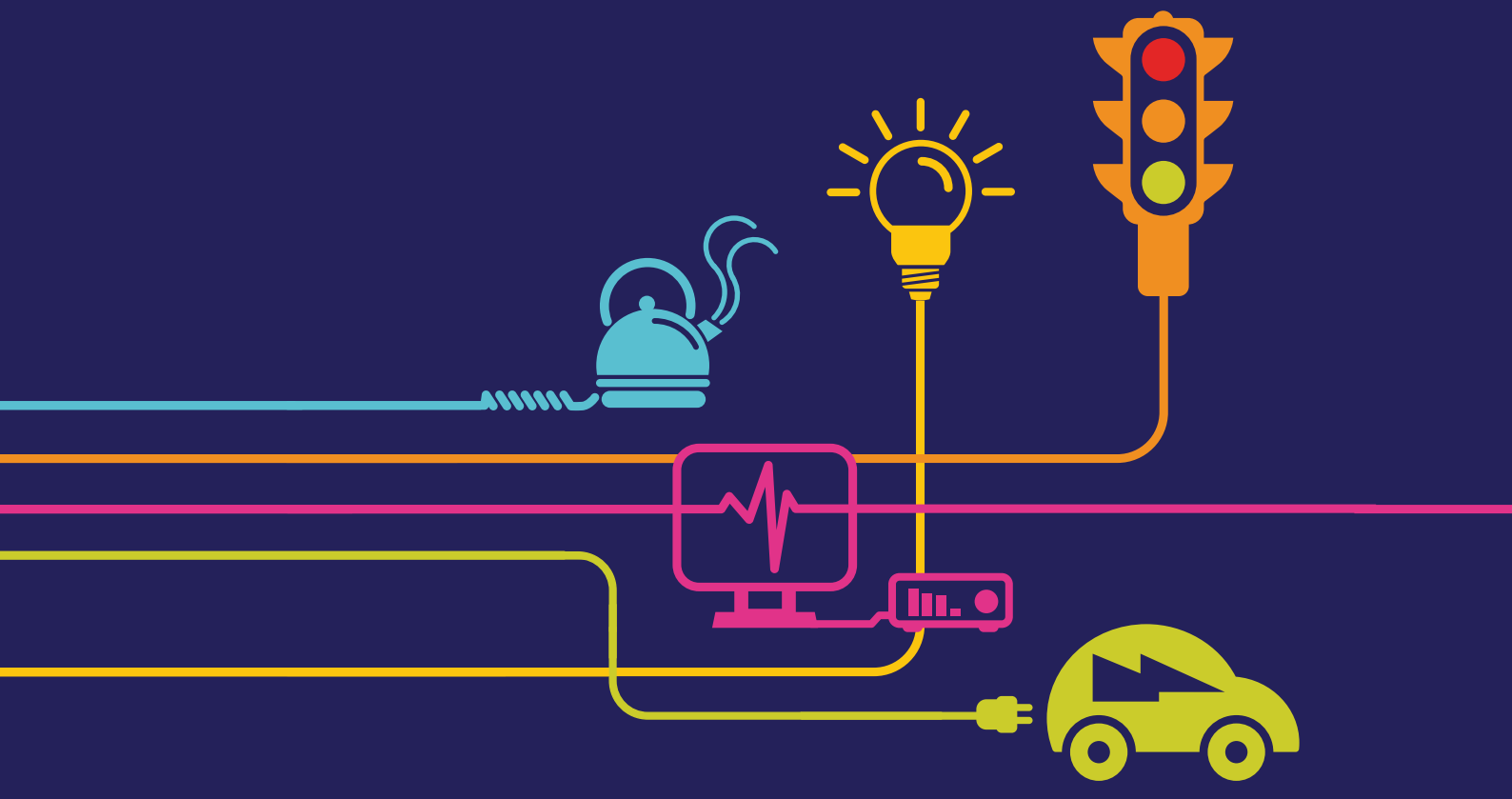
Document 5.5

nationalgrid

# Environmental Statement Environmental Impact Assessment Approach and Method

## Hinkley Point C Connection Project

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



Application Reference EN020001

May 2014

nationalgrid

**Hinkley Point C Connection Project**

# ENVIRONMENTAL STATEMENT – MAY 2014

## VOLUME 5.5.1, CHAPTER 5 – ENVIRONMENTAL IMPACT ASSESSMENT APPROACH AND METHOD

| Document Control | |
|---|---|
| **Document Properties** | |
| **Organisation** | **National Grid** |
| **Author** | **Bobby Clayton, TEP** |
| **Approved By** | **Ian Grimshaw, TEP** |
| **Title** | **Environmental Statement Chapter 5 - Environmental Impact Assessment Approach and Method** |
| **Document Reference** | **Volume 5.5.1** |

| **Date** | **Version** | **Status** | **Description/Changes** |
|---|---|---|---|
| 09/05/14 | A | Live | Final version for DCO submission |

Table of Contents

**5 EIA Approach and Method ..... 9**
5.1 Introduction ..... 9
5.2 Project Development ..... 9
5.3 EIA Screening ..... 11
5.4 EIA Scoping and other Engagement ..... 12
5.5 Preliminary Environmental Information ..... 18
5.6 Environmental Statement ..... 19

**INSETS (VOLUME 5.5.1)**

Inset 5.1: Overhead Lines Lateral LoD

Inset 5.2: Example of the Standard Lateral LoD for 400kV T-pylon

Inset 5.3: Example of a Reduction in the Standard Lateral LoD for 400kV T-pylon

Inset 5.4: Example of an Open Cut Underground Cable Installation

Inset 5.5: Example of HDD or Cable Bridge Underground Cable Installation at the River Axe

Inset 5.6: Example of Reduced Underground Cable LoD Width at Nailsea

Inset 5.7: Example of the Work Area for the Bridgwater Tee CSE Compounds

Inset 5.8: Example of the Construction Compound Area at the A38 Bristol Road

Inset 5.9: Example of a Bellmouth Easement Area

Inset 5.10: Example of a Construction Haul Road and Other Access Road

Inset 5.11: Example of a Pylon Working Area

Inset 5.12: Example of Scaffolding and Associated Working Area

Inset 5.13: Example of an EPZ

Inset 5.14: Example of a Road Crossing (Open Cut)

Inset 5.15: Example of a Road Crossing (Bridge)

Inset 5.16: Example of an Indicative Access for Future Maintenance to Pylon C-LD6

**APPENDICES (VOLUME 5.5.2)**

Appendix 5A: Scoping Opinion

Appendix 5B: Scoping Opinion - Representations and Responses

Appendix 5C: Draft Environmental Statement and Supporting Documents February 2014 Engagement - Representations and Responses

**FIGURES (VOLUME 5.5.3)**

Figure 5.1: Overhead Line Limits of Deviation – Lateral Pylon Movement

Figure 5.2: Overhead Line Limits of Deviation – Pinch Points

# 5 EIA APPROACH AND METHOD

## 5.1 Introduction

5.1.1 This chapter of the Environmental Statement (ES) outlines the Environmental Impact Assessment (EIA) process and the methods used in the identification and assessment of significant environmental effects for the construction, operation and decommissioning phases of the Proposed Development.

5.1.2 The ES presents the findings of the EIA carried out in respect of the Proposed Development and has been prepared in accordance with the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (the 2009 Regulations) (as amended). This chapter sets out the general approach taken throughout the process of assessing environmental effects.

5.1.3 The structure of the remainder of this chapter is as follows:

- Project Development – describes how the environmental information obtained has informed the development of the scheme.
- EIA Screening – describes why National Grid did not seek a Screening Opinion.
- EIA Scoping and other Engagement – describes the Scoping Report prepared and submitted to the Planning Inspectorate; the Scoping Opinion subsequently received from the Planning Inspectorate; provides a summary of the representations received in the Scoping Opinion and how they have been addressed by National Grid; describes the environmental topics scoped into the EIA and the reasons why; and describes the environmental topics scoped out of the EIA and the reasons why.
- Preliminary Environmental Information Report (PEIR) – provides a summary of the purpose and assessment approach of the PEIR; and provides a summary of consultation feedback received during Statutory Stage 4 Consultation (in accordance with the Planning Act 2008) and how the feedback received was addressed by National Grid in the subsequent ES.
- Environmental Statement – demonstrates that its provision and general approach is in accordance with the 2009 Regulations; describes the overall EIA method and assessment process adopted throughout the ES and in each individual technical chapter; and describes the more specific approach to the prediction and assessment of significance of effects.

5.1.4 Schedule 4, Part 1 of the 2009 Regulations sets out the information for inclusion in Environmental Statements. **Table 1.1** (in **Volume 5.1.1**) describes where each item has been addressed in the Hinkley Point C Connection Project ES.

## 5.2 Project Development

**Overview**

5.2.1 **Volume 5.2.1** describes the background to the project and provides detail on the following;

- project need;

- project development process; and
- alternatives.

5.2.2 Developing a scheme to connect Hinkley Point C Power Station to the National Grid high voltage transmission system has included the following steps:

- Need Case: To confirm the need to develop the high voltage transmission system to provide a secure connection for new power stations
- Strategic optioneering: To develop and assess strategic options that would meet the identified need, including assessment of alternative technologies and selection of an option to take forward.
- Route corridor study: To take account of environmental constraints and define potential areas of land or 'route corridors' for the new overhead line and identify the most appropriate option to meet the need.
- Initial consultation: To obtain the views of statutory bodies, other agencies and the general public on the potential route corridors.
- Back-check and review of options: To take the opportunity before corridor selection to verify that the need case and review of strategic options remained valid in light of any changes in circumstances and consider representations received.
- Route corridor selection: To consider which of the possible route corridors is preferred and announce the preferred corridor.
- Assessment of impact of infrastructure changes on the local electricity network and development of options to ensure electricity supplies are maintained (resulting from the proposed removal of existing 132kV overhead lines and where the Proposed Development interacts with the existing local electricity network).
- Draft route: To develop the connection detail within the preferred route corridor and to consult on this.
- EIA Scoping Report: To outline the approach and scope of the Environmental Impact Assessment for the project.
- Statutory Stage 4 consultation: To consult statutory bodies, other agencies and the general public on the details of the proposed application, including seeking views on the proposed 400kV pylon design options (steel lattice and T-pylons).
- Consultation feedback report: Review of representations received during statutory pre-application consultation.
- Change Management: Consideration of all suggestions to amend the Proposed Development following Statutory Stage 4 Consultation.

5.2.3 At each step in the design of the Proposed Development, from the identification and appraisal of strategic connection options to detailed siting of project components, environmental assessment has been an integral part of the process: high level environmental constraints were identified by National Grid during the initial stages of the development process in 2009 to limit environmental effects by avoidance of sensitive areas; options appraisal at all levels has included assessments of the potential effects for landscape and views, biodiversity, the historic environment and socio-economic issues.

5.2.4 In addition, environmental considerations have been built into the design of the Proposed Development so that potential effects can be considered and minimised at the earliest stages. This is known as 'mitigation by design'.

5.2.5 **Volume 5.2.1** summarises the need case for the Proposed Development and describes the main alternatives considered. It also summarises the assessment findings (financial, technical and environmental), and the conclusions reached for:

- strategic connection options for the 400kV connection;
- infrastructure requirements for the local electricity distribution network operated at 132kV by Western Power Distribution;
- route corridor options (strategic and detailed) for the 400kV and 132kV connections;
- connection options (alternative to overhead lines) for the 400kV and 132kV connections;
- substation and cable sealing end (CSE) compound sites;
- pylon design; and
- changes to the Proposed Development following Statutory Stage 4 Consultation.

## 5.3 EIA Screening

5.3.1 The screening process is prescribed in the 2009 Regulations and is the process by which it is determined whether a development proposal is likely to have significant effects on the environment. In the event that such effects are deemed likely to arise, the development proposal would constitute EIA development and an ES would be required.

5.3.2 The 2009 Regulations include two Schedules of development that are derived from the Directives. Applications for projects described in Schedule 1 must be accompanied by an EIA. Applications for projects described in Schedule 2 may require EIA, depending on the scale of the development, its characteristics and the sensitivity of the environment in which the development will take place (all of which is set out in Schedule 3). The decision as to whether or not EIA applies to a development is called the 'Screening Opinion'. The Secretary of State can decide whether an application comprises EIA development under the 2009 Regulations. Alternatively, a developer can decide that its application constitutes EIA development.

5.3.3 The Proposed Development is considered by National Grid to constitute EIA development as it falls under the definition offered by Schedule 2, Part 3 (Energy Industry) of the 2009 Regulations *"industrial installations for carrying gas, steam and hot water, transmission of electrical energy by overhead cables (projects not included in Schedule 1"* and is considered to have the potential to result in significant environmental effects given the scale of the proposed Development and the sensitivity of the environment. A Screening Opinion was not, therefore, sought by National Grid.

5.3.4 National Grid confirmed in writing (16 April 2013) to the Planning Inspectorate under Regulation 6 (1) (b) of the 2009 Regulations (as amended) its acceptance that the proposed Hinkley C Connection Project would constitute EIA development

and its intention to prepare and submit an ES to accompany a future Development Consent Order (DCO) application. The Planning Inspectorate acknowledged in writing (4 September 2013) National Grid's intention to prepare and submit an ES.

5.3.5 The same letter (16 April 2013) also included National Grid's request to the Planning Inspectorate for a Scoping Opinion under Regulation 8 (1) of the 2009 Regulations (as amended). The Scoping process is described below.

## 5.4 EIA Scoping and other Engagement

**Introduction**

5.4.1 As the Proposed Development was considered to constitute EIA development, the next stage of the EIA process was 'scoping'.

5.4.2 The Guidance on EIA Scoping (European Commission 2001) states that scoping is "*the process of determining the content and extent of the matters which should be covered in the environmental information to be submitted to a competent authority for projects which are subject to EIA".*

5.4.3 Regulation 8(1) of the 2009 EIA Regulations (as amended) states that *"a person who proposes to make an application for an order granting development consent may ask the Commission to state in writing its opinion as to the information to be provided in the environmental statement".*

5.4.4 Schedule 4, Part 1 of the 2009 Regulations sets out the aspects of the environment likely to be significantly affected by the development, which should be included in any ES. These are set out in **Table 5.1** below together with details as to where they are addressed in this ES.

Table 5.1 Aspects of the Environment – 2009 Regulations

| **Aspect of the Environment** | **Environmental Statement Coverage** |
|---|---|
| Population | **Volume 5.7.1** (Visual Effects); **Volume 5.12.1** (Traffic and Transport); **Volume 5.13.1** (Air Quality and Emissions); **Volume 5.14.1** (Noise and Vibration); **Volume 5.15.1** (Socio-economics and Land Use); **Volume 5.16.1** (Electric and Magnetic Fields). |
| Fauna | **Volume 5.8.1** (Biodiversity and Nature Conservation). |
| Flora | **Volume 5.8.1** (Biodiversity and Nature Conservation). |
| Soil | **Volume 5.9.1** (Ground Environment). |
| Water | **Volume 5.10.1** (Hydrology and Water Resources). Also set out at **Volume 5.23** (Flood Risk Assessments). |
| Air | **Volume 5.13.1** (Air Quality and Emissions). |

| Aspect of the Environment | Environmental Statement Coverage |
|---|---|
| Climatic factors | Climatic factors are considered as an inherent part of the assessment where relevant in the ES technical chapters. For example, changes to the hydrological environment as a result of climate change are set out in **Volume 5.10.1** (Hydrology and Water Resources) and **Volume 5.23** (Flood Risk Assessments). |
| Material assets (including the architectural and archaeological heritage) | **Volume 5.11.1** (Historic Environment). Also set out in the Planning Statement (**Volume 7.1**). |
| Landscape | **Volume 5.6.1** (Landscape). |
| Inter-relationship between the above factors | Inter-relationship of effects is considered as an inherent part of the assessment where relevant in the ES technical chapters. For example, traffic movements (**Volume 5.12.1**) associated with the construction of the Proposed Development has the potential to result in air quality (**Volume 5.13.1**) and noise (**Volume 5.14.1**) effects. In addition, the amenity assessment (**Volume 5.15.2, Appendix 15J**) considers the likely effects of the Proposed Development on the amenity of communities and community facilities. |

## Scoping Report

5.4.5 The Scoping Report was prepared in accordance with the guidelines set out in Regulation 8 and Schedule 4 of the 2009 Regulations and the Planning Inspectorate's Advice Note 7. It sought the opinion of the Secretary of State (and stakeholders) regarding the proposed approach for the environmental assessment of the Proposed Development. It accompanied National Grid's request to the Planning Inspectorate for a Scoping Opinion under Regulation 8 (1) of the 2009 Regulations (as amended). The Scoping Report for the Proposed Development was published and submitted to the Planning Inspectorate on 16 April 2013.

5.4.6 The Scoping Report included the following information:

- the purpose of the report;
- the need for EIA;
- the main alternatives considered including a summary of consultation Stages 1-3;
- characteristics of the Proposed Development including a description of the key components and details of construction, maintenance and decommissioning stages;
- the proposed EIA method and approach;
- the data sources, existing environment, characteristics of potential effects, proposed approach and method, assessment of significance of effect, inter-relationship of effects, cumulative effects, and reporting for the following environmental topics:
    - landscape and visual assessment;
    - biodiversity and nature conservation;

  - historic environment;
  - geological conservation;
  - flood risk, water quality and resources;
  - traffic and transport;
  - air quality and emissions;
  - noise and vibration;
  - socio-economics and land use; and
  - electric and magnetic fields and electro-magnetic compatibility.
- environmental aspects proposed to be scoped out of the EIA; and
- content and scope of the ES.

5.4.7 The Scoping Opinion (see **Volume 5.5.2, Appendix 5A**) was received from the Planning Inspectorate on 31 May 2013.

5.4.8 Representations were identified by National Grid under the following sections of the Scoping Opinion:

- Section 2 – The Proposed Development;
- Section 3 – EIA Approach and Topic Areas;
- Section 4 - Other Information;
- Appendix 2 – Respondents to Consultation and Copies of Replies; and
- Appendix 3 – Presentation of the ES.

5.4.9 The remaining sections of the Scoping Opinion (namely Section 1 – Introduction, and Appendix 1 – List of Consultees) provided factual and contextual information and contained no specific representations for further consideration.

5.4.10 The majority of the representations received were either specific to each environmental topic chapter or site-specific and generally included the following statements:

- in agreement of a proposed approach;
- in broad agreement of a proposed approach but requesting consideration of other issues which may lead to partial refinement;
- disagreement of a proposed approach; and
- suggestions not put forward in the Scoping Report that should be considered further.

5.4.11 The remaining representations were more generic and including the following:

- request to ensure appropriate consultation is undertaken with relevant consultees to agree the timing and relevance of survey works;
- request to ensure the physical scope of study areas is identified in accordance with recognised guidance where possible and is sufficiently robust;
- request to demonstrate compliance with National Policy Statements;
- request to ensure the ES includes a description of the proposed construction programme and methods;

- comments on the structure and overall assessment approach of the ES; and
- comments on matters proposed to be scoped out.

5.4.12 National Grid has undertaken a review of the representations included in the Scoping Opinion (see **Volume 5.5, Appendix 5B**) which provides a summary of each representation and how each representation has been addressed through the EIA process. If no further action has been considered necessary, appropriate justification is provided.

**Proposed Scope of ES**

5.4.13 Following a review of the Scoping Opinion representations and consideration of the issues raised at meetings with stakeholders, National Grid defined the scope of the EIA.

5.4.14 The following table describes the environmental topics that have been scoped out of the EIA process:

Table 5.2 EIA Topics Scoped Out

| EIA Environmental Topics Scoped Out | Reason |
|---|---|
| Effects on the transport network during operation | The Proposed Development would be unmanned and would not give rise to regular or significant traffic movements. |
| Air quality (eutrophication) effects during operation | The Proposed Development would not give rise to emissions such as nitrogen oxides and ammonia. |
| Vibration effects during operation | The Proposed Development would be unlikely to give rise to vibration effects during its operation phase. |
| Noise effects during operation from Seabank Substation, high voltage underground cables and cable sealing end compounds | The proposed works at Seabank Substation would comprise switchgear and auxiliary plant and the removal of an existing transformer; it would not give rise to operational noise effects.<br><br>High voltage underground cables and cable sealing end compounds are practically quiet in operation and would not give rise to significant effects. |
| Effects on electro-magnetic compatibility (EMC) | The proposed overhead line, substation, cable sealing end compounds and underground cables are of similar construction and operational parameters as those tested in the Technical Construction File (TCF) and would be covered by the Certificate of Conformity. The Proposed Development would present no issues with TV or radio interference under normal operating conditions. |
| Effects of electric and magnetic fields (EMFs) during construction | The proposed transmission equipment will not produce any significant EMFs during construction and prior to energisation. |

| EIA Environmental Topics Scoped Out | Reason |
|---|---|
| Effects on property prices | The effect on house prices of an overhead transmission line is not a matter that requires assessment under the 2009 Regulations and is not material to the merits of the Proposed Development. |

5.4.15 The following table describes the environmental topics that have been scoped into the EIA process:

Table 5.3 EIA Topics Scoped In

| EIA Topics Scoped In | Construction | Operation |
|---|---|---|
| Landscape Character | YES | YES |
| Visual Effects | YES | YES |
| Biodiversity and Nature Conservation | YES | YES |
| Ground Environment | YES | YES |
| Hydrology and Water Resources | YES | YES |
| Historic Environment | YES | YES |
| Traffic and Transport | YES | NO |
| Air Quality | YES | YES (Sulphur hexafluoride [$SF_6$] only) |
| Noise | YES | YES (Sandford Substation and 400kV overhead lines only) |
| Vibration | YES | NO |
| Socio-economics and Land Use | YES | YES |
| EMFs | NO | YES |

5.4.16 Decommissioning effects have been considered for all environmental topics scoped into the EIA process.

## Stakeholder Engagement

### *Overview*

5.4.17 National Grid has undertaken consultation in accordance with the stages identified at **Volume 5.1.1, section 1.5.**

5.4.18 The scope of the ES has been identified through early engagement with stakeholders and iteratively throughout the evolution of the project development process. The following steps have been undertaken as part of the overall approach to stakeholder engagement enabling project influence and evolution:

- Route Corridor Study (RCS): to take account of environmental constraints and define potential areas of land or 'route corridors' for the new connection and identify the most appropriate option to meet the need;
- initial consultation: to obtain the views of statutory bodies, other agencies and the general public on the potential route corridors;
- draft route: to develop the connection detail within the preferred route corridor and to consult on this;
- EIA Scoping Report: to outline the approach and scope of the EIA for the project; and
- statutory pre-application consultation (Statutory Stage 4 Consultation – see section 5.5 of this chapter): to consult statutory bodies, other non-statutory bodies and the general public on the details of the proposed application, including the Preliminary Environmental Information and seeking views on the proposed 400kV pylon design options (steel lattice and T-pylons).

### *Thematic Group and Other Meetings*

5.4.19 Following the preferred route corridor announcement in September 2011, National Grid commenced Stage 3 consultation. Three Thematic Groups were established (landscape and visual; biodiversity; and the historic environment) comprising technical officers from local authorities and statutory consultees. In addition, three Local Community Forums and one Strategic Community Forum were established. These provided advice and commented on the information that National Grid gathered to use in its studies.

5.4.20 In addition to the above, a series of additional meetings have been held throughout the development process (both before and after the preparation of the Scoping Report) to discuss key issues. Such meetings have covered all ES environmental topics, including those not subject to Thematic Group meetings detailed above.

### *Draft ES and Supporting Documents*

5.4.21 The Draft ES and a large number of the ES supporting documents were provided to a number of statutory and non-statutory bodies over a period of two weeks between 3 and 17 February 2014. This process of engagement (over and above that required by the statutory consultation process) was undertaken to provide an opportunity for these bodies to influence the assessment documents prior to their finalisation to accompany the DCO application.

5.4.22 A summary of the Draft ES comments received (relevant to EIA) and National Grid's responses are summarised at **Volume 5.5.2, Appendix 5C**.

## 5.5 Preliminary Environmental Information

5.5.1 National Grid produced a 'Statement of Community Consultation' (SoCC) in accordance with Section 47 of the Planning Act 2008 detailing how it intended to consult upon the Proposed Application. National Grid also prepared a Preliminary Environmental Information Report (PEIR) for consultation purposes pursuant to Regulation 10 of the 2009 Regulations. The PEIR was publicised at National Grid's Statutory Stage 4 Consultation on the project pursuant to Sections 42, 47 and 48 of the Planning Act 2008.

5.5.2 The Statutory Stage 4 Consultation took place over a period of eight weeks between 3 September and 29 October 2013. Statutory and non-statutory consultees and members of the public were included in the consultation. Various methods of consultation and engagement were used in accordance with the SoCC including letters, website, public exhibitions, publicity and advertising, inspection of documentation at selected locations and parish and town council briefings.

5.5.3 'Preliminary environmental information' means information referred to in Schedule 4, Part 1 of the 2009 EIA Regulations which has been compiled by the applicant and is reasonably required to assess the environmental effects of the development and any associated development. The information referred to in Schedule 4 includes the following and was included in the PEIR:

- a description of the Proposed Development;
- an outline of the main alternatives considered and the main reasons for the applicant's choice taking into account the environmental effects;
- 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;
- a description of the likely significant effects of the Proposed Development on the environment including direct, indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects;
- a description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects; and
- an indication of any difficulties encountered in compiling the required information.

5.5.4 The PEIR provided preliminary environmental information of the Proposed Development and was based on information known and available at that time. The PEIR also described the outstanding information that National Grid anticipated would subsequently be provided in the ES to accompany the DCO application.

5.5.5 National Grid sought feedback on the information presented in the PEIR to enable it to be appropriately considered in the production of this ES. During the Statutory Stage 4 Consultation process, 1635 individual representations were received.

5.5.6 National Grid published a Consultation Report (Ref 5.1) (**Volume 6.1**) to provide details about all individual representations received and how National Grid has addressed them. The Consultation Report is included in the suite of documents available to view as part of the DCO application.

5.5.7 The majority of the EIA-related representations received were either specific to each environmental topic chapter or site-specific. Some of the key representations received relate to the following themes:

- effects on Public Rights of Way;
- discussion of potential effects relating to bird collision risk;
- wider approach to assessment of effects and mitigation in the Habitats Regulation Assessment Report;
- consultation and agreement of mitigation associated with effects on landscape, views, biodiversity and nature conservation and the historic environment;
- details of watercourse crossings; and
- details of traffic and transport survey works.

5.5.8 The process of holding meetings with stakeholders to discuss key environmental issues was maintained by National Grid before, during and after Statutory Stage 4 Consultation. This enabled further influence of the EIA process through to the production of the ES.

## 5.6 Environmental Statement

### Introduction

5.6.1 This section presents the assessment method and approach adopted in the prediction and assessment of the significance of the potential effects of the Proposed Development.

5.6.2 The assessment method and approach set out in section 5.6 has been adopted for all environmental assessment topics (see **Volumes 5.6.1 – 5.17.1**), unless otherwise stated. Where an alternative approach has been adopted – for example where specific guidance or legislation relevant to that environmental topic is available and would influence the forecasting method – the adopted method is described in that environmental topic chapter.

5.6.3 The ES has been prepared in accordance with the 2009 Regulations. Compliance with the 2009 Regulations is set out in **Volume 5.1.1** together with an overview of the ES structure.

## General Approach to Assessment

### *Proposed Development Sections*

5.6.4 As detailed at **Volume 5.3.1,** (Project Description), to manage the assessment and presentation of environmental information, the Proposed Development has been divided into Sections (shown at **Volume 5.1.3, Figure 1.1** and **Volume 5.3.3, Figure 3.1**).

5.6.5 The Sections are based on changes in landscape character (Sections A-G inclusive). An additional Section has been defined based on the area of works for the Hinkley Line Entries (Section H). The Sections are set out below.

- Section A – Puriton Ridge;
- Section B – Somerset Levels and Moors South;
- Section C – Mendip Hills;
- Section D – Somerset Levels and Moors North;
- Section E – Tickenham Ridge;
- Section F – Portishead;
- Section G – Avonmouth; and
- Section H – Hinkley Line Entries.

5.6.6 The assessment of potential effects is generally described Section by Section referring to relevant receptors in that Section. However, where appropriate, certain chapters adopt a different approach. For example **Volume 5.8.1** (Biodiversity and Nature Conservation) describes the assessment of effects by receptor due to the number and wide geographical coverage of receptors such as bats and the internationally and nationally designated Severn Estuary. Where relevant, the geographical location (Proposed Development component and/or Section or Sections) of receptors is stated.

5.6.7 The approach to 'intra-project' effects is described at paragraphs 5.6.107 – 108.

### *Reasonable Worst Case Scenario*

5.6.8 The Planning Inspectorate's Advice Note 9 (Rochdale Envelope) advises that *"the EIA should assess the likely worst case in terms of the potential variations within a project but the detailed design of the project and the variations should not vary beyond these limits so that the proposals as built would not have been assessed, thereby rendering the ES inadequate."*

5.6.9 Order Limits, identified in the Proposed Development Plans (see **Volume 5.3.3, Figure 3.1 and Figure 3.2**) as a red outline, are fixed and detail the anticipated maximum extent of land in which the Proposed Development may take place (if approved and subject to Development Consent Order Requirements and any other associated commitments). In accordance with guidance provided by the Rochdale Envelope (Planning Inspectorate: Advice Note 9) the proposed route of the overhead lines and underground cables would be subject to Limits of Deviation (LoD) which would provide a necessary and proportionate degree of flexibility as to

the final alignment of the proposed works. The LoD identify a maximum distance or measurement of variation within which these works must be constructed.

5.6.10 Given the flexibility of the Proposed Development with regards the LoD and Order Limits (see section 5.6 'Spatial Considerations' below for further details) it is considered appropriate to adopt a reasonable worst case scenario approach in this ES.

5.6.11 A reasonable worst case scenario approach has also been adopted for temporal aspects of the EIA. An example is provided at paragraph 5.6.23.

**Step by Step Approach to Assessment**

***Baseline***

5.6.12 A description of the aspects of the environment likely to be significantly affected by the Proposed Development is given in each of the topic chapters. Desk top studies, consultation and field surveys have been used to identify the current conditions and environmental character of the area potentially affected by the Proposed Development. Baseline data varies between topics, but reflects the most up to date information available for that topic. In most cases, baseline data was gathered up to December 2013.

***Future Baseline***

5.6.13 Whilst the baseline environment provides a description of the current baseline conditions, due to the relatively extensive nature of the construction programme (see **Volume 5.3.2, Appendix 3B**) it is appropriate to consider the changing nature of the environment in the event that the Proposed Development is not constructed or operated. This is referred to as the 'future baseline' and represents a do nothing scenario.

5.6.14 The nature of the future baseline will vary between the environmental topic chapters and is influenced by a combination of natural and man-made processes. For example, **Volume 5.12.1** (Traffic and Transport) and **Volume 5.22.1** (Transport Assessment) identify future baseline traffic flows by applying a growth factor to the traffic surveys using Trip End Model Presentation Program (TEMPro), National Transport Model (NTM) factors and Integrated Transport Economics and Appraisal (ITEA).

Committed Development

5.6.15 In addition, a number of major consented development proposals ('committed developments') are able to influence the future baseline. Guidance set out in Department of Communities and Local Government document entitled 'Environmental Impact Assessment: A Guide to Good Practice and Procedures (2006) states that:

*"Often, future developments in the vicinity of a project site will be included in the baseline scenario as 'committed development'. But in the context of EIA, the term 'committed development' conventionally refers to development for which consent has been granted."*

5.6.16 For the purpose of this ES, a development proposal is considered as committed development if it:

- has a valid planning permission (whether under construction or not yet implemented); or
- has a valid permission granted under another consenting regime (for example Section 36 consent under the Electricity Act 1989, a Development Consent Order granted under the Planning Act 2008); or
- does not require consent to be constructed and operated but where there is sufficient commitment to undertake the works. National Grid is aware of such works only where it or Western Power Distribution is to undertake works which are required either as a result of, or to facilitate the Proposed Development (for example uprating of Bridgwater to Hinkley overhead line (from 275kV to 400kV) permitted development works; reconductoring of the 132kV N Route).

5.6.17 A number of committed developments have been identified and are included in the future baseline for each environmental topic chapter where appropriate, in relation to either construction and/or operation effects as relevant). The number of committed developments was identified during the process of identifying other major development proposals with the potential to have cumulative effects (together with the Proposed Development) on the environment (the Master List). The approach to identifying other major development proposals together with the approach to assessing the potential for cumulative effects is provided in more detail at **Volume 5.17.1.**

***Base Case***

5.6.18 A description of the baseline environment at the point when the potential effects of the Proposed Development are expected to occur is provided in the relevant environmental topic chapter. This 'future baseline' is referred to as the 'base case' in this ES, where the base case is different to the current baseline.

5.6.19 The consideration of a future baseline (i.e. 'base case') introduces the potential for additional receptors (to those identified from the current baseline) to be potentially affected by the Proposed Development. For example, a new residential development (with a valid planning permission) would have the potential to result in additional residential receptors during the construction (for example construction noise, visual effects) and operation (affected by, for example operation noise, visual effects) of the Proposed Development. These have been identified and assessed where relevant for each environmental topic chapter.

5.6.20 For some of the environmental topics, an assessment against a set threshold was more appropriate due to the nature of the environmental topic and the availability of guidance documents typically used for such assessments. For example, **Volume 5.14.1** (Noise and Vibration) considers construction noise against thresholds identified in Annex E of the British Standard BS 5228: 2009 'Noise and Vibration Control on Construction and Open Sites' – Part 1 'Noise'.

***Assessment Years***

5.6.21 The anticipated construction programme for the Proposed Development (and all of the permanent components) is provided at **Volume 5.3.2, Appendix 3B**. Construction works are anticipated to start in Q3 2015 and are anticipated to be completed by Q3 2019.

5.6.22 The assessment year (or years) for the assessment of construction effects varies between environmental topics and is dependent on a number of factors; for example, the geographical location of a receptor (or a group of receptors) and the specific Proposed Development component (or components) which are considered to give rise to an effect (or effects). Effects on receptors also have the potential to arise for a part of the construction phase or the entirety of the construction phase.

5.6.23 In some cases, it has been appropriate to assess the significance of potential effects when such effects would be at their peak. **Volume 5.12.1** (Traffic and Transport) provides an assessment of construction traffic movements during the peak construction periods. This complies with the general approach to the assessment of a reasonable worst case scenario (see paragraphs 5.6.8 - 11).

5.6.24 The assessment year (or years) for the assessment of operation effects also varies between environmental topics. The standard approach is for an 'opening year' to be used as the basis of assessment of operation effects. The 'opening year' for the Proposed Development is 2019. However certain environmental topics have considered alternative years where appropriate to consider a reasonable worst case scenario and to consider effects both before and after the implementation of mitigation measures; the latter is considered under 'residual effects' (see paragraph 5.6.112). For example, **Volume 5.7.1** (Visual Effects) considers operation effects before and after the implementation and establishment of on-site mitigation planting. Such residual effects are assessed 15 years after the opening year.

<u>Sensitivity Analysis</u>

5.6.25 There is the potential for changes to the construction programme (**Volume 5.3.2, Appendix 3B**) to arise due to the DCO being determined later than 2015 or changes to connection agreements or a combination of both of these influences.

5.6.26 Therefore, this ES has also considered, at a high level, the potential for environmental effects to occur for each of the construction programme scenarios detailed below.

Table 5.4 Sensitivity Analysis – Construction Programme Scenarios

| Scenario | Construction Commencement | Construction Completion |
|---|---|---|
| Variation 1 - programme is based on the contracted generation set out in the Need Case in **Volume 5.2.1**. If the DCO is granted later than 2015 and the completion dates remain as shown at **Volume 5.3.2, Appendix 3B**, National Grid would need to deploy additional resources. | March 2016 | October 2019 |
| Variation 2 - dates by which National Grid is obliged to connect the proposed power stations at Hinkley Point C and at Seabank could change. National Grid considers that a reasonable assumption is that these would be up to three years later than presently agreed.<br>National Grid may defer the start of construction for three years and work to a programme of the same duration as that set out in **Volume 5.3.2, Appendix 3B**. | October 2018 | October 2022 |
| Variation 3 – National Grid may commence construction on the works south of Sandford Substation in Sections A, B and C in 2015. This could allow National Grid to undertake 400kV underground cables installation outside of the winter period. | March 2016 | October 2022 |

### *Study Areas*

5.6.27 The Study Area is considered to be the geographical area within which the Proposed Development has the potential to give rise to environmental effects. Each specialist topic chapter describes the extent of the Study Area(s) used for the assessment and makes reference to Figures for illustration. The extent of the Study Areas varies across topics and is dependent upon the nature of the potential effects. For example, effects of the Proposed Development on views may be experienced over greater distances than effects from construction access tracks on soils and therefore require a larger area to be studied.

### *Forecasting Methods*

5.6.28 Details of the forecasting methods used to assess the potential for effects on the environment are described in all environmental assessment topics (see **Volumes 5.6.1 – 5.17.1**) in accordance with Schedule 4, Part 1 of the 2009 Regulations. Forecasting methods include but are not limited to relevant guidance, policy and legislation.

***Spatial Considerations***

Introduction

5.6.29 The prediction and assessment of significance of potential effects has been undertaken in the first instance using the fixed positions of the Proposed Development as shown on the following plans:

- Proposed Development Plans (**Volume 5.3.3, Figure 3.1**);
- Proposed Development Plans - Preferred Route Option A and Alternative Route Option B (**Volume 5.3.3, Figure 3.2**);
- Construction Plans (**Volume 5.3.3, Figure 3.3**);
- Construction Plans – Preferred Route Option A and Alternative Route Option B (**Volume 5.3.3, Figure 3.4**);
- Indicative Access for Future Maintenance (**Volume 5.3.3, Figure 3.5**); and
- Indicative Access for Future Maintenance – Preferred Route Option A and Alternative Route Option B (**Volume 5.3.3, Figure 3.6**).

5.6.30 The following sections describe how the Environmental Statement has considered the LoD and the Order Limits in the Environmental Impact Assessment of the Proposed Development.

Limits of Deviation

*Overview*

5.6.31 In accordance with guidance provided by the Rochdale Envelope (Planning Inspectorate: Advice Note 9) the proposed route of the overhead lines and underground cables would be subject to LoD which would provide a necessary and proportionate degree of flexibility as to the final alignment of the works. The LoD identify a maximum distance or measurement of variation within which these works must be constructed.

*Lateral LoD*

5.6.32 Lateral LoD are designed to allow for localised constraints or unknown or unforeseeable issues that may arise during construction and which would require a minor adjustment to the overhead line or underground cable design and the pylon positions. The proposed lateral LoD are:

- overhead line 400kV T-pylon: 80m (40m either side of the route centre line);
- overhead line 400kV lattice pylon: 60m (30m either side of the route centre line);
- overhead line 132kV (lattice and wood pole) pylon: 52m (26m either side of the route centre line); and
- underground 400/132kV cables: variable (see paragraphs 5.6.48 - 52).

5.6.33 The LoD set out above are shown on the Proposed Development Plans (see **Volume 5.3.3, Figure 3.1 and Figure 3.2**).

5.6.34 There are a small number (11) of geographical locations where different lateral LoD would apply for 400kV overhead lines; these 'pinch points' are described in paragraphs 5.6.43 - 45.

*Longitudinal LoD*

5.6.35 Longitudinal LoD are designed to allow for localised constraints or unknown or unforeseeable issues that may arise during construction and which would require a minor adjustment to the overhead line design and the pylon positions. The proposed longitudinal LoD would enable any individual pylon to be positioned up to a maximum distance of **+/- 40m** from the position shown at **Volume 5.3.3, Figure 3.1 and Figure 3.2** (including any lateral variations resulting from the application of the lateral LoD).

*Vertical LoD*

5.6.36 The proposed vertical LoD are designed to take account of standard steel lattice pylons and T-pylons. The vertical limit of deviation is +4m. The final design of pylons may be lower in height; there is no restriction placed on a reduction in height.

*400kV and 132kV Overhead Lines*

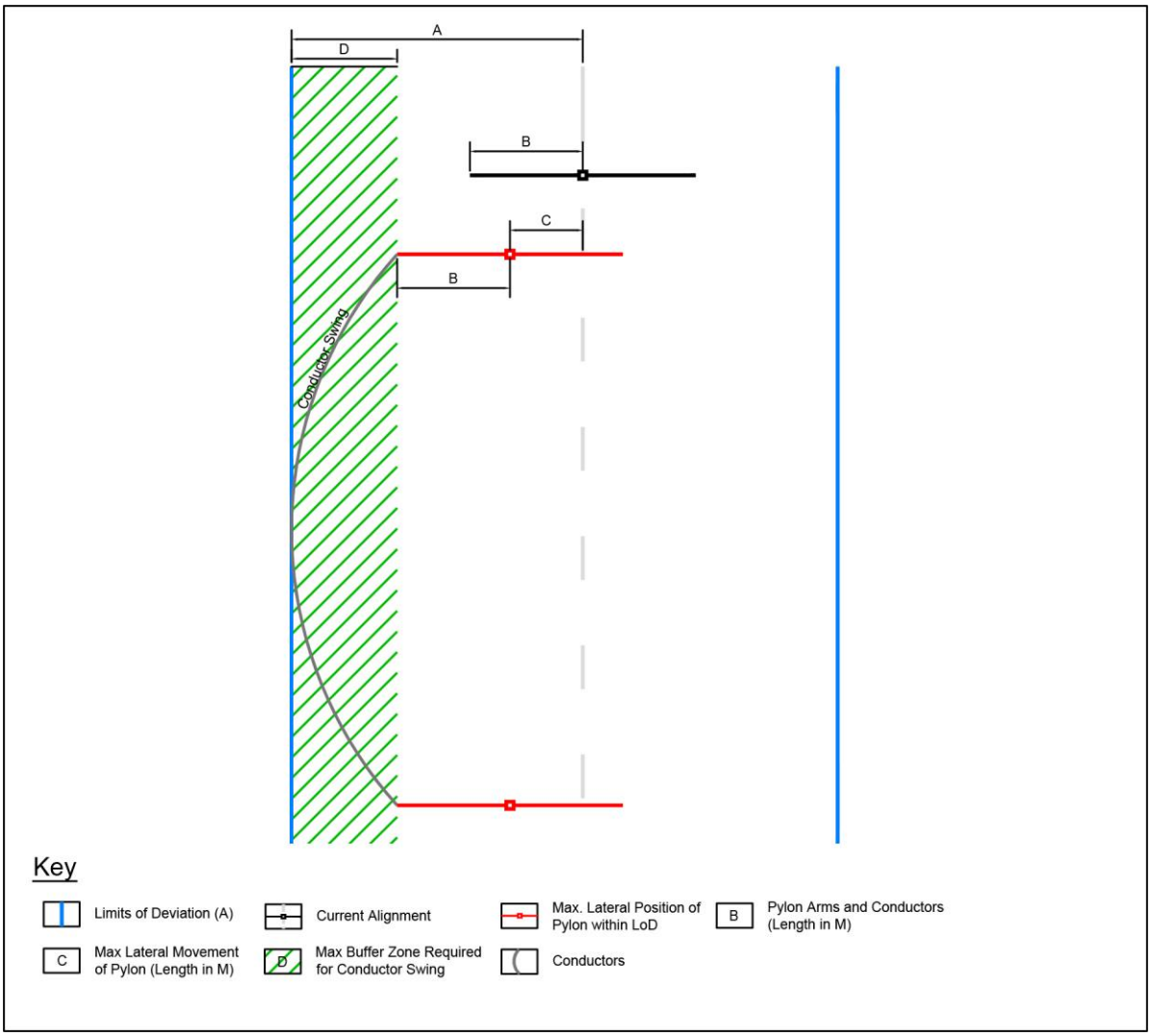
*Lateral LoD - General*

5.6.37 Although the distances identified at paragraph 5.6.32 above are defined as the lateral LoD, in practice, the pylons would have a very limited ability to move laterally from the positions shown on the Proposed Development Plans (see **Volume 5.3.3, Figure 3.1 and Figure 3.2**). This is because the lateral LoD must take into account the following considerations:

- the span length (or distance between each pylon); and
- the lateral swing of conductors under high wind conditions.

5.6.38 The above considerations are illustrated at **Volume 5.5.3, Figure 5.1** and **Inset 5.1** below which demonstrates that the maximum conductor swing is at the mid-point between any two pylons. However, as the pylons could move longitudinally along the length of the alignment (see paragraph 5.6.35 above), in practice this maximum point for conductor swing could occur at a number of points along the alignment.

Inset 5.1: Overhead Lines Lateral LoD

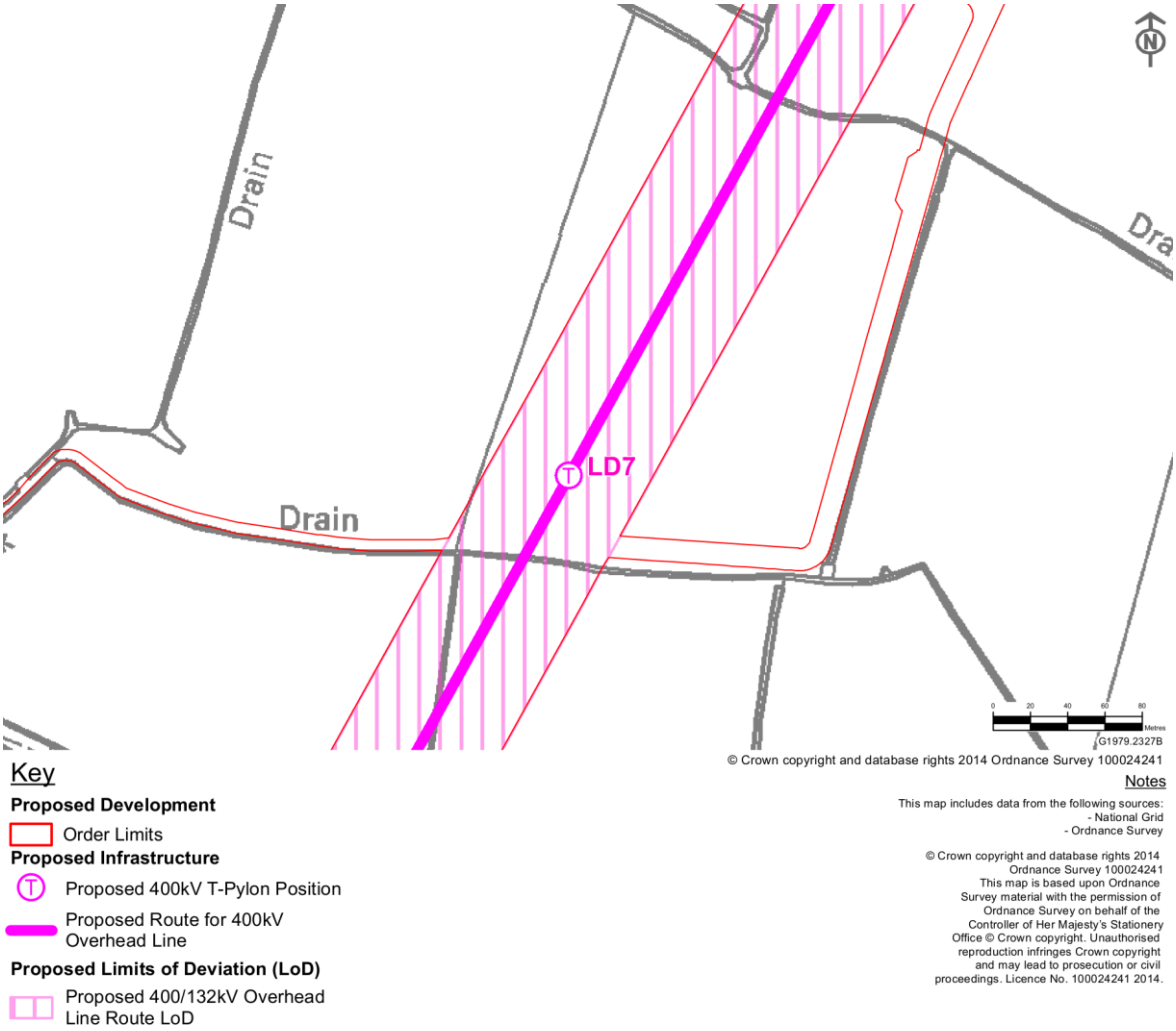



5.6.39 Notwithstanding the above considerations, National Grid considers the maximum lateral movement of any pylon to be **10m** either side of the route centre line as shown on the Proposed Development Plans (see **Volume 5.3.3, Figure 3.1 and Figure 3.2**). This 10m distance is represented by 'distance marker C' at **Volume 5.5.3, Figure 5.1** and **Inset 5.1** and is applicable for all 400kV and 132kV pylon types.

5.6.40 For example, a 400kV T-pylon has a lateral LoD of 40m either side of the route centre line. In practice this means that the pylon itself can move laterally (in either direction) by up to a maximum distance of 10m. The same 10m maximum distance is applicable for all other pylon types (400kV lattice, 132kV lattice and wood pole pylons) despite those pylon types having a smaller LoD (of 30m and 26m respectively) either side of the route centre line.

5.6.41 An example of the standard lateral LoD applicable for the 400kV T-pylon (as shown at **Volume 5.3.3, Figure 3.1.3**) is provided at **Inset 5.2** below.

Inset 5.2: Example of the Standard Lateral LoD for 400kV T-pylon




5.6.42 The only exceptions to this 10m distance are where 'pinch points' have been identified due to the existence of local constraints specific to those locations; these exceptions are described below.

*Lateral LoD - Pinch Points*

5.6.43 As stated above a number of 'pinch points' have been identified to the lateral LoD due to the existence of local constraints specific to those locations. The lateral LoD has been reduced in width at these locations. Constraints include groups of trees, land boundaries and proximity of the proposed overhead line to residential properties. A total of 11 locations have been identified and these are described in the table below and illustrated at **Volume 5.5.3, Figure 5.2**).

Table 5.5 Lateral LoD Pinch Points

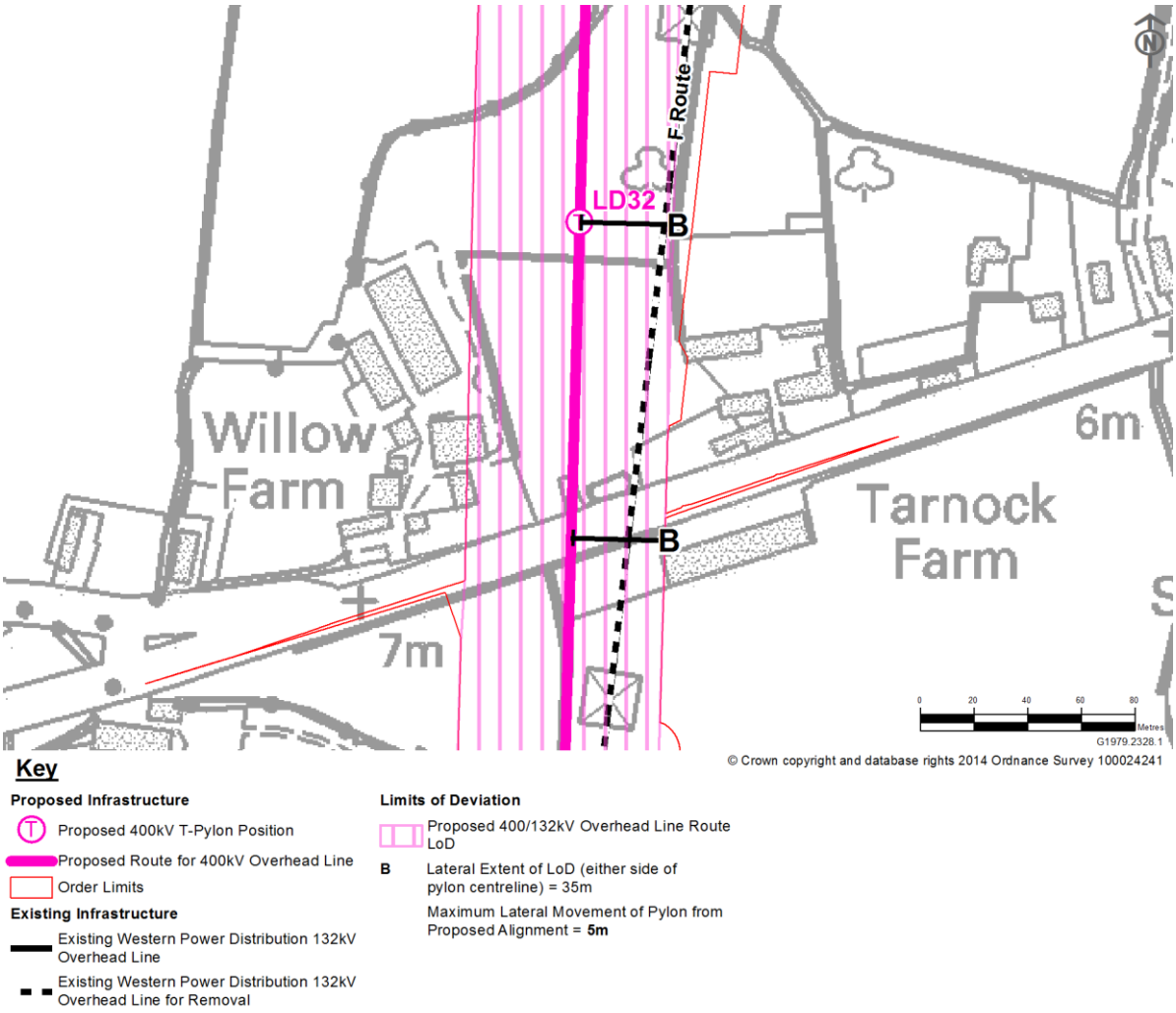
| Ref. | Pylon Number and Location | Reduction to LoD |
|---|---|---|
| 1 | VQ043 – ZGA 4, Section A, **Volume 5.5.3, Figure 5.2.1** | Western extent of LoD reduced by 10m to minimise tree losses at Withy Pool. |
| 2 | LD1 – LD5, Section B, **Volume 5.5.3, Figure 5.2.2** | Western extent of LoD reduced by up to 8m at the Huntspill River due to fixed location of proposed pylon LD1. |
| 3 | LD31 – LD 34, Section B, **Volume 5.5.3, Figure 5.2.3** | Eastern extent of LoD reduced by 5m to minimise effects to properties at Rooks Bridge. |
| 4 | LD80 – LD82, Section D, **Volume 5.5.3, Figure 5.2.4** | Western extent of LoD reduced by 10m to avoid oversailing of conductors at the Star Inn at Stone-edge Batch. |
| 5 | LD86 - LD88, Section E, **Volume 5.5.3, Figure 5.2.5** | Eastern extent of LoD reduced by 10m to avoid Mogg's Wood. |
| 6 | LD96 – LD100, Sections F/G, **Volume 5.5.3, Figure 5.2.6** | Northern extent of LoD reduced by 10m to minimise effects on existing land uses. Southern extent of LoD reduced by 12m due to the presence of the M5 motorway.<br>Please also note that the LoD has a transition point from T-pylon to lattice pylon between pylons LD100 and LD101 where a different standard lateral LoD would be applicable. |
| 7 | LD103 – LD104, Section G, **Volume 5.5.3, Figure 5.2.7** | Southern extent of LoD reduced by 1m at Marsh Lane due to the presence of existing land uses. |
| 8 | LD115, Section G, **Volume 5.5.3, Figure 5.2.8** | Northern extent of LoD immediately east of pylon LD115 reduced by 12-12.5m due to the presence of existing land uses. |
| 9 | LD129 – LD131, Section G, **Volume 5.5.3, Figure 5.2.9** | Eastern extent of LoD at pylon LD129 reduced by 10m due to the presence of existing land uses. Western extent of LoD at pylon LD130 reduced by 10m due to presence of the road. |
| 10 | AT30, Section D, **Volume 5.5.3, Figure 5.2.10** | Eastern extent of LoD reduced by 10m to minimise effects on trees at Nye Drove. |
| 11 | JP2, Section H, **Volume 5.5.3, Figure 5.2.11** | Southern extent of LoD reduced by 3m due to existing land boundaries. |

5.6.44 Where the standard LoD has been reduced in the locations detailed above, the length of that reduction would directly affect the ability of any pylon at that given point to move laterally within the default position of 10m. For example, where the LoD has been reduced by 2m, the pylon at that point could move laterally by a

maximum of 8m (10m – 2m = 8m). Where the LoD has been reduced by 5m, the pylon at that point could move laterally by a maximum of 5m (10m – 5m = 5m). However where the LoD has been reduced by 10m, the pylon has no ability at all to move laterally (10m – 10m = 0m).

5.6.45 An example of where the standard lateral LoD has been reduced (as shown at **Volume 5.5.3, Figure 5.2.3**) is provided at **Inset 5.3** below.

Inset 5.3: Example of a Reduction in the Standard Lateral LoD for 400kV T-pylon




*Longitudinal LoD*

5.6.46 The exception to the general allowance that any given pylon could be positioned up to a maximum distance of **+/- 40m** from the position shown at **Volume 5.3.3, Figure 3.1 and Figure 3.2** is where an overhead line changes direction at a tension or deviation pylon. At this point, a pylon would in practice have a very limited ability to move longitudinally from the positions shown as the conductors (and the space required for swing in adverse weather conditions) would exceed the defined LoD as shown on the Proposed Development Plans (see **Volume 5.3.3, Figure 3.1 and Figure 3.2**).

5.6.47 In practice, should any given pylon be repositioned longitudinally, the subsequent effects on the position of the next pylons along the alignment (i.e. any subsequent repositioning of other pylons) would be relatively limited as National Grid would typically seek to retain pylon positions at the locations shown on the Proposed Development Plans within approximately 2 pylon spans.

*400kV and 132kV Underground Cables*

*General*

5.6.48 The underground components of the Proposed Development consist of both 400kV and 132kV underground cables; however the assessment principles of the 400kV and 132kV cable working corridors and their associated LoD are the same and are described below.

5.6.49 Indicative trench positions for the installation of the 400kV and 132kV cables (within the respective LoD) are shown on the Construction Plans (see **Volume 5.3.3, Figure 3.3**).

5.6.50 **Volume 5.3.3, Figure 3.17** shows a typical construction swathe and general arrangement for the 400kV and 132kV cables. For the 400kV cables this would include a working corridor approximately 100m wide which would accommodate 4 cable trenches, a temporary haul road, soil storage areas and temporary drainage if required. The construction swathe and general arrangement for the 132kV cables would be similar to the 400kV cables, the main difference being that the working corridor would be smaller in width (approximately 60m) due to the requirement for only 2 cable trenches.

5.6.51 The lateral LoD (which varies in width) for both the 400kV and 132kV underground cables are shown on the Proposed Development Plans and Construction Plans (see **Volume 5.3.3, Figure 3.1** and **Figure 3.3** respectively). The cable trenches (see **Volume 5.3.3, Figure 3.3**) and the cable working corridors could be positioned anywhere within the LoD shown at **Volume 5.3.3, Figure 3.1 and Figure 3.2**.

5.6.52 Lateral LoD variance for underground 400kV and 132kV cables depends on :

- the nature and required land take of the underground cable installation works for example: installation in the countryside or in roads; open trenching or horizontal directional drilling (HDD); the requirement for cables bridges; or a scenario where more than one installation option is possible;
- existing environmental constraints such as woodland, watercourses, ecological features, buildings, roads and land ownership boundaries; and
- constraints resulting from the other Proposed Development components such as Sandford Substation.

*Installation Methods and Crossing Options*

5.6.53 Where the proposed underground cables would cross and subsequently directly and physically affect an existing geographical feature (typically the crossing of watercourses, roads, railways and utilities), a crossing would be required. **Volume 5.3.2, Appendix 3C** (Crossings Schedule) and **Volume 5.3.2, Appendix 3F** (400kV and 132kV Crossings Schedule) provide a full schedule of all crossing types required and the options available in each location; however a summary is provided below:

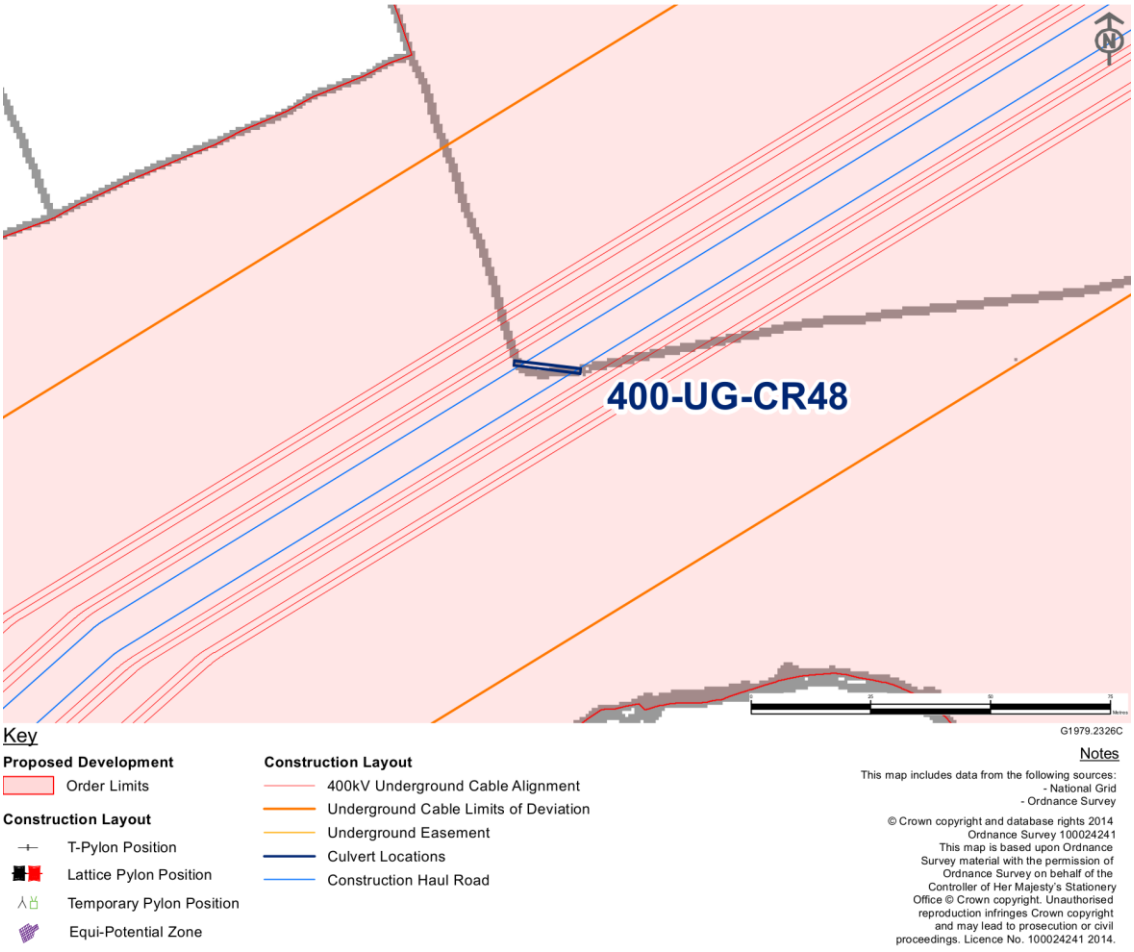
- open cut;
- HDD; or
- bridge.

5.6.54 The underground cables would be installed by open cut method unless other options (HDD and/or cable bridge) are specified in **Volume 5.3.2, Appendix 3F**).

5.6.55 All cable crossing options have also been assessed in different geographical locations which would be restricted to the flexibility offered by the lateral LoD for the proposed 400kV and 132kV underground cables as detailed above).

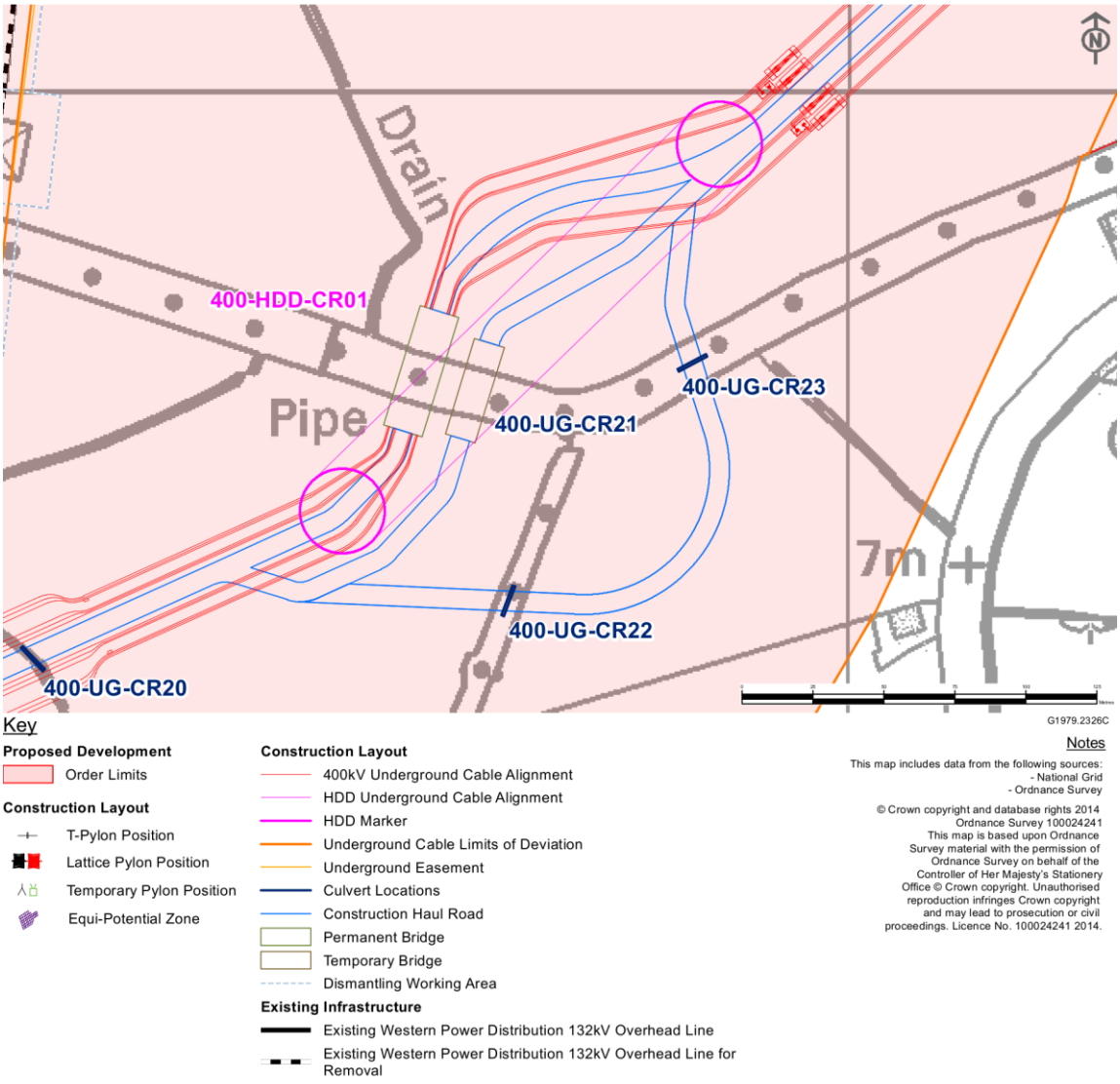
5.6.56 An example of an open cut underground cable installation (as shown at **Volume 5.3.3, Figure 3.3.21**) is provided at **Inset 5.4** below.

Inset 5.4: Example of an Open Cut Underground Cable Installation



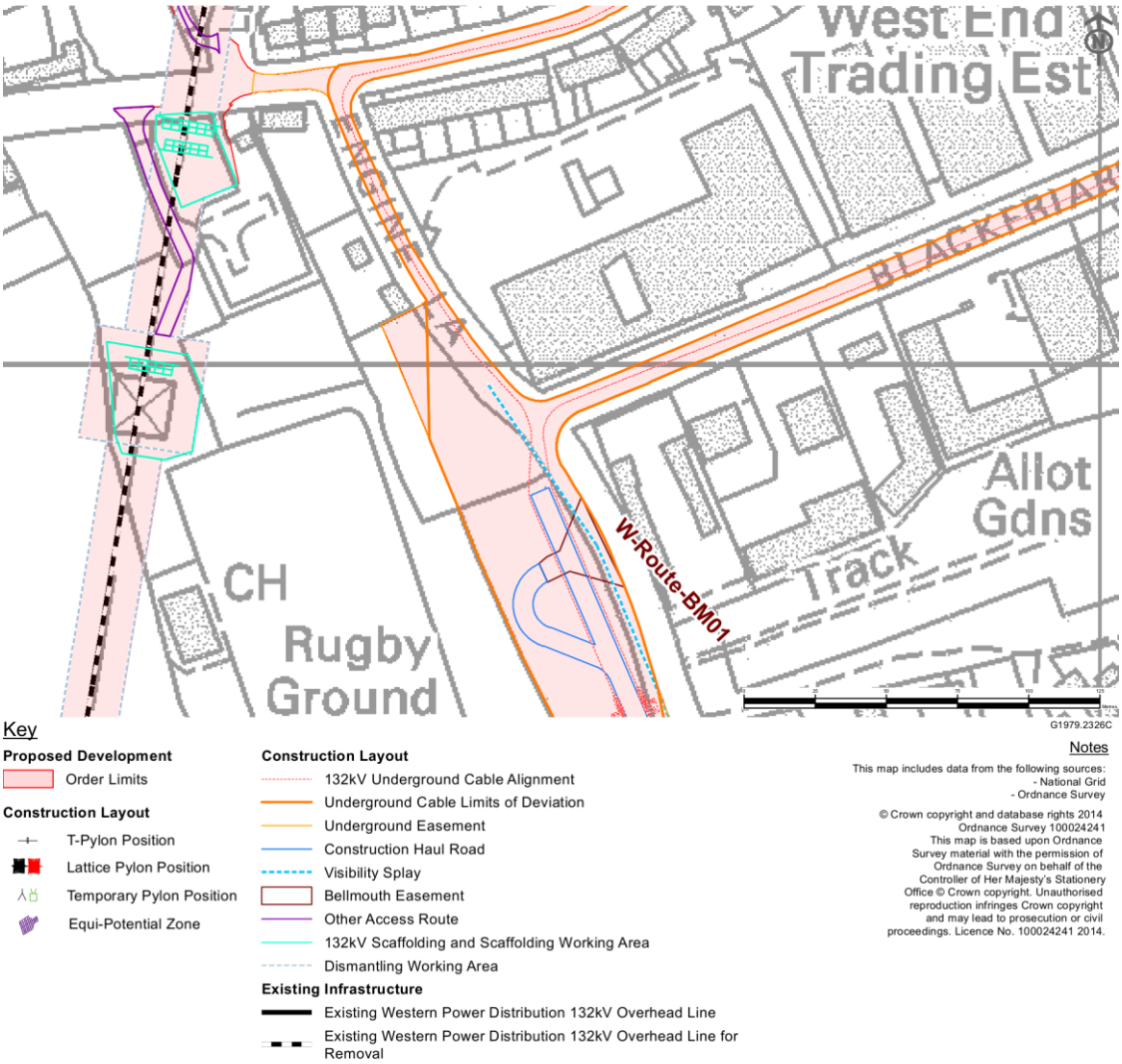

5.6.57 An example of where the underground cable could be installed either by HDD or cable bridge (at the River Axe as shown at **Volume 5.3.3, Figure 3.3.18**) is provided at **Inset 5.5** below.

Inset 5.5: Example of HDD or Cable Bridge Underground Cable Installation at the River Axe




5.6.58 An example of the varying underground cable LoD width is provided in Section D for the undergrounding of the 132kV W Route at Nailsea (see **Volume 5.3.3, Figure 3.3.34** and **Inset 5.6** below). At this location, undergrounding is proposed beneath North Street, Blackfriars Road, Queens Road, Hannah More Road and Hanham Way; the LoD has been reduced at these locations to street width. The construction practices here would be amended to suit the restricted working area.

Inset 5.6: Example of Reduced Underground Cable LoD Width at Nailsea




Order Limits

5.6.59 The Order Limits, identified in the Proposed Development Plans (see **Volume 5.3.3, Figure 3.1 and Figure 3.2**) as a red outline, are fixed and detail the anticipated maximum extent of land in which the Proposed Development may take place (if approved and subject to Development Consent Order Requirements and any other associated commitments).

*Site Specific Components*

5.6.60 Notwithstanding the Proposed Development components described in all preceding sub-sections of this section (spatial considerations) (namely all proposed 400kV and 132kV overhead lines and all 400kV and 132kV underground cables), the Order Limits would accommodate the following geographically fixed and site-specific components:

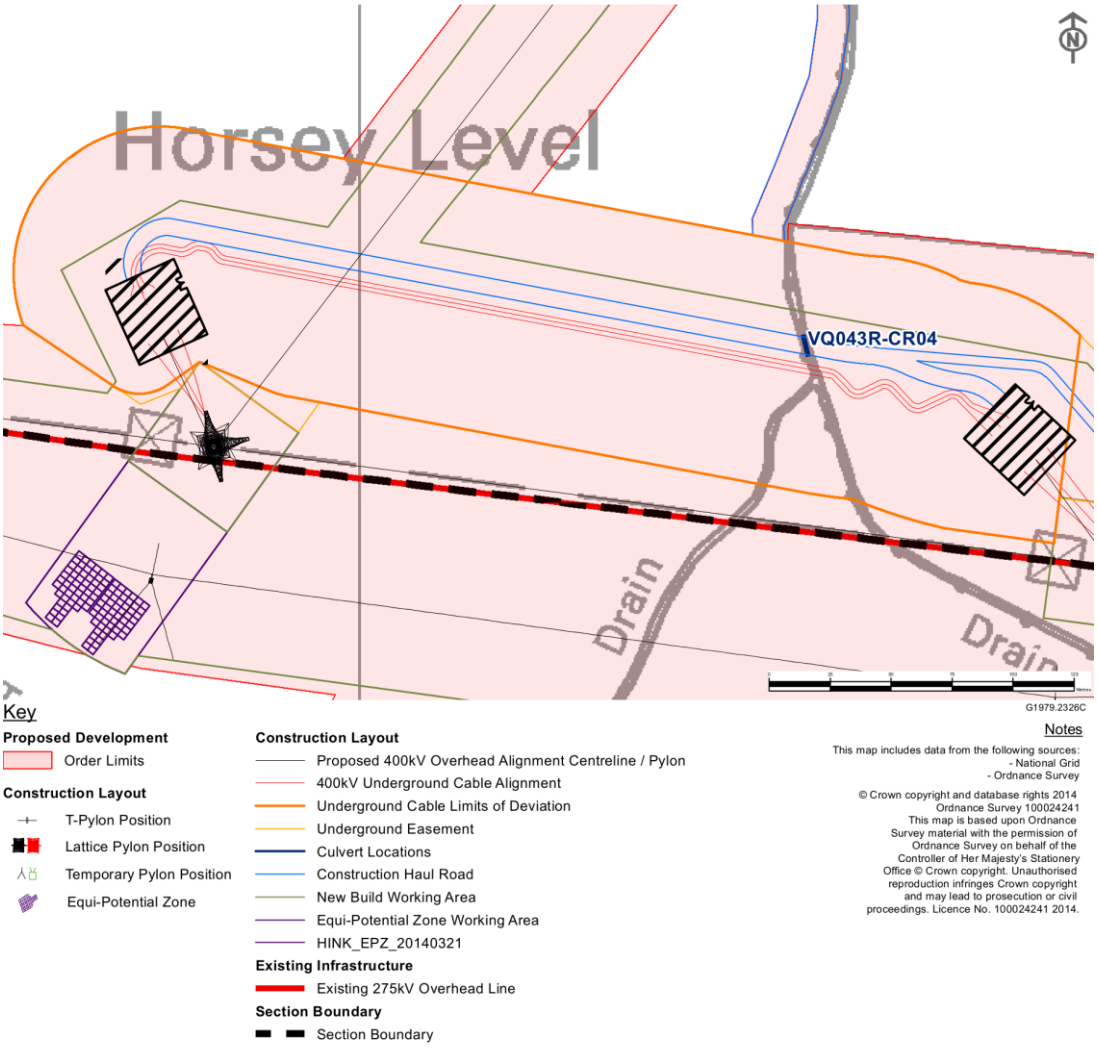
- Sandford 400/132kV Substation;
- extension to Seabank 400kV Substation;
- modifications to Seabank 132kV Substation;;
- modifications to Churchill, Avonmouth and Portishead 132/33kV Substations;

- cable sealing end (CSE) compound south of the Mendip Hills;
- 2 CSE compounds near Bridgwater Tee;
- removal of existing 132kV overhead lines;
- temporary construction compounds; and
- bellmouth locations; and
- visibility splays.

*Substation and CSE Compound Works*

5.6.61 The proposed permanent substation works (new substation at Sandford, extension at Seabank and modifications to other substations) and permanent CSE compound works are geographically fixed and have been assessed as such. The permanent works associated with these components would be within the associated working areas (as shown at **Volume 5.3.3, Figure 3.3.5)** and the fixed positions are provided at **Volume 5.3.3, Figures 3.9 – 3.15**; an example, at the Bridgwater Tee CSE compounds, is provided at **Inset 5.7** below.

Inset 5.7: Example of the Work Area for the Bridgwater Tee CSE Compounds



*Removal of Existing 132kV Overhead Lines*

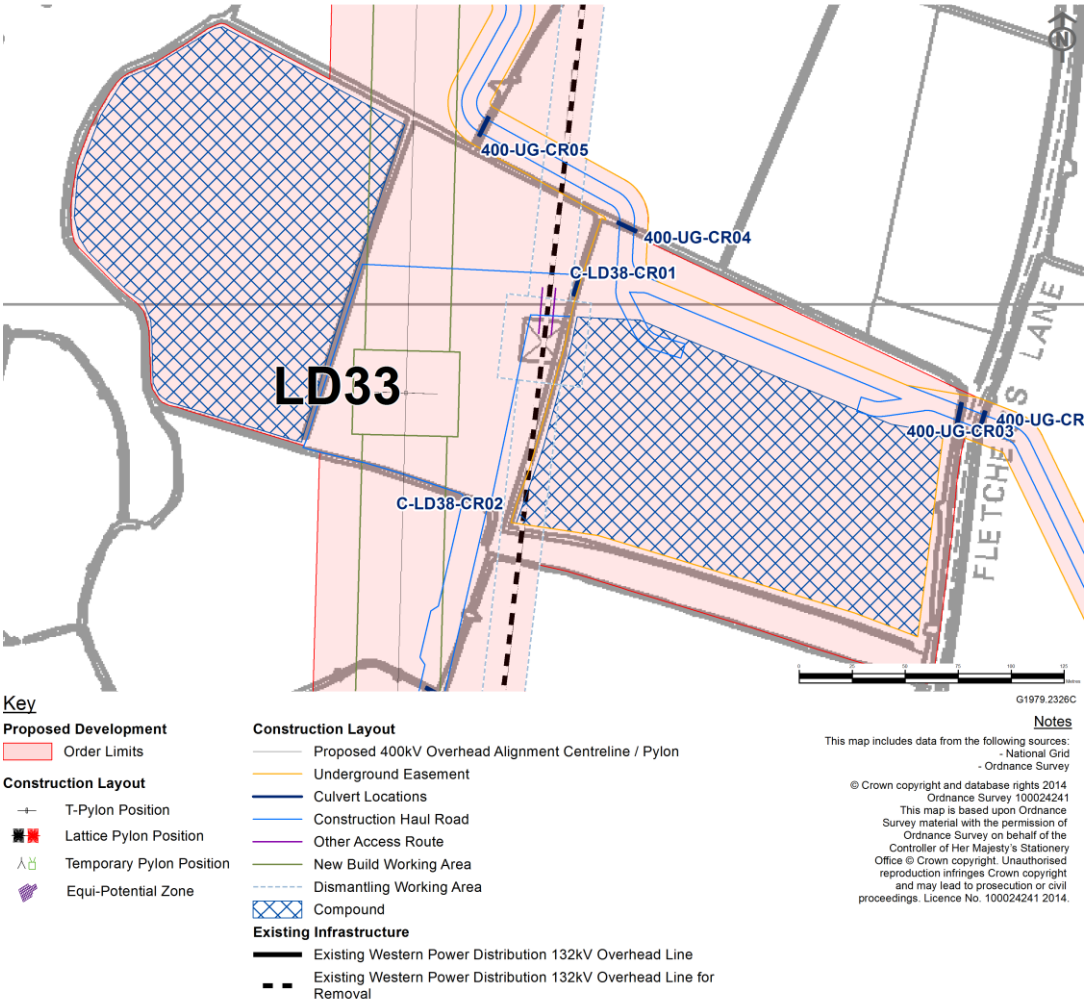
5.6.62 The existing 132kV overhead lines are existing, geographically fixed electrical infrastructure. Therefore, their removal is assessed on that basis. Pylon foundations would be removed to a depth of approximately 1m and subsoil and topsoil reinstated. In exceptional circumstances the entire foundation may be removed.

5.6.63 The approach to foundation removal (detailed above) would also be applied to the decommissioning of the proposed 400kV and 132kV overhead lines.

*Temporary Construction Compounds*

5.6.64 **Volume 5.3.3, Figure 3.16** provides three layout plans showing typical site laydown/construction compound areas. The temporary construction compounds have been assessed as being able to be constructed anywhere (either partly or in full) within the area demarcated on the Proposed Development Plans and Construction Plans (see **Volume 5.3.3, Figures 3.1 and 3.3** respectively). An example of a demarcated construction compound area (as shown at **Volume 5.3.3, Figure 3.3.16**) is provided at **Inset 5.8** below.

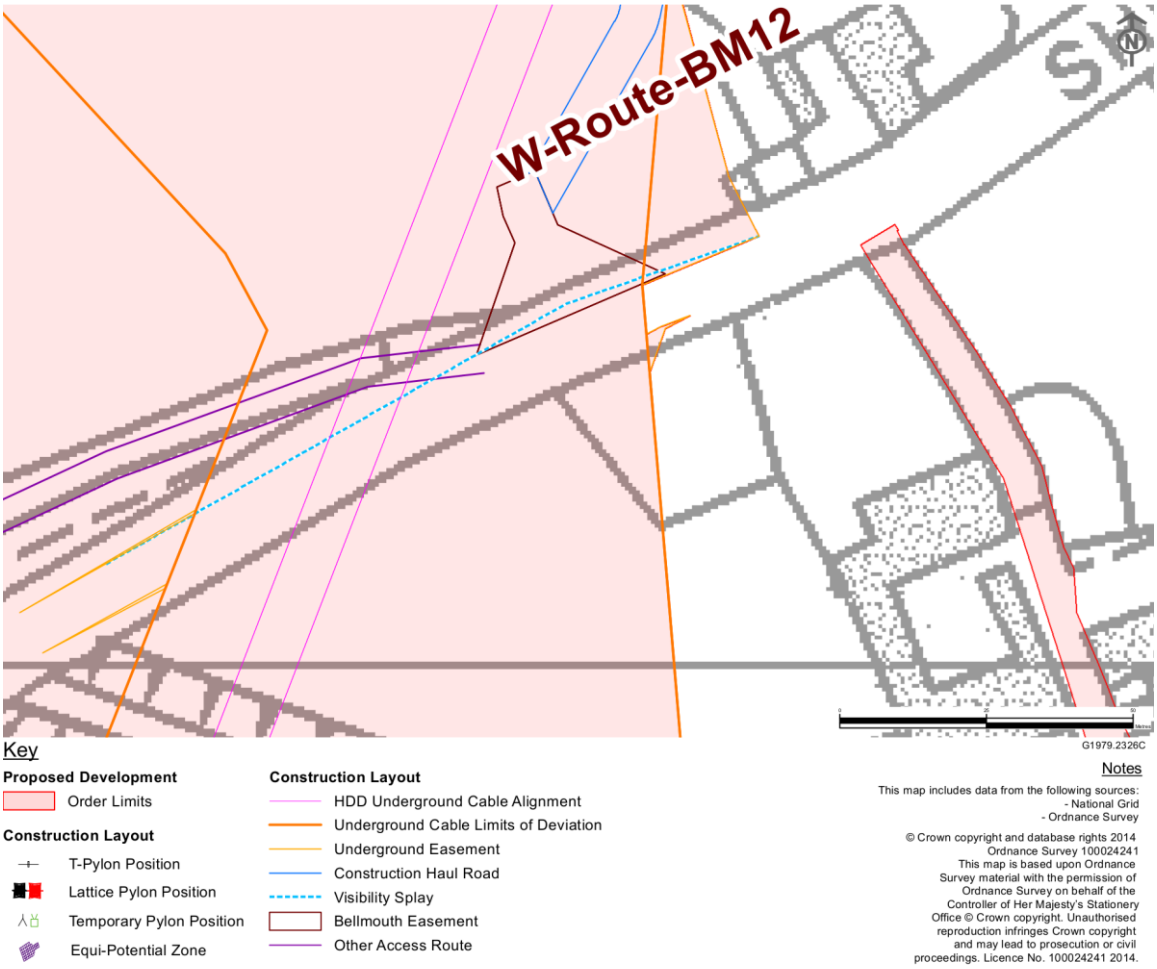
Inset 5.8: Example of the Construction Compound Area at the A38 Bristol Road



*Bellmouth Locations*

5.6.65 The proposed bellmouth locations off the existing highway network have been agreed in principle with the relevant local highways officers and the Highways Agency. The locations of the proposed bellmouths are provided at **Volume 5.3.3, Figure 3.3**) and are presented as boxes or triangular shaped polygons. An example of a bellmouth (as shown at **Volume 5.3.3, Figure 3.3.40**) is provided at **Inset 5.9** below.

Inset 5.9: Example of a Bellmouth Easement Area




5.6.66 **Volume 5.3.3, Figure 3.22** provides layout plans of three typical bellmouth arrangements (Type 1, Type 2 and Type 3). The typical bellmouth plans provided at **Volume 5.3.3, Figure 3.22** have been assessed as being able to be constructed anywhere (either partly or in full) within those polygons provided at **Volume 5.3.3, Figure 3.3**.

*Visibility Splays*

5.6.67 Visibility splays would be required for proposed bellmouths to maintain highway safety. Visibility splays are shown on the Construction Plans (see **Volume 5.3.3, Figure 3.3**); an example is also provided at **Inset 5.9** above.

5.6.68 The visibility splays have been assessed as being required for the full extent of the area demarcated on **Volume 5.3.3, Figure 3.3**. For example, hedgerow (if present) would be removed in full if deemed necessary to maintain highway safety during the construction works.

*Components which may be Sited Anywhere in the Order Limits*

5.6.69 In addition, the following components/activities (as shown at **Volume 5.3.3, Figure 3.3 and Figure 3.4**) may be sited anywhere within the Order Limits (subject to any restrictions set out in the DCO Works Plans):

- haul roads;
- other access roads;
- pylon working areas;
- scaffolding and associated working area;
- equi-potential zones (EPZ);
- crossings; and
- Indicative access for future maintenance.

5.6.70 The above components have been assessed in their locations as shown on the Construction Plans (see **Volume 5.3.3, Figure 3.3 – 3.4**); however the ES has also considered the potential for environmental effects in the event that any of the above components/activities are sited in a different position in the Order Limits than shown at **Volume 5.3.3, Figure 3.3 – 3.4** (subject to the parameters described in the paragraphs below and at section 5.4 below). The sections below describe the potential for these components/activities to be sited in alternative positions.

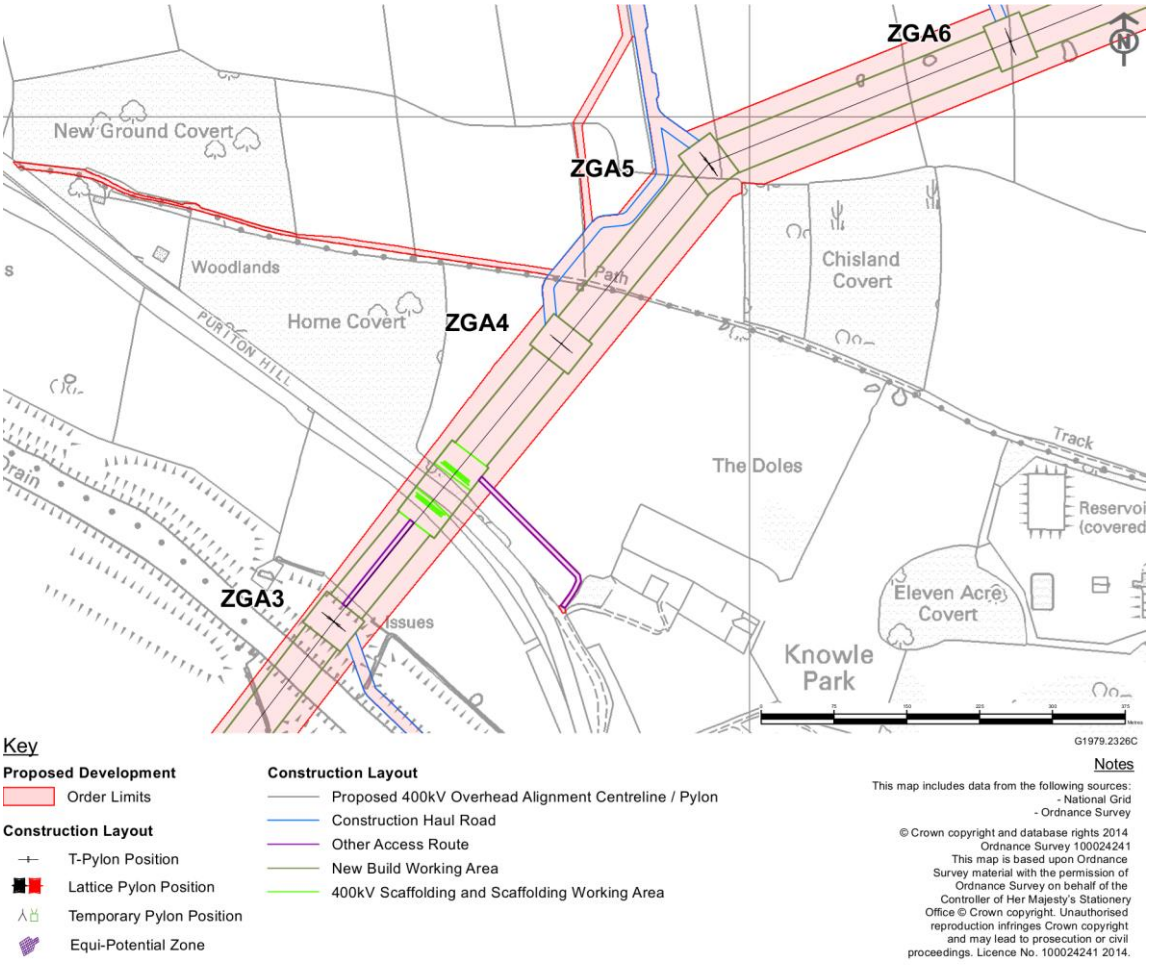
*Haul Roads and other Access Roads*

5.6.71 The temporary construction haul roads and access roads would be approximately 4-5m wide and would be used for the transportation of plant and machinery required during the construction of the Proposed Development. Where access roads would be required to temporarily cross a geographical feature (for example a watercourses, roads, railways and utilities), open cut (culvert) or temporary bridges would be installed (see paragraphs 5.6.79 - 84 below for further details regarding road crossings).

5.6.72 The other Proposed Development components/activities that the proposed haul roads and access roads would provide access to have been considered as a constant. For example, where a haul road or access road is shown to provide access to five specific pylons and a construction compound, alternative haul road and access road positions within the flexibility of the Order Limits have been assessed as providing an alternative access (or accesses) to the same five pylons and construction compound. Any geographical flexibility offered by those components themselves (e.g. LoD for the pylons) has also been considered when

assessing alternative access road locations. An example of a temporary access road (as shown at **Volume 5.3.3, Figure 3.3.6**) is provided at **Inset 5.10** below.

Inset 5.10: Example of a Construction Haul Road and Other Access Road

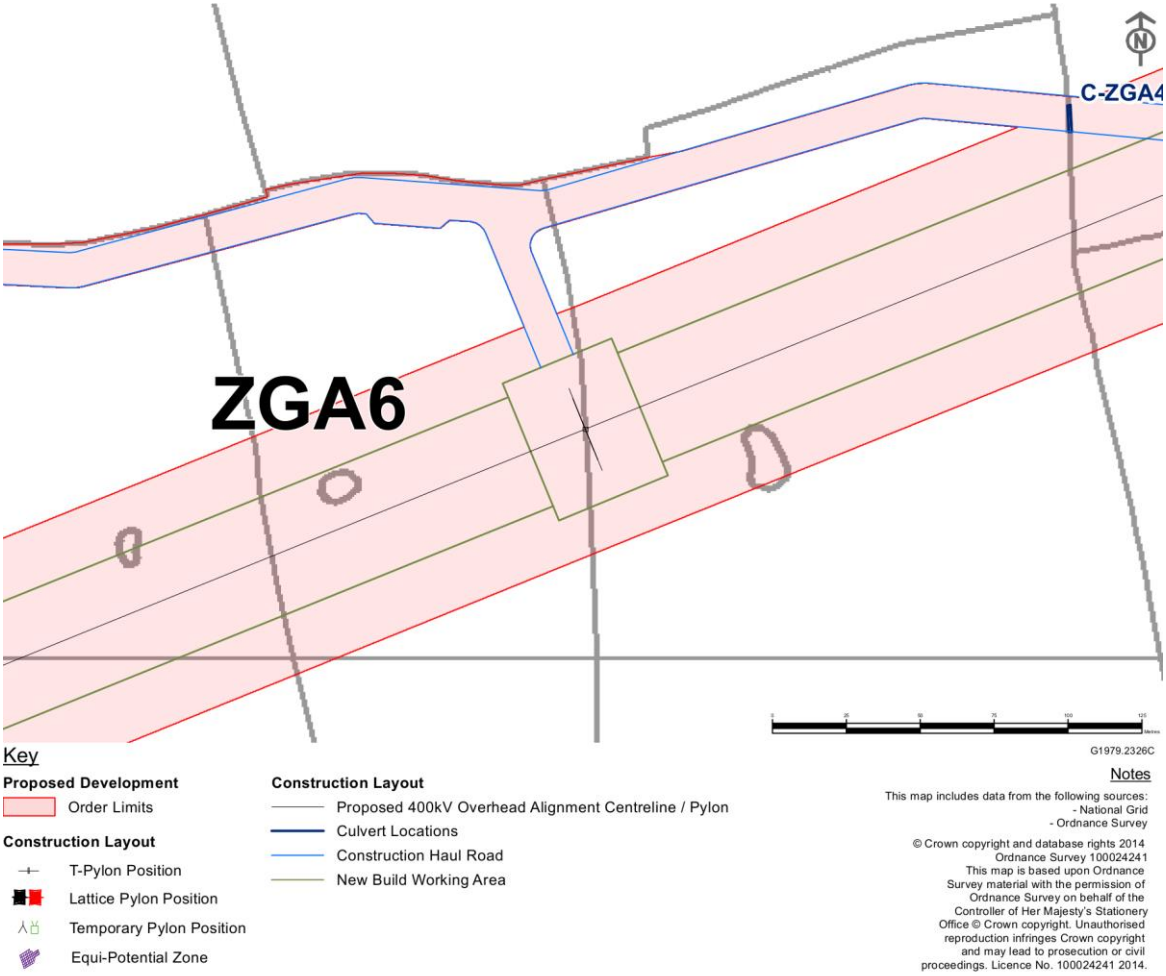



*Pylon Working Areas*

5.6.73 The pylon working areas would range in size from approximately 40m x 50m for a T-pylon, approximately 40m x 40m to 50m x 50m for a standard lattice pylon, approximately 70m x 70m for a 90 degree deviation steel lattice pylon, approximately 70m x 70m for the two special lattice pylons (one on each bank of the River Avon), and approximately 80 x 60m for the pylons at the entry point to the consented Shurton Substation.

5.6.74 The pylon working areas would be required in the area immediately surrounding any pylon proposed for removal of erection. The pylon working areas have therefore also been assessed in different geographical locations which would be restricted to the associated flexibility offered to the lateral and longitudinal LoD for all overhead lines. An example of a pylon working area (as shown at **Volume 5.3.3, Figure 3.3.7**) is provided at **Inset 5.11** below.

Inset 5.11: Example of a Pylon Working Area

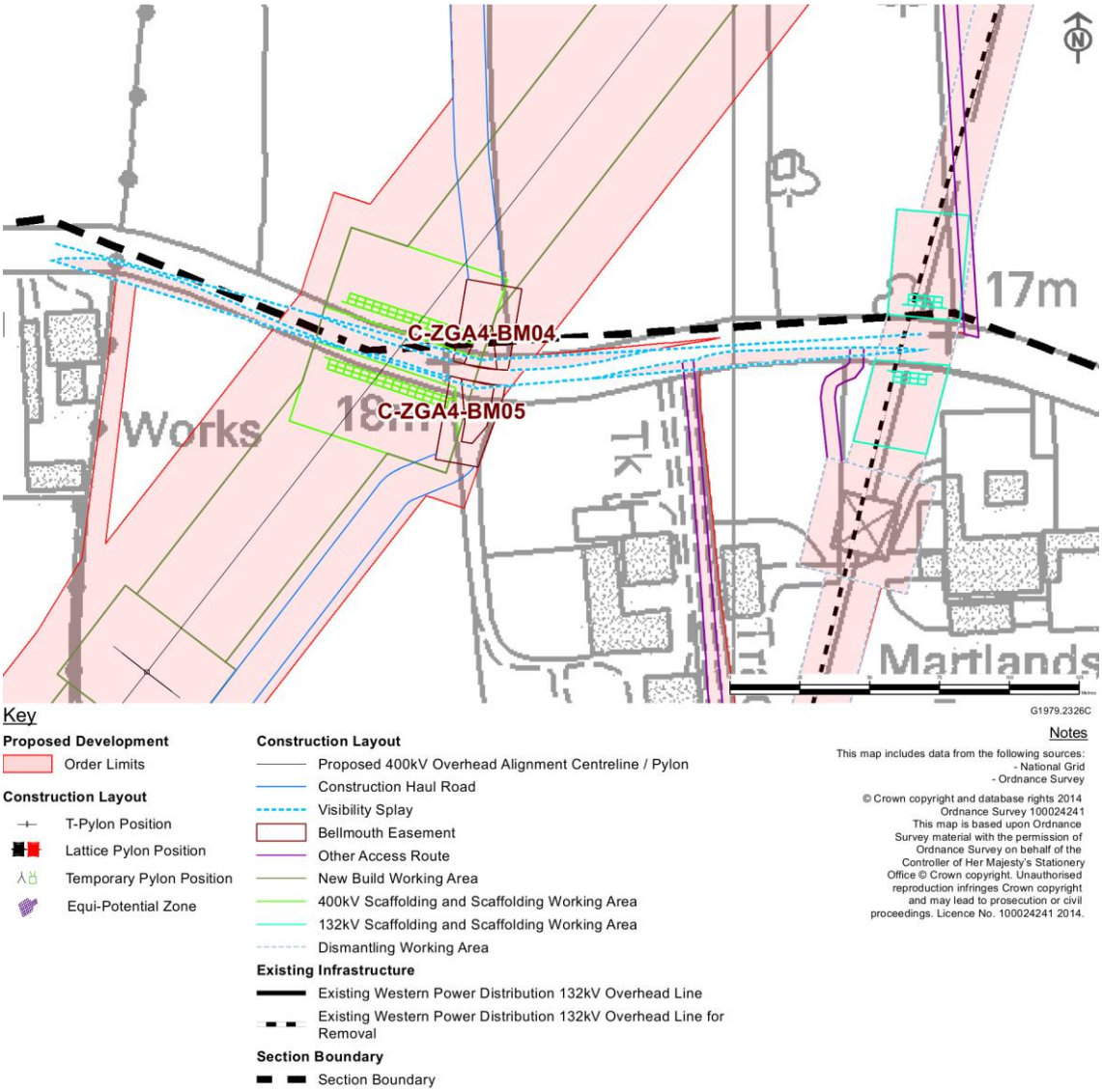



*Scaffolding and Associated Working Area*

5.6.75 Some temporary scaffolding would be installed during the works as a safety measure to protect roads, railways, Public Rights of Way (PRoWs) and distribution network overhead lines which would be crossed by the new 400kV overhead line.

5.6.76 The feature(s) that the scaffolding would be installed to protect would be existing and geographically fixed features; therefore the scaffolding and the associated working area have also been assessed only where that feature might be crossed in an alternative position within the flexibility offered by the overhead line LoD. For example, where the proposed 400kV overhead line would cross a road where scaffolding would be required, the scaffolding and associated working area would either be in the fixed position as shown on the plans or would be subject to minor lateral movement due to the flexibility offered by the overhead line lateral LoD. An example of a scaffold and associated working area (as shown at **Volume 5.3.3, Figure 3.3.7**) is provided at **Inset 5.12** below.

Inset 5.12: Example of Scaffolding and Associated Working Area

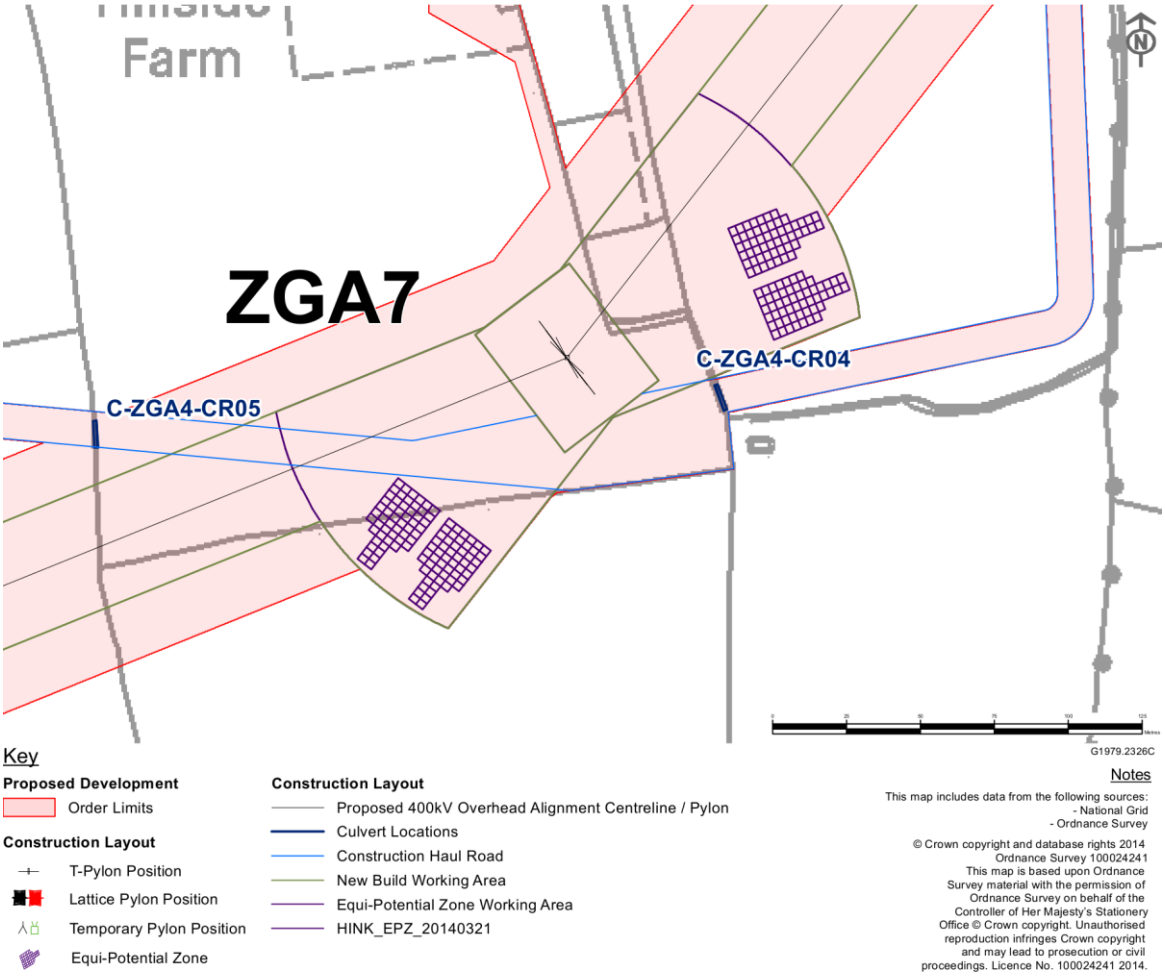



*Equi-Potential Zones*

5.6.77 The EPZ is a pulling or tensioning zone for the installation of pylon conductors and would remain relatively close to the associated overhead line. The EPZ working areas are shown on the Construction Plans (**Volume 5.3.3, Figure 3.3**).

5.6.78 The EPZ and the associated working areas have therefore also been assessed in different geographical locations which would be restricted to the associated flexibility offered by the lateral and longitudinal LoD for all overhead lines. An example of an EPZ (as shown at **Volume 5.3.3, Figure 3.3.7**) is provided at **Inset 5.13** below.

Inset 5.13: Example of an EPZ




*Crossings*

5.6.79 Where the Proposed Development would cross and directly and physically affect an existing geographical feature (typically the crossing of watercourses, roads, railways and utilities by proposed haul roads, access roads and underground cables), a crossing would be required. **Volume 5.3.2, Appendix 3C** (Crossings Schedule) and **Volume 5.3.2, Appendix 3F** (400kV and 132kV Crossing Schedule) provide a full schedule of all crossing types required and the options available in each location; however a summary is provided below:

- open cut (culverts or porous fill for road and cable crossings);
- HDD (for cable crossings); or
- bridge (for road and cable crossings).

5.6.80 The cable crossings have also been assessed in different geographical locations which would be restricted to the flexibility offered by the lateral LoD for all cables (described at paragraphs 5.6.48 - 52 above).

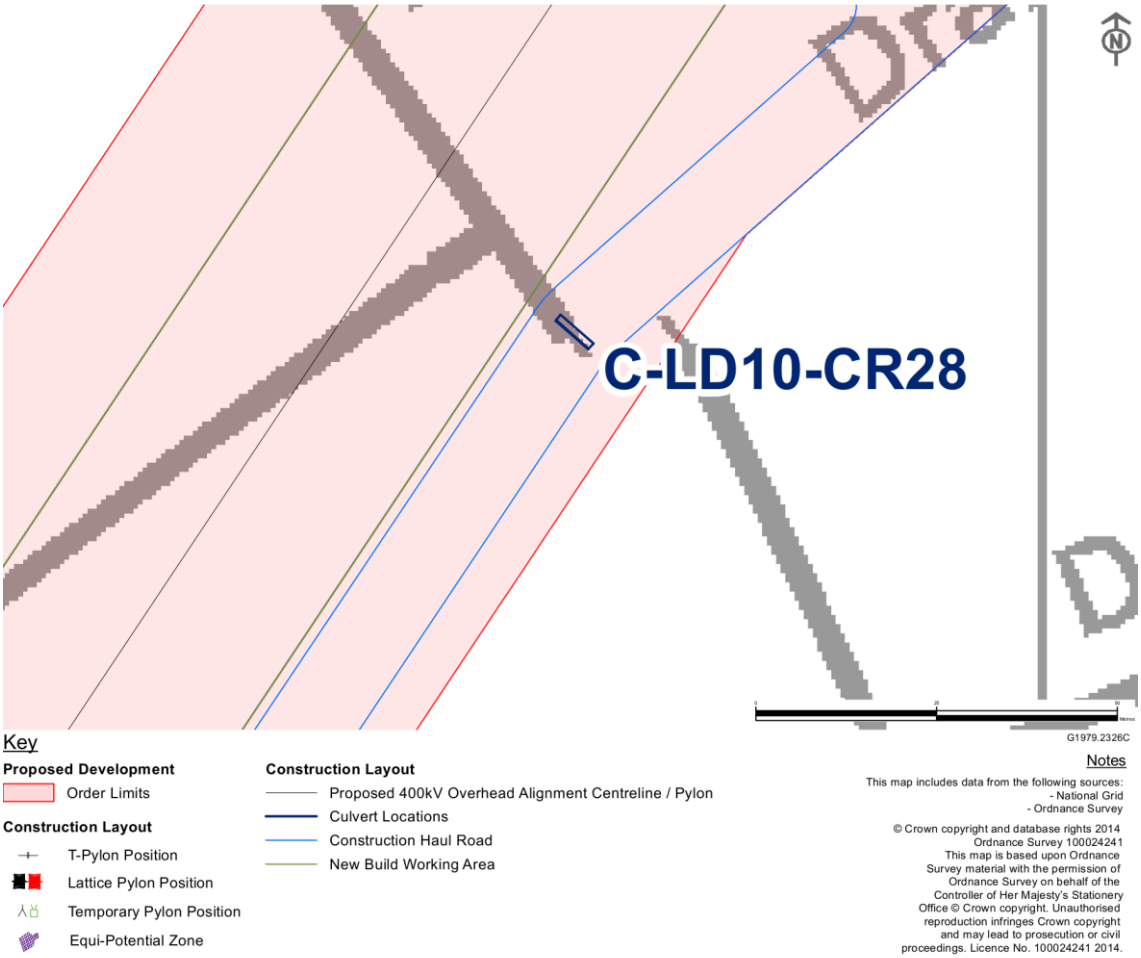
5.6.81 The road crossings would be undertaken via temporary culverts, porous fill or bridges. Permanent crossings would be required for the proposed semi-permanent

access road required for the delivery of the Super Grid Transformers (SGTs) from Towerhead Road to Sandford Substation.

5.6.82 The road crossings have also been assessed in different geographical locations which would be restricted to the flexibility offered by the Order Limits. The alternative crossings locations would also be restricted to the assessment parameters associated with the roads themselves as described at paragraphs 5.6.71 - 72 (i.e. the alternative positions of the access roads would themselves be restricted so they remain as providing access to the same Proposed Development components/activities within the Order Limits.

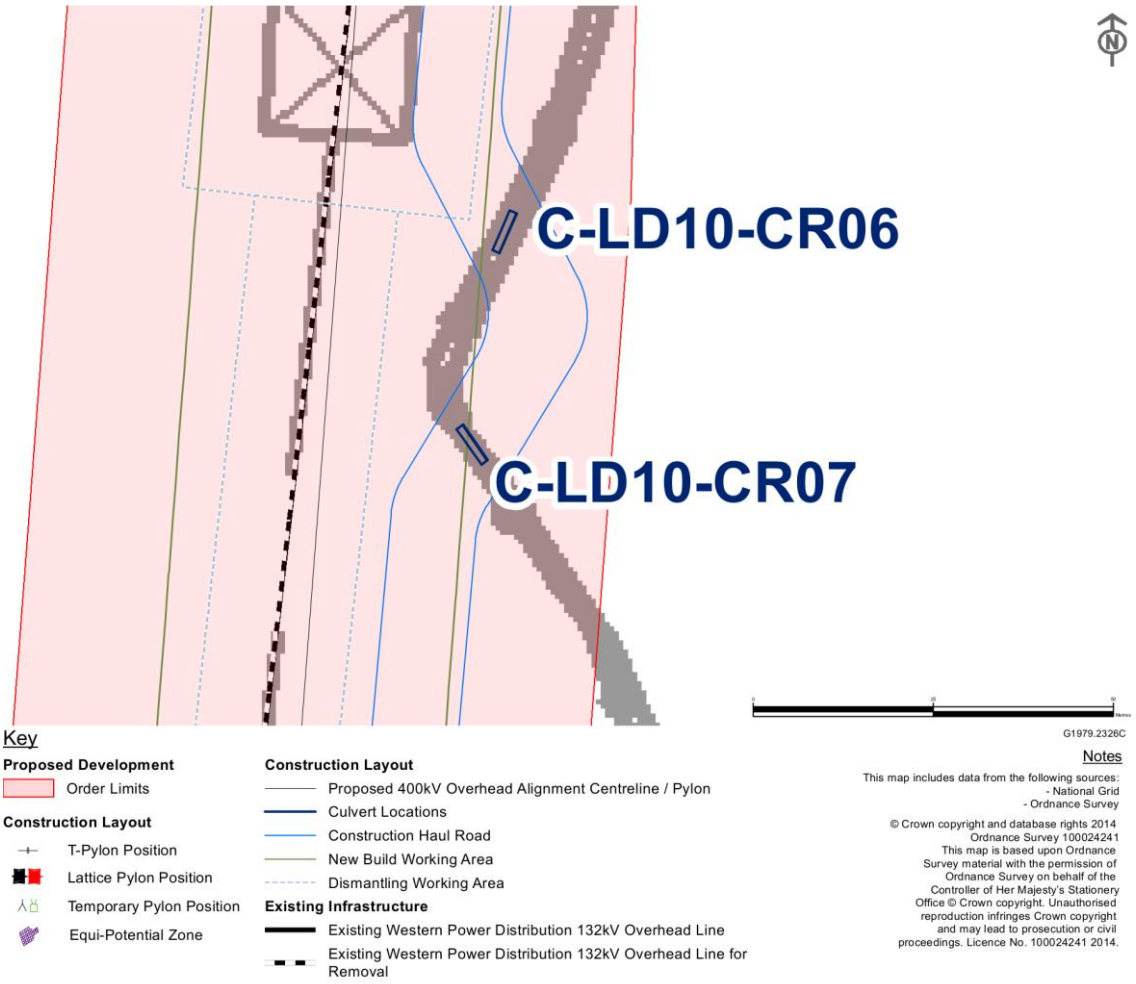
5.6.83 An example of a road crossing (culvert) (as shown at **Volume 5.3.3, Figure 3.3.11**) is provided at **Inset 5.14** below

Inset 5.14: Example of a Road Crossing (Culvert)



5.6.84 An example of a road crossing (bridge) (as shown at **Volume 5.3.3, Figure 3.3.10**) is provided at **Inset 5.15** below.

Inset 5.15: Example of a Road Crossing (Bridge)

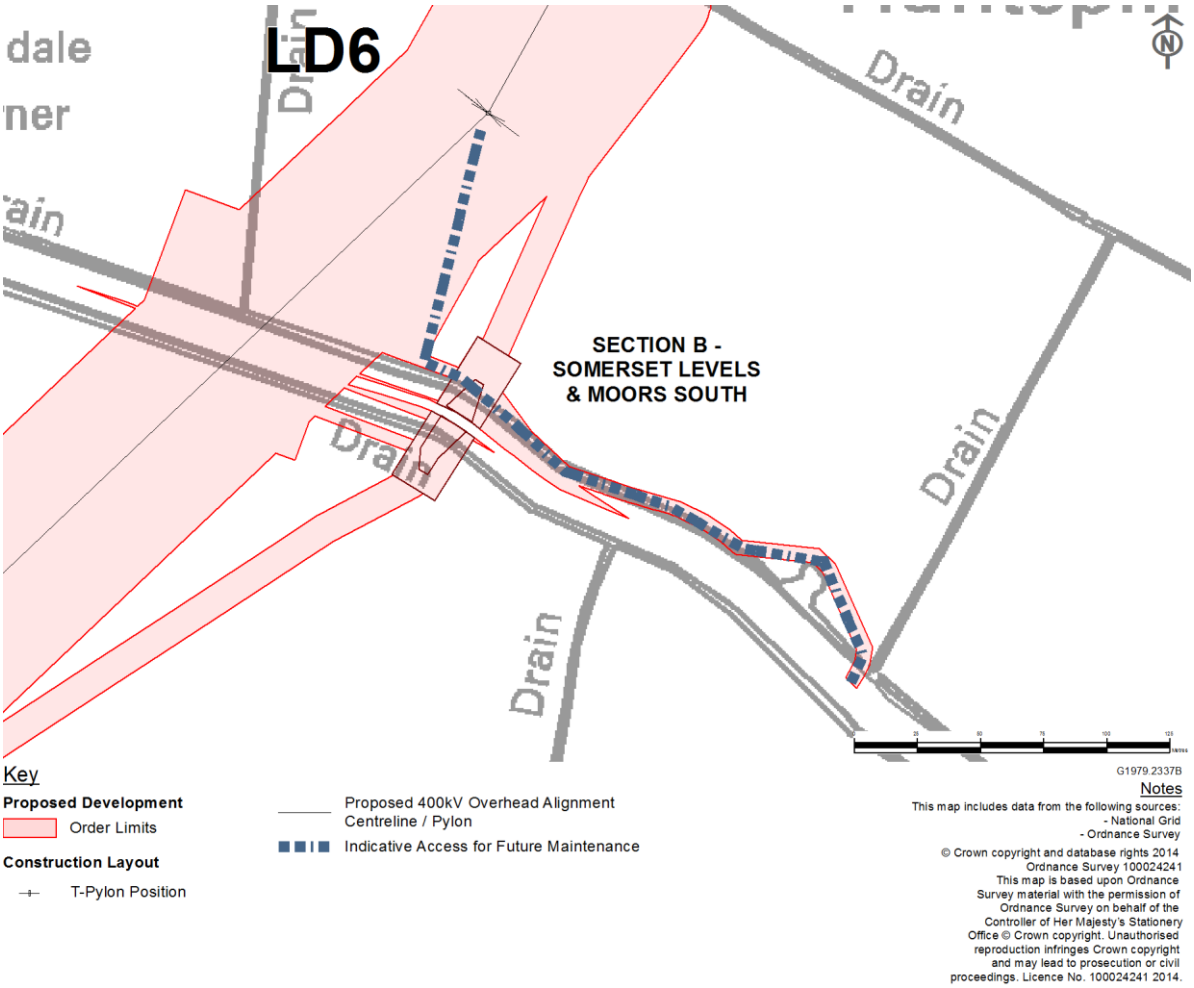



*Indicative Access for Future Maintenance*

5.6.85 National Grid would require access to ensure the Proposed Development could be appropriately maintained. The access would typically be made by foot, 4x4 or tractor and trailer and would not typically require any new temporary accesses; however access to tension pylons may require temporary stone roads or aluminium trackway to be laid. Upon completion of any maintenance works, surfaces would be restored to their previous condition. The indicative accesses for future maintenance are shown at **Volume 5.3.3, Figures 3.5 – 3.6**.

5.6.86 The point of access from the existing highway is fixed as shown at **Volume 5.3.3, Figures 3.5 – 3.6**. The Proposed Development component that the indicative accesses would be used for maintenance purposes have also been considered as a constant; however, alternative routes have been assessed (within the Order Limits) to get from the existing highway network to the Proposed Development component. An example is provided for proposed pylon LD6 at **Inset 5.16** below; in many cases the majority of the indicative access route itself would be restricted by the Order Limits which are tight around the perimeter of the access.

Inset 5.16: Example of an Indicative Access for Future Maintenance to Pylon LD6




EIA Assessment Parameters

5.6.87 The prediction and assessment of significance of potential effects has been undertaken in the first instance using the fixed positions as shown on the following plans:

- Proposed Development Plans (**Volume 5.3.3, Figure 3.1**);
- Proposed Development Plans - Preferred Route Option A and Alternative Route Option B (**Volume 5.3.3, Figure 3.2**);
- Construction Plans (**Volume 5.3.3, Figure 3.3**);
- Construction Plans – Preferred Route Option A and Alternative Route Option B (**Volume 5.3.3, Figure 3.4**);
- Indicative Access for Future Maintenance (**Volume 5.3.3, Figure 3.5**); and
- Indicative Access for Future Maintenance – Preferred Route Option A and Alternative Route Option B (**Volume 5.3.3, Figure 3.6**).

5.6.88 The proportionate degree of flexibility assigned to the Proposed Development components and construction activities within the LoD and the Order Limits has been assessed and described on an individual receptor by receptor basis; this has

been undertaken only where a receptor is considered likely to experience a different significance of effect to that likely to arise from the fixed positions shown on the Proposed Development Plans at **Volume 5.3.3, Figures 3.1 – 3.2**, the Construction Plans at **Volume 5.3.3, Figures 3.3 – 3.4** and the Indicative Access for Future Maintenance Plans at **Volume 5.3.3, Figures 3.5 – 3.6**. This has been undertaken for each individual technical chapter.

5.6.89 The assessment of flexibility described above has been undertaken using a reasonable worst case scenario approach on a receptor by receptor basis. As the nature and geographical location of individual receptors differs between technical chapters, the geographical location of the Proposed Development components and activities (within the parameters of the LoD and Order Limits) and their associated assessment also differs between each technical chapter. For example the ES has **not** considered a fixed alternative alignment (or a number of alternative alignments) for the 400kV overhead line within the parameters of the LoD or whether such alignments are feasible from an engineering perspective either in part or in their entirety.

5.6.90 In each individual technical chapter, where the assessment of flexibility identifies potential effects that are considered to be significant and unable to be removed or reduced to acceptable levels through the implementation of mitigation measures, these are stated clearly. These locations are effectively restricted areas and are clearly demarcated on relevant figures specific to each individual technical chapter.

***Assessing Significance of Effects***

5.6.91 The Institute of Environmental Management's (IEMA) Special Report entitled 'The State of Environmental Impact Assessment Practice in the UK' states that the primary method of describing environmental effects (to aid the decision-making process) is to describe and evaluate the significance of individual effects on different aspects of the environment

5.6.92 Overarching National Policy Statement for Energy (EN-1) states that:

*"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. 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. 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."*

5.6.93 IEMA's Special Report includes a reference to its 'Guidelines for Environmental Impact Assessment (2004)' which states:

*"There is often not a single, definitive, correct answer as to whether an impact is significant or not. Significance is influenced by the values of the individual, how the*

*changes to the environment affect them and whether they have a stake in the project or not."*

5.6.94 This ES has been undertaken in accordance with IEMA's Special report which states that the evaluation of significance is often subjective, and findings are regularly set out as different levels of significance (e.g. major, moderate, minor, etc.). The evaluation of significance is commonly undertaken by comparing the magnitude of the predicted effect with the sensitivity of the receiving environment.

Sensitivity of Receptor

5.6.95 The sensitivity of the receptor in the base case varies according to the relative importance of existing environmental features on or near to the Proposed Development (e.g. whether it is of national, regional or local importance) and the sensitivity of receptors that would potentially be affected.

5.6.96 Criteria for the determination of sensitivity (very high, high, medium, or low) or of importance or value (international, national, regional or local) are established based on guidance, legislation, statutory designation and/or professional judgment.

5.6.97 The following criteria provide a general definition for determining the sensitivity of receptors. Sensitivity criteria are explained in each specialist topic chapter.

- very high sensitivity - the receptor has little or no ability to absorb change without fundamentally altering its present character, is of very high environmental value, or of international importance e.g. special qualities of a Special Protection Area or National Park;
- high sensitivity - the receptor has low ability to absorb change without fundamentally altering its present character, is of high environmental value, or of national importance e.g. special qualities of a Site of Special Scientific Interest or AONBs;
- moderate sensitivity - the receptor has moderate capacity to absorb change without significantly altering its present character, has some environmental value, or is of regional importance e.g. special qualities of a regionally important geological site;
- low sensitivity - the receptor is tolerant of change without detriment to its character, is of low environmental value, or local importance e.g. qualities of a hedgerow or industrial areas; and
- negligible sensitivity - the receptor is resistant to change or is of little environmental value.

Magnitude of Effect

5.6.98 The magnitude of potential effects (both beneficial and adverse) on the relevant receptor in the environmental base case has been identified through the detailed consideration of the Proposed Development taking into account the following:

- the degree to which the environment is potentially affected e.g. whether the quality is enhanced or impaired;

- the scale or degree of change from baseline conditions as a result of the proposed development;
- the duration of the effect e.g. whether it is temporary or permanent; and
- the reversibility of the effect.

5.6.99 The following criteria provide a general definition for determining the magnitude of a particular effect:

- high magnitude - total loss or major alteration to key elements or features of the baseline conditions to the extent that post-development character or composition of baseline conditions will be fundamentally changed;
- moderate magnitude - loss or alteration to one or more key elements or features of the baseline conditions to the extent that post-development character or composition of the baseline conditions will be materially changed;
- low magnitude - minor shift away from baseline conditions. Changes arising will be detectable but not material; the underlying character or composition of the baseline conditions will be similar to the pre-development situation; and
- negligible magnitude - very little change from baseline conditions. Change is barely distinguishable, approximating to a 'no change' situation.

Significance of Effect

5.6.100 A combination of the magnitude of the likely effect and the sensitivity of the receiving environment will determine the overall significance of effects. The significance of the likely effects arising from the Proposed Development is categorised throughout the ES as follows (unless stated otherwise).

- major adverse
- moderate adverse.
- minor adverse.
- none.
- minor beneficial.
- moderate beneficial.
- major beneficial.

***Type of Effects***

5.6.101 The prediction of possible environmental effects in each environmental topic includes:

- direct effects;
- indirect (or secondary) effects;
- temporary effects;
    - short term (less than 12 months);
    - medium term (between one year and five years); and
    - long term (more than five years)
- permanent effects;
- adverse effects;

- beneficial effects;
- construction effects;
- operation effects;
- decommissioning effects;
- intra-project effects;
- inter-relationship of effects;
- residual effects; and
- cumulative effects.

5.6.102 Construction, operation, decommissioning, intra-project, inter-relationship, residual and cumulative effects are described in more detail below.

Construction Effects

5.6.103 Construction effects are those that would occur during the construction phase of the Proposed Development. This includes effects resulting from the activities associated with installation of the overhead line, underground cables, CSE compounds and substations and the removal of 132kV overhead lines. These activities include the creation of temporary access tracks, temporary scaffolding and construction compound areas and work activities. Construction effects are temporary during the construction phase of the Proposed Development. Likely temporary effects during the construction phase of the Proposed Development are described in the ES.

Operation Effects

5.6.104 Operation effects would occur as a result of the presence, operation and maintenance of the Proposed Development. Infrequent maintenance will be required throughout the lifespan of the infrastructure, which at times will involve the refurbishment and replacement of equipment. Some operation effects may be temporary, for instance, during the maintenance period of the Proposed Development, whereas other operation effects may occur throughout the lifespan of the Proposed Development. Likely permanent and temporary effects during the operation phase of the Proposed Development are described in the ES.

Decommissioning Effects

5.6.105 Decommissioning effects are those that would occur only during the decommissioning phase of the Proposed Development. This would include effects resulting from the activities associated with the removal of the Proposed Development once the development is no longer required. The effects are likely to be similar to those during the construction phase but could be temporary or permanent. Likely permanent and temporary effects during the decommissioning phase of the Proposed Development are described in the ES.

5.6.106 The removal of the existing 132kV overhead lines is considered as part of the construction phase of the Proposed Development.

### *Intra-project Effects*

Proposed Development Components

5.6.107 Individual Proposed Development components have the potential to result in combined effects on individual receptors. For example, Section D would contain several Proposed Development components including but not limited to Sandford Substation, 132kV and 400kV underground cables, 132kV and 400kV overhead lines and modifications to Churchill Substation. Individual receptors may therefore experience effects from more than one of these components.

5.6.108 Where combined effects are considered likely, such effects are described in each environmental topic chapter. Depending upon the nature and geographical location of a given receptor, this assessment is presented either in isolation and in combination, or in combination only.

Proposed Development Sections

5.6.109 Each environmental topic chapter also considers (where relevant) any potential combined effects on individual receptors across Sections i.e. potential effects within Sections are not considered in isolation.

Inter-relationship of Effects

5.6.110 The inter-relationship between environmental topics is inherently considered in each environmental topic chapter. For example, topic areas such as hydrology and biodiversity cannot be considered in isolation since changes affecting one topic area can also have implications for other topic areas. The ES identifies potential interactions between environmental topic areas where relevant.

5.6.111 An exception is the inter-relationship of effects on human receptors where, for example, a receptor may experience visual effects, construction noise and construction traffic effects. Information on each of these effects on human receptors is presented in **Volume 5.1.1** (Socio-economics and Land Use).

### *Residual Effects*

5.6.112 The overall significance of potential effects takes into account the identified mitigation measures i.e. the assessment applies to the residual effects of the Proposed Development after mitigation measures (see paragraphs 5.6.118 - 125 for further details of the approach to mitigation) have been implemented.

### *Cumulative Effects*

5.6.113 Cumulative effects may arise where other major developments, in tandem with the Proposed Development, have the potential to affect specific environmental resources or receptors. These are also known as ‘inter-project’ effects.

5.6.114 The ES considers large-scale projects where consent has been granted and/or is in the process of being obtained and would be implemented in a similar timeframe to the Proposed Development.

5.6.115 'Advice Note Nine: Rochdale Envelope' (Ref 5.2) advises that other major development should be identified through consultation with the local planning authorities and other relevant authorities on the basis of those that are:

- under construction;
- consented applications, but not yet implemented;
- submitted applications not yet determined;
- projects on the Planning Inspectorate Programme of Projects;
- identified in the relevant Development Plan (and emerging Development Plans - with appropriate weight being given as they move closer to adoption) recognising that much information on any relevant proposals will be limited; and
- identified in other plans and programmes (as appropriate) which set the framework for future development consents/approvals, where such development is reasonably likely to come forward.

5.6.116 Consultation with the relevant authorities was undertaken between 28 October and 15 November 2013 to invite comments on the proposed cumulative assessment method and to identify other projects that may give rise to cumulative effects. For each environmental topic, the spatial boundary for potential cumulative effects was identified. Other major development proposals considered are shown in **Volume 5.17.1, Table 17.7** and **Volume 5.17.3, Figure 17.1**. Major development proposals considered as part of the assessment of potential cumulative effects include:

- Hinkley Point C Nuclear Power Station;
- Energy park at the former Royal Ordnance factory;
- EDF Energy Renewables five turbine wind farm at Withy Farm;
- Scottish Power Avon Power Station;
- Seabank 3 Power Station; and
- Severnside Area Enterprise Zone.

5.6.117 The method adopted to identify other major development proposals and the assessment of potential cumulative effects is provided at **Volume 5.17.1**.

***Mitigation***

Mitigation Required to Prevent, Reduce and Offset Significant Adverse Effects

5.6.118 Mitigation is typically used to reduce effects of higher significance and can be 'embedded' i.e. designed into the project (see section 2 of this chapter and **Volume 5.2.1**); this is a very effective way to avoid and minimise effects as proposals develop. From the earliest stages of the project, and throughout the design evolution, National Grid has been committed to a process of review and assessment (including consideration of environmental information), which has meant that embedded mitigation has been included and forms an important part of the Proposed Development.

5.6.119 The ES includes judgements about the overall significance of effects in relation to topics. This has informed decisions made to date about the appropriateness of mitigation measures.

5.6.120 Where appropriate, mitigation has been proposed to enable potentially adverse effects to be avoided, minimised or the environment enhanced, in accordance with Schedule 4, Part 1, paragraph 21 of the 2009 Regulations (as amended).

5.6.121 Where specific mitigation measures are proposed such as landscape works around the proposed Sandford Substation and the proposed CSE compounds, this is described in each technical chapter where relevant. The time taken for mitigation to be effective is described in each technical chapter and where appropriate, assessments consider these years (for example landscape planting is typically well established after 15 years).

5.6.122 Such mitigation measures would be secured via a DCO Requirement or a Section 106 agreement and are able to be considered when assessing the likely residual effects (see paragraph 5.6.112 above). A key document that sets out mitigation measures is the Draft Construction Environmental Management Plan (CEMP) which is introduced below.

*Draft Construction Environmental Management Plan*

5.6.123 The Draft CEMP is presented at **Volume 5.26** and presents the approach and application of environmental management and mitigation for the construction of the Proposed Development. The Draft CEMP aims 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.

5.6.124 The objectives of the Draft CEMP are as follows:

- provide a link between construction phase mitigation described in the ES, Management Plans and the Requirements of the DCO;
- ensure compliance with legislation through consultation with and by obtaining necessary consents and licences from relevant statutory bodies;
- provide a framework for compliance auditing and inspection to ensure the agreed environmental aims are being met.
- provide a mechanism for implementing mitigation measures to reduce identified environmental effects;
- ensure environmental best practices are adopted throughout the construction of the Proposed Development where practicable;
- ensure a prompt response if any unacceptable adverse effects are identified with the provision of appropriate additional mitigation measures; and
- provide a framework for mitigating effects that may be unforeseen or unidentified until construction is underway.

5.6.125 Details of all proposed mitigation measures are provided at **Volumes 5.6.1 - 5.17.1**.

***Enhancement Measures***

Off-site Planting and Enhancement Scheme (OSPES)

5.6.126 The OSPES (see **Volume 5.25**) encompasses Sections A to H of the Hinkley Point C Connection and will form part of an agreement between National Grid and relevant Local Authorities for the implementation of works to provide enhancement measures to further reduce adverse residual effects of the Proposed Development. However the implementation of the OSPES is not considered as necessary for the Proposed Development to be considered as acceptable.

5.6.127 The aim of the OSPES is to reduce the adverse residual effects on landscape character and views of the Proposed Development as identified and discussed in **Volumes 5.6.1 and 5.7.1**. Particular attention has been paid to strengthening landscape character and minimising visual effects where effects of the greatest significance are likely.

5.6.128 If National Grid is granted permission for the Proposed Development, its rights under the DCO apply to specified land within the 'Order Limits'. Occasionally indicative OSPES works are proposed on land which is also within the 'Order Limits'. Where this occurs it is important to appreciate such proposals or equivalent works shown in this scheme are subject to the agreement of the landowner and are not works for which National Grid has sought rights in its DCO. OSPES works proposed outside of the Order Limits will also be subject to agreement with landowners.

5.6.129 The OSPES has not been considered in this ES when assessing the significance of residual effects.

---

5.1 Hinkley Point C Connection: Consultation Report (2014)

5.2 National Infrastructure Planning: Advice Note Nine: Rochdale Envelope: Version 2: April 2012'

# Appendix 5A – Scoping Opinion

The Planning Inspectorate

# SCOPING OPINION
# Proposed Hinkley to Seabank Grid Connection

May 2013

# CONTENTS

EXECUTIVE SUMMARY

1.0 INTRODUCTION ..... 3

2.0 THE PROPOSED DEVELOPMENT ..... 6

3.0 EIA APPROACH AND TOPIC AREAS ..... 19

4.0 OTHER INFORMATION ..... 33

APPENDIX 1 – LIST OF CONSULTEES

APPENDIX 2 – RESPONDENTS TO CONSULTATION AND COPIES OF REPLIES

APPENDIX 3 – PRESENTATION OF THE ENVIRONMENTAL STATEMENT

# EXECUTIVE SUMMARY

This is the Scoping Opinion (the Opinion) provided by the Secretary of State in respect of the content of the Environmental Statement for the Hinkley to Seabank Grid Connection project, located within the administrative boundaries of Somerset, North Somerset, Sedgemoor, West Somerset, City of Bristol and South Gloucestershire. The proposed development is required to update the National Electricity Transmission System to ensure sufficient capacity to enable the connection of new generation projects, including the proposed Hinkley C Power Station.

This report sets out the Secretary of State's opinion on the basis of the information provided in National Grid's report entitled 'Environmental Impact Assessment Scoping Report' (April 2013) with the Document Reference: 1979.280. The Opinion can only reflect the proposals as currently described by the Applicant.

The Secretary of State has consulted on the Scoping Report and the responses received have been taken into account in adopting this Opinion. The Secretary of State is satisfied that the topic areas identified in the Scoping Report encompass those matters identified in Schedule 4, Part 1, paragraph 19 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (as amended).

The Secretary of State draws attention both to the general points and those made in respect of each of the specialist topic areas in this Opinion. The main potential issues identified are

- Landscape and visual assessment
- Biodiversity and nature conservation
- Historic environment
- Socio-economic and land use

Matters are not scoped out unless specifically addressed and justified by the Applicant, and confirmed as being scoped out by the Secretary of State.

The Secretary of State notes the potential need to carry out an assessment under the Habitats Regulations[1].

[1] The Conservation of Habitats and Species Regulations 2010 (as amended)

# 1.0 INTRODUCTION

## Background

1.1 On 16 April 2013, the Secretary of State (SoS) received a scoping report submitted by National Grid (the Applicant) under Regulation 8 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (SI 2263) (as amended) (the EIA Regulations) in order to request a scoping opinion for the proposed Hinkley to Seabank Grid Connection. This Scoping Opinion is made in response to this request and should be read in conjunction with the Applicant's Scoping Report.

1.2 In a letter dated 16 April 2013, accompanying the Scoping Report, the Applicant formally notified the SoS under Regulation 6(1)(b) of the EIA Regulations that it proposes to provide an ES in respect of the proposed development. Therefore, in accordance with Regulation 4(2)(a) of the EIA Regulations, the proposed development is determined to be EIA development. The EIA Regulations enable an applicant, before making an application for an order granting development consent, to ask the SoS to state in writing their formal opinion (a 'scoping opinion') on the information to be provided in the environmental statement (ES).

1.3 Before adopting a scoping opinion the SoS must take into account:

(a) the specific characteristics of the particular development;

(b) the specific characteristics of the development of the type concerned; and

(c) environmental features likely to be affected by the development'.

*(EIA Regulation 8 (9))*

1.4 This Opinion sets out what information the SoS considers should be included in the ES for the proposed development. The Opinion has taken account of:

i the EIA Regulations

ii the nature and scale of the proposed development

iii the nature of the receiving environment, and

iv current best practice in the preparation of environmental statements.

1.5 The SoS has also taken account of the responses received from the statutory consultees (see Appendix 2 of this Opinion). The matters addressed by the Applicant have been carefully considered and use has been made of professional judgement and experience

in order to adopt this Opinion. It should be noted that when it comes to consider the ES, the SoS will take account of relevant legislation and guidelines (as appropriate). The SoS will not be precluded from requiring additional information if it is considered necessary in connection with the ES submitted with that application when considering the application for a development consent order (DCO).

1.6 This Opinion should not be construed as implying that the SoS agrees with the information or comments provided by the Applicant in their request for an opinion from the SoS. In particular, comments from the SoS in this Opinion are without prejudice to any decision taken by the SoS (on submission of the application) that any development identified by the Applicant is necessarily to be treated as part of a nationally significant infrastructure project (NSIP), or associated development, or development that does not require development consent.

1.7 Regulation 8(3) of the EIA Regulations states that a request for a scoping opinion must include:

(a) 'a plan sufficient to identify the land;

(b) a brief description of the nature and purpose of the development and of its possible effects on the environment; and

(c) such other information or representations as the person making the request may wish to provide or make'.

*(EIA Regulation 8 (3))*

1.8 The SoS considers that this has been provided in the Applicant's Scoping Report.

## The Secretary of State's Consultation

1.9 The SoS has a duty under Regulation 8(6) of the EIA Regulations to consult widely before adopting a scoping opinion. A full list of the consultation bodies is provided at Appendix 1. The list has been compiled by the SoS under their duty to notify the consultees in accordance with Regulation 9(1)(a). The Applicant should note that whilst the SoS's list can inform their consultation, it should not be relied upon for that purpose.

1.10 The list of respondents who replied within the statutory timeframe and whose comments have been taken into account in the preparation of this Opinion is provided at Appendix 2 along with copies of their comments, to which the Applicant should refer in undertaking the EIA.

1.11 The ES submitted by the Applicant should demonstrate consideration of the points raised by the consultation bodies. It is

recommended that a table is provided in the ES summarising the scoping responses from the consultation bodies and how they are, or are not, addressed in the ES.

1.12 Any consultation responses received after the statutory deadline for receipt of comments will not be taken into account within this Opinion. Late responses will be forwarded to the Applicant and will be made available on the Planning Inspectorate's website. The Applicant should also give due consideration to those comments in carrying out the EIA.

## Structure of the Document

1.13 This Scoping Opinion is structured as follows:

Section 1 Introduction

Section 2 The proposed development

Section 3 EIA approach and topic areas

Section 4 Other information.

The Scoping Opinion is accompanied by the following Appendices:

Appendix 1 List of consultees

Appendix 2 Respondents to consultation and copies of replies

Appendix 3 Presentation of the environmental statement.

# 2.0 THE PROPOSED DEVELOPMENT

## Introduction

2.1 The following is a summary of the information on the proposed development and its site and surroundings prepared by the Applicant and included in their Scoping Report. The information has not been verified and it has been assumed that the information provided reflects the existing knowledge of the proposed development and the potential receptors/resources.

## The Applicant's Information

### Overview of the Proposed Development

2.2 The proposed development consists of the removal of the existing 132kV overhead line between Bridgwater Substation and Avonmouth Substation and the construction of a new 400kV connection, of approximately 54.4km, between the existing Hinkley Point to Bridgwater overhead line in Somerset and the existing 400kV Seabank substation in Bristol using a combination of overhead line and underground cables. The proposals also involve modification to existing overhead lines and the construction and extension of substations as detailed below in paragraph 2.3 of this document.

2.3 Paragraphs 1.1.1 and 3.2.1 of the Scoping Report identify the following principal components of the proposed development:

- removal of the existing 132kV overhead line between Bridgwater Substation and Avonmouth Substation;
- construction of a new 400kV connection between Bridgwater and Seabank Substation;
- construction of a new 400kV/132kV grid supply point (GSP) substation on a site to the west of Nye Road, Sandford, North Somerset;
- construction of 3 cable sealing end (CSE) compounds at interface points between overhead and underground connections;
- installation of approximately 2km of 132kV line to provide a connection between the new substation at Sandford and an existing 132kV overhead line known as the 'AT Route';
- construction of a new 400kV substation in Aust, South Gloucestershire;
- extension of the existing 400kV substation at Seabank;
- modifications to existing overhead lines in the vicinity of the proposed Hinkley Point C nuclear power station;

- the removal and undergrounding of approximately 8km of a 132kV overhead line known as the 'W Route' between Nailsea and the existing WPS Portishead Substation; and
- the construction of temporary and permanent access tracks, temporary construction compounds and associated works.

2.4 The Applicant has divided the proposed connection route into sections referred to in the Scoping Report as Sections A – G. Paragraph 3.4.8 of the Scoping Report explains that, in relation to Section F of the proposed development, two routes will be assessed in the EIA. These will be the Applicant's preferred route, outlined in paragraph 3.4.7 of the Scoping Report and an alternative route which passes to the east of Portishead.

## Description of the site and surroundings

*The Application Site*

2.5 The proposed development is a linear scheme located within the administrative boundaries of Somerset, North Somerset, Sedgemoor, West Somerset, City of Bristol and South Gloucestershire in the south west of England. A location plan is provided at Figure 1 of the Scoping Report. The development area has been divided into seven sections with information provided separately for the proposed substation site at Aust and the Hinkley line modifications.

2.6 The proposed development site is predominantly low-lying and undulating agricultural land, of varying grades, and wetland surrounded and divided by low hills and ridges and with irregular field patterns defined by rhines. Winding rural roads and deep sunken lanes are common.

2.7 Section C includes the western extent of the Mendip Hills AONB which comprises open downland in contrast to the small hedged fields at the foot of the slopes.

2.8 The eastern parts of Section F includes part of the Portbury Settled Coastal Edge local landscape character area which consists of car depots, large areas of hardstanding and tall mature tree planting as well as pastoral land with areas of marshy ground.

2.9 Section G includes the dockland and industrial activity associated with the Royal Portbury Dock and Avonmouth.

2.10 A number of smaller towns, villages and scattered farmsteads are dispersed widely throughout the area.

2.11 The proposed development crosses or runs close to a number of main roads including: the A39; M5 and M48 motorways; A371; A370; A368 and A369. Public Rights of Way (PRoW) and cycle paths cross the area and include: the West Mendip Way;

Butcombe Trail; the Strawberry Line, along the former Cheddar Valley Railway; National Cycle Network Routes 4, 26, 33 and 41; Regional Route 10 and the Severn Way.

2.12 The proposed route crosses a number of watercourses including: Kings Sedgemoor Drain; the Huntspill River; the River Brue; the River Axe; Lox Yeo River; the River Yeo and the River Avon. Sections of the route are also characterised by extensive networks of rhines, many of which are designated SSSIs.

2.13 The proposed development passes through or adjacent to a number of woodland areas including: Banwell Wood and Priors Wood (ancient woodland) with the most extensive areas of woodland situated between Congresbury and the Avon Gorge and on the Failand Ridge.

2.14 The connection route passes through a number of settlements which include: Mark Causeway; Tarnock and Wedmore.

2.15 Paragraph 7.3.2 of the Scoping Report identifies the following within the route corridor and 250m buffer zone for the new overhead line and underground cable:

- Six Scheduled Monuments;
- Five Conservation Areas;
- Two Grade I Listed Buildings;
- Three Grade II* Listed Buildings;
- Fifty-eight Grade II Listed Buildings; and
- Six hundred and ninety non-designated heritage assets.

2.16 Environmental designations within the development area are shown at Figure 7 and Section 6.3 of the Scoping Report and include the following:

- Severn Estuary Special Protection Area (SPA), Special Area of Conservation (SAC) and Ramsar site;
- The Mendip Hills Area of Outstanding Natural Beauty (AONB);
- Biddle Street, Yatton Sites of Special Scientific Interest (SSSI);
- Tickenham Nailsea and Kenn Moors SSSI;
- Puxton Moor SSSI and Surrounding Rhines Site of Nature Conservation Importance;
- Severn Estuary SSSI;

- Bridgwater Bay SSSI and National Nature Reserve;
- River Avon SSSI (forms part of the Severn Estuary SPA and Ramsar site);
- Four Local Wildlife Sites: Huntspill River NNR & LWS; River Brue LWS; River Axe LWS and Stoning Pound Field South and Stoning Pound Rhines LWS and numerous SNCI

*The Surrounding Area*

2.17 Paragraph 3.3.2 of the Scoping Report identifies the surrounding area as being predominantly rural with much of the land comprising pastoral fields. Built development is largely focused to the west of the proposed development with smaller towns and villages dispersed widely throughout the area.

2.18 The wider area is defined by a series of prominent ridges running east to west and includes the Puriton Ridge to the north of Bridgwater, the Mendip Hills and Tickenham Ridge, north of Nailsea.

2.19 Further environmental designations within 15km of the proposed development site include:

- Somerset Levels and Moors SPA/Ramsar/SSSI;
- North Somerset and Mendips Bats SAC;
- Exmoor and Quantock Oakwoods SAC;
- Mendip Limestone Grasslands SAC;
- Crooke Peak to Shute Shelve Hill SSSI;
- Max Bog SSSI;
- Kings Wood and Urchins Wood SSSI;
- Banwell Ochre Caves SSSI;
- Banwell Caves SSSI;
- Aust Cliff SSSI; and
- Numerous SNCIs; local and national nature reserves and local and county wildlife sites.

2.20 Table 7.1 of the Scoping Report identifies large numbers of designated heritage assets within 1km, 2km and 10km of the proposed development site.

## Description of the Proposed Development

2.21 The proposed route is approximately 54.4km, from the Hinkley Point to Bridgwater overhead line to Seabank Substation and would comprise a combination of overhead line and underground cables. Three sealing end compounds would be developed at the interface points between overhead line and underground cable.

2.22 The proposed development includes the removal of existing 132kV overhead line between Bridgwater Substation and Avonmouth Substation (F & G Routes) and the construction and operation of two sections of new 400kV overhead line between Bridgwater and south of the Mendip Hills and north of the Mendip Hills to Seabank. Between these two sections of overhead line, the construction and operation of a new 400kV underground cable is proposed. The route of the new 400kV connection runs broadly along the route of the existing 132kV overhead line.

*The Proposed 400kV Overhead Line*

2.23 Paragraph 3.4.1 of the Scoping Report anticipates that the overhead line will comprise twin redwood conductors supported by either steel lattice pylons (L12 design) or T pylon. The likely approved design will have the following characteristics:

- suspension pylons (where line is straight), tension pylons (where lines change direction) and terminal pylons (where line changes to underground cable and connects to a sealing end compound);
- standard height for a pylon of approximately 47m (L12 design) and 35m (T pylon);
- typical base footprint of approximately 7m x 7m for an L12 design and 2m x 2m for a T pylon; and
- typical span between pylons of approximately 360m.

2.24 The proposed overhead line sections include:

2.25 Section A, *Puriton Ridge*, from the existing Hinkley Point and Bridgwater 275kV overhead line (VQ Route) where two CSE compounds would be required. From here the line would extend north to Woolavington Road.

2.26 Section B, *Somerset Levels and Moors South*, where the overhead line would connect to the existing Hinkley Point to Melksham overhead line (ZG Route) before connecting into a CSE compound located to the south of the River Axe and east of the M5 motorway. The cable is then undergrounded prior to crossing the River Axe before entering the Mendip Hills AONB (see Section C, described below).

2.27 Within Section D, *Somerset Levels and Moors North*, the intention is to connect the underground cables to the proposed 400/132kV substation to the north of Sandford. To the north of the proposed substation the overhead line will broadly follow the route of the existing 132kV line.

2.28 The overhead line in Section E, *Tickenham Ridge*, would follow the existing gap in the woodlands on Tickenham Ridge after which it would descend the northern slope and pass to the west of Priors Wood before crossing the M5 motorway.

2.29 Section F, *Portishead*, is where the overhead line would turn to the east, north of the M5, and run parallel to the motorway before crossing and following the A369.

2.30 Section G of the proposed overhead line, *Avonmouth*, would cross the River Avon to the west of the existing 132kV overhead line and follow the edge of Avonmouth village (through Avonmouth Docks complex) and through the industrial area before connecting into Seabank Substation.

### *The Proposed 132kV Overhead Line*

2.31 To maintain connections to the existing distribution network, a 132kV overhead line connection is required between the proposed Sandford substation, within Section D, and an existing overhead line known as the AT Route. This 2km connection is anticipated to comprise two single circuit trident wood pole overhead lines approximately 20m apart with an average height of 14m and a span between structures of approximately 130m.

2.32 Short 132kV connections are also required between the proposed Sandford substation and an existing 132kV overhead line known as the N Route and between the existing W and Y Route overhead lines and the existing Churchill substation.

### *Hinkley Point - Line Entry Modifications*

2.33 To the south of Hinkley Point C Power Station, the existing Hinkley to Bridgwater (VQ Route) and Hinkley to Taunton (ZZ Route) overhead lines will be diverted in a north westerly direction to facilitate connection with the proposed Shurton Substation (not part of this application). These diversions will include the removal of six existing pylons and the construction of ten new pylons (five on each of the overhead lines) and the construction of a new interconnector overhead line to include three new pylons, two of which would be within Wick Moor (part of Bridgwater Bay SSSI and the Severn Estuary SPA and Ramsar site).

### *The Proposed 400kV Underground Cables*

2.34 The proposed underground cable sections include:

2.35 Underground cables would begin in Section B, the *Somerset Levels and Moors South*, from south of the River Axe and east of the M5 motorway. This section passes the River Axe and enters the Mendip Hills AONB.

2.36 Underground cables would continue throughout Section C, *Mendip Hills*, using the low lying land in the valley of the Lox Yeo River prior to passing to the east of Banwell Wood.

2.37 Following the Mendip Hills, underground cables would continue north in Section D, *Somerset Levels and Moors North*, for approximately 1km prior to connecting into the proposed 400/132kV substation north of Sandford.

### *The Proposed 132kV Underground Cables*

2.38 Following the removal of 8km of overhead line (W Route) from south west of Nailsea to Portishead Substation, 132kV underground cables will be installed from a sealing end platform pylon to the south west of Nailsea (northern extent of Section D) to Portishead Substation (in Section F) and broadly follow the line of the existing 132kV (W Route) overhead line.

### *Substations*

2.39 A new 400/132kV Grid Supply Point (GSP) substation would be required to land adjacent to Nye Road, to the north of Sandford. The proposed substation would include two Super Grid Transformers (SGTs) and two Shunt Reactors. The maximum dimensions of the proposed substation will be 217m x 143m with a maximum electrical equipment height of 13m. The GSP substation would require a permanent access track and would be surrounded by electrified palisade fencing.

2.40 A new 400kV substation would be required at Aust to resolve technical issues on the transmission system between South Wales and South Gloucestershire. The proposed substation would be sited adjacent to National Grid's existing CSE compound at Aust and will contain electrical switchgear, Gas Insulated Busbar (GIB), steel support structures and ancillary buildings. The substation would require a permanent access track and would be surrounded by electrified palisade fencing.

2.41 The proposed extension to the existing 400kV Gas Insulated Switchgear (GIS) substation at Seabank will be approximately 24m and will include extending the switchgear building and annex, electrical switchgear, GIS, steel support structures and ancillary buildings. The removal of a Super Grid Transformer for re-use will be required to enable the works. The GIS substation equipment will be insulated using Sulphur Hexaflouride ($SF_6$). The operational compound building will be extended on the eastern side by 10m x 20m and in the south eastern corner by 15m x 20m. The

maximum height of electrical equipment will be 13m. The substation would be surrounded by electrified palisade fencing and access would be via the existing road from the public highway to Seabank Power Station.

## Proposed Access

2.42 The preparation and installation of temporary access roads to each pylon site and scaffolding sites may be required or existing accesses from public highways may need to be widened due to the size of the construction vehicles.

2.43 Traffic will use temporary tracks, constructed along the length of the overhead line as far as possible, to reduce traffic using the public highway. Temporary tracks will be installed for access on agricultural land using crushed stone with a reinforcing geotextile membrane to protect soils. Temporary access roads will be approximately 4m wide and 300-500mm deep.

## Construction

2.44 Temporary stone pads ranging from 20m x 10m for a wood pole design to 70m x 70m for a 90 degree deviation pylon would be required adjacent to pylon locations for plant used during construction. Typical plant would include cranes and piling rigs. The pylons would be delivered to site in pre-constructed sections or numbered parts. Pylon foundations would be piled or excavated and pre-mixed concrete would be delivered to the site. Figure 9 of the Scoping Report shows illustrative sizes of laydown and minimum and maximum footprint.

2.45 The working area at each pylon would include a security hut and welfare facility and constant security would be required during the construction phase. The area would be fenced off during construction and gated entrances used. The underground cable area would include temporary contractor's compounds and offices along the alignment to house staff, equipment and materials.

2.46 Temporary scaffolding would be installed during the works to protect existing infrastructure, including roads, railways and public rights of way. Some existing distribution network overhead lines may be temporarily switched off, relocated or removed as necessary during construction (see paragraph 3.4.15 of the Scoping Report).

2.47 The underground cables would be predominantly installed through open trenching. Where wider crossings are encountered that require a 'trenchless technique' to avoid environmental constraints, Horizontal Directional Drilling (HDD) or thrust boring will be used with the cables pulled through installed cable ducts. Cable joints will be required every 700m to 1km and each joint will require either an above ground kiosk or a surface accessible Link

Pit. A working area of up to 65m wide would be required along the length of the underground cable route.

2.48 Sealing end compounds would require an adjacent temporary construction compound. Standard concrete or piled foundations, cables troughs and stone pads (for cranes) would be required within the sealing end compounds. A scaffold structure covered with weatherproof material would be required while terminations are being installed.

2.49 A temporary construction compound and welfare facilities would be required adjacent to the proposed substation areas. Foundations would be required for electrical equipment.

## Operation and Maintenance

2.50 Pylons have a life expectancy of approximately 80 years, the conductors approximately 60 years and insulators and fittings approximately 40 years. Underground cables have a life expectancy of approximately 40 years, as do sealing end compounds and substations.

2.51 Vans would usually be used to transport workers to and from the site while lorries would be used to carry materials where necessary.

2.52 Overhead lines would be subject to an annual inspection either from the ground or by helicopter. Underground cables would be inspected via the kiosks above ground at the joints. Further monitoring would be carried out via the fibre optic cables installed with the underground lines. Infrequent visits to sealing end compounds would be required to monitor underground cables and carry out maintenance and checks on the electrical equipment. Substation maintenance would be undertaken approximately every 3 years.

## Decommissioning

2.53 Decommission of the proposed development is considered within the Scoping Report and indicates that lines and pylons may be removed if no longer required. Unless there is a particular need to remove all of the foundations, it is proposed that they would be removed to approximately 1m depth and subsoil and topsoil reinstated. Underground cables are proposed to remain in-situ following decommissioning unless there is a compelling need for removal.

2.54 At the end of the useful life of the substations, the equipment would be safely disconnected from the transmission system, dismantled and recycled where appropriate.

## The Secretary of State's Comments

### Description of the Application Site and Surrounding Area

2.55 In addition to detailed baseline information to be provided within topic specific chapters of the ES, the SoS would expect the ES to include a section that summarises proposed development and existing conditions across the entire site and surroundings. The characteristics of the proposed development, and its site and surroundings, are generally well described within the Scoping Report; however descriptions are provided for each Section of the proposed development which makes it difficult to gain an understanding of the overall construction programme and types of works proposed across the development site as a whole. This should be clarified within the ES.

### Description of the Proposed Development

2.56 The SoS notes, from paragraph 3.4.8 of the Scoping Report, that there is some uncertainty as to the route of the proposed development through Section F and that further consultation will be undertaken prior to confirming this route. It is also noted that the detailed design of the proposed substations and access roads are yet to be confirmed. The Applicant should be aware that the description of the development in the ES must be sufficiently certain to meet the requirements of paragraph 17 of Schedule 4 Part 1 of the EIA Regulations and the Applicant should ensure that the submitted ES supports the details set out in the DCO (see also Appendix 3 to the Scoping Opinion).

2.57 If the proposed development changes substantially during the EIA process, prior to submission, the Applicant may wish to consider the need to request a new Scoping Opinion.

2.58 The study area assessed should be sufficient to encompass the layout of all elements of the proposed development at the possible substation locations and any appropriate buffer zones applied. The Figures, showing the proposed substation site provided within the ES, should also clearly show the location of all infrastructure within the substation site and DCO boundary, including any landscape mitigation measures.

2.59 If a draft DCO is to be submitted, the Applicant should clearly define what elements of the proposed development are integral to the NSIP and which is 'associated development' under the Planning Act 2008 or is an ancillary matter. Any proposed works and/or infrastructure required as associated development, or as an ancillary matter, (whether on or off-site) should be considered as part of an integrated approach to environmental assessment.

2.60 The SoS recommends that the ES should include a clear description of all aspects of the proposed development, at the construction, operation and decommissioning stages.

2.61 Although not exhaustive, the following list provides an indication of the aspects of the proposed development which are expected to be clearly set out in the ES:

- details of likely emissions (water, air and soil pollution, noise, vibration, light, heat, radiation including electric and magnetic fields, etc);
- characteristics of the land required during the construction and operational phases;
- plans and figures illustrating both the location and elements of the proposed substations, sealing end compounds and pylons;
- land use requirements for development and any associated development, landscaping areas and potential off-site mitigation or compensation schemes;
- details of any measures required to mitigate impacts that form part of the scheme design;
- any potential risk of accidents/spillages, having regard in particular to substances or technologies used;
- nature and quantities of materials used;
- locations and restoration or reinstatement of any construction compounds, lay down areas for major components and parking areas;
- access arrangements including anticipated routes for construction vehicles into/within the site and to/from construction compounds or any off site locations; and
- construction processes and methods, including site preparation, methods for excavation of foundations and the extent and location of any vegetation and habitats which may require removal to facilitate construction.

2.62 The environmental effects of all wastes to be processed and removed from the site should be addressed. The ES will need to identify and describe the control processes and mitigation procedures for storing and transporting waste off site. All waste types should be quantified and classified.

2.63 The ES should describe proposals for handling different types of topsoil and subsoil and provide details relating to their management and storage.

## Alternatives Considered

2.64 The SoS notes the discussion of alternatives in Chapter 2 of the ES. To comply with the requirements of the EIA regulations the Applicant must provide 'An outline of the main alternatives studied by the applicant and an indication of the main reasons for the applicant's choice, taking into account the environmental effects' (See Appendix 3). Some project details have yet to be confirmed; where these are confirmed by the time of submission the Applicant should consider whether additional explanation should be provided in the ES on how different alternative solutions were evaluated.

## Proposed Access

2.65 The SoS considers that information regarding site access routes for construction traffic and any vehicles carrying abnormal indivisible loads (AIL) should be clearly identified and assessed within the ES, including any alterations required to the existing road network to accommodate any AIL. The ES should also identify whether any alterations to the existing road network would be retained or reinstated, and assess the potential effects arising from such reinstatement works within the ES.

## Construction

2.66 The SoS considers that information on construction including: phasing of programme; construction methods and activities associated with each phase; siting of construction compounds (including on and off site); lighting equipment/requirements; and number, movements and parking of construction vehicles (both HGVs and staff) should be clearly indicated in the ES. Information should also be provided in the ES on whether any construction activities are restricted to a particular time of year.

2.67 The SoS notes that the Scoping Report refers to the likely provision of an appropriate Construction Management Plan (CMP) (see paragraph 12.6.3 of the Scoping Report). The SoS considers that an outline CMP, setting out how construction phase effects would be managed and mitigation measures implemented, should be produced and appended to the ES.

## Operation and Maintenance

2.68 The SoS welcomes the inclusion of information on the operation and maintenance of the proposed development and the potential effects arising during these stages, within the ES. Information provided should cover, but not be limited to, such matters as: the number of full/part-time jobs; the operational hours and if appropriate, shift patterns; and the number and types of vehicle movements generated during the operational stage.

## Decommissioning

2.69 In terms of decommissioning, the SoS acknowledges that the further into the future any assessment is made, the less reliance may be placed on the outcome. However, the purpose of such a long term assessment is to enable the decommissioning of the works to be taken into account in the design and use of materials such that structures can be taken down with the minimum of disruption. The process and methods of decommissioning should be considered and options presented in the ES. The SoS encourages consideration of such matters and welcomes the commitment, referred to in paragraph 4.4.5 of the Scoping Report, to identify and assess, within the ES, both permanent and temporary effects likely to arise during the decommissioning phase of the development.

# 3.0 EIA APPROACH AND TOPIC AREAS

## Introduction

3.1 This section contains the SoS's specific comments on the approach to the ES and topic areas as set out in the Scoping Report. General advice on the presentation of an ES is provided at Appendix 3 of this Scoping Opinion and should be read in conjunction with this Section.

3.2 Applicants are advised that the scope of the DCO application should be clearly addressed and assessed consistently within the ES.

## ES Approach

3.3 The information provided in the Scoping Report sets out the proposed approach to the preparation of the ES. Whilst early engagement on the scope of the ES is to be welcomed, the SoS notes that the level of information provided at this stage is not always sufficient to allow for detailed comments from either the SoS or the consultees.

3.4 The SoS would suggest that the Applicant ensures that appropriate consultation is undertaken with the relevant consultees in order to agree wherever possible the timing and relevance of survey work as well as the methodologies to be used. The SoS notes and welcomes the intention to finalise the scope of investigations in conjunction with ongoing stakeholder liaison and consultation with the relevant regulatory authorities and their advisors.

3.5 The SoS recommends that the physical scope of the study areas should be identified under all the environmental topics and should be sufficiently robust in order to undertake the assessment. The extent of the study areas should be on the basis of recognised professional guidance, whenever such guidance is available. The study areas should also be agreed with the relevant consultees and, where this is not possible, this should be stated clearly in the ES and a reasoned justification given. The scope should also cover the breadth of the topic area and the temporal scope, and these aspects should be described and justified.

3.6 The SoS notes that National Policy Statements (NPS) are often referred to in the Scoping Report. This approach is welcomed; the Applicant is reminded that they must ensure that their ES provides the necessary evidence to allow the SoS to assess the potential impacts of the project as outlined in the relevant NPS.

## Matters to be Scoped Out

3.7 The Applicant has identified in the relevant sections of the Scoping Report (Table 15.1) the matters proposed to be 'scoped out'. These include:

- Effects on climate change;
- Effects on air quality from eutrophication during operation;
- Effects on flooding from sewers
- Effects from vibration during operation;
- Effects on the transport network during operation;
- Effects on property prices;
- Effects on noise during operation; and
- Electro-magnetic compatibility.

3.8 Matters are not scoped out unless specifically addressed and justified by the Applicant, and confirmed as being scoped out by the SoS.

3.9 The Scoping Report states that it is not intended to include effects on climate change in the ES as these will be confined to an increased risk of surface and ground water flooding. These matters will be addressed in the flood risk assessment. The SoS is satisfied that the potential impacts of the project on flood risk will be addressed here; however the scope of the 'Flood risk, water quality and resources' chapter of the Scoping Report does not suggest that any risks to the scheme as a result of climate change have been considered. The SoS does not agree that these effects can be scoped out at this stage.

3.10 The Scoping Report states that as the proposed development does not give rise to emission such as nitrogen oxides and ammonia during operation an assessment of the effects of eutrophication will not be undertaken for the operational phase of the project. The SoS agrees that on the basis of the information supplied in the Scoping Report it appears unlikely that eutrophication could occur during the operation of the line and substations. Vehicle use will be required for maintenance but it appears unlikely that this would generate sufficient vehicle movements to produce significant amounts of nitrogen oxides.

3.11 The Scoping Report states that there will be no vibration during the operation and maintenance of the project and so this is scoped out of the assessment. However no explanation or evidence is provided to support this statement. The SoS recommends that evidence be provided in the ES to support the decision to scope out vibration effects during operation. If this cannot be done then the effects should not be scoped out at this stage.

3.12 Effects on the transport network during operation have been scoped out. However no explanation or evidence is provided to support this statement. The SoS recommends that evidence be provided in the ES to support the decision to scope out transport effects during operation. If this cannot be done then the effects should not be scoped out at this stage.

3.13 The Scoping Report states that it is unlikely, given the rural nature of the preferred route corridor that a large number of sewerage systems will be crossed by the route of the connection. It is also unlikely that the proposed development will require a connection into the existing sewerage network. Effects on flooding from sewers have therefore been scoped out of the ES. The SoS agrees that the risk of flooding from sewers appears unlikely to be increased by the project and this effect can be scoped out. The Applicant's attention is drawn however to the comments from Compton Bishop Parish Council and Badgworth Parish Council on the need to assess the potential effects on drainage from septic tanks (see Appendix 2).

3.14 Effects on property prices have been scoped out on the grounds that this is not a matter that requires assessment under the EIA Regulation and also that the SoS has not required such effects to be assessed in scoping opinions issued for other Nationally Significant Infrastructure Projects. The SoS acknowledges that this is the case and agrees that effects on property prices can be scoped out of the ES.

3.15 The Scoping Report states that effects on noise levels for the substation at Aust and extension to Seabank substation will be scoped out. This is because operations that generate noise will only happen infrequently. The SoS is not satisfied that sufficient evidence has been presented in the Scoping Report to allow the scoping out of these effects. Evidence should be provided in the ES to justify the decision to scope out these effects during operation. If this cannot be done then the effects should not be scoped out at this stage.

3.16 The Scoping Report also states that high voltage cables and cable sealing end compounds have no noise effects during operation. The SoS accepts that these effects can be scoped out at this stage although the decision should be explained in the ES.

3.17 The Scoping Report states that no quantitative assessment will be undertaken relating to the effects on tourism. The SoS accepts that a fully quantitative assessment would be difficult to achieve but advises the applicant to ensure that their qualitative assessment is based on strong evidence which itself should be quantitative wherever possible. The Applicant's attention is drawn to the comments from the Joint Somerset Councils in Appendix 2.

3.18 Electro-magnetic compatibility has been scoped out because the overhead line, sealing end compounds and underground cable proposed for the project are similar in construction and operation to those tested in the Technical Construction File and covered by the Certificate of Conformity in Appendix E of the Scoping Report. The SoS agrees that electro-magnetic compatibility can be scoped out of the ES. It would be helpful to demonstrate in the ES that the specification of the overhead line, sealing end compounds and underground cable proposed for the project are similar to those tested in the Technical Construction File.

3.19 If the specification of the overhead line, sealing end compounds and underground cable changes such that they are no longer covered by the Certificate of Conformity then electro-magnetic compatibility should be scoped into the ES.

3.20 In order to demonstrate that topics have not simply been overlooked, where topics are scoped out prior to submission of the DCO application, the ES should still explain the reasoning and justify the approach taken.

## ES Structure

3.21 Chapter 16 of the Scoping Report sets out the proposed structure of the ES on which the Applicant seeks the Opinion of the SoS. The proposed content is presented in Table 16.1. The list of headings differs from that set out on Page 1 of the Scoping Report.

3.22 The SoS notes from the list of aspects of the environment to be assessed (Scoping Report paragraph 16.1.4) that the EIA would cover a number of assessments under the broad headings of:

- landscape and visual assessment;
- biodiversity and nature conservation;
- historic environment;
- geological conservation;
- flood risk, water quality and resources;
- traffic and transport;
- air quality and emissions;
- noise and vibration;
- socio-economic and land use; and
- electric and magnetic fields.

3.23 The SoS recommends that the ES should include a description of the proposed construction programme and methods.

## Topic Areas

### Landscape and visual assessment (see Scoping Report Chapter 5)

3.24 The SoS recognises that the project lies within an area which is very sensitive to visual impacts. The general approach taken within the Scoping Report is welcomed but raises a number of concerns which should be addressed within the final ES.

3.25 The SoS welcomes the intention to use the 'Guidelines for Landscape and Visual Impact Assessment – second edition'. The Applicant's attention is drawn to the fact that the third edition has recently been published and account should be taken of the guidance issued by the Landscape Institute in respect of transitional arrangements between the second and third editions of the Guidelines when completing the ES.

3.26 With regard to the method for visual assessment parameters have been identified as the basis for undertaking the field assessment. It is not clear however what the justification for this choice of study area is and how this relates to the Zone of Theoretical Visual Influence.

3.27 The Zone of Theoretical Visual Influence is shown in the figures accompanying the Scoping Report. It is requested that these figures are clearly labelled with their figure numbers so they can be easily cross-referenced with the text of the ES. The ES should describe the model used, provide information on the area covered and the timing of any survey work and the methodology used.

3.28 The SoS welcomes the commitment to work with the Landscape and Views Thematic Group. The SoS recommends that the following aspects of the Visual Impact Assessment should be defined in discussion with the relevant local authorities, Natural England (NE) and stakeholders such as parish councils and the Mendip Hills AONB unit to ensure that the effects of the project are fully assessed:

- Sensitive receptors;
- Choice of viewpoints for photomontages.

3.29 Terminology should be clearly defined. The assessment within the ES must provide sufficient evidence to allow the SoS to assess the effects of the project and must therefore reflect the route finally selected. Where options have not been confirmed at the time of application all options should be assessed. The methodology used must be described and any assumptions clearly stated.

3.30 The SoS recommends that lighting effects should also be considered for the construction phase and during the operation

phase if lighting is required for the substations. The proposals will be for large structures. The SoS requests that careful consideration should be given to the form, siting, and use of materials and colours in terms of minimising the adverse visual impact of these structures.

3.31 With regard to the assessment of cumulative effects the SoS must ultimately be in a position to understand both the effects of the project alone and the combined effects of the project's interactions with other plans or projects. Applicants should consider the potential cumulative impacts on an area as a result of increasing development in the proposed area, as well as those developments which are:

- in the process of being built;
- permitted application(s) but not yet implemented;
- submitted application(s) not yet determined;
- projects on the National Infrastructure's programme of projects;
- identified in the relevant development plan (and emerging development plans - with appropriate weight being given as they move closer to adoption) recognising that much information on any relevant proposals will be limited, and
- identified in other plans and programmes (as appropriate) which set the framework for future development consents/approvals, where such development is reasonably likely to come forward.

3.32 The Applicant should be able to state clearly how the effects of existing projects are captured in the assessment of baseline conditions; it may be necessary to undertake additional work to establish the existing effects generated by the visual impacts of existing power lines to ensure that cumulative effects are fully addressed.

3.33 The SoS notes that detailed mitigation proposals will be factored into the ES. Residual effects should also be included. Where mitigation measures lead to a reduction in impacts, clear justification should be provided for the assessment of residual effects, including stated assumptions about heights that will be achieved by proposed planting over stated time frames.

3.34 The Scoping Report refers to the inter-relationship of effects but seems to be confined to consideration of the inter-relationship of mitigation effects. The SoS recommends that the inter-relationship between the effects of the project should also be

considered such as the inter-relationship between the landscape and visual impacts and those on the historic environment.

3.35 The Applicant's attention is drawn to the detailed comments provided by Natural England, Bristol City Council, English Heritage, South Gloucestershire Council, Joint Somerset Councils, Nailsea Town Council, Bridgwater without Parish Council, Compton Bishop Parish Council, Badgworth Parish Council and Portbury Parish Council in Appendix 2.

## Biodiversity and nature conservation (see Scoping Report Chapter 6)

3.36 The SoS recommends that surveys should be thorough, up to date and take account of other development proposed in the vicinity. They must provide sufficient evidence to allow the SoS to assess the effects of the project. The methodologies chosen must be robust and appropriate for assessing the effects on biodiversity both within designated wildlife sites and the wider environment. They should be clearly described within the ES. The Applicant's attention is drawn to the comments from Natural England, the Environment Agency and the Joint Somerset Councils in Appendix 2. The SoS recommends that survey requirements and methodologies should be agreed with these bodies and other stakeholders through the Biodiversity Thematic Group.

3.37 The SoS notes that the figures that show the results of the Phase 1 survey show some areas as 'not accessed'. The Applicant is reminded of the need to ensure that the SoS has sufficient evidence to assess the effects of the project. The SoS recommends that the Applicant should address any gaps in their data that could hamper the assessment of the project.

3.38 The potential impacts on international and nationally designated sites should be addressed as well as county level habitats. The SoS notes the possible need for an Appropriate Assessment in view of the development site's location in relation to various European sites including the Severn Estuary SPA/Ramsar/SAC, the North Somerset and Mendips Bat SAC and the Somerset Levels and Moors SPA/Ramsar (see Section 4 of this Opinion).

3.39 The SoS recommends that the proposals should address fully the needs of protecting and enhancing biodiversity. The assessment should cover habitats, species and processes within the sites and surroundings. The SoS draws attention in particular, but not exclusively, to the effects from habitat fragmentation on bat species and the potential loss of functional habitat beyond the boundaries of statutory wildlife sites for birds that are designated features of these sites. Effects for both construction and operational phases should be addressed in the ES.

3.40 The SoS welcomes the decision to use the Institute of Ecology and Environmental Management's guidance on ecological impact assessment. However it is not clear from the Scoping Report how the zone of ecological influence has been defined and whether it adequately addresses the effects of the project. The ES should clearly state the extent and the justification for the zone of influence chosen.

3.41 The Scoping Report refers to the inter-relationship of effects but seems to be confined to consideration of the inter-relationship of mitigation effects. The SoS recommends that the inter-relationship between the effects of the project should also be considered such as the inter-relationship between the landscape and visual impacts and nature conservation.

3.42 The SoS welcomes the intention to undertake the assessment of cumulative effects (and in-combination effects for the Habitats Regulations Assessment). The Applicant's attention is drawn to the comments under 'Landscape and visual effects' on the assessment of cumulative effects. The Applicant should be able to state clearly how the effects of existing projects are captured in the assessment of baseline conditions; it may be necessary to undertake additional work to establish the existing effects generated by the visual impacts of existing power lines to ensure that cumulative effects are fully addressed.

3.43 The SoS welcomes the intention to include an assessment of the residual effects of the project following mitigation. It should be stated clearly how this mitigation will be secured and delivered. It would be helpful if this information was contained in table(s) that directly identified the ecological effect concerned, the mitigation proposed and how this would be secured e.g. through a requirement in the DCO.

## Historic environment (see Scoping Report Chapter 7)

3.44 The methodology used should be clearly described; the choice of methodology should be justified within the ES. The terminology used should also be clearly defined and explained. National Policy Statement 1 refers the significance of an asset as being '…the sum of the heritage interests that a heritage asset holds…'. In the Scoping Report this is referred to as sensitivity rather than significance, with significance instead being used to describe the relationship between the magnitude of effects and the sensitivity of an asset. The Applicant's attention is drawn to the comments from the Joint Somerset Councils in Appendix 2.

3.45 Study areas are defined within the Scoping Report for archaeological remains, built heritage and the historic landscape but the justification is for the extent of the areas is not clear. The ES should clearly describe and justify the study areas chosen.

3.46 The SoS welcomes the identification of non-designated archaeological remains which could be Schedulable. However the SoS also notes the high potential for previously unrecorded buried archaeological remains to be present within sections of the route corridor. The Applicant must ensure that they approach the assessment of effects in a way that ensures the SoS has enough evidence before them to determine the effects on archaeological assets as required by National Policy Statement EN-1. The Applicant's attention is drawn to the comments from the Joint Somerset Councils in Appendix 2.

3.47 The terminology used for the assessment of impacts on heritage assets should be clearly explained and consistent with national planning policy guidance. Secondary effects such as the effects on buried remains caused by the dewatering of peat should also be taken into account (see comments by English Heritage in Appendix 2).

3.48 The setting of cultural heritage resources could be affected; this includes historic buildings, historic landscapes and archaeological sites and the SoS considers that these should be addressed in the ES. Cross reference should be made to the Landscape and Visual section of the ES. The Applicant's attention is drawn to the detailed comments from English Heritage and the Joint Somerset Councils in Appendix 2.

3.49 The SoS welcomes and strongly encourages the intention to consult local planning archaeologists and English Heritage to establish general requirements for work.

## Geological conservation (see Scoping Report Chapter 8)

3.50 The SoS welcomes the general approach but advises that this chapter does not appear to be purely about geological conservation and that it would be helpful to amend the title of the chapter to reflect this. The Applicant's attention is drawn to the comments from South Gloucestershire Council and the Joint Somerset Councils on the need to consider potential impacts on geological Sites of Special Scientific Interest.

3.51 The Coal Authority has provided advice on the approach that should be taken for the EIA of projects that occur within a defined coalfield. Their response is in Appendix 2.

3.52 The SoS notes the various sources of evidence that will be consulted as part of the Desk Based Assessment. The Applicant is advised to liaise with the EA, Bristol City Council and the Joint Somerset Councils to ensure that they utilise all relevant data and address the correct issues in the ES.

3.53 Table 8.1 of the Scoping Report suggests that the disposal of waste from construction, operation and decommissioning will be

covered in generic terms based upon anticipated ground conditions. The Applicant is reminded that they must provide sufficient information to allow the SoS to assess the potentially significant environmental impacts of their project. NPS EN-1 outlines the issues that the SoS should consider and how these should be covered by the Applicant's assessment. The SoS advises that the ES deals with these issues. The Applicant's attention is also drawn to the comments from the EA (see Appendix 2).

## Flood risk, water quality and resources (see Scoping Report Chapter 9)

3.54 The SoS welcomes the provision of a Flood Risk Assessment (FRA) and advises on-going consultation with the EA, Internal Drainage Boards and the local authorities. The FRA should form an appendix to the ES.

3.55 The Applicant's attention is drawn to the detailed comments from the EA, South Gloucestershire Council, the Joint Somerset Councils, Bridgwater without Parish Council and Mark Parish Council in Appendix 2.

3.56 The SoS notes that a qualitative assessment will be undertaken incorporating the objectives of the Water Framework Directive and the issues set out for the water courses under the South West River Basin Management Plan. While a qualitative approach may be appropriate the Applicant is reminded that they must provide sufficient evidence to allow the SoS to meet the requirements of the Water Framework Directive when considering the application. The Applicant's attention is drawn to the comments from the EA in Appendix 2.

## Traffic and transport (see Scoping Report Chapter 10)

3.57 The SoS welcomes the general approach within this chapter and the consultation that has already been undertaken with various bodies including the Highways Agency and the local authorities. However the section on the 'Proposed ES Chapter Approach' refers to the guidelines in the Design Manual for Roads and Bridges and the guidance provided by the Institute of Environmental Assessment. The ES should clearly explain how the two sets of guidelines are reflected in the methodology adopted and the reasons for the choice. The Applicant's attention is drawn to the comments from the Highways Agency in Appendix 2.

3.58 The baseline data in the ES must be accurate and robust; the Applicant's attention is drawn to the comments from South Gloucestershire and the Joint Somerset Councils on inaccuracies in the information on the existing environment in the Scoping Report.

3.59 The SoS welcomes the intention to consult the local authorities on vehicle routeing. The SoS recommends that the approach to assessing impacts on traffic and transport should be developed in conjunction with the Highways Agency and the local authorities.

3.60 A key consideration in the traffic and transport assessment will be the delivery of abnormal loads, in particular, the super grid transformer to the Sandford substation site and the suitability of the existing strategic road network to accommodate the transport of such infrastructure. It is not clear from the Scoping Report whether such issues are likely to arise in relation to the Aust substation; this should be made clear in the ES. The SoS notes that road closures, diversions and/or widening to accommodate this infrastructure may be required during the construction phase of the development. The delivery route for these abnormal loads should be identified in the ES and any alternations to the existing road network should be described and assessed in the ES, with the location of these alterations identified by reference to Figures in the ES. Consideration should be given to potential impacts on the emergency services where roads will be closed or diverted and consultation with the local police and ambulance service is recommended. The Applicant is referred to the comments of the Highways Agency, South Gloucestershire Council and the Joint Somerset Councils on potential impacts on the strategic road network and Compton Bishop Parish Council on the suitability of the local road network for abnormal loads (see Appendix 2).

3.61 The SoS notes the requirement for proposed temporary tracks along the length of the overhead line to facilitate movement of construction vehicles (paragraph 10.3.2) in the Scoping Report). The SoS notes the statement in the Scoping Report that once construction is completed the temporary access tracks will be removed and the ground reinstated by removing stone and trackways. While these effects are only present during the construction phase this may last for some time and the removal may also have environmental impacts. Consideration should be given in the ES to removal of these temporary haul roads and reinstatement of this land and the existing transport network, including the potential effects during this work and of the reinstatement in terms of impact to landscape and visual, and biodiversity and nature conservation issues. The ES should clearly identify any access roads which are to be retained beyond the construction phase and provide details of ongoing maintenance of these roads.

3.62 The SoS welcomes the commitment in the Scoping Report to the consideration of the potential effects of the proposed development on Public Rights of Way (PRoW). The ES should clearly identify all potentially affected PRoW and set out impacts on them, including within the wider area. It is important to minimise hindrance to them where possible and enhancements should be considered as part of the mitigation proposed. A clear indication should be given

as to how the development would affect the existing and any proposed PRoW, including the need for any stopping up or diversion orders, and what mitigation would be appropriate in the short, medium and long term.

3.63 The applicant has sought to scope out effects on the transport network during the operational phase. The SoS' comments on this proposal are set out above.

## Air quality and emissions (see Scoping Report Chapter 11)

3.64 The SoS notes the general approach to the assessment of air quality. The intention to undertake a quantitative assessment of road traffic emissions during the construction phase (if the traffic assessment shows significant additional road traffic is generated) is welcomed.

3.65 It is noted that the Applicant has already undertaken discussions with local authorities regarding air quality to discuss the potential scope of the assessment. The SoS welcomes this approach and would expect on-going discussions and agreement on the scope and methodology of the assessment, where possible, with such bodies. The Applicant's attention is drawn to the comments from Bristol City Council, South Gloucestershire Council and the Joint Somerset Councils in Appendix 2.

3.66 The SoS welcomes the consideration given to appropriate mitigation measures and to monitoring dust complaints identified within the Scoping Report. If necessary the mitigation described in the ES should be reviewed to deal with impacts on air quality other than dust.

3.67 The SoS's comments on the Applicant's proposal to scope out effects from eutrophication during operation are provided above.

## Noise and vibration (see Scoping Report Chapter 12)

3.68 The SoS notes that consultation has already taken place with local authorities to discuss the potential scope of the noise and vibration assessments. The SoS recommends that the methodology and choice of noise receptors should also be discussed and agreed with the relevant Environmental Health Department of the Councils and the relevant parish councils where the new substations would be sited. In particular, consideration should be given to any potential noise disturbance likely to occur at night and other unsocial hours such as weekends and public holidays.

3.69 Information should be provided on the types of vehicles and plant to be used during the construction phase and an assessment of noise and vibration undertaken. The noise and vibration assessments should take account of construction traffic movements along access routes. The Applicant's attention is

drawn to the comments from Compton Bishop Parish Council in Appendix 2.

3.70 The SoS notes the intention to mitigate impacts during construction through working time restrictions and the provision of an appropriate Construction Management Plan. The ES should identify the measures that the plan will contain and assess their effectiveness. The Applicant's attention is also drawn to the comments from the Joint Somerset Councils in Appendix 2.

3.71 The SoS welcomes the intention to consider the inter-relationship of effects on ecology and nature conservation in view of the proximity of the development to various statutory wildlife sites. The Applicant's attention is also drawn to comments from South Gloucestershire Council and the Joint Somerset Councils in Appendix 2.

3.72 The SoS's comments on the Applicant's proposal to scope out operational noise from the substations at Aust and Seabank are provided above. The Applicant's attention is also drawn to the comments from South Gloucestershire and the Joint Somerset Councils in Appendix 2.

3.73 The SoS's comments on the Applicant's proposal to scope out vibration during operation are provided above.

3.74 Consideration should be given to monitoring noise complaints during construction and when the development is operational.

**Socio-economics and land use (see Scoping Report Chapter 13)**

3.75 The SoS welcomes the overall approach taken by Applicant and the fact that they have already discussed the scope of the report with local authorities and the National Farmers Union. The SoS recommends that the assessment is developed through further consultation with these bodies; the Applicant may also find it useful to engage in discussions with the relevant parish councils, particularly when considering potential effects on the tourism economy and local amenities.

3.76 The SoS recommends that the assessment criteria should be locationally specific and consider the potential significance of the impacts of the proposal within the local and regional context. The Applicant should assess the project's requirements, including construction materials and workforce numbers and evaluate these against local availability. The types of jobs generated during the construction phase should be considered in the context of the available workforce in the area. The potential cumulative effects on availability of local workforce and materials arising from other projects in the area should also be taken into account.

3.77 The SoS's comments on the Applicant's proposal to scope out consideration of house prices and a quantitative assessment of potential effects on tourism due to the proposed development are provided above.

3.78 The SoS notes that the Local Area of Influence defined in the scoping report includes Best and Most Versatile (BMV) agricultural land. The ES should clearly explain the extent of BMV that would be adversely affected and the mitigation measures taken to minimise any losses in line with the requirements of NPS EN-1. This should be in addition to assessing the economic effects on land holdings as a result of the loss of agricultural land.

3.79 The SoS welcomes the proposals to assess the impacts on amenity which could result from the project. The Scoping Report states that impacts on amenity value will be derived from other environmental impacts upon the receptors. The Applicant must ensure that they have correctly identified receptors, particularly in relation to local communities. The Applicant's attention is drawn to the comments from Bridgwater Without Parish Council on potential effects on anglers.

## Electric and magnetic fields and electro-magnetic compatibility (see Scoping Report Section 14)

3.80 The SoS welcomes the Applicant's intention to undertake an assessment of Electric and Magnetic Fields (EMF) using the conditions set out in the Department for Energy and Climate Change Codes of Practice. The SoS recommends that the Applicant should discuss the scope of the EMF assessment with the local authorities. The Applicant is also referred to the comments from the NHS Somerset Clinical Commissioning Group and Nailsea Town Council in Appendix 2.

3.81 The SoS's comments on the Applicant's proposal to scope out consideration of electro-magnetic compatibility (EMC) are provided above.

## Aviation issues

3.82 The potential height of structures associated with the power lines means that a range of bodies may need to be consulted including local aerodromes (particularly Bristol International Airport), the Civil Aviation Authority, the Ministry of Defence and any other local emergency air support units. The SoS recommends that the Applicant considers the various issues raised by the CAA in their comments in Appendix 2 and takes steps to address them in their ES.

# 4.0 OTHER INFORMATION

4.1 This section does not form part of the SoS's opinion as to the information to be provided in the environmental statement. However, it does respond to other issues that the SoS has identified which may help to inform the preparation of the application for the DCO.

## Habitats Regulations Assessment (HRA)

4.2 The SoS notes that European sites may be located close to the proposed development. It is the Applicant's responsibility to provide sufficient information to the Competent Authority (CA) to enable them to carry out a HRA if required. The Applicant should note that the CA is the SoS.

4.3 The Applicant's attention is drawn to The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (as amended) (The APFP Regulations) and the need to include information identifying European sites to which the Habitats Regulations applies or any Ramsar site or potential SPA which may be affected by a proposal. The submitted information should be sufficient for the competent authority to make an appropriate assessment (AA) of the implications for the site if required by Regulation 61(1) of the Habitats Regulations.

4.4 The report to be submitted under Regulation 5(2)(g) of the APFP Regulations with the application must deal with two issues: the first is to enable a formal assessment by the CA of whether there is a likely significant effect; and the second, should it be required, is to enable the carrying out of an AA by the CA.

4.5 When considering aspects of the environment likely to be affected by the proposed development; including flora, fauna, soil, water, air and the inter-relationship between these, consideration should be given to the designated sites in the vicinity of the proposed development.

4.6 Further information with regard to the HRA process is contained within Planning Inspectorate's Advice Note 10 available on the National Infrastructure Planning's website.

## Sites of Special Scientific Interest (SSSIs)

4.7 The SoS notes that a number of SSSIs are located close to or within the proposed development. Where there may be potential impacts on the SSSIs, the SoS has duties under sections 28(G) and 28(I) of the Wildlife and Countryside Act 1981 (as amended) (the W&C Act). These are set out below for information.

4.8 Under s28(G), the SoS has a general duty '… to take reasonable steps, consistent with the proper exercise of the authority's functions, to further the conservation and enhancement of the flora, fauna or geological or physiographical features by reason of which the site is of special scientific interest'.

4.9 Under s28(I), the SoS must notify the relevant nature conservation body (NCB) before authorising the carrying out of operations likely to damage the special interest features of a SSSI. Under these circumstances 28 days must elapse before deciding whether to grant consent, and the SoS must take account of any advice received from the NCB, including advice on attaching conditions to the consent. The NCB will be notified during the examination period.

4.10 If applicants consider it likely that notification may be necessary under s28(I), they are advised to resolve any issues with the NCB before the DCO application is submitted to the SoS. If, following assessment by applicants, it is considered that operations affecting the SSSI will not lead to damage of the special interest features, applicants should make this clear in the ES. The application documents submitted in accordance with Regulation 5(2)(l) could also provide this information. Applicants should seek to agree with NE the DCO requirements which will provide protection for the SSSI before the DCO application is submitted.

## European Protected Species (EPS)

4.11 The Applicant should also be aware that the decision maker under the Planning Act 2008 (PA 2008) has, as the CA, a duty to engage with the Habitats Directive.

4.12 The SoS considers that there is potential for the presence of EPS within the study area for the proposed development. Where a potential risk to an EPS is identified and before making a decision to grant development consent the CA must, amongst other things, address the derogation tests in Regulation 53 of the Habitats Regulations. Therefore the Applicant may wish to provide information which will assist the decision maker to meet this duty. Where required the Applicant should, in consultation with Natural England agree appropriate requirements to secure necessary mitigation.

4.13 If the Applicant has concluded (in consultation with Natural England) that an EPS licence is required the ExA will need to understand whether there is any impediment to the licence being granted. It would assist the examination if the Applicant could provide with the application confirmation from NE whether they intend to issue the licence in due course.

## Health Impact Assessment

4.14 The SoS considers that it is a matter for the Applicant to decide whether or not to submit a stand-alone Health Impact Assessment (HIA). However, the Applicant should have regard to the responses received from the relevant consultees regarding health, and in particular to the comments from the Health and Safety Executive in relation to electrical safety issues (see Appendix 2).

4.15 The methodology for the HIA, if prepared, should be agreed with the relevant statutory consultees and take into account mitigation measures for acute risks.

## Other regulatory regimes

4.16 The SoS recommends that the Applicant should state clearly what regulatory areas are addressed in the ES and that the Applicant should ensure that all relevant authorisations, licences, permits and consents that are necessary to enable operations to proceed are described in the ES. Also it should be clear that any likely significant effects of the proposed development which may be regulated by other statutory regimes have been properly taken into account in the ES.

4.17 It will not necessarily follow that the granting of consent under one regime will ensure consent under another regime. For those consents not capable of being included in an application for consent under the PA 2008, the SoS will require a level of assurance or comfort from the relevant regulatory authorities that the proposal is acceptable and likely to be approved, before they make a recommendation or decision on an application. The Applicant is encouraged to make early contact with other regulators. Information from the Applicant about progress in obtaining other permits, licences or consents, including any confirmation that there is no obvious reason why these will not subsequently be granted, will be helpful in supporting an application for development consent to the SoS..

# APPENDIX 1

# List of Consultees

# APPENDIX 1

## LIST OF BODIES FORMALLY CONSULTED DURING THE SCOPING EXERCISE

| CONSULTEE | ORGANISATION |
|---|---|
| The Welsh Ministers | The Welsh Government |
| The Health and Safety Executive | Health and Safety Executive |
| [2]The relevant Strategic Health Authority | NHS Commissioning Board<br>NHS Gloucestershire CCG<br>NHS South Gloucestershire CCG<br>NHS Bristol CCG<br>NHS Bath and North East Somerset CCG<br>NHS Somerset CCG<br>NHS North Somerset CCG |
| The relevant Health Board | Public Health Wales<br>Aneurin Bevan Health Board |
| Natural England | Natural England |
| The Historic Buildings and Monuments Commission for England | English Heritage |
| The relevant fire and rescue authority | Devon & Somerset Fire and Rescue Service<br>Avon Fire and Rescue Service<br>Gloucestershire Fire and Rescue Service<br>South Wales Fire and Rescue Service |
| The relevant police authority | Avon and Somerset Police and Crime Commissioner<br>Gwent Police and Crime Comissioner<br>Gloucestershire |

[2] Strategic Health Authorities (SHA) ceased to exist on 1 April 2013, following the Health and Social Care Act 2012 coming into force. In accordance with Regulation 3(a)(i) of the Infrastructure Planning (Prescribed Consultees and Interested Parties etc.) (Amendment) Regulations 2013, the reference to the relevant SHA has been replaced by "the National Health Service Commissioning Board and the relevant clinical commissioning group". Primary Care Trusts also ceased to exist on 1 April 2013. Their responsibilities have been taken over by the relevant Clinical Commissioning Groups and local area teams. Further information about changes to the NHS Structure after 1 April 2013 can be found on the NHS Choices website - http://www.nhs.uk/NHSEngland/thenhs/about/Pages/nhsstructure.aspx

| CONSULTEE | ORGANISATION |
|---|---|
| The relevant Parish Council | Abbots Leigh Parish Council<br>Almondsbury Parish Council<br>Alveston Parish Council<br>Aust Parish Council<br>Axbridge Town Council<br>Backwell Parish Council<br>Badgworth Parish Council<br>Banwell Parish Council<br>Bawdrip Parish Council<br>Bleadon Parish Council<br>Bradley Stoke Town Council<br>Brent Knoll Parish Council<br>Bridgwater Town Council<br>Bridgwater Without Parish Council<br>Brockley Parish Council<br>Burnham-on-Sea Parish Council<br>Burnham Without Parish Council<br>Burrington Parish Council<br>Burtle Parish Council<br>Chapel Allerton Parish Council<br>Cheddar Parish Council<br>Chedzoy Parish Council<br>Chepstow Town Council<br>Chilton Polden Parish Council<br>Chilton Trinity Parish Council<br>Churchill Parish Council<br>Clapton-in-Gordano Parish Council<br>Cleeve Parish Council<br>Clevedon Town Council<br>Compton Bishop Parish Council<br>Congresbury Parish Council<br>Cossington Parish Council<br>East Brent Parish Council<br>East Huntspill Parish Council<br>Fiddington Parish Council<br>Filton Town Council<br>Flax Bourton Parish Council<br>Frampton Cotterell Parish Council<br>Holford Parish Council<br>Hutton Parish Council<br>Kenn Parish Council<br>Kingston Seymour Parish Council<br>Locking Parish Council<br>Long Ashton Parish Council<br>Loxton Parish Council<br>Lympsham Parish Council<br>Mark Parish Council<br>Mathern Community Council<br>Nailsea Town Council<br>Nether Stowey Parish Council |

| CONSULTEE | ORGANISATION |
|---|---|
| | North Petherton Town Council<br>Oldbury-Upon-Severn Parish Council<br>Otterhampton Parish Council<br>Olveston Parish Council<br>Patchway Town Council<br>Pawlett Parish Council<br>Pill & Easton-in-Gordano Parish Council<br>Pilning & Severn Beach Parish Council<br>Portbury Parish Council<br>Portishead Town Council<br>Portskewett Community Council<br>Priddy Parish Council<br>Puriton Parish Council<br>Puxton Parish Council<br>Shipham Parish Council<br>Stawell Parish Council<br>St Georges Parish Council<br>Stockland-Bristol Parish Meeting<br>Stogursey Parish Council<br>Stringston Parish Council<br>Thornbury Town Council<br>Tickenham Parish Council<br>Tidenham Parish Council<br>Walton-in-Gordano Parish Council<br>Weare Parish Council<br>Wedmore Parish Council<br>Wembdon Parish Council<br>West Huntspill Parish Council<br>Weston-in-Gordano Parish Council<br>Weston-Super-Mare Town Council<br>Westonzoyland Parish Council<br>Wick St Lawrence Parish Council<br>Winscombe & Sandford Parish Council<br>Woolavington Parish Council<br>Wraxall and Failand Parish Council<br>Wrington Parish Council<br>Yatton Parish Council |
| The Environment Agency | The Environment Agency |
| The Commission for Architecture and the Built Environment | CABE at Design Council |
| AONB Conservation Boards | The Cotswolds Conservation Board |
| The Equality and Human Rights Commission | Equality and Human Rights Commission |
| The Commission for | The Commission for Rural Communities |

| CONSULTEE | ORGANISATION |
|---|---|
| Rural Communities | |
| The Homes and Communities Agency | The Homes and Communities Agency |
| The Civil Aviation Authority | Civil Aviation Authority |
| The Highways Agency | The Highways Agency |
| The relevant Highways Authority | Somerset County Council<br>North Somerset Council<br>Bristol City Council<br>South Gloucestershire Council |
| The Passengers Council | Passenger Focus |
| The Disabled Persons Transport Advisory Committee | The Disabled Persons Transport Advisory Committee |
| The Coal Authority | The Coal Authority |
| The Office of Rail Regulation | Office of Rail Regulation |
| Approved Operator | Network Rail Infrastructure Ltd<br>Network Rail (CTRL) Ltd |
| The Gas and Electricity Markets Authority | OFGEM |
| The Water Services Regulation Authority | OFWAT |
| The Relevant Waste Regulation Authority | The Environment Agency |
| The Relevant Internal Drainage Board | North Somerset Levels IDB<br>Somerset Drainage Boards Consortium<br>Lower Severn IDB |
| The British Waterways Board | The Canal and River Trust |
| [3]The Health Protection Agency | Public Health England |
| The Crown Estate Commissioners | The Crown Estate Commissioners |
| The Relevant Local | Avon & Somerset Local Resilience Forum |

[3] In accordance with Regulation 3(b)(i) of the Infrastructure Planning (Prescribed Consultees and Interested Parties etc.) (Amendment) Regulations 2013 (the Amendment Regulations), the reference to the HPA has now formally been replaced by "Public Health England, an executive agency of the Department of Health", from 6 April 2013. Please note that Public Health England was established on 1 April 2013 and from 1 April 2013, the HPA became part of Public Health England.

| CONSULTEE | ORGANISATION |
|---|---|
| Resilience Forum | Gloucestershire Local Resilience Forum |
| The Forestry Commission | The Forestry Commission |
| **Relevant Statutory Undertakers** | |
| **Health Bodies (s.16 of the Acquisition of Land Act (ALA) 1981)** | |
| NHS Foundation Trust | Taunton & Somerset NHS Foundation Trust<br>Somerset Partnership NHS Foundation Trust<br>Weston Area Health NHS Trust<br>University Hospitals Bristol NHS Foundation Trust<br>North Bristol NHS Trust |
| Ambulance Trusts | South West Ambulance Service NHS Foundation Trust |
| Mental Health Trusts | Avon & Wiltshire Mental Health Partnership NHS Trust<br>Somerset Partnership NHS Foundation Trust |
| **Relevant Statutory Undertakers (s.8 ALA 1981)** | |
| Railways | BRB Residuary Limited |
| Road Transport | Severn River Crossings plc |
| Water Transport | The Canal and River Trust |
| Canal or Inland Navigation Authorities | Bristol Harbour Authority |
| Dock | Bristol Harbour Authority<br>The Bristol Port Company |
| Harbour | Bristol Harbour Authority |
| Universal Service Provider | Royal Mail Group |
| Licence Holder (Chapter 1 of Part 1 of Transport Act 2000) | NATS en Route plc |
| Water and Sewage Undertakers | Bristol Water<br>Severn Trent<br>Wessex Water |
| Public Gas Transports | British Gas Pipelines Ltd<br>Energetics Gas Ltd<br>ES Pipelines Ltd<br>ESP Connections Ltd |

| CONSULTEE | ORGANISATION |
|---|---|
| | ESP Networks Ltd<br>ESP Pipelines Ltd<br>Fulcrum Pipelines Limited<br>GTC Pipelines Limited<br>Independent Pipelines Limited<br>LNG Portable Pipeline Services limited<br>National Grid Gas Plc<br>National Grid Plc<br>Quadrant Pipelines Limited<br>Scotland Gas Networks Plc<br>Severn Gas Transportation Limited<br>Southern Gas Networks Plc<br>SSE Pipelines Ltd<br>The Gas Transportation Company Limited<br>Utility Grid Installations Limited<br>Wales and West Utilities Limited |
| Electricity Licence Holders having CPO Powers | British Energy Generation (UK) Limited<br>EDF Energy Nuclear Generation Limited<br>Seabank Power Limited<br>Energetics Electricity Limited<br>ESP Electricity Limited<br>Independent Power Networks Limited<br>The Electricity Network Company limited<br>Western Power Distribution (West Midlands) plc<br>Western Power Distribution (South West) plc |
| Electricity Transmitters with CPO Powers | National Grid Electricity Transmission plc<br>National Grid plc |

## Local Authorities (s.43)

| | |
|---|---|
| Bath & North East Somerset Council<br>Bristol City Council<br>Cardiff Council<br>Cotswold District Council<br>Devon County Council<br>Dorset County Council<br>Exmoor National Park Authority<br>Forest of Dean District Council<br>Gloucestershire County Council<br>Mendip District Council<br>Mid Devon District Council | Monmouthshire County Council<br>North Devon Council<br>North Somerset Council<br>Sedgemoor District Council<br>Somerset County Council<br>South Gloucestershire Council<br>South Somerset District Council<br>Stroud District Council<br>Taunton Deane Borough Council<br>West Somerset Council<br>Wiltshire Council |

## Non Prescribed Consultees

Newport City Council

**Note: the Prescribed Consultees have been consulted in accordance with the Planning Inspectorate's Advice Note 3 'Consultation and notification undertaken by the Planning Inspectorate' (May 2012).**

# APPENDIX 2

# Respondents to Consultation and Copies of Replies

# APPENDIX 2

## LIST OF BODIES WHO REPLIED BY THE STATUTORY DEADLINE

| |
|---|
| Badgworth Parish Council |
| Bridgwater Without Parish Council |
| Bristol City Council |
| Civil Aviation Authority |
| The Coal Authority |
| Compton Bishop Parish Council |
| Cotswolds Conservation Board |
| EDF Energy |
| English Heritage |
| The Environment Agency |
| ES Pipelines Ltd |
| Gloucestershire Police & Crime Commissioner |
| Health and Safety Executive |
| Highways Agency |
| Mark Parish Council |
| Nailsea Town Council |
| Natural England |
| Newport City Council |
| NHS Somerset CCG |
| North Somerset Council |
| Portbury Parish Council |
| Portishead Town Council |
| Public Health England |
| Seabank Power Ltd |
| Sedgemoor District Council |
| Somerset Council |
| South Gloucestershire Council |
| University Hospitals Bristol NHS Foundation Trust |
| West Somerset Council |

# BADGWORTH PARISH COUNCIL
## Somerset

Clerk: [redacted]
Cheddar
Somerset
Tel [redacted]

**The Planning Inspectorate**
3/18 Eagle Wing 0303 444 5000
Temple Quay House
2 The Square
Bristol
BS1 6PN

15th May 2013

By email: For the attention of Mr Alan Ridley, EIA and Land Rights Adviser - environmentalservices@infrastructure.gsi.gov.uk

INFRASTRUCTURE PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2009 SI 2263 (as amended) (the EIA Regulations)
PROPOSED Hinkley to Seabank Grid Connection (the project)
PROPOSAL BY National Grid (the applicant)

Your Ref: 130422_EN020001_1756022

Dear Sir,

Thank you for your letter sent by email and dated 22 April 2013.

Badgworth Parish Council has the following observations to make.

Since 2009, and after seeking the opinions of the Parishioners, Badgworth Parish Council has been working to an agreed mandate. This mandate was to object to any proposal for an overhead line which affects the Parish and its vistas, and to work towards a sub-sea or underground solution. This response should not be seen as tacit approval for this overhead line proposal.

Landscape and Visual Assessment Section 5 Page 49.

Our Parish will be significantly affected by the above proposal. The Parish lies at the Southern foot of the Mendip Hills (North of Section B) in the area known as the Somerset Levels. The landscape has been described in the Scoping Report page 52 under Section B – Somerset Levels and Moors.

It is anticipated that in this Parish the new line will replace the existing 132kv roughly following the present path.

This route takes the proposed line from the underground cable section through the AONB to a Sealing End Compound (possibly to be sited within our Parish) and then overhead across country and eventually, before leaving the Parish

bisects the Hamlet of Tarnock within a few metres of dwellings, and the major trunk road the A38, before carrying on towards the Key Settlement of Mark and South of Section B.

Paragraph 5.3.24 describes the main settlements where there are potential views of the proposed development which includes 'Rooksbridge to the west'. This does not portray the significance of the impact on the neighbouring settlement/Hamlet of Tarnock.

The views from the dwellings in Tarnock to the North, is across the open countryside to the Mendip Hills in the distance.

Tarnock's views will be of the proposed 400kv line coming towards the residents/dwellings and obviously the impact is greater as it moves towards the houses. The Scoping Report does not reflect any significance for instances as described. There is a similar situation in the Key Settlement of Mark where the line bisects Mark Causeway close to dwellings.

There can be no adequate mitigation for the proposed 47.5 metre high pylons and conductors in such a flat open countryside when the line is marching towards you and the accumulation of the infrastructure one behind the other into the distance. The Receptor Sensitivity paragraphs, 5.5.26 to 5.5.28 and Table 5.4 does not adequately cover the impact this proposal will have on those dwellings.

Table 5.4 also states that relative sensitivity for motorists and passengers on main roads is low. The Parish Council feels that that as the line passes over the major trunk road, A38, the Relative Sensitivity assessment of low is not relative to cases such as these. Further consideration should be given as to what category such situations could be placed.

Table 5.6 describes a moderate significance where a moderate magnitude of effect is experienced by a receptor of high or medium sensitivity. For example, where part of a development is visible in a view from a private property, but where it does not comprise the whole view. This does not adequately describe the significance when the line passes within a few metres of a dwelling, where the line is looked up to and it does comprise the whole view because of its close proximity. The major significance typical criteria does not pay due regard to private property where the overhead line passes within a few metres.

5.6.3 No mitigation can be afforded to these private properties whereby their views are compromised by the close proximity of the overhead line.

5.9.1 States that a digital model of the landscape is under construction. Parish Councils have requested that this be presented at the Community Forums. We still wait to see this model.

5.9.2 And 5.9.3 Photomontages are to be produced and viewpoints identified and discussed with the Landscape Thematic Group. To date Parish Councils have not had sight of any photomontages and it is not clear if these will be made available to Community Forums.

Page 217 Section 15.

15.1.1 The Parish Council notes that the effects of flooding on and from sewers is scoped out of the EIA because it has been identified as unlikely to be adversely effected by the proposed development and therefore the significance of the impact on the receptor does not need to be assessed as part of the EIA. It should be noted that many villages where the line passes within a few metres of private properties are serviced by a septic tank, not mains sewage. Due consideration should be given to the effects of the proposal on these individual systems.

Surface water drainage is highly sensitive and can cause flooding in times of heavy rain due to the high water table in the area, something that is not unusual lately.

Vibration during Operation is also scoped out of the EIA. Houses that are located within a few metres of the line and the new roads and where the line cuts through villages and small hamlets will experience vibration from construction traffic and movement of heavy infrastructure.

The Parish Council notes that property prices are scoped out and do not require assessment under the EIA Regulations and further goes on to say that the effect on house prices as a result of this development, as with all types of development is not material to the planning merits of the proposal. The Parish Council wishes the Planning Inspectorate to note that property prices have already plummeted where the proposed overhead line is to pass within a few metres. We would further state that having spoken to several Estate Agents, we can confirm that house prices have been substantially affected in the area and in some cases properties are experiencing difficulties in selling. Some owners who live within a few metres of the overhead proposal have been told that their houses are unsalable. If this serious impact cannot be taken into consideration in the merits of the proposal, the Parish Council would like to know where this adverse impact can be taken into account.

Yours sincerely

[redacted], Chair, Badgworth Parish Council

Cc: [redacted], Sedgemoor District Council

[redacted], Somerset County Council

# BRIDGWATER WITHOUT PARISH COUNCIL

Alan Ridley,
The Planning Inspectorate,
3/16, Eagle Wing,
Temple Quay House,
2, The Square,
Bristol, BS1 6PN

17 May 2013

*Sent by email:* environmentalservices@infrastructure.gsi.gov.uk

Dear Mr Ridley,

**INFRASTRUCTURE PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2009 SI 2263 (as amended) (the EIA Regulations)**
**PROPOSED Hinkley to Seabank Grid Connection (the project)**
**PROPOSAL BY National Grid (the applicant)**
Your Ref: 130422_EN020001_1756022
Date: 22 April 2013

Thank you for consulting us on this scoping report. The Council has discussed this matter and has consulted members of the local community through meeting them at community association meetings and individually. There are shared concerns about this report as it affects the southern sector of the overhead line route, designated "Polden Ridge", where the construction of an additional overhead line along a new, exposed route is proposed.

They centre on whether the proposed methodologies for producing graphical images representing the impact of the new line crossing the Polden Ridge will convey accurately the visual dominance the pylon line would have as it traverses the exposed promontory and on assessment of effects on the important local environment and amenity.

The site, near Knowle Hill, is at the beginning of the Polden Ridge as it rises from the flat estuarine landscape and commands attention from receptors in a very wide area. The hill forms a visual focus for a local population of about 40,000; additionally it is exposed to view from the M5 and the railway and forms a foil and backdrop for the many tourists visiting Sedgemoor and the Quantocks.

New pylons proposed to be placed near the crest of the Polden Ridge are likely to be as tall again as the height that the hill rises above the surrounding levels and several times higher than most mature trees. Any suggestion that local topography or vegetation would or could appreciably reduce the impact of the structures would seem fanciful. Yet we fear that the use of effects, lighting and colouring in visual representations of the line's impacts may disguise the way the line may be highlighted in the landscape and how it may draw the eye of many receptors to the alien intrusion and the depredation of a focal area of local rural amenity.

We are also concerned that the methodology proposed will not take account of the population of large water birds including heron and swan that use Kings Sedgemoor Drain. The overhead lines cross the take-off/landing flight-path on a straight stretch of water close to a main road. There are several potential knock-on effects from birds flying into the cables including that stricken birds could fall into fast-moving traffic on the adjacent road causing a serious accident.

The stretch of water is a popular location for anglers. High voltage cables crossing it will seriously affect their opportunity to use it safely. Furthermore National Grid's proposed construction and maintenance access route is along the Drain's bank from which the anglers fish; further degrading their amenity.

We are also concerned that impact assessments may not demonstrate adequately the visual and habitat effects of permanent/semi permanent roadways that are to be created parallel to the line of overhead cables/pylons. These are likely to serve as new barriers to reptiles, amphibians, eels and other small creatures that currently exist in the semi-improved land near the proposed line. There is also the likelihood that drainage patterns, so important to life on the levels and neighbouring hills will be disrupted.

Please could you ensure that these issues are adequately covered and given due weight in assessments supporting the project application?

Yours sincerely,

[redacted]

[redacted]

Bridgwater Without Parish Council

Alan Ridley
EIA and Land Rights adviser
By email only
Environmentalserivces@infrastructure.gsi.gov.uk

Reply to
Telephone [redacted]
Minicom
Fax
E-mail
Our ref
Your ref
Date 20 May 2013

Dear Mr Ridley,

**Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 SI 2263 (as amended) (the EIA Regulations)**
**Proposed Hinkley to Seabank Grid Connection (the project)**
**Proposal by National Grid (the applicant)**

Thank you for your consultation letter dated the 22nd April 2013.

We write in our capacity as a consultation body as defined in the EIA regulations to inform the Secretary of State as to the information that officers of the Council consider should be included in the Environmental Statement for the Hinkley to Seabank grid connection project.

**General**

We would like to draw the applicant's attention to the Bristol City Councils Draft Development Management Policies 2013 which are due to be examined at the end of this year. This document should be included in the planning context of the assessment alongside the adopted Bristol Core Strategy 2011.

**Health and Wellbeing**

Proposed changes to the EIA directive are due to come into effect in 2014 which will require a mandatory consideration of health for EIA development. Parts of the health and wellbeing impacts will be covered by other sections (noise, electro-magnetic waves, air quality, etc) but although not yet a requirement, we consider that it is good practice to have a specific section of the EIA that explicitly looks at the impact on human health and wellbeing through direct and indirect impacts. It may, as appropriate, cross refer to other parts of the Environmental Statement.

## Landscape and Visual

The policy context at 5.2.1 should include Bristol Supplementary Planning Document 1: Tall Buildings, 2005.

It is considered that the proposed approach is adequate; the section relating to Avonmouth makes reference to a number of viewpoints that will be considered in the assessment. Appropriate viewpoints for photomontages should be agreed with the Planning Authority to ensure that the impact of the scheme is fully assessed.

## Biodiversity and Nature Conservation

We have previously sent comments to the developer's consultant regarding the scope of the nature conservation chapter (12 February 2013). We have nothing further to add.

## Historic Environment

The methodology for assessment of the direct and indirect impacts appears comprehensive, and we have nothing to add at this stage.

## Geological conservation

Piling risk assessments should be undertaken for the Avonmouth areas – particularly those which are on former contaminated sites. There are potential risks to groundwater from mobilisation of contaminants. Avonmouth area has very deep alluvium which requires very deep piles of c 10m. Some of the route appears to go through former landfill sites as well. The ground and surface waters around Avonmouth are really complicated due to the number of changes in rhine location and direction of flow over the years.

The proposed route follows a path where we hold a lot of existing site investigation reports – should the consultants wish to view them they can do so by prior appointment at our offices. It is recommended that the consultants contact Emma Waters (Contaminated Land Officer Tel: 0117-92-23346).

## Flood Risk, Water Quality

There does not appear to be any reference to the Technical Guidance that supports the NPPF. The Lower Severn Internal Drainage Board should be consulted on the proposal and consideration should be had of tidal food risk during construction.

## Traffic and transport

The scope of the EIA regarding Traffic and Transport is generally acceptable. The main effects will be during the construction and, unless the development required permanent diversion of roads or

PROWS (which looks unlikely), there should be very limited impacts during the operational phase. We agree with the list of likely effects at 10.4.1-7 which need to be considered. It would be useful if the applicant clarified that the construction phase would also include decommissioning of 132kV overhead line as this could be as disruptive as the erection of new overhead lines.

We expect there could be significant disruption during the construction phase (including removal of redundant infrastructure) and road closures and diversions which need to be agreed with the Council Network Management. We would prefer closures, particularly of the more strategic routes, to be minimised.

**Air Quality**

The proposed scope of the air quality section of the EIA covers all of the potential impacts thoroughly and makers reference to relevant guidance and methodologies.

**Noise and Vibration**

The approach for assessing the noise and vibration impacts is acceptable.

**Socio- economics and land use**

We note that there will be consideration of the impact on the Avonmouth Severnside Enterprise Area. The potential for impact on the developability of land in the area needs to be assessed as does the impact on existing businesses and the operational capabilities of Bristol Port. The assessment should also consider the relationship with the proposed development of Seabank Power Station.

If you have any questions about the contents of this letter or the scoping opinion please contact the person named at the top of the letter

Yours sincerely

[redacted]

Major Schemes Team
Development Management

.

**Directorate of Airspace Policy**

Mr Alan Ridley (via e-mail)
The Planning Inspectorate

25 April 2013

Reference: ERM/DAP/Planning/HinkleyCOverheadConnectionProject

Dear Mr Ridley,

**Proposed Hinkley to Seabank Grid Connection – Scoping Comment**

Thank you for The Planning Inspectorate's recent correspondence relating to the subject development. The Inspectorate sought related Civil Aviation Authority (CAA) scoping comment; I trust the following is useful.

I understand from the literature supplied that the maximum height of the structures supporting the overhead line (wherever they are routed) would be some 47m, I have few observations beyond highlighting the need for the associated Environmental Statement to identify any aerodrome-specific safeguarding issues. To that end, noting that aerodrome safeguard responsibilities rest in all cases with the relevant aerodrome license holder/operator, I would anticipate a need for the developer to engage with and seek the related viewpoints of several local aerodromes including Bristol International Airport and 2 helicopter landing sites. Any associated documentation supporting a related planning application would be expected to consider potential aerodrome issues.

Moreover, I am aware that, in respect of military aviation operations, the Ministry of Defence (MoD) has expressed generic concerns associated with overhead power lines. It is consequently possible that the MoD would make recommendation related to the lighting of the towers and marking of the wires. Accordingly, it is important that any environmental study establishes the MoD viewpoint related to the subject proposal. The Service should be aware that in general the CAA would wish to support MoD recommendation concerning enhancement to wire conspicuity.

Additionally, there would be a requirement for the overhead line to be promulgated for aviation purposes. Details of the overhead line and supporting structures would need to be provided to the Defence Geographic Agency. As an aside, it should be noted that, the CAA promulgates known power lines which have a height of 80ft or more, drawing information from a Defence Geographic Agency database. The MoD is known to use a lower threshold.

I hope these few comments match your requirements. Should you require any further civil aviation regulatory input, do not hesitate to get in touch.

Yours sincerely

[redacted]
Off Route Airspace 5

**Civil Aviation Authority**
CAA House 45-59 Kingsway London WC2B 6TE www.caa.co.uk
Telephone [redacted] Fax 020 7453 6565 [redacted]@caa.co.uk

The Coal Authority

INVESTOR IN PEOPLE

**200 Lichfield Lane**
**Berry Hill**
**Mansfield**
**Nottinghamshire**
**NG18 4RG**

**Tel: 01623 637 119 (Planning Enquiries)**

**Email: planningconsultation@coal.gov.uk**

**Web: www.coal.decc.gov.uk/services/planning**

For the Attention of Alan Ridley
EIA and Land Rights Adviser
The Planning Inspectorate

**[By Email: environmental services@infrastructure.gsi.gov.uk]**

13 May 2013

Dear Mr Ridley

**SCOPING OPINION – PROPOSED HINKLEY TO SEABANK GRID CONNECTION**

Thank you for your consultation letter of 22 April 2013 seeking the views of The Coal Authority on the EIA Scoping Opinion for the above proposal.

The Coal Authority Response

The proposed EIA development is located partly within the defined coalfield; parts of the preferred route corridor therefore have the potential to have been affected by past coal mining activity.

Past coal mining activities within the preferred route corridor should therefore be considered as part of the Environmental Statement (ES); this should take the form of a risk assessment, together with any necessary mitigation measures.

Consideration of Coal Mining Issues in the ES

There are a number of coal mining legacy issues that can potentially pose a risk to new development and therefore should be considered as part of an Environmental Statement for development proposals within coalfield areas:

- The location and stability of abandoned mine entries
- The extent and stability of shallow mine workings
- Outcropping coal seams and unrecorded mine workings
- Hydrogeology, minewater and minegas

In addition, consideration should be afforded as part of development proposals and the ES to the following:

- Whether Coal Authority permission is required to intersect, enter, or disturb any coal or coal workings during site investigation or development work

Coal Mining Information

Information on these issues can be obtained from The Coal Authority's Property Search Services Team (Tel: 0845 762 6848 or via the website: www.groundstability.com) or book an appointment to visit The Coal Authority's Mining Records Centre in Mansfield to view our mining information (Tel: 01623 637 233).

An assessment of the risks associated with the presence of coal mining legacy issues on a proposed development should be prepared by a "competent body". Links to the relevant professional institutions of competent bodies can be found at: http://coal.decc.gov.uk/en/coal/cms/services/planning/strategy/strategy.aspx

I trust this is acceptable, please do not hesitate to contact me if you require any additional information or would like to discuss this matter further.

Yours sincerely

[redacted]

**Planning Liaison Manager**

Disclaimer

The above consultation response is provided by The Coal Authority as a Statutory Consultee and is based upon the latest available data and records held by The Coal Authority on the date of the response. The comments made are also based upon only the information provided to The Coal Authority by the Local Planning Authority and/or has been published on the Council's website for consultation purposes in relation to this specific planning application. The views and conclusions contained in this response may be subject to review and amendment by The Coal Authority if additional or new data/information (such as a revised Coal Mining Risk Assessment) is provided by the Local Planning Authority or the Applicant for consultation purposes.

20 Old Coach Road
Cross
Axbridge
Somerset
BS26 2EG

Alan Ridley
EIA and Land Rights Adviser
3/18 Eagle Wing
Temple Quay House
2 The Square
Bristol
BS1 6PN
EnvironmentalServices@infrastructure.gsi.gov.uk

16th May 2013

Dear Mr Ridley

**EN020001 - Hinkley to Seabank Grid Connection - Scoping Consultation**

In response to your invitation to provide information which should be provided in the environmental statement, Compton Bishop Parish Council wishes the following to be taken into account :

1. Compton Bishop Parish Council does not support the installation of overhead transmission lines and has a mandate to promote and support the alternate solutions of sub-sea and undergrounding, particularly in the areas of the AONB and Somerset Levels.

2. The major concern of this parish is the preservation of the unique qualities of the landscape and visual aspects of the following sections :

   B – Somerset Levels & Moors South

   C- The Mendip Hills AONB

   D – Somerset Levels North. This is limited to the area of the Mendip Hills AONB, the Lox Yeo Valley including Banwell Hill and Banwell Plain.

   The Mendip Hills AONB is a valued recreational area well established as the next best thing to a National Park. Tourists from afar join regular visitors and tourists who come from local areas and include many from our nearest towns of Bridgwater, Weston Super Mare and also the City of Bristol. There are many members of nature and walking organisations who enjoy regular visits. The local leisure industries benefit from the natural environment of the open countryside which provides stunning views over the flat Somerset Levels. This provides an exceptional vista for the intervisibility between the significant landmarks of Brent Knoll, Glastonbury Tor, The Polden Hills, Brean Down and Steep Holm in the Severn Estuary.

   The visual distraction of overhead cables and massive pylons together with the proposed Sealing End Compound at Biddisham would have a cumulative impact of such magnitude that the high amenity value of this area would be compromised. The height of the unbroken line of cables, in a flat landscape which does not provide hills or trees for background screening, would have a major detrimental impact on a significant countryside location.
   The proposed sealing end compound, overhead power lines and associated pylons are unsuitable for this unique landscape and environment.

**3.** Compton Bishop Parish Council would make the following comments on those topics which have been identified as being 'scoped out' of the EIA (refer to EN020001 Scoping Report pages 217 – 220). The Council requests that the following items be included in the scoping process.

**3.1. Effects of Flooding from Sewers**

This rural area relies on Septic Tanks for sewage treatment. Any intrusion into water courses by undergrounding or positioning concrete platforms for pylons may have a detrimental impact on drainage from septic tanks.

**3.2. Effects from Vibration during Operation**

Many older properties and boundary walls do not have foundations. Any vibration from machinery or construction traffic could have a detrimental impact on these structures.

**3.3. Effects on the transport network during Operation**

Transport and access to sites would be using small country roads, lanes and droves. The larger vehicles and machinery may require roadways and access points to be widened. The concerns to be registered are that the wider roads would encourage an increase in both the speeds and volume of traffic and would further popularise the development of a rat-run from Weston Super Mare via Bleadon and Compton Bishop to Axbridge, Cheddar and the A38. Roads and tracks should be restored to their original size on completion of construction works.

**3.4. Effects on property prices**

Land and property owners are experiencing devaluation of their assets as a direct result of the proposed development by National Grid. Landowners and Farmers who experience an adverse financial impact for this type of development are compensated. Similar compensation should be provided for property owners.

**3.5. Effects on Climate Change**

While it is recognised that the project will not have an impact ***on*** climate, consideration should be made ***of*** the effect of climate change on the installations.

**3.6. Effects on the tourism economy**

This council recognizes that the proposal, by National Grid, to ***exclude quantitative*** assessment of the Tourism Industry in the Scoping Process is a serious omission. The Council would wish for a qualitative assessment to be a precursor to a quantitative assessment which would provide an accurate assessment of the impact of the development on the significant tourism industry in this area.

I would be grateful if you would confirm receipt of this letter.

Yours Sincerely,

[redacted]

Compton Bishop Parish Council

Copy : [redacted], Clerk to Compton Bishop PC

**From:** [redacted]
**To:** Environmental Services;
**Subject:** 130422_EN020001_1756022
**Date:** 09 May 2013 14:20:31

---

Dear Sir

Proposed HInkley to Seabank Grid connection

Thank you for your letter dated 22nd April 2013 regarding the above.

I can  confirm that the Cotswolds Conservation Board will not be making any comments on this proposal.

Yours sincerely

[redacted]
Planning Officer
Cotswolds Conservation Board
Fosse Way, Northleach, Gloucestershire GL54 3JH

[redacted]

[redacted]@cotswoldsaonb.org.uk

The Planning Inspectorate
3/18 Eagle Wing
Temple Quay House
2 The Square
Bristol
BS1 6PN

FAO Alan Ridley

130422-EN20001-1756022

17th May 2013

Dear Mr Ridley

**INFRASTRUCTURE PLANNING (EIA) REGULATIONS 2009 SI 2263 (as amended) PROPOSED Hinkley Point C Connection Project (the Connection Project) PROPOSAL BY National Grid (the Applicant)**

Thank you for consulting EDF Energy (Nuclear Generation) Limited ("EDF Energy") on the request for a scoping opinion on the information to be provided in an Environmental Statement for the above Connection Project.

I can confirm that EDF Energy is a relevant consultation body, and as you know this Connection Project will provide essential infrastructure to facilitate the export of electricity from the proposed Hinkley Point C (HPC) Nuclear Power Station, consent for which was granted by the Secretary of State on 19 March 2013. This response also takes account of views from the applicant for the power station proposal, NNB Generation Company Limited.

EDF Energy fully supports the need for the Connection Project, as described in Section 2.2 of the Scoping Report.

Having reviewed the scoping report, we confirm that it covers the majority of the scope of work we would expect in the Environmental Statement. (Please see comments below in respect of emergency planning associated with construction activities and in-combination effects)

EDF Energy has regular dialogue with the Applicant, and will continue to do so. This dialogue will aim to ensure that:

(a) the proposed Connection Project is planned and carried out in such a way that it does not adversely impact on the operation of the existing Hinkley Point B ("HPB") Power Station, and

(b) construction work for the proposed HPC Nuclear Power Station, including a new 400kV sub-station at Shurton, is co-ordinated with the construction work for the Connection Project in the area of the Hinkley Point Line Entries.

EDF Energy Nuclear Generation Limited
Barnett Way, Barnwood, Gloucester GL4 3RS

T: +44 (0)1452 652222
F: +44 (0)1452 652776
www.edfenergy.com

Registered office: Barnett Way, Barnwood Gloucester, GL4 3RS. Registered in England and Wales number 3076445.

Given the nature of the application, we would expect that the Applicant will continue to work closely with EDF Energy on its final detailed plans for works in the vicinity of Hinkley Point (including details pursuant to any Consent Requirements).

In particular relation to HPB and its day to day operation, EDF Energy would expect the Applicants Environmental Statement to cover the effect of construction activities in the vicinity of the power station (particularly traffic) and the potential in-combination effects the proposed development may have.

Crucially, EDF Energy also has responsibilities for emergency arrangements under the Nuclear Site Licence conditions attached to HPB and HPC. It will be important that any activities within the Detailed Emergency Planning Zone can be accommodated within the off site Emergency Plan. EDF Energy would suggest that emergency planning is covered in the Environmental Statement so it is clear the potential impacts on staff, visitors and residents in the area have been addressed. EDF Energy is willing to discuss this matter with the Applicant and share the expertise of its emergency planning team.

In terms of operational impact to HPB, we will expect to have the opportunity to properly consider and comment, when available, on the technical detail of the Applicant's proposals, including any impacts on the security of the electrical supplies to and from HPB.

Finally, we note the references to the HPC project in the scoping report, in particular in recognition of the grant of Development Consent on 19th March this year. It is recommended that the Applicant has due regard to the Secretary of State's decision and PINS Panel Report (19th December 2012) in progressing the EIA. EDF Energy will make available to the Applicant any relevant information from the EIA that was carried out to inform its Environmental Statement together with any subsequent DCO requirement or other consenting submissions as may be relevant.

EDF Energy supports this proposal and confirms that we will work closely with the Applicant throughout all stages of development.

[redacted]

**PLANNING & DEVELOPMENT MANAGER**
**EDF ENERGY (NUCLEAR GENERATION) LTD**

ENGLISH HERITAGE

SOUTH WEST

Mr Alan Ridley
EIA and Land Rights Adviser
The Planning Inspectorate
3/18 Eagle Wing
Temple Quay House
2 The Square
Bristol
BS1 6PN

Your ref: 130422_EN020001_1756022

17 May 2013

Dear Mr Ridley

re: **Hinkley Point C Connection Project: Environmental Impact Assessment, Scoping Report**

Thank you for your letter of 22nd April 2013 consulting English Heritage about the above EIA Scoping Report.

This development could, potentially, have an impact upon a large number of designated and non –designated heritage assets and their settings in the area along the proposed corridor. In line with the advice in NPPF Chapter 12 we would expect the Environmental Report to contain a thorough assessment of the likely effects which the proposed development might have upon Historic Assets.

Given the height of the structures associated with the proposed development and the surrounding landscape character, this development is likely to be visible across a very large area and could, as a result, affect the significance of heritage assets at some distance from this site itself. We would expect the Assessment to clearly demonstrate that the extent of the proposed Study area is of the appropriate size to ensure that all heritage assets likely to be affected by this development have been included and can be properly assessed.

The assessment should also take account of the potential impact which associated activities (such as construction activity, servicing and maintenance, and associated traffic) might have upon perceptions, understanding and appreciation of the heritage assets in the area. Assessment should also consider, where appropriate, the likelihood of alterations to drainage patterns that might lead to in situ decomposition or destruction of below ground archaeological remains and deposits, and can also lead to subsidence of buildings and monuments.

Overall the Report covers all the above points and any issues we have previously raised. However there are a few points of clarification which we would like to see addressed in the final Environmental Statement

- Section 5.7.1 and 7.7 it is very positive that the inter-relationship of effects has been recognising, but both sections need to be cross referenced so the wording is similar.
- Dynamic views, especially along PROWs, need to be assessed
- In Section 7.4.20 we are pleased to see that equal weight has been given to non-designated heritage assets, which are of demonstrable designatable significance.
- In Table 7.2, p120, under the Representation column the row starting 'one or several experts who have….' under How Addressed in the EIA column replace 'archaeological' with 'historic environment', this then covers all asset types.
- Under Section 7.4.19 does the footprint include, for instance, compounds, access routes for plant etc? This is of concern as these activities can significantly impact on some historic assets.
- Under Section 7.5.8 the 11th bullet point needs to add a reference to local historic parks and gardens.
- Also in Section 7.5.8 under the final bullet point, remove English Heritage from the list, we do not hold Lidar data. This could be replaced with Environment Agency, who do hold this data.
- Under Sections 7.5.12 and 13 the assets excluded from the survey need to be recorded so we are aware they have been assessed. This could form a table in an appendix. (See last bullet point below)
- In Section 7.5.16 the following sentence needs to be added 'If the field methodology is not suitable for core recovery, provision should be made to return and take cores/ samples using appropriate geo-archaeological techniques.
- In Section 7.5.22 significant views from highly designated assets in some cases may be required, i.e. principal rooms in Stately Homes.
- When assessing effects of development the potential for dewatering in peat deposits by the Pylon footings needs to be looked at.
- There are no references to any landscape assessment guidance at the end of chapter 5. If not mentioned elsewhere in the document the recently published 3rd Edition of the Guidelines for Landscape and Visual Impact Assessment needs to be consulted.
- We are unsure about the proposal to split effects into substantial or less than substantial, especially if the latter will not be brought out in the main text of the Historic Environment chapter of the ES and the summary documents that may draw upon the chapter. We would like to see all the effects presented in a text summary in the main body of the chapter, with a tabulated form set out as a technical appendix to the chapter that includes all effects.

29 QUEEN SQUARE BRISTOL BS1 4ND

*Telephone 0117 975 0700 Facsimile 0117 975 0701*
*www.english-heritage.org.uk*
*Please note that English Heritage operates an access to information policy. Correspondence or information which you send us may therefore become publicly available*

Stonewall
DIVERSITY CHAMPION

Yours sincerely

Inspector of Ancient Monuments

E-mail: [redacted]@english-heritage.org.uk

**From:** [redacted]
**To:** [redacted]tal Services;
**Subject:** HINKLEY C CONNECTION PROJECT - EIA SCOPING REPORT
**Date:** 20 May 2013 16:59:02
**Attachments:** dps1.pdf

---

FAO Alan Ridley

Please find attached a copy of the Environment Agency's response in respect of the above.

Regards

[redacted]

Mr Alan Ridley
The Planning Inspectorate
3/18 Eagle Wing House
2 The Square
Bristol
BS1 6PN

**Our ref:** WX/2009/111876/07-L01
**Your ref:** 130422_EN020001_ 1756022

**Date:** 20 May 2013

Dear Ridley

**HINKLEY C CONNECTION PROJECT - EIA SCOPING REPORT**

Thank you for your consultation regarding the above.

We have been, and continue to be, in direct contact with National Grid in respect of this proposal. As a consequence of our engagement, we are essentially satisfied regarding the range of issues and methodologies identified within the Scoping Report.

Notwithstanding the above, we would make the following observations:

**Biodiversity and Nature Conservation**

Ongoing monitoring

Based on the details of survey methodology and timings, we would expect a robust data set for priority and protected species and habitats. However, this data may only be suitable for a relatively short period of time. Transient populations, including water voles, otters and amphibians, can change year on year and therefore it may not be sufficient to use 2-5 year old data. Continuous monitoring for protected species will likely be required during the course of the proposed works.

Fragmentation of habitat

The proposed scheme of works has the capacity to cause significant habitat fragmentation however, it would appear that this issue has been omitted from the report. The applicant will be expected to appropriately assess the potential impact for habitat fragmentation and incorporate appropriate avoidance/mitigation options. Where it is not possible to avoid the loss of habitat, the developer must be mindful of the fact that like for like creation of habitat is rarely possible for mature habitats due to the time scales required to form these habitats. Again, the applicant will be expected to appropriately assess any potential impact on mature habitats and incorporate appropriate avoidance/mitigation options.

Temporary culverts

Temporary culverts require a lower level of environmental assessment than permanent culverts. It should be noted that if temporary culverts are installed and it subsequently becomes evident that they need to be retained, the culvert may need to be re-assessed and possibly replaced with a more appropriate design.

Heat radiation from underground lines

In a number of areas the underground lines will run under or adjacent to bodies of water. If heat is radiated from these underground lines, this could result in an increase in the temperature of such water bodies. A change in water temperature of even a degree can drastically alter the ecology of a system. We will require additional information on the potential for heat radiation from these lines and the potential impact on wetland habitat. Where an increase in water temperature is a risk, appropriate mitigation should incorporated to manage the risk i.e. tree planting along river banks can provide shade and thus reduce water temperature.

**Geological Conservation**

It is noted that part of the proposed route passes through a groundwater Source Protection Zone 1 (SPZ1). This is located in Section E, Tickenham Ridge, between approximate NGR ST8402 7323 and ST 4767 7273. This part of the route is shown on Figure G1979.1377, and is located approximately 800m to the west of Moat House Farm. Here, the indicative underground cable route crosses a unit of Carboniferous Limestone (Black Rock Limestone), a Principal Aquifer that forms the SPZ1 for the public water supply of Twickenham Road Well, Clevedon, operated by Bristol Water plc.

Accordingly, there is a significant risk to groundwater and the SPZ1 during the construction stage, principally from, inter alia, the spillage of fuels and hydraulic fluid from construction and excavation vehicles. We would therefore expect appropriate pollution prevention measures to be incorporated within the requisite construction environment management plan, to protect this important resource. We also recommend that the developer liaise with Bristol Water plc in respect of this matter.

**Flood Risk, Water Quality and Resources**

With reference to Section 9.5.6 – we would welcome clarification regarding the statement that an appraisal incorporating the objectives of the Water Framework Directive (WFD) is not required in respect of the effects of temporary construction works. Although it is acknowledged that WFD objectives relate to non-temporary effects, it is understood that certain ‘temporary’ construction works may be in-situ for a number of years.

It should be noted that it is not mandatory to obtain our requisite Flood Defence Consent (FDC) prior to submission of the Development Consent Order (DCO) application. We would wish to maintain our consenting powers i.e. not allow the DCO to remove our control of any works that require FDC i.e. watercourse crossings. Under such circumstances, any significant route changes resulting from the DCO process, would still be subject to our FDC.

Notwithstanding the above, current on-going discussions regarding our FDC requirements should continue.

Cont/d..

Details regarding the proposed assessment and management of waste emanating from the proposed works have not specifically been included. This issue may have environmental permitting and/or formal exemption implications. Accordingly, we will expect the inclusion of full details regarding this matter.

Should you wish to discuss the above issues further please contact me direct.

Yours sincerely

[redacted]
**Sustainable Places - Planning Specialist**

[redacted]
Direct e-mail [redacted]@environment-agency.gov.uk

End

**From:** [redacted]
**To:** Environmental Services;
**Subject:** RE: EN020001 - Hinkley to Seabank Grid Connection - Scoping Consultation
**Date:** 25 April 2013 12:41:08

---

Hi Alan,

**INFRASTRUCTURE PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT)**
**REGULATIONS 2009 SI 2263 (as amended) (the EIA Regulations)**
**PROPOSED Hinkley to Seabank Grid Connection (the project)**
**PROPOSAL BY National Grid (the applicant)**

Your ref: 130422_EN020001_1756022

ESP Ref: PE105243,105247,105250,105251,105261,105266,105270

Further to your email communication to E S Pipelines Ltd, ESP Networks Ltd, ESP Pipelines Ltd, ESP Electricity Ltd and ESP Connections Ltd dated 22 April 2013 I can confirm that our businesses have no comments at this stage.

Regards,

[redacted]
Operations Manager

[redacted]
www.espipelines.com

**From:** [redacted]
**To:** Environmental Services;
**Subject:** Hinkley to Seabank Grid Connection
**Date:** 26 April 2013 14:53:18

---

Dear Sir
We have already commented on the EIA and did not feel it would have any impact upon Gloucestershire.

Please accept this reply from the Office of the Gloucestershire Police and Crime Commisioner that the proposed Hinkley to Seabank grid connection will not have an impact on this organisation.

Regards
[redacted]
Environmental Manager
Tel no [redacted]

| | |
|---|---|
| **From:** | NSIP.Applications@hse.gsi.gov.uk |
| **To:** | Environmental Services; |
| **cc:** | [redacted] |
| **Subject:** | Proposed Hinkley to Seabank Grid Connection - HSE Response |
| **Date:** | 20 May 2013 12:12:45 |
| **Attachments:** | [Untitled].pdf |

---

Dear Mr. Ridley,

HSE does not comment on EIA's but, as it is a consultee on all NSIP's, we pass on observations which would help the applicant progress the application. Please find these attached.

A hard copy has also been posted.

Kind regards,

[redacted]

[redacted]

Land Use Planning Policy, Major Hazards Policy Division, Hazardous Installations Directorate, Health and Safety Executive.

Desk 58, 5.S.2, Redgrave Court, Merton Road, Bootle, Merseyside L20 7HS

[redacted]@hse.gsi.gov.uk

www.hse.gov.uk | http://hse.gov.uk/landuseplanning

HSE

Health and Safety Executive

HID Policy - Land Use Planning
NSIP Consultations
Building 5.S.2, Redgrave Court
Merton Road, Bootle
Merseyside, L20 7HS

Your ref: 130422_EN020001_1756022
Our ref: 4.2.1.3590

HSE email: NSIP.applications@hse.gsi.gov.uk

FAO Alan Ridley
The Planning Inspectorate
3/18 Eagle Wing, Temple Quay House
2 The Square, Bristol
BS1 6PN

Dear Mr Ridley,

20th May 2013

**PROPOSED HINKLEY TO SEABANK GRID CONNECTION (the project)**
**PROPOSAL BY NATIONAL GRID (the applicant)**
**INFRASTRUCTURE PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2009 SI 2263 (as amended) (the EIA Regulations)**

Thank you for your letter of 22nd April 2013 regarding the information to be provided in an environmental statement relating to the above project.

**Major Hazard installations and explosives sites within the vicinity of the proposed development**

Major Hazard Installations

This is a complex application with many features that fall within the Consultation Distances of a number of major hazard sites and pipelines. It is not clear to us at this stage, but (in line with PADHI+ guidance) we would advise against features such as the sub-stations if they were more than 3 occupied storeys or allowed occupation by 100 workers. It may be that the sub-stations are considered to be 'not normally occupied', so they would not meet the criteria for HSE to advise against.

Explosives sites

The Hinkley to Seabank Grid Connection does not impinge on the separation distances of any explosives site licence by HSE.

**Electrical Safety**

This project may create or have an impact on existing generation, transmission and distribution assets. It needs to satisfy general UK health and safety legislation (i.e. Health and Safety at Work etc Act 1974 and supporting regulations ), and the proposed design and future operations must comply with the Electricity at Work Regulations 1989 and Electrical Safety, Quality and Continuity Regulations 2002, as amended. Generators, distributors, their contractors and others have defined duties in order to protect members of the public from the dangers posed by the electrical equipment used. HSE enforces the safety aspects of these regulations. If you have any doubts about the particular application of these regulations in terms of either the operation or construction of substations, overhead lines or underground cables, please contact [redacted] Principal Specialist Inspector (Electrical Networks), either at [redacted]@hse.gsi.gov.uk or Rose Court GSW, 2 Southwark Bridge Road, London SE1 9HS.

Please send any further electronic communication on this project directly to the HSE's designated e-mail account for NSIP applications. Alternatively any hard copy correspondence should be sent to:

[redacted]
NSIP Consultations
5.S.2 Redgrave Court
Merton Road
Bootle
Merseyside
L20 7HS

Yours sincerely,

[redacted]

HID Policy - Land Use Planning

HIGHWAYS AGENCY

Our ref: HA/National Grid
Your ref: EN020001_1756022

[redacted]
Asset Manager
2/08K
Temple Quay House
2 The Square, Temple Quay
Bristol BS1 6HA

Direct Line: [redacted]
Fax:

14 May 2013

The Planning Inspectorate
3/18a Eagle Wing
Temple Quay House
2 The Square
Bristol
BS1 6PN

**For the attention of Alan Ridley**

Dear Mr Ridley

**INFRASTRUCTURE PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2009 SI 2263 (as amended) (the EIA Regulations)**
**PROPOSED Hinkley to Seabank Grid Connection (the project)**
**PROPOSAL BY National Grid (the applicant)**

In your scoping report of April 2013, you have invited the Highways Agency (HA) to provide comments on the scope of an Environmental Statement in respect of proposals to develop a new 400,000 volt (400kV) connection between Bridgwater, Somerset and Seabank Substation, north of Avonmouth.

I have set out below both the general and specific areas of concerns that the Highways Agency would wish to see considered as part of an Environmental Statement. The comments relate specifically to matters arising from the Agency's responsibilities to manage and maintain the Strategic Road Network (SRN) in England.

Comments relating to the local road network should be sought from the appropriate local highway authority.

General aspects to be addressed in all cases:

- An assessment of transport related impacts of the proposal should be carried out and reported as described in the current Department for Transport *'Guidance on Transport Assessment'*.
- Environmental impact arising from any disruption during construction, traffic volume, composition or routing change and transport infrastructure modification should be fully assessed and reported.
- Adverse change to noise and to air quality should be particularly considered, including in relation to compliance with the European air quality limit values and/or in local authority designated Air Quality Management Areas (AQMAs).
- No new connections are permitted to the Highways Agency drainage network. In the case of an existing 'permitted' connection, this can only be retained if there is no land use change.



POSITIVE ABOUT DISABLED PEOPLE
INVESTOR IN PEOPLE
Department for Transport

- Development must not lead to any surface water flooding on the Strategic Road Network (SRN) carriageway.

Location specific considerations:

We note that Table 10.9 Consultation Comments and Responses sets out a number of areas where consultation comments have been received and where they will be addressed. The comments below should therefore be considered as additional to those already reflected in Table 10.9. For the avoidance of doubt, the HA is comfortable with the proposed approach for addressing the points identified in Table 10.9. We also recognise that separate scoping is to be undertaken on the Transport Assessment and will therefore expect to make specific responses to that consultation.

Please also be advised that consultation has recently ended on a proposed new circular, to replace Circular 02/07 Planning and the strategic road network, the draft replacement document should therefore be treated as a material consideration when producing your application documents, until such time that the outcome of the consultation exercise is known.

- Please be advised that the road network for which the HA assumes responsibility in the vicinity of the site includes the A4 from the St Andrew's Roundabout (A403/A4), St Brendan's Roundabout (A4/M5 and M49 Slip Roads) the Portway Roundabout (A4/M5 and M49 Slip Roads) as well as the M5, M4, M49 and M48.
- As the impact of development during construction is likely to be a primary concern of the HA's, detailed information on staffing numbers, mode share, shift patterns, HGV numbers, HGV arrival/departure profiles, development phases, and Abnormal Indivisible Loads, should be determined at the earliest opportunity.
- For your information, the HA would anticipate the need for controls to ensure that the construction trip generation is not exceeded, such that the assessment and accompanying mitigation package can be relied upon. We would anticipate that this requirement will be accommodated through production of a Construction Traffic Management Plan.
- At this stage the HA is not able to confirm the extent of the study area which we would expect the application to consider, however, we are happy to provide ongoing advice on this matter as information on the extent of impact is made available.

These comments are only advisory, as the responsibility for determining the final scope of the Environmental Statement does not rest with the Highways Agency.

The Agency's comments imply no pre-determined view as to the acceptability of the proposed development in traffic, environmental or highway terms. Should the applicant wish to discuss the merits of the proposal in terms of the likely impact on the SRN please contact me on [redacted]

Yours sincerely

[redacted]

Network Delivery & Development (South West)
Email: [redacted]@highways.gsi.gov.uk

# MARK PARISH COUNCIL

[redacted]
**Clerk of the Council**

**5 Channel Court,**
**Burnham-on-Sea,**
**Somerset,**
**TA8 1NE**

**Your Ref:** Your Ref: 130422 EN020001 1756022 **Tel:** [redacted]

15th May 2013

3/18 Eagle Wing 0303 444 5000
Temple Quay House
2 The Square
Bristol
BS1 6PN

Dear Mr Ridley,

**INFRASTRUCTURE PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2009 SI 2263 (as amended) (the EIA Regulations)**
**PROPOSED Hinkley to Seabank Grid Connection (the project)**
**PROPOSAL BY National Grid (the applicant)**

Mark Parish Council has been asked to comment on the Scoping report which National Grid has compiled with regard to the above application.

The proposed 400kv power line will replace the existing 132kv line deviating from the existing route south of Mark Moor and would cross Southwick Road and continue north up Mark Moor crossing Mark Causeway and beyond.

We wish it to be recorded that Mark Parish Council has from the beginning of 2009 supported the overwhelming majority view of the residents of Mark that the new connection line should be routed subsea between Hinkley and Seabank Avonmouth, or alternatively underground. This is still the opinion of the community as expressed at public meetings and community forums.

The Council, in respect of Study Area B, wish to raise the following points from the report which it believes are relevant to the area.

**Landscape and Visual Assessment. Page 53, 5.3.24**

**Study Area B**

*5.3.17 Section B comprises the Somerset Levels and Moors described as a broad area of flat low-lying farmland and wetland surrounded and divided by low hills and ridges characterised as the Mid Somerset Hills. There is a close visual association between these character areas with the hills and ridges forming adistinct and varied backdrop and skyline to the lower lying Levels and Moors with expansive views from the higher ground across the Levels and Moors.*

The detrimental impact resulting from the proposed line of 46.5 metre high pylons across Mark Moor will be clear for all to see in the loss of visual amenity across the scenic landscape of the Somerset Levels. It is proposed for these exceptionally tall structures to be erected across Mark Moor, Mark Causeway (B3139), where the route intersects the community of Mark severely impacting on the quality of life of residents in nearby properties.

**Receptor Sensitivity page 78 5.5.26.**

This section does not cover the impact this proposal will have on the residents of the village of Mark. It will be virtually impossible to mitigate the impact of the proposed route across the Somerset Levels and Moors.

As there has been no photographic/image evidence produced by National Grid of the visual impact upon Somerset Levels, the Council is unable to refer the IPC to such evidence.

The Council would be happy to conduct a member of the IPC around Mark village to show how the proposed line of 46.5metre high pylons would impact on the village.

**Flooding Risk, Water Quality and Resources page 140 9.3.3/9.4.3.4.**

.

*Fluvial Flooding*

*9.3.3 Based on the Environment Agency's online Flood Maps the majority of the study area is within Flood Zone 3 associated with flooding from fluvial and tidal sources.*
*The risk of river flooding in Flood Zone 3 is within the 1 in 100 year event and is considered to be a high risk of flooding. In addition there are generally narrow zones of Medium Probability Flood Zone 2 between Flood Zones 1 and 3. In this Flood Zone flooding probability will be between 1 in 100 years and 1 in 1000 year. The remainder of the study area is within Flood Zone 1 where the risk of flooding from fluvial sources is outside the 1 in 1000 year event and is considered to be* at low risk of flooding.

*9.4.3 Sections of the proposed development are in the floodplains of Main Rivers and Ordinary Watercourses (Rhyne). The majority of the study area is within Flood Zone 3 associated with flooding from fluvial sources.*

*9.4.4 Construction activities have the potential to cause blockages within watercourses and/or impact upon the floodplains of watercourses ultimately reducing their floodwater storage capability. It should be noted also that excavation adjacent to the banks of watercourses can increase the risk of overtopping and/or breach of the bank by locally lowering the level of protection, or decreasing the integrity of the bank or flood risk asset. This can increase the flood risk to adjacent land and property.*

Mark Moor and Southwick site fall within flood zone 3 and is a 1in 100 year event (high risk) from tidal flooding see Environment Agencies Map, plus a number of rhynes crossing Mark Moor.

The Causeway is an “at risk area” if the sea defences were to be breached at any time. This event last occurred in 1988 and 2012 saw the Levels and Moors flooded for much of the year. In addition several homes in the village and across the Moor were flooded during the months of November and December; this flooding also had an adverse effect on the main sewer system along Mark Causeway with Wessex Water having to pump thousands of gallons of polluted water daily from the surrounding area. Farmers were unable to gain access to their fields for several months because of the level of floodwater.

The construction of 46.5 metre high pylons on the moors could result in additional flooding by way of the foundations for the pylons being excavated and filled with tons of concrete thereby dispersing the flood water elsewhere.

These are two of the main issues which the Council would like to be noted.

Yours sincerely

[redacted]
Clerk, Mark Parish Council

**From:** [redacted]
**To:** [redacted]ntal Services;
**cc:** [redacted]
**Subject:** RE: EN020001 - Hinkley to Seabank Grid Connection - Scoping Consultation
**Date:** 19 May 2013 10:49:23

---

The response from Nailsea Town Council is as follows:

Nailsea Town Council challenges National Grid on:
(1) need case. If new generation at Hinkley does not go ahead, or is significantly delayed, we believe this connection is not required. All other new generation of significant output is physically closer to transmission lines in the M4 corridor. If Hinkley does proceed, then alternative technologies such as undersea and underground will be more price competitive at that time.
(2) adequacy of consultation.
(3) consideration of alternative technologies.
(4) consideration of alternative routes.
(5) ensuring planning approval is flexible to enable National Grid to change solution/route at the last minute.
(6) ensure the planning decision takes into account the costs borne by communities; to include (for example) landscape blight, social, health, tourism and property blight. The planning decision should include compensation for these.
(7) Discrimination of rural vs urban communities (ie powerlines are usually overhead in rural areas, and underground in urban ones). Rural communities have to pay both ways - financially for underground in urban areas, and by losing unblemished countryside for overhead in rural areas.

Specific comments on the report:

2.4.3 (pg 13) NAILSEA TOWN COUNCIL challenges National Grid's statement "seek to minimise the scale of change" as inappropriate to justify replacing 26m high pylons with ones nearly twice as high. There is no way to mitigate the huge blemish of 35-47 metre high pylons on the landscape when the sparse trees on the moors are 10-15 metres (maximum) and are already dwarfed by the current 26 metre high pylons. To use a residential example to illustrate the point, there is no way that

planning permission would be given for a four storey house in an area where all the neighbouring houses have at most two storeys. Housing developments that aim to justify such a request with the statement "seek to minimise the scale of change" would be refused. Nailsea Town Council believes this situation is analogous and the imposition of these huge pylons to be unreasonable.

3.4.5 (pg 20) National Grid states that new "overhead line will broadly follow the route of the 132kV existing overhead line". NAILSEA TOWN COUNCIL would like to emphasize that the two existing lines pass between homes in Nailsea and that National Grid have proposed that their route for the new line will be erected much further away from existing (and planned) homes. Further, NAILSEA TOWN COUNCIL emphasizes that the route of the new line should be at least equidistant between existing/planned homes in Nailsea/West End on one side and Tickenham on the other side of Nailsea/Tickenham Moor.

3.4.6 (pg 21) National Grid states "The proposed overhead line follows the only gap in the woodlands on Tickenham Ridge". This is incorrect. The M5 also cuts through the ridge and woodlands, as do other minor roads. A route along the M5 between Clevedon and Tickenham is not being considered as an alternative route. The M5 route would allow for much better mitigation of the new overhead line by redirecting the route into the deep cut through the ridge alongside the M5 between Clevedon and Tickenham and then to follow the M5 to Avonmouth Bridge. In the cut the pylons would be hidden by the ridge either side. On the northern side, the pylons would be lost to the eye alongside the M5 and against the rocky northern slopes of the ridge.

3.7.3 (pg 28) and 3.12 (pg 36-39)

Regarding the undergrounding of the 132kV W route line around Nailsea:

There is no specific information about

where this will be undergrounded (along existing route? under roads? under the moors?) No specific information yet released about where or how this line converts to overhead.

3.7.10 (pg 29) Regarding removal of existing foundations of 132kV pylons to only 1m deep. Is this sufficient? What do landowners / environmentalists say?

14.4.6 (pg 214) Incorrect to state that "There is some evidence to suggest that high magnetic fields may be associated with an increased risk of one particular disease, childhood leukaemia." An expert tells us:

*"Also, there is powerful additional evidence for adult leukaemia, adult brain cancer, miscarriage and Alzheimer's disease associated with EMFs."*

*"One point to emphasise is that National Grid are in denial of adverse health effects apart from the rare childhood leukaemia. The fact is that the evidence for some of these other risks is in fact stronger than that for childhood leukaemia and given that they are more prevalent, are of considerably greater public health significance. This was openly discussed at an EU meeting in Brussels last November [2011]."*

**Significant Omission**

Throughout the document reference to Cadbury Camp on Tickenham Ridge is missing. Cadbury Camp is an Iron Age hill fort and Scheduled Ancient Monument which is managed by the National Trust. It is a hugely popular outdoor destination including (for example) walkers, cyclists and horseriders. Tourism and Heritage should be considered, as should long and short distance distance views, each of which will be significantly impacted by the new overhead line.

Finally, the methodology for environmental impact contained in the scoping report is accepted as thorough. However, it does not adequately address the issue of the presence of otters in the parts of the route impacting on Nailsea.

Yours sincerely

[redacted]

**Nailsea Town Clerk**

[redacted]

Date: 20th May 2012
Your ref: 130422_EN020001_1756022

Alan Ridley
3/18 Eagle Wing
Temple Quay House
2 The Square
Bristol
BS1 6PN

Natural England
Consultation Service
Hornbeam House
Electra Way
Crewe Business Park
CREWE
CW1 6GJ

T: 0300 060 3900

**BY EMAIL ONLY**

Dear Mr Ridley,

**INFRASTRUCTURE PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2009 SI 2263 (as amended) (the EIA Regulations)**

**Proposal: Hinkley to Seabank Grid Connection (the project)**

**Applicant: National Grid**

I write further to your consultation (on behalf of the Secretary of State) of the 22nd April 2013 relating to an Environmental Impact Assessment (EIA) scoping opinion of the proposed Hinkley to Seabank Grid Connection project.

Natural England is a non-departmental public body. Our statutory purpose is to ensure that the natural environment is conserved, enhanced, and managed for the benefit of present and future generations, thereby contributing to sustainable development.

- ***The Conservation of Habitats and Species Regulations 2010 (as amended);***
- ***Wildlife and Countryside Act 1981 as amended by the Countryside and Rights of Way Act 2000 and the Natural Environment and Rural Communities Act 2006;***
- ***The National Parks and Access to the Countryside Act 1949.***

The project is far reaching and has the potential to significantly impact on a number of internationally (EU), nationally (UK) and locally protected sites and wildlife species. It could also impact on people's access to and enjoyment of the natural environment. Natural England's key concerns relate to potential impact on:

- the North Somerset and Mendips bats Special Area of Conservation (SAC), the Mendip Limestone Grasslands SAC, the Mendip Woodlands SAC and the Exmoor and Quantock Oakwoods SAC -

through potential bat disturbance, direct mortality and habitat loss/fragmentation;

- the Somerset Levels and Moors and Severn Estuary Special Protection Areas (SPAs) and Ramsar sites – through potential bird disturbance, direct mortality (bird strike) and habitat loss;
- the Tickenham, Nailsea and Kenn Moors Site of Special Scientific Interest (SSSI) and the Severn Estuary SSSI – through potential habitat damage and loss;
- the Mendip Hills Area of Outstanding Natural Beauty (AONB) – through potential landscape and visual impacts;
- protected species (especially bats) – through disturbance, direct mortality and habitat loss/fragmentation.

*Note: this is not an exhaustive list of potential impacts. Refer to Annex 1 for detailed comments.*

Natural England has participated in pre-application discussions with the applicant regarding 'routing' and design of the proposed power line connection (the project). We are pleased that the chosen route/design appears to have been informed by our advice. This should increase the likelihood of avoiding or mitigating impacts. However, the potential for significant environmental impacts (as described above) remains and we would expect rigorous assessments to be undertaken under the EIA umbrella to determine the significance, likelihood and severity of potential impact.

Natural England would expect the EIA of this project to include a 'shadow' Habitats Regulations Assessment (HRA) which is likely to include an Appropriate Assessment. The shadow HRA will inform the Secretary of State's HRA of the project, which he will be required to undertake as 'competent authority', post application.

Furthermore we would advise that the EIA includes a robust Landscape and Visual Impact Assessment (LVIA) using the Guidelines for Landscape and Visual Impact Assessment (GLVIA) 3rd edition.

It is important that all assessments under the EIA umbrella consider the 'in-combination' impacts of the project with other projects/plans as well as the cumulative effects of plans, projects, activities or processes outside the scope of the in-combination assessment.

Please refer to Annex 1 for detailed comments and do not hesitate to contact me if you have any queries.

Kind regards

[redacted]
Senior Adviser (Planning – Nuclear & Grid Connections)
Sustainable Land Use Operations
Natural England

**ANNEX 1**

**Specific Comments on the EIA Scoping Report**

***Please note that these comments are made without prejudice to any future comments and advice which Natural England may wish to offer in relation to the Hinkley to Seabank Connection project.***

Natural England has reviewed the EIA Scoping document and all associated documents and can offer the following comments:

**Ecology**

Bats (SAC and other)

We are concerned that the project could potentially cause bat habitat fragmentation along the length of the development. So a judgement of impact significance would have to be made by looking at levels of bat activity, main commuting routes and roost locations and proposals regarding removal of linear landscape features i.e. hedgerows etc in these areas. Clearly, the removal of large tracts of hedgerows in such areas would potentially have a detrimental effect on the Favourable Conservation Status (FCS) of bat species in the area and would need to be mitigated for in some way, for example, through planting schemes re-directing bats to enable them to still access key foraging area and roosts.

We are also concerned that the proposed power lines could potentially, through Electro Magnetic Field (EMF) interference, prevent bat species accessing their foraging areas and their roost sites, though very little is known about the effect of EMF on bats.

Although we are aware of some research being undertaken by National Grid to 'Investigate the effects of 400kV transmission lines on the Lesser Horseshoe bat in England and Wales, we know of only one other piece of academic research that has been undertaken in this area, conducted by Racey & Nicholls in 2007, please see the link below;

http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0000297

In terms of surveys, we are satisfied that a sufficient level of survey effort has been undertaken or is proposed.

Ornithology (SPA)

*Functionally linked land*

Power lines can result in impact through direct habitat loss, indirect habitat loss (displacement and barrier effects) and mortality (electrocution and collision). When assessing bird habitats of high sensitivity, such as areas

designated as SSSI and SPA, the presence of functionally linked land that may extend several kilometres beyond the site boundary must be considered. Typically, this might be farmland beyond a site boundary that could be used by waders (such as golden plover and lapwing) and wildfowl (such as swans and geese). The presence of functionally linked land, and the birds it supports, is of relevance when considering mortality as well as habitat effects.

*Vantage points and power lines*

The use of Vantage Point (VP) counts is common to the assessment of both wind farm and power-line applications, although the methodology for conducting Vantage Point counts is based on guidance for the assessment of on-shore wind farms. Vantage Point counts enable an estimate to be made of the number of flights occurring at risk height through the development area.

For wind farms, a Collision Risk Model then determines the number of collisions, based on specific turbine design and both flight speed and size of each species in question, in the absence of any avoidance. Finally, a species-specific avoidance rate is applied to provide a total number of birds that could be killed on an annual basis.

For power-lines, there is, as yet, no standard accepted modelling protocol to enable the results of vantage point counts to be translated into predicted bird deaths. Such a model is, however, in development (by Scottish Natural Heritage) and once it becomes available will enable results of vantage point surveys to be used in order to quantify the, otherwise somewhat subjective, risk posed by power lines.

*VP surveys and pylon design*

It is known that the top earth wire accounts for a disproportionate number of collisions, presumably on account of both its thickness (less obvious than other wires) and its height. Mitigating the affect of this, ideally through pylon design, or potentially through use of deflectors, should be considered.

When conducting VP counts, consideration should be given to the stage reached within the pylon design process (also bearing in mind that moving wires can act as mitigation). Heights used during VP work should not be so narrow as to add inevitable levels of human error when attempting to estimate height accurately at distance, but should allow modelling work to be flexible enough to incorporate design changes without having to repeat field work. In order to reduce human error, surveyors should be experienced and use range-finders and clinometers to accurately measure height where possible.

*Use of radar*

Radar work may also be necessary in association with sensitive populations that may be crepuscular or nocturnal and cannot be surveyed using routine Vantage Point surveys - for example, populations of certain

waterbirds adjacent to an SPA, or where power lines bisect flight-lines of waterbirds that might commute between two SPAs. Ongoing vantage point / scoping work may help identify those situations where the use of radar would prove advantageous. The judgement as to whether such monitoring is necessary should consider the costs of delaying works to enable further seasonally restricted assessment to take place.

Nocturnal surveys are unlikely to be able to replicate the use of radar. Of key concern would be movements of birds between the Somerset Levels and the Severn Estuary, that might only occur under certain conditions; for example, during periods of harsh weather when birds might be forced to feed at night in inter-tidal habitats as they vacate frozen wetlands inland. Nocturnal foraging is also linked to lunar cycles, as full moons can improve visibility.

*Assessing the affect of collisions*

Typically, the predicted number of bird deaths is expressed as an increase against background mortality levels for the species' relevant population (i.e. SPA, SSSI or regionally important) and correct time of year (i.e. breeding or non-breeding). Accepted practice is for a 1% increase in background mortality to be deemed significant.

Note that where background mortality is expressed as a percentage, this is a relative rather than an absolute term. Therefore, using a hypothetical background mortality of 10%, the correct figure would be 10.1% and not 11%. As early as possible in the assessment process, it would be useful to discuss the potential mitigation options available, and when these might be considered necessary.

*In combination and cumulative impact*

Impacts on internationally protected habitats and species needs to be assessed both alone and in-combination. The in-combination assessment needs to consider those approved applications which have yet to be constructed, applications which have yet to be approved and any other development proposals for which there is sufficient information to complete an assessment. Of particular relevance will be wind farms in the vicinity of the proposed route which have the potential to affect the same bird populations.

As well as an in-combination assessment, a cumulative impacts assessment will also have to be undertaken which, beyond the scope of the in-combination assessment, should include the affect of existing developments within the environment. For example, this might include an assessment of mortality owing to collisions with existing wind-farms or power lines.

Protected Species

We are broadly satisfied with the scope of protected species surveys, as proposed by the applicant and detailed in the EIA Scoping document. We would advise that the applicant continue to liaise and discuss the details of these proposals with our Natural England Wildlife Licensing Team.

Sites of Special Scientific Interest

The project has the potential to directly impact on Tickenham, Nailsea and Kenn Moors SSSI which is notified for its invertebrate assemblage; Lowland ditch systems and; nationally rare and scarce dragonfly species (Dragonfly, Damselfly). Likelihood and severity of impact will depend on final route/engineering choices.

It is important that a final choice be made with the above in mind and that a robust assessment be undertaken to determine the likely impact of construction activities and operation (including maintenance) on the SSSI and its notified features.

It is important too that the EIA consider the potential for the project to impact (through construction and operation) on SSSIs, National Nature Reserves (NNRs) and all other designated sites within close proximity to the chosen route – identified in figures 6.1 – 6.9 of the EIA scoping document.

**Protected Landscapes**

Natural England is broadly satisfied with the approach to landscape and visual as proposed in the EIA scoping document.

It is important that the applicant works closely with the Mendip Hills AONB Unit and other local stakeholders to identify key receptors, sensitivities, and viewpoints to feed into the LVIA.

**From:** [redacted]
**To:** Environmental Services;
**cc:** [redacted]
**Subject:** Hinkley to Seakbank connection (scoping) 130422_EN020001_1755584
**Date:** 02 May 2013 14:08:52

---

For whom it may concern.

Newport City Council has no comment to make in relation to the 'scoping opinion' request relating to the above referenced subject.

It is presumed that Newport City Council will be notified if any formal application is made in relation to this project.

Regards,

[redacted]
On behalf of the Development Services Manager (Newport City Council)

NHS
Somerset
Clinical Commissioning Group

Our Ref: DS/aaly/102

20 May 2013

Wynford House
Lufton Way
Lufton
Yeovil
Somerset
BA22 8HR

Tel: 01935 384000
Fax: 01935 384079

enquiries@somersetccg.nhs.uk

Alan Ridley
EIA and Land Rights Adviser
The Planning Inspectorate
3/18 Eagle Wing
Temple Quay House
2 The Square
Bristol BS1 6PN

Dear Mr Ridley

**INFRASTRUCTURE PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2009 SI 2263(as amended) (the EIA Regulations)**
**PROPROSED Hinkley to Seabank Grid Connection (the project)**
**PROPOSAL BY National Grid (the applicant)**

Thank you for your letter dated 22 April 2013 in which you informed us that Somerset Clinical Commissioning Group has been identified as a consultation body by the Secretary of State and our opinion is sought concerning the environmental statement for the Hinkley to Seabank Grid Connection.

Under the NHS reforms our local Public Health Team are now employed through Somerset County Council and wider expertise resides with Public Health England.

The main public concern relates to overhead lines and the perceived risk from electromagnetic radiation, and in particular childhood leukaemia which we note is covered in chapter 14. We advise that if you have not already done so, that you also consult with Public Heath England on the content of the environmental statement.

Otherwise I do not have any further comments at this stage.

Yours sincerely

[redacted]
**Managing Director**

Copy:

[redacted]cting Director of Public Health, Somerset County Council
[redacted], Director of Clinical Commissioning Development, Somerset CCG

**PORTBURY PARISH COUNCIL**
**Adcroft House**
**15 Roath Road**
**Portishead, Bristol BS20 6AW**
**☎01275 815012**
**✉portbury_parish_council@hotmail.co.uk**

To
The Planning Inspectorate
FAO Mr A Ridley
3/18 Eagle Wing
2 The Square
Bristol
BS1 6PN

Ref - 130422_EN020001_1756022

National Grid Document Reference: 1979.280

13th May 2013

Dear Mr Ridley

Please find enclosed our report giving comments upon the Scoping Document for an Environmental Impact Assessment for the Hinkley Point C to Seabank Connector Project.

The report contains all of our views on the scoping document, the conclusion of or analysis being that the EIA is not ready yet to proceed, significant, late changes having been made to the design proposals for Study Area F. These late changes have not been fully assessed in terms of their potential impacts and the scoping report thus has major deficiencies at this stage.

Please contact me directly should anything in our report prove to be unclear.

[redacted]
Chairman, Portbury Parish Council

# Hinkley Point ‘C’ to Seabank Connection project – Scoping Report for an Environmental Impact Assessment.

National Grid Document Reference: 1979.280 – April 2013
Planning Inspectorate Ref - 130422_EN020001_1756022

**A consultation feedback report by Portbury Parish Council**

| **Distribution** | **Organisation** |
|---|---|
| Alan Ridley | Planning Inspectorate - Bristol |
| [redacted] | North Somerset Planning Department |
| [redacted] | Portbury Parish Council (Chairman) |
| [redacted] | North Somerset County Council |
| Liam Fox MP | House of Commons - North Somerset Constituency |
| [redacted] | Portbury Parish Council Technical Team |
| [redacted] | Portbury Parish Council Strategy Team |

## Record of Revisions

| Revision Level | Date Issued |
|---|---|
| 1 | 13th May 2013 |
| 2 | |
| 3 | |

## Table of Contents


Scope .
Executive Summary
1.0 Introduction
2.0 Study Area E
3.0 Study Area F
4.0 Study Area G
5.0 Assessment Criteria
6.0 Digital Modelling
7.0 Initial View Assessment
8.0 Thematic Groups on Landscape and Views – scoping
9.0 Owl flight paths
10.0 Conclusion

## Geographical Scope

The geographical area discussed in this report is centered on Portbury Parish and includes Section F (Portishead), the eastern part of Section E (Tickenham Ridge) and the part of Section G west of the River Avon. The pre October 2012 Preferred Corridor transits the parish through Section F, whilst the current proposed "Alternative Blue Route" runs parallel to the M5 Motorway on its northern side.

The content of the report will be limited to identifying areas within the EIA Scoping Assessment which need to be addressed due to omission, incompleteness or inaccurate assessment

## Executive Summary

Having studied the above scoping report issued by the Planning Inspectorate on 22nd April 2013 we conclude it does not adequately cover potentially high impacts upon views in study areas E, F, and G. It contains a significant number of deficiencies which come about as a result of late changes in the preferred pylon route in Study Area F, the consequences of which have not been demonstrated in the scoping document.

The adequacy of work carried out within the Thematic Group on Landscape and Views is brought into question as a deficient Scoping Report has been used as a baseline for considering potential viewpoints for photomontage work.

Representatives of Portbury Parish Council have identified a significant number of specific landscape issues associated with the alternative blue route, (October 2012 Options report), these are detailed within this report and need to be corrected before further design work continues.

This report concludes that the alternative blue route within Study Area F is not yet ready to progress into the Environmental Impact Assessment stage.

## 1.0 Introduction

As a result of the proposed route change in the area of Portbury Village there are a significant number of impacts upon landscape which appear not to have been contemplated when this Scoping document was written. We have identified a multitude of locations on the public highway where the impact upon views will potentially be extremely negative. We have also identified that the setting of a Grade 1 listed building will be affected. The Scoping report should therefore be

corrected to take these points into account and to give appropriate consideration to views from the public highway as well as to views from recreational paths and the like as indicated above.

The Scoping Report uses a relatively “coarse” matrix in assessing both magnitude and significance of impact upon views. This matrix does not appear to give adequate weighting to views from the public highway, especially where there are a significant number of such views and receptors. The example given in the significance table, 5.6, should be expanded to give appropriate consideration to the public highway.

The selection of viewpoints for photomontage is critical in the light of the recent change in proposed route in area F. It is requested that these viewpoints are revisited by the Thematic Group on Landscape and Views in the light of this report before the next stage in design development begins. It is further requested that this thematic group includes appropriate representatives who understand the significance of the close views of the proposed pylon route from the village of Portbury.

The buffer zone in Study areas E and F is incorrectly drawn and thus may lead to incorrect selection of key viewpoints. This needs to be corrected. In addition the theoretical zone of influence may also be incorrect as a result of this and needs correction. Habitat surveys have also been too narrowly considered and need correction.

There are many drawings, listed below that refer only to the original route corridor, suggesting that survey work is as yet incomplete, particularly in the case of bats. This leads to the conclusion that little effort was made to update the scoping document in relation to the alternative blue route. These omissions should be corrected before progressing to the next stage.

It appears this scoping document was largely written before the recent change of route within Study Area F which now includes a section running parallel to the M5 in very close proximity to the village of Portbury. Consequently the description of landscape, views and receptors does not include a significant number of highly sensitive locations close to the “alternative blue” route, as defined in the October 2012 options report. These potential views and receptors lie within both Study Area E and F.

Deficiencies in the preliminary landscape assessments are described below along with a record of other significant deficiencies that suggest that the design work on the pylon route is not yet ready to progress to the next stage.

**2.0 Landscape Study Area E.** Page 59 et seq

Properties on Caswell Hill and Caswell Lane are mentioned in the scope of study for Area E, paragraph 5.3.71; however there would also be a potentially high impact upon views in the area of Cole Acre and Elm Tree Farm and Park, both

on Sheepway, if the alternative blue route is considered. These views would be extremely close, within 50 metres, and from the public highway. In particular there are several key points where views should be considered carefully, including on the Railway Bridge adjacent to Cole Acre and at bus stops both on the A369 (Portbury Hundred Road) and Sheepway. There would also be very close views from the public highway within Elm Tree Park where potentially there will be a pylon in very close proximity to the Southern edge of this development.

3. **Landscape Study Area F**. Page 60 et seq

Portbury is mentioned as having views of the development but is referenced as being in Section E, paragraph 5.3.86. As described above Portbury has not been considered in terms of impact upon views, presumably as the previous route corridor did not follow the M5 as is now proposed.

If the alternative blue route is followed there will then be significant impact upon views from within the main village of Portbury. There will be clear views from parts of Caswell Lane, Station Road, Priory Road as well as a significant number of private views from elevated locations. These views will be very close and facing to the North, thus placing both pylons and cables upon the skyline. We have identified a multitude of positions upon the public highway where views will be heavily impacted. Moreover there are several points where pedestrian ways, public footpath and roadway intersect and views from these positions are heavily impacted also.

4. **Landscape Study Area G.** Page 61 et seq

In the October 2012 options report the setting of the Church of St Mary the Virgin, Portbury, was referenced but not given a high priority as the routes at that time would not have significant impact. If the alternative blue route is followed then views of the Church towards the North and West will potentially be significantly impacted. St Mary's Church is a Grade 1 listed building and as such is a heritage asset. The scope of the report does not include views around nor the setting of the Church, the views considered are mainly from longer distance, paragraphs 5.3.97 to 5.3.102.

St Mary the Virgin Church in Portbury should therefore be identified as a receptor, as required in paragraph 7.1.8, and considered accordingly. It is not clear from Paragraph 7.3.2 whether the Church is one of the two Grade 1 Listed Buildings to be considered.

5. **Assessment Criteria** Page 74 et seq

In paragraph 5.5.38 and table 5.5 is set out some criteria for assessment of the magnitude of effect of views. It is likely that some of the key locations mentioned above, within the environs of Portbury, will suffer a high magnitude of effect on view given the both the uncharacteristic nature of the proposed pylons and cabling and their close proximity in these areas.

Paragraph 5.6.3 and table 5.6 set out criteria for the significance of effects. In the major effect category views from recreational footpaths are mentioned, but the public highway is not. In the moderate significance category views from private property are mentioned, but again the public highway is not. This creates a wide gap within which views from the public highway need to be placed. In the sensitivity criteria at paragraph 5.5.28 and table 5.4 it is clear that views from the public highway are accorded a high sensitivity, as are views at ground floor from private residences and gardens. The assessment criteria for significance of effects seems therefore to be out of step with the given sensitivity criteria. This should be corrected.

In our view there is a big gap between major and moderate effect which misses out the significance of everyday views from the public highway, particularly where the magnitude of effect is high. Views of high scenic quality are clearly of major significance, but views of large numbers of receptors should be equally considered within the criteria of assessment.

6. **Digital Modelling** page 82 et seq

It follows from our comments above that the identification of photomontage viewpoints is critical to the eventual EIA in relation to Portbury, see paragraph 5.9.3. Since the scope of this report has, in our estimation, been based upon the route corridor prior to the October 2012 options report, it is therefore important that the selected viewpoints are reviewed and updated accordingly prior to discussions within the Landscape Thematic Groups.

7. **Initial View Assessment –** appendices and drawings

In the scoping report appendices, figures 14 to 18, there are preliminary view assessments which will presumably be used in later photomontage work. On page 5, drawing number G1979.1430.4A the initial assessment for Study Areas E and F is shown. This drawing also depicts the 0.5kM and 3kM buffer zone from the proposed route. These buffer zones are drawn only in relation to the former preferred route corridor and are not widely enough drawn in relation to the alternative blue route following the M5.

On page 7 a further, wide scale drawing, G1979.1456B, depicts the theoretical zone of influence; this may also be incorrect as a result of the buffer zone being too narrowly drawn.

On page 49, the habitat survey in study area F is similarly restricted to the original preferred route corridor, drawing G1979.1382.15A. This needs to be corrected, as does the drawing relating to target notes, G1979.1425.15A.

On page 27 of Figures 19 to 24 drawing number G1979.1390A shows the results of the National Vegetation survey. This drawing similarly is drawn in relation to the original route corridor and is thus incorrect.

Other drawings are also incorrectly drawn showing only the original route corridor, and may have an influence upon the eventual EIA. They are noted here.

G1979.1431.15A
G1979.807A
G1979.04.066A
G1979.05.067A
G1979.04.068A
G1979.04.069A
G1979.04.070A
G1979.04.071A
G1979.04.072A
G1979.04.073A
G1979.04.074A
G1979.04.075A
G1979.04.086A
G1979.04.087A
G1979.04.088A
G1979.04.089A
G1979.04.090A
G1979.04.091A
G1979.04.092A
G1979.04.093A
G1979.04.094A
G1979.04.095A
G1979.04.076A
G1979.04.077A
G1979.04.078A
G1979.04.079A
G1979.04.080A
G1979.04.081A
G1979.04.082A
G1979.04.083A
G1979.04.084A
G1979.04.085A
G1979.1334A
G1979.1336A
G1979.1338A
G1979.1340A
G1979.1342A
G1979.1355A
G1979.1357A
G1979.1359A
G1979.1361A
G1979.1363A
G1979.1383A

Many of these drawings relate to bat studies and this suggests that survey work has not been completed sufficiently widely for the alternative blue route. These surveys should be completed and drawings updated before progressing to the full EIA.

### 8. Thematic Group Scoping Meetings – Landscape and Views – Appendix A

The notes of the Thematic Group scoping meeting on Landscape and Views, held on 16th January 2013 contain no reference to the significant change in route that was embodied within the October 2012 options report. Moreover the EIA scoping document that has been reviewed by this group contains all of the shortcomings in content that has been highlighted above. This group is tasked with determining key viewpoints, from which landscape impact will be assessed using photomontages; these viewpoints will have been selected without full knowledge of the likely new impacts in Study Area F. Portbury Parish Council has not seen any of the output work of the Landscape Thematic Group and is therefore not able to comment on whether appropriate viewpoints are being selected. The Thematic Group should, as a minimum, be re-briefed regarding the changes in route in Study Area F and should review its conclusions in the light of the probable high level of impact on the Village of Portbury.

### 9. Owl Flight Paths

It is understood that there are important Owl flight paths that cross both the A369 and M5 generally on a North-South alignment. Whereas there has been work to identify roosting Owls in nest boxes, within the previous preferred route corridor, no work has been done for the alternative blue route, in particular in relation to disturbance to flight paths.

### 10. Conclusion

This report has described a significant number of deficiencies in the Scoping Report for the Environmental Impact Assessment for the Hinkley Point C to Seabank Connection Project. These deficiencies relate to Study Areas E, F and G.

The deficiencies arise as a result of late changes to the proposed pylon route in Study Area F, which were first publicised in October 2012 in an Options Report. This was the first time since the inception of the project that a potential route along the M5, near Portbury Village, had been suggested. The first opportunity that the villagers of Portbury had to discuss these changes with the National Grid design team was at a public consultation meeting on the 6th of December 2012.

The deficiencies and omissions recorded in this report lead to the conclusion that the early stage assessment of the so named “alternative blue route” in study area

F has not been fully completed.  Portbury Parish Council believes this route is not yet ready to progress to the next design stage and all of the deficiencies within the Scoping Report should be corrected before a full Environmental Impact Assessment commenced.

[redacted]
On Behalf of Portbury Parish Council – at the direction of [redacted]

10th May 2013

**From:** [redacted]
**To:** Environmental Services;
**cc:** [redacted]
**Subject:** Hinkley Point C to Seabank Connection project - further comments on EIA scoping report 1979.280
**Date:** 20 May 2013 10:19:06
**Attachments:** MAP ES cover letter.pdf
Hinkley Point to Seabank Connector project - supplemetary comment on EIA scoping document (1).pdf

---

Dear Sirs ,

please find our further comments on the above document as discussed today.

Enclosed is a covering letter and a report.

I would be grateful if you could confirm receipt of these documents.

Yours Faithfully

[redacted]

[redacted]
for Portbury Parish Council

**PORTBURY PARISH COUNCIL**
**Adcroft House**
**15 Roath Road**
**Portishead, Bristol BS20 6AW**
**☎01275 815012**
**✉portbury_parish_council@hotmail.co.uk**

To
The Planning Inspectorate
FAO Mr A Ridley
3/18 Eagle Wing
2 The Square
Bristol
BS1 6PN

Ref - 130422_EN020001_1756022

National Grid Document Reference: 1979.280

20th May 2013

Dear Mr Ridley

Please find enclosed our further report giving comments upon the Scoping Document for an Environmental Impact Assessment for the Hinkley Point C to Seabank Connector Project.

The report contains our views relating to the assessment of effects on Landscape and Views in the scoping document.

Please contact me directly should anything in our report prove to be unclear.

Yours Faithfully

[redacted]
for Portbury Parish Council

# Hinkley Point ‘C’ to Seabank Connection project – Scoping Report for an Environmental Impact Assessment.

National Grid Document Reference: 1979.280 – April 2013
Planning Inspectorate Ref - 130422_EN020001_1756022

**A consultation feedback report by Portbury Parish Council**

| **Distribution** | **Organisation** |
|---|---|
| Alan Ridley | Planning Inspectorate - Bristol |
| [redacted] | North Somerset Planning Department |
| [redacted] | Portbury Parish Council (Chairman) |
| [redacted] | North Somerset County Council |
| Liam Fox MP | House of Commons - North Somerset Constituency |
| [redacted] | Portbury Parish Council Technical Team |
| [redacted] | Portbury Parish Council Strategy Team |

## Record of Revisions

| Revision Level | Date Issued |
|---|---|
| 1 | 20th May 2013 |
| 2 | |
| 3 | |

## Table of Contents


Scope .
Executive Summary
1.0 Landscape and View Assessment
2.0 Residential Amenity Assessment
3.0 Conclusion


### Geographical Scope

The geographical area discussed in this report is centered on Portbury Parish and includes Section F (Portishead), the eastern part of Section E (Tickenham Ridge) and the part of Section G west of the River Avon. The pre October 2012 Preferred Corridor transits the parish through Section F, whilst the current

proposed “Alternative Blue Route” runs parallel to the M5 Motorway on its northern side.

The content of the report concerns the use of “residential amenity assessment” to assess the effects of the route through Portbury. It is supplementary to the report already issued on 13th May 2013.

## Executive Summary

“Guidelines for Landscape and Visual Impact Assessment”, published by the Landscape Institute and the Institute of Environmental Management and Assessment describe, in section 6, the use of “residential amenity assessment” to assess the local impacts of developments close to residential areas. The use of this methodology is appropriate for the proposed route near to Portbury given the scale of effect that is likely from the alternative blue route.

In preparation for an assessment using this approach the “competent authority” is required to agree the detailed scope and approach including the viewpoints that will be used to gauge effects. We request that either the Planning Inspectorate, or North Somerset Council as the local specialist, sets out a process for a residential amenity assessment, using local knowledge and representation to agree a baseline.

## 1.0 Landscape and View assessment

As a result of the proposed route change in the area of Portbury Village there are a significant number of impacts upon landscape which appear not to have been contemplated when this Scoping document was written. In particular where the pylons potentially run very close to residential properties there is no recognition of the scale of the effects on views due to the close proximity of pylons and wires, viewed in many cases against the sky.

It appears, from minutes of the Thematic Group on Landscape and Views, that work is already underway to assess viewpoints from which photomontages will be created and yet there has been as yet no identification of local receptors who will now be effected by the late change of route.

Guidelines for Landscape and Visual Impact Assessment are referenced from the section of the scoping report dealing with methodology, and provide a range of approaches to the assessment of effects on landscape. The use of “residential amenity assessment” is described in Section 6 and is entirely appropriate for use on the section of route near Portbury given the following

a) The proximity of pylons and wires to residential properties, despite the supplementary notes to the Holford Rules advising to avoid these areas.

b) The large number points within the village from which the pylons and wires will be visible, in many against the skyline, despite Holford Rule 4 advising otherwise
c) The number private views that will be effected, the guidelines noted above deal with the balance between public and private views
d) The "value" of the current views in the above places, the scoping report dismisses the value of views from Portbury given the presence of the M5 and the Docks. Our previous report shows that this is not material as at street level in Portbury one is not aware of the presence of these other features due to the particular topography and landscape. This can only be understood by close local analysis; "residential amenity assessment" is the appropriate tool to use in this case.
e) The significant number of people in Portbury who are opposed to the proposal to run pylons and cables so close to Portbury using the "alternative blue route". This view was expressed very clearly by the volume of people attending a public meeting with National Grid in Portbury Village Hall on the 6th of December 2012

## 2.0 Residential Amenity Assessment

As described above the use Residential Amenity Assessment is entirely appropriate for the part of the route where pylons will run very close to residential property in Portbury. This method of assessment uses photomontages, at agreed critical points, to assess the close effects of developments in residential areas. The method requires that scope, method and viewpoints are agreed with the "competent authority" which is taken to mean the Planning Inspectorate in this case. Clearly the Inspectorate has little close local knowledge of Portbury to be able the act in this capacity and it is recommended therefore that this task is delegated to North Somerset Council who will then liaise very closely with stakeholders in the area of Portbury.

## 3.0 Conclusion

This report concludes that Residential Amenity Assessment, as described in the "Guidelines for Landscape and Visual Impact Assessment" is the appropriate tool to use in the area of Portbury at the Environmental Impact Assessment stage. This method is not currently called up in the scoping document. It is further concluded that the Planning Inspectorate should delegate the role of "competent authority" in this case to North Somerset Council.

[redacted]
On Behalf of Portbury Parish Council – at the direction of Cllr P Cooke

20th May 2013

**From:** [redacted]
**To:** Environmental Services;
**Subject:** Infrastructure Planning (Enviornmental Impact Assessment) Your ref: 130422_EN020001_1756022
**Date:** 10 May 2013 10:33:02

---

FAO Alan Ridley

The Planning & Regulatory Committee for Portishead Town Council met on 2nd May 2013 and confirm that on this occasion they do not have any comment in response to the above.

Please do feel free to contact me if you have any queries or concerns.

Regards

[redacted]
Assistant Clerk
Portishead Town Council
[redacted]
www.portishead.gov.uk

Public Health England

CRCE/NSIP Consultations
Chilton
Didcot
Oxfordshire OX11 0RQ

T +44 (0) 1235 825278
F +44 (0) 1235 822614

www.gov.uk/phe

Alan Ridley
EIA and Land Rights Adviser
The Planning Inspectorate
3/18 Eagle Wing
Temple Quay House
2 The Square
BRISTOL BS1 6PN

Your Ref: 130422_EN020001_1756022
Our Ref: EN NG 130425 224

8th May 2013

**INFRASTRUCTURE PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2009 SI 2263 (as amended) (the EIA Regulations)**
**PROPOSED Hinkley to Seabank Grid Connection (the project)**
**PROPOSAL BY National Grid (the applicant)**

Dear Mr Ridley

Thank you for your letter dated 22nd April 2013.

Public Health England is satisfied that the measures the applicant proposes to take to assess the EMF public health implications, as set out in Chapter 14 of the EIA scoping report, are appropriate and adequate.

It is noted that the issues of historically contaminated land and of construction related dust emissions will be included in the assessment. Public Health England recommends that any potential health and nuisance impacts on human receptors should be specifically identified and risk assessed as part of the assessment process.

Public Health England will expect to comment again when the assessment become available in the Environmental Statement.

The Health Protection Agency (HPA) became part of Public Health England on 1st April 2013 therefore any further correspondence should be directed to Public Health England.

Yours sincerely

[redacted]

Head of Physical Dosimetry Department

nsipconsultations@phe.gov.uk

*Please mark any correspondence for the attention of National Infrastructure Planning Administration.*

**From:** [redacted]
**To:** Environmental Services;
**Subject:** For Alan Ridley, Your Ref 130422_EN020001_1756022, Hinkley Point
**Date:** 02 May 2013 15:27:45

---

Environmental Impact Assessment : Scoping Report for Hinkley Point C Connection Project April 2013

Thank you for inviting us to comment on the request for scoping opinion by National Grid and we would simply like to highlight the linkage between this project and the Seabank 3 CCGT NSIP development being developed by SSE which is proposing to utilise the 400kV Seabank Substation for its grid connection. Seabank 3 should be considered one of the "projects on the planning inspectorates programme of projects" and the cumulative effects of these two developments will have to be considered by both projects in terms of the likely interaction between the respective construction programmes.

The project manager for the Seabank 3 CCGT development project is [redacted]

If you wish to discuss this further I can be contacted on [redacted]

Best Regards

[redacted]
General Manager Seabank Power Ltd

**From:** [redacted]
**To:** Environmental Services;
**cc:** [redacted]
**Subject:** [redacted] ng Report
**Date:** 17 May 2013 15:36:24
**Attachments:** Joint Councils response to National Grid"s Scoping Report May 2013.pdf

---

Dear Mr Ridley,

INFRASTRUCTURE PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2009 SI 2263 (as amended)
PROPOSED HINKLEY TO SEABANK GRID CONNECTION (THE PROJECT)
PROPOSAL BY NATIONAL GRID (THE APPLICANT)

Thank you for your letter dated 22 April 2013 consulting Somerset County Council, West Somerset Council, Sedgemoor District Council and North Somerset Council on the Scoping Report submitted by National Grid for the Hinkley to Seabank Grid Connection project.

Please find attached a joint response from the Councils listed above.

I would be much obliged if you could confirm receipt of this response.

Kind regards,

[redacted]
Senior Planning Officer
Major Programmes
Somerset County Council

[redacted] somerset.gov.uk

Mr Alan Ridley
3/18 Eagle Wing
Temple Quay House
2 The Square
Bristol
BS1 6PN

Please ask for [redacted]

Direct line

My reference
EN020001_05_2013

Your reference:
130422_EN020001_1756022

17 May 2013

Dear Mr Ridley

**Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 SI 2263 (as amended) (the EIA Regulations) proposed Hinkley to Seabank grid connection (the project) proposal by National Grid (the applicant): -**

**Joint response from Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council to the Scoping Report**

1.0 Thank you for your letter dated 22 April 2013 inviting comments on the Environmental Impact Assessment Scoping Report for the Hinkley Point C Connection Project. This is a joint response from Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council (hereafter referred to as the "Joint Councils") providing the Secretary of State with our view in respect of the information which should be provided in the Environmental Statement.

**Approach to the Environmental Impact Assessment**

2.0 National Grid has provided a comprehensive and detailed Scoping Report, which subject to topic specific comments below, sets out an appropriate methodological approach to the assessment of effects of the project.

2.1 We welcome the inclusion of a number of our comments that were made on the draft scoping material provided to the Joint Councils previously and at a series of thematic meetings held between the Joint Councils and National Grid. A small number of matters remain unresolved from earlier consultations and are raised in the sections below. All of this previous work and technical stakeholder engagement falls outside of the formal EIA and formal consultation process which starts on issue of the EIA scoping report and the Statement of Community Consultation.

2.2 The Joint Councils emphasise the need to engage in further, meaningful discussions regarding the developing scope and assessment and to be given every opportunity going forward to formally influence the design and development of the preferred project. Despite the considerable efforts expended to date in compiling baseline data and developing route options and the preferred route, the proposed timescale for the submission of Preliminary Environmental Information and the final Environmental Statement (ES) submission as set out appears to be challenging given the complexity of the project. We would encourage National Grid to keep this

programme flexible and under review as the EIA develops. We would also urge National Grid to consider holding regular multidisciplinary liaison groups with key statutory stakeholders over the remaining survey and assessment period and in advance of the issue of the Preliminary Environmental Information and would welcome a clear programme of proposed engagement activities during this period. We also request that due regard is given in the ES to the development plan policies of the respective planning authorities and any policies specifically related to impact assessment and mitigation of National Infrastructure projects. In the case of Sedgemoor, attention is drawn to Policy MIP1 and other relevant policies of the adopted Core Strategy. This policy covers a range of environmental issues and potential impact areas.

2.3 **Alternative Options**

National Grid has engaged in an extensive and comprehensive process of options and alternative development for the current proposed scheme, from Strategic, through to more detailed routing and siting studies. At the strategic level it is acknowledged that National Grid has undertaken a variety of studies to evaluate whether the use of underground cables instead of an overhead line could be justified for parts of the route. Stakeholders have previously raised that Willingness to Pay studies should be undertaken in any assessment of alternatives. Any results of such an assessment should be considered and used as evidence in the selection/justification of connection options. Willingness to Pay provides consumers with the opportunity to express in monetary terms the perceived environmental and socio-economic disbenefits of overhead lines. Such information would therefore provide essential evidence to the Secretary of State in coming to a view on whether the additional cost of undergrounding can be justified.

2.4 The Joint Councils are supportive of this process and acknowledge the positive commitment to minimising visual impacts on the Mendips AONB through undergrounding of this section of the route. The Joint Councils consider that ongoing dialogue is essential for the continuing design development of the preferred project. In particular, the Joint Councils would encourage National Grid to engage in the development of appropriate opportunities for mitigation and enhancement that would naturally follow from a more detailed assessment of a defined project (and as more environmental data and analysis becomes available). The Joint Councils would also still like to see National Grid include and assess practical alternatives where they relate to minor modifications of the design proposed at EIA scoping stage.

2.5 In terms of the Scoping Report plans there are several that show the original route corridor without reference to the subsequent change in the preferred route near Portbury village. National Grid is proposing to consult on both its preferred route (the route described at paragraph 3.4.7) and an alternative route which passes to the east of Portishead and utilises the previously identified preferred route corridor as part of its formal consultation under s42/47 of the Planning Act. It is proposed that both routes will be assessed in the EIA.

2.6 The Joint Councils require that close engagement is maintained regarding the design development of the Portishead/Portbury options and that any design decision taken is clearly articulated within an assessment of alternatives and communicated to local communities at the earliest possible opportunity.

2.7 **Duration of Effects**
National Grid clearly sets out that the duration of an effect is related to the significance of an effect. We would welcome clarification of the length of time considered to constitute a temporary effect.

2.8 **Impact on Health**
During informal engagement with communities, concern has been raised over the potential health impact over the connection during the construction and operational phases. It is therefore considered that the ES should assess health implications via a Health Impact Assessment.

2.9 **Generic Design Elements**
We note that the design of certain features e.g. Cable Sealing End (CSE) Compounds is generic at the present stage and is therefore subject to change. Ongoing dialogue regarding the design development will be essential to ensure that the Joint Councils' comments on effects are representative of the actual scheme proposals.

2.10 **Section by Section Approach**
National Grid is proposing that the assessment will be separated by route sections. As part of the final EIA, National Grid should ensure that any effects arising at the interface between different route sections are clearly identified and assessed, to ensure that effects do not fall between route sections.

2.11 **Cumulative Effects**
We welcome National Grid's proposal to consult with the Joint Councils regarding the scope of cumulative effects and note that spatial and temporal boundaries of the assessment remain to be clarified and that the methodology for determining the significance of cumulative effects has not been put forward at this stage. Close engagement with the Joint Councils will be required to ensure that the significant effects arising from the combination of multiple non-significant effects are robustly identified and mitigated.

**EIA Topics**

3.0 **Landscape and Visual Assessment (pages 49 – 82)**

3.1 We welcome the inclusion of a number of our comments that were made on the draft scoping material; however a number of matters require further consideration and/or dialogue within the landscape thematic workshops.

3.2 A study area for the consideration of landscape effects is not defined within the Scoping Report; although it is acknowledged that the Zone of Theoretical Visibility (ZTV) plan extends up to 10km from the proposed route. This is considered to be a suitable study area for the initial consideration of visual effects. The Initial Visual Assessment plans supplied with the Scoping Report (Figure 14) illustrate that, in general, views within 3km have been considered, although this is difficult to verify due to the resolution of the base mapping on which the information is presented. While it is accepted that this may be the distance within which the most significant effects would occur, views outside this distance, particularly relating to large scale features such as CSE compounds and 400KV pylons and especially from viewpoint locations that may contain great concentrations of sensitive receptors such as within the Mendip Hills AONB, should also be considered with the assessment.

3.3 With the exception of the information provided in National Grid's response to comments on the draft Scoping Report provided in Table 5.1 of the Scoping Report, no methodology for the production of the ZTV is provided. A full explanation of how any ZTV maps have been prepared should be provided in the final ES. It is unclear why, if as noted in the Scoping Report, "the use of ZTV mapping of the substation and cable sealing end compounds may assist in defining the visual extent of these particular elements" this information does not appear to have been produced or utilised. This information should be provided within the final ES if it has been used to inform the assessment, if not then reference to it should not be included.

3.4 The identification of sensitivity of visual receptors should be reviewed against the methodology in GLVIA3 which now considers the susceptibility of visual receptors to change and the value attached to views in the consideration of sensitivity. As it stands the Scoping Report appears to consider the importance of views outside of the assessment of sensitivity of visual receptors. This is not in accordance with recognised standard practice and should be reviewed within the final ES. The Joint Councils previously raised with National Grid whether there would be any merit in adopting elements in the Design Manual for Roads and Bridges Interim Advice Note. National Grid responded that they had referred to this document; however, the Scoping Report does not make any reference to this.

3.5 National Policy Statement for Electricity Networks EN-5 paragraph 2.8.4 identifies that "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." In describing the residual impacts of the scheme, the ES should clearly demonstrate the mitigation options that have been considered, including consideration of undergrounding, and any off site planting or other enhancement measures proposed. In addition the ES should clearly explain the choice of proposed mitigation, having regard to its ability to reduce the landscape and visual impacts associated with the proposed scheme.

3.6 It is recommended that a Landscape Strategy outlining the proposed mitigation measures should be provided as part of the application. It should be prepared and agreed with the Joint Councils and form part of the DCO commitments.

3.7 Care should be taken to avoid misleading readers of the final ES as, based on the description provided within the Scoping Report, a full assessment of the inter-relationship of effects is not outlined; rather it is a consideration of how mitigation proposed for other disciplines would impact upon landscape and visual receptors. In accordance with National Infrastructure Planning Advice Note 9, a full assessment of the inter-relationship of effects should be undertaken as part of the wider ES.

3.8 The geographic extent of the study area for the consideration of cumulative effects and the specific development to be included in the assessment should be agreed in advance of the assessment being undertaken.

3.9 The Scoping Report refers to National Infrastructure Planning Advice Note 9 when identifying the types of development to be included in the cumulative assessment. This does not include existing development (which is considered to be addressed within the baseline position). However, there is potential for adverse cumulative effects to arise as a result of the proposed line and existing lines, including lower

capacity lines, not removed as part of the scheme.

3.10 The 'Overarching National Policy Statement for Energy' EN-1 states that "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)."As such it is considered that existing lines, not removed as part of the scheme should form part of the assessment of cumulative landscape and visual effects.

3.11 The final ES should clearly identify the proposed construction, operation and decommissioning time periods for each section of the route that are considered within the assessment.

3.12 The assessment should consider the temporary impacts associated with operation of the construction compounds and any associated infrastructure.

3.13 Reference is made to accesses and construction traffic using the wider road network. The extent and significance of the landscape and visual effects should be assessed within the final ES, proposals for appropriate mitigation identified and the residual effects assessed.

3.14 No reference to the assessment of lighting during construction phase has been made within the Scoping Report, except Table 5.1 which states that National Grid do not consider an assessment of lighting impacts to be necessary. During winter, if normal construction working hours are to be used, then there will be some requirement for lighting of compounds etc., due to the shorter daylight hours experienced in winter even if pylons are not being erected or strung during the darker hours.

3.15 The Scoping Report states that "the timing of photographic surveys will be discussed with the Landscape Thematic Group". While this may have occurred in the past, it appears to be the case that most if not all of the baseline photography has already been collated (to take photographs before trees are in leaf). The Joint Councils reserve the right to request further viewpoints or photomontages at a later date if required.

3.16 Prior to September 2013 (Section 42/47 consultation) it is critical that the selection of viewpoints for photomontages is reviewed in the light of the recent change in proposed route in area F. It is requested that these viewpoints are discussed and agreed with the Landscape Thematic Groups or North Somerset Council before the next stage in consultation begins. The detailed comments put forward by Portbury Parish Council on suggested viewpoints also need to be fully assessed.

3.17 There appear to be some consistency issues in relation to assessment terminology and the proposed assessment process, which should be addressed in the final ES. When discussing the assessment of landscape value the Scoping report should make it clear whether it will be assessed on a National to Local level scale or a High to Low scale as both sets of terminology are used.

3.18 In addition, there appears to be some confusion regarding the definition of landscape sensitivity. The definition provided in the Scoping Report states that landscape sensitivity considers the "degree to which a landscape can accommodate change". LCA Topic Paper 6: Techniques and Criteria for Judging Capacity and Sensitivity only refer to a landscape's ability to accommodate change

when referring to capacity. It is recommended that the definition is further reviewed for the final ES.

3.19 The Joint Councils have previously commented that there appears to have been no consideration of viewpoints from bridleways and sought clarification on this. National Grid's response in Table 5.1 of the Scoping Report addresses this matter; however, it is not clarified in the methodology text. Paragraph 5.5.18 only refers to public footpaths and does not mention bridleways. It is preferable to use the generic term 'public rights of way' rather than specify footpath or bridleway as there is also a Restricted Byway within the Study Area.

3.20 In relation to the justification for the sensitivity of transient tourist receptors travelling through the area it should be noted that users of rural lanes also include walkers, cyclists and horse riders utilising rural lanes as a means of connecting public rights of way and therefore sensitivity in this case should be categorised as "high".

3.21 The inclusion of consideration of public views of proposed line entries is given consideration, however in relation to paragraph 5.3.116, National Grid need to take into account that the West Somerset Coast path is soon to form part of the England Coast Path National Trail currently being developed by Natural England in conjunction with Somerset County Council. The section of the West Somerset Coast path to the north of the Hinkley Point C site is presently closed by order as part of the site preparation works planning permission. The temporary alternative route runs around the perimeter fence of the site and underneath the existing pylons.

3.22 In relation to long distance views towards the proposed line entries anticipated from distant receptors, consideration should be given to promoted regional and national routes such as The Coleridge Way and The McMillan Way West.

3.23 Consideration has been given to national routes at paragraph 5.3.12, 5.3.35 and Table 5.1 however the ES should also take into account regional routes.

4.0 **Biodiversity and Nature Conservation (pages 83 – 106)**

4.1 We welcome the inclusion of a number of our comments that were made on the draft scoping material. However a number of outstanding methodological issues have been identified and are summarised below.

4.2 Further bat surveys will need to be undertaken and included within the ES to identify the location of roost sites and thereby potential impacts on roosts through construction activities, particularly in relation to tree roosting species. Bat emergence surveys and inspections of tree with high potential are recommended in the Guidance produced by the Bat Conservation Trust.

4.3 It is suggested that remote monitoring of hedgerows and tree lines to be intersected by the undergrounding is undertaken to provide information on the level of use by horseshoe bats. The data presented within the scoping report (figures only) does not make it clear what information has been obtained in relation to the SAC. The colours used on figure 31 (static monitoring) are not distinct enough to tell if horseshoe bats have been recorded without the benefit of interpretive text which should be included.

4.4 Evidence of the justification for not avoiding impacts on the SAC will need to be presented within the final ES and accompanying Information to Inform the Habitats Regulations Assessment as required by The Conservation of Habitats and Species Regulations 2010 (as amended).

4.5 It is advised that consideration of the need for invertebrate surveys is extended to the potential construction compounds. In relation to surveys, Paragraph 6.5.45 does not state when the second visit would be undertaken as the month has been omitted.

4.6 There is no reference to mortality or collision risk in section 3 "Characteristics of Potential Effects"; this should be considered as part of the final ES.

4.7 Regulation 8(9) of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 states that the relevant authority must take into account the environmental features likely to be affected by the development before adopting a scoping opinion. Also, IEEM Guidelines for Ecological Impact Assessment suggests scoping may be more effective when results are provided from preliminary ecological surveys. Whilst the Councils welcome the inclusion of maps, it is considered that the environmental features should be described in order to provide sufficient information to enable PINS to take these into account in forming a scoping opinion; this may enable certain receptors to be scoped out.

4.8 We note that Figure 29 has been omitted from the uploaded Scoping Report and would welcome provision of this figure.

4.9 Clarification has previously been sought from National Grid in respect of how the bird surveys relate to the likely need to collect data on bird features which are qualifying interest features of the Severn Estuary European Marine Site to provide underpinning data for Habitats Regulations Assessment. Clarification through inclusion of information from the surveys undertaken to date within the text of the scoping report may resolve this query. Without this information it is not clear if the data obtained and surveys proposed will be sufficient to allow a robust assessment of the potential impacts on the features of the Severn Estuary European Marine Site and the Somerset Levels and Moors SPA.

4.10 Para 6.6.11: - It is assumed that the reference to on-site habitat creation relates to the reinstatement of habitats. Off-site habitat creation should be referred to as off-setting measures within the final ES rather than mitigation.

4.11 Para 6.2.1: - Data sources – Lists are given of organisations contacted by National Grid for data. When the ES is published the Joint Councils would expect to see a summary of the data actually used to inform the EIA. So far as Somerset is concerned, the Somerset Environmental Records Centre (SERC) is the main central repository of biological records. There are several specialist recording groups in the county (e.g. Somerset Badger Group) and many of these (but not all) contribute records to SERC. Increasingly, EIAs use data from the National Biodiversity Network (NBN) to supplement data from Local Records Centres. NBN is not listed as a data source in the Report. It is also suggested that data should also be obtained from the Environment Agency for fisheries to ascertain the potential effects on watercourse crossings and implications for the Water Framework Directive.

4.12 Para 6.3.5: - Zones of Influence – The Report states that the EIA will be conducted according to the IEEM's EcIA Guidelines which indicate that the area affected by aspects of the proposed development should be defined. National Grid lists sites within the "potential influence" of the development but there is no explanation regarding the distance(s) over which the project might exert effects. In the case of sites designated for mobile features (e.g. birds, bats) the sites could be some distance from the route corridor yet still affected by the development. A statement regarding the fundamental assumptions made regarding Zones of Influence would have been useful to clarify whether have been any omissions in terms of sites, habitats and species that the EIA ought to cover. This information should inform thematic workshop discussions.

4.13 Para 6.5.27: - It is recommended that further inspection of Category 1 and 1* trees with potential to be used by bats in close proximity to the route will need to be undertaken along with emergence surveys and the results included within the ES in order to fully assess the potential impacts on bat species which are European Protected Species. It will be necessary to identify roosts within the vicinity of the proposed development to allow an assessment of the magnitude of effects such as severing of flight routes and loss of foraging habitat.

4.14 Para 6.5.37: - Population size class assessments should also be undertaken for waterbodies within 250m of potential construction compounds and laydown areas which may also exceed the area that triggers the need for these surveys.

4.15 Para 6.5.39: - It is suggested that netting (with a long handled pole) could be a safe and effective method of survey in line with guidance that should be included within the survey techniques. This may also be a more effective way of undertaking egg searching without causing damage to eggs and plants by using a grapnel.

4.16 Para 6.6.10: - Reference to the hierarchy of avoid – mitigate – compensate is welcomed. However it is not clear how this has been applied in relation to the North Somerset and Mendip Bats SAC where it has been decided that any impacts on bat flight routes can be mitigated. Evidence of the justification for this approach will need to be presented within the final ES and accompanying information to inform the Habitats Regulations Assessment.

4.17 Para 6.9.2: - Reference should also be made to the severing of bat commuting and foraging routes as potential effects of undergrounding within this paragraph.

4.18 Table 6.3: - SSSIs (e.g. Banwell Caves) are mentioned as being within "potential influence" of the project that are components of particular international designations (in the case of Banwell Caves SSSI – North Somerset and Mendip Bats SAC). The European Site is not listed in the same table under international sites potentially affected and should be considered in the final ES.

4.19 Para 6.4: - The nature of the anticipated potential effects on designated sites is not specified. In particular, there is no mention of habitat fragmentation, which is an issue that has been raised at thematic group meetings by the Joint Councils. Fragmentation potentially affects bats, Dormice and Great Crested Newts, all of which are European Protected Species.

4.20 Para 6.5.1: - The Joint Councils are keen to understand the programme of seasonally restricted surveys and seeks clarification from National Grid that these can be completed in time and the results analysed so that they can contribute to detailed design decisions.

4.21 Table 6.10: - States that some of the proposed actions take the form 'awaiting feedback from consultees before deciding how to address the issue in the EIA'. The Joint Councils have provided feedback on these issues.

4.22 Para 6.5.14: - According to the Scoping Report: "…surveys were carried out to assess the preferred Route Corridor". There is no discussion of how the data collected in the early surveys listed in this section were used to decide or inform the preferred route. Where environmental factors might have been in conflict – one consideration suggesting one route choice, a different one another - there is no indication of the objective procedure followed to resolve matters. The EIA will need to demonstrate that a robust selection process has been followed to minimise the environmental effects arising from the route.

4.23 Para 6.5.19: - Dormouse surveys: There is some dispute as to whether the surveys conducted followed recognised best practice. There is no written guidance that suggests that nest tube checks should stop as soon as a single record of a Dormouse is found, yet this is the procedure followed in surveys as reported to the Thematic Group, although not as described in paragraph 6.5.22. The disadvantage of such an approach is that there is no objective way at the end of the survey season to gauge the relative importance of different features along the route in terms of local conservation status of the species. This may have implications for route choice and/or mitigation.

4.24 Para 6.6.2: - Value of Local Wildlife Sites: Despite IEEM guidelines (which are currently under review) it is the case that 'Local Wildlife Sites' can be of more than county significance. Often they can be of regional importance and occasionally of national significance. This is reflected in current Defra guidance on Local Sites. The Joint Councils consider that the value of different County (Local) Wildlife Sites should be judged on a case by case basis rather assuming that they are all of county-level value. Because they can form part of ecological networks and may support protected species, UK Priority Habitats, etc, Local Sites need to be considered in terms of the nature of the interest for which they were designated. In Somerset, in accordance with Defra guidelines, there are written criteria-based reasons for designation of sites and the criteria are publicly accessible and readily available for use in the EIA process.

5.0 **Historic Environment (pages 107 – 130)**

5.1 We are pleased to see that National Grid has considered and included a number of our comments which were made on the draft scoping chapter. We do still however have a number of concerns relating to omissions concerning the basic methodology accepted. In addition, we are still concerned over the concept of not carrying out geophysical surveys and trial trenching on pylon footprints and access roads as it is our understanding that this is a requirement of National Planning Policy.

5.2 On review of the chapter we have the following recommendations to make:

5.3 1. Geophysical survey must take place on areas of known archaeology and potential archaeology. Without information concerning the character, date and extent of assets it is not possible to understand an asset's significance. This also applies to trial trenching.

5.4 It is therefore recommended that Geophysical Survey and Trial Trenching must not be restricted to specific types of impact as that is contrary to National Planning Policy Framework (NPPF) para. 128 and 135 which require evaluation to assess the significance of assets and the scale of harm or loss on the significance of assets. Within the area of the Mendip AONB, and crossing the Failand ridge and Gordano, undergrounding will effectively destroy all known and unknown heritage assets, and the initial stage of geophysical survey will need to be 100% gradiometry survey, to best identify the currently unknown heritage assets.

5.5 2. The EIA should reflect national planning policy and not adopt particular descriptions or assessment criteria peculiar to designated assets to assess all assets.

5.6 It is therefore recommended that the definition of impact or harm should not be restricted to substantial or less than substantial as this is only applied for designated (or equivalent) assets (see 7.1.6 below).

5.7 3. All elements of the scheme that have the potential to impact upon heritage assets or their setting must be included in the EIA.

5.8 It is therefore recommended that pylons, access tracks, drop down areas and any other necessary infrastructure must form part of the potential impacts during operational phase.

5.9 The mitigation statements cannot be achieved (see 7.6.12) unless the above recommendations are applied. Avoidance of buried remains is not possible unless an assessment of buried remains is made including geophysical survey and trial trenching of potential sites.

5.10 EIAs should be an iterative process that includes all classes of assets rather than a fixed process that identifies High and Moderate significant assets, and fails to assess impacts on Low significant assets.

5.11 Consultation must play a major role in deciding elements of the assessment. For example adjusting the data collection areas for Historic Landscape Characterisation setting must be done in conjunction with the appropriate Local Planning Authority Historic Environment Officer.

5.12 The methodology proposed will not be sufficient to identify assets with the potential to be of regional or local significance. This is particularly relevant in areas that have archaeological potential but have not been subject to investigation. Assets already recorded on the HERs (Historic Environment Records) (Somerset, North Somerset, Bristol, South Gloucestershire) but insufficiently investigated are assessed within this scoping document as Low significance, but these assets may have the potential to be of Medium or High significance.

5.13 The number of different terms described here may lead to confusion on the part of the reader. We note numerous references to compliance with the EU Directive; the EU Directive has been amended many times and as a result these changes were codified as Directive 2011/92/EU and we note that this does not prescribe the use of any particular terminology, only that impacts should be identified and assessed. This fact notwithstanding, we note that some terminology employed by the EU Directive is not followed in National Grid's proposed approach, for instance at paragraph 7.1.6 the term 'negative' is used, whereas the Directive uses the term 'adverse'. The term 'adverse' would be preferred in terms of avoiding misunderstandings.

5.14 We recommend that all terminology within both the technical and non-technical Cultural Heritage chapters of the ES should comply with accepted terminology as set out by NPPF and other professional guidelines produced by English Heritage and the IfA.

5.15 As discussed above, pylon bases should not be excluded from geophysical survey. It is unclear how it will be possible to move works that may impact upon nationally significant remains, especially in the event that these remains are widespread (a large villa complex for instance). A robust baseline should be obtained for the entire scheme to enable impacts to be identified and assessed, as required by the EU Directive.

5.16 More detail is required on the scale of impacts from pylon bases (i.e. size of footprint and overall effect). It is considered that impacts are not restricted to direct pylon bases but are a cumulative effect of all four pads. Any impacts should be addressed as one overall impact and not four separate impact areas.

5.17 The methodology proposes mitigation on currently non-designated assets and potential assets without any assessment of significance.

5.18 The cumulative effects on assets of local significance should be assessed for each study area and across local government areas based on HER responsibility. For example there should be a statement concerning the impacts on all assets within the county of Somerset.

5.19 Para 7.1.1: - The terminology is confusing and should be defined.

5.20 Para 7.1.6: - NPPF only refers to "substantial" and "less than substantial" when assessing impacts on designated assets (para.132) in terms of weighing the impact against the public benefit of the proposal. When dealing with impacts on non-designated assets NPPF refers to the "scale of harm or loss and the significance" of the impact on the asset (para.135).

5.21 Para 7.2.9: - The English Heritage guidance "Understanding the Archaeology of Landscapes 2007" and "Environmental Archaeology 2nd ed 2011"

should also be applied.

5.22 Para 7.3.4: - The Roman settlement at Crandon Bridge was put forward as a non-designated asset of schedulable quality and should be included on this list. This is also true of the known Roman settlement at Winthill in Banwell, only part of which (not in the corridor) is Scheduled, but which is known from previous work to extend across the line of such. It too, should be included on this list.

5.23 Para 7.3.5: - Clarification: the 'northern end of the corridor' refers to the area north of the Avon': this is the part of the route where archaeological potential is lower (but still substantial).

5.24 Para 7.3.10: - The footprint of the substation at Sandford is another area where initial 100% gradiometry will be necessary during the geophysical survey.

5.25 Para 7.4.3: - It is unclear how mitigation to avoid significant effects on high significance buried archaeology could be 'embedded in the design' if the location and extent is not known. All areas where proposed works may impact on buried archaeological remains should be evaluated through geophysical survey and where appropriate trial trenching. The results of these surveys should be fed into the design process to enable impacts upon significant archaeological remains to be avoided where possible.

5.26 Para 7.4.11: - Potential impacts should include the pylons and not be restricted to sealing end compounds, the overhead line and substations.

5.27 Para 7.4.12: - The system for notification of LPA for repairs likely to impact on heritage assets should be formulated and implemented as part of the EIA statement.

5.28 Para 7.4.20: - More detail on the methodology for identifying Zones of Theoretical Visibility should be provided including details of viewshed analysis. The term "significance" should be used not "sensitivity (significance)".

5.29 Para 7.5.8: - LiDAR data from the Environment Agency should also be included in the data set as well as UES data from SCC.

5.30 Para 7.5.15: - Geophysical survey should take place on pylon bases where potential for archaeological interest exists. NPPF paragraph 128 is clear that assessment including field evaluation should take place in order to understand the significance of assets, where potential for archaeology has been recognised. Also when and if pylons require piling for support attention should be given to the potential effect on dewatering of potential archaeological and palaeoenvironmental layers below.

5.31 Para 7.5.16: - Monitoring of geotechnical investigations will be of limited value, or even useless if the investigative techniques are not appropriate to environmental assessment. This point was raised during Historic Environement Thematic group meetings.

5.32 Para 7.5.17: - The impact on buried remains of non-designated assets needs to be understood in order to comply with NPPF. Due to the restriction on the geophysical survey (see point 7.5.15 above) it will not be possible to identify previously un-investigated assets. All sites with potential for buried remains should be assessed using geophysical survey and where appropriate field evaluation (trial trenching). This should include pylon bases and any other potential impact areas. This point was raised during Historic Environment Thematic Group meeting No.8 17th April 2013.

5.33 Para 7.5.18: - The statement is contrary to NPPF and saved Local Plan policies as the impacts on affected assets significance will not be understood in the determination of the proposal. It is normal practice to carry out geophysical survey and trial trenching on sites with archaeological potential (including such proposals as wind turbines, which have similar impacts as pylons).

5.34 Para 7.5.25: - The SCC Historic Landscape Characterisation should also be used.

5.35 Para 7.5.26: - The English Heritage guidance "2011a" and "2011" should apply.

5.36 Para 7.6.2: - The terms used in Table 7.3 are incorrect as there is no such definition as "undesignated assets". The term non-designated should be applied to assets not currently scheduled or listed.

5.37 Para 7.6.5: - Attention should be drawn at the beginning of this paragraph to the areas where the 'magnitude of the effect' will be total, i.e. in areas of undergrounding (Mendip AONB, and to a lesser extent, Nailsea to Portishead), sealing compounds, substations, and individual pylon sites.

5.38 Para 7.6.12: - Avoidance cannot be achieved without full assessment of buried archaeological remains in line with NPPF.

6.0 **Geological Conservation (pages 133 – 138)**

6.1 We welcome the approach outlined in Table 8.1, which addresses a number of comments raised during the draft consultation process.

6.2 We welcome the inclusion of geological conservation issues within the ES and would recommend that consideration be given to conserving / enhancing / recording geological features such as the rocks on Crookstone peak and the quarry immediately below it. We would also recommend that Natural England's geological SSSI citations are consulted, where relevant.

6.3 Based on the presence of Coal Measures within the local area, the potential for historic mine workings to be present should be considered and any potential instability issues that could result.

6.4 The extent of the study area may need to be extended for some different aspects, such as potential surface and ground water receptors. If sources of contamination are identified, the subsequent risk assessments should not be limited to receptors within a 250m radius. National Grid is advised to contact the Joint Councils to verify whether they hold any records of contaminated land on the route.

7.0 **Flood Risk, Water Quality and Resources (pages 139 – 147)**

7.1 We are pleased to see that National Grid has considered and included a number of our comments which were made on the draft scoping chapter.

7.2 However in relation to paragraph 9.6.4 (third bullet relating to the parameters for Moderate Sensitivity), we note that the parameters are unclear in respect of the Flood Risk criteria. The criteria defining the sensitivity of the receptors should be clarified to ensure that the significance of effect matrix is then appropriate when the magnitude of effect is considered in conjunction with receptor sensitivity criteria as follows:

- Moderate – The text "Or a flood plain or defence protecting 10 or fewer residential properties or industrial premises from flooding" is not appropriate, and consider" should be deleted.

7.3 We would also note that Section 9.5.9 fails to mention consents required from the relevant Internal Drainage Board (IDB) or Lead Local Flood Authority (LLFA) under the Land Drainage Act for works affecting ordinary watercourses. Within their area the IDB is the consenting authority for all works or structures in, under, over or within 9 metres of a 'viewed rhyne' or which might affect the channel of any other ditch or watercourses within the IDB area. In all other locations, the LLFA is the consenting authority for any works which might affect a watercourse or fall within any locally established byelaw distance from the watercourse channel.

8.0 **Traffic and Transport (pages 149 – 167)**

8.1 The Transport Chapter of the EIA scoping report provides a description of the existing transport network but does not identify key areas for scrutiny for transport assessment. This must be included in the Transport Assessment (TA) scoping note that National Grid propose to include as a separate report to the EIA.

8.2 Relevant transport policy documents are set out for reference as are the appropriate TA guidelines that National Grid proposes to use in the assessment of impact. It should be noted that the Highways Authority will require a detailed TA to be carried out on transport links and junctions along the route and that the criteria for assessment (i.e the increase in vehicle flow criteria) should be taken from the Department for Transport Guidelines on Transport Assessment. The use of the IEA guidelines for the assessment of the proposed trip generation from the proposed development may mean that there is an underestimation of traffic impact on the existing network, a network which is currently under stress and lacks resilience. The bands limits set in the IEA will be too broad for the effective assessment of the increase in traffic. It should be noted that NPPF paragraph 32 makes clear reference to the need for a TA and travel plan and the glossary of this document includes a definition of a TA. A Construction Management Plan would also need to be included in the TA and the EIA.

8.3 The TA should also have due regard to the development plan of the respective planning authorities and any policies specifically related to impact assessment and mitigation of National Infrastructure projects. In the case of Sedgemoor, attention is drawn to Policy MIP1 and other relevant policies of the adopted Core Strategy.

8.4 The EIA scoping report table 10.9 acknowledges and agrees with the issues that the local authorities raised on transport matters as part of the consultation on the

draft EIA Scoping Report. This is welcomed. However, there is an urgency to clarify and agree the scope of the TA between all parties. We wish this matter to be recognised by PINS in the context of this EIA scope.

8.5 The scope of the TA was provided to National Grid as part of the consultation response to the draft Scoping Report Transport chapter. These comments need to be taken into account and included in the subsequent TA. These comments are included in appendix A and B for avoidance of doubt.

8.6 **Existing Environment Section**
This section of the traffic and transport chapter of the EIA scoping report seeks to provide a detailed account of the existing highway, public transport and walking and cycling facilities. A key concern arising from the review of this section relates to the inaccuracy of some of the descriptions and categorisation of roads, for example the road link through Woolavington is not the B3139 but rather the B3141. The B3139 is in part a County Route and not a smaller access road. Other issues relate to the specificity of the descriptions, for example Harp Road does in part have footways.

8.7 It is not clear from the review of the traffic data included in this section of the report the source of the data or type: whether it is Annual Average Daily Traffic data (for example in paragraph 10.3.18). The accuracy of the description of existing environment needs to be enhanced. Data reference plans should be included to determine the extent of the data sets required and whether any data sources could have been scoped out as not applicable to the proposed development.

8.8 Building on this last point, it is not clear from the review of this section of the report what key issues have been scoped into the traffic and transport assessment and what matters have been scoped out. There is only one reference in this chapter to where a matter has been scoped out and this is seen in paragraph 10.4.5. This approach should have been taken throughout this section of the report.

8.9 It is noted that the Hinkley Point Line Entry Modifications section contains incorrect statements regarding the standards of road and the status of the Cannington Bypass which has now been approved as part of the DCO process.

8.10 Somerset County Council as Highway Authority is responsible for the management and maintenance of 6144 km of public rights of way across the county. All public rights of way are highways and the network in Somerset is made up predominantly of footpath with the remainder of approximately 20% of bridleways and restricted byways available for horse riders and cyclists and less than 1% of Byways Open to All Traffic available for other users such as those with motorised vehicles.

8.11 A number of public rights of way are incorporated into local, regional and national trails which are promoted to attract visitors to the County. The most notable of which in the study areas are The West Mendip Way, The River Parrett Trail and the West Somerset Coast Path which will soon form part of The England Coast Path National Trail currently being developed by Natural England in conjunction with Somerset County Council.

8.12 Public rights of way are very highly valued by residents and visitors to the County and any interruption/interference can result in upset and complaints. Therefore it is essential that any closures/temporary diversions and alternative routes are publicised early and the County Council's Public rights of way service is involved in agreeing any changes to the PRoW network. It is imperative that changes are

shown on the SCC rights of way interactive mapping system shows any long term closures/temporary diversions for information purposes for those who use the system to plan a walk or ride.

8.13 Para 10.3.9: - This paragraph refers to 5 designated PRoW possibly being affected by development proposals listed in Table 10.1. No specific rights of way maps are included as figures but from assessing the information on the small scale figures showing the Red Line Boundary for the proposed new line and the old line to be dismantled it would appear that more than 5 PRoW will be affected.

8.14 Table 10.1: - No indication is given as to where the Reference Numbers in Table 10.1 are to be found. Without larger scale maps it is impossible to identify the references specified in Table. The numbers listed in the column entitled 'PRoW Numbers' are not the unique path reference numbers for the rights of way but would seem to refer to what we call feature numbers used to identify specific pieces of path 'furniture' such as gates, signposts, stiles, etc. Path numbers in this area would be in a similar fashion to the following - BW28/1. In addition to the public rights of way affected there is a permissive path between Dunball and Knowle on the north bank of King's Sedgemoor Drain logged on the PRoW mapping system. There are also improvement proposals put forward by various users (e.g. Sedgemoor Bridleway Association) as a result of the public consultation for the Rights of Way Improvement Plan-a statutory document created through the Countryside and Rights of Way Act 2000 which is incorporated into the Somerset Local Transport Plan.

8.15 Para 10.3.20: - Similarly, numerous PRoW across Section B may be affected by the proposed new and removal of old lines as shown within the Red Line Boundary Figures. Table 10.2 lists reference numbers which cannot be identified and again PRoW numbers are listed as feature numbers. Paths in this section would have a numbering system such as AX23/10. There are also improvement proposals put forward by various users as a result of the public consultation for the Rights of Way Improvement Plan-as above.

8.16 Para 10.3.76: -This paragraph states that 7 PRoW may be affected by the development proposals and that would appear to be correct. However 3 of the 7 path numbers listed are incorrect. These are WL23/67, WL23/106 and WL23/82. There are also improvement proposals put forward by various users as a result of the public consultation for the Rights of Way Improvement Plan.

8.17 Para 10.5.19: -This paragraph states that pedestrian and cyclist delay will be considered (in the ES) in regards to any footpaths or cycle ways that have to be temporarily closed due to the construction of the development. The ES should clarify if this is in relation to urban footpaths or public rights of way.

8.18 Para 10.5.23: - This paragraph states that the Transport Assessment which will be undertaken to accompany the ES will identify how construction works will affect PRoW. The ES should make clear how the public

rights of way crossed by the construction of the 'haul' roads will be affected and what mitigation will be put in place especially those rights of way which have been identified as access routes for construction.

8.19 Para 10.5.26: - This paragraph refers to 'Protected lanes'. This status needs to be clarified.

8.20 Para 13.3.53: - Instead of referring to the South West Coast Path the text should in future reference *'West Somerset Coast Path long distance trail which will soon form part of The England Coast Path National Trail passes directly to the north of Hinkley Point…..'.*

8.21 Para 13.4.1: - The Scoping Report states that effects may occur as a result of direct inaction with socio-economic and land use features, such as severance or disruption to access along a PRoW during construction. It may be the case that on national trails and promoted paths the effects may be greater than on local PRoW.

8.22 Table 13.3: - Table 13.3 - 2nd row, 2nd column, the ES should also consider those which form part of a national trail or promoted route.

9.0 **Air Quality and Emissions (pages 169 – 175)**

9.1 The Joint Councils are broadly satisfied with the approach outlined to assess air quality effects. National Grid set out a number of environmental aspects in Chapter 15 which are to be scoped out of the chapter, including the impact of eutrophication during operation (since the proposed operational development will not give rise to any emissions which may affect eutrophication). This approach is supported based on the argument presented.

9.2 Clarification is required regarding the trigger for assessment of SF6 emissions, as Chapter 15 clearly states that it will be assessed whilst it is currently stated as being assessed on a risk based approach in Chapter 11.

9.3 The traffic data that will be used in the assessment of air quality and emissions will need to be agreed with all parties to ensure a robust assessment is carried out.

10.0 **Noise and Vibration (pages 177 – 183)**

10.1 The Joint Councils are pleased to note that a number of comments raised in relation to the draft Scoping Report have been taken on board.

10.2 Table 12.1 of the noise and vibration scope notes that the operational noise remains scoped out, and refers to further explanation of this issue in paragraphs 12.4.3 to 12.4.6. Whilst it is understood that noise emissions are unlikely to cause disturbance from this source, it is considered that this should be confirmed with a commitment to provide some quantitative assessment of operational noise.

10.3 It is noted that noise and vibration from construction activities will be controlled through the provisions of the Code of Construction Practice. As well as describing generic Best Practicable Means approaches to minimising noise and vibration, the ES should also describe any specific measures that can be identified and have been assumed in reaching the assessment conclusions.

10.4 The consultation responses note that the effect of general disturbance (including noise) on birds using the estuary will be covered in Ecological Chapter of the ES. The Ecological and Noise and Vibration Chapters should be cross-referenced such that it is clear how the noise baseline and assessment results from the Noise and Vibration assessment have been utilised in the Ecological assessment to determine effects on the species identified as receptor.

10.5 When describing effects, the final EIA text should be consistent in the use of the terms 'impact' and 'effect' e.g. paragraph 12.6.1 refers to magnitude of effect rather than impact.

10.6 In relation to cumulative effects from other potential developments, the final assessment should include the combined, indirect effects of road transport. The assessment should also identify where construction or operational traffic from different developments will simultaneously affect certain road links.

11.0 **Socio-Economics and Land Use (pages 185 – 208)**

11.1 The Scoping Report contains only limited information regarding the approach to assessment of effects on land holdings for the undergrounding section of the route and further methodological detail is required.

11.2 We are otherwise satisfied that the Scoping Report sets out an acceptable proposal for assessing the socio-economic impacts of the proposed development and that comments made in response to the draft have been broadly taken into account in producing the Scoping Report.

11.3 The plans accompanying the Administrative Areas within the Local Area of Influence (Figure 34) would benefit from key graphics and maps alongside text for clarity of presentation and ease of reference (not as an appendix).

11.4 We note that a formal quantitative assessment of tourism impacts has been scoped out, however a 'what if' analysis based on the outcomes of the visual amenity and transport assessments which looks at the range and scale of potential impacts to the tourism industry may be appropriate to support and illustrate the qualitative assessment.

11.5 Consideration should be given to whether displacement will occur across the wider study area not just the Local Area of Influence (for example, tourists may choose to use facilities elsewhere in the study area as a result of construction traffic which may fall outside the LAI).

11.6 We would continue to emphasise that the quality of the evidence base is critical to the assessment of tourism impacts.

11.7 It is likely that the primary socio-economic impacts will be felt through two effects: (i) a reduction in visual amenity and its effect on the quality and reputation of the local tourism offer, and (ii) the reputational impact of the effect of construction traffic over a potentially long construction period on the tourism market. Both of these effects are likely to be exacerbated by cumulative impacts of other developments including but not limited to Hinkley Point C and local renewable energy proposals and, as such, the methodology for cumulative impact assessment is particularly important in this area and requires further engagement with the Joint Councils.

11.8 The tourism industry is worth over £200m to the Somerset economy and employs over 7,000 people – a disproportionate and growing number of people compared with England as a whole[1]. It is noted that there is a high likelihood of gaps in the evidence base relating to tourism assets and the impact of high voltage overhead lines on the tourist economy. Given this, and in line with its economic importance, it is appropriate that attention is paid to improving the evidence base relating to the tourism sector and making the most robust possible assessment, including through primary research where appropriate.

11.9 We note that a formal quantitative assessment of tourism impacts has been scoped out, however a 'what if' analysis based on the outcomes of the visual amenity and transport assessments which looks at the range and scale of potential impacts to the tourism industry (in terms of output and jobs) may be appropriate to support and illustrate the qualitative assessment.

We trust that the above comments are helpful. If you require any clarification, please do not hesitate to contact us.

Yours sincerely,

| | | | |
|---|---|---|---|
| Strategic Manager, Major Programmes, Somerset County Council | Planning Manager, West Somerset Council | Local Planning Team Leader, North Somerset Council | Group Manager, Strategy & Business, Sedgemoor District Council |

[1] Source: Somerset Economic Assessment, March 2011, Figure 7

**Appendix A: -** Response to Traffic and Transportation EIA Draft Scoping Report on behalf of Somerset County Council, Sedgemoor District Council and West Somerset Council

# Hinkley Point C Connection Project

# Response to Traffic and Transportation EIA Draft Scoping Report on behalf of Somerset County Council, Sedgemoor District Council and West Somerset Council

**Issue Date: 11th February 2013**
**Submission date: 1st March 2013**

**Hinkley Point C Connection Project - Response to Traffic and Transportation EIA Draft Scoping Report on behalf of Somerset County Council, Sedgemoor District Council and West Somerset Council.**

## Executive Summary

**In order to provide a joint response on representing the views of the Somerset PPA Authorities, Somerset County Council on behalf of Sedgemoor District Council and West Somerset Council has reviewed the documentation that has been provided. Based upon the information presented it is extremely difficult to state agreement or disagreement with the methodology given that the report that has been provided is very general and lacks clarity which could have been represented on plans. No plans were included or information relating to the type and date of the traffic data to be used in the transport assessment.**

**The three Authorities concur with the views expressed by the Highways Agency and North Somerset Council in their response to the Draft Scoping Report for traffic and transportation.**

**Several discussions have taken place between Somerset County Council and the applicant with regards to the movement of Abnormal Loads and the potential impact that may arise out of these movements. Agreement on the routing of such vehicles is still to be agreed.**

## Introduction

1.1 This review has been prepared on behalf of, and with input from the Councils. It contains a review of the Draft Traffic and Transportation EIA Scoping Report (11/02/13) (the 'Draft Scoping Report'), prepared by National Grid.

1.2 The review is intended to provide a response to the issues raised within the Draft Scoping Report and identify additional areas for National Grid's consideration for inclusion in the Final Report.

## General

1.3 There are no graphics or maps within the Draft Scoping Report; and this makes the identification of the 'Sections' described within the Draft Scoping Report hard to appreciate and define the extent of the study area and area of impact.

1.4 The word 'Temporary' is used liberally throughout the Draft Scoping Report. The definition of 'Temporary' should be clearly stated up front to clarify the duration of any works. A Construction Method statement is required that would include such definitions of timescales.

1.5 The following Chapters should be included within the final Transport Assessment ('TA'):

1. Introduction;
2. Consultation;
3. Baseline / Existing Environment;
4. Policy;
5. Development Proposals;
6. Operational / Construction / Decommissioning Characteristics;
7. Person Trip Generation;
8. Freight Trip Generation;
9. Trip Distribution;
10. Parking Strategy;
11. Rail / River / Bus / Maritime Strategy;
12. Walk & Cycle;
13. Road Safety;
14. Traffic Analysis;
15. Mitigation;
16. Travel Plan; and
17. Controls and Monitoring.

1.6 Any permanent accesses will require a full Technical Audit by the Somerset Engineering team, which will include Safety Audits.

1.7 Temporary Accesses will be assessed on a case by case basis, but may also require Safety Audits, depending on the scale and duration of the works. The temporary accesses will also require 'Condition Surveys' before and after the works, to ensure that they are restored to their original state.

1.8 Where Abnormal Indivisible Loads (AIL) are being delivered to the sites, a full route plan will need to be drawn up and agreed.

1.9 The assessment should include other committed schemes in the area; a list outlining all committed schemes be provided by SCC.

1.10 The scope of the area to be analysed will need to be agreed with SCC. The impact associated with the traffic could be more widespread due to the nature and origin of the traffic required to construct the National Grid infrastructure.

1.11 Maritime modes of transport should also be considered within the TA.

**Transport Assessment**

***Consultation***

1.12 The Internal Drainage Board and Environment Agency should be added to the list of Consultees.

***Baseline***

1.13 Maps and diagrams should be included to identify the existing rail, cycling, walking, public transport and road networks.

1.14 The TA should also include Public Transport timetables to establish where there is scope to travel by alternatives to the car.

1.15 A description of the existing highway and its operation (including pinch points) should be included within the TA. All traffic data used in the final TA should be agreed with SCC before use. The data currently in the Draft Scoping Report is from 2011 (two years old) and there is no information relating to where this data has been sourced from. All modes should be included in the Transport Assessment and any barriers to the use of those modes should be clearly established and defined in the Transport Assessment.

1.16 Peak hours for the movement of the construction traffic along with the network peak hours should be identified from the traffic data and seasonality will need to be taken into account within the TA.

1.17 The TA should also consider any existing maritime facilities within the area.

1.18 Road Safety information (for the latest five year period) will need to be included and analysed against the Somerset average. This will be particularly significant around the location of the accesses and will help to identify the most suitable locations when connecting to the Highway.

***Policy***

1.19 The Policy should include a review and statement of compliance of the following policy documents:

- *Department for Transport, 2007. Guidance on Transport Assessment. London: Department for Transpor*t; and
- *Circular 02/07 Planning and the Strategic Road Network*, March 2007

All local policy and strategy documents, including the Somerset Future Transport Plan will need to be incorporated in the review and analysis so that it is clearly stated where the proposals and any associated mitigation comply with the policies and strategies.

***Development Proposals***

1.20 This Chapter should provide a map of all the suggested access points off of the Highway, as well as the general Development Proposals for the substations and their timing of implementation.

1.21 The accesses will require detailed design drawings and any permanent accesses will require a full detailed design package prior to submission. Locations of accesses onto highways should be discussed and agreed with SCC at the earliest possible opportunity to ensure that an optimal location is found.

1.22 The car and cycle parking provision for the Operational; Construction and Decommissioning phases should be provided for each of the sites.

***Operational / Construction / Decommissioning Characteristics***

1.23 This section should provide the following information:

- Construction phasing;
- Construction workforce profile;
- Shift patterns; and
- Catchment of staff;

***Person Trip Generation***

1.24 Confirm and agree a suitable Year of assessment with SCC. The year of assessment will be dependent on the phasing of each 'Section'.

1.25 All assumptions (eg. car share ratio) that are made within the TA should be clearly stated, evidenced and agreed with SCC.

1.26 The TA should include a multi-modal profile of journey to work trips based on the proposed transport strategy for each phase of the construction, operation and decommissioning phases. This should include a list of vehicle types required to facilitate the trip generation.

***Freight Trip Generation***

1.27 The TA should seek to demonstrate the number of Freight trips required throughout each of the phases. This information should be evidence based

and broken down by daily, monthly and quarterly movements across the entirety of the Works.

1.28 Depending on the number of freight vehicles required for the Works, a freight management centre maybe required to help consolidate and regulate vehicle trips.

1.29 A full Construction Management Traffic Plan (CTMP) and Traffic Incident Management Plan (TIMP) should be provided for each of the sites.

***Trip Distribution***

1.30 A methodology will be needed, to be discussed and agreed with SCC, to determine the origin of workers. Further information should be supplied by the Applicant detailing where the workers will be based and whether they can be sourced locally or whether they will be more specialised workers from further afield.

1.31 The origin of any Freight traffic should be identified early in the process. The Freight will be confined to fixed routes, which can be easily monitored and controlled as necessary.

1.32 The Freight (and AILs in particular) will have an impact upon road conditions and structures in the local area and will therefore require assessments to be undertaken on SCC structures in order for:

- National Grid to prove that they can take the loads; or
- The level of strengthening and the feasibility of implementing the strengthening required to accommodate the traffic.

Surveys and swept path analysis for abnormal loads are required to be included in the assessment that will be included in the Transport Assessment.

1.33 The specific needs of SCC Bridges / Retaining Wall stock are not the sole criteria in selecting Freight routes. Wider issues of highway co-ordination should also be taken into account, for example:

- Road space booking;
- Planned and ongoing road works;
- Road condition;
- Route suitability; and
- Timings of other events (e.g. Bridgwater Carnival)

1.34 Funding of these tasks would also need to be considered as well as the respective responsibilities. SCC requires National Grid to undertake the assessments under SCC direction, for ultimate approval by SCC and agreed actions.

***Parking Strategy***

1.35 The parking provision for the Operational; Construction and Decommissioning phases should be provided for each of the sites. This will need to be linked to the trip generation in order to demonstrate the need for the proposed number of spaces.

1.36 The types of space should also be provided, ie. cycle motorcycle, minibus and bus provision parking provision. Somerset County Council Parking Strategy sets out the formal standards for parking provision and where such standards are not applicable then an parking needs based methodology should be deployed which is trip generation based and linked to trip management measures included in the agreed Travel Plan.

***Rail / Bus / Maritime Strategy***

1.37 The TA should provide a summary of any proposed bus routes transporting workers to the area of Works. There may be potential to tap into the HPC bus strategy if there is spare capacity on their buses.

1.38 The impact upon the current public transport facilities should be investigated, to ensure that there is no adverse impact upon existing services.

1.39 The possibility of transporting Freight via rivers or the sea should be investigated.

***Walk & Cycle***

1.40 A suitable walking and cycling strategy should be prepared to facilitate access to any site Works. Any barriers to sustainable transport movements should be identified and appropriate mitigation to overcome these barriers should be identified, agreed and included in the Transport Assessment.

1.41 The impact the Development will have on the existing pedestrians and cyclists should be taken into account. This should be assessed through the Transport Chapter of the EIA and should look at:

- Severance;
- Driver Delay; and
- Pedestrian Amenity.

1.42 When assessing these impacts, the types of vehicles should be taken into consideration. For example high sided vehicles are much more likely to have the potential to conflict with both pedestrians and cyclists.

***Road Safety***

1.43 Obtain the latest accident data for the last five years from Somerset County Council and the Highways Agency for the key routes that will be used by National Grid traffic:

1.44 The TA should seek to analyse the accident data for the study area for the latest five years and plot the data using GIS distinguishing severity of accidents and those involving vulnerable road users. The study should then be developed to:

- Examine accident patterns in terms of type, contributory factors and location, considering accident numbers and rates for each class of road;
- Identify accident clusters and determine if there is an underlying reason resulting in an increase in collisions;
- Tabulate the results for each road in the study area;
- Identify any alterations to the local and strategic highway network within the study period to determine if they have had an impact on the Personal Injury Collision (PIC) rate;
- Summarise road safety measures implemented by the SCC Road Safety Partnership (under the Red Routes scheme) and any proposed improvements under the Rural Safety Management programme and the Urban Safety Management programme;
- Summarise Somerset average accident rates (information to be provided by SCC Road Safety Partnership);
- Determine the impact of the National Grid development on road safety;
- Identify road safety improvements to be implemented by  to mitigate the road safety impact if required; and
- Provide a programme of delivery.

***Traffic Analysis***

1.45 Suitable time periods for the hours of assessment will also need to be agreed with SCC. The impact upon the network peak, the shoulders of the peak and the Development peak will all need to be considered within the assessment.

1.46 An agreed suite of modelling will need to be agreed with SCC prior to any analysis. The models will also need to be agreed in terms of:

- Growth;
- Cumulative Impacts;
- Scope; and
- Time periods.

1.47 All permanent accesses will need to be modelled using either PICADY or LinSig (if signalised). Temporary accesses may also require modelling analysis depending on their nature and the need for the assessment of such junctions will need to be agreed with Somerset County Council. It should be noted that all transport models will need to be agreed with Somerset County Council.

***Mitigation***

1.48 The mitigation needed to accommodate the works should be outlined in detail within the TA. Any Highways works will need to be accompanied by a full submission of detailed drawings to demonstrate that the scheme can be built out. All mitigation will need to be agreed in principle.

1.49 The Draft Scoping Report states that 'the assessment will seek to identify suitable mitigation', this is welcomed by SCC and the agreement of any remedial works will be a critical part of the assessment process.

***Travel Plan***

1.50 A site-specific travel plan for each of the areas under construction should be developed in line with the Somerset County Council Manual for Travel Plans and will need to be discussed and agreed with Somerset County Council. The Manual for Travel Plans Guidance is available on line and will need to be used by the applicant. It should be noted that any Travel Plan documentation should include for example;

- Scope of the Travel Plan;
- Objectives and targets linked to the trip generation and trip distribution associated with the development;
- Management structure for the delivery of the travel plan;
- Proposed travel plan measures, implementation plan; and
- Monitoring and review strategy.

***Controls and Monitoring***

1.51 Proposed limits for traffic movements should be proposed by the Applicant and discussed and agreed with Somerset County Council. These limits will need to be linked to the trip generation and distribution that have been tested within the assessment and suitable measures for controlling and monitoring included within the TA.

**Transport Chapter**

1.52 The criterion that is being assessed in the Transport Chapter is considered acceptable for 'Temporary' impacts. However, if the impacts are considered to be longer than 'Temporary', then a full assessment of the criteria defined within IEMA 'Guidelines for the Environmental Assessment of Road Traffic':

- Severance,
- Pedestrian Delay,
- Pedestrian Amenity;
- Driver Delay; and
- Road Safety.

1.53 Each of these criteria should be scoped and a suitable methodology of assessment agreed with SCC.

1.54 Sensitive receptor values should also be redefined if the Works are considered to be longer than 'Temporary'.

**Noise and Vibration and Air Quality and Emissions Scoping Report**

1.55 The following comments are cross-referenced in the Noise and Vibration and Air Quality and Emissions Scoping Report.

1.56 A suitable method for calculating AADTs and AAWTs should be agreed with SCC prior to any assessments.

1.57 The hours of working should be taken into consideration, particularly in areas where HGVs or AILs would be required to route past houses or other sensitive receptors.

**Appendix B: -** Response to Traffic and Transportation EIA Draft Scoping Report on behalf of North Somerset Council

# INTERNAL MEMORANDUM

# FROM: D&E HIGHWAYS & TRANSPORT

---

**Date**: 26 February 2013
**Case Officer**: [redacted]

| |
|---|
| **Application No. : HPC Connection Project** |
| **Location : North Somerset (connection route includes Sandford and Nailsea)** |
| **Request for EIA transport scoping comments from NSC Highways and Transport**<br><br>**THIS IS NOT A PLANNING APPLICATION** |

**Comments from [redacted], Highways Development Management**

**Scope of Enquiry**

**This is not a planning application.** Highways and Transport comments herein are provided in response to the request for comments regarding the Environmental Impact Assessment (EIA) scoping note prepared by WYG Planning and Environment, February 2013, on behalf of National Grid in relation to the Hinkley Point C connection project.

My interpretation of the information submitted and scope of the enquiry is for comments in relation to the approach to the assessment of highway and transport impacts for the project to connect Hinkley C. Whilst comments from NSC Highways and Transport are provided in response to the scoping note prepared for the whole geographical area covered by the project, they specifically consider the need to assess impacts within the North Somerset boundary.

Notwithstanding the above, NSC Highways and Transport concurs with views expressed by the Highways Agency and Somerset County Council in their responses to the scoping report for traffic and transportation.

The scoping report would have benefitted from a series of plans and maps showing the location of connections and the extent of each 'section'/study area and site. It would be expected that such plans are provided to support the final submission/TA to help determine the area of impact.

**Highways Considerations**

**Transport Assessment**

National Planning Policy Framework 2012 (NPPF) states in paragraph 32 that *"all developments that generate significant amounts of traffic should be supported by a Transport Statement or Transport Assessment"*. In addition, Annex 2 outlines that a Transport Assessment (TA) is *"a comprehensive and systematic process that sets out transport issues relating to a proposed development. It identifies what measures will be required to improve accessibility and safety for all modes of travel, particularly for alternatives to the car such as walking, cycling and public transport and what measures will need to be taken to deal with the anticipated transport impacts of the development".*

Guidance on preparation of a TA or Transport Statement (TS) is defined in **Guidance on Transport Assessment 2007** (GTA), produced by DfT/CLG. It provides clear advice on the content of a TA and it is expected that this will be closely followed in the final submission.

There are two main issues to be considered in the TA:

1. Traffic generated by the decommissioning and construction phases of the proposed development and its impact on the surrounding network; and
2. Traffic generated by the operation of each element of the proposal once fully developed and its impact on the surrounding road network.

***1. Construction and Decommissioning Traffic***

The programme and associated traffic profile of the construction and decommissioning phases of the proposed development should be clearly set out within the TA and further disaggregated by site and an appropriate time scale.

There is a real concern about the implications of the construction and decommissioning phases, and the potential effect they could have on the local highway network, transport and the environment. It is anticipated that there will be a significant volume of heavy vehicle movements over this period, particularly during mobilisation, and these will need to be quantified for each site.

Specifically, assessment of the decommissioning and construction phase must include:

- Phasing of the different elements of the proposal;
- Volume of material to be moved to and from the site;
- Volume and distribution of Abnormal Indivisible Loads (AILs);
- Volume of HGV movements;
- Distribution of HGV movements during the construction phases;
- Volume and type of all other traffic associated with the decommissioning and construction phase including workforce profile, shift patterns and staff catchment;
- Impact of construction traffic on the surrounding local highway network;
- Capacity assessments of key junctions to be agreed with NSC

***2. Operation of Proposed Development***

It is anticipated that traffic generated by the operation of the development will be relatively low and associated mostly with ongoing maintenance. Nevertheless, it is understood that, periodically, there will be a requirement for abnormal and/or heavy loads to access each site.

An assessment of the operation phase must include;

- Programme of operational requirements for each site where applicable;
- Volume and type of traffic generated
- Traffic distribution and assignment
- Details of access
- Demand for parking and parking provision

The extent of the area to be assessed will need to be agreed with NSC prior to the final submission. The impact of traffic associated with the development is likely to reach beyond the immediate local highway network given the nature and origin of the traffic required to construct the National Grid infrastructure.

A description of the existing highway and its operation should be included within the TA. All traffic data used in the final TA should be approved by NSC prior to use and the source should be clearly identified. All traffic modes should be included in the TA.

Suitable assessment years should be agreed with NSC and will be dependent on the phasing of works associated with each site. All assumptions that are made within the TA should be clearly stated, evidenced and agreed with NSC.

Hours of assessment should be agreed with NSC and will be dependent on local network peak hours and the daily traffic profile of each site. Peak hours for the movement of traffic associated with the proposed development and the network peak hours should be identified from the traffic data. Seasonality will

need to be taken into account within the TA particularly with regard to the A38 which tends to experience higher traffic movements during the Summer months.

The assessment should include other committed schemes in the area. NSC can provide further information regarding relevant committed schemes.

*Mitigation*

Any mitigation required to accommodate the works should be outlined in detail within the TA and accompanied by detailed design drawings for approval by NSC.

**Access**

The location of permanent and temporary accesses connecting to the public highway should be provided in the TA, supported by a detailed design plan for approval by NSC Highways and Transport. As a minimum, this should demonstrate consideration has been given to relevant guidance concerning geometry and visibility. It is strongly recommended that NSC Highways are consulted on the proposed access locations prior to their inclusion in the final submission to ensure that the most appropriate location is found.

Any temporary or permanent accesses will require a technical audit by an NSC highway engineer and will also require a Road Safety Audit (S). This can be undertaken by NSC Road Safety team or by an external third party. Should it be the latter, the Council would require sight of the relevant qualifications for the audit team and would request an invitation to attend the audit as an observer. Temporary accesses will also require condition surveys prior to works commencing to ensure the network is restored to it's original state.

Where heavy or AILs will be required to access a site, this should be clearly indicated and it would be expected that a full route plan and vehicle tracking assessment (swepth path analysis) is provided in the TA and approved by NSC.

Vehicle routing, particularly for heavy and abnormal loads must take account of:

- Road space booking;
- Planned and ongoing road works including road closures and diversions;
- Road condition;
- Route suitability; and
- Timings of other local events

**Structures**
The location of any relevant structures over which traffic associated with the proposed development will need to pass should be provided in the TA. The TA should confirm the load bearing capacity of each relevant structure.

Relevant structures will require a comprehensive condition inspection, particularly for structures over which abnormal or heavy loads will pass. The inspection can be carried out by the NSC Structures team and Steve Spence should be contacted in this respect.

The TA should confirm whether access by heavy or abnormal loads will be required during the operational phase of the development and the timescales for access. NSC undertake routine structures inspections every two years.

**Construction Management Plan**
In addition to the assessment of the impact of construction traffic associated with the development outlined above, it is essential that an approved construction management plan and mitigation strategy is submitted to the local planning authority prior to construction work commencing on site. As a minimum, the construction management plan should include further details regarding vehicle access to the site (signage, banksman etc), provision for staff parking/staff compound, temporary traffic management measures, any temporary pedestrian/cycle facilities and safety measures, and highway safety measures such as wheel washing facilities.

**Travel Plan**
It is recognised that due to the nature of the proposal to construct National Grid infrastructure, there may be relatively limited scope to influence travel behaviour.

Notwithstanding the above, a site-specific travel plan for each site should be developed in accordance with North Somerset's Travel Plan SPD and provided with the TA. Given that it is likely that relatively low levels of traffic movements will be associated with the operation of the infrastructure, the Travel Plan should focus on the construction phase of the development and specifically address staff travel to each site. The Travel Plan will need to be agreed by NSC and Ben Searle, Senior Transport Planning Officer should be contacted in this respect.

**Walking and Cycling**

A walking and cycling strategy should be prepared to facilitate access to each site. This should include an assessment of barriers to walking and cycling and suitable mitigation measures.

Particular consideration should be given in the EIA to the impact of the operation, construction and decommissioning phases of the development on existing pedestrians and cyclists, specifically in regard to safety, severance and pedestrian amenity. The types of vehicles accessing each site should be taken into consideration.

**EIA Transport Chapter**

It would be expected that Guidelines for the Environmental Assessment of Road Traffic (IEMA) in respect of the assessment of highway and traffic issues would be closely followed in the preparation of the EIA transport chapter. These outline the additional transport assessment requirements required for an EIA and include preparation of traffic data to support the assessment of road traffic noise or environmental pollution etc.

**Minor Amendments/Errors**
Please revise the incorrect spelling of Banwell (currently presented as Barnwell).

South Gloucestershire Council

environmentalservices@infrastructure.gsi.gov.uk

by email only

Attention: Alan Ridley, EIA and Land Rights Advisor

Date: 20 May 2013
Your Ref: 130422_EN020001_1756022
Our Ref:
Enquiries to: [redacted]
Telephone:
Internet: [redacted]@southglos.gov.uk

Dear Mr Ridley

**Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 SI 2263 (as amended) (the EIA Regulations)**
**Proposed Hinkley to Seabank Grid Connection (the project)**
**Proposal by National Grid (the applicant)**

Thank you for your consultation dated 22 April 2013.

We write in our capacity as a consultation body as defined in the EIA Regulations, to inform the Secretary of State as to the information that technical officers of this Council consider should be provided in the Environmental Statement (ES) for the above named project.

We would be grateful for your confirmation of receipt of this response.

Comments are as follows:

1. General

Although this Council has been in dialogue with the applicant for some considerable time, uncertainties remain, including:

- as to the location of the proposed physical works within the 'red line' boundary has been provided at this point in time. The assessment of the scoping is therefore undertaken on the assumption that the 'bulges' I the red lines are indicative of towers and construction compounds.

- The strategic nature of any mitigation works that may be designed into the scheme to reduce or mitigate impact, either in the vicinity of the line entries to Seabank or at the proposed substation at Aust.

We suggest that the approach to environmental impact assessment should at paragraph 4.1.3 commit to the standard EIA hierarchical approach to impact mitigation: i.e. firstly seek to avoid, then mitigate or as a last resort compensate for impact. This is best delivered by building EIA into the planning and design of the proposed scheme.

[redacted]
Director of Environment and Community Services
South Gloucestershire Council, PO Box 2081, South Gloucestershire, BS35 9BP
Telephone: 01454 868004 Internet: mai box@southglos.gov.uk

INVESTORS IN PEOPLE | Gold

It is suggested that it is important therefore to ensure that the ongoing survey, assessment and EIA work is integrated with the detailed design work for the scheme to that the environmental impact of the scheme is minimised.

We question whether the document as submitted adequately describes how the interrelationship of the various effects of the scheme will be assessed or reported, and suggest that the final EIA should make this clear, both in terms of methodology and reporting of impact.

There remain some issues of inconsistent use of terminology in relation for example to levels of impact. It is suggested that this should be addressed in the final EIA.

Traveller community: We are concerned that potential impacts on the Traveller community are not adequately addressed in the Scoping Report. While mentioned in Table 12.1, with respect to noise, no other impacts are considered or scoped out. The community at Aust is directly adjacent to the access track to the proposed substation and it is suggested that this issue should be addressed. Since the nature of the proposed works to the access road are not yet known, the precautionary approach is that there could be impact. As suggested to National Grid, early engagement with the Traveller community during design development could help to avoid or minimise impact on this community.

Policy Context: We would like to draw attention to advanced stage of the South Gloucestershire Core Strategy, the Examination having closed, the Inspector's further modifications having been published and adoption being anticipated in the summer of 2013. This is relevant to all sections of the EIA; however it is noted for example that section 6.2.3 Biodiversity Planning context does not seem to mention the South Gloucestershire Core Strategy.

2. Landscape and visual assessment

In general it is considered that the proposed approach is adequate, however the revised Landscape Institute Guidelines for Landscape and Visual Assessment were published for use on 17 April and it is recommended that these should be used for this project.

However there are concerns as to whether the assessment of the proposed works at Aust as set out in the Scoping Report is adequate or complete.

It is acknowledged that the landscape and visual assessment proposes to assess the proposed substation at Aust and that relevant issues are covered in the text at paragraphs 5.3. 121 - 127, however the relevant e.g. Figures 12, 14 and 15 do not seem to provide information for this location.

Given the sensitivity of this location being on the Severn Estuary, directly adjacent to and visible from the Severn Way and also being visible from the estuary itself and the north bank of the estuary in the vicinity of the end of Offa's Dike long distance path, it is imperative that the scope of the EIA fully covers assessment of the impact at Aust and that plans and assessments are included to cover this area, and appropriate viewpoints for photomontages etc are plotted and agreed. Discussions have taken place with National Grid regarding these issues, but we are unable to find reference in the document?

In order to be able to assess the environmental impact of the proposed scheme it will be important for strategic landscape proposals to be included as an integral part of the proposed works, including any proposals for off site schemes that may be proposed by National Grid or by agreement.

The issue of lighting during construction needs to be assessed particularly in areas of environmental sensitivity such as adjacent to the Severn Estuary at Aust, and this also has implications for potential disturbance of wildlife and particularly any species associated with the international designations on the estuary.

3. Biodiversity and Nature Conservation

Rather than repeat them, officers endorse those matters raised in the joint Somerset Councils' response that are relevant to the issue of Scoping the EIA.

With respect to Aust, although Table 6.8 mentions the Aust Cliff geological SSSI, neither this section of the Scoping Report or Section 8 on Geological Conservation seem to mention the need to assess the potential impact of earthworks or construction works on the underlying strata that are likely to relate to the same geological beds as the SSSI. This matter has been highlighted to National Grid on a number of occasions, and methodologies will need to be agreed for suitable investigations in advance of any earthworks and for appropriate mitigation measures as appropriate.

The Scoping Opinion seems to be inadequate in this regard.

3. Historic Environment

The scoping document submitted to the Council for formal comment includes sections on the Historic Environment (Chapter 7). This provides a detailed assessment methodology for assessing impacts arising directly and indirectly from the development proposals. The document appears appropriate and should allow for adequate assessment of the potential impacts of the proposals and allow for the development of appropriate mitigation, to be included within the environmental impact assessment report.

As stated in the 'General' section above, whilst we welcome the apparent thoroughness of the proposed approach there are concerns that the process and timetable must allow for an appropriate level of assessment of the environmental impacts as set out within this chapter and to enable the findings to inform the development proposals and develop appropriate mitigation proposals for inclusion within the Environmental Impact Assessment.

4. Geological Conservation

As stated in section 3 of this letter, we are unable to find any mention in this section of survey or assessment of any potential impacts of the works at Aust on potential geologically important beds (related to the nearby SSSI), or of any commitment to mitigation. Section 8.4.1 does not highlight the potential for construction and earthworks to impact on geologically important strata (such as those found at Aust).

In this respect the Scoping report appears inadequate.

It is noted that issues relating to the potential for land contamination are included in Chapter 8 – Geological Conservation of National Grid EIA Scoping Report dated April 2013. The approach to assessing the potential for land contamination is acceptable

5. Flood Risk, Water Quality and Resources

It is suggested that the following is missing from the Scoping Report:

Para 9.2.1 should include reference to the Government's Technical Guidance that supports the NPPF
Para 9.5.5 should include consultation with the Lower Severn Internal Drainage Board
Para 9.5.7 should include reference to Government's Technical Guidance that supports the NPPF

There may be further comments or questions about flood issues once we have more understanding of the detail of the scheme.

6. Traffic and Transport

In general it is considered that the Scoping Report identifies the issues particularly in relation to the wider highway infrastructure, however, for clarity we have the following additional information that should be considered when undertaking the EIA.

The biggest impact in South Gloucestershire is likely to be the construction of the sub-station at Aust, primarily related to the construction and delivery of the components following construction. In terms impact upon our network access to this site is via the A403/M48/B4461 roundabout towards the motorway service station. However, given that the nature of and operation of construction compounds haul roads and access is not yet known there is also the potential for impact in the Severnside Area.

As part of any assessment there would be a requirement within the Transportation Assessment details of how the applicant intends to deal with the construction of the sub-station as well as the main pylon line works and including for example any access routes for delivery vehicles.

Specifically the substation assessment should contain reference to a construction management plan which for the avoidance of doubt would include routing of vehicles ( no construction vehicles would be allowed to use the B4461), timing of the deliveries to avoid network peak times (would need to be agreed to HA) and a timetable indicating when peak deliveries for the civil phase will occur with identified off-site waiting areas identified to account for the fact that the vehicle access to the site is constrained with limited queuing space available. The access road to the sub-station site is poorly aligned to the existing highway infrastructure and not considered suitable to deal with the proposed traffic generation, and as such details of how access is to be managed at this location would also need to be provided. Given the abnormal number of HGV's accessing the site provision should also be made for a dilapidation survey on the route from the roundabout to the site entrance, which would subsequently need to be agreed with SGC highways/HA.

6. Air Quality

The proposed approach to assessing the potential air quality impacts of the proposed development, as set out in Chapter 11 of the National Grid EIA Scoping Report dated April 2013, seems appropriate.

7. Noise and vibration

It is recommended that in response to point 12.4.5 regarding operation noise at Aust substation, some quantitative assessment of operational noise is provided. This is particularly important given the environmental sensitivity of the location including its

adjacency to the international designations on and protected species associated with the Severn Estuary.

The rest of the approach for assessing Noise and Vibration impacts seems to be appropriate.

7. Socio-economics and land use

Given the potential for impact on PROW and long distance paths in the vicinity of the proposed project, it is recommended that Public Rights of Way are a significant issue that merits their own sub section, heading, and mapping within the EIA. It is not clear from the introduction to section 13 that this includes PROW, although later text includes this issue. Paragraph 13.2.3 does not mention reference to local authority mapping of PROW, and related local planning policies (such as promoted routes).

While it is recognised that visual impact will be assessed in the relevant section, it will be important for the EIA to assess impact on PROW routes and / amenity.

Para 13.3.48: although the last sentence does refer to an employment allocation in the South Gloucestershire Local Plan and Core Strategy it does not seem to refer to the Avonmouth Severnside Enterprise Area. (The Enterprise Area is referred to in Table 13.2). As acknowledged in table 13.2, the potential for impact on the developability of land parcels in this area needs to be assessed in the EIA. This does not seem to have been taken into account in the main body of the Scoping Report. In addition any interrelationship or impacts on the proposed development of a Seabank 3 gas fired power station will also need to be assessed.

We trust that the above will be taken into account when responding to the applicant's request for a Scoping Opinion.

If you have any questions or queries please do not hesitate to contact me.

Yours Sincerely

Strategic Projects Manager
Environment & Community Services

**From:** [redacted]
**To:** Environmental Services;
**Subject:** Infrastructure planning regs - Proposed Hinkley to Seabank Grid Connection
**Date:** 03 May 2013 14:44:04

---

**Your ref: 130422_EN020001_1756022**

To Whom it May Concern:

With reference to the above, we confirm that we do not have any comments.

Regards,
[redacted]

[redacted] | [redacted], Director of Facilities and Estates
University Hospitals Bristol NHS Foundation Trust | Bristol Royal Infirmary | Marlborough Hill | Bristol | BS2 8HW
Tel [redacted]

# APPENDIX 3

# Presentation of the Environmental Statement

# APPENDIX 3

# PRESENTATION OF THE ENVIRONMENTAL STATEMENT

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (SI 2264) (as amended) sets out the information which must be provided for an application for a development consent order (DCO) for nationally significant infrastructure under the Planning Act 2008. Where required, this includes an environmental statement. Applicants may also provide any other documents considered necessary to support the application. Information which is not environmental information need not be replicated or included in the ES.

An environmental statement (ES) is described under the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (SI 2263) (as amended) (the EIA Regulations) as a statement:

a) 'that includes such of the information referred to in Part 1 of Schedule 4 as is reasonably required to assess the environmental effects of the development and of any associated development and which the applicant can, having regard in particular to current knowledge and methods of assessment, reasonably be required to compile; but

b) that includes at least the information required in Part 2 of Schedule 4'.

*(EIA Regulations Regulation 2)*

The purpose of an ES is to ensure that the environmental effects of a proposed development are fully considered, together with the economic or social benefits of the development, before the development consent application under the Planning Act 2008 is determined. The ES should be an aid to decision making.

The SoS advises that the ES should be laid out clearly with a minimum amount of technical terms and should provide a clear objective and realistic description of the likely significant impacts of the proposed development. The information should be presented so as to be comprehensible to the specialist and non-specialist alike. The SoS recommends that the ES be concise with technical information placed in appendices.

## ES Indicative Contents

The SoS emphasises that the ES should be a 'stand alone' document in line with best practice and case law. The EIA Regulations Schedule 4, Parts 1 and 2, set out the information for inclusion in environmental statements.

Schedule 4 Part 1 of the EIA Regulations states this information includes:

*'17. Description of the development, including in particular—*

*(a) a description of the physical characteristics of the whole development and the land-use requirements during the construction and operational phases;*
*(b) a description of the main characteristics of the production processes, for instance, nature and quantity of the materials used;*
*(c) 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.*

*18. An outline of the main alternatives studied by the applicant and an indication of the main reasons for the applicant's choice, taking into account the environmental effects.*

*19. A description of the aspects of the environment likely to be significantly affected by the development, including, in particular, population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the interrelationship between the above factors.*

*20. A description of the likely significant effects of the development on the environment, which should cover the direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the development, resulting from:*
*(a) the existence of the development;*
*(b) the use of natural resources;*
*(c) the emission of pollutants, the creation of nuisances and the elimination of waste,*
*and the description by the applicant of the forecasting methods used to assess the effects on the environment.*

*21. A description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment.*

*22. A non-technical summary of the information provided under paragraphs 1 to 5 of this Part.*

*23. An indication of any difficulties (technical deficiencies or lack of know-how) encountered by the applicant in compiling the required information'.*

*EIA Regulations Schedule 4 Part 1*

4.18 The content of the ES must include as a minimum those matters set out in Schedule 4 Part 2 of the EIA Regulations. This includes the consideration of 'the main alternatives studied by the applicant' which the SoS recommends could be addressed as a separate chapter in the ES. Part 2 is included below for reference:

### 4.19 Schedule 4 Part 2

- A description of the development comprising information on the site, design and size of the development
- A description of the measures envisaged in order to avoid, reduce and, if possible, remedy significant adverse effects
- The data required to identify and assess the main effects which the development is likely to have on the environment
- An outline of the main alternatives studies by the applicant and an indication of the main reasons for the applicant's choice, taking into account the environmental effects, and
- A non-technical summary of the information provided *[under the four paragraphs above]*.

Traffic and transport is not specified as a topic for assessment under Schedule 4; although in line with good practice the SoS considers it is an important consideration *per se*, as well as being the source of further impacts in terms of air quality and noise and vibration.

## Balance

The SoS recommends that the ES should be balanced, with matters which give rise to a greater number or more significant impacts being given greater prominence. Where few or no impacts are identified, the technical section may be much shorter, with greater use of information in appendices as appropriate.

The SoS considers that the ES should not be a series of disparate reports and stresses the importance of considering inter-relationships between factors and cumulative impacts.

## Scheme Proposals

The scheme parameters will need to be clearly defined in the draft DCO and therefore in the accompanying ES which should support the application as described. The SoS is not able to entertain material changes to a project once an application is submitted. The SoS draws the attention of the applicant to the DCLG and the Planning Inspectorate's published advice on the preparation of a draft DCO and accompanying application documents.

## Flexibility

The SoS acknowledges that the EIA process is iterative, and therefore the proposals may change and evolve. For example, there may be changes to the scheme design in response to consultation. Such changes should be addressed in the ES. However, at the time of the application for a DCO, any proposed scheme parameters should not be so wide ranging as to represent effectively different schemes.

It is a matter for the applicant, in preparing an ES, to consider whether it is possible to assess robustly a range of impacts resulting from a large number of undecided parameters. The description of the proposed development in the ES must not be so wide that it is insufficiently certain to comply with requirements of paragraph 17 of Schedule 4 Part 1 of the EIA Regulations.

The Rochdale Envelope principle (see *R v Rochdale MBC ex parte Tew (1999) and R v Rochdale MBC ex parte Milne (2000)*) is an accepted way of dealing with uncertainty in preparing development applications. The applicant's attention is drawn to the Planning Inspectorate's Advice Note 9 'Rochdale Envelope' which is available on the Advice Note's page of the National Infrastructure Planning website.

The applicant should make every attempt to narrow the range of options and explain clearly in the ES which elements of the scheme have yet to be finalised and provide the reasons. Where some flexibility is sought and the precise details are not known, the applicant should assess the maximum potential adverse impacts the project could have to ensure that the project as it may be constructed has been properly assessed.

The ES should be able to confirm that any changes to the development within any proposed parameters would not result in significant impacts not previously identified and assessed. The maximum and other dimensions of the proposed development should be clearly described in the ES, with appropriate justification. It will also be important to consider choice of materials, colour and the form of the structures and of any buildings. Lighting proposals should also be described.

## Scope

The SoS recommends that the physical scope of the study areas should be identified under all the environmental topics and should be sufficiently robust in order to undertake the assessment. The extent of the study areas should be on the basis of recognised professional guidance, whenever such guidance is available. The study areas should also be agreed with the relevant consultees and local authorities and, where this is not possible, this should be stated clearly in the ES and a reasoned justification given. The scope should also cover the breadth of the topic area and the temporal scope, and these aspects should be described and justified.

*Physical Scope*

In general the SoS recommends that the physical scope for the EIA should be determined in the light of:

- the nature of the proposal being considered
- the relevance in terms of the specialist topic

- the breadth of the topic
- the physical extent of any surveys or the study area, and
- the potential significant impacts.

The SoS recommends that the physical scope of the study areas should be identified for each of the environmental topics and should be sufficiently robust in order to undertake the assessment. This should include at least the whole of the application site, and include all offsite works. For certain topics, such as landscape and transport, the study area will need to be wider. The extent of the study areas should be on the basis of recognised professional guidance and best practice, whenever this is available, and determined by establishing the physical extent of the likely impacts. The study areas should also be agreed with the relevant consultees and, where this is not possible, this should be stated clearly in the ES and a reasoned justification given.

*Breadth of the Topic Area*

The ES should explain the range of matters to be considered under each topic and this may respond partly to the type of project being considered. If the range considered is drawn narrowly then a justification for the approach should be provided.

*Temporal Scope*

The assessment should consider:

- environmental impacts during construction works
- environmental impacts on completion/operation of the development
- where appropriate, environmental impacts a suitable number of years after completion of the development (for example, in order to allow for traffic growth or maturing of any landscape proposals), and
- environmental impacts during decommissioning.

In terms of decommissioning, the SoS acknowledges that the further into the future any assessment is made, the less reliance may be placed on the outcome. However, the purpose of such a long term assessment, as well as to enable the decommissioning of the works to be taken into account, is to encourage early consideration as to how structures can be taken down. The purpose of this is to seek to minimise disruption, to re-use materials and to restore the site or put it to a suitable new use. The SoS encourages consideration of such matters in the ES.

The SoS recommends that these matters should be set out clearly in the ES and that the suitable time period for the assessment should be agreed with the relevant statutory consultees.

The SoS recommends that throughout the ES a standard terminology for time periods should be defined, such that for example, ‘short term’ always refers to the same period of time.

## Baseline

The SoS recommends that the baseline should describe the position from which the impacts of the proposed development are measured. The baseline should be chosen carefully and, whenever possible, be consistent between topics. The identification of a single baseline is to be welcomed in terms of the approach to the assessment, although it is recognised that this may not always be possible.

The SoS recommends that the baseline environment should be clearly explained in the ES, including any dates of surveys, and care should be taken to ensure that all the baseline data remains relevant and up to date.

For each of the environmental topics, the data source(s) for the baseline should be set out together with any survey work undertaken with the dates. The timing and scope of all surveys should be agreed with the relevant statutory bodies and appropriate consultees, wherever possible.

The baseline situation and the proposed development should be described within the context of the site and any other proposals in the vicinity.

## Identification of Impacts and Method Statement

*Legislation and Guidelines*

In terms of the EIA methodology, the SoS recommends that reference should be made to best practice and any standards, guidelines and legislation that have been used to inform the assessment. This should include guidelines prepared by relevant professional bodies.

In terms of other regulatory regimes, the SoS recommends that relevant legislation and all permit and licences required should be listed in the ES where relevant to each topic. This information should also be submitted with the application in accordance with the APFP Regulations.

In terms of assessing the impacts, the ES should approach all relevant planning and environmental policy – local, regional and national (and where appropriate international) – in a consistent manner.

*Assessment of Effects and Impact Significance*

The EIA Regulations require the identification of the 'likely significant effects of the development on the environment' (Schedule 4 Part 1 paragraph 20).

As a matter of principle, the SoS applies the precautionary approach to follow the Court's[4] reasoning in judging 'significant effects'. In other words

[4] See Landelijke Vereniging tot Behoud van de Waddenzee and Nederlandse Vereniging tot Bescherming van Vogels v Staatssecretris van Landbouw (Waddenzee Case No C 127/02/2004)

'likely to affect' will be taken as meaning that there is a probability or risk that the development will have an effect, and not that a development will definitely have an effect.

The SoS considers it is imperative for the ES to define the meaning of 'significant' in the context of each of the specialist topics and for significant impacts to be clearly identified. The SoS recommends that the criteria should be set out fully and that the ES should set out clearly the interpretation of 'significant' in terms of each of the EIA topics. Quantitative criteria should be used where available. The SoS considers that this should also apply to the consideration of cumulative impacts and impact inter-relationships.

The SoS recognises that the way in which each element of the environment may be affected by the proposed development can be approached in a number of ways. However it considers that it would be helpful, in terms of ease of understanding and in terms of clarity of presentation, to consider the impact assessment in a similar manner for each of the specialist topic areas. The SoS recommends that a common format should be applied where possible.

*Inter-relationships between environmental factors*

The inter-relationship between aspects of the environments likely to be significantly affected is a requirement of the EIA Regulations (see Schedule 4 Part 1 of the EIA Regulations). These occur where a number of separate impacts, e.g. noise and air quality, affect a single receptor such as fauna.

The SoS considers that the inter-relationships between factors must be assessed in order to address the environmental impacts of the proposal as a whole. This will help to ensure that the ES is not a series of separate reports collated into one document, but rather a comprehensive assessment drawing together the environmental impacts of the proposed development. This is particularly important when considering impacts in terms of any permutations or parameters to the proposed development.

*Cumulative Impacts*

The potential cumulative impacts with other major developments will need to be identified, as required by the Directive. The significance of such impacts should be shown to have been assessed against the baseline position (which would include built and operational development). In assessing cumulative impacts, other major development should be identified through consultation with the local planning authorities and other relevant authorities on the basis of those that are:

- under construction
- permitted application(s), but not yet implemented
- submitted application(s) not yet determined
- projects on the National Infrastructure's programme of projects

- identified in the relevant development plan (and emerging development plans - with appropriate weight being given as they move closer to adoption) recognising that much information on any relevant proposals will be limited, and
- identified in other plans and programmes (as appropriate) which set the framework for future development consents/approvals, where such development is reasonably likely to come forward.

Details should be provided in the ES, including the types of development, location and key aspects that may affect the EIA and how these have been taken into account as part of the assessment.

The SoS recommends that offshore wind farms should also take account of any offshore licensed and consented activities in the area, for the purposes of assessing cumulative effects, through consultation with the relevant licensing/consenting bodies.

For the purposes of identifying any cumulative effects with other developments in the area, applicants should also consult consenting bodies in other EU states to assist in identifying those developments (see commentary on Transboundary Effects below).

*Related Development*

The ES should give equal prominence to any development which is related with the proposed development to ensure that all the impacts of the proposal are assessed.

The SoS recommends that the applicant should distinguish between development for which development consent will be sought and any other development. This distinction should be clear in the ES.

*Alternatives*

The ES must set out an outline of the main alternatives studied by the applicant and provide an indication of the main reasons for the applicant's choice, taking account of the environmental effect (Schedule 4 Part 1 paragraph 18).

Matters should be included, such as *inter alia* alternative design options and alternative mitigation measures. The justification for the final choice and evolution of the scheme development should be made clear. Where other sites have been considered, the reasons for the final choice should be addressed.

The SoS advises that the ES should give sufficient attention to the alternative forms and locations for the off-site proposals, where appropriate, and justify the needs and choices made in terms of the form of the development proposed and the sites chosen.

*Mitigation Measures*

Mitigation measures may fall into certain categories namely: avoid; reduce; compensate or enhance (see Schedule 4 Part 1 paragraph 21); and should be identified as such in the specialist topics. Mitigation measures should not be developed in isolation as they may relate to more than one topic area. For each topic, the ES should set out any mitigation measures required to prevent, reduce and where possible offset any significant adverse effects, and to identify any residual effects with mitigation in place. Any proposed mitigation should be discussed and agreed with the relevant consultees.

The effectiveness of mitigation should be apparent. Only mitigation measures which are a firm commitment and can be shown to be deliverable should be taken into account as part of the assessment.

It would be helpful if the mitigation measures proposed could be cross referred to specific provisions and/or requirements proposed within the draft development consent order. This could be achieved by means of describing the mitigation measures proposed either in each of the specialist reports or collating these within a summary section on mitigation.

The SoS advises that it is considered best practice to outline in the ES, the structure of the environmental management and monitoring plan and safety procedures which will be adopted during construction and operation and may be adopted during decommissioning.

*Cross References and Interactions*

The SoS recommends that all the specialist topics in the ES should cross reference their text to other relevant disciplines. Interactions between the specialist topics is essential to the production of a robust assessment, as the ES should not be a collection of separate specialist topics, but a comprehensive assessment of the environmental impacts of the proposal and how these impacts can be mitigated.

As set out in EIA Regulations Schedule 4 Part 1 paragraph 23, the ES should include an indication of any technical difficulties (technical deficiencies or lack of know-how) encountered by the applicant in compiling the required information.

*Consultation*

The SoS recommends that any changes to the scheme design in response to consultation should be addressed in the ES.

It is recommended that the applicant provides preliminary environmental information (PEI) (this term is defined in the EIA Regulations under regulation 2 ‘Interpretation’) to the local authorities.

Consultation with the local community should be carried out in accordance with the SoCC which will state how the applicant intends to consult on the

preliminary environmental information (PEI). This PEI could include results of detailed surveys and recommended mitigation actions. Where effective consultation is carried out in accordance with Section 47 of the Planning Act, this could usefully assist the applicant in the EIA process – for example the local community may be able to identify possible mitigation measures to address the impacts identified in the PEI. Attention is drawn to the duty upon applicants under Section 50 of the Planning Act to have regard to the guidance on pre-application consultation.

## Transboundary Effects

The SoS recommends that consideration should be given in the ES to any likely significant effects on the environment of another Member State of the European Economic Area. In particular, the SoS recommends consideration should be given to discharges to the air and water and to potential impacts on migratory species and to impacts on shipping and fishing areas.

The Applicant's attention is also drawn to the Planning Inspectorate's Advice Note 12 'Development with significant transboundary impacts consultation' which is available on the Advice Notes Page of the National Infrastructure Planning website

## Summary Tables

The SoS recommends that in order to assist the decision making process, the applicant may wish to consider the use of tables:

**Table X** to identify and collate the residual impacts after mitigation on the basis of specialist topics, inter-relationships and cumulative impacts.

**Table XX** to demonstrate how the assessment has taken account of this Opinion and other responses to consultation.

**Table XXX** to set out the mitigation measures proposed, as well as assisting the reader, the SoS considers that this would also enable the applicant to cross refer mitigation to specific provisions proposed to be included within the draft Development Consent Order.

**Table XXXX** to cross reference where details in the HRA (where one is provided) such as descriptions of sites and their locations, together with any mitigation or compensation measures, are to be found in the ES.

## Terminology and Glossary of Technical Terms

The SoS recommends that a common terminology should be adopted. This will help to ensure consistency and ease of understanding for the decision making process. For example, 'the site' should be defined and used only in

terms of this definition so as to avoid confusion with, for example, the wider site area or the surrounding site.

A glossary of technical terms should be included in the ES.

## Presentation

The ES should have all of its paragraphs numbered, as this makes referencing easier as well as accurate.

Appendices must be clearly referenced, again with all paragraphs numbered.

All figures and drawings, photographs and photomontages should be clearly referenced. Figures should clearly show the proposed site application boundary.

## Bibliography

A bibliography should be included in the ES. The author, date and publication title should be included for all references. All publications referred to within the technical reports should be included.

## Non Technical Summary

The EIA Regulations require a Non Technical Summary (EIA Regulations Schedule 4 Part 1 paragraph 22). This should be a summary of the assessment in simple language. It should be supported by appropriate figures, photographs and photomontages.

# Appendix 5B – Scoping Opinion - Representations and Responses

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| **Chapter 2: Proposed Development** | | | | |
| **1** | **2.55** | The SoS would expect the ES to include a section that summarises proposed development and existing conditions across the entire site and surroundings. Descriptions are provided for each Section of the proposed development which makes it difficult to gain an understanding of the overall construction programme and types of works proposed across the development site as a whole. This should be clarified within the ES. | PINS | A detailed description of the Proposed Development is provided at **Volume 5.3.1.** |
| **2** | **2.56** | The SoS notes, from paragraph 3.4.8 of the Scoping Report, that there is some uncertainty as to the route of the proposed development through Section F and that further consultation will be undertaken prior to confirming this route. It is also noted that the detailed design of the proposed substations and access roads are yet to be confirmed. The Applicant should be aware that the description of the development in the ES must be sufficiently certain to meet the requirements of paragraph 17 of Schedule 4 Part 1 of the EIA Regulations and the Applicant should ensure that the submitted ES supports the details set out in the DCO (see also Appendix 3 to the Scoping Opinion. | PINS | The detailed design of the options for the Proposed Development in sections F and G are provided in the chapter, appendices and figures at **Volume 5.3.** |
| **3** | **2.61** | Although not exhaustive, the following list provides an indication of the aspects of the proposed development which are expected to be clearly set out in the ES:<br><br>• details of likely emissions (water, air and soil pollution, noise, vibration, light, heat, radiation including electric and magnetic fields, etc.);<br>• characteristics of the land required during the construction and operational phases;<br>• plans and figures illustrating both the location and elements of the proposed substations, sealing end compounds and pylons;<br>• land use requirements for development and any associated development, landscaping areas and potential off-site mitigation or compensation schemes;<br>• details of any measures required to mitigate impacts that form part of the scheme design;<br>• any potential risk of accidents/spillages, having regard in particular to substances or technologies used;<br>• nature and quantities of materials used;<br>• locations and restoration or reinstatement of any construction compounds, lay down areas for major components and parking areas;<br>• access arrangements including anticipated routes for construction vehicles into/within the site and to/from construction compounds or any off site locations; and<br>• construction processes and methods, including site preparation, methods for excavation of foundations and the extent and location of any vegetation and habitats which may require removal to facilitate construction. | PINS | These aspects of the Proposed Development, and more, as identified in the scoping stage of this EIA, are described in the ES (**Volumes 5.1 to 5.19)** and its Supporting Documents (**Volumes 5.20 to 5.26**) plus appendices such as the Outline Waste Management Plan (Outline WMP) (**Volume 5.26.2**). Further details are also provided in the Planning Statement (**Volume 7.1**) and Design and Access Statement (**Volume 7.2**). |
| **4** | **2.62** | The environmental effects of all wastes to be processed and removed from the site should be addressed. The ES will need to identify and describe the control processes and mitigation procedures for storing and transporting waste off site. All waste types should be quantified and classified. | PINS | An Outline WMP is provided as Appendix 1 (**Volume 5.26.2**) of the Draft Construction Environmental Management Plan (CEMP) (**Volume 5.26.1**). |
| **5** | **2.63** | The ES should describe proposals for handling different types of topsoil and subsoil and provide details relating to their management and storage. | PINS | **Volume 5.9.1** identifies methods for managing different types of soil and subsoil including management and storage. For the proposed 400kV and 132kV underground cables sections, further details are provided in the Topsoil Stripping Method Statement, **Volume 5.3.2, Appendix 3G.** |
| **6** | **2.64** | The SoS notes the discussion of alternatives in Chapter 2 of the ES. To comply with the requirements of the EIA regulations the Applicant must provide 'An outline of the main alternatives studied by the applicant and an indication of the main reasons for the applicant's choice, taking into account the environmental effects' (See Appendix 3). Some project details have yet to be confirmed; where these are confirmed by the time of submission the Applicant should consider whether additional explanation should be provided in the ES on how different alternative solutions were evaluated. | PINS | Details of alternatives considered are provided in **Volume 5.2.1,** Project Need and Background. |
| **7** | **2.65** | The SoS considers that information regarding site access routes for construction traffic and any vehicles carrying abnormal indivisible loads (AIL) should be clearly identified and assessed within the ES, including any alterations required to the existing road network to accommodate any AIL. The ES should also identify whether any alterations to the existing road network would be retained or reinstated, and assess the | PINS | An AIL report has been produced and can be read in **Volume 5.22.2,** Transport Assessment (TA) **Appendix 22D.** |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | | potential effects arising from such reinstatement works within the ES. | | |
| **8** | **2.66** | The SoS considers that information on construction including: phasing of programme; construction methods and activities associated with each phase; siting of construction compounds (including on and off site); lighting equipment/requirements; and number, movements and parking of construction vehicles (both HGVs and staff) should be clearly indicated in the ES. Information should also be provided in the ES on whether any construction activities are restricted to a particular time of year. | PINS | Details and information on construction programme, methods and activities are provided in **Volume 5.3.** Construction traffic movements and management are described in **Volume 5.12** and **Volume 5.22** TA and the Draft CEMP **(Volume 5.26)** provides a Draft Construction Traffic Management Plan (Draft CTMP) **(Volume 5.26.5)**. |
| **9** | **2.67** | The SoS notes that the Scoping Report refers to the likely provision of an appropriate Construction Management Plan (CMP) (see paragraph 12.6.3 of the Scoping Report). The SoS considers that an outline CMP, setting out how construction phase effects would be managed and mitigation measures implemented, should be produced and appended to the ES. | PINS | A Draft CEMP is provided as Supporting Document **Volume 5.26**. |
| **10** | **2.68** | The SoS welcomes the inclusion of information on the operation and maintenance of the proposed development and the potential effects arising during these stages, within the ES. Information provided should cover, but not be limited to, such matters as: the number of full/part-time jobs; the operational hours and if appropriate, shift patterns; and the number and types of vehicle movements generated during the operational stage. | PINS | Relevant information about employment during the operational and maintenance phases of the Proposed Development is provided in **Volume 5.3.1, Volume 5.12.1 and Volume 5.15.1**. Vehicle movements during the operation phase have been scoped out of the EIA. |
| **11** | **2.69** | In terms of decommissioning, the SoS acknowledges that the further into the future any assessment is made, the less reliance may be placed on the outcome. However, the purpose of such a long term assessment is to enable the decommissioning of the works to be taken into account in the design and use of materials such that structures can be taken down with the minimum of disruption. The process and methods of decommissioning should be considered and options presented in the ES. The SoS encourages consideration of such matters and welcomes the commitment, referred to in paragraph 4.4.5 of the Scoping Report, to identify and assess, within the ES, both permanent and temporary effects likely to arise during the decommissioning phase of the development. | PINS | The approach to decommissioning is described in **Volume 5.5.1** and assessed in all ES environmental topic chapters (**Volumes 5.6.1 to 5.16.1**). |
| **Chapter 3: ES Approach** | | | | |
| **12** | **3.4** | The SoS would suggest that the Applicant ensures that appropriate consultation is undertaken with the relevant consultees in order to agree wherever possible the timing and relevance of survey work as well as the methodologies to be used. | PINS | Four stages of consultation have been undertaken to inform the location, design and assessment of the Proposed Development. Detailed comments on the Preliminary Environmental Report (PEIR) were received following the Statutory Stage 4 Consultation in the autumn of 2013, which have been taken account of in all of the ES chapters and Supporting Documents. A table of all representations from this consultation, and the corresponding response in the ES, are provided in National Grid's Consultation Report. In addition, all ES environmental topic chapters provide details of how the chapter has taken account of the representations received. Further consultation has taken place since the Statutory Stage 4 Consultation, including thematic groups, topic specific meetings and one to one meetings with relevant stakeholders. In addition, LPAs and statutory consultees were provided with the draft ES and supporting documents prior to submission. The representations and responses received are provided in **Volume 5.5.2, Appendix 5C.** |
| **13** | **3.5** | The SoS recommends that the physical scope of the study areas should be identified under all the environmental topics and should be sufficiently robust in order to undertake the assessment. The extent of the study areas should be on the basis of recognised professional guidance, whenever such guidance is available. The study areas should also be agreed with the relevant consultees and, where this is not possible, this should be stated clearly in the ES and a reasoned justification given. The scope should also cover the breadth of the topic area and the temporal scope, and these aspects should be described and justified. | PINS | All ES environmental topic chapters identify study areas in their method, with reference to professional guidance where appropriate. |
| **14** | **3.6** | The SoS notes that National Policy Statements (NPS) are often referred to in the Scoping Report. This approach is welcomed; the Applicant is reminded that they must ensure that their ES provides the necessary evidence to allow the SoS to assess the potential impacts of the project as outlined in the | PINS | The requirements of, and compliance with, NPS EN-1 and EN-5 in relation to Environmental Statements are described in **Volume 5.4.1**. **Volumes 5.6.1 to 5.16.1**, describe the requirements of, and |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | | relevant NPS. | | compliance with, EN-1 and EN-5 (where relevant) in relation to the specific topic. |
| **Chapter 3: Matters to be Scoped Out** | | | | |
| **15** | **3.9** | The Scoping Report states that it is not intended to include effects on climate change in the ES as these will be confined to an increased risk of surface and ground water flooding. These matters will be addressed in the flood risk assessment. The SoS is satisfied that the potential impacts of the project on flood risk will be addressed here; however the scope of the 'Flood risk, water quality and resources' chapter of the Scoping Report does not suggest that any risks to the scheme as a result of climate change have been considered. The SoS does not agree that these effects can be scoped out at this stage. | PINS | All ES environmental topic chapters address the potential effects of the Proposed Development from and on Climate Change, in accordance with recent EU guidance on Integrating Biodiversity and Climate Change into EIA. This includes an assessment of future baseline conditions, taking into account the lifespan of the Proposed Development in operation; the resilience of the Proposed Development to the future baseline; the resilience of mitigation measures to the future baseline; and the potential effects of the Proposed Development on greenhouse gas emissions, during construction and operation phases. |
| **16** | **3.11** | The Scoping Report states that there will be no vibration during the operation and maintenance of the project and so this is scoped out of the assessment. However no explanation or evidence is provided to support this statement. The SoS recommends that evidence be provided in the ES to support the decision to scope out vibration effects during operation. If this cannot be done then the effects should not be scoped out at this stage. | PINS | An assessment of vibration during operation and maintenance of the Proposed Development is provided in **Volume 5.14.1 (Part 2).** |
| **17** | **3.12** | Effects on the transport network during operation have been scoped out. However no explanation or evidence is provided to support this statement. The SoS recommends that evidence be provided in the ES to support the decision to scope out transport effects during operation. If this cannot be done then the effects should not be scoped out at this stage. | PINS | Evidence to support the scoping out of transport effects during operation and maintenance of the Proposed Development is provided in **Volume 5.12.1.** |
| **18** | **3.13** | The SoS agrees that the risk of flooding from sewers appears unlikely to be increased by the project and this effect can be scoped out. The Applicant's attention is drawn however to the comments from Compton Bishop Parish Council and Badgworth Parish Council on the need to assess the potential effects on drainage from septic tanks (see Appendix 2). | PINS | **Volume 5.10.1** addresses the approach to potential effects on private water supplies and septic tanks. It has not been possible at this stage to determine the location of private water supplies and septic tanks within the Order Limits. Notwithstanding this, mitigation measures to prevent pollution and ensure the continued delivery of local services are outlined in the ES and the Draft CEMP **(Volume 5.26)**. Detailed Ground Investigations, hydrological assessments and a Drainage Management Plan would be developed at the detailed design stage, if the DCO is granted; these studies would determine the specific locations at risk. |
| **19** | **3.15** | The Scoping Report states that effects on noise levels for the substation at Aust and extension to Seabank substation will be scoped out. This is because operations that generate noise will only happen infrequently. The SoS is not satisfied that sufficient evidence has been presented in the Scoping Report to allow the scoping out of these effects. Evidence should be provided in the ES to justify the decision to scope out these effects during operation. If this cannot be done then the effects should not be scoped out at this stage | PINS | Evidence to support the scoping out of noise during operation and maintenance of Seabank Substation is provided in **Volume 5.14.2, Appendix 14C.** Aust Substation has been removed from the Proposed Development. |
| **20** | **3.16** | The Scoping Report also states that high voltage cables and cable sealing end compounds have no noise effects during operation. The SoS accepts that these effects can be scoped out at this stage although the decision should be explained in the ES. | PINS | Evidence to support the scoping out of noise effects during the operation of the overhead lines and the cable sealing end compounds is provided in **Volume 5.14.2, Appendix 14C**. |
| **21** | **3.17** | The Scoping Report states that no quantitative assessment will be undertaken relating to the effects on tourism. The SoS accepts that a fully quantitative assessment would be difficult to achieve but advises the applicant to ensure that their qualitative assessment is based on strong evidence which itself should be quantitative wherever possible. The Applicant's attention is drawn to the comments from the Joint Somerset Councils in Appendix 2. | PINS | **Volume 5.15.1** provides a qualitative assessment of potential effects of the Proposed Development on tourism. Baseline evidence, quantified where possible, to support the assessment is described in the chapter. |
| **22** | **3.18 & 3.19** | The SoS agrees that electro-magnetic compatibility can be scoped out of the ES. It would be helpful to demonstrate in the ES that the specification of the overhead line, sealing end compounds and underground cable proposed for the project are similar to those tested in the Technical Construction File.<br><br>If the specification of the overhead line, sealing end compounds and underground cable changes such | PINS | The specification of the overhead line, cable sealing end compounds and underground cables is demonstrated in **Volume 5.16.1**, to be comparable to those tested in the Technical Construction File, thereby confirming the decision to scope electro-magnetic compatibility out of the ES. |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | | that they are no longer covered by the Certificate of Conformity then electro-magnetic compatibility should be scoped into the ES. | | |
| **Chapter 3: ES Structure** | | | | |
| **24** | **3.21** | Chapter 16 of the Scoping Report sets out the proposed structure of the ES on which the Applicant seeks the Opinion of the SoS. The proposed content is presented in Table 16.1. The list of headings differs from that set out on Page 1 of the Scoping Report. | PINS | **Volume 5.1.1** provides an overview of the structure of the ES. |
| **25** | **3.23** | The SoS recommends that the ES should include a description of the proposed construction programme and methods. | PINS | **Volume 5.3.1** provides a description of the proposed construction programme and methods |
| **Chapter 3: Landscape and Visual Assessment** | | | | |
| **26** | **3.25** | The SoS welcomes the intention to use the 'Guidelines for Landscape and Visual Impact Assessment – second edition'. The Applicant's attention is drawn to the fact that the third edition has recently been published and account should be taken of the guidance issued by the Landscape Institute in respect of transitional arrangements between the second and third editions of the Guidelines when completing the ES. | PINS | The recently issued 'Third Edition' of the Guidelines for Landscape and Visual Impact Assessment have been taken into account in the assessment methods for Landscape and Visual Impact Assessments as described in the 'Method' sections (6.3 and 7.3) of **Volumes 5.6.1 and 5.7.1** |
| **27** | **3.26** | With regard to the method for visual assessment parameters have been identified as the basis for undertaking the field assessment. It is not clear however what the justification for this choice of study area is and how this relates to the Zone of Theoretical Visual Influence. | PINS | **Volume 5.7.1** provides details of the assessment parameters and the reasons for them in the section 'Method'. |
| **28** | **3.27** | The Zone of Theoretical Visual Influence is shown in the figures accompanying the Scoping Report. It is requested that these figures are clearly labelled with their figure numbers so they can be easily cross-referenced with the text of the ES. The ES should describe the model used, provide information on the area covered and the timing of any survey work and the methodology used. | PINS | All figures in the ES are clearly labelled according to the chapter or supporting document they relate to. **Volume 5.7.1** in section 7.3 'Method' provides details on the method used, including a description of models used, study areas and surveys undertaken. |
| **29** | **3.28** | The SoS welcomes the commitment to work with the Landscape and Views Thematic Group. The SoS recommends that the following aspects of the Visual Impact Assessment should be defined in discussion with the relevant local authorities, Natural England (NE) and stakeholders such as parish councils and the Mendip Hills AONB unit to ensure that the effects of the project are fully assessed:<br><br>- Sensitive Receptors; and<br>- Choice of viewpoints for photomontages. | PINS | Relevant stakeholders, including the Landscape and Views Thematic Group, have been engaged in the location, design, assessment and mitigation of the Proposed Development. Opinion has been sought, and taken into account, on the sensitivity of receptors and choice of viewpoints. This is described in **Volume 5.7.1** in the sub-section 'Project Consultation'. |
| **30** | **3.30** | The SoS recommends that lighting effects should also be considered for the construction phase and during the operation phase if lighting is required for the substations. The proposals will be for large structures. The SoS requests that careful consideration should be given to the form, siting, and use of materials and colours in terms of minimising the adverse visual impact of these structures. | PINS | **Volumes 5.6.1 and 5.7.1** provide an assessment of all potential effects during the construction and operation phase, and include details of how design has been modified to minimise effects and site specific mitigation proposals. |
| **31** | **3.31** | With regard to the assessment of cumulative effects the SoS must ultimately be in a position to understand both the effects of the project alone and the combined effects of the project's interactions with other plans or projects. Applicants should consider the potential cumulative impacts on an area as a result of increasing development in the proposed area, as well as those developments which are:<br><br>- in the process of being built<br>- permitted application(s) but not yet implemented<br>- submitted application(s) not yet determined<br>- projects on the National Infrastructure's programme of projects<br>- identified in the relevant development plan (and emerging development plans - with appropriate weight being given as they move closer to adoption) recognising that much information on any relevant proposals will be limited, and<br>- identified in other plans and programmes (as appropriate) which set the framework for future development consents/approvals, where such development is reasonably likely to come forward. | PINS | **Volume 5.17.1, Section 17.3** describes the method used to understand both the effects of the project alone and the combined effects of the project's interactions with other plans or projects. All development types stated have been considered at **Volume 5.17.1, Section 17.3.** |
| **32** | **3.32** | The Applicant should be able to state clearly how the effects of existing projects are captured in the assessment of baseline conditions; it may be necessary to undertake additional work to establish the existing effects generated by the visual impacts of existing power lines to ensure that cumulative effects are fully addressed. | PINS | Noted. Existing overhead lines are considered as part of the existing landscape or view and in determining the sensitivity of the landscape or view to the Proposed Development. The Proposed Development is assessed in the context of the existing environment including existing development such as overhead lines. |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| **33** | **3.33** | The SoS notes that detailed mitigation proposals will be factored into the ES. Residual effects should also be included. Where mitigation measures lead to a reduction in impacts, clear justification should be provided for the assessment of residual effects, including stated assumptions about heights that will be achieved by proposed planting over stated time frames. | PINS | Residual effects are described in all ES environmental topic chapters (**Volumes 5.6.1 to 5.16.1**), including justification as to how mitigation measures have resulted in a reduction of effects where appropriate. Details regarding planting proposals, and assumptions thereof, are provided in the chapters and figures provided in **Volumes 5.6 and 5.7.** |
| **34** | **3.34** | The Scoping Report refers to the inter-relationship of effects but seems to be confined to consideration of the inter-relationship of mitigation effects. The SoS recommends that the interrelationship between the effects of the project should also be considered such as the inter-relationship between the landscape and visual impacts and those on the historic environment. | PINS | The inter-relationship of effects is described in all ES environmental topic chapters (**Volumes 5.6.1 to 5.16.1**). Details of the approach followed are provided in **Volume 5.5.1**. The inter-relationship between heritage and landscape and visual effects has been addressed throughout each of the chapters **(Volumes 5.6.1, 5.7.1 and 5.11.1.** |
| **Chapter 3: Biodiversity & Nature Conservation** | | | | |
| **35** | **3.37** | The SoS notes that the figures that show the results of the Phase 1 survey show some areas as 'not accessed'. The Applicant is reminded of the need to ensure that the SoS has sufficient evidence to assess the effects of the project. The SoS recommends that the Applicant should address any gaps in their data that could hamper the assessment of the project. | PINS | Additional survey work has been undertaken since publication of the scoping report. Details of all survey work are provided in the Biodiversity and Nature Conservation Chapter, Appendices and Figures provided in **Volume 5.8.** |
| **36** | **3.38** | The potential impacts on international and nationally designated sites should be addressed as well as county level habitats. The SoS notes the possible need for an Appropriate Assessment in view of the development site's location in relation to various European sites including the Severn Estuary SPA/Ramsar/SAC, the North Somerset and Mendips Bat SAC and the Somerset Levels and Moors SPA/Ramsar (see Section 4 of this Opinion). | PINS | Potential effects on international and nationally designated sites are addressed in **Volume 5.8.**<br>The Applicant's Report to Support Habitats Regulations Assessment is provided as a Supporting Document of the ES, **Volume 5.20** and has been prepared in consultation with Natural England. |
| **37** | **3.39** | The SoS recommends that the proposals should address fully the needs of protecting and enhancing biodiversity. The assessment should cover habitats, species and processes within the sites and surroundings. The SoS draws attention in particular, but not exclusively, to the effects from habitat fragmentation on bat species and the potential loss of functional habitat beyond the boundaries of statutory wildlife sites for birds that are designated features of these sites. Effects for both construction and operational phases should be addressed in the ES. | PINS | **Volume 5.8.1** addresses the needs of protecting and enhancing biodiversity. The assessment includes the consideration of the issues raised by SoS. |
| **38** | **3.40** | It is not clear from the Scoping Report how the zone of ecological influence has been defined and whether it adequately addresses the effects of the project. The ES should clearly state the extent and the justification for the zone of influence chosen. | PINS | Details of the study area, including the zone of ecological influence, are described in **Volume 5.8.1** in section 8.3 'Method'. |
| **39** | **3.41** | The Scoping Report refers to the inter-relationship of effects but seems to be confined to consideration of the inter-relationship of mitigation effects. The SoS recommends that the interrelationship between the effects of the project should also be considered such as the inter-relationship between the landscape and visual impacts and nature conservation. | PINS | The inter-relationship of effects is described in all ES environmental topic chapters (**Volumes 5.6.1 to 5.16.1**). Details of the approach followed are provided in **Volume 5.5.1**. The inter-relationship between biodiversity and landscape and visual effects has been addressed throughout each of the chapters **(Volumes 5.6.1, 5.7.1 and 5.8.1)** |
| **40** | **3.42** | The Applicant's attention is drawn to the comments under 'Landscape and visual effects' on the assessment of cumulative effects. The Applicant should be able to state clearly how the effects of existing projects are captured in the assessment of baseline conditions; it may be necessary to undertake additional work to establish the existing effects generated by the visual impacts of existing power lines to ensure that cumulative effects are fully addressed. | PINS | Existing projects and those likely to be completed before the construction of the Proposed Development would begin (Committed Development) are described in the 'Baseline Conditions' section of chapters where relevant. Existing overhead lines are taken into account in the 'Baseline Conditions' section of all chapters. |
| **41** | **3.43** | The SoS welcomes the intention to include an assessment of the residual effects of the project following mitigation. It should be stated clearly how this mitigation will be secured and delivered. It would be helpful if this information was contained in table(s) that directly identified the ecological effect concerned, the mitigation proposed and how this would be secured e.g. through a requirement in the DCO. | PINS | Residual effects are described in all ES environmental topic chapters (**Volumes 5.6.1 to 5.16.1**), including justification as to how mitigation measures have resulted in a reduction of effects where appropriate. The securing and delivery of mitigation relating to effects on biodiversity are described in **Volume 5.8.1** and **Volume 5.26.3** the Biodiversity Mitigation Strategy (BMS). |
| **Chapter 3: Historic Environment** | | | | |
| **42** | **3.44** | The methodology used should be clearly described; the choice of methodology should be justified within | PINS | **Volume 5.11.1** provides a description, explanation and |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | | the ES. The terminology used should also be clearly defined and explained. National Policy Statement 1 refers the significance of an asset as being '…the sum of the heritage interests that a heritage asset holds…'. In the Scoping Report this is referred to as sensitivity rather than significance, with significance instead being used to describe the relationship between the magnitude of effects and the sensitivity of an asset. The Applicant's attention is drawn to the comments from the Joint Somerset Councils in Appendix 2. | | justification of the method used in the assessment.<br>The terminology used was altered to reflect the comments made by SoS, and a note explaining usage of terms is included in the Glossary. |
| **43** | **3.45** | Study areas are defined within the Scoping Report for archaeological remains, built heritage and the historic landscape but the justification is for the extent of the areas is not clear. The ES should clearly describe and justify the study areas chosen. | PINS | Study areas are described and justified in **Volume 5.11.1** in section 11.3 'Method'. |
| **44** | **3.46** | The SoS welcomes the identification of non-designated archaeological remains which could be Schedulable. However the SoS also notes the high potential for previously unrecorded buried archaeological remains to be present within sections of the route corridor. The Applicant must ensure that they approach the assessment of effects in a way that ensures the SoS has enough evidence before them to determine the effects on archaeological assets as required by National Policy Statement EN-1. The Applicant's attention is drawn to the comments from the Joint Somerset Councils in Appendix 2. | PINS | **Volume 5.11.1** provides a detailed description of method and assessment, in accordance with the requirements of NPS EN-1. |
| **45** | **3.47** | The terminology used for the assessment of impacts on heritage assets should be clearly explained and consistent with national planning policy guidance. Secondary effects such as the effects on buried remains caused by the dewatering of peat should also be taken into account (see comments by English Heritage in Appendix 2). | PINS | The **DCO Submission** includes an overarching glossary where all terms used in the submission documents are defined. Terms are consistent with NPS EN-1. Secondary effects, including dewatering, have been considered as part of the assessment; the results of the assessment of the potential effects on peat are provided in **Appendix 11A.** |
| **46** | **3.48** | The setting of cultural heritage resources could be affected; this includes historic buildings, historic landscapes and archaeological sites and the SoS considers that these should be addressed in the ES. Cross reference should be made to the Landscape and Visual section of the ES. The Applicant's attention is drawn to the detailed comments from English Heritage and the Joint Somerset Councils in Appendix 2. | PINS | Setting has been considered as part of the assessment provided in **Volume 5.11.2 Appendix 11B**. This work was carried out in conjunction with the Landscape and Visual Impact Assessment specialists. |
| **47** | **3.49** | 3.49 The SoS welcomes and strongly encourages the intention to consult local planning archaeologists and English Heritage to establish general requirements for work. | PINS | Relevant stakeholders, including the Historic Environment Thematic Group, have been engaged in determining the location, design, assessment and mitigation of the Proposed Development. This is described in **Volume 5.11.1,** in the sub-section 'Project Consultation'. |
| **Chapter 3: Ground Environment** | | | | |
| **48** | **3.50** | The SoS welcomes the general approach but advises that this chapter does not appear to be purely about geological conservation and that it would be helpful to amend the title of the chapter to reflect this. The Applicant's attention is drawn to the comments from South Gloucestershire Council and the Joint Somerset Councils on the need to consider potential impacts on geological Sites of Special Scientific Interest. | PINS | **Volume 5.9.1** is now entitled 'Ground Environment'. Geological SSSIs are considered in the assessment of effects. |
| **49** | **3.52** | The SoS notes the various sources of evidence that will be consulted as part of the Desk Based Assessment. The Applicant is advised to liaise with the EA, Bristol City Council and the Joint Somerset Councils to ensure that they utilise all relevant data and address the correct issues in the ES. | PINS | Data to inform the establishment of baseline conditions and the assessment of effects has been sourced from a number of different places, including the EA and the relevant local authorities. These sources are described in **Volume 5.9.1** in section 9.3 'Method'. |
| **50** | **3.53** | Table 8.1 of the Scoping Report suggests that the disposal of waste from construction, operation and decommissioning will be covered in generic terms based upon anticipated ground conditions. The Applicant is reminded that they must provide sufficient information to allow the SoS to assess the potentially significant environmental impacts of their project. NPS EN-1 outlines the issues that the SoS should consider and how these should be covered by the Applicant's assessment. The SoS advises that the ES deals with these issues. The Applicant's attention is also drawn to the comments from the EA (see Appendix 2). | PINS | The Outline WMP for the Proposed Development (**Volume 5.26.2**) describes the potential waste streams arising as a result of construction, operation and decommissioning of the Proposed Development and proposals for the safe management of the waste, in accordance with the requirements of relevant regulatory authorities such as the Environment Agency. The Outline WMP is informed by the assessment and proposals for mitigation outlined in all the ES environmental topic chapters, particularly, **Volumes 5.8** (Biodiversity), **5.9** (Ground Environment), **and 5.10** (Hydrology). |
| **Chapter 3: Flood Risk, Water Quality and Resources** | | | | |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| **51** | **3.54** | The SoS welcomes the provision of a Flood Risk Assessment (FRA) and advises on-going consultation with the EA, Internal Drainage Boards and the local authorities. The FRA should form an appendix to the ES. | PINS | FRAs are summarised in **Volume 5.10.1** and provided as Supporting Documents to the ES in **Volume 5.23**. All FRAs have been produced in consultation with EA, IDBs and the LLFRAs. |
| **52** | **3.56** | The SoS notes that a qualitative assessment will be undertaken incorporating the objectives of the Water Framework Directive and the issues set out for the water courses under the South West River Basin Management Plan. While a qualitative approach may be appropriate the Applicant is reminded that they must provide sufficient evidence to allow the SoS to meet the requirements of the Water Framework Directive when considering the application. The Applicant's attention is drawn to the comments from the EA in Appendix 2. | PINS | **Volumes 5.8.1, 5.10.1** and **Volume 5.10.2, Appendix 10E** provide an assessment of the aspects of the WFD of relevance of that chapter: **Volume 5.10.1 and Volume 5.10.2, Appendix 10E** addresses the water chemistry and geomorphological aspects of WFD; **Volume 5.8.1** takes this assessment and provide an assessment of the biological elements of WFD. This is done at a higher level for the Proposed Development as a whole and in more detail specifically for the proposed realignment of Parish Rhyne at the site of the proposed Sandford Substation. |
| **Chapter 3: Traffic and Transport** | | | | |
| **53** | **3.57** | The SoS welcomes the general approach within this chapter and the consultation that has already been undertaken with various bodies including the Highways Agency and the local authorities. However the section on the 'Proposed ES Chapter Approach' refers to the guidelines in the Design Manual for Roads and Bridges and the guidance provided by the Institute of Environmental Assessment. The ES should clearly explain how the two sets of guidelines are reflected in the methodology adopted and the reasons for the choice. The Applicant's attention is drawn to the comments from the Highways Agency in Appendix 2. | PINS | **Volume 5.12.1** provides a description of the guidance that has been used and how it has been taken into account in section 12.3 'Method'. |
| **54** | **3.58** | The baseline data in the ES must be accurate and robust; the Applicant's attention is drawn to the comments from South Gloucestershire and the Joint Somerset Councils on inaccuracies in the information on the existing environment in the Scoping Report. | PINS | **Volume 5.12.1** in the section 'Baseline Conditions' details baseline data; the method of collection and final results of which, have been agreed with the relevant local authorities. |
| **55** | **3.60** | A key consideration in the traffic and transport assessment will be the delivery of abnormal loads, in particular, the super grid transformer to the Sandford substation site and the suitability of the existing strategic road network to accommodate the transport of such infrastructure. It is not clear from the Scoping Report whether such issues are likely to arise in relation to the Aust substation; this should be made clear in the ES. The SoS notes that road closures, diversions and/or widening to accommodate this infrastructure may be required during the construction phase of the development. The delivery route for these abnormal loads should be identified in the ES and any alternations to the existing road network should be described and assessed in the ES, with the location of these alterations identified by reference to Figures in the ES. Consideration should be given to potential impacts on the emergency services where roads will be closed or diverted and consultation with the local police and ambulance service is recommended. The Applicant is referred to the comments of the Highways Agency, South Gloucestershire Council and the Joint Somerset Councils on potential impacts on the strategic road network and Compton Bishop Parish Council on the suitability of the local road network for abnormal loads (see Appendix 2). | PINS | An abnormal indivisible load (AIL) report has been produced and is provided in **Volume 5.22.2, Appendix 22D.** |
| **56** | **3.61** | The SoS notes the statement in the Scoping Report that once construction is completed the temporary access tracks will be removed and the ground reinstated by removing stone and trackways. While these effects are only present during the construction phase this may last for some time and the removal may also have environmental impacts. Consideration should be given in the ES to removal of these temporary haul roads and reinstatement of this land and the existing transport network, including the potential effects during this work and of the reinstatement in terms of impact to landscape and visual, and biodiversity and nature conservation issues. The ES should clearly identify any access roads which are to be retained beyond the construction phase and provide details of ongoing maintenance of these roads. | PINS | The removal of the haul roads and subsequent reinstatement of the ground, post construction, is addressed in all ES environmental topic chapters (**Volumes 5.6.1 to 5.16.1**) in the sub section 'Construction Effects'. The construction risk assessment and method statement relating to the installation and removal of haul roads is provided in **Volume 5.3.2, Appendix 3G.** |
| **57** | **3.62** | The SoS welcomes the commitment in the Scoping Report to the consideration of the potential effects of the proposed development on Public Rights of Way (PRoW). The ES should clearly identify all potentially affected PRoW and set out impacts on them, including within the wider area. It is important to minimise hindrance to them where possible and enhancements should be considered as part of the mitigation proposed. A clear indication should be given as to how the development would affect the existing and any proposed PRoW, including the need for any stopping up or diversion orders, and what mitigation would be appropriate in the short, medium and long term. | PINS | Public Rights of Way (PRoW) are addressed in **Volumes 5.7, 5.12 and 5.15** There is also a **PRoW Management Plan**, provided at **Volume 5.26.6.** |
| **58** | **3.63** | The applicant has sought to scope out effects on the transport network during the operational phase. The | PINS | Evidence to support the scoping out of transport effects during |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | | SoS' comments on this proposal are set out above. | | operation and maintenance of the Proposed Development is provided in **Volume 5.12.1** |
| **Chapter 3: Air Quality and Emissions** | | | | |
| **59** | **3.66** | The SoS welcomes the consideration given to appropriate mitigation measures and to monitoring dust complaints identified within the Scoping Report. If necessary the mitigation described in the ES should be reviewed to deal with impacts on air quality other than dust. | PINS | **Volume 5.13.1** provides an assessment of all of the potential effects upon air quality. |
| **Chapter 3: Noise and Vibration** | | | | |
| **60** | **3.68** | The SoS notes that consultation has already taken place with local authorities to discuss the potential scope of the noise and vibration assessments. The SoS recommends that the methodology and choice of noise receptors should also be discussed and agreed with the relevant Environmental Health Department of the Councils and the relevant parish councils where the new substations would be sited. In particular, consideration should be given to any potential noise disturbance likely to occur at night and other unsocial hours such as weekends and public holidays. | PINS | **Volume 5.14.1** in the section 'Project Consultation', describes consultation with EHOs and other relevant stakeholders. Representations have been taken into account in the determination of baseline conditions, assessment and proposals for mitigation. |
| **61** | **3.69** | Information should be provided on the types of vehicles and plant to be used during the construction phase and an assessment of noise and vibration undertaken. The noise and vibration assessments should take account of construction traffic movements along access routes. The Applicant's attention is drawn to the comments from Compton Bishop Parish Council in Appendix 2. | PINS | A quantitative traffic noise assessment and a qualitative traffic vibration assessment for sensitive receptors has been undertaken and is provided in **Volume 5.14.1.** |
| **62** | **3.70** | The SoS notes the intention to mitigate impacts during construction through working time restrictions and the provision of an appropriate Construction Management Plan. The ES should identify the measures that the plan will contain and assess their effectiveness. The Applicant's attention is also drawn to the comments from the Joint Somerset Councils in Appendix 2. | PINS | Types of vehicles and plant to be used during the construction phase are described in **Volumes 5.3.1, 5.12.1 and 5.14.1**. **Volume 5.14.1** includes an assessment of noise and vibration during the construction phase and refers to the TA **(Volume 5.22**) and the Draft CTMP **(Volume 5.26.5)** for traffic movements during construction. |
| **63** | **3.72** | The SoS's comments on the Applicant's proposal to scope out operational noise from the substations at Aust and Seabank are provided above. The Applicant's attention is also drawn to the comments from South Gloucestershire and the Joint Somerset Councils in Appendix 2. | PINS | Evidence to support the scoping out of noise during operation and maintenance of Seabank Substation is provided in **Volume 5.14.2 Appendix 14C.** Aust Substation has been removed from the Proposed Development. |
| **64** | **3.73** | The SoS's comments on the Applicant's proposal to scope out vibration during operation are provided above. | PINS | Evidence to support the scoping out of vibration during operation and maintenance of the Proposed Development is provided in **Volume 5.14.2 Appendix 14C.** |
| **65** | **3.74** | Consideration should be given to monitoring noise complaints during construction and when the development is operational. | PINS | Complaints will be monitored as part of noise management plans described in **Volume 5.14.1**and the Draft CEMP **(Volume 5.26.1)**, to be implemented during construction and operation. |
| **Chapter 3: Socio Economic** | | | | |
| **66** | **3.75** | The SoS welcomes the overall approach taken by Applicant and the fact that they have already discussed the scope of the report with local authorities and the National Farmers Union. The SoS recommends that the assessment is developed through further consultation with these bodies; the Applicant may also find it useful to engage in discussions with the relevant parish councils, particularly when considering potential effects on the tourism economy and local amenities. | PINS | Relevant stakeholders have been engaged in determining the method and findings of the socio-economic assessment of the Proposed Development. Opinion has been sought, and taken into account, on the potential effects on the tourism economy and local amenities. This is described in **Volume 5.15.1** in the sub-section 'Project Consultation'. |
| **67** | **3.76** | The SoS recommends that the assessment criteria should be locationally specific and consider the potential significance of the impacts of the proposal within the local and regional context. The Applicant should assess the project's requirements, including construction materials and workforce numbers and evaluate these against local availability. The types of jobs generated during the construction phase should be considered in the context of the available workforce in the area. The potential cumulative effects on availability of local workforce and materials arising from other projects in the area should also be taken into account. | PINS | The ES includes consideration of the local workforce.<br><br>Assessment of the project's materials and workforce requirements has been undertaken, alongside consideration of availability and the proportion which may be sourced locally (see **Volume 5.17.1, Section 17.3**). |
| **68** | **3.77** | The SoS's comments on the Applicant's proposal to scope out consideration of house prices and a quantitative assessment of potential effects on tourism due to the proposed development are provided above. | PINS | As agreed by PINS, the effect on house prices of an overhead transmission line is not a matter that requires assessment under the EIA Regulations and has been scoped out of the socio-economic and land use EIA assessment. |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| **69** | **3.78** | The SoS notes that the Local Area of Influence defined in the scoping report includes Best and Most Versatile (BMV) agricultural land. The ES should clearly explain the extent of BMV that would be adversely affected and the mitigation measures taken to minimise any losses in line with the requirements of NPS EN-1. This should be in addition to assessing the economic effects on land holdings as a result of the loss of agricultural land. | PINS | **Volume 5.15.1** provides a qualitative assessment of potential effects of the Proposed Development on tourism. Baseline evidence, quantified where possible, to support the assessment is described in the chapter. |
| **70** | **3.79** | The SoS welcomes the proposals to assess the impacts on amenity which could result from the project. The Scoping Report states that impacts on amenity value will be derived from other environmental impacts upon the receptors. The Applicant must ensure that they have correctly identified receptors, particularly in relation to local communities. The Applicant's attention is drawn to the comments from Bridgwater Without Parish Council on potential effects on anglers. | PINS | **Volume 5.15.1** includes the Amenity Assessment for the Proposed Development. |
| **Chapter 3: Electric and Magnetic Fields and Electromagnetic Compatibility** | | | | |
| **71** | **3.80** | The SoS welcomes the Applicant's intention to undertake an assessment of Electric and Magnetic Fields (EMF) using the conditions set out in the Department for Energy and Climate Change Codes of Practice. The SoS recommends that the Applicant should discuss the scope of the EMF assessment with the local authorities. The Applicant is also referred to the comments from the NHS Somerset Clinical Commissioning Group and Nailsea Town Council in Appendix 2. | PINS | Relevant stakeholders have been engaged in determining the scope, method and findings of the EMF assessment of the Proposed Development. This is described in **Volume 5.16.1** in the sub-section 'Project Consultation'. The assessment has been carried out in accordance with current requirements, as described in the section 'Policy and legislation'. |
| **72** | **3.81** | The SoS's comments on the Applicant's proposal to scope out consideration of electro-magnetic compatibility (EMC) are provided above. | PINS | The specification of the overhead line, cable sealing end compounds and underground cables is demonstrated in **Volume 5.16.1**, to be comparable to those tested in the Technical Construction File, thereby confirming the decision to scope electro-magnetic compatibility out of the ES. |
| **Chapter 3: Aviation Issues** | | | | |
| **73** | **3.82** | The potential height of structures associated with the power lines means that a range of bodies may need to be consulted including local aerodromes (particularly Bristol International Airport), the Civil Aviation Authority, the Ministry of Defence and any other local emergency air support units. The SoS recommends that the Applicant considers the various issues raised by the CAA in their comments in Appendix 2 and takes steps to address them in their ES. | PINS | National Grid has consulted with the relevant aviation authorities with regard to the Proposed Development. |
| **Chapter 4: Other Information (not part of opinion, for help)** | | | | |
| **74** | **4.14** | The SoS considers that it is a matter for the Applicant to decide whether or not to submit a stand-alone Health Impact Assessment (HIA). However, the Applicant should have regard to the responses received from the relevant consultees regarding health, and in particular to the comments from the Health and Safety Executive in relation to electrical safety issues (see Appendix 2). | PINS (non-opinionated) | There is no specific legislation in the UK which requires a standalone HIA to be undertaken as part of the infrastructure planning process. Although the EU EIA Directive is due to come into force in 2014, this is not expected to be transposed into UK law and thereby come into effect until 2016. Potential impacts which are likely to result in health outcomes have been assessed and mitigated in the appropriate chapters including, but not limited to, impacts associated with noise, air quality, EMF and visual amenity. |
| **75** | **4.2** | The SoS notes that European sites may be located close to the proposed development. It is the Applicant's responsibility to provide sufficient information to the Competent Authority (CA) to enable them to carry out a HRA if required. The Applicant should note that the CA is the SoS. | PINS (non-opinionated) | The Applicant's Report to Support Habitats Regulations Assessment is provided as a Supporting Document of the ES, **Volume 5.20** and has been prepared in consultation with Natural England. |
| **76** | **4.3** | The Applicant's attention is drawn to The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (as amended) (The APFP Regulations) and the need to include information identifying European sites to which the Habitats Regulations applies or any Ramsar site or potential SPA which may be affected by a proposal. The submitted information should be sufficient for the competent authority to make an appropriate assessment (AA) of the implications for the site if required by Regulation 61(1) of the Habitats Regulations. | PINS (non-opinionated) | The Applicant's Report to Support Habitats Regulations Assessment is provided as a Supporting Document of the ES, **Volume 5.20** and has been prepared in consultation with Natural England. |
| **77** | **4.4** | The report to be submitted under Regulation 5(2)(g) of the APFP Regulations with the application must deal with two issues: the first is to enable a formal assessment by the CA of whether there is a likely significant effect; and the second, should it be required, is to enable the carrying out of an AA by the CA. | PINS (non-opinionated) | The Applicant's Report to Support Habitats Regulations Assessment is provided as a Supporting Document of the ES, **Volume 5.20** and has been prepared in consultation with Natural England. |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| **78** | **4.5** | When considering aspects of the environment likely to be affected by the proposed development; including flora, fauna, soil, water, air and the inter-relationship between these, consideration should be given to the designated sites in the vicinity of the proposed development. | PINS (non-opinionated) | Potential effects on international and nationally designated sites are addressed in **Volume 5.8.1.**<br><br>The Applicant's Report to Support Habitats Regulations Assessment is provided as a Supporting Document of the ES, **Volume 5.20** and has been prepared in consultation with Natural England. |
| **79** | **4.6** | Further information with regard to the HRA process is contained within Planning Inspectorate's Advice Note 10 available on the National Infrastructure Planning's website. | PINS (non-opinionated) | Noted |
| **80** | **4.7** | The SoS notes that a number of SSSIs are located close to or within the proposed development. Where there may be potential impacts on the SSSIs, the SoS has duties under sections 28(G) and 28(I) of the Wildlife and Countryside Act 1981 (as amended) (the W&C Act). These are set out below for information. | PINS (non-opinionated) | Potential effects on nationally designated sites are addressed in **Volume 5.8.1.** |
| **81** | **4.8** | Under s28(G), the SoS has a general duty '… to take reasonable steps, consistent with the proper exercise of the authority's functions, to further the conservation and enhancement of the flora, fauna or geological or physiographical features by reason of which the site is of special scientific interest. | PINS (non-opinionated) | Potential effects on nationally designated sites are addressed in **Volume 5.8.1.** |
| **82** | **4.9** | Under s28(I), the SoS must notify the relevant nature conservation body (NCB) before authorising the carrying out of operations likely to damage the special interest features of a SSSI.<br>Under these circumstances 28 days must elapse before deciding whether to grant consent, and the SoS must take account of any advice received from the NCB, including advice on attaching conditions to the consent. The NCB will be notified during the examination period. | PINS (non-opinionated) | Potential effects on nationally designated sites are addressed in **Volume 5.8.1.** National grid will give notice to NE under Section 28E of the Wildlife and Countryside to undertake works within a SSSI. Ongoing consultation with NE continues to agree a Statement of Common Ground to submit with the DCO application. |
| **83** | **4.10** | If applicants consider it likely that notification may be necessary under s28(I), they are advised to resolve any issues with the NCB before the DCO application is submitted to the SoS. If, following assessment by applicants, it is considered that operations affecting the SSSI will not lead to damage of the special interest features, applicants should make this clear in the ES. The application documents submitted in accordance with Regulation 5(2)(l) could also provide this information. Applicants should seek to agree with NE the DCO requirements which will provide protection for the SSSI before the DCO application is submitted. | PINS (non-opinionated) | Potential effects on nationally designated sites are addressed in **Volume 5.8.1.** National grid will give notice to NE under Section 28E of the Wildlife and Countryside to undertake works within a SSSI. Ongoing consultation with NE continues to agree a Statement of Common Ground. |
| **84** | **4.11** | The Applicant should also be aware that the decision maker under the Planning Act 2008 (PA 2008) has, as the CA, a duty to engage with the Habitats Directive. | PINS (non-opinionated) | Noted |
| **85** | **4.12** | The SoS considers that there is potential for the presence of EPS within the study area for the proposed development. Where a potential risk to an EPS is identified and before making a decision to grant development consent the CA must, amongst other things, address the derogation tests in Regulation 53 of the Habitats Regulations. Therefore the Applicant may wish to provide information which will assist the decision maker to meet this duty.<br>Where required the Applicant should, in consultation with Natural England agree appropriate requirements to secure necessary mitigation. | PINS (non-opinionated) | The Applicant's Report to Support Habitats Regulations Assessment is provided at **Volume 5.20.1** and has been prepared in consultation with Natural England. The BMS (**Volume 5.26.3**) sets out related mitigation, the BMS will be a requirement of the DCO.<br><br>Draft applications for Protected Species Licences have been assessed by Natural England and are provided in the DCO. |
| **86** | **4.13** | If the Applicant has concluded (in consultation with Natural England) that an EPS licence is required the ExA will need to understand whether there is any impediment to the licence being granted. It would assist the examination if the Applicant could provide with the application confirmation from NE whether they intend to issue the licence in due course. | PINS (non-opinionated) | A letter of no impediment has been issued by NE in response to the bat draft licence application. Discussions are on-going with the great crested newt draft licence application and NE licensing team will be confirming progress within the NE statement of common ground |
| **87** | **4.14** | The SoS considers that it is a matter for the Applicant to decide whether or not to submit a stand-alone Health Impact Assessment (HIA). However, the Applicant should have regard to the responses received from the relevant consultees regarding health, and in particular to the comments from the Health and Safety Executive in relation to electrical safety issues (see Appendix 2. | PINS (non-opinionated) | There is no specific legislation in the UK which requires a standalone HIA to be undertaken as part of the infrastructure planning process.<br>Although the EU EIA Directive is due to come into force in 2014, this is not expected to be transposed into UK law and thereby come into effect until 2016. Potential impacts which are likely to |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | | | | result in health outcomes are already being assessed and mitigated in the appropriate chapters including, but not limited to, impacts associated with noise, air quality, EMF and visual amenity. |
| **88** | **4.15** | The methodology for the HIA, if prepared, should be agreed with the relevant statutory consultees and take into account mitigation measures for acute risks. | PINS (non-opinionated) | There is no specific legislation in the UK which requires a standalone HIA to be undertaken as part of the infrastructure planning process.<br>Although the EU EIA Directive is due to come into force in 2014, this is not expected to be transposed into UK law and thereby come into effect until 2016. Potential impacts which are likely to result in health outcomes are already being assessed and mitigated in the appropriate chapters including, but not limited to, impacts associated with noise, air quality, EMF and visual amenity. |
| **89** | **4.16** | The SoS recommends that the Applicant should state clearly what regulatory areas are addressed in the ES and that the Applicant should ensure that all relevant authorisations, licences, permits and consents that are necessary to enable operations to proceed are described in the ES. Also it should be clear that any likely significant effects of the proposed development which may be regulated by other statutory regimes have been properly taken into account in the ES. | PINS (non-opinionated) | All potential regulatory requirements are identified in the ES environmental topic chapters (**Volumes 5.6 to 5.16**); all relevant authorisations, licenses, permits and consents have been identified. Some will be addressed through the DCO, others will be secondary consents, to be applied for if the DCO is granted. |
| **90** | **4.17** | It will not necessarily follow that the granting of consent under one regime will ensure consent under another regime. For those consents not capable of being included in an application for consent under the PA 2008, the SoS will require a level of assurance or comfort from the relevant regulatory authorities that the proposal is acceptable and likely to be approved, before they make a recommendation or decision on an application. The Applicant is encouraged to make early contact with other regulators. Information from the Applicant about progress in obtaining other permits, licences or consents, including any confirmation that there is no obvious reason why these will not subsequently be granted, will be helpful in supporting an application for development consent to the SoS. | PINS (non-opinionated) | For those consents which are not granted as part of the DCO, 'comfort' is being sought with the relevant authorities that the proposals are acceptable and likely to be approved. |
| **Appendix 2: Representations Related to Landscape and Visual Assessment** | | | | |
| **91** | **App 2. Rep Letter 1.** | Paragraph 5.3.24 describes the main settlements where there are potential views of the proposed development which includes 'Rooksbridge to the west'.<br>This does not portray the significance of the impact on the neighbouring settlement/Hamlet of Tarnock. The views from the dwellings in Tarnock to the North, is across the open countryside to the Mendip Hills in the distance. Tarnock's views will be of the proposed 400kv line coming towards the residents/dwellings and obviously the impact is greater as it moves towards the houses.<br><br>The Scoping Report does not reflect any significance for instances as described. There is a similar situation in the Key Settlement of Mark where the line bisects Mark Causeway close to dwellings. There can be no adequate mitigation for the proposed 47.5 metre high pylons and conductors in such a flat open countryside when the line is marching towards you and the accumulation of the infrastructure one behind the other into the distance. | Badgworth Parish Council Somerset | Resident views from properties at Tarnock have been considered as part of the visual assessment. See **Volume 5.7.1** and the Figures in **Volume 5.7.3** which illustrate all visual receptors at Tarnock within 1km of the proposed 400kV overhead line that have been assessed.<br><br>The visual assessment provided in **Volume 5.7.1** and the supporting Appendices identifies the likely significances of effects of the Proposed Development and proposes mitigation measures. |
| **92** | **App 2. Rep Letter 1.** | The Receptor Sensitivity paragraphs, 5.5.26 to 5.5.28 and Table 5.4 does not adequately cover the impact this proposal will have on those dwellings.<br><br>Table 5.4 also states that relative sensitivity for motorists and passengers on main roads is low. The Parish Council feels that that as the line passes over the major trunk road, A38, the Relative Sensitivity assessment of low is not relative to cases such as these. Further consideration should be given as to what category such situations could be placed. | Badgworth Parish Council Somerset | **Volume 5.5.1** and **Volume 5.7.1** under the section 'Method', describe how receptor sensitivity contributes to the determination of significance of effect. Receptor sensitivity has been reviewed in line with GLVIA3. |
| **93** | **App 2. Rep Letter 1.** | Table 5.6 describes a moderate significance where a moderate magnitude of effect is experienced by a receptor of high or medium sensitivity. For example, where part of a development is visible in a view from a private property, but where it does not comprise the whole view. This does not adequately describe the significance when the line passes within a few metres of a dwelling, where the line is looked up to and it does comprise the whole view because of its close proximity. | Badgworth Parish Council Somerset | **Volume 5.5.1** and **Volume 5.7.1** under the section 'Method', describe how receptor sensitivity and magnitude contribute to the determination of significance of effect. Receptor sensitivity has been reviewed in line with GLVIA3. The magnitude of effect takes into account the nature and scale of a development and how it will |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | | The major significance typical criteria does not pay due regard to private property where the overhead line passes within a few metres. 5.6.3 No mitigation can be afforded to these private properties whereby their views are compromised by the close proximity of the overhead line. | | affect an identified receptor. It also takes account of its duration and reversibility.<br><br>Site specific mitigation measures are identified in **Volume 5.7.1**. An Off-site Planting and Enhancement Scheme (OSPES) **Volume 5.25**) has been developed through consultation with Local Authorities and Key Stakeholders as part of the Thematic Group Meetings. |
| **94** | **App 2. Rep Letter 1.** | 5.9.1 States that a digital model of the landscape is under construction. Parish Councils have requested that this be presented at the Community Forums. We still wait to see this model.5.9.2 and 5.9.3 Photomontages are to be produced and viewpoints identified and discussed with the Landscape Thematic Group. To date Parish Councils have not had sight of any photomontages and it is not clear if these will be made available to Community Forums. | Badgworth Parish Council Somerset | The 3D model was made available during public consultation. Photomontage viewpoint locations were discussed and agreed with the Landscape and Views Thematic Group and are illustrated in the figures provided in **Volume 5.7.3**. Photomontages have been subjected to consultation for a selection of viewpoints throughout the project study area to support the ES Landscape and Visual assessments at **Volumes 5.6.1, 5.7.1 and 5.7.2**. |
| **95** | **App 2. Rep Letter 2** | They centre on whether the proposed methodologies for producing graphical images representing the impact of the new line crossing the Polden Ridge will convey accurately the visual dominance the pylon line would have as it traverses the exposed promontory and on assessment of effects on the important local environment and amenity. | Bridgwater Without Parish Council | Photomontages were produced as accurately as possible in accordance with current industry guidance. The method for the production of verified photomontages is provided in **Volume 5.7.2, Appendix 7J.** |
| **96** | **App 2. Rep Letter 2** | The site, near Knowle Hill, is at the beginning of the Polden Ridge as it rises from the flat estuarine landscape and commands attention from receptors in a very wide area. The hill forms a visual focus for a local population of about 40,000; additionally it is exposed to view from the M5 and the railway and forms a foil and backdrop for the many tourists visiting Sedgemoor and the Quantocks.<br><br>New pylons proposed to be placed near the crest of the Polden Ridge are likely to be as tall again as the height that the hill rises above the surrounding levels and several times higher than most mature trees. Any suggestion that local topography or vegetation would or could appreciably reduce the impact of the structures would seem fanciful. Yet we fear that the use of effects, lighting and colouring in visual representations of the line's impacts may disguise the way the line may be highlighted in the landscape and how it may draw the eye of many receptors to the alien intrusion and the depredation of a focal area of local rural amenity. | Bridgwater Without Parish Council | **Volume 5.7.1** describes the method of assessment. Topography and landform, and backgrounding by woodland, landform and built form are considered when determining the magnitude of effect of the Proposed Development. Other factors such as the distance between the receptor and the proposed overhead line, the angle of the view and the proportion of the view affected are also considered to determine the magnitude of effect in the view. Photomontages were produced as accurately as possible in accordance with current industry guidance. The method for the production of verified photomontages is provided in **Volume 5.7.2, Appendix 7J.** |
| **97** | **App 2. Rep Letter 3** | The Policy Context at 5.2.1 should include Bristol Supplementary Planning Document 1: Tall Buildings, 2005. | Bristol City Council | This has been referenced in **Volume 5.4.2, Appendix 4A** |
| **98** | **App 2. Rep Letter 3** | It is considered the proposed approach is adequate; the section relating to Avonmouth makes reference to a number of viewpoints that will be considered in the assessment. Appropriate viewpoints for photomontages should be agreed with the Planning Authority to ensure the impact of the scheme is fully assessed. | Bristol City Council | Photomontage viewpoints were presented at Landscape and Views Thematic Group meetings between September and December 2013 and have been provided to attendees and absent consultees following meetings. Photomontage viewpoint locations have been discussed and agreed with Bristol City Council via email correspondences. Viewpoints in Avonmouth are illustrated in the figures provided as part of **Volume 5.7.3.** Photomontages are presented in **Volume 5.18.** |
| **99** | **App 2. Rep Letter 6** | The major concern of this parish is the preservation of the unique qualities of the landscape and visual aspects of the following sections:<br><br>B – Somerset Levels & Moors South<br>C- The Mendip Hills AONB<br>D – Somerset Levels North. This is limited to the area of the Mendip Hills AONB, the Lox Yeo Valley including Banwell Hill and Banwell Plain<br><br>The Mendip Hills AONB is a valued recreational area well established as the next best thing to a National Park. | Compton Bishop Parish Council | The Somerset Levels and Moors South, Mendip Hills AONB and the Somerset Levels North have been considered as part of the assessment of effects on Landscape, as provided in **Volume 5.6.1**. Potential effects on the Mendip Hills AONB and its setting as a result of a new 400kV overhead line were taken into account in the design of the Proposed Development; as a result 400kV underground cables are proposed through the Mendip Hills AONB in addition to the removal of the existing 132kV overhead line. |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | | The local leisure industries benefit from the natural environment of the open countryside which provides stunning views over the flat Somerset Levels. This provides an exceptional vista for the intervisibility between the significant landmarks of Brent Knoll, Glastonbury Tor, The Polden Hills, Brean Down and Steep Holm in the Severn Estuary.<br><br>The visual distraction of overhead cables and massive pylons together with the proposed Sealing End Compound at Biddisham would have a cumulative impact of such magnitude that the high amenity value of this area would be compromised. The height of the unbroken line of cables, in a flat landscape which does not provide hills or trees for background screening, would have a major detrimental impact on a significant countryside location. The proposed sealing end compound, overhead power lines and associated pylons are unsuitable for this unique landscape and environment. | | |
| **100** | **App 2 Rep Letter 9** | Dynamic views, especially along PRoWs, need to be assessed. | English Heritage (South West) | Views along public rights of way, including footpaths, bridleways and restricted byways, and along roads have been assessed sequentially and this is detailed in **Volume 5.7.1.** |
| **101** | **App 2 Rep Letter 9** | There are no references to any landscape assessment guidance at the end of chapter 5. If not mentioned elsewhere in the document the recently published 3rd Edition of the Guidelines for Landscape and Visual Impact Assessment needs to be consulted. | English Heritage (South West) | Methods for landscape assessment and guidance relating to it are described in **Volume 5.6.1.** |
| **102** | **App 2 Rep Letter 15** | (Regarding Section B, Somerset Levels and Moors para 5.3.17 scoping)The detrimental impact resulting from the proposed line of 46.5 metre high pylons across Mark Moor will be clear for all to see in the loss of visual amenity across the scenic landscape of the Somerset Levels. It is proposed for these exceptionally tall structures to be erected across Mark Moor, Mark Causeway (B3139), where the route intersects the community of Mark severely impacting on the quality of life of residents in nearby properties. | Mark Parish Council | The visual effect of the proposed 400kV overhead line across Mark Moor in public and private views is considered as part of the ES Chapter visual assessment, **Volume 5.7.1.** |
| **103** | **App 2 Rep Letter 15** | (Regarding Receptor Sensitivity page 78 5.5.26) This section does not cover the impact this proposal will have on the residents of the village of Mark. It will be virtually impossible to mitigate the impact of the proposed route across the Somerset Levels and Moors. As there has been no photographic/image evidence produced by National Grid of the visual impact upon Somerset Levels, the Council is unable to refer the IPC to such evidence. | Mark Parish Council | As described in 'Method' in **Volume 5.7.1** assessment of the significance of visual effects are a judgement based on the sensitivity of the receptor (value of view and susceptibility to change) and the magnitude of the effect. The magnitude of effect takes into account the nature and scale of a development and how it will affect an identified receptor. It also takes account of its duration and reversibility.<br><br>Detailed mitigation proposals for screening substations and sealing end compounds are provided in the ES Chapter and factored into the assessment.<br><br>Photomontages were produced to support the ES landscape and visual assessments and include a viewpoint on Green Drove footpath AX23/5, Mark looking northwards to Mark Causeway. The method for the production of verified photomontages is provided in **Volume 5.7.2, Appendix 7J.** |
| **104** | **App 2 Rep Letter 16** | NAILSEA TOWN COUNCIL challenges National Grid's statement "seek to minimise the scale of change" as inappropriate to justify replacing 26m high pylons with ones nearly twice as high. There is no way to mitigate the huge blemish of 35-47 metre high pylons on the landscape when the sparse trees on the moors are 10-15 metres (maximum) and are already dwarfed by the current 26 metre high pylons. To use a residential example to illustrate the point, there is no way that planning permission would be given for a four storey house in an area where all the neighbouring houses have at most two storeys. Housing developments that aim to justify such a request with the statement "seek to minimise the scale of change" would be refused. Nailsea Town Council believes this situation is analogous and the imposition of these huge pylons to be unreasonable. | Nailsea Town Council | **Volumes 5.6.1 and 5.7.1** describe potential effects of the Proposed Development on landscape character and views at Nailsea.<br>The presence of existing overhead lines in the landscape has been considered when determining the sensitivity of the landscape (or view) to the change proposed. A landscape that includes an existing 132kV or 400kV overhead line/s is considered to have a lower sensitivity (susceptibility to change) to the proposed 400kV overhead line; however overall landscape sensitivity is a combined judgement of the susceptibility of the landscape to the development proposed and the value attached to that landscape. |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | | | | The judgement on the significance of the effect resulting from the Proposed Development takes account of receptor sensitivity and magnitude of effect. |
| **105** | **App 2 Rep Letter 17** | Furthermore we would advise that the EIA includes a robust Landscape and Visual Impact Assessment (LVIA) using the Guidelines for Landscape and Visual Impact Assessment (GLVIA) 3rd edition. | Natural England | **Volumes 5.6.1 and 5.7.1** provide the Landscape and Visual Impact Assessments, carried out in accordance with GLVIA 3rd Edition. |
| **106** | **App 2 Rep Letter 17** | Protected Landscapes<br><br>Natural England is broadly satisfied with the approach to landscape and visual as proposed in the EIA scoping document. It is important that the applicant works closely with the Mendip Hills AONB Unit and other local stakeholders to identify key receptors, sensitivities, and viewpoints to feed into the LVIA. | Natural England | Relevant stakeholders, including the Mendip Hills AONB Unit, have been engaged in determining the scope, method and findings of the assessments of the potential effects of the Proposed Development on protected landscapes. This is described in **Volumes 5.6.1 and 5.8.1** in the sub-section 'Project Consultation'. |
| **107** | **App 2 Rep Letter 20** | The selection of viewpoints for photomontage is critical in the light of the recent change in proposed route in area F. It is requested that these viewpoints are revisited by the Thematic Group on Landscape and Views in the light of this report before the next stage in design development begins. It is further requested that this thematic group includes appropriate representatives who understand the significance of the close views of the proposed pylon route from the village of Portbury. | Portbury Parish Council | Photomontages are provided in **Volume 5.18**. Viewpoint locations take account of both the preferred route Option A and the alternative route Option B 400kV overhead line routes in Section F.<br><br>Several photomontage viewpoints that would illustrate the effect of the Proposed Development on views from Portbury have been agreed with the Landscape and Views Thematic Group and are illustrated in the ES figures. |
| **108** | **App 2 Rep Letter 20** | The buffer zone in Study areas E and F is incorrectly drawn and thus may lead to incorrect selection of key viewpoints. This needs to be corrected. In addition the theoretical zone of influence may also be incorrect as a result of this and needs correction. Habitat surveys have also been too narrowly considered and need correction. | Portbury Parish Council | Maps used as part of the landscape and visual assessments presented in **Volumes 5.6 and 5.7** include both the preferred route (Option A) and the alternative route (Option B) 400kV overhead line routes in Section F, along with zones identified at 1km and 3km from the line routes. Viewpoints provided by the Landscape and Views Thematic Group have been assessed. |
| **109** | **App 2 Rep Letter 20** | It appears this scoping document was largely written before the recent change of route within Study Area F which now includes a section running parallel to the M5 in very close proximity to the village of Portbury. Consequently the description of landscape, views and receptors does not include a significant number of highly sensitive locations close to the “alternative blue” route, as defined in the October 2012 options report. These potential views and receptors lie within both Study Area E and F. | Portbury Parish Council | Maps used as part of the landscape and visual assessments presented in **Volumes 5.6 and 5.7** include both the preferred route (Option A) and the alternative route (Option B) 400kV overhead line routes in Section F, along with zones identified at 1km and 3km from the line routes. Viewpoints provided by the Landscape and Views Thematic Group have been assessed. |
| **110** | **App 2 Rep Letter 20** | Properties on Caswell Hill and Caswell Lane are mentioned in the scope of study for Area E, paragraph 5.3.71; however there would also be a potentially high impact upon views in the area of Cole Acre and Elm Tree Farm and Park, both on Sheepway, if the alternative blue route is considered. These views would be extremely close, within 50 metres, and from the public highway. In particular there are several key points where views should be considered carefully, including on the Railway Bridge adjacent to Cole Acre and at bus stops both on the A369 (Portbury Hundred Road) and Sheepway. There would also be very close views from the public highway within Elm Tree Park where potentially there will be a pylon in very close proximity to the Southern edge of this development. | Portbury Parish Council | These properties have been considered as part of the visual assessment provided in **Volume 5.7.1.** |
| **111** | **App 2 Rep Letter 20** | Portbury is mentioned as having views of the development but is referenced as being in Section E, paragraph 5.3.86. As described above Portbury has not been considered in terms of impact upon views, presumably as the previous route corridor did not follow the M5 as is now proposed. If the alternative blue route is followed there will then be significant impact upon views from within the main village of Portbury. There will be clear views from parts of Caswell Lane, Station Road, Priory Road as well as a significant number of private views from elevated locations. These views will be very close and facing to the North, thus placing both pylons and cables upon the skyline. We have identified a multitude of positions upon the public highway where views will be heavily impacted. Moreover there are several points where pedestrian ways, public footpath and roadway intersect and views from these positions are heavily impacted also. | Portbury Parish Council | This is considered in the visual assessment provided in **Volume 5.7.**<br><br>Maps used as part of the landscape and visual assessments presented in the ES include both the preferred route (Option A) and the alternative route (Option B) 400kV overhead line routes in Section F, along with zones identified at 1km and 3km from the line routes. Visual assessment work has considered all views within Portbury and the surrounding area. |
| **112** | **App 2 Rep Letter 20** | In the October 2012 options report the setting of the Church of St Mary the Virgin, Portbury, was referenced but not given a high priority as the routes at that time would not have significant impact. If the | Portbury Parish Council | As part of the visual assessment provided in **Volume 5.7** all receptors within 1km of the proposed 400kV overhead line have |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | | alternative blue route is followed then views of the Church towards the North and West will potentially be significantly impacted. St Mary's Church is a Grade 1 listed building and as such is a heritage asset. The scope of the report does not include views around nor the setting of the Church, the views considered are mainly from longer distance, paragraphs 5.3.97 to 5.3.102. St Mary the Virgin Church in Portbury should therefore be identified as a receptor, as required in paragraph 7.1.8, and considered accordingly. It is not clear from Paragraph 7.3.2 whether the Church is one of the two Grade 1 Listed Buildings to be considered. | | been considered and would include views towards and from St Mary's Church. |
| **113** | **App 2 Rep Letter 20** | Paragraph 5.6.3 and table 5.6 set out criteria for the significance of effects. In the major effect category views from recreational footpaths are mentioned, but the public highway is not. In the moderate significance category views from private property are mentioned, but again the public highway is not. This creates a wide gap within which views from the public highway need to be placed. In the sensitivity criteria at paragraph 5.5.28 and table 5.4 it is clear that views from the public highway are accorded a high sensitivity, as are views at ground floor from private residences and gardens. The assessment criteria for significance of effects seems therefore to be out of step with the given sensitivity criteria. This should be corrected.<br><br>In our view there is a big gap between major and moderate effect which misses out the significance of everyday views from the public highway, particularly where the magnitude of effect is high. Views of high scenic quality are clearly of major significance, but views of large numbers of receptors should be equally considered within the criteria of assessment. | Portbury Parish Council | **Volume 5.7.1** in section 7.3 'Method', describes the approach to determining the significance of a visual effect. This section also addresses the sensitivity of receptors in accordance with GLVIA3. |
| **114** | | It follows from our comments above that the identification of photomontage viewpoints is critical to the eventual EIA in relation to Portbury, see paragraph 5.9.3. Since the scope of this report has, in our estimation, been based upon the route corridor prior to the October 2012 options report, it is therefore important that the selected viewpoints are reviewed and updated accordingly prior to discussions within the Landscape Thematic Groups. | | Photomontage viewpoint locations were presented at the January 2013 Landscape and Views Thematic Group meeting on a plan that illustrated the proposed 400kV overhead line route along the M5 motorway between Sections E and F. 1km and 3km offsets were also illustrated. See Drawing G1979.1288 that accompanied meeting minutes. Photomontage viewpoint location maps were updated as necessary since the January 2013 and following discussions with the Thematic Group.<br><br>Photomontage viewpoint plans were updated to include the 'alternative' route running north of the M5 and then southeast across part of Section F and were presented and discussed at the April 2013 Landscape and Views Thematic Group meeting. See Drawing G1979.1316e that accompanied meeting minutes. Photomontage viewpoint locations in Section E and F were agreed with the Landscape and Views Thematic Group and have since been confirmed on site.<br><br>The ES figures identify photomontage viewpoints for all viewpoints in Sections E and F. |
| **115** | **App 2 Rep Letter 20** | 8. Thematic Group Scoping Meetings – Landscape and Views – Appendix A<br><br>The notes of the Thematic Group scoping meeting on Landscape and Views, held on 16th January 2013 contain no reference to the significant change in route that was embodied within the October 2012 options report. Moreover the EIA scoping document that has been reviewed by this group contains all of the shortcomings in content that has been highlighted above. This group is tasked with determining key viewpoints, from which landscape impact will be assessed using photomontages; these viewpoints will have been selected without full knowledge of the likely new impacts in Study Area F. Portbury Parish Council has not seen any of the output work of the Landscape Thematic Group and is therefore not able to comment on whether appropriate viewpoints are being selected. The Thematic Group should, as a minimum, be re-briefed regarding the changes in route in Study Area F and should review its conclusions in the light of the probable high level of impact on the Village of Portbury. | Portbury Parish Council | Photomontage viewpoint locations were presented at the January 2013 Landscape and Views Thematic Group meeting on a plan that illustrated the proposed 400kV overhead line route along the M5 motorway between Sections E and F. 1km and 3km offsets were also illustrated. Photomontage viewpoint location maps were updated as necessary since the January 2013 and following discussions with the Thematic Group.<br><br>Photomontage viewpoint plans were updated to include the 'alternative' route running north of the M5 and then southeast across part of Section F and were presented and discussed at the April 2013 Landscape and Views Thematic Group meeting. |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | | | | Photomontage viewpoint locations in Section E and F were agreed with the Landscape and Views Thematic Group and have since been confirmed on site.<br><br>**Volume 5.18.1** identifies photomontage viewpoints for all viewpoints in Sections E and F. |
| **116** | **App 2 Rep Letter 20** | "Guidelines for Landscape and Visual Impact Assessment", published by the Landscape Institute and the Institute of Environmental Management and Assessment describe, in section 6, the use of "residential amenity assessment" to assess the local impacts of developments close to residential areas. The use of this methodology is appropriate for the proposed route near to Portbury given the scale of effect that is likely from the alternative blue route. In preparation for an assessment using this approach the "competent authority" is required to agree the detailed scope and approach including the viewpoints that will be used to gauge effects. **We request that either the Planning Inspectorate, or North Somerset Council as the local specialist, sets out a process for a residential amenity assessment,** using local knowledge and representation to agree a baseline. | Portbury Parish Council | National Grid has determined that a residential amenity assessment is not required in this instance. The visual assessment provided in **Volume 5.7** considers effects on views identified within 1km of the proposed 400kV overhead line as well as effects in representative views between 1km and 3km, and important views beyond 3km of the proposed 400kV overhead line. This method has been agreed with the Landscape and Views Thematic Group and has since been reviewed to ensure compliance with GLVIA3. |
| **117** | **App 2 Rep Letter 20** | The "value" of the current views in the above places, the scoping report dismisses the value of views from Portbury given the presence of the M5 and the Docks. Our previous report shows that this is not material as at street level in Portbury one is not aware of the presence of these other features due to the particular topography and landscape. This can only be understood by close local analysis; "residential amenity assessment" is the appropriate tool to use in this case. | Portbury Parish Council | National Grid has determined that a residential amenity assessment is not required in this instance. The visual assessment provided in **Volume 5.7** considers effects on views identified within 1km of the proposed 400kV overhead line as well as effects in representative views between 1km and 3km, and important views beyond 3km of the proposed 400kV overhead line. This method has been agreed with the Landscape and Views Thematic Group and has since been reviewed to ensure compliance with GLVIA3. |
| **118** | **App 2 Rep Letter 24** | A full explanation of how any ZTV maps have been prepared should be provided in the final ES. It is unclear why, if as noted in the Scoping Report, "the use of ZTV mapping of the substation and cable sealing end compounds may assist in defining the visual extent of these particular elements" this information does not appear to have been produced or utilised. This information should be provided within the final ES if it has been used to inform the assessment, if not then reference to it should not be included. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | **Volume 5.7.1** includes details on ZTV mapping. |
| **119** | **App 2 Rep Letter 24** | The Joint Councils previously raised with National Grid whether there would be any merit in adopting elements in the Design Manual for Roads and Bridges Interim Advice Note. National Grid responded that they had referred to this document; however, the Scoping Report does not make any reference to this. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | Noted. In **Volume 5.7.1** reference has been made to the Design Manual for roads and Bridges Interim Advice note 135.10; the plans and schedules or visual summary tables included in the ES will have many similarities to Visual Effects Drawings (VED) and Visual Effects Schedules (VES). |
| **120** | **App 2 Rep Letter 24 para 3.4** | The identification of sensitivity of visual receptors should be reviewed against the methodology in GLVIA3 which now considers the susceptibility of visual receptors to change and the value attached to views in the consideration of sensitivity. As it stands the Scoping Report appears to consider the importance of views outside of the assessment of sensitivity of visual receptors. This is not in accordance with recognised standard practice and should be reviewed within the final ES. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | The method for the visual assessment included in the Environmental Impact Assessment (EIA) Scoping Report (April 2013) for this project was based on the second edition of the GLVIA; however the method was reviewed following the recent publication of the third edition GLVIA to ensure its compliance. The method is included in **Volume 5.7.1.** |
| **121** | **App 2 Rep Letter 24 Para 3.5** | 'the ES should clearly explain the choice of proposed mitigation, having regard to its ability to reduce the landscape and visual impacts associated with the proposed scheme.' | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | Landscape mitigation proposals for site specific development including substations and cable sealing end compounds have been produced as part of **Volumes 5.6 and 5.7**. Residual effects have been considered as part of the ES landscape and visual assessments.<br><br>The OSPES **Volume 5.25** has been produced in consultation with |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | | | | the Landscape and Views Thematic Group. |
| **122** | **App 2 Rep Letter 24 Para 3.6** | It is recommended that a Landscape Strategy outlining the proposed mitigation measures should be provided as part of the application. It should be prepared and agreed with the Joint Councils and form part of the DCO commitments. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | The OSPES **Volume 5.25** has been produced in consultation with the Landscape and Views Thematic Group. |
| **123** | **App 2 Rep Letter 24 Para 3.12** | The assessment should consider the temporary impacts associated with operation of the construction compounds and any associated infrastructure. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | Temporary construction effects on landscape and views are considered as part of the assessments in **Volumes 5.6.1 and 5.7.1.** |
| **124** | **App 2 Rep Letter 24 Para 3.13** | Reference is made to accesses and construction traffic using the wider road network. The extent and significance of the landscape and visual effects should be assessed within the final ES, proposals for appropriate mitigation identified and the residual effects assessed. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | Temporary construction effects, including those from construction traffic, on landscape and views are considered as part of the assessments in **Volumes 5.6.1 and 5.7.1.** |
| **125** | **App 2 Rep Letter 24 Para 3.14** | No reference to the assessment of lighting during construction phase has been made within the Scoping Report, except Table 5.1 which states that National Grid do not consider an assessment of lighting impacts to be necessary. During winter, if normal construction working hours are to be used, then there will be some requirement for lighting of compounds etc., due to the shorter daylight hours experienced in winter even if pylons are not being erected or strung during the darker hours. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | This is addressed in **Volumes 5.6.1 and 5.7.1.** |
| **126** | **App 2 Letter 24 Para 3.15** | The Scoping Report states that "the timing of photographic surveys will be discussed with the Landscape Thematic Group". While this may have occurred in the past, it appears to be the case that most if not all of the baseline photography has already been collated (to take photographs before trees are in leaf). The Joint Councils reserve the right to request further viewpoints or photomontages at a later date if required. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | Photomontage viewpoints were agreed in consultation with the Landscape and Views Thematic Group during meetings in the early part of 2013. Further photomontage viewpoints were agreed in the Thematic Group meetings during September - December 2013 and all photomontage viewpoints agreed are included in **Volume 5.18.** |
| **127** | **App 2 Letter 24 Para 3.16** | Prior to September 2013 (Section 42/47 consultation) it is critical that the selection of viewpoints for photomontages is reviewed in the light of the recent change in proposed route in area F. It is requested that these viewpoints are discussed and agreed with the Landscape Thematic Groups or North Somerset Council before the next stage in consultation begins. The detailed comments put forward by Portbury Parish Council on suggested viewpoints also need to be fully assessed. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | Photomontage viewpoints were agreed in consultation with the Landscape and Views Thematic Group during meetings in the early part of 2013. Further photomontage viewpoints were agreed in the Thematic Group meetings during September - December 2013 and all photomontage viewpoints agreed are included in **Volume 5.18.** |
| **128** | **App 2 Letter 24 Para 3.17** | There appear to be some consistency issues in relation to assessment terminology and the proposed assessment process, which should be addressed in the final ES. When discussing the assessment of landscape value the Scoping report should make it clear whether it will be assessed on a National to Local level scale or a High to Low scale as both sets of terminology are used. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | **Volume 5.6.1** records the landscape across the Proposed Development study area as being of national, regional and or local value. |
| **129** | **App 2 Letter 24** | There appears to be some confusion regarding the definition of landscape sensitivity. The definition provided in the Scoping Report states that landscape sensitivity considers the "degree to which a | Joint Authorities (Somerset County | The method for landscape assessment included in the EIA Scoping Report (April 2013) has been reviewed following the |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | **Para 3.18** | landscape can accommodate change". LCA Topic Paper 6: Techniques and Criteria for Judging Capacity and Sensitivity only refer to a landscape's ability to accommodate change when referring to capacity. It is recommended that the definition is further reviewed for the final ES. | Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | recent publication of the third edition of the Guidelines for Landscape and Visual Impact Assessment to ensure its compliance. The ES method is included at **Volume 5.6.1** and states that landscape sensitivity considers the value of the landscape and its susceptibility to change which is the degree to which a landscape can accommodate change without suffering detrimental effects on its character. The susceptibility of a landscape to accommodate change is noted as being dependent on the characteristics of the receiving landscape and the type and nature of the proposed development. |
| **130** | **App 2 Letter 24 Para 3.19** | The Joint Councils have previously commented that there appears to have been no consideration of viewpoints from bridleways and sought clarification on this. National Grid's response in Table 5.1 of the Scoping Report addresses this matter; however, it is not clarified in the methodology text. Paragraph 5.5.18 only refers to public footpaths and does not mention bridleways. It is preferable to use the generic term 'public rights of way' rather than specify footpath or bridleway as there is also a Restricted Byway within the Study Area. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | The generic term 'public rights of way' or PRoW is used in the ES chapters and refers to footpath, bridleway or restricted byway. |
| **131** | **App 2 Letter 24 Para 3.20** | In relation to the justification for the sensitivity of transient tourist receptors travelling through the area it should be noted that users of rural lanes also include walkers, cyclists and horse riders utilising rural lanes as a means of connecting public rights of way and therefore sensitivity in this case should be categorised as "high". | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | National Grid has taken into account the comments of the Joint Authorities. In relation to the sensitivity of motorists and passengers on rural lanes and tourist routes, the method for visual assessment has been reviewed following the recent publication of the third edition GLVIA. These receptors are considered to have a sensitivity of medium and high. The visual assessment method is included in **Volume 5.7.1.** |
| **134** | **App 2 Letter 24 Para 3.21** | The inclusion of consideration of public views of proposed line entries is given consideration, however in relation to paragraph 5.3.116, National Grid need to take into account that the West Somerset Coast path is soon to form part of the England Coast Path National Trail currently being developed by Natural England in conjunction with Somerset County Council. The section of the West Somerset Coast path to the north of the Hinkley Point C site is presently closed by order as part of the site preparation works planning permission. The temporary alternative route runs around the perimeter fence of the site and underneath the existing pylons. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | This is addressed in **Volume 5.7.** |
| **135** | **App 2 Letter 24 Para 3.22** | In relation to long distance views towards the proposed line entries anticipated from distant receptors, consideration should be given to promoted regional and national routes such as The Coleridge Way and The McMillan Way West. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | |
| **136** | **App 2 Letter 24 Para 3.23** | Consideration has been given to national routes at paragraph 5.3.12, 5.3.35 and Table 5.1 however the ES should also take into account regional routes. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | |
| **137** | **App 2 Letter 25 Heading 1. General** | Traveller community: We are concerned that potential impacts on the Traveller community are not adequately addressed in the Scoping Report. While mentioned in Table 12.1, with respect to noise, no other impacts are considered or scoped out. The community at Aust is directly adjacent to the access track to the proposed substation and it is suggested that this issue should be addressed. Since the nature of the proposed works to the access road are not yet known, the precautionary approach is that there could be impact. As suggested to National Grid, early engagement with the Traveller community during design development could help to avoid or minimise impact on this community. | South Gloucestershire | Aust Substation has been removed from the Proposed Development and is not considered in the ES. |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| **138** | **App 2 Letter 25 Heading 2. Landscape and Visual Assessment** | In general it is considered that the proposed approach is adequate, however the revised Landscape Institute Guidelines for Landscape and Visual Assessment were published for use on 17 April and it is recommended that these should be used for this project. | South Gloucestershire | The methods for landscape and visual assessments included in the EIA Scoping Report (April 2013) have been reviewed to ensure compliance with GLVIA3. The updated methods are presented in **Volumes 5.6.1 and 5.7.1.** |
| **139** | **App 2 Letter 25 Heading 2. Landscape and Visual Assessment** | It is acknowledged that the landscape and visual assessment proposes to assess the proposed substation at Aust and that relevant issues are covered in the text at paragraphs 5.3. 121 - 127, however the relevant e.g. Figures 12, 14 and 15 do not seem to provide information for this location.<br><br>Given the sensitivity of this location being on the Severn Estuary, directly adjacent to and visible from the Severn Way and also being visible from the estuary itself and the north bank of the estuary in the vicinity of the end of Offa's Dike long distance path, it is imperative that the scope of the EIA fully covers assessment of the impact at Aust and that plans and assessments are included to cover this area, and appropriate viewpoints for photomontages etc. are plotted and agreed. Discussions have taken place with National Grid regarding these issues, but we are unable to find reference in the document?<br><br>In order to be able to assess the environmental impact of the proposed scheme it will be important for strategic landscape proposals to be included as an integral part of the proposed works, including any proposals for off-site schemes that may be proposed by National Grid or by agreement. | South Gloucestershire | Aust Substation has been removed from the Proposed Development and is not considered in the ES. |
| **140** | **App 2 Letter 25 Heading 2. Landscape and Visual Assessment** | The issue of lighting during construction needs to be assessed particularly in areas of environmental sensitivity such as adjacent to the Severn Estuary at Aust, and this also has implications for potential disturbance of wildlife and particularly any species associated with the international designations on the estuary. | South Gloucestershire | This has been considered in **Volumes 5.6.1 and 5.7.1** where relevant to landscape and views. The implications for potential disturbance of wildlife and any species associated with the international designations on the estuary are addressed in **Volume 5.8.1.**<br>Aust Substation has been removed from the Proposed Development and is not considered in the ES. |
| **Appendix 2: Representations Related to Biodiversity & Nature Conservation** | | | | |
| **141** | **App 2. Rep Letter 2** | We are also concerned that the methodology proposed will not take account of the population of large water birds including heron and swan that use Kings Sedgemoor Drain. The overhead lines cross the take-off/landing flight-path on a straight stretch of water close to a main road. There are several potential knock-on effects from birds flying into the cables including that stricken birds could fall into fast-moving traffic on the adjacent road causing a serious accident.<br><br>The stretch of water is a popular location for anglers. High voltage cables crossing it will seriously affect their opportunity to use it safely. Furthermore National Grid's proposed construction and maintenance access route is along the Drain's bank from which the anglers fish; further degrading their amenity. | Bridgwater Without Parish Council | A detailed programme of ornithological assessments, including wintering and breeding bird surveys were undertaken in support of the proposals. These are detailed in **Volume 5.8.1** and The Applicant's Report to Support Habitats Regulations Assessment **(Volume 5.20)** |
| **142** | **App 2. Rep Letter 2** | We are also concerned that impact assessments may not demonstrate adequately the visual and habitat effects of permanent/semi-permanent roadways that are to be created parallel to the line of overhead cables/pylons. These are likely to serve as new barriers to reptiles, amphibians, eels and other small creatures that currently exist in the semi-improved land near the proposed line. There is also the likelihood that drainage patterns, so important to life on the levels and neighbouring hills will be disrupted. | Bridgwater Without Parish Council | **Volume 5.3.1** describes the Proposed Development and provides details of permanent, semi-permanent and temporary accesses and roads. These have been assessed for their ecological effects in **Volume 5.8.1**. |
| **143** | **App 2. Rep Letter 3** | We have previously sent letters to the developer's consultant regarding the scope of the nature conservation chapter (12 February 2013). We have nothing further to add<br><br>(Taken from Ecological PEIR) Referred to comments on draft scoping opinion dated 12/02/2013, which were as follows:<br>Para 4.4.9 How do these surveys relate to the likely need to collect data on qualifying interest feature birds to provide underpinning data for Habitats Regulations Assessment for the Severn Estuary European Marine Site? | Bristol City Council | These representations are addressed in **Volume 5.8.1** and The Applicant's Report to Support Habitats Regulations Assessment **Volume 5.20.** |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | | Paras 4.9.2 and 4.9.3 These paragraphs are somewhat contradictory.<br><br>Paras 1.5.1 This should state the Bristol Core Strategy (adopted June 2011).<br><br>There is also an Avon Biodiversity Action Plan, which has been co-ordinated by the Avon Wildlife Trust.<br><br>This should state the Conservation of Habitats and Species Regulations 2010 (as amended).<br><br>Para 6.2.2 Ecological enhancement measures need to be addressed.<br><br>It is suggested that the use of artificial refuges and egg laying substrates would be a valuable adjunct. It is also suggested that sites on the threshold of the suitability score for ditches should be surveyed in full, to test the robustness of the methodology<br><br>According to the English Nature Great Crested Newt Mitigation Guidelines (2001), page 26, 5.7.2.1, Population size class assessment should be carried out between mid-March and mid-June<br><br>Mitigation measures need to be addressed in areas of terrestrial vegetation which has the potential to support great crested newts.<br><br>The probability of birds colliding with lattice and T pylons and its likely ecological implications should be addressed within the draft EIA Scoping report.<br><br>There is an opportunity to create a potential summer roost for horseshoe bats at the proposed Sandford Substation in North Somerset. | | |
| **145** | **App 2 Rep Letter 10** | Ongoing Monitoring<br><br>Based on the details of survey methodology and timings, we would expect a robust data set for priority and protected species and habitats. However, this data may only be suitable for a relatively short period of time. Transient populations, including water voles, otters and amphibians, can change year on year and therefore it may not be sufficient to use 2-5 year old data. Continuous monitoring for protected species will likely be required during the course of the proposed works. | Environment Agency | As is described in **Volume 5.8.1** and the BMS (**Volume 5.26.3**), in addition to the surveys already undertaken, pre-commencement surveys would also be carried out. Due to the duration of the works, extending over several years, it is accepted that on-going surveys throughout the construction period would be required. |
| **146** | **App 2 Rep Letter 10** | Fragmentation of Habitat<br><br>The proposed scheme of works has the capacity to cause significant habitat fragmentation however, it would appear that this issue has been omitted from the report.<br><br>The applicant will be expected to appropriately assess the potential impact for habitat fragmentation and incorporate appropriate avoidance/mitigation options.<br><br>Where it is not possible to avoid the loss of habitat, the developer must be mindful of the fact that like for like creation of habitat is rarely possible for mature habitats due to the time scales required to form these habitats. Again, the applicant will be expected to appropriately assess any potential impact on mature habitats and incorporate appropriate avoidance/mitigation options. | Environment Agency | Potential effects as a result of habitat fragmentation are assessed in **Volume 5.8.1**. |
| **147** | **App 2 Rep Letter 10** | Temporary culverts require a lower level of environmental assessment than permanent culverts. It should be noted that if temporary culverts are installed and it subsequently becomes evident that they need to be retained, the culvert may need to be re-assessed and possibly replaced with a more appropriate design. | Environment Agency | Temporary culverts, installed for the purposes of the Proposed Development, would not be retained on a permanent basis. |
| **148** | **App 2 Rep Letter 10** | Heat Radiation from Underground Lines<br><br>In a number of areas the underground lines will run under or adjacent to bodies of water. If heat is radiated from these underground lines, this could result in an increase in the temperature of such water | Environment Agency | The potential effects of heat radiation are currently subject to further research. Details to date are provided in the **Volume 5.8.1**. At the time of writing the full report is expected Summer 2014. |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | | bodies. A change in water temperature of even a degree can drastically alter the ecology of a system. We will require additional information on the potential for heat radiation from these lines and the potential impact on wetland habitat. Where an increase in water temperature is a risk, appropriate mitigation should incorporated to manage the risk i.e. tree planting along river banks can provide shade and thus reduce water temperature. | | |
| **149** | **App 2 Rep Letter 16** | Finally, the methodology for environmental impact contained in the scoping report is accepted as thorough. However, it does not adequately address the issue of the presence of otters in the parts of the route impacting on Nailsea. | Nailsea Town Council | The suitability of sites to support otter was assessed as a part of the Phase 1 Habitat Survey and is described in **Volume 5.8.1** and its appendices. Dedicated otter surveys, in line with best practice, have been carried out and covered areas of potential otter habitat within the Proposed Development 'route corridor'. |
| **150** | **App 2 Rep Letter 17** | Natural England would expect the EIA of this project to include a 'shadow' Habitats Regulations Assessment (HRA) which is likely to include an Appropriate Assessment. The shadow HRA will inform the Secretary of State's HRA of the project, which he will be required to undertake as 'competent authority', post application. | Natural England | The Applicant's Report to Support Habitats Regulations Assessment is provided as a supporting document to the ES (**Volume 5.20**) |
| **151** | **App 2 Rep Letter 17** | Bats (SAC and other)<br><br>We are concerned that the project could potentially cause bat habitat fragmentation along the length of the development. So a judgement of impact significance would have to be made by looking at levels of bat activity, main commuting routes and roost locations and proposals regarding removal of linear landscape features i.e. hedgerows etc. in these areas.<br><br>Clearly, the removal of large tracts of hedgerows in such areas would potentially have a detrimental effect on the Favourable Conservation Status (FCS) of bat species in the area and would need to be mitigated for in some way, for example, through planting schemes re-directing bats to enable them to still access key foraging area and roosts.<br><br>We are also concerned that the proposed power lines could potentially through Electro Magnetic Field (EMF) interference, prevent bat species accessing their foraging areas and their roost sites, though very little is known about the effect of EMF on bats. | Natural England | Effects on bats as a result of hedgerow removal have been assessed in **Volume 5.8.1**. Detailed mitigation measures are provided in the BMS at **Volume 5.26.3**. This includes the potential for EMF interference. |
| **152** | **App 2 Rep Letter 17** | Although we are aware of some research being undertaken by National Grid to 'Investigate the effects of 400kV transmission lines on the Lesser Horseshoe bat in England and Wales, we know of only one other piece of academic research that has been undertaken in this area, conducted by Racey & Nicholls in 2007, please see the link below;<br><br>http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0000297<br><br>In terms of surveys, we are satisfied that a sufficient level of survey effort has been undertaken or is proposed. | Natural England | National Grid thanks Natural England for the information links they provided as part of the project Scoping. |
| **153** | **App 2 Rep Letter 17** | Ornithology (SPA)<br>Functionally linked land<br><br>Power lines can result in impact through direct habitat loss, indirect habitat loss (displacement and barrier effects) and mortality (electrocution and collision). When assessing bird habitats of high sensitivity, such as areas designated as SSSI and SPA, the presence of functionally linked land that may extend several kilometres beyond the site boundary must be considered. Typically, this might be farmland beyond a site boundary that could be used by waders (such as golden plover and lapwing) and wildfowl (such as swans and geese). The presence of functionally linked land, and the birds it supports, is of relevance when considering mortality as well as habitat effects. | Natural England | The assessment presented in **Volume 5.8.1** has considered some areas outside of the route corridor and included them within the scope of the ornithological assessments. |
| **154** | **App 2 Rep Letter 17** | VP Surveys and Pylon Design<br><br>It is known that the top earth wire accounts for a disproportionate number of collisions, presumably on | Natural England | Mitigation measures are included in **Volume 5.8.1** and the BMS, **Volume 5.26.3**. |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | | account of both its thickness (less obvious than other wires) and its height. Mitigating the effect of this, ideally through pylon design, or potentially through use of deflectors, should be considered.<br><br>When conducting VP counts, consideration should be given to the stage reached within the pylon design process (also bearing in mind that moving wires can act as mitigation). Heights used during VP work should not be so narrow as to add inevitable levels of human error when attempting to estimate height accurately at distance, but should allow modelling work to be flexible enough to incorporate design changes without having to repeat field work. In order to reduce human error, surveyors should be experienced and use range-finders and clinometers to accurately measure height where possible. | | |
| **155** | **App 2 Rep Letter 17** | *Use of Radar*<br><br>Radar work may also be necessary in association with sensitive populations that may be crepuscular or nocturnal and cannot be surveyed using routine Vantage Point surveys - for example, populations of certain waterbirds adjacent to an SPA, or where power lines bisect flight-lines of waterbirds that might commute between two SPAs. Ongoing vantage point/scoping work may help identify those situations where the use of radar would prove advantageous. The judgement as to whether such monitoring is necessary should consider the costs of delaying works to enable further seasonally restricted assessment to take place.<br><br>Nocturnal surveys are unlikely to be able to replicate the use of radar. Of key concern would be movements of birds between the Somerset Levels and the Severn Estuary, that might only occur under certain conditions; for example, during periods of harsh weather when birds might be forced to feed at night in inter-tidal habitats as they vacate frozen wetlands inland. Nocturnal foraging is also linked to lunar cycles, as full moons can improve visibility. | Natural England | National Grid has taken these comments into consideration. A radar study was undertaken and the results are provided and interpreted in **Volume 5.8.1.** |
| **156** | **App 2 Rep Letter 17** | *Assessing the effect of collisions*<br><br>Typically, the predicted number of bird deaths is expressed as an increase against background mortality levels for the species' relevant population (i.e. SPA, SSSI or regionally important) and correct time of year (i.e. breeding or non-breeding). Accepted practice is for a 1% increase in background mortality to be deemed significant.<br><br>Note that where background mortality is expressed as a percentage, this is a relative rather than an absolute term. Therefore, using a hypothetical background mortality of 10%, the correct figure would be 10.1% and not 11%. As early as possible in the assessment process, it would be useful to discuss the potential mitigation options available, and when these might be considered necessary. | Natural England | Details of ornithological assessment and mitigation measure where appropriate are provided in **Volume 5.8.1.** |
| **157** | **App 2 Rep Letter 17** | *In combination and cumulative impact*<br><br>Impacts on internationally protected habitats and species needs to be assessed both alone and in-combination. The in-combination assessment needs to consider those approved applications which have yet to be constructed, applications which have yet to be approved and any other development proposals for which there is sufficient information to complete an assessment. Of particular relevance will be wind farms in the vicinity of the proposed route which have the potential to affect the same bird populations.<br><br>As well as an in-combination assessment, a cumulative impact assessment will also have to be undertaken which, beyond the scope of the in-combination assessment, should include the effect of existing developments within the environment. For example, this might include an assessment of mortality owing to collisions with existing wind farms or power lines. | Natural England | A detailed assessment of in-combination and cumulative effects has been undertaken as a part of both the EIA and HRA. **Volume 5.17** provides the Assessment of Cumulative Effects. The Applicant's Report to Support Habitats Regulations Assessment is a supporting document of the ES (**Volume 5.20**). |
| **158** | **App 2 Rep Letter 17** | Sites of Special Scientific Interest<br><br>The project has the potential to directly impact on Tickenham, Nailsea and Kenn Moors SSSI which is notified for its invertebrate assemblage; Lowland ditch systems and; nationally rare and scarce dragonfly species (Dragonfly, Damselfly). | Natural England | **Volume 5.8.1** provides an assessment of all potential construction, operation and decommissioning effects of the Proposed Development, including potential effects to designated sites and Protect Species. |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | | Likelihood and severity of impact will depend on final route/engineering choices. It is important that a final choice be made with the above in mind and that a robust assessment be undertaken to determine the likely impact of construction activities and operation (including maintenance) on the SSSI and its notified features.<br><br>It is important too that the EIA consider the potential for the project to impact (through construction and operation) on SSSIs, National Nature Reserves (NNRs) and all other designated sites within close proximity to the chosen route – identified in figures 6.1 – 6.9 of the EIA scoping document. | | |
| **159** | **App 2 Rep Letter 20** | The buffer zone in Study areas E and F is incorrectly drawn and thus may lead to incorrect selection of key viewpoints. This needs to be corrected. In addition the theoretical zone of influence may also be incorrect as a result of this and needs correction. Habitat surveys have also been too narrowly considered and need correction. | Portbury Parish Council | Initial habitat surveys were extended to include the preferred route (Option A) along the M5 motorway near Portbury. They have also been extended to include the 132kV overhead line (W Route) removal and 132kV (W Route) undergrounding near Portbury. These are described in **Volume 5.8.1**. |
| **160** | **App 2 Rep Letter 20** | On page 49, the habitat survey in study area F is similarly restricted to the original preferred route corridor, drawing G1979.1382.15A. This needs to be corrected, as does the drawing relating to target notes, G1979.1425.15A. | Portbury Parish Council | This error has been addressed. |
| **161** | **App 2 Rep Letter 20** | It is understood that there are important Owl flight paths that cross both the A369 and M5 generally on a North-South alignment. Whereas there has been work to identify roosting Owls in nest boxes, within the previous preferred route corridor, no work has been done for the alternative blue route, in particular in relation to disturbance to flight paths. | Portbury Parish Council | Information and assessment on owl flight paths has been undertaken and is presented in **Volume 5.8.1**. |
| **162** | **App 2 Letter 24 Para 4.2** | Further bat surveys will need to be undertaken and included within the ES to identify the location of roost sites and thereby potential impacts on roosts through construction activities, particularly in relation to tree roosting species. Bat emergence surveys and inspections of tree with high potential are recommended in the Guidance produced by the Bat Conservation Trust. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | Further surveys to identify tree roost sites have been undertaken. Bat survey methods, an assessment of potential effects and proposals for mitigation are described in **Volume 5.8.1**. |
| **163** | **App 2 Letter 24 Para 4.3** | It is suggested that remote monitoring of hedgerows and tree lines to be intersected by the undergrounding is undertaken to provide information on the level of use by horseshoe bats. The data presented within the scoping report (figures only) does not make it clear what information has been obtained in relation to the SAC. The colours used on figure 31 (static monitoring) are not distinct enough to tell if horseshoe bats have been recorded without the benefit of interpretive text which should be included. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | Details of bat surveys undertaken are provided in **Volume 5.8.** Bat activity surveys have been undertaken in line with best practice (e.g. Bat Conservation Trust, 2012). Bat activity transect surveys have been undertaken along the route and static recording surveys completed, which concentrated on areas of potential high impact (including undergrounding areas). |
| **164** | **App 2 Letter 24 Para 4.4** | Evidence of the justification for not avoiding impacts on the SAC will need to be presented within the final ES and accompanying Information to Inform the Habitats Regulations Assessment as required by The Conservation of Habitats and Species Regulations 2010 (as amended). | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | This information has been provided in **Volume 5.8** and detailed in The Applicant's Report to Support Habitats Regulations Assessment (**Volume 5.20**) |
| **165** | **App 2 Letter 24 Para 4.5** | It is advised that consideration of the need for invertebrate surveys is extended to the potential construction compounds. In relation to surveys, Paragraph 6.5.45 does not state when the second visit would be undertaken as the month has been omitted. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | The invertebrate survey encompasses construction compound areas and the second visit was undertaken in August 2013, as detailed in **Volume 5.8.** |
| **166** | **App 2 Letter 24 Para 4.6** | There is no reference to mortality or collision risk in section 3 "Characteristics of Potential Effects"; this should be considered as part of the final ES. | Joint Authorities (Somerset County Council, Sedgemoor | Noted. Bird mortality and collision risk has been an important consideration in the ornithological assessments and is considered in **Volume 5.8** and The Applicant's Report to Support Habitats |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | | | District Council, West Somerset Council and North Somerset Council) | Regulations Assessment (**Volume 5.20**). |
| **167** | **App 2 Letter 24 Para 4.7** | Welcome the inclusion of maps, it is considered that the environmental features should be described in order to provide sufficient information to enable PINS to take these into account in forming a scoping opinion; this may enable certain receptors to be scoped out. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | This is provided in the figures for chapter 8, **Volume 5.8.3** |
| **168** | **App 2 Letter 24 Para 4.8** | We note that Figure 29 has been omitted from the uploaded Scoping Report and would welcome provision of this figure. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | National Grid provided figure 29 to the Joint Authorities following receipt of this scoping representation. |
| **169** | **App 2 Letter 24 Para 4.9**<br><br>**Additions**<br><br>**Para 4.10**<br><br>**Para 4.11** | Clarification has previously been sought from National Grid in respect of how the bird surveys relate to the likely need to collect data on bird features which are qualifying interest features of the Severn Estuary European Marine Site to provide underpinning data for Habitats Regulations Assessment. Clarification through inclusion of information from the surveys undertaken to date within the text of the scoping report may resolve this query. Without this information it is not clear if the data obtained and surveys proposed will be sufficient to allow a robust assessment of the potential impacts on the features of the Severn Estuary European Marine Site and the Somerset Levels and Moors SPA.<br><br>Para 4.10 - It is assumed that the reference to on-site habitat creation relates to the reinstatement of habitats. Off-site habitat creation should be referred to as off-setting measures within the final ES rather than mitigation.<br><br>Para 4.11 - NBN is not listed as a data source in the report. It is also suggested that data should be obtained from the Environment Agency for fisheries to ascertain the potential effects on watercourse crossings and implications for the Water Framework Directive. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | **Volume 5.8** and The Applicant's Report to Support Habitats Regulations Assessment **(Volume 5.20)** are supported by a robust and comprehensive programme of ornithological assessments, including both wintering and breeding bird surveys, which have been undertaken over several years.<br><br>This is clarified in **Volume 5.8.1.**<br><br>Records from NBN and from the Environment Agency will be obtained. |
| **170** | **App 2 Letter 24 Para 4.12** | <u>Para 6.3.5</u><br>Zones of Influence – The Report states that the EIA will be conducted according to the IEEM's EcIA Guidelines which indicate that the area affected by aspects of the proposed development should be defined. National Grid lists sites within the "potential influence" of the development but there is no explanation regarding the distance(s) over which the project might exert effects. In the case of sites designated for mobile features (e.g. birds, bats) the sites could be some distance from the route corridor yet still affected by the development. A statement regarding the fundamental assumptions made regarding Zones of Influence would have been useful to clarify whether have been any omissions in terms of sites, habitats and species that the EIA ought to cover. This information should inform thematic workshop discussions. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | Clarification on the 'zone of influence' of the Proposed Development is provided in **Volume 5.8.1.** |
| **171** | **App 2 Letter 24 Para 4.13** | <u>Para 6.5.27</u><br>It is recommended that further inspection of Category 1 and 1* trees with potential to be used by bats in close proximity to the route will need to be undertaken along with emergence surveys and the results included within the ES in order to fully assess the potential impacts on bat species which are European Protected Species. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset | Surveys of Category 1 and 1* trees to determine presence or likely absence of bats was undertaken; the results are described in **Volume 5.8.1.** |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | | | Council and North Somerset Council) | |
| **172** | **App 2 Letter 24 Para 4.14** | Para 6.5.37<br>Population size class assessments should also be undertaken for water bodies within 250m of potential construction compounds and laydown areas which may also exceed the area that triggers the need for these surveys. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | Population size class assessments were undertaken and are provided in **Volume 5.8.1.** |
| **173** | **App 2 Letter 24 Para 4.15** | Para 6.5.39<br>It is suggested that netting (with a long handled pole) could be a safe and effective method of survey in line with guidance that should be included within the survey techniques. This may also be a more effective way of undertaking egg searching without causing damage to eggs and plants by using a grapnel. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | This was taken into account in survey methods, as described in **Volume 5.8.1.** |
| **174** | **App 2 Letter 24 Para 4.16**<br><br>**Para 4.17** | Para 6.6.10<br>Reference to the hierarchy of avoid – mitigate – compensate is welcomed. However it is not clear how this has been applied in relation to the North Somerset and Mendip Bats SAC where it has been decided that any impacts on bat flight routes can be mitigated. Evidence of the justification for this approach will need to be presented within the final ES and accompanying information to inform the Habitats Regulations Assessment.<br><br>Para 4.17 - Reference should also be made to the severing of bat commuting and foraging routes as potential effects of undergrounding within this paragraph. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | **Volume 5.8.1** describes how the mitigation hierarchy has been applied in relation to North Somerset and Mendip Bats SAC and other designations within and adjacent to the route.<br><br>Fragmentation effects on bats, and other protected species have been assessed and are described in **Volume 5.8.1** and the supporting appendices **(Volume 5.8.2)** |
| **175** | **App 2 Letter 24 Para 4.18** | Table 6.3<br>SSSIs (e.g. Banwell Caves) are mentioned as being within "potential influence" of the project that are components of particular international designations (in the case of Banwell Caves SSSI North Somerset and Mendip Bats SAC). The European Site is not listed in the same table under international sites potentially affected and should be considered in the final ES. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | Effects to the North Somerset and Mendip Bats SAC, and its component sites, have been evaluated and are described in **Volume 5.8.1**. |
| **176** | **App 2 Letter 24 Para 4.19** | Para 6.4<br>The nature of the anticipated potential effects on designated sites is not specified. In particular, there is no mention of habitat fragmentation, which is an issue that has been raised at thematic group meetings by the Joint Councils. Fragmentation potentially affects bats, Dormice and Great Crested Newts, all of which are European Protected Species. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | Effects on each designated site within the zone of influence have been evaluated and are described in **Volume 5.8.1**. Rationale as to why designated sites have been scoped in or out of the ecological impact assessment is also provided. |
| **177** | **App 2 Letter 24 Para 4.20** | Para 6.5.1<br>The Joint Councils are keen to understand the programme of seasonally restricted surveys and seeks clarification from National Grid that these can be completed in time and the results analysed so that they can contribute to detailed design decisions. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | As described in **Volume 5.8.1**, section 8.3 'Method', all surveys and assessments have been programmed to be undertaken inside of the optimum survey window. The surveys have formed part of an iterative process, with their findings being used to inform the design of the Proposed Development. |
| **178** | **App 2 Letter 24 Para 4.22** | Para 6.5.14<br>According to the Scoping Report: "…surveys were carried out to assess the preferred Route Corridor". There is no discussion of how the data collected in the early surveys listed in this section were used to decide or inform the preferred route. Where environmental factors might have been in conflict – one consideration suggesting one route choice, a different one another - there is no indication of the objective procedure followed to resolve matters. The EIA will need to demonstrate that a robust selection process | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North | **Volume 5.2.1** describes the Alternatives to the Proposed Development and how these were assessed. |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | | has been followed to minimise the environmental effects arising from the route. | Somerset Council) | |
| **179** | **App 2 Letter 24 Para 4.23** | Para 6.5.19<br>Dormouse surveys: There is some dispute as to whether the surveys conducted followed recognised best practice. There is no written guidance that suggests that nest tube checks should stop as soon as a single record of a Dormouse is found, yet this is the procedure followed in surveys as reported to the Thematic Group, although not as described in paragraph 6.5.22. The disadvantage of such an approach is that there is no objective way at the end of the survey season to gauge the relative importance of different features along the route in terms of local conservation status of the species. This may have implications for route choice and/or mitigation. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | The dormouse survey was undertaken in accordance with Natural England guidance; the survey method and results are described in **Volume 5.8.1** and the supporting appendix in **Volume 5.8.2.** No dormice were recorded in the survey areas. |
| **180** | **App 2 Letter 24 Para 4.24** | Para 6.6.2<br>Value of Local Wildlife Sites: Despite IEEM guidelines (which are currently under review) it is the case that 'Local Wildlife Sites' can be of more than county significance. Often they can be of regional importance and occasionally of national significance. This is reflected in current Defra guidance on Local Sites. The Joint Councils consider that the value of different County (Local) Wildlife Sites should be judged on a case by case basis rather assuming that they are all of county-level value. Because they can form part of ecological networks and may support protected species, UK Priority Habitats, etc, Local Sites need to be considered in terms of the nature of the interest for which they were designated. In Somerset, in accordance with Defra guidelines, there are written criteria-based reasons for designation of sites and the criteria are publicly accessible and readily available for use in the EIA process. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | The value of Local Wildlife Sites have been assessed on an individual basis and are described in **Volume 5.8.1.** |
| **181** | **App 2 Letter 25 Heading 3. Biodiversity and Nature Conservation** | Rather than repeat them, officers endorse those matters raised in the joint Somerset Councils' response that are relevant to the issue of Scoping the EIA. | South Gloucestershire | Noted |
| **Appendix 2: Representations Related to Historic Environment** | | | | |
| **182** | **App 2 Rep Letter 9** | This development could, potentially, have an impact upon a large number of designated and non–designated heritage assets and their settings in the area along the proposed corridor. In line with the advice in NPPF Chapter 12 we would expect the Environmental Report to contain a thorough assessment of the likely effects which the proposed development might have upon Historic Assets. | English Heritage (South West) | **Volume 5.11.1** describes the baseline historic environment, an assessment of the potential effects of the Proposed Development and proposals for mitigation. |
| **183** | **App 2 Rep Letter 9** | Given the height of the structures associated with the proposed development and the surrounding landscape character, this development is likely to be visible across a very large area and could, as a result, affect the significance of heritage assets at some distance from this site itself.<br><br>We would expect the Assessment to clearly demonstrate that the extent of the proposed Study area is of the appropriate size to ensure that all heritage assets likely to be affected by this development have been included and can be properly assessed. | English Heritage (South West) | Further details and justifications of the study areas used are provided in **Volume 5.11.1.** |
| **184** | **App 2 Rep Letter 9** | The assessment should also take account of the potential impact which associated activities (such as construction activity, servicing and maintenance, and associated traffic) might have upon perceptions, understanding and appreciation of the heritage assets in the area. Assessment should also consider, where appropriate, the likelihood of alterations to drainage patterns that might lead to in situ decomposition or destruction of below ground archaeological remains and deposits, and can also lead to subsidence of buildings and monuments. | English Heritage (South West) | All construction, operation and decommissioning phase components and activities of the Proposed Development are assessed in **Volume 5.11.1**; potential effects of dewatering are considered as part of the assessment of impacts on buried archaeological remains. |
| **185** | **App 2 Rep Letter 9** | Overall the Report covers all the above points and any issues we have previously raised. However there are a few points of clarification which we would like to see addressed in the final Environmental Statement. | English Heritage (South West) | National Grid has taken into account this comment and thanks English Heritage for their input into the consultation process. |
| **186** | **App 2 Rep Letter 9** | Section 5.7.1 and 7.7 it is very positive that the inter-relationship of effects has been recognising, but both sections need to be cross referenced so the wording is similar. | English Heritage (South West) | The assessment for Historic Environment has been carried out with reference to the methods and assessments of other disciplines. |
| **187** | **App 2 Rep** | Dynamic views, especially along PRoWs, need to be assessed. | English Heritage | Assessment of views has been considered as part of the setting |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | **Letter 9** | | (South West) | assessment in **Volume 5.11.1**. Views along PRoWs are considered as part of the Landscape and Visual Impact assessments provided in **Volumes 5.6.1 and 5.7.1.** |
| **188** | **App 2 Rep Letter 9** | In Section 7.4.20 we are pleased to see that equal weight has been given to non-designated heritage assets, which are of demonstrable designatable significance. | English Heritage (South West) | This approach has been adopted throughout the assessment detailed in **Volume 5.11**. |
| **189** | **App 2 Rep Letter 9** | In Table 11.2, p120, under the Representation column the row starting 'one or several experts who have….' under How Addressed in the EIA column replace 'archaeological' with 'historic environment', this then covers all asset types. | English Heritage (South West) | This has been addressed in **Volume 5.11.1** |
| **190** | **App 2 Rep Letter 9** | Under Section 7.4.19 does the footprint include, for instance, compounds, access routes for plant etc? This is of concern as these activities can significantly impact on some historic assets. | English Heritage (South West) | This has been addressed in **Volume 5.11.1** |
| **191** | **App 2 Rep Letter 9** | Under Section 7.5.8 the 11th bullet point needs to add a reference to local historic parks and gardens. | English Heritage (South West) | This has been addressed in **Volume 5.11.1** |
| **192** | **App 2 Rep Letter 9** | Also in Section 7.5.8 under the final bullet point, remove English Heritage from the list, we do not hold Lidar data. This could be replaced with Environment Agency, who do hold this data. | English Heritage (South West) | LiDAR data was obtained from the Environment Agency for assessment, the results of which have been included in the **Volume 5.11.1**. |
| **193** | **App 2 Rep Letter 9** | Under Sections 7.5.12 and 13 the assets excluded from the survey need to be recorded so we are aware they have been assessed. This could form a table in an appendix. | English Heritage (South West) | All assets within the study areas, and those outside the study areas but included in the assessment, are summarised in the appendices of **Volume 5.11.2** |
| **194** | **App 2 Rep Letter 9** | In Section 7.5.16 the following sentence needs to be added 'If the field methodology is not suitable for core recovery, provision should be made to return and take cores/samples using appropriate geo-archaeological techniques. | English Heritage (South West) | The suggested method was adopted for the assessment and is described in **Volume 5.11.1.** |
| **195** | **App 2 Rep Letter 9** | In Section 7.5.22 significant views from highly designated assets in some cases may be required, i.e. principal rooms in Stately Homes. | English Heritage (South West) | This was considered for applicable historic sites where access is possible, and the results are reported in **Volume 5.11.1**. |
| **196** | **App 2 Rep Letter 9** | When assessing effects of development the potential for dewatering in peat deposits by the Pylon footings needs to be looked at. | English Heritage (South West) | Dewatering has been considered as part of the assessment detailed in **Volume 5.11.1**. |
| **197** | **App 2 Rep Letter 9** | We are unsure about the proposal to split effects into substantial or less than substantial, especially if the latter will not be brought out in the main text of the Historic Environment chapter of the ES and the summary documents that may draw upon the chapter. We would like to see all the effects presented in a text summary in the main body of the chapter, with a tabulated form set out as a technical appendix to the chapter that includes all effects. | English Heritage (South West) | This has been addressed in **Volume 5.11.1** |
| **198** | **App 2 - Nailsea Town Council** | Throughout the document reference to Cadbury Camp on Tickenham Ridge is missing. Cadbury Camp is an Iron Age hill fort and Scheduled Ancient Monument which is managed by the National Trust. It is a hugely popular outdoor destination including (for example) walkers, cyclists and horse riders. Tourism and Heritage should be considered, as should long and short distance views, each of which will be significantly impacted by the new overhead line. | Nailsea Town Council | Cadbury Camp has been included in the assessment (asset ref: SM231), **Volume 5.11.1.** |
| **199** | **App 2 Rep Letter 20** | St Mary the Virgin Church in Portbury should therefore be identified as a receptor, as required in paragraph 7.1.8, and considered accordingly. It is not clear from Paragraph 7.3.2 whether the Church is one of the two Grade 1 Listed Buildings to be considered. | Portbury Parish Council | St Mary the Virgin Church has been included in the assessment (asset ref: LB129) **Volume 5.11.1.** |
| **200** | **App 2 Letter 24 Para 5.1** | ...we are still concerned over the concept of not carrying out geophysical surveys and trial trenching on pylon footprints and access roads as it is our understanding that this is a requirement of National Planning. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | The scope of geophysical survey and trial trenching was developed further, with the ongoing input of statutory and non-statutory consultees. The results of geophysical survey and trial trenching are provided in **Volume 5.11.2**, **Appendix 11C and 11D**. |
| **201** | **App 2 Letter 24 Para 5.3** | Geophysical survey must take place on areas of known archaeology and potential archaeology. Without information concerning the character, date and extent of assets it is not possible to understand an asset's significance. This also applies to trial trenching. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North | The scope of geophysical survey and trial trenching was developed further, with the ongoing input of statutory and non-statutory consultees. The results of geophysical and trial trenching are provided in **Volume 5.11.2**, **Appendix 11C and 11D**. |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | | | Somerset Council) | |
| **202** | **App 2 Letter 24 Para 5.4** | It is therefore recommended that Geophysical Survey and Trial Trenching must not be restricted to specific types of impact as that is contrary to National Planning Policy Framework (NPPF) para. 128 and 135 which require evaluation to assess the significance of assets and the scale of harm or loss on the significance of assets. Within the area of the Mendip AONB, and crossing the Failand ridge and Gordano, undergrounding will effectively destroy all known and unknown heritage assets, and the initial stage of geophysical survey will need to be 100% gradiometry survey, to best identify the currently unknown heritage assets. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | The scope of geophysical survey and trial trenching was developed further, with the ongoing input of statutory and non-statutory consultees. The results of geophysical survey and trial trenching are provided in **Volume 5.11.2**, **Appendix 11C and 11D**. |
| **203** | **App 2 Letter 24 Para 5.5 & 5.6** | The EIA should reflect national planning policy and not adopt particular descriptions or assessment criteria peculiar to designated assets to assess all assets. It is therefore recommended that the definition of impact or harm should not be restricted to substantial or less than substantial as this is only applied for designated (or equivalent) assets (see 7.1.6 below). | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | The terminology used has been altered to reflect these comments, and a note explaining usage of terms is included in the introduction of **Volume 5.11.1**<br><br>The assessment criterion allows comparison with the classification of substantial and less than substantial harm in government policy (e.g. NPPF); however, the method is not restricted to these conclusions. |
| **204** | **App 2 Letter 24 Para 5.7 - 5.9** | All elements of the scheme that have the potential to impact upon heritage assets or their setting must be included in the EIA. It is therefore recommended that pylons, access tracks, drop down areas and any other necessary infrastructure must form part of the potential impacts during operational phase.<br><br>The mitigation statements cannot be achieved (see 7.6.12) unless the above recommendations are applied. Avoidance of buried remains is not possible unless an assessment of buried remains is made including geophysical survey and trial trenching of potential sites. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | The assessment includes all activities and components of the Proposed Development, as described in **Volume 5.3.1.** |
| **205** | **App 2 Letter 24 Para 5.10 - 5.11** | EIAs should be an iterative process that includes all classes of assets rather than a fixed process that identifies High and Moderate significant assets, and fails to assess impacts on Low significant assets. Consultation must play a major role in deciding elements of the assessment. For example adjusting the data collection areas for Historic Landscape Characterisation setting must be done in conjunction with the appropriate Local Planning Authority Historic Environment Officer. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | The assessment considers effects on all heritage assets.<br><br>Consultation with statutory and non-statutory consultees was ongoing throughout the assessment process and National Grid would like to thank consultees for the comments and suggestions provided. |
| **206** | **App 2 Letter 24 Para 5.12** | The methodology proposed will not be sufficient to identify assets with the potential to be of regional or local significance. This is particularly relevant in areas that have archaeological potential but have not been subject to investigation. Assets already recorded on the HERs (Historic Environment Records) (Somerset, North Somerset, Bristol, South Gloucestershire) but insufficiently investigated are assessed within this scoping document as Low significance, but these assets may have the potential to be of Medium or High significance. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | The scope of geophysical survey and trial trenching was developed further, with the ongoing input of statutory and non-statutory consultees. The results of geophysical survey and trial trenching are provided in **Volume 5.11.2**, **Appendix 11C and 11D.** |
| **207** | **App 2 Letter 24 Para 5.13 & 5.14** | The number of different terms described here may lead to confusion on the part of the reader. We note numerous references to compliance with the EU Directive; the EU Directive has been amended many times and as a result these changes were codified as Directive 2011/92/EU and we note that this does not prescribe the use of any particular terminology, only that impacts should be identified and assessed. This fact notwithstanding, we note that some terminology employed by the EU Directive is not followed in National Grid's proposed approach, for instance at paragraph 7.1.6 the term 'negative' is used, whereas the Directive uses the term 'adverse'. The term 'adverse' would be preferred in terms of avoiding misunderstandings. We recommend that all terminology within both the technical and non-technical Cultural Heritage chapters of the ES should comply with accepted terminology as set out by NPPF and other professional guidelines produced by English Heritage and the IfA. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | The terminology used has been altered to reflect these comments, and a note explaining usage of terms is included in the introduction of **Volume 5.11.1.**<br>The assessment criterion allows comparison with the classification of substantial and less than substantial harm in government policy (e.g. NPPF); however, the methodology is not restricted to these conclusions. |
| **208** | **App 2 Letter 24 Para 5.15 & 5.16** | As discussed above, pylon bases should not be excluded from geophysical survey. It is unclear how it will be possible to move works that may impact upon nationally significant remains, especially in the event that these remains are widespread (a large villa complex for instance). A robust baseline should be obtained for the entire scheme to enable impacts to be identified and assessed, as required by the EU Directive. More detail is required on the scale of impacts from pylon bases (i.e. size of footprint and overall effect). It | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset | The scope of geophysical survey and trial trenching was developed further, with the ongoing input of statutory and non-statutory consultees. The results of geophysical survey and trial trenching are provided in **Appendices 11C** and **11D** of **Volume 5.11.2**. |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | | is considered that impacts are not restricted to direct pylon bases but are a cumulative effect of all four pads. Any impacts should be addressed as one overall impact and not four separate impact areas. | Council and North Somerset Council) | Full details of the construction impacts have been provided to statutory and non-statutory consultees. |
| **209** | **App 2 Letter 24 Para 5.17** | The methodology proposes mitigation on currently non-designated assets and potential assets without any assessment of significance. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | The method, as described in **Volume 5.11.1** assesses the significance of all known non-designated assets; field evaluation is included in the scope for some assets. |
| **210** | **App 2 Letter 24 Para 5.18** | The cumulative effects on assets of local significance should be assessed for each study area and across local government areas based on HER responsibility. For example there should be a statement concerning the impacts on all assets within the county of Somerset. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | Cumulative effects are summarised in **Volume 5.11.1**; an assessment of Cumulative Effects is provided in **Volume 5.17.1**. |
| **211** | **App 2 Letter 24 Para 5.19** | Para 7.1.1: - The terminology is confusing and should be defined. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | The terminology used has been altered to reflect these comments, and a note explaining usage of terms is included in the introduction of **Volume 5.11.1.** The assessment criteria allows comparison with the classification of substantial and less than substantial harm in government policy (e.g. NPPF); however, the method is not restricted to these conclusions. |
| **212** | **App 2 Letter 24 Para 5.20** | Para 7.1.6: - NPPF only refers to “substantial” and “less than substantial” when assessing impacts on designated assets (para.132) in terms of weighing the impact against the public benefit of the proposal. When dealing with impacts on non-designated assets NPPF refers to the “scale of harm or loss and the significance” of the impact on the asset (para.135). | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | The assessment criteria, as described in **Volume 5.11.1** allow comparison with the classification of substantial and less than substantial harm in government policy (e.g. NPPF); however, the method is not restricted to these conclusions. |
| **213** | **App 2 Letter 24 Para 5.21** | Para 7.2.9: - The English Heritage guidance “Understanding the Archaeology of Landscapes 2007” and “Environmental Archaeology 2nd ed 2011” should also be applied. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | These guidance documents have been used in the assessment as described in **Volume 5.11.1** in the section 'Method'. |
| **214** | **App 2 Letter 24 Para 5.22** | Para 7.3.4: - The Roman settlement at Crandon Bridge was put forward as a non-designated asset of schedulable quality and should be included on this list. This is also true of the known Roman settlement at Winthill in Banwell, only part of which (not in the corridor) is Scheduled, but which is known from previous work to extend across the line of such. It too, should be included on this list. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | These two assets have been accorded this degree of consideration, as suggested. See **Volume 5.11.** |
| **215** | **App 2 Letter 24 Para 5.23** | Para 7.3.5: - Clarification: the ‘northern end of the corridor’ refers to the area north of the Avon’: this is the part of the route where archaeological potential is lower (but still substantial). | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | This clarification has been adopted for future reporting. See **Volume 5.11.1.** |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| **216** | **App 2 Letter 24 Para 5.24** | Para 7.3.10: - The footprint of the substation at Sandford is another area where initial 100% gradiometry will be necessary during the geophysical survey. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | Geophysical survey of new land-take at substations is included in the scope of assessment works, as described in **Volume 5.11.1**. |
| **217** | **App 2 Letter 24 Para 5.25** | Para 7.4.3: - It is unclear how mitigation to avoid significant effects on high significance buried archaeology could be 'embedded in the design' if the location and extent is not known. All areas where proposed works may impact on buried archaeological remains should be evaluated through geophysical survey and where appropriate trial trenching. The results of these surveys should be fed into the design process to enable impacts upon significant archaeological remains to be avoided where possible. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | The scope of geophysical survey and trial trenching was developed further, with the ongoing input of statutory and non-statutory consultees. The results of geophysical survey and trial trenching are provided in **Appendices 11C** and **11D** of **Volume 5.11.2**. |
| **218** | **App 2 Letter 24 Para 5.26** | Para 7.4.11: - Potential impacts should include the pylons and not be restricted to sealing end compounds, the overhead line and substations. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | The assessment includes all activities and components of the Proposed Development, as described in **Volume 5.3.1.** |
| **219** | **App 2 Letter 24 Para 5.27** | Para 7.4.12: - The system for notification of LPA for repairs likely to impact on heritage assets should be formulated and implemented as part of the EIA statement. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | A method statement addressing this issue is included in **Volume 5.11.1.** |
| **220** | **App 2 Letter 24 Para 5.28** | Para 7.4.20: - More detail on the methodology for identifying Zones of Theoretical Visibility should be provided including details of viewshed analysis. The term "significance" should be used not "sensitivity (significance)". | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | Details of the method for identifying the ZTV and its application are included in **Volume 5.11.1.**<br><br>The terminology used has been altered to reflect these comments, and a note explaining usage of terms is included in the introduction of **Volume 5.11.1**.<br><br>The assessment criteria allows comparison with the classification of substantial and less than substantial harm in government policy (e.g. NPPF); however, the method is not restricted to these conclusions. |
| **221** | **App 2 Letter 24 Para 5.29** | Para 7.5.8: - LiDAR data from the Environment Agency should also be included in the data set as well as UES data from SCC. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | LiDAR data has been obtained from the Environment Agency for assessment, the results of which are included in **Volume 5.11.1.** |
| **222** | **App 2 Letter 24 Para 5.30** | Para 7.5.15: - Geophysical survey should take place on pylon bases where potential for archaeological interest exists. NPPF paragraph 128 is clear that assessment including field evaluation should take place in order to understand the significance of assets, where potential for archaeology has been recognised. Also when and if pylons require piling for support attention should be given to the potential effect on dewatering of potential archaeological and palaeoenvironmental layers below. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North | The scope of geophysical survey and trial trenching was developed further, with the ongoing input of statutory and non-statutory consultees. The results of geophysical survey and trial trenching are provided in the **Appendices 11C** and **11D** of **Volume 5.11.2** |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | | | Somerset Council) | |
| **223** | **App 2 Letter 24 Para 5.31** | Para 7.5.16: - Monitoring of geotechnical investigations will be of limited value, or even useless if the investigative techniques are not appropriate to environmental assessment. This point was raised during Historic Environement Thematic group meetings. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | Monitoring of geotechnical investigations is part of an iterative process of geoarchaeological works also including desk-based assessment and recovery of intact samples. |
| **224** | **App 2 Letter 24 Para 5.32** | Para 7.5.17: - The impact on buried remains of non-designated assets needs to be understood in order to comply with NPPF. Due to the restriction on the geophysical survey (see point 7.5.15 above) it will not be possible to identify previously un-investigated assets. All sites with potential for buried remains should be assessed using geophysical survey and where appropriate field evaluation (trial trenching). This should include pylon bases and any other potential impact areas. This point was raised during Historic Environment Thematic Group meeting No.8 17th April 2013. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | The scope of geophysical survey and trial trenching was developed further, with the ongoing input of statutory and non-statutory consultees. The results of geophysical survey and trial trenching are provided in the **Appendices 11C** and **11D** of **Volume 5.11.2** |
| **225** | **App 2 Letter 24 Para 5.33** | Para 7.5.18: - The statement is contrary to NPPF and saved Local Plan policies as the impacts on affected assets significance will not be understood in the determination of the proposal. It is normal practice to carry out geophysical survey and trial trenching on sites with archaeological potential (including such proposals as wind turbines, which have similar impacts as pylons).<br><br>5.19 Para 7.1.1: - The terminology is confusing and should be defined. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | The scope of geophysical survey and trial trenching was developed further, with the ongoing input of statutory and non-statutory consultees. The results of geophysical survey and trial trenching are provided in the **Appendices 11C** and **11D** of **Volume 5.11.2**<br><br>The terminology used has been altered to reflect these comments, and a note explaining usage of terms is included in the introduction of **Volume 5.11.1.**<br>The assessment criterion allows comparison with the classification of substantial and less than substantial harm in government policy (e.g. NPPF); however, the method is not restricted to these conclusions. |
| **226** | **App 2 Letter 24 Para 5.34** | Para 7.5.25: - The SCC Historic Landscape Characterisation should also be used. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | This resource and guidance, were used as part of the assessment. See **Volume 5.11.1.** |
| **227** | **App 2 Letter 24 Para 5.35** | Para 7.5.26: - The English Heritage guidance “2011a” and “2011” should apply. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | This guidance was used as part of the assessment. See **Volume 5.11.1.** |
| **228** | **App 2 Letter 24 Para 5.36** | Para 7.6.2: - The terms used in Table 7.3 are incorrect as there is no such definition as “undesignated assets”. The term non-designated should be applied to assets not currently scheduled or listed. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | The typo was corrected. |
| **229** | **App 2 Letter 24 Para 5.37** | Para 7.6.5: - Attention should be drawn at the beginning of this paragraph to the areas where the ‘magnitude of the effect’ will be total, i.e. in areas of undergrounding (Mendip AONB, and to a lesser extent, Nailsea to Portishead), sealing compounds, substations, and individual pylon sites. | Joint Authorities (Somerset County Council, Sedgemoor | Total destruction of any asset, which corresponds to a high adverse magnitude of effect, is referred to in the **Volume 5.11.1** where appropriate. |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | | | District Council, West Somerset Council and North Somerset Council) | |
| **230** | **App 2 Letter 24 Para 5.38** | Para 7.6.12: - Avoidance cannot be achieved without full assessment of buried archaeological remains in line with NPPF. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | The scope of geophysical survey and trial trenching was developed further, with the ongoing input of statutory and non-statutory consultees. The results of geophysical survey and trial trenching are provided in the **Appendices 11C** and **11D** of **Volume 5.11.2** |
| **231** | **App 2 Letter 24 Para 5.39** | The scoping document submitted to the Council for formal comment includes sections on the Historic Environment (Chapter 7). This provides a detailed assessment methodology for assessing impacts arising directly and indirectly from the development proposals. The document appears appropriate and should allow for adequate assessment of the potential impacts of the proposals and allow for the development of appropriate mitigation, to be included within the environmental impact assessment report.<br><br>As stated in the 'General' section above, whilst we welcome the apparent thoroughness of the proposed approach there are concerns that the process and timetable must allow for an appropriate level of assessment of the environmental impacts as set out within this chapter and to enable the findings to inform the development proposals and develop appropriate mitigation proposals for inclusion within the Environmental Impact Assessment. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | Noted |
| **Appendix 2: Representations Related to Ground Environment** | | | | |
| **232** | **App 2. Rep Letter 3** | Piling risk assessments should be undertaken for the Avonmouth Areas - particularly those which are on former contaminated sites. There are potential risks to groundwater from mobilisation of contaminants. Avonmouth Area has very deep alluvium which requires very deep piles of circa 10m. Some of the route appears to go through former landfill sites as well. The ground and surface waters around Avonmouth are really complicated due to the number of changes in rhine location and direction flow over the years. | Bristol City Council | A piling risk assessment would need to be undertaken following site-specific ground investigations and data collection. This would be undertaken prior to construction/demolition phases and is included in the Draft CEMP, **Volume 5.26**. |
| **233** | **App 2. Rep Letter 3** | The proposed route follows a path where we hold a lot of existing site investigation reports, should the consultants wish to view them they can do so by prior appointment at our offices. It is recommended that the consultants contact Emma Waters (Contaminated Land Officer) Tel: 0117 9223346. | Bristol City Council | A site visit to BCC's offices was undertaken to review existing reports. These were summarised within the technical baseline reports to **Volume 5.9.1** where appropriate. |
| **234** | **App 2. Rep Letter** | There are a number of coal mining legacy issues that can potentially pose a risk to new development and therefore should be considered as part of an Environmental Statement for development proposals within coalfield areas:<br><br>-The location and stability of abandoned mine entries<br>- The extent and stability of shallow mine workings<br>- Outcropping coal seams and unrecorded mine workings<br>- Hydrogeology, minewater and minegas | The Coal Authority | A standalone coal mining risk assessment report has been produced, **Appendix 9I to Volume 5.9.2** to assess potential risks from coal workings. The risk assessment has been undertaken for sections along the Proposed Development, where coal bearing strata are present, and historic coal workings have been recorded. |
| **235** | **App 2 Rep Letter 5** | In addition, consideration should be afforded as part of development proposals and the ES to the following:<br><br>Whether Coal Authority permission is required to intersect, enter, or disturb<br>any coal or coal workings during site investigation or development work. | The Coal Authority | A standalone coal mining risk assessment report has been produced, **Appendix 9I to Volume 5.9.2** to assess potential risks from coal workings. The risk assessment has been undertaken for sections along the Proposed Development, where coal bearing strata are present, and historic coal workings have been recorded. |
| **236** | **App 2 Rep Letter 10** | It is noted that part of the proposed route passes through a groundwater Source Protection Zone 1 (SPZ1). This is located in Section E, Tickenham Ridge, between approximate NGR ST8402 7323 and ST 4767 7273. This part of the route is shown on Figure G1979.1377, and is located approximately 800m to the west of Moat House Farm. Here, the indicative underground cable route crosses a unit of Carboniferous Limestone (Black Rock Limestone), a Principal Aquifer that forms the SPZ1 for the public water supply of Twickenham Road Well, Clevedon, operated by Bristol Water plc.<br><br>Accordingly, there is a significant risk to groundwater and the SPZ1 during the construction stage, | Environment Agency | The SPZ was identified within the technical baseline reports. Consultation with Bristol Water and the Environment Agency is underway to agree mitigations measures to reduce risks to the aquifer from construction activities. See **Volume 5.9.1.** |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | | principally from, inter alia, the spillage of fuels and hydraulic fluid from construction and excavation vehicles. We would therefore expect appropriate pollution prevention measures to be incorporated within the requisite construction environment management plan, to protect this important resource. We also recommend that the developer liaise with Bristol Water plc in respect of this matter. | | |
| **237** | **App 2 Letter 24 Para 6.2** | We welcome the inclusion of geological conservation issues within the ES and would recommend that consideration be given to conserving/enhancing/recording geological features such as the rocks on Crookstone peak and the quarry immediately below it. We would also recommend that Natural England's geological SSSI citations are consulted, where relevant. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | Noted, appropriate mitigation measured to minimise adverse effects on these designated areas have been discussed within **Volume 5.9.1**. |
| **238** | **App 2 Letter 24 Para 6.3** | Based on the presence of Coal Measures within the local area, the potential for historic mine workings to be present should be considered and any potential instability issues that could result. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | A standalone coal mining risk assessment report has been produced, **Appendix 9I to Volume 5.9.2** to assess potential risks from coal workings. The risk assessment has been undertaken for sections along the Proposed Development, where coal bearing strata are present, and historic coal workings have been recorded. |
| **239** | **App 2 Letter 24 Para 6.4** | The extent of the study area may need to be extended for some different aspects, such as potential surface and ground water receptors. If sources of contamination are identified, the subsequent risk assessments should not be limited to receptors within a 250m radius. National Grid is advised to contact the Joint Councils to verify whether they hold any records of contaminated land on the route. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | The baseline technical report (**Appendix 9J, Volume 5.9.2**) and **Volume 5.9.1** include a buffer zone of between 250m and 2km depending upon the receptor. |
| **240** | **App 2 Letter 25 Heading 4. Geological Conservation** | As stated in section 3 of this letter, we are unable to find any mention in this section of survey or assessment of any potential impacts of the works at Aust on potential geologically important beds (related to the nearby SSSI), or of any commitment to mitigation. Section 8.4.1 does not highlight the potential for construction and earthworks to impact on geologically important strata (such as those found at Aust).<br><br>In this respect the Scoping report appears inadequate. | South Gloucestershire | **Volume 5.9.1** identifies potential effects and appropriate mitigation measures to minimise potential adverse effects on the geological SSSI. |
| **Appendix 2: Representations Related to Flood Risk, Water Quality and Resources** | | | | |
| **241** | **App 2. Rep Letter 1.** | The Parish Council notes that the effects of flooding on and from sewers is scoped out of the EIA because it has been identified as unlikely to be adversely effected by the proposed development and therefore the significance of the impact on the receptor does not need to be assessed as part of the EIA. It should be noted that many villages where the line passes within a few metres of private properties are serviced by a septic tank, not mains sewage. Due consideration should be given to the effects of the proposal on these individual systems. | Badgworth Parish Council Somerset | **Volume 5.10.1** addresses the approach to potential effects on private water supplies and septic tanks. It has not been possible at this stage to determine the location of private water supplies and septic tanks within the Order Limits. Notwithstanding this, mitigation measures to prevent pollution and ensure the continued delivery of local services is outlined in the ES and the Draft CEMP **(Volume 5.26)**. Detailed Ground Investigations, hydrological assessments and a Drainage Management Plan would be developed at the detailed design stage, if the DCO is granted; these studies would determine the specific locations at risk. |
| **242** | **App 2. Rep Letter 1.** | Surface water drainage is highly sensitive and can cause flooding in times of heavy rain due to the high water table in the area, something that is not unusual lately. | Badgworth Parish Council Somerset | **Volume 5.10.1** addresses the approach to potential effects on private water supplies and septic tanks. It has not been possible at this stage to determine the location of private water supplies and septic tanks within the Order Limits. Notwithstanding this, mitigation measures to prevent pollution and ensure the continued delivery of local services is outlined in the ES and the Draft CEMP **(Volume 5.26)**. Detailed Ground Investigations, hydrological assessments and a Drainage Management Plan would be developed at the detailed design stage, if the DCO is granted; these studies would determine the specific locations at risk. |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| **243** | **App 2. Rep Letter 3** | There does not appear to be any reference to the techinical guide that supports the NPPF. The Lower Severn Internal Drainage Board should be consulted on the proposal and consideration should be had of tidal flood risk during construction. | Bristol City Council | Technical guidance supporting NPPF has been referenced in the supporting Flood Risk Assessments **Volume 5.23**.The Lower Severn IDB has been consulted. |
| **244** | **App 2. Rep Letter 6 Para 3.1** | Effects of Flooding from Sewers<br><br>This rural area relies on Septic Tanks for sewage treatment. Any intrusion into water courses by undergrounding or positioning concrete platforms for pylons may have a detrimental impact on drainage from septic tanks. | Compton Bishop Parish Council | **Volume 5.10.1** addresses the approach to potential effects on private water supplies and septic tanks. It has not been possible at this stage to determine the location of private water supplies and septic tanks within the Order Limits. Notwithstanding this, mitigation measures to prevent pollution and ensure the continued delivery of local services is outlined in the ES and the Draft CEMP **(Volume 5.26)**. Detailed Ground Investigations, hydrological assessments and a Drainage Management Plan would be developed at the detailed design stage, if the DCO is granted; these studies would determine the specific locations at risk. |
| **245** | **App 2 Rep Letter 10** | Temporary culverts require a lower level of environmental assessment than permanent culverts. It should be noted that if temporary culverts are installed and it subsequently becomes evident that they need to be retained, the culvert may need to be re-assessed and possibly replaced with a more appropriate design.<br><br>With reference to Section 9.5.6 – we would welcome clarification regarding the statement that an appraisal incorporating the objectives of the Water Framework Directive (WFD) is not required in respect of the effects of temporary construction works. Although it is acknowledged that WFD objectives relate to non-temporary effects, it is understood that certain 'temporary' construction works may be in-situ for a number of years. | Environment Agency | All temporary culverts will be removed following the construction phase of the Proposed Development. An assessment of the potential effects of the Proposed Development on WFD quality elements is provided in **Volumes 5.8.1, 5.10.1 and 5.10.2, Appendix 10E.** |
| **246** | **App 2 Rep Letter 10** | It should be noted that it is not mandatory to obtain our requisite Flood Defence Consent (FDC) prior to submission of the Development Consent Order (DCO) application. We would wish to maintain our consenting powers i.e. not allow the DCO to remove our control of any works that require FDC i.e. watercourse crossings. Under such circumstances, any significant route changes resulting from the DCO process, would still be subject to our FDC. | Environment Agency | Where required, Environment Agency Flood Defence Consents will be applied for following the granting of the DCO. Through regular dialogue and consultation with the Environment Agency, their likely requirements for such consents have been taken into account in the design of the Proposed Development. Further discussion would take place at detailed design stage, if the DCO is granted. |
| **247** | **App 2 Rep Letter 10** | Details regarding the proposed assessment and management of waste emanating from the proposed works have not specifically been included. This issue may have environmental permitting and/or formal exemption implications. Accordingly, we will expect the inclusion of full details regarding this matter. | Environment Agency | Details of likely waste streams, arisings and the management of such waste, including any the identification of permits that may be required, is provided in the Outline WMP **Volume 5.26.2** |
| **248** | **App 2 Rep Letter 15** | Based on the Environment Agency's online Flood Maps the majority of the study area is within Flood Zone 3 associated with flooding from fluvial and tidal sources. The risk of river flooding in Flood Zone 3 is within the 1 in 100 year event and is considered to be a high risk of flooding. In addition there are generally narrow zones of Medium Probability Flood Zone 2 between Flood Zones 1 and 3. In this Flood Zone flooding probability will be between 1 in 100 years and 1 in 1000 year.<br><br>The remainder of the study area is within Flood Zone 1 where the risk of flooding from fluvial sources is outside the 1 in 1000 year event and is considered to be at low risk of flooding.<br><br>Sections of the proposed development are in the floodplains of Main Rivers and Ordinary Watercourses (Rhyne). The majority of the study area is within Flood Zone 3 associated with flooding from fluvial sources.<br><br>Construction activities have the potential to cause blockages within watercourses and/or impact upon the floodplains of watercourses ultimately reducing their floodwater storage capability. It should be noted also that excavation adjacent to the banks of watercourses can increase the risk of overtopping and/or breach of the bank by locally lowering the level of protection, or decreasing the integrity of the bank or flood risk asset. This can increase the flood risk to adjacent land and property.<br><br>Mark Moor and Southwick site fall within flood zone 3 and is a 1in 100 year event (high risk) from tidal | Mark Parish Council | All of these concerns are addressed in the FRAs at **Volume 5.23**. |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | | flooding see Environment Agencies Map, plus a number of rhynes crossing Mark Moor.<br><br>The Causeway is an "at risk area" if the sea defences were to be breached at any time. This event last occurred in 1988 and 2012 saw the Levels and Moors flooded for much of the year. In addition several homes in the village and across the Moor were flooded during the months of November and December; this flooding also had an adverse effect on the main sewer system along Mark Causeway with Wessex Water having to pump thousands of gallons of polluted water daily from the surrounding area. Farmers were unable to gain access to their fields for several months because of the level of floodwater. The construction of 46.5 metre high pylons on the moors could result in additional flooding by way of the foundations for the pylons being excavated and filled with tons of concrete thereby dispersing the flood water elsewhere. | | |
| **249** | **App 2 Letter 24 Para 7.2** | However in relation to paragraph 9.6.4 (third bullet relating to the parameters for Moderate Sensitivity), we note that the parameters are unclear in respect of the Flood Risk criteria. The criteria defining the sensitivity of the receptors should be clarified to ensure that the significance of effect matrix is then appropriate when the magnitude of effect is considered in conjunction with receptor sensitivity criteria as follows:<br><br>Moderate – The text "Or a flood plain or defence protecting 10 or fewer residential properties or industrial premises from flooding" is not appropriate, and consider" should be deleted. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | This has been addressed in **Volume 5.10.1.** |
| **250** | **App 2 Letter 24 Para 7.3** | We would also note that Section 9.5.9 fails to mention consents required from the relevant Internal Drainage Board (IDB) or Lead Local Flood Authority (LLFA) under the Land Drainage Act for works affecting ordinary watercourses. Within their area the IDB is the consenting authority for all works or structures in, under, over or within 9 metres of a 'viewed rhyne' or which might affect the channel of any other ditch or watercourses within the IDB area. In all other locations, the LLFA is the consenting authority for any works which might affect a watercourse or fall within any locally established byelaw distance from the watercourse channel. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | National Grid will obtain all relevant consents prior to any construction commencing. |
| **251** | **App 2 Letter 25 Heading 5. Flood Risk** | It is suggested that the following is missing from the Scoping Report:<br>Para 9.2.1 should include reference to the Government's Technical Guidance that supports the NPPF.<br>Para 9.5.5 should include consultation with the Lower Severn Internal Drainage Board.<br>Para 9.5.7 should include reference to Government's Technical Guidance that supports the NPPF. | South Gloucestershire | Technical guidance supporting NPPF has been referenced in the supporting FRAs at **Volume 5.23**. The Lower Severn IDB has been consulted |
| **Appendix 2: Representations Related to Traffic and Transport** | | | | |
| **252** | **App 2. Rep Letter 3** | It would be useful if the applicant clarified that the construction phase would also include decommissioning of 132kV overhead lines as this could be disruptive as the new erection ofoverhead lines.<br><br>We expect there could be significant disruption during the construction phase (including removal of redundant infrastructure) and road closures and diversions which need to be agreed with the Council Network Management. We would prefer closures, particularly of the more strategic routes to be minimised. | Bristol City Council | The Proposed Development activities and components are described in **Volume 5.3.1**. All construction effects in relation to Traffic and Transport, anticipated as part of the development are discussed in detail in **Volume 5.12.1** including any traffic management measures required. |
| **253** | **App 2 Rep Letter 14** | General Aspects to be addressed:<br><br>- An assessment of transport related impacts of the proposal should be carried out and reported as described in the current Department for Transport 'Guidance on Transport Assessment'.<br><br>- Environment impact arising from any disruption during construction, traffic volume, composition or routing change and transport infrastructure modification should be fully assessed and reported.<br><br>- Adverse change to noise and to air quality should be particularly considered including in relation to compliance with the European Air Quality Limit Values and/or in designated Local Authority Air Quality Management Areas (AQMA's).<br><br>- No new connections are permitted to the Highways Agency drainage network. In the case of an existing 'permitted' connection, this can only be retained if there is no land use change. | Highways Agency | The assessment of transport related impacts have been carried out in accordance with 'Guidance on Transport Assessment' and are reported in **Volume 5.12.1** and the TA, **Volume 5.22**.<br>Air quality and Noise and are assessed in **Volumes 5.13 and 5.14** respectively.<br><br>No new drainage connections will be required as part of the Proposed Development. The Proposed Development is not anticipated to lead to any flooding on the strategic road network (see **Volume 5.23**). |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | | - Development must not lead to any surface water flooding on the Strategic Road Network (SRN) carridgeway. | | |
| **254** | **App 2 Rep Letter 14** | Additional Points made to those considered in Table 10.9<br><br>- Please be aware that the road network that the HA assumes responsibility in the vicinity of the site includes the A4 from the St Andrews Roundabout (A304/A4) St Brendan's Roundabout (A4/M5 and m49 slip roads) the Portway Rooundabout (A4/M5 and M49 Slip Roads) as well as the M5, M4, M49 and M48.<br>- As the impact of development during construction is likely to be a primary concern of the HA's, detailed information on staffing numbers, mode share, shift patterns, HGV numbers, HGV arrival departure profiles, development phases and Abnormal Indivisible Loads, should be determined at the earliest opportunity.<br>- For your information, the HA would anticipate the need for controls to ensure that the construction trip generation is not exceeded such that the assessment and accompanying mitigation package can be relied upon. We would anticipate that this requirement will be accomodated through production of a construction Traffic Management Plan.<br>- At this stage the HA is not able to confirm the extent of the study area which we would expect the application to consider, however, we are happy to provide ongoing advice on this matter as information on the extent of the impact is made available. | Highways Agency | National Grid noted the comments on HA responsibility.<br><br>Where possible details on staff trip generation and modal split have been provided along with details on all construction traffic movements within **Volume 5.12.1** and the TA, **Volume 5.22.**<br><br>Construction traffic mitigation is presented in the Draft CTMP, **Volume 5.26.5**. This has been developed in consultation with the relevant local authorities and the Highways Agency. |
| **255** | **App 2 Letter 24 Para 8.1** | The Transport Chapter of the EIA scoping report provides a description of the existing transport network but does not identify key areas for scrutiny for transport assessment. This must be included in the Transport Assessment (TA) scoping note that National Grid propose to include as a separate report to the EIA. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | This is provided in the TA which is provided as Supplementary Document, **Volume 5.22** of the ES. |
| **256** | **App 2 Letter 24 Para 8.2** | Relevant transport policy documents are set out for reference as are the appropriate TA guidelines that National Grid proposes to use in the assessment of impact. It should be noted that the Highways Authority will require a detailed TA to be carried out on transport links and junctions along the route and that the criteria for assessment (i.e the increase in vehicle flow criteria) should be taken from the Department for Transport Guidelines on Transport Assessment. The use of the IEA guidelines for the assessment of the proposed trip generation from the proposed development may mean that there is an underestimation of traffic impact on the existing network, a network which is currently under stress and lacks resilience. The bands limits set in the IEA will be too broad for the effective assessment of the increase in traffic. It should be noted that NPPF paragraph 32 makes clear reference to the need for a TA and travel plan and the glossary of this document includes a definition of a TA. A Construction Management Plan would also need to be included in the TA and the EIA. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | This is provided in the TA which is provided as Supplementary Document, **Volume 5.22** of the ES. |
| **257** | **App 2 Letter 24 Para 8.3** | The TA should also have due regard to the development plan of the respective planning authorities and any policies specifically related to impact assessment and mitigation of National Infrastructure projects. In the case of Sedgemoor, attention is drawn to Policy MIP1 and other relevant policies of the adopted Core Strategy. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | Noted |
| **258** | **App 2 Letter 24 Para 8.4** | The EIA scoping report table 10.9 acknowledges and agrees with the issues that the local authorities raised on transport matters as part of the consultation on the draft EIA Scoping Report. This is welcomed. However, there is an urgency to clarify and agree the scope of the TA between all parties. We wish this matter to be recognised by PINS in the context of this EIA scope. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | Relevant Local Authorities were consulted in the development of the TA, provided as Supporting Document, **Volume 5.22** of the ES. |
| **259** | **App 2 Letter 24** | The scope of the TA was provided to National Grid as part of the consultation response to the draft Scoping Report Transport chapter. These comments need to be taken into account and included in the | Joint Authorities (Somerset County | |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | **Para 8.5** | subsequent TA. These comments are included in appendix A and B for avoidance of doubt. | Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | |
| **260** | **App 2 Letter 24 Appendix A** | Executive Summary<br><br>In order to provide a joint response on representing the views of the Somerset PPA Authorities, Somerset County Council on behalf of Sedgemoor District Council and West Somerset Council has reviewed the documentation that has been provided. Based upon the information presented it is extremely difficult to state agreement or disagreement with the methodology given that the report that has been provided is very general and lacks clarity which could have been represented on plans. No plans were included or information relating to the type and date of the traffic data to be used in the transport assessment. The three Authorities concur with the views expressed by the Highways Agency and North Somerset Council in their response to the Draft Scoping Report for traffic and transportation. Several discussions have taken place between Somerset County Council and the applicant with regards to the movement of Abnormal Loads and the potential impact that may arise out of these movements. Agreement on the routing of such vehicles is still to be agreed. | Appendix A to JA response from Somerset County Council, Sedgemoor District Council and West Somerset Council | All detail known at the time of the production of the Scoping Report was included. This was further developed throughout the ES process to produce the assessment presented in **Volume 5.12.1.** |
| **261** | **App 2 Letter 24 Appendix A** | NOTE: Appendix A to be read in full to interpret the relevant information Please refer to Appendix 2, Letter 24, Appendix A<br><br>A number of considerations taken from the letter are presented below: | Appendix A to Joint Authorities (JA) response from Somerset County Council, Sedgemoor District Council and West Somerset Council | Noted |
| **262** | **App 2 Letter 24 Appendix A Para 1.4** | The word 'Temporary' is used liberally throughout the Draft Scoping Report. The definition of 'Temporary' should be clearly stated up front to clarify the duration of any works. A Construction Method statement is required that would include such definitions of timescales. | Appendix A to Joint Authorities (JA) response from Somerset County Council, Sedgemoor District Council and West Somerset Council | Construction programme is provided at **Volume 5.3.1.** |
| **263** | **App 2 Letter 24 Appendix A Para 1.20** | Development Proposals 1.20 This Chapter should provide a map of all the suggested access points off of the Highway, as well as the general Development Proposals for the substations and their timing of implementation. | Appendix A to Joint Authorities (JA) response from Somerset County Council, Sedgemoor District Council and West Somerset Council | These details are provided within **Volume 5.12.1** and the TA, **Volume 5.22.** |
| **264** | **App 2 Letter 24 Appendix A Para 1.29** | 1.29 A full Construction Management Traffic Plan (CTMP) and Traffic Incident Management Plan (TIMP) should be provided for each of the sites. | Appendix A to Joint Authorities (JA) response from Somerset County Council, Sedgemoor District Council and West Somerset Council | These documents are provided within the Draft CTMP, **Volume 5.26.5.** |
| **265** | **App 2 Letter 24** | 1.37 The TA should provide a summary of any proposed bus routes transporting workers to the area of Works. There may be potential to tap into the HPC bus strategy if there is spare capacity on their buses. | Appendix A to Joint Authorities (JA) | This has been assessed as part of the TA at **Volume 5.22.** |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | **Appendix A Para 1.37** | | response from Somerset County Council, Sedgemoor District Council and West Somerset Council | |
| **266** | **App 2 Letter 24 Appendix A Para 1.56** | 1.56 A suitable method for calculating AADTs and AAWTs should be agreed with SCC prior to any assessments. | Appendix A to Joint Authorities (JA) response from Somerset County Council, Sedgemoor District Council and West Somerset Council | All data collected was agreed with SCC. All future traffic scenarios were discussed prior to the finalisation of any assessments through the consultation process. The method is described in **Volume 5.12.1.** |
| **267** | **App 2 Letter 24 Appendix A Para 1.57** | 1.57 The hours of working should be taken into consideration, particularly in areas where HGVs or AILs would be required to route past houses or other sensitive receptors. | Appendix A to Joint Authorities (JA) response from Somerset County Council, Sedgemoor District Council and West Somerset Council | This information has been provided in the TA **(Volume 5.22)** and the Draft CTMP, **Volume 5.26.5.** |
| **268** | **App 2 Letter 24 Appendix B** | There are two main issues to be considered in the TA:<br><br>1. Traffic generated by the decommissioning and construction phases of the proposed development and its impact on the surrounding network; and<br>2. Traffic generated by the operation of each element of the proposal once fully developed and its impact on the surrounding road network. | Appendix B to JA response from North Somerset Council | Both elements have been considered in all assessments and are detailed in the TA **(Volume 5.22)** |
| **269** | **App 2 Letter 24 Appendix B** | Specifically, assessment of the decommissioning and construction phase must include:<br><br>Phasing of the different elements of the proposal;<br>-Volume of material to be moved to and from the site;<br>-Volume and distribution of Abnormal Indivisible Loads (AILs);<br>-Volume of HGV movements;<br>-Distribution of HGV movements during the construction phases;<br>-Volume and type of all other traffic associated with the decommissioning and construction phase including workforce profile, shift patterns and staff catchment;<br>-Impact of construction traffic on the surrounding local highway network; and<br>-Capacity assessments of key junctions to be agreed with NSC. | Appendix B to JA response from North Somerset Council | Acknowledged. This detail has been set out within the **T**A **(Volume 5.22)** and **Volume 5.12.1.** |
| **270** | **App 2 Letter 24 Appendix B** | An assessment of the operation phase must include<br><br>- Programme of operational requirements for each site where applicable;<br>- Volume and type of traffic generated;<br>- Traffic distribution and assignment;<br>- Details of access; and<br>- Demand for parking and parking provision. | Appendix B to JA response from North Somerset Council | National Grid acknowledges these comments however, traffic associated with the operational phases of development is anticipated to be minimal and has been scoped out of the assessment. |
| **271** | **App 2 Letter 24 Appendix B** | The location of permanent and temporary accesses connecting to the public highway should be provided in the TA, supported by a detailed design plan for approval by NSC Highways and Transport. | Appendix B to JA response from North Somerset Council | This is provided within the TA **(Volume 5.22)** |
| **272** | **App 2 Letter 24** | Where heavy or AILs will be required to access a site, this should be clearly indicated and it would be expected that a full route plan and vehicle tracking assessment (swepth path analysis) is provided in the | Appendix B to JA response from North | |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | **Appendix B** | TA and approved by NSC. | Somerset Council | |
| **273** | **App 2 Letter 24 Appendix B** | The location of any relevant structures over which traffic associated with the proposed development will need to pass should be provided in the TA. The TA should confirm the load bearing capacity of each relevant structure. | Appendix B to JA response from North Somerset Council | |
| **274** | **App 2 Letter 24 Appendix B** | It is recognised that due to the nature of the proposal to construct National Grid infrastructure, there may be relatively limited scope to influence travel behaviour. Notwithstanding the above, a site-specific travel plan for each site should be developed in accordance with North Somerset's Travel Plan SPD and provided with the TA. Given that it is likely that relatively low levels of traffic movements will be associated with the operation of the infrastructure, the Travel Plan should focus on the construction phase of the development and specifically address staff travel to each site. The Travel Plan will need to be agreed by NSC and Ben Searle, Senior Transport Planning Officer should be contacted in this respect. | Appendix B to JA response from North Somerset Council | |
| **275** | **App 2 Letter 24 Appendix B** | A walking and cycling strategy should be prepared to facilitate access to each site. This should include an assessment of barriers to walking and cycling and suitable mitigation measures. | Appendix B to JA response from North Somerset Council | |
| **276** | **App 2 Letter 24 Appendix B** | It would be expected that Guidelines for the Environmental Assessment of Road Traffic (IEMA) in respect of the assessment of highway and traffic issues would be closely followed in the preparation of the EIA transport chapter. These outline the additional transport assessment requirements required for an EIA and include preparation of traffic data to support the assessment of road traffic noise or environmental pollution etc. | Appendix B to JA response from North Somerset Council | The guidelines are discussed in the method section of **Volume 5.12.1** and have been used to inform the assessment presented. |
| **277** | **App 2 Letter 24 Appendix B** | Please revise the incorrect spelling of Banwell (currently presented as Barnwell). | Appendix B to JA response from North Somerset Council | This misspelling was corrected. |
| **278** | **App 2 Letter 24 Appendix B** | The biggest impact in South Gloucestershire is likely to be the construction of the sub-station at Aust, primarily related to the construction and delivery of the components following construction.<br><br>Specifically the substation assessment should contain reference to a construction management plan which for the avoidance of doubt would include routing of vehicles ( no construction vehicles would be allowed to use the B4461), timing of the deliveries to avoid network peak times (would need to be agreed to HA) and a timetable indicating when peak deliveries for the civil phase will occur with identified off-site waiting areas identified to account for the fact that the vehicle access to the site is constrained with limited queuing space available. The access road to the sub-station site is poorly aligned to the existing highway infrastructure and not considered suitable to deal with the proposed traffic generation, and as such details of how access is to be managed at this location would also need to be provided. Given the abnormal number of HGV's accessing the site provision should also be made for a dilapidation survey on the route from the roundabout to the site entrance, which would subsequently need to be agreed with SGC highways/HA. | South Gloucestershire | Aust was removed as an element of the Proposed Development and is no longer being considered. |
| **Appendix 2: Representations Related to Air Quality and Emissions** | | | | |
| **279** | **App 2 Letter 24 Para 9.2** | Clarification is required regarding the trigger for assessment of SF6 emissions, as Chapter 15 clearly states that it will be assessed whilst it is currently stated as being assessed on a risk based approach in Chapter 11.<br><br>Further information regarding existing air quality should also be obtained using the background maps tool on Defra's Local Air Quality Management website.<br><br>No mention has been made regarding the assessment of Nitrogen deposition at sensitive ecological sites within 200m of affected routes, the methodology for which is also outlined in 'The Design Manual for Roads and Bridges'. Further information should be included regarding this. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | Sulphur hexafluoride ($SF_6$) is considered under 'operation effects' in **Volume 5.13.1.**<br>The review of existing 'baseline' air quality includes the mapped estimated background pollutant concentration maps.<br>Where the TA, **(Volume 5.22)** identifies that significant additional road traffic is likely to be generated on local roads, an assessment of nitrogen deposition at sensitive sites would be included in the quantitative assessment using the method outlined in the Design Manual for Roads and Bridges (DMRB). Quantitative assessment of vehicle and plant exhaust emissions is not proposed for temporary haul roads or the working spread, since the number of |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | | The use of the methodology for deriving the significance of effects from the Proposed Development outlined in the IAQM guidance is agreed for the assessment of construction dust. However, if required, further information is required on how the significance of effect from an assessment of construction traffic would be derived. | | vehicles/plant would be small and the routes temporary. |
| **280** | **App 2 Letter 24 Para 9.3** | The traffic data that will be used in the assessment of air quality and emissions will need to be agreed with all parties to ensure a robust assessment is carried out.<br><br>Mitigation measures should be taken from the 'Dust and Air Emissions Mitigation Measures' document that accompanies the IAQM construction dust guidance and the GLA best practice guidance. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | The TA **(Volume 5.22)** was carried out in consultation with the relevant Local Authorities and the Highways Agency; the data generated is considered to be appropriate.<br>The IAQM document is based on emerging guidance from the Greater London Council, as part of their revision of the 'The control of dust and emissions from construction and demolition: Best Practice Guidance' (2006).<br><br>Mitigation measures recommended are based on the updated GLA Best Practice, if available, or the 2006 GLA best practice guidance and the IAQM document. |
| **281** | **App 2 Letter 24 Appendix B** | Should emissions from generators located at substations be assessed?<br><br>Interim Advice Note 170/12 should be taken into account, where DMRB assessment is carried out. | South Gloucestershire | Backup generators (in the event of a temporary loss of local power) will be provided at substations but would be in operation for a very short period of time. Power losses in substation are rare (average once every five years) and are typically fixed within a few hours.<br><br>Interim Advice Note 170/12 has been taken into account where DMRB assessment is undertaken. |
| **Appendix 2: Representations Related to Noise and Vibration** | | | | |
| **282** | **App 2. Rep Letter 1.** | Vibration during Operation is also scoped out of the EIA. Houses that are located within a few metres of the line and the new roads and where the line cuts through villages and small hamlets will experience vibration from construction traffic and movement of heavy infrastructure. | Badgworth Parish Council Somerset | Vibration from construction methods and traffic has been assessed qualitatively and presented in **Volume 5.14.1.** |
| **283** | **App 2. Rep Letter 6** | Many older properties and boundary walls do not have foundations. Any vibration from machinery or construction traffic could have a detrimental impact on these structures. | Compton Bishop Parish Council | Vibration from construction methods and traffic has been assessed qualitatively and presented in **Volume 5.14.1.** |
| **284** | **App 2 Letter 24 Para 10.2** | Table 12.1 of the noise and vibration scope notes that the operational noise remains scoped out, and refers to further explanation of this issue in paragraphs 12.4.3 to 12.4.6. Whilst it is understood that noise emissions are unlikely to cause disturbance from this source, it is considered that this should be confirmed with a commitment to provide some quantitative assessment of operational noise. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | Further information is provided in the appendices provided in **Volume 5.14.2.** |
| **285** | **App 2 Letter 24 Para 10.3** | It is noted that noise and vibration from construction activities will be controlled through the provisions of the Code of Construction Practice. As well as describing generic Best Practicable Means approaches to minimising noise and vibration, the ES should also describe any specific measures that can be identified and have been assumed in reaching the assessment conclusions. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | Measures to control noise and vibration from construction activities are described in **Volume 5.14.1** and the Draft CEMP, **Volume 5.26.1.**<br><br>Assumptions made regarding construction noise and vibration mitigation in assessments is specified in **Volume 5.14.1.** |
| **286** | **App 2 Letter 24 Para 10.4** | The consultation responses note that the effect of general disturbance (including noise) on birds using the estuary will be covered in Ecological Chapter of the ES. The Ecological and Noise and Vibration Chapters should be cross-referenced such that it is clear how the noise baseline and assessment results from the Noise and Vibration assessment have been utilised in the Ecological assessment to determine effects on the species identified as receptor. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | The outputs from the Noise and Vibration chapter have been assessed within **Volume 5.8.1** to determine any detrimental impact on receptor species. |
| **287** | **App 2 Letter 24** | When describing effects, the final EIA text should be consistent in the use of the terms 'impact' and 'effect' e.g. paragraph 12.6.1 refers to magnitude of effect rather than impact. | Joint Authorities (Somerset County | A consistent approach is adopted throughout the ES. |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | **Para 10.5** | | Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | |
| **288** | **App 2 Letter 24 Para 10.6** | In relation to cumulative effects from other potential developments, the final assessment should include the combined, indirect effects of road transport. The assessment should also identify where construction or operational traffic from different developments will simultaneously affect certain road links. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | Cumulative effects from traffic serving simultaneous development are addressed within the TA **(Volume 5.22)** and the Cumulative Effects Assessment, **Volume 5.17.1.** |
| **289** | **App 2 Letter 24 Appendix B** | It is recommended that in response to point 12.4.5 regarding operation noise at Aust substation, some quantitative assessment of operational noise is provided. This is particularly important given the environmental sensitivity of the location including its adjacency to the international designations on and protected species associated with the Severn Estuary. | South Gloucestershire | Aust has been removed as an element of the Proposed Development and is no longer being considered. |
| **Appendix 2: Representations Related to Socio Economic** | | | | |
| **290** | **App 2. Rep Letter 1.** | The Parish Council notes that property prices are scoped out and do not require assessment under the EIA Regulations and further goes on to say that the effect on house prices as a result of this development, as with all types of development is not material to the planning merits of the proposal. The Parish Council wishes the Planning Inspectorate to note that property prices have already plummeted where the proposed overhead line is to pass within a few metres. We would further state that having spoken to several Estate Agents, we can confirm that house prices have been substantially affected in the area and in some cases properties are experiencing difficulties in selling. Some owners who live within a few metres of the overhead proposal have been told that their houses are unsalable. If this serious impact cannot be taken into consideration in the merits of the proposal, the Parish Council would like to know where this adverse impact can be taken into account. | Badgworth Parish Council Somerset | As agreed by PINS, the effect on house prices of an overhead transmission line is not a matter that requires assessment under the EIA Regulations and was scoped out of the socio-economic and land use EIA assessment. |
| **291** | **App 2. Rep Letter 3** | We note that the consideration of the impact on the Avonmouth Severnside Enterprise Area. The potential for impact on the developability of land in the area needs to be assessed as does the impact of existing businesses and the operational capabilities of Bristol Port. The assesssment should also consider the relationship with the proposed development at Seabank Power Station. | Bristol Ciy Council | These developments are considered in **Volume 7.1**. They have also been considered in **Volume 5.15.1** with respect to land developability and business and operational effects on Bristol Port. |
| **292** | **App 2. Rep Letter 6** | Land and property owners are experiencing devaluation of their assets as a direct result of the proposed development by National Grid. Landowners and Farmers who experience an adverse financial impact for this type of development are compensated. Similar compensation should be provided for property owners.<br><br>Badgworth Parish Council stated that a number of people would be willing to pay extra money in their electricity bills to accommodate an underground route and that this is underpinned by the 'willingness to pay' survey. | Compton Bishop Parish Council | As agreed by PINS, the effect on house prices of an overhead transmission line is not a matter that requires assessment under the EIA Regulations and has been scoped out of the socio-economic and land use EIA assessment.<br><br>National Grid has undertaken a willingness to pay survey in relation to existing overhead lines in National Parks and AONBs. This followed the announcement from Ofgem that it is minded to provide an allowance under the latest price control (known as RIIO-T1) for transmission companies to undertake work to mitigate the visual impact of existing transmission lines in National Parks and AONBs. The willingness to pay research was undertaken in order to inform the question of the size of the allowance and will not be used to inform decisions over where (if at all) to place existing lines underground. National Grid took this research into account this research in our RIIO-T1 Business Plan submission, and National Grid welcomes Ofgem's decision to include a provision for up to £500m to address the visual impacts of existing lines in National Parks and AONBs in England, Wales and Scotland. Further information on the WTP study can be found here: http://www.nationalgrid.com/NR/rdonlyres/88431596-2009- |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | | | | 4CDE-BE51-EC5E536FF2BC/55358/NationalGridWTPreport.pdf<br><br>The WTP does not represent a broader attempt to place a monetary value on the landscape and visual impacts of our infrastructure. The approach to mitigating the visual impact of new lines is set out in the Government's National Policy Statements, EN-1 and EN-5. In accordance with our published Approach to the Design and Routeing of New Electricity Lines, National Grid will use an Options Appraisal methodology to help make decisions on, inter alia, whether and where to propose to place new lines underground.<br><br>National Grid does not consider that effects on the environment from our proposals can be properly given a monetary value. It does not feel it is appropriate or realistic to carry out WTP studies for each of the topic areas relating to, for instance, landscape and visual, cultural heritage or biodiversity. Decisions on the balance to be struck between the range of factors involved in promoting new infrastructure are matters of judgement for National Grid, considering meaningful consultation with our stakeholders and the public. Ultimately the Secretary of State must decide on the appropriateness of our proposals, in determining whether development consent should be given in accordance with the relevant National Policy Statements. |
| **293** | **App 2. Rep Letter 6** | This council recognizes that the proposal, by National Grid, to ***exclude quantitative*** assessment of the Tourism Industry in the Scoping Process is a serious omission. The Council would wish for a qualitative assessment to be a precursor to a quantitative assessment which would provide an accurate assessment of the impact of the development on the significant tourism industry in this area. | Compton Bishop Parish Council | The assessment of the effects on tourism, described in **Volume 5.15.1**, draws upon quantitative evidence and primary research through user and count surveys on key public rights of way to assess the value of tourism within the project area. Baseline studies and field validation surveys have been used to identify likely tourism receptors, supported by engagement with tourism operators and local councils. The socio-economic assessment has been supplemented by consideration of the findings from other relevant EIA assessments, including Landscape **(Volume 5.6.1)** and Traffic and Transport **(Volume 5.12.1)**. |
| **294** | **App 2 Letter 24 Para 11.7** | It is likely that the primary socio-economic impacts will be felt through two effects: (i) a reduction in visual amenity and its effect on the quality and reputation of the local tourism offer, and (ii) the reputational impact of the effect of construction traffic over a potentially long construction period on the tourism market. Both of these effects are likely to be exacerbated by cumulative impacts of other developments including but not limited to Hinkley Point C and local renewable energy proposals and, as such, the methodology for cumulative impact assessment is particularly important in this area and requires further engagement with the Joint Councils. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | The socio-economics and land use assessment (see this **Volume 5.17.1, Section 17.3**) includes potential cumulative effects as a result of the Proposed Development in combination with other major developments. The scope of projects considered in the cumulative assessment has been agreed with the relevant planning authorities via a consultation exercise undertaken between 29 October and 19 November 2013 |
| **295** | **App 2 Letter 24 Para 11.8** | The tourism industry is worth over £200m to the Somerset economy and employs over 7,000 people – a disproportionate and growing number of people compared with England as a whole1. It is noted that there is a high likelihood of gaps in the evidence base relating to tourism assets and the impact of high voltage overhead lines on the tourist economy. Given this, and in line with its economic importance, it is appropriate that attention is paid to improving the evidence base relating to the tourism sector and making the most robust possible assessment, including through primary research where appropriate. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | The assessment of the effects on tourism, described in **Volume 5.15.1**, draws upon quantitative evidence and primary research through user and count surveys on key public rights of way to assess the value of tourism within the project area. Baseline studies and field validation surveys have been used to identify likely tourism receptors, supported by engagement with tourism operators and local councils. The socio-economic assessment has been supplemented by consideration of the findings from other relevant EIA assessments, including Landscape **(Volume 5.6)** and Traffic and Transport **(Volume 5.12)**. |
| **296** | **App 2** | Given the potential for impact on PRoW and long distance paths in the vicinity of the proposed project, it is | South | The PRoW baseline assessment includes identification of PRoWs |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | **Letter 24 Appendix B** | recommended that Public Rights of Way are a significant issue that merits their own sub section, heading, and mapping within the EIA. It is not clear from the introduction to section 13 that this includes PRoW, although later text includes this issue. Paragraph 13.2.3 does not mention reference to local authority mapping of PRoW, and related local planning policies (such as promoted routes). While it is recognised that visual impact will be assessed in the relevant section, it will be important for the EIA to assess impact on PRoW routes and amenity. | Gloucestershire | which act as connections between villages and the assessment of impacts on these PRoWs take this into account. The impact on all PRoWs, including permissive paths, within the Local Area of Influence (as identified from Local Authority Definitive Maps) have assessed within the EIA and are presented as **Appendix 15l to Volume 5.15.2**. This assessment considers construction and operational impacts. The TA **(Volume 5.22)** assesses impacts on the highway network. Relevant PRoW officers were consulted upon throughout the development of the EIA for the Proposed Development. A PRoW Management Plan is provided at **Volume 5.26.6**.<br><br>The landscape and visual assessment considers likely long distance views. The findings of this assessment have been incorporated into the socio-economic impact assessment where impacts on visual amenity are anticipated. |
| **297** | **App 2 Letter 24 Appendix B** | Para 13.3.48: although the last sentence does refer to an employment allocation in the South Gloucestershire Local Plan and Core Strategy it does not seem to refer to the Avonmouth Severnside Enterprise Area. (The Enterprise Area is referred to in Table 13.2). As acknowledged in table 13.2, the potential for impact on the developability of land parcels in this area needs to be assessed in the EIA. This does not seem to have been taken into account in the main body of the Scoping Report. In addition any interrelationship or impacts on the proposed development of a Seabank 3 gas fired power station will also need to be assessed. | South Gloucestershire | These developments are considered for the potential of Cumulative Effects in **Volume 17.1**. They have also been considered in **Volume 5.15.1** with respect to land developability and business and operational impacts of Bristol Port. |
| **Appendix 2: Representations Related to Electric and Magnetic Fields and Electro-magnetic Compatibility** | | | | |
| **298** | **App 2 Rep Letter 16** | Incorrect to state that “There is some evidence to suggest that high magnetic fields may be associated with an increased risk of one particular disease, childhood leukaemia.” An expert tells us:<br>'Also, there is powerful additional evidence for adult leukaemia, adult brain cancer, miscarriage and Alzheimer's disease associated with EMFs.' 'One point to emphasise is that National Grid are in denial of adverse health effects apart from the rare childhood leukaemia. The fact is that the evidence for some of these other risks is in fact stronger than that for childhood leukaemia and given that they are more prevalent, are of considerably greater public health significance. This was openly discussed at an EU meeting in Brussels last November [2011].' | Nailsea Town Council | National Grid takes the issue of health very seriously and relies on authoritative and independent scientific organisations such as the World Health Organisation (WHO) and Public Health England (formally the Health Protection Agency) to review the worldwide body of scientific evidence on EMFs and health rather than relying on its own assessment of the science. We believe it is right that the decision on what is acceptable or not is made independently of National Grid.<br><br>NPS EN-5 in section 2.10.6 states ‘The balance of scientific evidence over several decades of research has not proven a causal link between EMFs and cancer or any other disease. The HPA CRCE keeps under review emerging scientific research and/or studies that may link EMF exposure with various health problems and provides advice to the department of Heath on the possible need for introducing further precautionary measures.’<br><br>This is reflected in the policies and guidance used throughout this assessment. |
| **299** | **App 2 Rep Letter 19** | The main public concern relates to overhead lines and the perceived risk from electromagnetic radiation and in particular childhood leukaemia which we note is covered in chapter 14. We advise that if you have not already done so, that you also consult with Public Health England on the content of the environmental statement. | NHS | |
| **300** | **App 2 Rep Letter 17** | We are also concerned that the proposed power lines could potentially, through Electro Magnetic Field (EMF) interference, prevent bat species accessing their foraging areas and their roost sites, though very little is known about the effect of EMF on bats. | Natural England | This is addressed in **Volume 5.16.1**. |
| **Appendix 2: Representations Related to Aviation** | | | | |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| **301** | **App 2 Rep Letter 4** | I understand from the literature supplied that the maximum height of the structures supporting the overhead line (wherever they are routed) would be some 47m, I have few observations beyond highlighting the need for the associated Environmental Statement to identify any aerodrome-specific safeguarding issues. To that end, noting that aerodrome safeguard responsibilities rest in all cases with the relevant aerodrome license holder/operator, I would anticipate a need for the developer to engage with and seek the related viewpoints of several local aerodromes including Bristol International Airport and 2 helicopter landing sites. Any associated documentation supporting a related planning application would be expected to consider potential aerodrome issues. | Civil Aviation Authority | Relevant aviation bodies were consulted upon with respect to the Proposed Development |
| **302** | **App 2 Rep Letter 4** | Moreover, I am aware that, in respect of military aviation operations, the Ministry of Defence (MoD) has expressed generic concerns associated with overhead power lines. It is consequently possible that the MoD would make recommendation related to the lighting of the towers and marking of the wires. Accordingly, it is important that any environmental study establishes the MoD viewpoint related to the subject proposal. The Service should be aware that in general the CAA would wish to support MoD recommendation concerning enhancement to wire conspicuity. Additionally, there would be a requirement for the overhead line to be promulgated for aviation purposes. Details of the overhead line and supporting structures would need to be provided to the Defence Geographic Agency. As an aside, it should be noted that, the CAA promulgates known power lines which have a height of 80ft or more, drawing information from a Defence Geographic Agency database. The MoD is known to use a lower threshold. | Civil Aviation Authority | Relevant aviation bodies were consulted upon with respect to the Proposed Development |
| **Appendix 2: Representations Related to Cumulative Effects** | | | | |
| **303** | **App 2 Rep Letter 17** | It is important that all assessments under the EIA umbrella consider the 'in-combination' impacts of the project with other projects/plans as well as the cumulative effects of plans, projects, activities or processes outside the scope of the in-combination assessment. | Natural England | This has been undertaken and is presented at **Volume 5.17**. |
| **304** | **App 2 Rep Letter 24 Para 2.11 ' Cumulative Effects'** | We welcome National Grid's proposal to consult with the Joint Councils regarding the scope of cumulative effects and note that spatial and temporal boundaries of the assessment remain to be clarified and that the methodology for determining the significance of cumulative effects has not been put forward at this stage. Close engagement with the Joint Councils will be required to ensure that the significant effects arising from the combination of multiple non-significant effects are robustly identified and mitigated. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | Consultation with all statutory consultees was undertaken between 29 October and 19 November 2013 to discuss and agree the proposed method for the assessment of potential cumulative effects and whether there were any further major development proposals that should be considered by National Grid. This consultation is described further in **Volume 5.17.1, Section 17.2** under the heading 'Consultation Process' and also set out in **Tables 17.5 and 17.6.** |
| **305** | **App 2 Rep Letter 24 Para 3.8** | The geographic extent of the study area for the consideration of cumulative effects and the specific development to be included in the assessment should be agreed in advance of the assessment being undertaken | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | |
| **306** | **App 2 Rep Letter 24 Para 3.9** | The Scoping Report refers to National Infrastructure Planning Advice Note 9 when identifying the types of development to be included in the cumulative assessment. This does not include existing development (which is considered to be addressed within the baseline position). However, there is potential for adverse cumulative effects to arise as a result of the proposed line and existing lines, including lower capacity lines, not removed as part of the scheme. | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | Existing overhead lines (including lower capacity overhead lines) are considered as part of the existing landscape or view. The great majority have been in place for decades. They are considered when determining the sensitivity of the landscape or view to the Proposed Development. The Proposed Development is assessed in the context of the existing environment including existing development such as overhead lines.<br><br>The effects on landscape character and on views of the Proposed Development in the context of existing overhead lines is reported in the assessments.<br><br>As the effects of the Proposed Development together with existing overhead lines (and other existing developments) is considered in |
| **307** | **App 2 Rep Letter 24 Para 3.10** | The 'Overarching National Policy Statement for Energy' EN-1 states that "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)."As such it is considered that existing lines, not removed as part of the scheme should form part of the assessment of cumulative landscape and visual effects | Joint Authorities (Somerset County Council, Sedgemoor District Council, West Somerset Council and North Somerset Council) | |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | | | | the assessment of effects, it is not appropriate to present this assessment again in the sections addressing cumulative effects of the Proposed Development with other proposals not yet implemented. |
| **Appendix 3: Presentation of the Environmental Statement** | | | | |
| **308** | **App 3, Assessment of Effects and Impact Significance** | The SoS considers it is imperative for the ES to define the meaning of 'significant' in the context of each of the specialist topics and for significant impacts to be clearly identified. The SoS recommends that the criteria should be set out fully and that the ES should set out clearly the interpretation of 'significant' in terms of each of the EIA topics. Quantitative criteria should be used where available. The SoS considers that this should also apply to the consideration of cumulative impacts and impact inter-relationships. | PINS | Noted – the approach to significance is described at **Volume 5.5.1** (EIA Approach and Method). Each individual assessment chapter (Volume 5.6.1 – 5.16.1) describes the method used to determine significance in their associated 'Method' sections. This is then used for the cumulative assessment in **Volume 5.17**. |
| **309** | **App 3, Cumulative Impacts** | The potential cumulative impacts with other major developments will need to be identified, as required by the Directive. The significance of such impacts should be shown to have been assessed against the baseline position (which would include built and operational development). In assessing cumulative impacts, other major development should be<br>identified through consultation with the local planning authorities and other relevant authorities on the basis of those that are:<br>• under construction<br>• permitted application(s), but not yet implemented<br>• submitted application(s) not yet determined<br>• projects on the National Infrastructure's programme of projects<br>• identified in the relevant development plan (and emerging development plans - with appropriate weight being given as they move closer to adoption) recognising that much information on any relevant proposals will be limited, and<br>• identified in other plans and programmes (as appropriate) which set the framework for future development consents/approvals, where such development is reasonably likely to come forward.<br>Details should be provided in the ES, including the types of development, location and key aspects that may affect the EIA and how these have been taken into account as part of the assessment.<br>The SoS recommends that offshore wind farms should also take account of any offshore licensed and consented activities in the area, for the purposes of assessing cumulative effects, through consultation with the relevant licensing/consenting bodies.<br>For the purposes of identifying any cumulative effects with other developments in the area, applicants should also consult consenting bodies in other EU states to assist in identifying those developments (see commentary on Transboundary Effects below). | PINS | **Volume 5.17.1** provides a full assessment of the potential Cumulative Effects of the Proposed Development specifically 'in combination with' other major development projects in the vicinity. The method and list of projects to be considered was developed in consultation with relevant Local Authorities and key stakeholders. |
| **310** | **App 3, ES Indicative Contents** | Schedule 4 Part 1 of the EIA Regulations states this information includes:<br>'17. Description of the development, including in particular:<br>(a) a description of the physical characteristics of the whole development and the land-use requirements during the construction and operational phases;<br>(b) a description of the main characteristics of the production processes, for instance, nature and quantity of the materials used;<br>(c) 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. | PINS | **Volume 5.3.1** provides details of the Proposed Development. The outline of the ES is described in **Volume 5.1.1** and in more detail in **Volume 5.5.1** including a description of the approach and method of the EIA undertaken in respect of the EIA regulations. |
| **311** | **App 3, ES Indicative Contents** | An outline of the main alternatives studied by the applicant and an indication of the main reasons for the applicant's choice, taking into account the environmental effects | PINS | Alternatives are discussed in **Volume 5.2.1.** |
| **312** | **App 3, ES Indicative Contents** | A description of the aspects of the environment likely to be significantly affected by the development, including, in particular, population, fauna, flora, soil, water, air, climatic<br>factors, material assets, including the architectural and archaeological heritage, landscape and the interrelationship between the above factors. | PINS | **Volumes 5.1.1** and **5.5.1** provide description of the environmental aspects to be covered by the EIA. ES environmental topic chapters are provided in **Volume 5.6 to 5.16**. |
| **313** | **App 3, ES Indicative** | A description of the likely significant effects of the development on the environment, which should cover the | PINS | These are described in ES environmental topic Chapters, **Volumes 5.6 to 5.16.** |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| | **Contents** | direct effects and any indirect, secondary, cumulative, short, medium and long-term, permanent and temporary, positive and negative effects of the development, resulting from:<br>(a) the existence of the development;<br>(b) the use of natural resources;<br>(c) the emission of pollutants, the creation of nuisances<br>and the elimination of waste, and the description by the applicant of the forecasting methods used to assess the effects on the environment | | Cumulative Effects have been detailed in **Volume 5.17.** |
| **314** | **App 3, ES Indicative Contents** | A description of the measures envisaged to prevent, reduce and where possible offset any significant adverse effects on the environment. | PINS | Mitigation measures are presented in the individual ES Chapters and supporting document, appendices and figures. |
| **315** | **App 3, ES Indicative Contents** | A non-technical summary of the information provided under paragraphs 1 to 5 of this Part | PINS | A non-technical summary is provided at **Volume 5.19.** |
| **316** | **App 3, ES Indicative Contents** | An indication of any difficulties (technical deficiencies or lack of know-how) encountered by the applicant in compiling the required information. | PINS | Each ES environmental topic chapter identified limitations and assumptions in the 'Method' section. |
| **317** | **App 3, ES Indicative Contents** | The content of the ES must include as a minimum those matters set out in Schedule 4 Part 2 of the EIA Regulations. This includes the consideration of 'the main alternatives studied by the applicant' which the SoS recommends could be addressed as a separate chapter in the ES | PINS | The ES covers all topics identified in Schedule 4 Part 2 of the EIA Regulations. This is detailed in **Volumes 5.1.1 and 5.5.1**. Alternatives are discussed in **Volume 2.2.** |
| **318** | **App 3, ES Indicative Contents** | Traffic and transport is not specified as a topic for assessment under Schedule 4; although in line with good practice the SoS considers it is an important consideration per se, as well as being the source of further impacts in terms of air quality and noise and vibration | PINS | The Traffic and Transport assessment is provided at **Volume 5.12.1** and the TA **(Volume 5.22).** |
| **319** | **App 3, ES Balance** | The SoS recommends that the ES should be balanced, with matters which give rise to a greater number or more significant impacts being given greater prominence. Where few or no impacts are identified, the technical section may be much shorter, with greater use of information in<br>appendices as appropriate.<br>The SoS considers that the ES should not be a series of disparate reports and stresses the importance of considering inter-relationships between factors and cumulative impacts. | PINS | This has been taken into account in the structure and writing of the ES. Inter-relationship of effects is considered within each environmental topic chapter of the ES. |
| **320** | **App 3, ES Scheme Proposals** | The scheme parameters will need to be clearly defined in the draft DCO and therefore in the accompanying ES which should support the application as described. The SoS is not able to entertain material changes to a project once an application is submitted. The SoS draws the attention of the applicant to the DCLG and the Planning Inspectorate's published advice on the preparation of a draft DCO and accompanying application documents. | PINS | This has been taken into account in the Limits of Deviation for the Proposed Development, as described in **Volumes 5.3.1 and 5.5.1.** |
| **321** | **App 3, ES Flexibility** | The SoS acknowledges that the EIA process is iterative, and therefore the proposals may change and evolve. For example, there may be changes to the scheme design in response to consultation. Such changes should be addressed in the ES. However, at the time of the application for a DCO, any proposed scheme parameters should not be so wide ranging as to<br>represent effectively different schemes | PINS | This has been taken into account in the Limits of Deviation for the Proposed Development, as described in **Volumes 5.3.1 and 5.5.1.** |
| **322** | **App 3, ES Flexibility** | It is a matter for the applicant, in preparing an ES, to consider whether it is possible to assess robustly a range of impacts resulting from a large number of undecided parameters. The description of the proposed development in the ES must not be so wide that it is insufficiently certain to comply with requirements of paragraph 17 of Schedule 4 Part 1 of the EIA Regulations | PINS | **Volume 5.3.1** provides a full description of the Proposed Development in accordance with EIA Regulations |
| **323** | **App 3, ES Flexibility** | The applicant should make every attempt to narrow the range of options and explain clearly in the ES which elements of the scheme have yet to be finalised and provide the reasons. Where some flexibility is sought and the precise details are not known, the applicant should assess the maximum potential adverse impacts the project could have to ensure that the project as it may be constructed has been properly assessed. | PINS | National Grid acknowledges the comments made. |
| **324** | **App 3, ES Flexibility** | The ES should be able to confirm that any changes to the development within any proposed parameters would not result in significant impacts not previously identified and assessed. The maximum and other dimensions of the proposed development should be clearly described in the ES, with appropriate justification. It will also be important to consider choice of materials, colour and the form of the structures and of any buildings. Lighting proposals should also be described | PINS | National Grid acknowledges the comments made. |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| **325** | **App 3, ES Scope** | The SoS recommends that the physical scope of the study areas should be identified under all the environmental topics and should be sufficiently robust in order to undertake the assessment. The extent of the study areas should be on the basis of recognised professional guidance, whenever such guidance is available. The study areas should also be agreed with the relevant consultees and local authorities and, where this is not possible, this should be stated clearly in the ES and a reasoned justification given. The scope should also cover the breadth of the topic area and the temporal scope, and these aspects should be described and justified. | PINS | The study areas have been identified for each individual topic considered in the ES with full description and justification provided. |
| **326** | **App 3, ES Scope, Physical Scope** | In general the SoS recommends that the physical scope for the EIA should be determined in the light of:<br>• the nature of the proposal being considered<br>• the relevance in terms of the specialist topic<br>• the breadth of the topic<br>• the physical extent of any surveys or the study area, and<br>• the potential significant impacts. | PINS | National Grid acknowledges the comments made. |
| **327** | **App 3, ES Scope, Physical Scope** | The SoS recommends that the physical scope of the study areas should be identified for each of the environmental topics and should be sufficiently robust in order to undertake the assessment. This should include at least the whole of the application site, and include all offsite works. For certain topics, such as landscape and transport, the study area will need to be wider. The extent of the study areas should be on the basis of recognised professional guidance and best practice, whenever this is available, and determined by establishing the physical extent of the likely impacts. The study areas should also be agreed with the relevant consultees and, where this is not possible, this should be stated clearly in the ES and a reasoned justification given | PINS | The study areas have been identified for each individual topic considered in the ES with full description and justification provided. |
| **328** | **App 3, ES Scope, Breadth of the topic area** | The ES should explain the range of matters to be considered under each topic and this may respond partly to the type of project being considered.<br>If the range considered is drawn narrowly then a justification for the approach should be provided | PINS | **Volume 5.5.1** describes the approach and method of the EIA including the matters to be considered under each topic. |
| **329** | **App 3, ES Scope, Temporal Scope** | The assessment should consider:<br>• environmental impacts during construction works<br>• environmental impacts on completion/operation of the development<br>• where appropriate, environmental impacts a suitable number of years after completion of the development (for example, in order to allow for traffic growth or maturing of any landscape proposals), and<br>• environmental impacts during decommissioning | PINS | The ES considers the environmental effects of the Proposed Development during construction, operation and decommissioning. This approach is taken for all topic chapters in the ES. |
| **330** | **App 3, ES Scope, Temporal Scope** | In terms of decommissioning, the SoS acknowledges that the further into the future any assessment is made, the less reliance may be placed on the outcome. However, the purpose of such a long term assessment, as well as to enable the decommissioning of the works to be taken into account, is to encourage early consideration as to how structures can be taken down. The purpose of this is to seek to minimise disruption, to reuse materials and to restore the site or put it to a suitable new use. The SoS encourages consideration of such matters in the ES.<br><br>The SoS recommends that these matters should be set out clearly in the ES and that the suitable time period for the assessment should be agreed with the relevant statutory consultees.<br><br>The SoS recommends that throughout the ES a standard terminology for time periods should be defined, such that for example, 'short term' always refers to the same period of time. | PINS | **Volume 5.3.1** identifies the timeframe of decommissioning of the development |
| **331** | **App 3, ES, Baseline** | The SoS recommends that the baseline should describe the position from which the impacts of the proposed development are measured. The baseline should be chosen carefully and, whenever possible, be consistent between topics. The identification of a single baseline is to be welcomed in terms of the approach to the assessment, although it is recognised that this may not always be possible. | PINS | National Grid acknowledges these comments and has considered it in determining the baselines of the EIA topic chapters. |
| **332** | **App 3, ES, Baseline** | The SoS recommends that the baseline environment should be clearly explained in the ES, including any dates of surveys, and care should be taken to ensure that all the baseline data remains relevant and up to date. | PINS | A full detail of the baseline for each topic is provided in the ES, **Volumes 5.6.1 - 5.16.1.** The approach to the EIA is described in **Volume 5.5.1**. |

| Volume 5.5.2 Appendix 5B Scoping Opinion - Representations and Responses | | | | |
|---|---|---|---|---|
| **ID NO** | **PARA REF.** | **REPRESENTATION** | **CONSULTEE** | **RESPONSE** |
| **333** | **App 3, ES, Baseline** | For each of the environmental topics, the data source(s) for the baseline should be set out together with any survey work undertaken with the dates. The timing and scope of all surveys should be agreed with the relevant statutory bodies and appropriate consultees, wherever possible. | PINS | A full detail of the baseline for each topic is provided in the ES, **Volumes 5.6.1 - 5.16.1.** The approach to the EIA is described in **Volume 5.5.1**. |
| **334** | **App 3, ES, Baseline** | The baseline situation and the proposed development should be described within the context of the site and any other proposals in the vicinity. | PINS | A full detail of the baseline for each topic is provided in the ES, **Volumes 5.6.1 - 5.16.1.** The approach to the EIA is described in **Volume 5.5.1**. |

# Appendix 5C – Draft Environmental Statement and Supporting Documents February 2014 Engagement - Representations and Responses

**VOLUME 5.5.2, APPENDIX 5C: DRAFT ENVIRONMENTAL STATEMENT AND SUPPORTING DOCUMENTS FEBRUARY 2014 ENGAGEMENT – REPRESENTATIONS AND RESPONSES**

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| **Joint Councils – ES** | | | |
| **Covering Letter Key Issues** | | | |
| **Overarching Concerns and Geographically Specific Issues** | | | |
| 1 | 1.1 | Whilst the Joint Councils support the principle of applying a 'Rochdale Envelope' to provide flexibility for the proposed development, it is considered that the lack of a defined longitudinal LoD for the pylon positions potentially undermines conclusions drawn in the draft ES regarding impact significance. Specific limits of longitudinal LoD should be defined in the formal application for Development Consent. These could be framed in terms of general LoD and/or in terms of LoD which confirm that pylons cannot be placed in specific sensitive areas or locations (akin to 'exclusion zones'), otherwise National Grid risk undermining conclusions drawn with respect to significant effects, e.g. moving a T pylon by 200m could have impact an entirely different set of receptors, with differing levels of sensitivity or movement within a development parcel could affect developability | **Volume 5.5.1** has been updated to include a defined longitudinal LoD. |
| 2 | 1.1 | The National Grid response to the LPAs' Schedule of Requirements and Obligations is helpful to see, but it is impossible for the Joint Councils to assess without sight of the controls, requirements and obligations referred to. In addition, the Councils note the theme of National Grid referring to an issue being "considered" or "dealt with" in a management plan or strategy. The specific issues the Joint Councils raised are commonly not dealt with in those documents. Further, the Councils do not accept in a number of cases that a 'flexible' management plan is an appropriate way to secure important mitigation | National Grid acknowledges this comment. |
| 3 | 1.1 | The Information to Inform a Habitats Regulations Assessment (HRA) is considered to be inadequate and a potential risk to the application if submitted in its current state. In addition, we do not agree with the conclusion that Hallen Marsh does not support SPA species | The HRA provided in **Volume 5.20** was still in draft form at the time of the February consultation. National Grid has worked with Natural England throughout the production of the HRA and have continued to do so since the February consultation. The version submitted with the DCO addresses the points raised in the Joint Councils and Natural England's detailed responses to the HRA. Natural England's informal response is that they are now satisfied with the HRA. |
| 4 | 1.1 | The majority of the proposed replacement and new mitigation planting will be subject to 3rd party agreement and cannot therefore be relied on as mitigation. This a significant concern in light of the potential for harm to regional landscape character due to the extensive vegetation clearance proposed. It remains our position that a 15 year maintenance strategy is required in this respect and that the 5 year provision in the | The assessments in the Environmental Statement do not rely on implementation of the OSPES planting as mitigation.<br><br>Funding for the OSPES takes account of the costs to negotiate with landowners, prepare schemes, implement them and monitor and maintain them for 5 years. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | DCO model requirements is inappropriate to the nature of the scheme. Although the current provisions through the on and offsite landscape mitigation planting are considered to be closer to being appropriate and proportional to the proposed development, there remain substantial concerns regarding their deliverability and their status in relation to the DCO. In the event that impacts cannot be mitigated, appropriate compensation will be required | 5 years is the appropriate period for maintenance and is the timeframe set out in the model DCO provisions in PINS guidance.<br><br>The funding for the OSPES would be secured via a S106 agreement and would be drawn down as required. National Grid does not consider that 'compensation' other than funding planting is appropriate and that in the absence of the OSPES planting the proposals would remain acceptable considered against national planning policy. |
| 5 | 1.1 | The impact of the undergrounding works on the Mendips AONB and associated effects on Mendip SACs is considered to be downplayed in relation to the beneficial effects of 132kV overhead line removal | National Grid acknowledges this comment. |
| 6 | 1.1 | The reduction of the proposed buffer for PRoW improvements, from 3km to 1km, which had previously been consulted on, results in a scheme that does not adequately address impact on the amenity or setting of the PRoW network. In addition, it is noted that certain PRoW, rather than all affected footpaths are identified as potentially being subject to mitigation. We support the list of ProW identified in paragraph 6.3.2 of the Offsite Planting and Enhancement Scheme (OSPES) as discussed in 2013. The Joint Councils consider that the proposals should better mitigate the geographic scope of the impacts and the scale of the proposals | The OSPES sets out landscaping proposals. Effects on Public Rights of Way have been considered in setting out the OSPES. There is provision in the OSPES for PRoW works to be implemented to PRoWs in the vicinity of the Proposed Development, as identified in the OSPES PRoW improvements, although the expenditure of the allocated funds would be at the reasonable discretion of the Councils. |
| 7 | 1.1 | Archaeological mitigation proposals are considered to be premature, in a number of cases, lacking an informed assessment upon which to draw conclusions in relation to mitigation works. Further field evaluation is required and will draw on officer time. Mitigation in relation to the built environment is considered to be lacking | Mitigation of physical effects on archaeology was discussed at TGM of 118/12/13 and strategy agreed. **The JCs accept that the method employed for the ES is compliant with Policies 5.8.8 and 5.8.9 of EN-1** (see 2.5.1 of JCs letter dated 17/02/14).<br>The comment on mitigation is noted. |
| 8 | 1.1 | Flooding issues remain to be confirmed in the absence of full Flood Risk Assessment data. We consider that the 40 year design life is low for critical infrastructure of National Importance and could result in subsequent additional phases of construction activity on sites | National Grid acknowledges this comment. Flood Risk Assessments are provided in **Volume 5.23.** |
| 9 | 1.1 | The Construction Environmental Management Plan (CEMP) is considered to be very loosely drafted and requires further work to clarify mitigation proposals and provide the Joint Councils with certainty that the mitigation measures outlined can be implemented, monitored and enforced appropriately. In particular the hours of working need formal agreement with the Joint Councils, including clarification of activities occurring outside of core hours, the extremely long working day length proposed and conditions that will lead to 24 hour working. These matters will need to be secured by requirement | Updates have been made to the Draft CEMP, **Volume 5.26.1** to ensure the mitigation measures are enforceable.<br><br>The working hours and works outside of the core working hours have been updated in accordance with the draft requirements |
| **HPCC Route Alignment and Design** | | | |
| 10 | 1.3 | The Joint Councils have reviewed the revised plans submitted with the draft ES and commented on the scheme accordingly. However, with the | A set of plans showing the Proposed Development was provided to the Joint Councils at a workshop held on the 14 January 2014. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | exception of Substation and Cable Sealing End Compound (CSEC) proposals, which are provided as detailed layouts, National Grid has not yet supplied a formal set of proposal plans illustrating the final operational scheme for which National Grid is seeking DCO consent. This hampers our ability to comment on the totality of the scheme effects | |
| **Sections A, B and D Puriton Ridge and Somerset Levels and Moors** | | | |
| 11 | 1.5 | There are significant concerns regarding the potential for local communities to be affected by the landscape and visual effects of the route over Puriton Ridge and through Mark and Tarnock. The Joint Councils expect National Grid to ensure the deliverability of landscape mitigation options in these areas. Detailed comments regarding the robustness of the assessments presented in the Draft ES are provided in Appendix A2 | National Grid acknowledges this comment. |
| **Section C Mendips Area of Outstanding Natural Beauty (AONB) Undergrounding** | | | |
| 12 | 1.8 | National Grid emphasises its commitment to embedded mitigation for example by minimising visual impacts on the Mendips AONB through undergrounding of this section of the route. We are concerned however that the draft ES does not adequately assess the effects the construction phase will have on the AONB and has concentrated too much on the benefits that the removal of the 132kV line will bring. Whilst the removal of overhead cables is welcomed, the increased tree and hedgerow loss and associated ecological impact, archaeological impacts, drainage impacts, Grade 1 agricultural land take and the longer term operational impact of the 400kV undergrounding are considered to be substantial. National Grid's attention is drawn to the requirements of the NPS EN-1 to carry out works to "high environmental standards, including through the application of appropriate requirements" and "to minimise harm to the landscape, including by reasonable mitigation". NPS EN-5 also states that undergrounding can "disturb sensitive habitats, have an impact on soils and geology, and damage heritage assets, in many cases more than an overhead line would". In light of the proximity of the scheme to the Mendips bat SAC and Mendip Limestone Grasslands SAC, and the substantial loss of trees and hedgerows within the AONB, a clear commitment to measures in addition to like-for-like replacement planting within the AONB is considered to be essential | National Grid is committed to undertaking like for like replacement planting within the AONB and this is detailed in the AIA at **Volume 5.21.1, section 9**. National Grid is also committed to undertaking mitigation measures comprising new planting of trees, tree groups and hedges at proposed site-specific infrastructure located within the setting of the AONB comprising the South of Mendip Hills CSE compound, Sandford Substation and bridge crossings at the River Axe and Towerhead Brook. These measures are detailed at **Volume 5.7.1, section 7.7**. National Grid can guarantee and will deliver these measures via Requirements set out in the DCO.<br><br>The assessment of effects on bats considers the importance of habitats (specifically loss of hedgerows and linear tree lines) for bat foraging and takes account of losses of important habitats under the bat receptor and the two bat SAC site receptors. The use of temporary bat flyways and the temporary management of land for bat foraging are all detailed in the Biodiversity Mitigation Strategy (**Volume 5.26.3, Appendix 2)** submitted with the DCO. These elements all fall within the DCO order limits and would be delivered by National Grid during or immediately following the construction period. It is expected these will be secured as a Requirement with details provided in the BMS.<br><br>In addition to the measures identified above National Grid will enter into an agreement with relevant local authorities to commit to the funding to undertake off-site planting and enhancement works set out in the OSPES at ES **Volume 5.25**. These mitigation measures are |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | | not guaranteed, however they do have a 'reasonable chance' of delivery and have been identified in accordance with advice in EN-1 and EN-5. |
| **Section F Portbury vs. Portishead Route Options** | | | |
| 13 | 1.13 | As previously set out during s42 consultation stage, NSC favours the Portishead route (Option B) alignment, which avoids the introduction of new visual impacts on receptors in Portbury, largely replaces an established twin pylon corridor and is not therefore perceived as a totally new feature in the landscape. At present it is considered that the environmental and landscape case for favouring Option A as the preferred route option has not been demonstrated conclusively | National Grid acknowledges this comment. The submitted ES provides an EIA assessment of the Proposed Development through both route options A and B. |
| **Section G Severnside Avonmouth Enterprise Area** | | | |
| 14 | 1.18 | There is also significant impact on the settings to the PRoW network in the Severnside Avonmouth this area. There is a significant impact on the settings to the PROW network in this area, particularly in and around Hallen Marsh. Adequate mitigation will be sought via the s106 to screen views, effect local diversions away from the power cable route and improve signage and path condition | As part of the OSPES National Grid will provide a lump sum fund to allow Local Authorities to implement and prioritise improvements to access and signage. The PRoW network across Hallen Marsh is identified in the OSPES and funds are included for access and signage improvements. Diversions of PRoW during construction operations are detailed in the CEMP PRoW Management Plan at **Volume 5.26.6**, Appendix 5. |
| **Section D Sandford Substation** | | | |
| 15 | 1.19 | NSC considers that the revised landscape proposals submitted with the draft ES address issues raised previously. Given the duration of disruption and amenity impacts for local residential receptors (including unmitigated impacts identified within the noise appendix), it is considered that additionally National Grid should offset amenity impacts through an extension of the Strawberry Line under Droveway Bridge | The proposed extension of the Strawberry Line is included as part of the site-specific mitigation measures at the proposed Sandford Substation detailed in **Volume 5.7.1 at section 7.7** and on **Figure 7.35 at Volume 5.7.3**. National Grid considers that the proposed realignment of the Strawberry Line is acceptable as included within the Order Limits for the Proposed Development. Land under Droveway Bridge and to the north of the bridge is not within the Order Limits and therefore cannot be guaranteed. |
| **M5 and Horsey Cable Sealing End Compounds** | | | |
| 16 | 1.20 | SDC welcomes the amended landscaping proposals for the CSE compound at Horsey Levels and near the M5 at Biddisham, including the inclusion of a bund along the M5 | Noted. |
| **Hinkley Line Entries** | | | |
| 17 | 1.22 | We note that community woodland proposals have not been included within the draft ES. We consider that this is an area for further evaluation in light of cumulative amenity effects on communities local to Hinkley Point C (HPC) | As part of the OSPES proposals at ES **Volume 5.25** National Grid will provide a lump sum figure to the Local Authority to undertake management of woodlands of community value and protect and improve existing landscape elements that contribute to the distinctive qualities of local landscape character. National Grid considers that this lump sum figure and the planting proposed in the OSPES is sufficient based on the existing landscape character and views |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | | available in the area. |
| **T-pylon Option** | | | |
| 18 | 1.23 | The Joint Councils have previously commented on uncertainties associated with the T pylon design at Preliminary Environmental Information Review (PEIR) stage. T pylon colour remains an issue for the Joint Councils, with National Grid proposing a 'battleship' grey colour for all pylons. We are not aware of any rationale having been put forward to support this as the best environmental option for minimising visual intrusion and landscape character impacts. National Grid should justify their colour selection through an assessment of different colour options, in particular setting out the basis on which tried and tested colour schemes such as the typical wind turbine off-white colour are not being adopted. | Within its DCO application National Grid has specified appropriate colour finishes which could be used for the proposed pylons. |
| 19 | 1.24 | The Joint Councils also seek agreement from National Grid to be able to request variations to the T pylon colour in certain locations, e.g. to use sage green rather than grey to blend the pylon within the landscape and reduce visual harm on the setting of heritage assets. | |
| 20 | 1.25 | At PEIR the Joint Councils noted that the 400kV route alignment has been developed in accordance with the Holford Rules, which were developed for overhead lines constructed using the more visually permeable lattice pylon structure. National Grid has not provided comment on the applicability of the Holford Rules and related NPS policy to the new pylon as requested at s42 consultation stage. We note that NPS EN-5, when discussing landscape mitigation through choice of support structure, also does not mention T-pylons. | The Holford Rules were considered in the Project Connection Options Report (2012) in Chapters 5 (Definition of Options) and Chapter 7 (Options Appraisal). The Holford Rules were used in route selection. The Holford Rules also informed the Route Corridor Study (2009) in Chapter 5 (National Grid's Environmental Guidance) and Chapter 6 (Constraints Used in Identification of Potential Route Corridors).<br><br>The Holford Rules are concerned with the routeing of overhead lines. Where supports are referenced, the term 'tower' is used although the Holford Rules are used for routeing overhead lines using single and double wooden pole supports and folded steel plate pole supports.<br><br>If each rule is considered in turn, it is very difficult to understand how it would not apply to an overhead line supported by the T-pylon.<br><br>The Holford Rules also explicitly suggests consideration of alternative tower designs where appropriate, 'In additional to adopting appropriate routeing, evaluate where appropriate the use of alternative tower designs now available where these would be advantageous visually, and where the extra cost can be justified'.<br><br>The deployment of the T-pylon is consistent with this advice. |
| **2. HCCP Documentation Received - Programme of works** | | | |
| 21 | 2.3 | At present planting is identified in the CEMP as occurring at 'the end of | All landscaping and replacement planting works must be implemented |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | construction'. To reduce the length of time between vegetation clearance and landscape planting, the Joint Councils consider that planting should be undertaken on completion of each phase of works to allow the greatest opportunity for plants to become established. National Grid should also investigate and implement potential opportunities for advance planting of landscape areas adjacent to substations, CSE compounds and in the AONB to reduce the duration of landscape character and visual effects | in the first planting season after that part of the authorised development to which the landscaping or replacement planting works apply is first brought into operational use. |
| **Local Policy and Baseline Data** | | | |
| 22 | 2.4 | The draft ES responds to the Joint Councils requests at PEIR stage to inclusion of local policy information within the draft ES, although it is noted that National Grid's review of local policy documentation is not up to date and omits key policies and baseline documentation. Further detail is provided within the detailed appendices | **Volume 5.4.1** (Planning Policy Context) has been reviewed and updated to reflect the latest local planning policies. Each technical chapter of the ES (**Volume 5.6.2 – 5.16.1**) includes a summary of relevant local policy and how it has influenced the assessment. |
| 23 | 2.5 | The Joint Councils remain unclear how, if at all, the identified policies have influenced the assessment material presented | |
| **Health Impact Assessment (HIA)** | | | |
| 24 | 2.6 | During the Joint Councils formal and informal engagement with communities, concern has been raised over potential health impacts of the project in their widest sense. At scoping and during s42 consultation, it was recommended by the Joint Councils that the submission should assess health implications via an HIA. In its Scoping Opinion, PINS suggested that the applicant should have regard to this view. Whilst we recognise that some elements of this material may have been supplied separately within ES chapters (e.g. air quality, noise, socio-economic electromagnetic effects), the ES does not provide a rounded view of potential health effects on the local community. The Joint Councils maintain that the communities affected by the proposals would be better served by a dedicated qualitative assessment that addresses these issues in the round, such as has been prepared for other major projects (e.g. Hinkley Point C New Nuclear Project and High Speed Two) and consider that this is a missed opportunity for National Grid to allay perceptual concerns relating to the project. It is likely that this matter will be the subject of written representations. | There is no specific legislation in the UK which requires a standalone HIA to be undertaken as part of the infrastructure planning process. Although the EU EIA Directive is due to come into force in 2014, this is not expected to be transposed into UK law and thereby come into effect until 2016. Potential impacts which are likely to result in health outcomes have been assessed and mitigated in the appropriate chapters including, but not limited to, impacts associated with noise, air quality, EMF and visual amenity. |
| **Chapter 17 - Cumulative Effects** | | | |
| 25 | 2.130 | The cumulative effects chapter lacks clear definition of the assessment and significance criteria adopted for the cumulative assessment. This should be provided within the final ES. In addition, issues such as the cumulative effect of the 400kV through Sedgemoor with wind turbine proposals in combination with the T pylon design are not adequately addressed, with general statements made in respect of a grid route | This has been addressed and is provided at **Volume 5.17.1** (Section 17.3).<br><br>The assessments have been revisited to ensure appropriate consideration is made of the cumulative effect with wind turbine developments and is provided at **Volume 5.17.** |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | rather than the specific pylon option | |
| 26 | 2.131 | We consider that the conclusions drawn in relation to the mitigation of significant cumulative effects and the assessment of significant cumulative effects themselves require further consideration. For example, significant cumulative effects on amenity are ruled out on the basis that individually significant effects for traffic, noise, air quality will not occur. National Grid should consider the potential for multiple non-significant adverse impacts on individual receptors to become cumulatively significant | The potential for significant cumulative effects on amenity is considered in **Volume 5.17.1 (section 17.3** – assessment table for socio-economics and land use). |
| 27 | 2.132 | The potential for the cumulative projects to amplify amenity effects related to traffic and noise was recognised in the socio-economic section of the PEIR. This remains a major concern for the Joint Councils especially regarding the reputational risk and the impacts of traffic, landscape and noise on tourism within the region | |
| **Appendix A1- General Material and Introductory Chapters** | | | |
| **General** | | | |
| 28 | ES Chapter 1 inset | Figure resolution too poor to read | Noted and amended. |
| 29 | 1.1 | Potential error in table line 5 – no link to reference material | |
| 30 | Table 1.2 | Last sentence of this paragraph appears to be a misplaced reference | |
| 31 | 1.8.3 | Undefined acronyms 3.7.86 MEWPs, 3.7.103 SGTs | |
| 32 | Chapter 3 | Inset figures lack clarity. E.g. unnumbered inset figure between 3.15 and 3.16 | |
| 33 | Chapter 3 | Unclear what the text on 79 relates to. | The text relates to the uprating of the existing Bridgwater to Hinkley overhead line from 275kV to 400kV which does not form part of the Proposed Development. Greater clarity has been provided. |
| **Environmental Statement Chapter 1 - Introduction** | | | |
| 34 | 1.8.3 | The Construction Environmental Management Plan (CEMP) and appendices are joint National Grid and WPD documents. National Grid states 'whilst there is no statutory requirement to produce these documents they have been produced to ensure that construction activities for the proposed development are carried out in accordance with current legislation and good practice…'. National Grid should confirm what their monitoring and enforcement mechanism is to ensure control over the content and implementation of the CEMP | This is addressed in the Draft CEMP (Volume 5.26). |
| **Environmental Statement Chapter 2 – Needs Case and Alternatives** | | | |
| 35 | Chapter 2 | This document has not been provided for review and we understand will | Noted. **Volume 5.21** (Project Need and Alternatives) will form ES |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | be available in the next 2-3 weeks. The alternatives and needs case are essential documents to understand design decisions taken and the lack of provision of these documents limits our ability to comment effectively on material received | Chapter 2 and will be submitted with the DCO application. |
| **Environmental Statement Chapter 3 – Project Description** | | | |
| 36 | 3.2.23 | Foundations removed to a depth of approximately 1m or fully if requested by landowner. The Joint Councils will require agreement regarding the detail of mitigation proposals relating to foundation base removal | Acknowledged by National Grid. |
| 37 | 3.3.20 | Reference is made to potential drainage improvement works to ensure site of cable installation is free from flooding. National Grid should expand on this point, illustrating potential types of works that might be required and whether these would be temporary or permanent in nature | |
| 38 | 3.3.26 | Programme dates for elements of work are set out. No indication of the duration of site compounds is provided. Further detail is required in terms of phasing of works and duration of specific works activities | Amended. |
| 39 | 3.5.7 | Text states that waste material would largely be classified as 'non-hazardous, inert waste'. Whilst this is considered to be likely, there is potential that contaminated material could be excavated and this should be acknowledged | Amended. |
| 40 | 3.7.65 | Documentation should confirm what the status of shared infrastructure is around Hinkley Point C e.g. is National Grid using any HPC access routes to reduce impacts on the wider environment? | Amended. |
| 41 | 3.7.71 | Existing field access widening 'or temporary new accesses' may be required – this does not provide certainty around total habitat loss or access issues | The positions of all new accesses are fixed by the DCO/Order limits and an assessment of these on a worst case basis has been undertaken within the ES.<br><br>There will be a requirement within the DCO that no stage of the authorised development may commence until, for that stage, a Tree and Hedgerow Protection Strategy (THPS) identifying the trees, groups of trees and hedgerows to be retained during that stage has been submitted to and approved by the relevant planning authority. |
| 42 | 3.7.72, inset figure 3.5 | Unclear what the intent of this figure is | The Inset shows the typical area required to erect a pylon. |
| 43 | 3.7.82 | Typical pylon life expectancy is cited as 80 years, conductors 40-60 years, insulators 25 years – there is no reference to T pylon life span and this remains an area of uncertainty – e.g. potentially T pylons could require more frequent maintenance and therefore disturbance/temporary construction | Amended to include T-pylon. |
| 44 | 3.7.89 | Foundation removal to 1m is restated but no reference made to 'unless landowner states otherwise'. At 3.7.142 reference is made to total removal only if there is a 'compelling need'. A consistent approach to | Amended to ensure consistency. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | describing foundation removal is required | |
| 45 | 3.7.107 | Widening of field accesses to 5m – National Grid must ensure that this is reflected in any habitat loss calculations, where relevant | Noted. |
| 46 | 3.7.110 | Reference is made in several locations to storage of topsoil and subsoil in accordance with good practice – reference to the relevant good practice should be provided | Amended to make reference to the Draft CEMP at **Volume 5.26.** |
| 47 | 3.7.119 | Cables would remain buried at end of life unless compelling reason for removal – the Joint Councils will require National Grid to provide an assessment of the relative merits of removal of the scheme at end of life, this would inform the nature of any intervention required | Cable removal has been clarified in **Volume 5.3.1** in a similar manner to the removal of pylon foundations. |
| 48 | 3.7.125 | Terminal gantries are described as being 13-14m high – this is a welcome reduction compared to the double diamond pylons | Noted. |
| 49 | 3.7.130 | Potential to use stripped topsoil to form bunds is highlighted but not confirmed – creating uncertainty in the scope of activities. National Grid should describe the scheme that it intends to implement | Amended. |
| 50 | Appendix 3B | Outlines that construction compounds will be constructed within 4 weeks of start of works but does not detail end dates. Removal of compounds will need to be secured through requirement | Amended. |
| 51 | Appendix 3C | Numbers of watercourse crossings and types of potential structure proposed require evaluation. Funds will need to be made available to the councils to undertake this piece of work to assess the appropriateness of crossing solutions for a location and to monitor construction/ decommissioning activities | Culvert designs and crossings have been discussed with the IDB and EA as part of project design.<br><br>The necessary consents (either to the EA or the relevant drainage authority dependent on classification) will be made post-DCO when the exact locations of the crossings are known National Grid will be required to pay the appropriate consent fees to the IDBs and EA. As part of the CEMP we are committed to monitoring and managing the works to minimise the local environmental impact if we fail to do that then there are relevant statutory procedures of enforcement that may be applied. |
| **Environmental Statement Chapter 4 – Planning Policy Context** | | | |
| 52 | General | The summary of local planning policy is welcomed but the list is incomplete and in some cases inaccurate and it is unclear how, if at all local policy influences the assessment outcomes. Key policy references are identified in the topic specific appendices. Key policy references are identified in the topic specific appendices but include for South Gloucestershire Council:<br>• CS1 High quality design<br>• CS9 Managing the Environment & Heritage<br>• CS12 Safeguarded areas for economic development<br>• CS35 Severnside<br>• CS36 Major Infrastructure Projects<br>Some replaced local plan policies are also cited and this should be | **Volume 5.4.1** (Planning Policy Context) has been reviewed and updated to reflect the latest local planning policies. Each technical chapter of the ES (**Volume 5.6.2 – 5.16.1**) includes a summary of relevant local policy and how it has influenced the assessment. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | rectified (see SGC Core Strategy Appendix 2). | |
| 53 | 4.4.20 | Mitigation planting is suggested as noise mitigation. Typically this is only true where planting belts of 30m are suggested and the mitigation benefits are limited, particularly in light of the uncertainty around landscape mitigation proposals | Planting for noise attenuation is not considered necessary to mitigate noise effects (see **Volume 5.14.1**) and is not part of the Proposed Development. |
| **Environmental Statement Chapter 5 – EIA Approach and Method** | | | |
| 54 | Inset figure 5.1 | This figure is inconsistent as the significance scale is different from scale in paragraph 5.6.49 | The Inset has been removed. |
| 55 | 5.6.29, Draft Appendix 5D, 5.2.5 | The longitudinal limits of deviation for pylons should be constrained as per lateral LOD. No limit is set on longitudinal limits of deviation for pylons. This potentially undermines the assessment of effects undertaken. A reasonable limit of deviation is required. This could be phrased as generally applicable LOD and/or as 'exclusion areas' in which pylons cannot be placed due to their sensitive nature | Longitudinal LoD of +/- 40m for the proposed pylons have been included as part of the Proposed Development and are described in more detail at **Volume 5.5.1.** |
| **Appendix A2 Comprising comments on<br>Chapter 6 & 7 Landscape and Visual Impact including figures and appendices<br>Volume 5.3 Figures - Typical Underground Cable Technical Arrangements<br>Chapter 17 - Cumulative Effects,<br>Volume 5.18 Figures - Photomontage Viewpoint Locations, Figures - Photomontages<br>Volume 5.21 - Arboricultural Impact Assessment and Tree Impact Plans<br>Volume 5.25 - Off-Site Planting and Enhancement Scheme (OSPES)<br>Volume 5.26 - Construction Environment Management Plan (CEMP)** | | | |
| 56 | General | The Methodology has been substantially rewritten and, broadly speaking, now appears to be more in keeping with GLVIA3, which is welcomed. However, there are still inadequacies in the methodology (see 'Assessment' below) and the section on 'Assessing Significance of Landscape Effects' and in particular the assessment of sensitivity, is fundamentally different to that presented for consultation in the PEIR | The method has been reviewed further with GLVIA3. The general basis of the method is the same. |
| 57 | GLVIA3 Para 5.42 | At Para 5.42, GLVIA specifically states that the assessment of susceptibility of landscape receptors "should not be recorded as part of the landscape baseline, but should be considered as part of the assessment of effects." This should be addressed in the final ES | This has been addressed in the final ES at **Volume 5.6.1,** Section 6.5. |
| 58 | Table 6.3 Representation Number 5 | The issue of the 'scale' of the landscape assessment was raised in the s42 response, but has only been partly addressed in the Draft ES. Assessment of landscape character is still made at too broad a scale rather than a finer grained local/site specific scale. Examples of this issue at Polden Ridge and the Mendip Hills are provided below.<br>• E.g. 1. - Section A: The Polden Ridge Local Landscape Character Area (LLCA) is assessed as one character area and the Horsey level (part of the Somerset Levels LLCA and Clay Moors LLCA area), whereas best practice would be to assess the sensitivity of and effects on the landscape character at as | Sections A to H have been identified based on landscape character, and were defined in consultation with the Landscape and Views Thematic Group specifically because they represented appropriate 'landscape units' at a scale appropriate for assessment.<br><br>The landscape assessment identifies the local landscape character areas which would experience landscape effects within the 3km study area as a result of the Proposed Development. As part of the assessment of landscape sensitivity at **Volume 6.5.1, section 6.5,** tables have been provided that summarise the sensitivity of the |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | fine a level of detail as possible and appropriate. In this instance, the west end of the Polden Ridge, to the south and west of Puriton, is more highly sensitive and would experience a greater magnitude of change than the majority of the Polden Ridge further east. National Grid's approach could therefore mask or 'average out' effects in a way that is not appropriate or robust.<br>E.g. 2. – Section C: The Mendip Hills AONB is assessed as one area with the same sensitivity and magnitude of change ascribed across each of the separate LLCAs. Again best practice would be to assess the sensitivity of and effects on the landscape character at an appropriate level of detail. In this instance the west end of the Strawberry Belt and Footslope Villages LLCA around Webbington, will experience a very different range of effects (including those from the Cable Sealing End Compound (CSEC) and River Axe crossing) than will the Lox Yeo River Flood Plain LLCA. Additionally if the sensitivity of these different character areas were assessed independently, they may be ascribed different sensitivity values.<br>It is recommended that the baseline section of this chapter in the Final ES should break down the landscape into its local character areas for assessment of sensitivity. Where the character of the landscape immediately around the proposed development is at variance with the wider LLCA, it's sensitivity and the effects on it should be assessed at an even finer site-specific level | landscape in each Section with reference to the relevant LLCA, which would potentially be affected by a component or components of the Proposed Development. Where landscape susceptibility to the proposed change and landscape value varies within a Section, this has been identified.<br><br>The magnitude of predicted landscape effects resulting from the Proposed Development and the significance of these effects are presented in Sections.<br><br>Paragraph 1.17 of GLVIA3 states that "The Directive is clear that the emphasis is on the identification of likely significant environmental effects...identifying significant effects stresses the need for an approach that is in proportion to the scale of the project that is being assessed and the nature of its likely effects. Judgement needs to be exercised at all stages in terms of the scale of investigation that is appropriate and proportional."<br><br>The ES landscape assessment has been undertaken to an appropriate level of detail to identify the likely significant effects of the Proposed Development on landscape character. |
| 59 | Tables 6.4, 6.5, 6.8 and 6.9 and Para 6.4.298 | The councils consider that the assessment made of susceptibility to change and consequent sensitivity of the landscape character of the Mendip Hills AONB is not robust.<br>It is considered that the susceptibility of the landscape of the AONB to changes brought about by the proposed development is not 'Low' as stated.<br><br>Elements of the proposed development include:<br>• visually and physically intrusive construction activities;<br>• removal and only partial replacement of vegetation;<br>• introduction of built elements such as CSECs, link pillars and water course crossings; and<br>• the undergrounding 'scar' on the landscape.<br><br>The character of the whole AONB is considered to have a medium susceptibility to change in accordance with the criteria in Table 6.4.<br>• "there is one or more overhead line present in the landscape; | The AONB landscape is assessed as having a high sensitivity to the proposed installation of 400kV underground cables due to the susceptibility to change being medium. The final ES assesses that the AONB landscape has a medium sensitivity to the operation of proposed underground cables, due to the susceptibility to change being low and taking account of an amendment to **Volume 5.6.1, Table 6.7** referred to in the response provided below.<br><br>The susceptibility to change judgement takes account of the specific development being assessed. For example, the AONB landscape would have a different susceptibility to change from the installation of proposed 400kV underground cables, compared to the long term operation of the proposed underground cables, which would comprise infrequent and low-height above ground structures (link box pillars).<br><br>As part of the assessment of landscape sensitivity in the final ES at **Volume 5.6.1, section 6.5**, tables have been provided that |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | and or<br>• there is some backgrounding by landform, woodland, and or built form; and or<br>• the landscape type is generally able to accommodate the Proposed Development without suffering detrimental effects on its character."<br><br>Additionally, it is considered, as stated above, that the susceptibility and sensitivity of the AONB should not be assessed as a whole, but at a finer grain relating to its many constituent LLCAs. | summarise the sensitivity of the landscape in each Section with reference to the relevant LLCA, which would potentially be affected by a component or components of the Proposed Development. |
| 60 | | Applying the criteria in Table 6.5 to the entire AONB, a nationally valued landscape with a medium susceptibility should be ascribed a High sensitivity rating, not low as stated. It is noted that the AONB Landscape was ascribed a high sensitivity rating in the PEIR.<br><br>This issue is considered likely to be as a result of the unevenly differentiated criteria used in Table 6.4 and 6.5, and calls into question all of the assessments made in respect of landscape sensitivity throughout the project study area that rely on the same criteria. All assessments made in the final ES should therefore be checked against this issue. | The sensitivity of the landscape in the Mendip Hills AONB (Section C) to a new 400kV overhead line is assessed as being high; however underground cables are proposed as embedded mitigation.<br><br>The AONB landscape is assessed as having a high sensitivity to the installation of the proposed 400kV underground cables; and a low sensitivity to the operation of the proposed 400kV underground cables, due to the landscape's low susceptibility to this change.<br><br>**Volume 5.6.1, Table 6.7** in the final ES has been amended to include the following typical criteria when determining a landscape has medium sensitivity to the change proposed:<br>• The landscape has a low susceptibility to change and has national value.<br><br>The final ES assesses that the AONB landscape has a medium sensitivity to the operation of the proposed 400kV underground cables to take account of the above amendment.<br><br>Landscape sensitivity has been reviewed in the final ES |
| 61 | | There is concern, however, that the ES does not adequately assess the effects the construction phase will have on the AONB and has focused too much on the benefits that the removal of the 132Kv line will bring during the operational phase. The two phases should not be conflated in the assessment | Landscape effects have been assessed during the construction, operation, and decommissioning stages of the Proposed Development and have been reported separately in **Volume 5.6.1, section 6.5** |
| 62 | | The conclusion that the effects on landscape character from the undergrounding of the cables during the construction phase would only be Moderate Adverse (Localised) is questioned. Given the high sensitivity, it is considered that this would give rise to a Major Adverse (Temporary) effect in line with the criteria in the assessment tables. | Reference to the effect being localised has been deleted.<br>The proposed installation of 400kV underground cables in Section C is predicted to result in a moderate adverse magnitude of effect in accordance with the magnitude criteria in **Volume 5.6.1, Table 6.8**. Given the high sensitivity of the AONB landscape to this element of the Proposed development, and the moderate adverse magnitude of effect predicted, the significance of this effect would be moderate |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | | adverse for the short-term, in accordance with the significance criteria in **Volume 5.6.1, Table 6.9.** |
| 63 | | On balance therefore, it is considered that this assessment needs to be revisited and that an overall assessment of 'Neutral' or at best, 'Minor Beneficial' is more appropriate.<br><br>The assessment of 'Neutral' for the effect of the undergrounded cable may be achieved, but would be crucially dependent on the successful reinstatement of pastureland above the route. The details of the reinstatement proposals and management of these should be dealt with as a requirement of the DCO requiring approval of details prior to commencement of the development. | The overall effect of the operation of the Proposed Development on landscape character has been assessed as being beneficial. The landscape assessment at **Volume 6.5.1, section 6.5** assesses the adverse indirect effects on the Mendip Hills AONB landscape that are predicted as a result of the Proposed Development in the setting of this AONB (in Sections B and D). The overall effect on the Mendip Hills AONB landscape has been assessed as being moderate beneficial as defined in **Volume 5.6.1, Table 6.9**.<br><br>National Grid can guarantee the re-instatement of land, the implementation of in-situ replacement planting and management of this planting for 5 years via a requirement in the DCO. |
| 64 | | The Mendip Hills AONB unit has welcomed the proposal to underground Section C of the route. There is concern, however, that the ES does not adequately assess the effects the construction phase and subsequent scarring of the landscape will have on the AONB, but has focused too much on the benefits that the removal of the 132Kv line will bring during the operational phase | Landscape effects have been assessed during the construction, operation, and decommissioning stages of the Proposed Development and have been reported separately in **Volume 5.6.1, section 6.5**. Adverse visual effects arising from the Proposed Development in the Mendip Hills AONB and in its setting in Sections B and D are identified in **Volume 5.7.1** and at **Volume 5.7.2, Appendix 7B, 7C and 7D**. The visual assessment is based on the method provided at **Volume 5.7.1, section 6.3**. |
| 65 | Table 6.9 | The conclusion that the effects on landscape character of the AONB from the undergrounding of the cables during the construction phase would only be Moderate Adverse (Localised) is questioned. We recommend that this conclusion is revisited to check whether a Major Adverse (Temporary) assessment would be more appropriate in line with the criteria in the assessment tables | Reference to the effect being localised has been deleted.<br>The proposed installation of 400kV underground cables in Section C is predicted to result in a moderate adverse magnitude of effect in accordance with the magnitude criteria in **Volume 5.6.1, Table 6.8**. Given the high sensitivity of the AONB landscape to this element of the Proposed development, and the moderate adverse magnitude of effect predicted, the significance of this effect would be moderate adverse for the short-term, in accordance with the significance criteria in **Volume 5.6.1, Table 6.9** |
| 66 | Table 6.9 | The assessment in Table 6.9 of 'Neutral' for the effect of the undergrounded cable may be achieved, but would be crucially dependent on the successful reinstatement of pastureland above the route. The details of the reinstatement proposals and management of these measures should be dealt with as a pre-commencement requirement of the DCO.<br><br>It is considered that the overall assessment of Moderate Beneficial for the completed and operational scheme is not fully justified. Whilst the removal of existing overhead lines is clearly a benefit, the AONB and its | National Grid can guarantee the re-instatement of land, the implementation of in-situ replacement planting and management of this planting for 5 years via a DCO requirement.<br><br>The beneficial and adverse effects on the Mendip Hills AONB landscape predicted as a result of the Proposed Development in the short, medium and long-term (including in the setting of this AONB in Sections B and D) are presented at **Volume 6.5.1, section 6.5**, and |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | setting will still need to accommodate some new permanent surface infrastructure, including Cable Sealing End Compound, link pillars and a bridge across the River Axe. In the short to medium term there will also be a clearly visible scar on the landscape. The negative effects of construction, the scaring effect in the short to medium term and the permanent surface infrastructure Need to be carefully balanced against the benefit of removing the existing overhead line. This comment relates to the assessment of visual effects as well and landscape effects. It is therefore recommended that this assessment is revisited and that an overall assessment of 'Neutral' in the short to medium term and at best, 'Minor Beneficial' in the long term is more appropriate.<br><br>The Final ES should provide some detail on how the healing of the landscape scar will be managed in the short and medium term. For example the ES needs to contain details of how replacement hedges and seeding will be managed over a 15 year period following completion of the works. | have been determined in accordance with the landscape assessment method at **Volume 6.5.1, section 6.3**.<br><br>The overall effect of the operation of the Proposed Development on the AONB landscape has been assessed as being moderate beneficial in the medium and long-term as defined in **Volume 5.6.1, Table 6.9**. |
| 67 | | It is considered that the management plan for all proposed planting, including site specific, in-situ replacement planting, replacement planting in new locations and that proposed in the OSPES, should cover a minimum 15 year period. Given the scale of the proposed development and the number of significant effects that require effective mitigation in order to deliver the residual mitigation predicted following the 15 year establishment period, this is considered imperative.<br><br>This is the standard for development e.g. in S Gloucestershire and North Somerset takes account of the need to see establishment through to maturity. In the case of HCCP this gives certainty in terms of impact mitigation.<br><br>The more intense management would undoubtedly occur in the first 5 years with less frequent inspections thereafter. Any necessary longer term management prescriptions in the following 10 year period, such as thinning of woodland, pollarding of willows, etc., might be considerably less frequent and onerous | National Grid will implement site-specific mitigation planting for site-specific infrastructure (including CSE compounds, Sandford Substation and cable bridge crossings), and will maintain this planting during the operation of proposed electrical infrastructure. Mitigation planting on land not acquired by National Grid will be maintained by National Grid for 5 years via a DCO requirement.<br><br>National Grid cannot guarantee the planting of replacement trees, tree groups and hedges in new locations as part of the reinstatement of land (following construction) because this planting relies on landowner agreement.<br><br>National Grid cannot guarantee new planting as part of the OSPES because this planting relies on landowners' agreement and the LPAs' actions. National Grid will offer to enter into an agreement with relevant LPA to fund the planting and enhancement works including 5 years maintenance set out in the OSPES. 5 years is the appropriate period for maintenance and that is what has been proposed in the OSPES. This is also the timeframe set out in the model DCO provisions in PINS guidance. |
| 68 | Table 6.9 | Amalgamation and assessment of the effects of the CSEC and the undergrounded 132Kv lines in Section A into one item is considered to be an over simplification. These items require separate assessment as the significance of effects from each element is likely to be different, especially in terms of magnitude of change as a result of duration and | This has been addressed in the final ES at **Volume 5.6.1, section 6.5**. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | effect of mitigation | |
| 69 | Para 6.5.84 | A “moderate to minor adverse” effect on landscape character is recorded in the northern part of Section B – whereas it is “moderate” elsewhere in Section B. Given that this northern part of Section B includes the CSE and is close to the AONB, the reasons for this judgment of reduced significance of effect are not made clear and are a source of concern. This should be revisited and amended or the reasons made clear in the Final ES | Clearer justification for this judgement has been provided in the final ES at **Volume 5.6.1, section 6.5**. |
| **Volume 5.7 - Chapter 7 Visual Effects** | | | |
| 70 | General | The Methodology has been substantially rewritten and generally the amended methodology appears to be more in keeping with GLVIA3, which is welcomed. However, there are still inadequacies in the methodology (see ‘Assessment’ below). In respect of the section on ‘Assessing Significance of Visual Effects’ and in particular the assessment of sensitivity, this methodology is fundamentally different to that presented for consultation in the PEIR | The method has been reviewed further with GLVIA3 however the general basis of the method is the same. The key change has been in relation to duration and in particular the reduced effect of short-term construction effects. |
| 71 | Table 7.3 | The methodology presents a generic table (Table 7.3) setting out the susceptibility to change for types of receptor. As stated in the s42 response in respect of assessment of sensitivity, this aspect of a receptor should be assessed for each individual receptor. For example, it is considered that, a frequently-used, way marked, long-distance route through tranquil, unspoilt countryside should be given a higher susceptibility rating than a short fragment of an inaccessible footpath adjacent to a busy motorway | This has been addressed in the method and in the Visual Assessment Tables at **Volume 5.7.2, Appendix 5.7A to H**. Susceptibility to change and value of view determine receptor sensitivity as detailed in **Table 7.6** (previously Table 7.4) and in GLVIA3.<br><br>For example most PRoW are of high susceptibility to the change proposed but have views of local value resulting in receptor views being of medium sensitivity. However in the AONB where views are of national value PRoW have high sensitivity. In addition long distance routes have a high susceptibility to change and have views of national value resulting in receptors being of high sensitivity.<br><br>During site assessment it was not possible to determine how frequently routes are used or make judgements on accessibility and this cannot be used to determine sensitivity. |
| 72 | Tables 7.4 and Table 6.5 | There is a discrepancy between the assessment criteria used for assessing sensitivity of receptors given at Table 7.4, and that given at Table 6.5 in Chapter 6 Landscape. Table 7.4 places receptors of national importance, with a medium susceptibility to change in the ‘medium’ sensitivity category, whereas in Table 6.5 a receptor with these same criteria is placed in the ‘highly’ sensitive category. The reason for this discrepancy is not clear. Table 6.5 is considered to be correct in this respect, as opposed to Table 7.4 which is believed to unduly moderate receptor sensitivity | **Volume 5.7.1, Table 7.6** (previously Table 7.4) has been updated to make receptors of national importance, with a medium susceptibility to change in the ‘high’ sensitivity category. The assessment has also been updated accordingly. |
| 73 | Table 7.6 Inset 5.1 | This table provides criteria for only a limited range of scenarios. For instance where sensitivity and magnitude are both high a major effect is | As detailed in GLVIA3 significance of visual effect is not absolute and can only be defined in relation to each development and its specific |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | predicted and where sensitivity is medium or high and magnitude is medium the effect is considered to be of moderate significance. The judgement of moderate significance as a result of a medium magnitude of change to a highly sensitive receptor is questioned. If this were the case, then only one scenario (high + high) would result in an effect of major significance. This is thought to unduly moderate the assessment of effects. The table does not describe what significance level would be ascribed to a receptor with a medium sensitivity to change and a high magnitude of change. In accordance with Inset 5.1, it is considered that receptors with a medium sensitivity and a high magnitude of change should, in the vast majority of instances, be ascribed a major or at least a major to moderate significance of effect.<br><br>It is considered that Table 7.6 is over simplified and that National Grid should consider an assessment methodology using a verbal scale with more increments such as 'Very high/low' or 'high/low to moderate' | location. It is for each development to determine the approach and if necessary to adopt a consistent approach across all the EIA topic areas. In determining the significance of effect the nature or type of development (proposed 400kV overhead line), size or scale, geographical extent and duration and reversibility have been considered.<br><br>**Table 7.8** (previously Table 7.6) has been updated to describe that a receptor with a medium sensitivity to change and a high magnitude of change would be ascribed a major significance of effect.<br><br>The verbal scale used in the assessment method is felt to be sufficient and takes account of GLVIA3. |
| 74 | Paragraph 7.5.35 and 7.5.52 And Fig 7.30.1 | The Draft ES predicts, at Paragraph 7.5.35 (construction) and Paragraph 7.5.52 (operation), that the significance of adverse visual effects to walkers on PRoW on Puriton Ridge will be moderate adverse. The assessment correctly ascribes these receptors a 'medium' sensitivity. However the prediction of a moderate magnitude of change to these views is questioned, particularly at the junction of PRoWs BW 28/1 and BW 2/46. This area of the Polden Ridge between Home Covert and Chisland Covert affords impressive open panoramic and long distance views north and south over the Levels. Whilst existing pylons are just visible in these views they are distant and do not dominate the views. Construction activities associated with the development and the operation of the 400Kv overhead lines and pylons would constitute a "High alteration to the existing view and/or the introduction of elements considered totally uncharacteristic in the view" and "would be seen in close proximity with a large proportion of the view affected with little or no filtering or backgrounding and there would be a great scale of change from the present situation for the long or medium-term." (**Table 7.5**)<br><br>It is considered that the significance of this effect is under-assessed. The magnitude of change to these views is considered to be large, with pylons very close to receptors and new power lines directly overhead. Accordingly, the significance of the adverse visual effects is considered to be major. | The significance of effect on receptors is considered to be moderate adverse as the Proposed Development would include a partial alteration to the existing view and the introduction of prominent elements in the view. Views beyond the proposed 400kV overhead line would remain due to the nature of the Proposed Development.<br><br>The Proposed Development would be seen in views for the long or medium-term with a moderate proportion of the view affected. There is some backgrounding in places from woodland on the ridge which minimises the scale of change from the present situation.<br><br>During construction the Proposed Development would be seen in close proximity with a large proportion of the view affected for the short-term.<br><br>Refer to Visual Effects Tables at **Volume 5.7.2, Appendix 7A** receptors A1.F4, A1.F5 and A1.F7 for details of assessment. |
| 75 | Paragraph 7.5.122-123 and 7.5.128, | Similarly at Mark, It is considered that the significance of visual effects is under played as a result of under-assessing the magnitude of change predicted to the following receptors: | We support that the magnitude of this effect is correct. See above response in relation to this. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | Photograph 7.18 and B1.48 Part 1 and Fig 7.30.4 | • Properties - B1.H50 and B1.H51;<br>• PRoW - AX23/10; and<br>• Road B1.R13 and B1.R12/11.<br><br>In the case of the routes (not the dwellings) this is probably a result of averaging out the magnitude of change to views from along selected lengths of the receptors in question. Environmental Impact Assessment best practice is to state and consider the likely worst case scenario.<br><br>In these instances, the changes under and adjacent to the overhead lines would be best described by the criteria for a high magnitude of change set out in **Table 7.5** (See above).<br><br>**Fig 7.30.4** should show the lengths, directly underneath and either side of these routes oversailed by the development, for which the magnitude will be high and the significance of effects, major (in accordance with the comments on the assessment criteria table &.7.3 to 7.6 above.. The report text could then describe if and how the magnitude, and so the significance of effect, might diminish with distance along these routes.<br><br>In respect of the two private dwelling listed above, the magnitude of change is again considered to be under assessed | PRoW and roads have been assessed sequentially and combined into overall assessments of sensitivity for each receptor and magnitude for each effect. Sensitivity and magnitude have then been combined to assess overall significance. Where a greater magnitude of effect is assessed for a short length of each route this is identified. |
| 76 | para 6.5.237 | In the assessment there is a disparity between the significance attached to the importance of urban residential areas in Avonmouth compared to rural areas. This disparity is apparent when comparing the attention given to mitigating impacts on villages such as Mark and other settlements to that given to residential areas of Avonmouth, evidenced for example, by a lack of visual aids to back up assessment. The proximity of the power lines to housing in Avonmouth warrants further analysis of impacts in the area. There is concern over the assertion at Para 6.5.237 that where the proposed development "runs closer to residential properties" impact is low adverse. Until visualisations from residential streets are presented, the impact cannot be fully understood and would have to be assumed to be significant. The pylons, in the near view will appear as significantly larger structures compared to other more distant industrial and dockland structures beyond | This has been considered and an assessment of landscape effects has been made based on the method provided at **Volume 5.6.1, section 6.3**.<br><br>Photomontage viewpoints were discussed and agreed with the Landscape and Views Thematic Group at Thematic Group meetings during 2013. Two viewpoints were agreed within the settlement of Avonmouth and are presented at **Volume 5.18.2, Figure 18.2.104 and Figure 18.2.99.** |
| 77 | | The examples above are at locations where the alignment of the proposed 400Kv pylon route is offset from the existing 132Kv line. This means the baseline landscape does not experience the detracting effect of the existing line and so the assessments in such locations need to reflect this | Noted. This has been considered as part of the assessment of landscape effects in this location and presented at **Volume 5.6.1, section 6.5**. |
| 78 | Para 7.5.122 - | There appears to have been no assessment made of visual effects on | The M5 has been assessed sequentially as a long distance route |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | .128 | motorist on the M5 in Section B or C. Consideration of this receptor is particularly important in the northern part of Section B and the southern part of Section C, given the proximity of the 400Kv overhead lines, the CSEC and the proposed River Axe bridge.<br><br>Whilst its value is relatively low it is still considered to be of regional importance as it is the main tourist route through the southwest. The number of receptors using this particular part of the route, with attractive views to the Mendip Hills, Brent Knoll and opening out over the Somerset levels, the susceptibility to changes as a result of this type of development and the associated construction activities is considered to be medium. The sensitivity of this receptor is considered to be medium<br><br>The final ES needs to carefully assess the effects on views that will be experienced by users of the M5. | through Sections A to G and included in Visual Assessment Tables at **Volume 5.7.2, Appendix 7I**. Tables are provided in the final ES, and an overview of effects is included in the draft ES visual effects chapter. Receptors using the M5 are of medium susceptibility to change and have views of regional value and have been ascribed as of medium sensitivity. |
| 79 | Para 7.5.402 to7.5.405 and 7.5.425<br><br>and<br><br>Para 7.10.86 to 7.10.92 and Tables 7.15 and 7.16<br>And Figures 7.30.16 and 7.30.17 | Figure 3.1 The Proposed Development, shows the alignment of the proposed 400kv routes, but does not clearly distinguish between the type and extent of works required for removal and undergrounding of the existing F, W, G and BW routes associated with either option. There is currently no detailed description of this in Volume 5.3 and only a brief written explanation at para 6.5.204 in Chapter 6 and 7.5.397 in Chapter 7 and two very useful comparative plans (Figures 7.30.16 and 7.30.17) in Volume 5.7. This information would probably be best provided in Chapter 5.3 by two separate drawings<br><br>It is thought that the landscape and visual assessments tend to under-estimate the adverse effects of roA and the beneficial effects of roB, whilst over-estimate the Adverse effects of roB. Examples of some of these dubious assessments are provided below:<br><br><u>Under- estimation of assessments</u><br>**Beneficial landscape effects of removing existing 132Kv lines**<br>The landscape and visual assessments both assess the operational effects associated with the removal of the existing routes to be of **moderate beneficial** significance in the case of preferred route option A and only **minor beneficial** in the case of Route Option B. Comparing Figures 7.30.16 and 7.30.17, the differences in the route removals shown are considered to be so minor as to not warrant such differential assessment. It is not clear how the effect of removal of the existing lines is of moderate benefit to the landscape character in the case of roA, but only of minor beneficial significance in the case of roB. | This has been added to **Volume 5.3**.<br><br>The assessments of landscape and visual effects predicted as a result of Option A and Option B have been reviewed and are in accordance with the assessment methods provided at **Volume 5.6.1, section 6.3,** and at **Volume 5.7.1, section 7.3**.<br><br>The assessments of landscape and visual effects predicted as a result of Option A and Option B have been reviewed and are in accordance with the assessment methods provided at **Volume 5.6.1, section 6.3,** and at **Volume 5.7.1, section 7.3**.<br><br>The M5 has been assessed sequentially as a long distance route through Sections A to G and included in Visual Assessment Tables at **Volume 5.7.2, Appendix 7I**. Tables are provided in the final ES, and an overview of effects is included in the draft ES visual effects chapter. Receptors using the M5 are of medium susceptibility to change and have views of regional value and have been ascribed as |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | | of medium sensitivity. |
| 80 | | **roA - Adverse effects on users of the M5**<br>Chapter 7 (visual Effects) of the Draft ES does not make any assessment of view from the M5 within 1 km of the proposed development either roA or roB in Section F. The only reference to adverse effects on M5 users is at Para, 7.5.425<br>"The proposed 400kV overhead line on the preferred route (Option A) would be visible in some views above trees along the M5 motorway and receptors would experience a negligible significance of effect on views."<br><br>The M5 is an important receptor especially as the relevant length of the motorway plays an important role as a gateway to North Somerset as views open out to the west over the Clapton Moor to southbound travellers, just beyond Portbury and Sheepway. It is considered that there would potentially be a significant adverse effect on southbound views (and northbound views) available to M5 traffic as a result of Route Option A. This effect would arise from a medium sensitivity to change (elevated from low due to the number of receptors and its gateway position) and a<br>Moderate magnitude of effect. This needs to be fully considered and robustly assessed in the Final ES. | The M5 has been assessed sequentially as a long distance route through Sections A to G and included in Visual Assessment Tables at **Volume 5.7.2, Appendix 7I**. Tables are provided in the final ES, and an overview of effects is included in the draft ES visual effects chapter. Receptors using the M5 are of medium susceptibility to change and have views of regional value and have been ascribed as of medium sensitivity. |
| **Mitigation** | | | |
| 81 | General. | The 'site specific' mitigation proposals and the OSPES have been substantially amended in response to comments on the s42 consultation material. It is noted that the proposals for these two categories of mitigation are now closer to being appropriate and proportional to the effects predicted.<br><br>It is considered that the visual effects on several sensitive public and private visual receptors in and around Wick have been under-assessed in the draft ES. These receptors include H1.F1, F2, F3, F15, F16, R1, R6, R8, H1, H2 and H4.<br><br>It is disappointing that the OSPES proposals to the south of the Line Entries only comprise sparse hedgerow tree planting in field boundaries north and west of Wick. This planting should be substantially increased to provide a far more richly vegetated field pattern with many hedgerow trees. This would enhance visual containment of views to the north from the receptors around Wick and form a rational link to the proposed community woodland, associated with Hinkley C power station, directly to the west. Contrary to National Grid's response to the Joint s42 comments, this would not be in conflict with the important features of the | National Grid notes the Joint Councils' response.<br><br>The assessment of visual effects on receptors within Section H has been reviewed and is in accordance with the method provided at **Volume 5.7.1, section 7.3**.<br><br>National Grid considers that the extent of hedgerow tree planting is sufficient based on the existing landscape character and views available in the area.<br><br>The symbology on the OSPES plans at **Volume 5.25.3,** Figures 25.1.1 to 25.1.19 does not represent actual plant numbers and is indicative. The OSPES Schedule of Enhancements at Volume 5.25.2, Appendix A provides details of plant numbers and enhancements include 106 new native trees in this area in Section H. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | nearby SSSI Designation. | |
| 82 | | In the s42 response, the Joint Councils asserted the requirement for on-site mitigation measures at a number of 'pinch points' along the route (including Puriton Ridge, Mark, Tarnock, Tickenham and Nailsea) to address localised impacts including landscape and visual effects. This suggestion has not been addressed. The draft ES identifies a moderate significant effect in many of these locations. Notwithstanding the fact that the Councils view is that the effect is "major" in at least some of these instances, it is considered that it is reasonable to attempt to reduce the significance of effect to "minor" or better, by additional targeted, specific and deliverable mitigation. Such measures could not rely on landowner agreement and would need to be part of the DCO or / and deliverable localised compensation | The significance of effect on many of these receptors is considered to be moderate adverse as the Proposed Development would include a partial alteration to the existing view and the introduction of prominent elements in the view. Views beyond the proposed 400kV overhead line would remain due to the nature of the Proposed Development.<br><br>The Proposed Development would be seen in views for the long or medium-term with a moderate proportion of the view affected. There is some backgrounding in places which minimises the scale of change from the present situation.<br><br>Refer to Visual Effects Tables at **Volume 5.7.2, Appendix 7A to 7H** for details of assessment.<br><br>The OSPES at **Volume 5.25** includes enhancement measures to further reduce adverse visual effects of the Proposed Development. The funding for the OSPES takes account of the costs to negotiate with landowners, prepare schemes, implement them and monitor and maintain them for 5 years. The funding for the OSPES would be secured via a S106 agreement. The implementation of the OSPES will be subject of landowner agreement and the programme for implementation will be in the remit of the LPAs implementing it. |
| 83 | Para 7.7.28 - 29 and Volume 5.3 Draft Figure 3.15.1-7 River Axe and Towerhead Crossings | It is considered that the proposals in respect of the river crossing bridge locations and works are not currently defined enough to design an appropriate mitigation scheme. Broadly speaking the intent of the planting proposals presented is adequate, although more planting around the embankments at either end of the bridge would considerably reduce adverse effects.<br><br>The River Axe and Towerhead Brook crossings are each around 13 m wide. This is just under half the width of the M5 motorway. As both of these crossings are likely to be visible from nearby elevated ground it would be beneficial if the decks could be entirely grassed rather than only partially.<br><br>In relation to the bridges shown in fig 3.15.1. and 3.15.2 – there is concern over the use of cladding, balustrades and steps. These elements of the design increase the visible bulk of the structure whilst also giving a recognisable sense of scale to the structures. The structures are large and it would be preferable to avoid these details to minimise their size and to use a design that is hard for the viewer to | Landscape mitigation proposals for the River Axe cables bridge option provided at **Volume 5.7.3, Figure 7.33.6** is considered appropriate and takes account of the underground cables easement, and constraints to planting adjacent to watercourses. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | scale in the landscape. A detailed design scheme is needed to show how these large structures and ramps are to be integrated into the landscape | |
| **Volume 5.25 Off Site Planting and Enhancement Scheme (OSPES)** | | | |
| 84 | OSPES Figure 5.25.17 and 5.25.18 | Regarding street tree planting in Avonmouth, it is difficult to understand the impact of the new overhead power lines and the efficacy of mitigation provided by the proposed street tree planting in the absence of photomontages. Given that this is one of the few urban residential areas affected by the proposals, due attention should be paid to the impact on townscape and localised views.<br><br>One way of ensuring mitigation for affected views for the community would be to integrate street tree planting into general public realm improvements around Clayton Street/Meadow Street - locating trees within road space (generally very wide) rather than pavements, which are on the whole narrow. It is unlikely that this localised tree planting will adequately mitigate the effect on the community and, therefore, the scheme should identify locations for additional planting such as Avonmouth Park, traffic islands or additional street tree planting in the locality to compensate the local residential community for the additional visual harm.<br><br>The principle of tree planting along Severn Road is supported but the extent currently falls short of required local screening of near views of pylons in the open area of Hallen Marsh.<br><br>Given the landscape and visual impact on Severn Road arising from the oblique crossing by a new pylon line, further planting should be proposed to ensure continuity of hedgerow and where possible tree planting along both sides of Severn Road, from the motorway overbridge to PRoW ORN 27/10 | All photomontages have now been produced to support the landscape and visual assessments at **Volume 5.6**.**1** and **Volume 5.7**.**1**. Proposed street tree planting in the OSPES aims to further reduce adverse visual effects and improve streetscape character in Avonmouth. Street tree planting would support the BCC Tree Bristol campaign.<br><br>The OSPES includes landscape works to further reduce the adverse residual effects on landscape character and views of the Proposed Development. The works proposed are indicative and set out the principals and objectives of the enhancement measures. National Grid can agree the final details of these proposals with the LPAs within the agreed financial limits.<br><br>The OSPES includes landscape works to further reduce the adverse residual effects on landscape character and views of the Proposed Development. The works proposed are indicative and set out the principles and objectives of the enhancement measures. National Grid can agree the final details of these proposals with the LPAs within the agreed financial limits.<br><br>However, due to the ongoing review of the Local Plan and development of bird habitat enhancement proposals for Hallen Marsh, details of any planting should be discussed and agreed with Bristol City Council's Ecologist. |
| 85 | OSPES 1.1.1 | For clarity this statement should add *'or equivalent works on nearby land, where landowner consent cannot be secured'.* | Text added to paragraph 1.1.1. |
| 86 | OSPES 1.3.1 | It should be the Forest of Avon Plan 2002 | Text amended at paragraph 1.3.1. |
| 87 | OSPES 5.1.4 | The inclusion of the principle of tagging of trees is welcomed, however there would however be a cost implication to this and this needs to be reflected in the funding made available | The cost implication for tagging existing hedgerow trees would be included in the funding to be made available for the OSPES. Costs would allow for planting individual extra heavy standard trees 16-18cm girth (RB) of local provenance including tree pit, backfilling with excavated topsoil, double timber stakes and 5 years maintenance. If existing hedgerow trees are suitable the cost for new planting would be combined or replaced with tagging of existing hedgerow tree species to be managed and established into mature hedgerow trees. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| 88 | OSPES 6 | The principle that if a landowner is not interested in a specific proposal then funding will be provided for work of an equivalent value, elsewhere is welcome. Again, the work to establish this needs to be reflected in the sums made available through the s106 | Funding would include land acquisition costs and fees and professional fees for design, consultation, procurement and contract administration. |
| 89 | OSPES 6.2.1 | Hedge laying is an important and traditional management operation and should be included. This accords with OSPES principles at 5.1.4. This could be used in combination with some gapping up, particularly where the base of the hedge has become very open. Include also in Appendix E.<br><br>It is assumed that 'native structure planting' includes woodland, but for clarity woodland should be stated as well | Hedge laying of existing hedgerows to be gapped up, particularly where the base of the hedge has become very open, to be added to the OSPES Schedule of Enhancements at Appendix 25B and in the Management Operations at Appendix 25E.<br><br>Native woodland structure planting includes woodland but for clarity 'woodland' to be stated as well. |
| 90 | OSPES 6.3.1 | The OSPES states that the lump sum for improvements to PRoW will be based on where most benefit would derived. The OSPES plans in section A-H in Appendix A are very limited to relatively short sections of the PRoW near the Pylons. This does not allow for the consideration of direct and indirect cumulative effects on physical use and the visual, amenity and tranquillity of the PRoW which pass under the development | As part of the OSPES National Grid will provide a fund to allow Local Authorities to implement and prioritise improvements to access and signage where appropriate. The sum would include the costs for Local Authorities to manage the delivery works and to secure agreement with landowners. The sum is based on improvement of local PRoW where most benefit would be derived. The OSPES plans identify these PRoWs in Sections A-H at **Volume 5.25.3**, Figures 25.1.1 to 25.1.19.<br><br>In addition to the PRoW improvements National Grid will support the improvement of long distance footpath and cycle routes by providing Local Authorities with a lump sum to fund improvements to access, signage and general repairs or improvements along each route within 1km of the Proposed Development. This includes the Long Distance Routes (LDR) and National Cycle Routes (NCR) located within 1km of the Proposed Development and identified at **Volume 5.25.1**, Section 6.3. |
| 91 | OSPES 6.4 | National Grid should clarify what 'distinctive elements' will be funded | The OSPES states that the fund for woodland management and distinctive elements will be available to contribute to, amongst others, the management of woodlands of community value, ancient woodland, veteran trees, stone walls, rhynes and ditches, orchards and pollarded willows. |
| 92 | OSPES 7.1 Plans | Excepting that woodland planting, management and distinctive elements (6.4.2) are not included, the revised plans have addressed the majority of the additional hedge and individual tree planting proposed by NSC, with the notable exception of southerly views from Tickenham, where additional trees were proposed. National Grid should clarify, why these planting proposals have not been considered | To the north and west of Nailsea (Nailsea Moor/West End), particularly where the lines will oversail rural roads and recreational routes and to the south of Grade I listed Church of St Quiricus and St Julietta at Tickenham: A large area (between North End and Nailsea) of Section D is designated as a SSSI which limits enhancement planting appropriate for landscape character and visual enhancement which would be inconsistent with the important features of the designation as discussed with Natural England. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| 93 | OSPES Appendix 25B Schedule of Enhancements | There are inconsistencies between PRoW path numbers shown on the OPES plans in Appendix A and Appendix 25B Schedule of Enhancements.<br><br>The Community Forest Path listed under para 6.3.2 of the OPES is not included in Appendix 25 Schedule of Enhancements.<br><br>The Two Rivers Way listed under 6.3.2 of the OPES is not included in Appendix 25B Schedule of Enhancements.<br><br>It would be helpful if the "Measure" in the schedule could be separated out for each Local Authority, PRoW, Long Distance footpath and National Cycle Routes. | PRoW path numbers updated in the Schedule of Enhancements at **Volume 5.25.2, Appendix A** to include the correct PRoW path numbers shown on the OSPES plans at **Volume 5.25.3**<br><br>The Community Forest Path has been removed from the list at **Volume 5.25.1,** Section 6.3 as it is further than 1km from the Proposed Development and is not included in the Schedule of Enhancements at **Volume 5.25.2**, Appendix A.<br><br>The Two Rivers Way has been removed from the list at **Volume 5.25.1**, Section 6.3 as it is further than 1km from the Proposed Development and is not included in the Schedule of Enhancements at **Volume 5.25.2**, Appendix A.<br><br>The Schedule of Enhancements at **Volume 5.25.2**, Appendix A has been updated to clearly itemise each enhancement proposal, its measure (quanitities) and the Local Authority boundary it is within. |
| 94 | OSPES Appendix D | NBS document doesn't cover tree planting in hard surfaces – street tree planting operations so not useful to set standards | **Volume 5.25.2, Appendix C** NBS Landscape Specification has been updated to include tree planting in hard surfaces. |
| 95 | OSPES Appendix E | Bristol City Council requires a commuted sum for the maintenance of highway trees. We highlight this requirement as it goes beyond the 5 year commitment of the regular maintenance condition | 5 years is the appropriate period for maintenance and is the timeframe set out in the model DCO provisions in PINS guidance. |
| **Volume 5.21 Arboricultural Impact Assessment (AIA)** | | | |
| 96 | General | • The site specific mitigation is realistic and implementable.<br>• The small amount of 'in-situ' tree and woodland replacement planting and the vast majority of the replacement hedgerow is realistic and implementable but subject to landowner compliance.<br>• The majority of replacement tree planting 'in new locations' is completely dependent on 3rd party agreement.<br>• The Off Site planting and enhancement scheme is entirely dependent on 3rd party agreement. | National Grid acknowledges this comment |
| 97 | (AIA) Table 9.2 | This table states that only replacement planting for 19 trees (out of the 588 lost) and 0.94ha of tree groups (of the 10.66 ha lost) will be delivered 'in –situ' as part of the DCO | National Grid acknowledges this statement |
| 98 | AIA Para. 9.3.4 | The mitigation tree and tree group planting proposed in the in situ replacements and the site specific mitigation measures account for some 990 individual trees and 3.24ha of tree groups. With the loss of 588 trees (2352 replacements at 1:4) and 10.660 ha of tree groups removed, there | The tree replacement ratio of 4:1 applies to the combined proposals encompassing 4 principal activities:<br><br>•planting replacement trees, tree groups and hedges 'in-situ'; |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | is a shortfall of 1362 trees and 7.42 Ha of tree groups to be provided as mitigation for the loss of planting as a direct result of the development.<br><br>There is a commitment to plant these as close to the lost vegetation as possible subject to landowner agreement, but:<br><br>*"National Grid is not applying for the rights in its DCO to undertake this planting but would commit to offering this planting to landowners. If landowners request this planting prior to reinstatement of land, National Grid will undertake it."*<br><br>See the comments in the Councils' covering letter on National Grid's position, which the Councils do not accept.<br><br>There is also 0.63 km of replacement hedgerow planting which may not be possible to plant on site.<br>Clearly the vast majority of the replacement planting of trees and tree groups is subject to as much if not more uncertainty than the OSPES proposals, cannot be guaranteed for delivery under the DCO under National Grid's current proposed approach, and so must be secured by other means.<br><br>In addition to the commuted sum agreed for the OSPES under the s106 agreement, there will need to be an obligation to secure funding for the planting of however many of these plants cannot be planted by National Grid within the Order Limits before the completion of the development. National Grid should clarify what their contingency position is, in the event that they are unable to secure a 4 to 1 planting ratio | •planting replacement trees, tree groups and hedges in new locations with landowner agreement as part of reinstatement of land;<br>•new planting of trees, tree groups and hedges with new infrastructure; and<br>new planting as part of the OSPES.<br><br>The combination of these four activities exceeds the 4:1 ratio.<br><br>National Grid acknowledges this statement<br><br>National Grid acknowledges this statement |
| 99 | AIA, Section 9.6 | Section 9.6 of the AIA states the number of trees and groups of trees to be planted, however this includes those proposed within the OSPES. The OSPES planting should not be considered as mitigation in the ES and so cannot count towards the number of proposed plants as mitigation | National Grid acknowledges this statement |
| **The AIA Tree Impact Plans** | | | |
| 100 | General | Despite a request and agreement at consultation meetings in December to provide plans showing protection measures for vegetation and heritage assets to be protected, there do not appear to be any plans showing such protection measures. These are required. These should be included as part of the ES and should be cross referenced appropriately from the Landscape and Visual Chapters, the Historic Environment chapter, the CEMP and the AIA. | Tree protection will be secured by a Requirement of the DCO. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | With the AIA there is a statistical analysis of existing trees broken down into the Project Sections. This is very helpful, but it is requested that this document is extended to detail trees and tree groups to be removed and those that could be effected in each Project Section<br><br>The only graphic representation of 'Hedgerow Replacement Planting' is on the OSPES plans. The OSPES is specifically excluded from the DCO. It is considered critical that there should be a requirement to replace hedgerows and this should be presented on plans that are submitted as part of the ES | National Grid acknowledges this statement<br><br>Hedgerow replacement planting is illustrated in the Arboricultural Impact Assessment (AIA), **Volume 5.21.1** |
| 101 | Drg 2.1.12<br>Drg 2.1.16<br>Drg 2.1.23<br>Drg 2.1.37<br>Drg 2.1.47,<br>(amongst others) | The plans are difficult to read in areas as the tree ID numbers cover up the trees. A good example of where this is resolved is at Drg 2.1.7, where the numbers are removed from the less detailed plan and shown on the inset plan | Every effort has been made to improve the clarity of the figures presented in **Volume 5.21.3**. The scale of the development and the number and density of trees makes it difficult to avoid all conflicts. |
| 102 | Inset plans:<br>Drg 2.1.7a<br>and<br>Drg 2.1.47a | Where there are existing hedgerows with large numbers of trees to be removed, there will be at best partial removal or total loss of the hedge under the trees. These hedges should be shown as 'Hedgerow Replacement Planting' | Hedgerow replacement planting has only been shown where hedges are actively being removed. Tree stumps may persist as a valuable dead wood habitat within hedgerows for many years, during which time hedgerow vegetation will naturally develop to infill existing gaps. |
| **Volume 5.26 Construction Environment Management Plan (CEMP)** | | | |
| 103 | General | There are no plans provided showing vegetation, habitat or heritage asset protection measures. There have repeatedly been requested and are considered very important in offering reassurance on the protection of important features. These measures (normally integral to documents such a Construction Environment Management Plans and Arboricultural Impact Assessments (Tree Protection plans)) have been omitted to date and should be provide as part of the final ES. | It is not possible to provide plans illustrating the location of tree and hedgerow protection fencing in the ES as there is some flexibility in the Order Limits as to where construction accesses and working would be. Tree and hedgerow protection is discussed in the AIA at **Volume 5.21,1, section 8** and will be provided as a Requirement of the DCO. |
| 104 | 7.3.3-7 | Under the heading 'Planting to screen construction works' in the CEMP no planting measures are described.<br><br>Due to the potential for significant adverse effects on the amenity of residents in Tarnock and Biddisham, details of the planting screen proposed to the south of the Tarnock compound are requested. This planting should be included in the Visual Effects Chapter, CEMP and OSPES, as part of the DCO as advance planting to screen views of the compounds, but then to remain as part of the off-site landscape enhancements. This block of planting should also be extended north along the east boundary of the compound to mitigate effects on views in from Fletchers Lane | Mitigation of construction effects on landscape character and views will be secured via the Construction Environmental Management Plan (CEMP) at Volume **5.26.1**, which is the subject of a Requirement in the DCO.<br><br>Measures would be undertaken to mitigate landscape and visual effects of the A38 Bristol Road (overhead line) Compound, (and other construction compounds and working areas). Appropriate construction mitigation will comprise measures such as temporary topsoil bunding with stockpiles around the edges of the compounds and some work areas; and temporary steel mesh fencing (minimum 2m high) fitted with olive green tarpaulin along some boundaries of |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | Similarly at other compounds and areas where construction activities will be concentrated and would give rise to significant effects on visual amenity or landscape character, advance planting of the proposed mitigation measures should be considered | the compounds or work areas.<br><br>Construction mitigation measures above are referred to in the landscape and visual assessments provided at **Volume 5.6.7, section 6.7,** and **Volume 5.7.1, section 7.7**. |
| **Cumulative Effects** | | | |
| 105 | General | The selection of cumulative projects is adequate.<br><br>There are no criteria provided for the assessment of cumulative effects. It is recommended that some criteria table, similar to those in the other chapter methodologies, are provided to describe precisely how the assessments are made, for example: | GLVIA 3rd Edition (GLVIA3) Chapter 7 – Assessing cumulative landscape and visual effects does not refer to the use of different criteria for assessing cumulative effects as compared to assessing the effects of a project. Assessments are based on the exercise of professional judgement. GLVIA3 makes clear that the emphasis should be on assessing the main project and how or whether its adds to or combines with the others being considered to create significant cumulative effects |
| 106 | | • The basis on which several moderate effects are considered in combination to draw a conclusion on the overall cumulative significance; | This is a matter for professional judgement; it is not 'formulaic' (e.g. three moderates equals moderate whereas four moderates equals major). |
| 107 | | • how the susceptibility to changes brought around by several types of development on one receptor have been assessed. Equally, criteria should be provided to demonstrate; | As stated in paragraph 7.28 of GLVIA3, *'the emphasis must always remain on the main project being assessed and how or whether it adds to or combines with the others being considered to create significant cumulative effect.'*<br><br>For each development, the Proposed Development (400kV overhead line) is considered in combination with a number of receptors. Professional judgement is exercised as to the significance of effect on those receptors |
| 108 | | • how the magnitude of changes to the character of the landscape and views changes as a result of several developments being built; and | Paragraph 7.28 of GLVIA refers to '*the most significant cumulative landscape effects are likely to be those that would give rise to changes in the landscape character of the study area of such an extent as to have major effects on its key characteristics and even, in some cases, to transform it into a different landscape type. This may be the case where the project being considered itself tips the balance through its additional effects. The emphasis must always remain on the main project being assessed and how or whether it adds to or combines with the others being considered to create significant cumulative effect.'*<br><br>When considering the magnitude of change to the character of the landscape and views as a result of several developments being built (eg '*the cluster of potential energy and infrastructure related* |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | | *development around Puriton and Woolavington'* referenced by the Joint Councils), the assessment has considered:<br>A. What effect would all the other potential developments have on landscape and views in the absence of the proposed 400kV overhead line?<br><br>B. What effect would all the other potential developments have on landscape and views with the proposed 400kV overhead line?<br><br>The conclusion of the landscape and views chapters of the Environmental Statement is that the effects of the proposed 400kV overhead line (B above) generally are similar to the effects experienced from the existing overhead line infrastructure on landscape and views (A above). The proposed 400kV overhead line would not *'tip the balance through its additional effects'* in combination with potential developments in the area as per paragraph 7.28 of GLVIA3. |
| 109 | | • how the magnitude of changes to a PRoW or road are assessed as a result of receptors sequentially experiencing several views of one or many developments along a journey through the landscape.<br><br>In general this chapter is considered to fall short of a full cumulative effects assessment | The assessment of the effects of the proposed Hinkley C Connection Project considers sequential experience. However it is not apparent that assessments of other developments have considered these effects. The exercise suggested is one which is beyond the reasonable focus of the assessment of the effects of the Proposed Development. |
| 110 | Paras 15.5.111-15.5.114 and Table 15.44 | The assessment of inter-relationship of effects on amenity is very brief and separated from the assessment of cumulative effects. The criteria for assessing effects in different chapters (and importantly the spectra used in the classification of significance of effects) varies across the topics. The methodology for assessment of the interrelationship of effects and their cumulative/in-combination effects needs to be clearly set out.<br><br>The inter relationship of effects on amenity only considers 100 receptors within 250m of the development. Significant landscape, visual and other effects will be experienced and will combine to create intra-project cumulative effects over an much wider area.<br><br>The scope of the assessment of the inter relationship needs expanding to consider a wider range of receptors and effects | For a receptor to be considered in the amenity assessment it needed to be significantly affected by more than one discipline (i.e. landscape, views, air quality, noise, vibration, traffic and transport). Whilst landscape and visual effects occur in the Wider Study Area, these in isolation would not be considered to influence amenity value (they are assessed specifically in the landscape and visual assessment).<br>The study area for the amenity assessment was a reflection of the extent to which there were in-combination effects. |
| 111 | Table 15.44 on Page 118 | States that visual effects on receptors in Mark will be Low. This is not consistent with the assessments made in chapters 6 and 7 | The assessment uses an in-combination appraisal, incorporating factors which could affect the ability to use or enjoy the receptor, such |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | of Chapter 15 | | as ability to access a receptor, noise, visual and air quality effects. As an in-combination appraisal, the amenity assessment therefore draws from the magnitude of effects identified in some of the other technical assessments (such as transport, noise, landscape and air quality), and considers these effects in the context of the amenity value or sensitivity. This means that in some cases a range has been applied to classify the effects, and also, there may be differences in the classification of effects on the same receptor between ES chapters. |
| 112 | Para 17.3.14 | This para states:<br>*"None of the predicted cumulative effects are greater than the predicted effect of the Proposed Development, given that the categories of predicted effects provide a range within which the effects are assessed by professional judgement (for example, that is a moderate cumulative may be marginally greater than a moderate non-cumulative, but both are within the moderate spectrum)."*<br><br>This exemplifies a concern with the breadth of the moderate spectrum used in this assessment and is the reason many assessments are made using a verbal scale with 6 categories rather than the 4 used here. Nevertheless, in accordance with GLVIA3, the 4 point scale would be acceptable if the assessments were presented alongside evenly distributed and clearly described assessment criteria. This has not been done here | Paragraph 17.3.14 has been edited to make the sense clearer. Where a proposed development such as a wind farm would give rise to greater adverse effects than the Proposed Development, it is not the case that the cumulative effects would be the same as for the Proposed Development.<br><br>As set out above, the assessments have been undertaken by the exercise of professional judgement and in accordance with guidance set out in GLVIA3. |
| 113 | Chapter 6, Para 6.9.2 and Chapter 17 Table 17.7 | The cumulative effects assessment does not address the effects arising as a result of the proposed access road, one of the more significant aspects of the Huntspill Energy Park development. This is proposed between Puriton Hill (A39) and the ROF site and occupies a swathe of the northerly slope of the Puriton Ridge south of Puriton. The proposed overhead lines and pylons will be intervisible and from very close range and will have significant cumulative landscape and visual effects on local receptors. These cumulative effects on the landscape elements and overall character of the west end of the Polden Ridge LLCA will be direct, (contrary to the assertions in Para 6.9.2 and 17.3.11), permanent, adverse and significant.<br><br>The robustness of the assessments in the Draft ES of the Landscape and visual effects on receptors on Puriton Ridge are discussed above. These inter-related effects, in combination with indirect, long term landscape and visual effects arising from the proposed energy park, wind farms and PV parks, are considered to be of potential major significance on the character of the local landscape and views to and from the Puriton Ridge. | The cumulative landscape and visual assessments provided at **Volume 5.17.1**, include an assessment of the proposed access road associated with the proposed Huntspill Energy Park development and has considered cumulative landscape and visual effects on Puriton Ridge.<br><br>The final cumulative landscape and visual assessments provided at **Volume 5.17.1** include an assessment of the combined effect of developments in combination.<br><br>In terms of mitigation, GLVIA 3 in paragraph 7.40 advises that there is scope for reducing cumulative effects through changes to the main project layout or the use of planting or screening to reduce to contribution to the cumulative effects. The routeing of the overhead line has considered how effect may be reduced.<br><br>Paragraph 7.41 states that cumulative effects may be addressed through<br>*"partnership working between developers, the consenting authority* |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | There is an unusually concentrated cluster of energy and infrastructure related development in the relatively attractive rural landscape around Puriton and Woolavington. It is recommended that the cumulative effects assessment includes the access road element of the energy park once the ES assessments of landscape and visual effects on Puriton Ridge receptors have been re-visited As suggested above. The cumulative assessment should also assess the combined effect of all of these developments in combination and where necessary propose adequate mitigation to alleviate effects on the character of the landscape and local views | *and statutory bodies to produce an agreed package of solutions; community compensation/offset packages, which may be linked to partnership working".*<br><br>National Grid is including the OSPES which will provide funding for offsetting adverse effects on views.<br><br>Where there is concern regarding the effects of the 'cluster' of developments, it is assumed that in each other case than the Proposed Development the cumulative effects have been assessed and considered as acceptable. National Grid does not consider that the Proposed Development would represent a 'tipping point' which would require it to address effects of the 'cluster' of developments. |
| 114 | Volume 5.17 Chapter 17, Table 17.8 <u>Assessment of Potential Cumulative Effect – During operation</u> Public Views | *"Views north from PRoW running along the top of Puriton Ridge (A1.F8) and PRoW east of Puriton (A1.F5) would have the proposed 400Kv overhead line in the foreground with the proposed Huntspill Energy Park in the distance in view above groups of trees. Given the high sensitivity of these receptors and the low magnitude of effect predicted as a result of the proposed 400Kv overhead line and the proposed Huntspill Energy Park, in terms of visual effect the cumulative significance would be minor adverse."*<br><br>Again this assessment neglects to consider the access road and incorrectly ascribes a low magnitude of change. The assessment in Chapter 7 ascribes a moderate magnitude of change. This review (above) asserts that this should be categorised as a High magnitude of change | The cumulative visual assessment provided at **Volume 5.17.1** has been reviewed and includes an assessment of the proposed access road associated with the proposed Huntspill Energy Park development.<br><br>It concludes that during the construction period the Huntspill Energy Park access road would cause a very high magnitude of change on nearby receptors and a cumulative significance of effect with Proposed Development of major adverse.<br><br>During the operation phase the cumulative assessment concludes that properties to the southeast of Puriton would have views of both the Energy Park access road and the Proposed Development. The landscape disturbed during construction would be reinstated, with mounding and screening implemented although there would be the introduction of a prominent element in the view. The significance of visual effect would be moderate adverse. |
| 115 | Para 4.1.3.15 of the s42 response | In the s42 response, the Joint Councils raised that there needed to be greater consideration of the cumulative effects of the development, in particular with the T-pylon and the proposed wind turbine developments along the route. This does not appear to be addressed as the line is treated in a generic way regardless of choice of pylon and yet there will be a significant difference of effect between the T-Pylon and the lattice pylon | The assessment has been undertaken based on the project description set out in the Environmental Statement at **Volume 5.3.1**, including the designs of pylons that would be seen with other developments along the route. |
| 116 | Chapter 17 and visual impact Tables at appendix 7g | This cumulative assessment should be made with reference to Bristol Port Company's Renewable Energy Project Phase 2. This involves the erection of three wind turbines to the west and southwest of Avonmouth Village. Although the proposed pylons in this vicinity are Lattice structures, they will give rise to cumulative effects as tall vertical | As this proposed development (Bristol Port Company's Renewable Energy Project Phase 2) now has planning consent, it has been considered as committed development in the respective landscape and visual effects chapters of the Environmental Statement at **Volume 5.6.1, and Volume 5.7.1**. The respective chapters consider |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | structures and cables against the skyline in combination with the proposed turbines.<br><br>In addition to this, another proposal by the Bristol Port Company (planning application Ref no.11/02773/F) to use the former railway siding to the south west of Avonmouth Village as a storage facility, needs to be considered in detail in Chapter 17. The project has been included in the list of projects to be considered, but no assessment has been made of the potential cumulative landscape or visual effects of the loss of a substantial amount of mature tree cover in this area. This same tree cover is relied upon in the Visual Assessment Tables at Volume 5.7 Appendix 7g: Section G Avonmouth Preferred Route (Option A) Visual Assessment Tables Houses Within 1km of the Proposed Development in Section G, to partially filter views of the proposed development | the potential effects of the proposed wind turbines on the future baseline within which the proposed 400kV overhead line would be constructed and operational in.<br><br>The proposal for the storage facility (planning application Ref no.11/02773/F) also now has planning consent and has been considered as committed development in the respective landscape and visual effects chapters of the Environmental Statement at **Volume 5.6.1, and Volume 5.7.1**. The assessments consider the potential effects of the proposed storage facility on the future baseline within which the proposed 400kV overhead line would be constructed and operational in.<br><br>The issue of the potential loss of tree cover on the former railway sidings has been addressed in the Visual Assessment Tables at **Volume 5.7.2, Appendix 7G**: Section G Avonmouth. |
| 117 | Chapter 17 | Sequential cumulative effects on users of the M5, A38 and main railway line have not been assessed. For the same reasons given above, in the comment on Para 7.5.122 -.128, these are considered to be receptors of regional importance with medium sensitivity to change. Therefore it is considered important that the sequential cumulative effects on the visual amenity of users travelling north and south bound on the relevant lengths of these routes | The assessment of the effects of the proposed Hinkley C Connection Project considers sequential experience. However it is not apparent that assessments of other developments have considered these effects. The exercise suggested is one which is beyond the reasonable focus of the assessment of the effects of the Proposed Development. |
| **Appendix A3 - Biodiversity** | | | |
| **Volume 5.08 - Chapter 8 Biodiversity and Nature Conservation** | | | |
| 118 | Overarching comment | The specific detail sought in the mitigation table has not been provided in particular with regard to the impacts on Local Wildlife Sites and s106 funding to allow Local Authority monitoring of compliance with requirements | The Local Sites Offsetting Strategy is provided as 'Additional Mitigation; in **Volume 5.8.1,** reflecting its status as a S106 deliverable. **Volume 5.8.2,** Appendix 8O provides a detailed breakdown of impacts for each local wildlife site and the BMS describes specific construction working methods for each site. |
| 119 | Avonmouth Severnside policy context | The assessment should reference the Site Allocation and Development Management Policy and relevant context relating to a review of these allocations in 2016 in the Enterprise Area. The review will identify additional land for development and other changes (including areas required for ecological off set) and this will affect context for considering ecological impacts (see also comments in the Socio-Economic chapter in relation to Enterprise area and the implications of HRA work with respect to Hallen Marsh on the provision of offsetting areas). Comments below on ecological impacts for current situation are made, therefore, without prejudice to a proper consideration of the changing context as plans for the Enterprise Area are changed within the current review leading to 2016 revisions to land allocation. | The HRA (**Volume 5.20.1**) includes a detailed assessment of the plans and policies relating to the Avonmouth/Severnside area, this has been presented to Natural England to review and has been discussed during a meeting with Bristol City Council and the written paper then passed to BCC. The ecology section of **Volume 5.17.1** also includes an assessment of these plans/policies |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | South Gloucestershire Adopted Core Strategy (Dec 2013) & relevant 'saved' Local Plan policies are not cited. The South Gloucestershire Biodiversity Action Plan and targeted habitats and species are also not cited. | **Volume 5.8.1**, Section 8.2 and **Volume 5.8.2**, Appendix 8B have been updated accordingly. |
| 120 | 8.2.49 Table 8.4 | There is no reference to the North Somerset Local Biodiversity Action Plan, 'Action for Nature' 2005, which, although technically out of date, highlights the local and national priority habitats within the district and should be listed. Also, there is no reference to the North Somerset supplementary planning document 'Biodiversity and Trees' (Adopted 2005). | **Volume 5.8.1**, Section 8.2 and **Volume 5.8.2**, Appendix 8B have been updated accordingly. |
| 121 | 8.3.62 | It is noted that water vole surveys are still to be completed | Water vole surveys are only outstanding in a few limited areas and an initial assessment has already been undertaken. Weather dependant these will be completed in March/April 2014. The assessment and mitigation approach in Volume 5.8.1 and the BMS (**Volume 5.26.3**) allow for changes in water vole distribution between now and construction. Therefore this does not pose a constraint to the ES. 2014 survey data will be available prior to DCO hearings. |
| 122 | 8.4.18 Hedgerows and Ditches and Table 8.22 Valuation of Habitat Types | There is no baseline assessment section in relation to the structure/ management of hedgerows. The height (and width) of hedgerows is a significant variable in terms of the assessment of the ecological value of the hedgerow as a feature for bats. Radio tracking of greater horseshoe bats from Brockley Hall Stables SSSI has concluded that the bats 'forage primarily over grassland adjacent to tall, overgrown hedgerows and tree lines and along tree-lined watercourses and wetland areas' (pp. 32, English Nature (2002)).<br><br>The significance of these key landscape features for greater horseshoe bats (qualifying interest species of the North Somerset and Mendip Bats Special Area of Conservation), has been translated into a North Somerset local planning policy (North Somerset Replacement Local Plan (2007) (ECH 12 bat consultation zone).<br><br>Hedgerow height is considered significant for greater horseshoes in terms of provision of a structural feature for 'perching' and also for other foraging bats due to the sheltered microclimate provided for commuting and foraging, and which supports airborne invertebrate prey (notably moths).<br><br>Therefore the loss in extent of tall hedgerows is particularly relevant to greater horseshoes and therefore should be quantified, particularly in relation to those locations of the Proposed Development that lie within | A breakdown of hedgerow losses has been provided distinguishing those that are over 3m in height. Specific consideration has also been given to the extended period which these hedgerows would need to re-establish and regain ecological functionality. Hedgerows >3m high have also been considered in the provision of bat flyways. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | key foraging distances from roosts used by bats that form the SAC populations. See also comments in relation to Table 8.23 below.<br><br>Hedgerow height and width (as well as species diversity which is covered) is also relevant in the assessment of habitat quality and to inferring likely impacts on connectivity for species such as dormice which may rely on food resources provided by taller hedgerows, that are trimmed less frequently, when migrating between blocks of woodland (again generally within wooded locations at higher altitudes in North Somerset outside of the North Somerset Levels and Moors).<br><br>Therefore the hedgerow section needs to quantify the extent (length) of tall (>3m) hedgerows impacted by the Proposed Development; and to explain the significance of the structure of the hedgerow, i.e. height (and to some extent possibly width) in relation to the ecological resource provided.<br><br>It is recognised that annually flailed short hedgerows provide little in the way of food resources for birds, dormice and other wildlife as many native shrubs such as hawthorn only flower and fruit on second year growth. Therefore, the value of the ecological resource is not adequately explained simply by species richness or importance under the Hedgerow Regulations 1997.<br><br>*Mitigation*<br>The assessment of height of hedgerow is also helpful to the assessment of provision of mitigation in terms of height and width of deadwood/ deadhedge bat flyway structures across the extent of the Proposed Development to replicate existing.<br><br>Although it is agreed that the provision of bat flyways of sufficient height should be implemented, the extent to which they may be used may be uncertain.<br><br>Other functions of a living hedgerow cannot be replicated so readily, and, for this reason, enhancements to the provision of tall hedgerows over the longer term needs to be considered off site (to include projects which undertake landowner liaison to raise awareness of the significance of tall sympathetically managed hedgerows in the provision of resources for bats, dormice, birds and invertebrates; and that will lead to sustained enhancements to the hedgerow network in the wider area over the longer term). | |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| 123 | 8.22 Grassland Habitats | The potential significance of pastural land use to horseshoe bats (as an internationally important species) should be articulated, as a low biodiversity conversion for improved pasture does not take into account the particular importance of pastural land use in North Somerset for the maintenance of greater horseshoe bat SAC roosts | The assessment of effects on bats considers the importance of habitats (including pastoral land) for bat foraging and takes account of losses of important habitats under the bat receptor and the two bat SAC site receptors. |
| 124 | 8.4.122 | Cetti's warbler has also been recorded on the Strawberry Line (on or near large reedbed near to Yatton crossing point (Trevor Riddle, bird surveyor, YACWAG). | Noted, this will be added to the baseline data |
| 125 | 8.4.123 | Kingfisher. Due to the regular maintenance of rhynes, many wet ditches have vertical banks which are maintained clear of vegetation, which provide potential suitable banks for kingfisher nest holes. Kingfisher has recently been recorded on the Cross Rhyne network between Weston and Banwell and on a stream at Claverham (pers. comm. local resident, Claverham). Therefore, this species may be more widespread than records may suggest and need to be considered in pre commencement ecological checks prior to crossing works on the rhyne networks. Subsequent provisions in 8.7.34 noted | These records have been added to the baseline data. The BMS (**Volume 5.26.3**) already provides for pre-commencement checks for this species at all culvert/bridge works. |
| 126 | 8.4.139 | Leisler's bat has also been recorded at Yatton in the recent past (Smart System's landholding of Wenderham Way). | The baseline data has been updated to include this record. |
| 127 | 8.4.186 | Noted toads widespread. In North Somerset there are a number of known toad migration routes that cross roads across the district ranging from Winscombe Hill Road, Winscombe, Mendip Road, Yatton, the Gordano Valley, and Portishead | Those crossings identified in the consultee response include an area >2.5km from the Order Limits. Further toad crossings have been identified from the Froglife database and Ch8 and supported figures have been amended accordingly. |
| 128 | Table 8.23 | Horseshoe bats recorded in excess of 4km from the Mendip SACs have only been valued as being of county importance, along with barbastelle bats outside of the consultation zone for the Exmoor and Quantocks Oakwoods SAC. Horseshoe bats, including lesser horseshoe, have been recorded foraging and commuting greater distances than 4km and it is therefore dangerous to assign a lower value to these species if they are beyond this distance unless it can be definitively shown that they have come from different roosts. Otherwise they should be assumed to be part of SAC populations – this is consistent with the precautionary principle which should be adopted in relation to such SAC populations.<br><br>Note radio tracking of bats from Brockley Hall Stables SSSI roost found that bats regularly commuted to foraging areas 7km from Brockley Hall Stables and up to 10km from roost (English Nature 2002)<br><br>Dormouse - The route includes locations near to Banwell with good hedgerow networks, with dormouse found in Locking and Barton in the wider area. However, it is noted that these records are discussed later in 8.5. It should be also be noted that NG surveyors utilised tubes, | Bats:<br><br>**Volume 5.8** has been updated to include all greater horseshoe, lesser horseshoe and barbastelle bats within the international importance value. Impact assessment on these bat species takes account of the Somerset Biodiversity Offsetting Consideration Zones (CZ) and CZ Modifier Bands.<br><br>Dormouse:<br><br>Text regarding existing dormouse records clarified in **Volume 5.8.1** Section 8.4, Table 8.23 & Section 8.5. The precautionary approach to impact assessment and mitigation allows for potential future or low level use by this species already. This is also reflected in the BMS.<br><br>NE Standing Advice states that dormouse nest boxes can be used but does not stipulate their use. NE Interim Advice Note WML-G37 12/11 (Dormouse surveys for mitigation licensing – best practice and common misconceptions, 2011), which is referenced in the Standing Advice suggests use of boxes in addition to tubes where there is |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | whereas a number of dormouse surveyors have advised that they obtain a better uptake by dormice when using dormouse boxes (Craig Stenson pers. Comm.); and furthermore that it may be several years before dormice are detected. Natural England Standing Advice also advocates use of dormouse boxes. It is difficult to prove absence if the habitat is suitable and favourable connectivity exists suitable blocks of woodland habitat | sufficient time to 'bed-in' the boxes in advance of survey. Owing to project constraints, this was not possible on the Hinkley Point C Connection project. |
| 129 | Section 8.5 | The section does not make reference to the effects of dust on habitats or species, despite the air quality chapter considering the effect to be slight adverse after mitigation. Similarly there is no consideration of the effects of surface water run-off during construction which could be highly significant in any areas of undergrounding, especially where these are located in or near to designated sites | Dust:<br><br>Residual effects on ecological receptors identified in the Air Quality Chapter (**Volume 5.13.1**) have been incorporated into **Volume 5.8.1**.<br><br>Water run-off:<br><br>Embedded mitigation set out in **Volume 5.10.1** forms part of the assessed scheme, which includes measures to avoid adverse effects associated with surface water run-off and emergency response measures in the event that accidental effects occur. Neither EA nor NE has commented against the principle of embedded mitigation from **Volume 5.10.1** forming part of the assessed scheme. |
| 130 | 8.5.16 | **Grassland replacement.** It is not generally recommended for designated Wildlife Sites to be re-seeded; as they are designated for their intrinsic interest. Therefore it is generally preferable for the top soil to be stored and retained. It is important for designated Wildlife Sites to be brought into positive conservation management. This should form part of the on and offsite mitigation (through S.106 obligations that fund projects to provide advice and/or financial assistance to landowners to implement appropriate management) | In the main LWS's are farmed land, although topsoil will be retained and reused, the land owner may be unwilling to wait for the land to re-seeded as this affects the operation of their land, furthermore, there may be run-off concerns for local ditch systems (many of which have their own designations). Locally appropriate seed mixes are specified as part of the reinstatement package. National Grid has committed to management of reinstated habitats for 5 years to ensure these establish as intended. |
| 131 | 8.5.32 | **Approach to Habitat Loss Calculations**<br>Loss of any permanent pasture and loss of tall overgrown hedgerows >3m needs to be included in approaches to Habitat Loss Calculations | As previously noted, this has been provided. |
| 132 | 8.5.38 | 8.5.38 International Designated Sites<br>As stated previously, the HRA report needs to quantify loss of key foraging habitats and landscape features arising from the Proposed Development that fall within the consideration zones identified by Somerset CC in the Biodiversity Offsetting Methodology | As previously noted, SERC CZ and CZ Modifier Bands have been used to inform the assessment of potential effects on the SAC sites in both the **Volume 5.8** and the HRA, **Volume 5.20.1**. |
| 133 | Table 8.24 | This table should set out the effects on locally designated sites including any species for which they are designated. However in this table it appears that the effects on legally protected species are assessed separately under the species regardless of it they are important within that site.<br><br>Page 116 of the ES. The 30 metre swathe of undergrounding which | The table (and supporting Appendix 8O, **Volume 5.8.2**) have been reviewed to ensure effects on sites and the species of importance to them are clearly drawn out.<br><br>Mitigation specific to Lawrence Weston Road Rhines SNCI and the Salt Rhine and Moorhouse Rhine SNCI is clearly stated in the BMS and referenced in the ES. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | affects Lawrence Weston Road Rhines SNCI and the Salt Rhine and Moorhouse Rhine SNCI will require sensitive ecological mitigation, especially given the likely presence of legally protected water voles.<br><br>Pages 117 and 149 of the ES. The corridor for tree clearance required for Gloucester Road Railway Sidings SNCI is likely to have a significant impact on the site. It is not clear how these impacts are going to be fully mitigated. The proposed inclusion of an off-setting scheme for Local Wildlife Sites on section 8.7.63 page 204 of the ES is welcomed. This should be secured through a requirement. | Clarification on the assessment of effects at Gloucester Road is provided in **Volume 5.8.1** and **Volume 5.8.2**, Appendix 8O. Tree losses are compensated through the OSPES, the agreement of otherwise to provide additional funds will be through s106 negotiations with National Grid. |
| 134 | Table 8.25 | The data is missing from this table | The data was provided in the text of this section, the table provides a summary of this text and this has now been updated. |
| 135 | 8.5.47, 8.2.5 | As previously stated, research has indicated the significance of tall overgrown hedgerows for greater horseshoe bats. The sentence 'There would be a time lag of 2-5 years as hedgerow planting establishes' relates solely to the establishment of the whips, but could be misconstrued as meaning that the hedgerow (to include its height and overall structure) will be fully mitigated in this time frame; whereas this is not the case, the time frame for the creation of a tall overgrown hedgerow may be up to three times this time period. 8.2.5 Habitat loss calculations – again no mention is made of hedgerow height and width | Establishment periods are clarified in **Volume 5.8.1** Section 8.5, both as an initial overarching consideration and after each relevant effect is identified. |
| 136 | 8.5.48 | *The significance of the loss in extent of* pasture of 128.2ha in total within the 4km SAC buffer needs to be explained. Some breakdown of the extent to which the pasture may be subject to cattle grazing is relevant. It would aid clarity of the issues if the ES included some explanation or reference to the significance of pastural land use, in the provision of dung beetles (Aphodius spp.) as a key insect prey for greater horseshoes (up to 40% of diet of mothers and juveniles English Nature (1996)); otherwise the significance of loss in extent of pasture, particularly the loss of any cattle grazed pasture, may not be fully understood or apparent to the public and the Planning Inspectorate | The published research on foraging value of pasture has been reviewed and included in **Volume 5.8.2** Appendix 8H. It has not been possible to determine the various uses of the pasture fields. |
| 137 | 8.5.74 and 8.7.28 | It is stated that 12.31 km of hedgerow would be removed. However, it would be more robust if hedgerows were categorised to provide an understanding of their significance (species richness, height category, importance under Hedgerow Regulations, location). | A breakdown of hedgerow losses has been provided and updated to reflect the latest Order Limits and development design. |
| 138 | 8.5.203 | Hallen Marsh should also be considered in this paragraph along with Portbury Wharf due to the long term aspirations and requirements to develop this area for wintering birds under the requirements of previous consented applications that have been considered under the Habitats Regulations | Hallen Marsh is considered as equivalent international status in both **Volume 5.8.1**. and **Volume 5.20.1** |
| 139 | 8.7.118 | In order to fully mitigate for the loss of tall hedgerows over the longer term, it is not sufficient to simply re-plant. It may be the case that a tall | NG will manage the hedgerows for 5yrs. Where replacement hedgerows are beneath overhead lines, heights will be restricted by |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | hedgerow will be replanted with whips, but subsequently subject to an annual flail (i.e. inappropriately managed) so that the hedgerows functionality is never fully mitigated. Therefore, again, it may be necessary to reiterate that it is essential that mitigation includes provision to raise the knowledge base of landowners to motivate them to undertake sympathetic hedgerow management (which will vary according to whether the hedgerow is located within or outside of the Levels and Moors) | electrical safety clearances. |
| 140 | 8.7.12 | The inclusion of bird flight diverters is welcomed and should be included within the requirements for the scheme | Noted, bird diverters in the south are part of the scheme and are also specified in the BMS (**Volume 5.26.3**) which will form a Requirement. |
| 141 | 8.7.13 | The mitigation measures are not considered sufficient using a qualitative and quantitative assessment process to determine the change in the value of the bat foraging habitat. The residual loss of foraging habitat has therefore not been quantified. In light of this under the requirements of the EIA Regulations additional compensation should be included. However, under the requirements of the Habitats Regulations this could not be considered. It is likely that the residual loss of foraging habitat could constitute an adverse effect on the integrity of the two SACs and could impact on grant of DCO | Further detail has been provided to Natural England and reviewed by their bat specialist. This has been incorporated into the HRA document (**Volume 5.20.1**) and is reflected in the ES chapter, **Volume 5.8.1**. |
| 142 | 8.7.18 | A net loss of bat foraging habitat value can be predicted for the scheme and it is likely that this would be considered a significant effect in EIA terms and an adverse effect on integrity in a HRA context | No significant loss in bat foraging habitat is predicted in the long term and the approach to mitigating short term losses is detailed in the HRA (**Volume 5.20.1**) and has been reviewed by NEs bat specialist. |
| 143 | 8.7.21 | This paragraph appears to state that the loss of areas of Ancient Woodland can be offset by the benefits in terms of landscape character and views of using the proposed route compared to other alignments. This is not justifiable as these will still be an adverse effect on the landscape character as overhead pylons will still be present. The assessment should consider the effects of the proposed development against the baseline environment rather than comparing different alignments that have been put forward | This is not the case and the text has been modified to clarify this. |
| 144 | 8.7.56 | Reference is made to the OSPES proposals for tree and hedgerow planting and some could be undertaken in a number of Local Wildlife Sites. However it is not clear if this planting is within the LWS designated areas or whether this is actually mitigation/compensation for impacts identified or enhancements. Given that some of these sites are not wooded or designated for their hedgerows it is questionable whether this would actually give rise to additional negative impacts. Of particular concern is the inclusion of Hallen Marsh Agricultural Land, as this site has been secured to provide compensatory areas for wintering birds from the Severn Estuary. The planting of trees and hedgerows within this area is likely to compromise its ability to host wintering waders which prefer open areas with unrestricted flight lines. | The OSPES planting near Hallen Marsh is restricted to planting along the boundary of the site which is also along existing roads which are likely to have an existing displacement effect. Furthermore, the supporting text states that any planting should be undertaken in consultation with BCC ecologist.<br><br>Planting within the OSPES (**Volume 5.25)** has been reviewed to ensure it doesn't contradict the reasons for designation of any wildlife sites. The implementation of the OSPES will be within LPA control and further amendments can be made. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | Local Wildlife Sites identified in the OSPES proposals for tree and hedgerow planting should be surveyed and assessed to identify actions to bringing them into positive conservation management. These sites may be designated for features of interest that would be adversely impacted by hedgerow or tree planting and therefore each Wildlife Site needs to be assessed to retain the features for which it was designated.<br><br>The majority of the Wildlife Sites listed are within the Levels and Moors. Hedgerow or tree planting is likely to be more appropriate for areas outside of the Levels and Moors, which is open in landscape character, the exception being for the creation of small mosaic habitats of wet woodland (priority habitat) on sites with potentially suitable hydrology (with appropriate consultation of Natural England, the Avon Wildlife Trust and YACWAG, where relevant). Again compensatory off-setting measures could include projects that include landowner liaison with advice and financial assistance to bring Local Wildlife Sites into positive management; and also other small landholdings with potential for enhancements through more sympathetic management | |
| 145 | 8.7.62 | National Grid commit to providing a sum for offsetting the effects on Hallen Marsh. Given this land has been secured as a compensatory measure for effects on the Severn Estuary, any effect on this site should be assessed as if the site were part of the internationally designated Severn Estuary under the requirements of the Habitats Regulations (Tyldesley & Chapman, 2013) including consideration of alternatives and IROPI if relevant. The Councils do not consider that National Grid has presented the evidence to date which would satisfy these two tests.<br><br>If compensatory measures are relevant, then they would need to consider and comply with the relevant guidance, including that relating to timing of provision, compensation ratios and location (see Guidance document on Article 6(4) of the Habitats Directive, European Commission, January 2007).<br><br>Mitigation on a reduce Hallen Marsh area will require funding to implement including negotiation with tenants including compensation , project management, capital and maintenance costs and the level of funding must reflect this in order to be secure and dependable. The exact nature of the wetland habitat to be created at Hallen Marsh - pools, scrapes, bog - has not been finalised with BCC or landowners and there is therefore a lack of certainty about delivery. This is recognised in our letter response and it is considered that National Grid commits to | **Volume 5.8** is now explicit that Hallen Marsh is considered alongside the Severn Estuary designations.<br><br>Further work has been undertaken and presented to Natural England. The assessment of the potential future bird displacement effect of the Proposed Development at Hallen Marsh concludes that the majority of the overhead line sits within the existing displacement zone of the Motorway, plantation and the Severn Road. It also concludes that the remaining area of land more than allows for delivery of the area stated in the Cresswell report as being necessary to allow offsetting for future Avonmouth development. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | contributing towards a mechanism to be adopted to ensure that development delivers the requisite amount of wetland habitat identified within the Cresswell report.[1] | |
| 146 | 8.7.63 | As stated above if compensation is required for the effects on Local Wildlife Sites this should be provided by the applicant as the potential effects of the proposed development should be a material consideration in terms of planning and efforts should be made to avoid or mitigate such impacts before resorting to compensation.<br><br>Notwithstanding this comment, the proposal for a fund is welcomed by the councils. However, it is felt that the fund should be for the management and enhancement of LWSs to provide a local biodiversity gain and that the applicant should ensure not net loss of LWSs or biodiversity as a result of their development | **Volume 5.8.1** and **Volume 5.8.2**, Appendix 8O demonstrates how residual effects on local wildlife sites have been minimised with very few sites experiencing any permanent losses other than those relating to the pylon footprint. S106 negotiations will be undertaken with National Grid. |
| 147 | 8.7.9 | The text in the bullet relating to bat foraging is different from that included within the HRA leading to uncertainty over how habitats will be managed for bat foraging and whether the loss of bat foraging habitat would be even more significant | The text has been reviewed to clarify this. |
| 148 | 8.7.79 Point 3 | Attention is drawn to key research reports, notably 'The management of feeding areas for greater horseshoe bats' (English Nature 1996), 'Radio tracking study of greater horseshoe bats at Brockley Hall Stables Site of Special Scientific Interest, May-August 2001' (English Nature2002); 'Greater horseshoe bat project 1998-2003 (English Nature 2003). | A literature review is provided in **Volume 5.8.2**, Appendix 8H. |
| 149 | 8.7.103 | Further hedge, shrub and tree planting should be avoided at Hallen Marsh to maintain open sight-lines for wading birds | As discussed previously, bird sight-lines have been taken account of in the OSPES for Hallen Marsh. |
| 150 | 8.7.104 | The text states that the impact of works at Hallen Marsh will have a 'moderate beneficial' effect. This conclusion is questioned because it fails to take into account the fact that the 'Pool at eastern end of Hallen Marsh' identified in the Creswell Stage 2 report will no longer be suitable for qualifying interest feature birds. We note that page 210 states that habitat enhancement should be undertaken at least 60m from overhead lines to avoid any increase in bird collision risk and page 176 of the ES confirms that waders and wildfowl are species at risk of collision with overhead lines. In addition this assessment of impacts does not take into account the points set out above | The assessment of Hallen Marsh has been revisited. The pond referenced in the Cresswell Report and species associated with it was based on a desk based study and extrapolation from known bird assemblages in other areas of Avonside. Our assessment of the pond is that is provides poor habitat for SPA species and that it is already within the displacement zone created by the M49 motorway. This is detailed in supporting **Volume 5.8.2**, Appendix 8F. |
| 151 | 8.7.171 | Advises ca. 62 ha of grassland land with the Order Limits will be managed for bats. It would aid understanding and clarity if the method through which the requirement will be secured and the substance of the management could be further elaborated. Will it comprise cattle grazed | Further information has been provided in the HRA document (**Volume 5.20**) and is presented in the BMS (**Volume 5.26.3**). The CEMP (**Volume 5.26.1**) and BMS will be a Requirement of the DCO. |

[1] Please see the pdf of figures that accompany the Creswell Stage 2 Report, available at: http://www.bristol.gov.uk/page/planning-and-building-regulations/planning-evidence-documents

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | pasture for instance. Also referred to in Table 8.3 p.244. | |
| 152 | Table 8.3 | **Brown Hare**. Mitigation should include pre site clearance checks for leverets by suitably experienced mammal ecologists | This is included in the BMS (**Volume 5.26.3**) and has been made explicit in **Volume 5.8.1.** |
| 153 | Table 8.30 | Reference is made in the mitigation column for many of the Local Wildlife Sites to measures including within the BMS and Habitat Reinstatement. Habitat reinstatement is not mitigation during construction as it only occurs after the completion of the construction phase. Consideration is needed of the effects during the 4 years of construction and measures to reduce the significance of those effects. The Biodiversity Mitigation Strategy does not contain specific information regarding mitigation at Local Wildlife Sites.<br><br>Page 257 of the ES. The proposed pylon over the King's Weston Lane Rhine SNCI is close to the rhine and it is recommended that the pylon base is moved further way from the rhine | Habitat loss is a construction phase effect. Habitat reinstatement mitigates this. Reinstatement will be carried out in the latter part of the construction phase, once works are complete. This is set out early in Section 8.5 of **Volume 5.8.1**. Reinstatement will take time to establish (different periods for different habitats) and accordingly the duration of each effect has been stated.<br><br>The BMS (**Volume 5.26.3**) includes a site by site description of mitigation for local wildlife sites. This includes King's Weston Lane Rhine. |
| **Volume 5.20 Draft Habitats Regulations Assessment** | | | |
| 154 | Title Page | National Grid are not the competent authority and therefore in accordance with current guidance (Tydlesey & Chapman, 2013) the document should be title "Information to Inform a Habitats Regulations Assessment" | This is an error and has been corrected. |
| 155 | | The text should include a review of the ICI consent under the Habitat Regulations 2010 | This has been included in the HRA (**Volume 5.20**) and **Volume 5.8.2,** Appendix 8F. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| 156 | | The HRA material for the Severn Estuary European Marine Site, with respect to impacts on Hallen Marsh requires further work. Page 38 of the CEMP report states that Hallen Marsh is not currently used by Special Protection Area Species (page 38; part of the text is incomplete). However, the Creswell reports (please see references below) identify species such as mallard and curlew as using Hallen Marsh. Moreover it should be noted that detailed bird surveys for Hallen Marsh are lacking. Furthermore Hallen Marsh was not included within TEP's vantage point bird surveys. In addition page 49 of the Ornithology report identifies 'Land at Hallen' as having high or moderate potential to support waders or wildfowl. There is a lack of detailed evidence within the HRA and a lack of reference to mitigation and DCO requirements that will ensure that the project satisfies the requirements of HRA.<br>Page 15 of the ES acknowledges the 'need to regard sites that have been established as compensatory habitats for losses to Natura 2000 sites as having equivalent status to Natura 2000 sites themselves (NPPF paragraph 118, final bullet point).' Because of the need to apply the precautionary principle (which is referred to on page 13 in the HRA), the potential for bird collisions should be minimised if an overground rather than an underground route is selected through the installation of bird deflectors immediately following construction (and not just a reference to considering retrofitting bird deflectors at a later stage), a requirement will be needed in this respect.<br>A monitoring approach to bird collisions and mortalities is not favoured for this reason. Such an approach would require intensive resources for frequent searches for injured birds and corpses along this section of line given the likely presence of predators such as corvids and foxes. A detailed, robust and intensive monitoring and mortality search strategy would need to be agreed in advance of submission of the application to PINS as part of the HRA package and applied as a requirement necessitated under HRA. Furthermore the threshold for action following monitoring would need to be set low enough that further mitigation could be enacted before a significant or an adverse effect takes place. | The peak counts recorded by Cresswell are low and represent only occasional use. Clarification has been provided in the HRA (**Volume 5.20**) and **Volume 5.8.2,** Appendix 8F.<br><br>Figures (**Volume 5.8.3**) and text have been updated since the February consultation to show the full survey coverage of Hallen Marsh.<br><br>The reference at page 49 was for moderate potential only and was limited to one field in the Hallen Marsh area, this has been clarified.<br><br>Further assessment regarding Hallen Marsh has been undertaken and this has been reviewed by NE and is provided in the HRA (**Volume 5.20**) and **Volume 5.8.2,** Appendix 8F.<br><br>Due to the uncertainty of timescales for habitat enhancement works at Hallen Marsh and then any future patterns of use by SPA species, the need for bird diverters is not known at this stage. National Grid has a bird diverter protocol that has been judged appropriate at another NSIP hearing and would be used here. Furthermore, National Grid's commitment to future monitoring (and details of such monitoring) is also set out in the HRA document. |
| 157 | | The ES winter bird surveys found no areas supporting significant numbers of waders and wildfowl and the findings are generally straightforward and acceptable. Notwithstanding this, however, these surveys were in 2012 and it should be recognised that the recent deluges in winter 2013/14 has led to a marked demographic shift in waterfowl across the Levels and the coastal floodplain as they shift to utilise roosts in newly flooded fields. The scheme should include contingencies so that construction works can proceed should land on or adjoining the route still be flooded or if there is a repeat of the inundation in future years. | If areas are severely flooded it is likely that construction works would be restricted therefore no allowance for this eventuality has been included |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| 158 | | It is noted that the following baseline wetland and grazing pasture habitats will be affected by the Hinkley C Connection Project proposals. Within Hallen Marsh:<br>A. Pool at eastern end of Hallen Marsh (please see for example Figure 11). This pool will be directly affected by the route and made essentially unsuitable for wildfowl (unless an underground solution is applied).<br>B. Hallen Marsh as a whole (e.g. Figure 8B)<br><br>Elsewhere in Avonmouth:<br>C. Pools in the vicinity of Lawrence Weston Road (e.g. Figure 11)<br>D. Land to the south of Avonmouth Works (e.g. Figure 8B)<br>E. Land to the west of King's Weston Lane (e.g. Figure 8B)<br><br>The report concludes that further ecological avoidance measures are required as a statutory requirement under the Habitats Regulations. Given the potential scale of the impacts including in-combination impacts, it is considered that it is essential that bird deflectors are employed in the vicinity of these sections of the route as an ecological avoidance measure. Further measures may also be required subject to the completing of a full and thorough Appropriate Assessment for this location.<br><br>In addition page 49 of the Ornithology report identifies Avonmouth Sewage Works as having high or moderate potential to support waders or wildfowl. These water features are also identified in the Creswell Stage 2 report where they are termed Avonmouth Pools.<br><br>The Hinkley C Connection project should also either provide funding through a Section 106 contribution (as proposed on page 210 of the ES) for a Biodiversity Offsetting Scheme, or undertake works directly as part of the project for the purposes of ecological avoidance and mitigation measures. This should include measures such as the management of scrub where existing pools for waterfowl are in the process of scrubbing up and the installation of scrapes, grips and ponds for wading birds and wildfowl. | The need for bird diverters in the Hallen Marsh area has been discussed in the responses provided above.<br><br>The need for bird diverters near areas C, D and E has been considered in the HRA (**Volume 5.20.1**) it concludes they are not required.<br><br>National Grid is undertaking s106 discussions with the LPAs. |
| 159 | TOC | The Appendices listed in the Table of Contents have not been provided. Whilst it is understood that the record of consultation and statement of common ground could not be provided until the document is finalised, the screening matrices and Appropriate Assessment matrices could be. This | These have been provided in the final submitted version of **Volume 5.8.1.** |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | prevents a complete understanding of the assessment approach taken | |
| 160 | 2.4.5 | Reference is made in this paragraph that "permanent habitat loss of European designated sites would be compensated through the implementation of on and off-site landscape schemes". As noted above, under the requirements of the Habitats Regulations compensatory measures can only be applied in order to allow a project to proceed where there are no alternatives and there are imperative reasons of overriding public interest. The statement in this paragraph is therefore contrary to the Regulations without an assessment and robust conclusion as to the lack of alternatives and the presence of IROPI. If adopted by the Secretary of State in due course it could therefore pose a risk of legal challenge | This was an error and has been re-phrased, habitat loss is only associated with the Hinkley Line Entries and will not affect the integrity of the site. |
| 161 | 3.3.1 | A 10km buffer has been used for the identification of Special Protection Areas that could be affected by the proposed development. This is considered to be insufficient compared to the distance that would commonly be used for other project types that involve avian collision (20-25km). In addition it looks very small compared to the 50km buffer used for bat species which are less mobile than for example migratory wintering bird species. The required precautionary approach needs to be applied, and the buffer increased accordingly | The scoping of SPA sites extended to 30km (the next SPA is 40km away) the text has been revised to clarify this |
| 162 | 3.3.3 Construction and Decommissioning | While we agree with the list of potential impacts listed in this section, the consequential effects do not appear to have been considered. For example the loss or degradation of bat foraging habitat could have a consequential effect on the bat populations especially due to the comparatively long construction period of 4 years for the undergrounding.<br><br>There is no mention within the potential impacts from construction of the effects on air quality such as dust. The Air Quality chapter of the ES recognises that even with mitigation measures there is likely to be a slight adverse impact from dust within Section C of the Route. We would therefore expect to see consideration of this within the Information to Inform a HRA | The text has been amended to provide clarification on these points |
| 163 | Table 3.1 | The commentary provided for each site within this table uses inappropriate language, referring to 'adverse effects'. As this table forms part of the screening considerations reference should be made to the risk of 'significant effects' | This has been corrected. |
| 164 | Table 3.1 Chew Valley Lake SPA | This site is designated for shoveler (*Anas clypeata*) which is also a feature of the Somerset Levels and Moors SPA and part of the assemblage features of the Severn Estuary SPA and Ramsar Site. Given the close proximity of these sites consideration should be given to movement of birds between the three sites. Taking a precautionary approach, the Councils think that National Grid should reconsider | Natural England has accepted our reasoning for scoping of SPA sites, including the ruling out of this site |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | whether this site is screened out | |
| 165 | Table 3.1 Wye Valley Woodlands SAC | No references are provided to support the statements that are made within this section in relation to lesser horseshoe bat foraging ranges. However it should be noted that radio tracking of this species in North Wales found lesser horseshoe moving up to 11km between summer and winter roosts (Welsh Government, 2003). It is therefore not possible to screen out this site due to it being 10km away from the development. In addition due to the proximity of the Wye Valley Woodlands SAC and the Wye Valley & Forest of Dean Bat Sites SAC, both these sites should be considered further for the effects on lesser horseshoe bat as there is almost certainly interchange between the two sites | Natural England have accepted our scoping of SAC sites, including the ruling out of this site. |
| 166 | 3.4.6 | This paragraph and the duplicate numbered following paragraph states that the conservation objectives are the same for all SACs and that one conservation objective is given for all SPAs being considered. This is an incorrect statement. Each site and feature will have its own conservation objectives and specific targets which should be considered within the scope of the HRA in order for that to enable consideration of impacts on the sites' integrity, as required by the Habitats Regulations | We have quoted (verbatim) the European Site Conservation Objectives as provided by Natural England for the SPAs and SACs screened into the HRA (**Volume 5.20**). For the SACs, designated for their bat populations the Conservation Objectives are the same. However, they apply to each of the designated features (Annex II populations) and these vary for each SAC screened into the HRA. The same applies to the SPAs that are screened into the assessment. This application to individual features has been taken into account in the HRA and conclusions are drawn with respect to the each of the features in respect of the Conservation Objectives. This has been clarified in the relevant text. |
| 167 | 3.4.9 | No mention is made to conservation objectives for Ramsar sites. These should also be included and considered | Ramsar sites do not have specific conservation objectives. In line with Government Policy (Office of the Deputy of the Prime Minister (ODPM) Circular 06/2005) we have assumed that the Conservation Objectives developed for designated interest features of SACs and SPAs (i.e. designated Annex I habitats, Annex II populations and migratory bird populations) also apply to the same/similar features designated under the Ramsar Convention |
| 168 | 3.5.39 | This paragraph limits the effects on eel to that of EMF, however it does not take into account the potential for eels moving over land to become trapped in excavations or prevented from moving between water bodies due to soil storage mounds | This has been included. |
| 169 | 3.5.51 | Comparison with the effects of EMF on eels in coastal waters less than 20m does not replicate the conditions which could be expected for eels within the Lox Yeo passing over the underground 400kV cables. We feel that the conclusion reached in the screening assessment is not sufficiently substantiated and that enough uncertainty remains to screen the effects of EMF on eels into the considerations of the Appropriate Assessment | Additional information has been included. |
| 170 | 3.9.9 | The in-combination assessment appears to have discounted smaller development applications below 100 properties in size. This is contrary to | While the Master List for the Cumulative Assessment in the ES takes this approach, the in combination assessment for the HRA (**Volume** |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | current guidance and the spirit of the Regulations which does not set any thresholds on consideration of other plans or projects. Furthermore no plans are listed within Table 3.6 where we would expect to see plans such as the Severn Estuary Shoreline Management Plan 2 | **5.20**) include any projects that might have an in combination affect. The method text has been updated to clarify this.<br><br>The Severn Estuary Shoreline Management Plan 2 has been included. MW). |
| 171 | 3.9.14 | In common with the consideration of in-combination projects for the SPAs there are a number of projects and plans which have been omitted from consideration such as Project Sky. In addition the in-combination assessment does not include consideration of those features which may have been screened out individually such as the consideration of in-combination effects on eels or on the habitats of the limestone grasslands. Reference is also repeatedly made to the Cumulative Assessment within the ES. National Grid should provide a clear differentiation between cumulative and in-combination assessments presented | The LPAs were reissued with the Master List in February 2014 and any additional projects supplied through that process have been added to the in combination assessment as appropriate.<br><br>Natural England has reviewed the in combination assessment on numerous occasions and is happy with the approach of considering bats and bird in the in combination section.<br><br>References to the Cumulative Assessment of the ES are made when discussing the selection of the Master List of projects and plans. Additional information on how the Master List has been applied and adapted is provided. The method text has been updated to clarify this. |
| 172 | 4.5.1 | This section forms part of the Appropriate Assessment, however the following Table 4.3 repeats the screening exercise undertaken in Section 3. Table 4.3 is therefore surplus to requirements as the screening in or out of Sites and Features has been undertaken | This has been updated. |
| 173 | Table 4.3 | The assessment of habitat loss experienced by the SPA features should be considered in any areas which they are known to use. The statement included within the table implies that any effect would be negligible as there is plenty of habitat within the Somerset Levels. This is not supported by a detailed consideration of the availability of habitat or reference to known usage areas which may be protected through targets attached to the conservation objectives for the feature. It is also noted in European guidance on the Habitats Directive that the likely continued overall coherence of protected areas does not justify interference on a local scale | Habitat losses across the Proposed Development are largely temporary and associated with the construction phase. Permanent losses relate mainly to tree losses which are not a favoured habitat of these SPA species.<br>Displacement effects during the construction phase have been minimised at the most sensitive location (Portbury Wharf) by avoiding Winter working. The assessment concludes displacement effects elsewhere are not significant. |
| 174 | 4.6.1 | The consideration of impacts within the Appropriate Assessment does not include consideration of habitat loss despite this being considered as requiring further assessment in the screening stage | Habitat loss is considered in the Appropriate Assessment. |
| 175 | 4.6.9 | The consideration of effects at Portbury Wharf does not appear to consider the potential effects that might arise through the undergrounding of the 132kV line in to the substation. This is considered to be a significant omission | This is included. As works will be restricted to avoid wintering bird season, disturbance to SPA birds is avoided. |
| 176 | 4.6.12 | The summary of the consideration of disturbance and displacement states that impacts would not be significant. However the consideration at this stage should be an Appropriate Assessment of the impacts in relation to the conservation objectives for each feature. This is considered to be an omission from the assessment | Clarity on how conservation objectives have been considered is discussed above. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| 177 | 4.7.34 | There is no guidance referenced to suggest that only flights within 10km of the SPA should be considered in terms of assessing the collision rate and the potential mortality of birds | This is not the meaning of the paragraph and the text has been updated to clarify this. |
| 178 | 4.7.36 | As with the comments on 4.6.12, consideration of the assessment of the impact on mute swan within Somerset Levels and Moors SPA should be made in relation to the specific conservation objectives for that species. This comment applies to all the species and sites considered in Section 4.7 | Clarity on how conservation objectives have been considered is discussed above. |
| 179 | 4.7.42 & 4.7.43 | The prediction of collision risk has been split, which therefore predicts a different rate for birds from the two different SPAs. This is an inappropriate division of data as the fact that flights have been recorded implies that the birds do move between the two designated sites (and potentially Chew Valley). It is strongly recommended that the collision rate is predicted for the species as a whole and that this impact is then considered against both SPA populations. This comment applies to all species considered which are features of more than one site. In addition, the discussion in the main text does not take advantage of any mortality calculations to inform the impact assessments for bird populations | The 5 year peak mean was taken for each SPA species at each site and flight lines were apportioned to each site of the proportional basis of the peak mean counts. This approach is appropriate as it avoids double counting collision data.<br><br>The impact assessments do take account of mortality calculations and the text has been clarified to demonstrate this |
| 180 | 4.8 | As mentioned above the specific conservation objectives for each site and feature need to be considered in the assessment and the implications for achieving favourable condition need to be included within the Integrity Test. The lack of inclusion of the specific conservation objectives within this section mean that the conclusions of the integrity test cannot be valid and robust.<br><br>The box within this section does not include features of the Severn Estuary SPA/Ramsar.<br><br>In addition many of the conclusions have not been substantiated by the information provided. For example the conservation objectives for the Severn Estuary include the requirement for “no significant disturbance of features at foraging or roosting sites”. Elsewhere in the document it is acknowledged that disturbance could be significant but this has subsequently been omitted in this section | Clarity on how conservation objectives have been considered is discussed above.<br><br>The Box has been updated to include the Severn Estuary |
| 181 | 4.12.2 | This section should set out the predicted collision rate from each of the considered projects and assess the combined impact in relation to the conservation objectives for the site. At present it is not considered that the approach is fully consistent with the HRA process | This information is included |
| 182 | Table 5.2 | The conclusion in Table 5.2 that design of construction methods will reduce and avoid effects needs to be supported by a quantitative assessment of foraging habitat value. | As detailed above, further information on foraging habitat value has been provided. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | It is not clear if the 'Likelihood column' in this table relates to the likelihood of the habitat being lost or some other consideration? | The table text has been amended to clarify this latter point |
| 183 | 5.2.9 | The buffer zones of 600m and 2.5km are not considered adequate for the consideration of the effects on bat foraging habitat. There is a significant difference in terms of the zone in which efforts should be concentrated for conservation and the zone in which consideration of the potential effects on bats needs to be considered. The consideration zones used by Somerset County Council in the Biodiversity Offsetting Methodology include three zones, the greatest extending up to 5km from roost sites | The assessment has been amended to use the Consideration Zones used in the Somerset Biodiversity Offsetting Methodology |
| 184 | 5.2.10 | Whilst it is agreed that the habitats listed are important for lesser horseshoe bats as navigational features, grassland areas in particular those that are grazed, are also very valuable to this species and greater horseshoe bats in providing the insect biomass on which the bats feed | The text has been amended to clarify the importance of these habitats. |
| 185 | 5.2.17 | The assessment of the benefit of the substation landscape works compared to the permanent habitat loss needs to consider the existing value of the habitats present against the future value following establishment of the plants and compared to the construction phase. It is strongly recommended, that a quantitative assessment is undertaken using the SCC Biodiversity Off Setting Methodology to quantify the changes in habitats during the Construction, Post-Construction and Post-establishment phases to ensure no net loss of foraging value within the application boundary | Further information has been provided on the current and proposed habitat value at Sandford substation |
| 186 | 5.2.18 | The comments made in relation to para 5.2.17 also apply to this paragraph and Table 5.3. The comparison with the buffer zone does not consider those areas that may be unsuitable to horseshoe bats such as villages or may be fragmented, such as areas to the west of the M5 which is less likely to be crossed by lesser horseshoe bats | Data on land within buffer zones but west of the M5 has been included |
| 187 | Table 5.5 | The losses of these areas and the cessation of their current management practices needs to be quantified to determine the potential effect on the bats | Further information has been provided |
| 188 | Table 5.6 | It should be noted that the 62.6ha of land that has been included within the order limits so that it can be managed for bats does not effectively count towards offsetting the 54.3ha of habitat lost. The 62.6ha already exist and is likely to be used by the bats. Unless this land is currently arable and would be transferred to grazed pasture it will not provide any gain in the value of bat foraging habitat within the order limits | Some of the land is currently arable. As before, further information has been provided |
| 189 | 5.4.2 | The conservation objective quoted states to maintain "the extent and distribution of qualifying natural habitats and habitat of qualifying species". No mention of this is made of this being limited to within the SAC boundaries. | The text has been updated to clarify effects on foraging habitat along undergrounding. As before, further information has been provided |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | The subsequent bullets and sub-paragraphs include the conclusion that there is potential for effects on foraging outside of the SACs as a result of the substation creation but no mention is made of the effects of the undergrounding.<br><br>The conclusions presented in this section are not supported by sufficient evidence. It is our opinion based on some initial calculations using the SCC methodology that the proposed undergrounding as set out in Table 5.6 would result in a net loss of bat foraging habitat value and that this should be considered as an adverse effect on the integrity of the bat SACs. As such if submitted in this form, a DCO should not be granted for the development | |
| 190 | Table 5.10 | The comments in relation to the in-combination assessment for birds are also applicable to this table in terms of approach.<br><br>Furthermore the Cheddar Reservoir 2 development (ID22) was designed to ensure no net loss of foraging habitat during either construction or operation. The assertion that a significant negative impact would be caused is incorrect | The text has been amended to reflect these comments |
| **Appendix A4 – Ground Environment** | | | |
| **General** | | | |
| 191 | Overarching comment | The proposal to appoint an agricultural liaison officer or soil specialist during construction stated in the PIER is no longer included. However, a "Soil Management Plan and a Drainage Management Plan would be prepared and implemented". | There will be Draft DCO requirements for a Soil Management Plan and a Drainage Management Plan, including that these will be provided to the Local Planning Authority (LPA) for comment, review and approval. **Volume 5.9.1** includes a statement to this effect in the mitigation section (**section 9.7**) |
| 192 | Overarching comment | No reference is made to the crossing of the government oil pipeline which runs along Severn Road. Pylon LD129 could potentially be sited on or very close to the way leave. | An assessment of existing oil pipelines in section E, F and G have been added for soil contamination; incorrect pylon number referenced, it should be LD125 amongst others. |
| 193 | Overarching comment | Current and disused land drains are frequently encountered in Avonmouth, some investigation into their location and/or a proposed method of dealing with them should be included. | There will be a Draft DCO Requirement for a written scheme of ground investigation, to be approved by the LPAs, and to be carried out prior to construction. A statement for additional site investigation (SI) prior to construction has been added to the mitigation section. Also, National Grid has designed its proposals to avoid all third party services wherever possible. Where third party services cannot be avoided, National Grid has worked closely with the organisations responsible for their operation or maintenance to minimise effects on operations and future development aspirations. This engagement will continue during the construction phase. |
| 194 | 9.4.38 | A cautionary note should be added to this section with regards to made ground/landfill in Section G. | An additional note has been added regarding made ground within Section G. Please note the paragraph reference the LPA's refer to is actually 9.4.358. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | Advice was provided early on in the process that unexpected landfill is frequently encountered in Avonmouth, in the past developments have encountered gas works waste and smelter residues in unexpected locations. | |
| 195 | 9.5.43 | The assessment of negligible risk for Section G is queried. Avonmouth has significant made ground and alluvial deposits (tidal flats or river deposits). These range from anything up to 10 – 15 metres below ground level. For instance when the M49 was constructed the additional loading caused an older landfill site on the other side of the M5 to produce methane levels of over 60% | A separate assessment for Tidal Flat Deposits (TFD) within Section G has been undertaken where landfills are located close to TFD and compression could result in release of ground gas and leachate. |
| 196 | 9.5.44 to 66 Creation of Additional Ground Migration Pathways for Mine Gas, Ground Gas or Landfill Gas | Risk of ground gas associated with peat deposits should be considered. | An additional assessment for ground gas from natural peat deposits has been included in Section 9.5. |
| 197 | 9.5.63 | Consideration should be given towards gas monitoring at T-Farm. T-Farm was a vast landfill site and was tipped in the 1940's – 1960's, given the historical landfilling that has occurred in Avonmouth it is advisable to consider investigation of gas issues at this landfill site. | There will be a Draft DCO Requirement for a written scheme of ground investigation, to be approved by LPAs, and to be carried out prior to construction. A statement for additional SI prior to construction has been added to the mitigation section.<br>The risk rating for Crooks Marsh Landfill has been changed to reflect moderate risk. |
| 198 | 9.5.68 | The standard depth of 1.8metres for undergrounding is queried.<br>• Made ground particularly to the north of Avonmouth Way is likely to be of smelter residues/wastes<br>• Reuse of arising's may not be possible if soils are contaminated<br>• Concrete class selection for this area is important as buildings have suffered with chemical attacks.<br>• No information regarding integrity of the rhines to be crossed has been prepared yet.<br>• Limited detail about undergrounding beneath M49 and associated landfill/made ground. | There will be a Draft DCO Requirement for a written scheme of ground investigation, to be approved by LPAs, and to be carried out prior to construction. A statement for additional SI prior to construction has been added to the mitigation section.<br>The integrity of rhines in this area will be investigated during the development of the Drainage Management Plan. |
| 199 | 9.5.71 | Section G should be considered for inclusion here. The land proposed for undergrounding around the M49 up to Severn Road is classed as agricultural and also designated as wildlife network site. Should be mentioned in this section | A reference to Section G has been added to this section. (Need update on AP emailing Sofia – 'wildlife should be addressed in Chapter 8'). |
| 200 | 9.5.108 | The following statement must be justified or at the very least referenced. | This statement has been removed from **Volume 5.9.1.** |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | "No significant issues relating to the existing piled foundations having acted as migration pathways for contaminants is recorded to date" | |
| 201 | 9.5.124 Operational Effects | Risk of ground gas accumulation in confined spaces resulting from peat deposits should be considered. | A further assessment has been added regarding gas accumulation in confined spaces. |
| 202 | 9.7.3 | The plans should be approved by Local Authorities/Environment Agency prior to implementation, agreement on threshold values for reuse on site must also be agreed | The schedule of mitigation detailed in supporting document **Volume 5.24.1** provides a statement for additional Site Investigation Prior to construction. |
| 203 | Mitigation Pre-Construction 9.7.4 | Pre-construction ground investigations should include the investigation and characterisation of potentially contaminated sites. The ground investigation information should be used to inform risk assessments and where necessary remedial strategies. The investigations should also inform the foundation risk assessments. | There will be a Draft DCO Requirement for a written scheme of ground investigation, to be approved by LPAs, and to be carried out prior to construction. A statement for additional SI prior to construction has been added to the mitigation section |
| **Chapter 5.9 – Appendix 9G 1/5 Preliminary Risk Assessment** | | | |
| 204 | Table 6 (page 52) | Specific measures to mitigate ground gas will be required, particularly at Crooks Marsh Landfill and will need to be secured by requirement. | This will be dealt with as part of the site investigation and risk assessment process that will be secured by Requirement |
| 205 | Table 6 (page 54) | Leachates from Crooks Marsh Landfill need to be considered.<br>Perched water is often found to be contaminated along this section of the route. | This will be dealt with as part of the site investigation and risk assessment process that will be secured by Requirement |
| 206 | 3.9.6 | Agree that further investigation is required of rhine network and drainage ditches however this is not discussed in the Chapter 5.9 or Chapter 5.26. There is no mention of potential risk from ground gas. | There is no reference to the investigation of surface waters and watercourses within Volume 5.9.1 or the Preliminary Risk Assessments (PRAs) detailed in Volume 5.9.2. Where required as part of any intrusive investigations and risk assessments, surface waters may be tested. |
| **Chapter 5.9 – Appendix 9G 4/5 and 5/5 Unexploded Ordnance Reports** | | | |
| 207 | Card Geotechnics Report | A new updated report is required (this is proposed within the CEMP). This report looks at the existing route only and not the proposed new route through Avonmouth Docks which was subject to intense bombing in WWII. | A statement for additional Site Investigation including the requirement for up to data UXO study prior to construction is detailed within the mitigation section, |
| **Appendix A5 - Hydrology and Water Resources**<br>**Including:**<br>**Chapter 10 Hydrology and Water Resources**<br>**Hinkley to Avonmouth 400Kv Underground Cable Transmission Hydrological Assessment (Aug 2013)**<br>**Hinkley to Avonmouth 132Kv Underground Cable Transmission Hydrological Assessment (Sept 2013)**<br>**Volume 5.3 Typical Underground Cable Technical Arrangements**<br>**Volume 5.3 River Axe and Towerhead Crossings**<br>**Horsey Level CSEC FRA (very cursory review at this point)**<br>**South of Mendip CSEC FRA (very cursory review at this point)** | | | |
| **General** | | | |
| 208 | Overarching Comment | There is insufficient detail provided regarding Avonmouth Rhine network and potential impacts of the works to sensitive receptors such as the | Only one rhyne/rhine is being diverted for the Proposed Development and it is Sandford not Avonmouth. Crossing of rhines in the |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | RAMSAR site, ecology etc. The rhines are known to have suffered with pollutants, some rhines are subject to water treatment due to active remediation schemes, some rhines have had their flow reversed etc. The assessment must consider the potential for dealing with contaminated water when rhines are diverted. | Avonmouth area will be subject to the Watercourse Crossing Method statement as described in the BMS (**Volume5.26.3**) and pollution control measures as outlined in the CEMP (**Volume 5.26.1**). Further, detailed Ground Investigations will be carried out in the Avonmouth area prior to commencement of construction which will identify any areas of contamination which may additional mitigation measures. |
| 209 | | As the full set of FRAs have not yet been provided, it has not been possible to confirm consistency of analysis between FRAs and the ES. | The FRAs and ES have been developed in tandem to ensure consistency across the documents. |
| 210 | App 5C Hydrology & WR Ref Nos 203 to 220 | Whilst, as suggested in the National Grid Response to the Joint Councils Representations to the s42 / PEIR consultation, further detail is provided in the ES, we do not accept that 'full detailed information' (ref: 206) has been provided and assessed as is claimed for some topics. Further information will be required.<br>In particular, we consider that further information is still required on undergrounding e.g. the potential impacts on shallow groundwater and sub-surface flows; the provisions for temporary and permanent diversion or reinstatement of intercepted ditches, land drainage systems etc. | Information on groundwater and sub-surface flows in so are as these may impact on or be impacted upon in terms of flood risk by the Proposed Development is contained within the Hinkley Point C Connection Route FRA (**Volume 5.23.9**). Further detailed information will be provided upon completion of the Drainage Management Plan(s) (DMP) for the Proposed Development, prior to commencement of construction. |
| 211 | 10.1.14, Table 10.2 | As above, we consider that further detail is required to fully assess impacts during construction and operational phases. | Information on groundwater and sub-surface flows in so are as these may impact on or be impacted upon in terms of flood risk by the Proposed Development is contained within the Hinkley Point C Connection Route FRA (**Volume 5.23.9**). Further detailed information will be provided upon completion of the Drainage Management Plan(s) (DMP) for the Proposed Development, prior to commencement of construction. |
| 212 | 10.5.8 – 10.5.11<br><br>Horsey 10.5.12 – 10.5.20<br><br>S of Mendips 10.5.21 – 10.5.28<br><br>Sandford 10.5.29 – 10.5.33<br>Seabank 10.5.34 – 10.5.42 | With respect to the Overhead Lines section we consider further assessment will be needed of the potential impact of the pile clusters and pile cap structures etc. associated with the T pylon design and the possible need for local mitigation to maintain continuity of flows around such obstructions to ensure that drainage is not impeded, leading to local flooding problems. Substantial structures are shown on drawings no's G1979.2123.4B & 5B (Figs 3.20.4 and 3.20.5 in ES Vol 5.3). The single large pile cap of the T pylon has the potential to present a greater local obstruction to flow paths that the four lattice pylon foundations, between which flows can pass. | Information on groundwater and sub-surface flows in so are as these may impact on or be impacted upon in terms of flood risk by the Proposed Development is contained within the Hinkley Point C Connection Route FRA (**Volume 5.23.9**). Further detailed information will be provided upon completion of the Drainage Management Plan(s) (DMP) for the Proposed Development, prior to commencement of construction. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | Route 10.5.43 – 10.5.51 | | |
| 213 | 10.5.52 – 10.5.66 | Further assessment is needed on the potential impact on shallow groundwater and sub-surface flows; the provisions for temporary and permanent diversion or reinstatement of intercepted ditches, land drainage systems etc. | Information on groundwater and sub-surface flows in so are as these may impact on or be impacted upon in terms of flood risk by the Proposed Development is contained within the Hinkley Point C Connection Route FRA (**Volume 5.23.9**). Further detailed information will be provided upon completion of the Drainage Management Plan(s) (DMP) for the Proposed Development, prior to commencement of construction. |
| 214 | 10.5.67 – 10.5.79 | With the proposed preventative measures and other mitigation, and taking into account likelihood of large scale spillages, these potential impacts are considered to be mitigated adequately. Further details of Parish Rhyne diversion are required. Any such watercourse diversions will require consent. | A Water Framework Directive (WFD) assessment is included in **Volume 5.10.1, section 10.5**, and **Volume 5.10.2, Appendix 10E** including the diversion of Parish Rhyne. Further details of the realignment will be provided at the detailed design stage, prior to commencement of construction and sill be subject to LLFA/IDB/ EA approval as appropriate. |
| 215 | 10.5.80 – 10.5.82 | Surface water drainage infrastructure e.g. at CSECs and Substations will require ongoing maintenance secured by DCO requirement to ensure that adequate mitigation is provided in the event of a chemical spillage or similar during maintenance operations which could otherwise give rise to a significant impact on local hydrology. | There is limited surface water infrastructure at the substations (**Volume 5.23.5** and **Volume 5.23.7**); what is provided will be maintained for the lifetime of the structure. There is no surface water drainage infrastructure at the CSE compounds. The use of permeable materials means there is no requirement for surface water drainage. |
| 216 | 10.5.86 – 10.5.90 | To address water quality and discharge rates, surface water drainage facilities at sites should be designed to accommodate at least 20% increase in rainfall intensity and depth in line with NPPF requirements. Design flood levels affecting the site obtained from the EA as used in the FRAs include sea level rise and fluvial climate change impacts. | This is addressed in the FRAs at **Volume 5.23** |
| 217 | 10.6.7 – 10.6.8 | The text notes particularly the potential interactions on water quality issues and groundwater movement, particularly in the vicinity of areas of landfill. Mitigation measures are proposed for these aspects.<br>No comment is made on interruption of shallow and near surface groundwater flows leading to local flooding events as raised elsewhere by councils and drainage boards. It is recommended that this is addressed in the final ES. | **Volume 5.9.1** (Ground Environment) provides details of potential effects and mitigation related to areas of landfill.<br><br>Information on groundwater and sub-surface flows in so are as these may impact on or be impacted upon in terms of flood risk by the Proposed Development is contained within the Hinkley Point C Connection Route FRA (**Volume 5.23.9**).<br><br>The DMP will provide further details regarding shallow and near surface groundwater flows and mitigation measures prior to construction. |
| 218 | 10.7.1 – 10.7.25 | At the time of writing the full 'Route FRA' was not available to confirm that measures identified would address all relevant issues at locations identified as sensitive. Comment will be reserved until full documentation | The 'Route FRA' has been developed in consultation with the Environment Agency and LPAs in order to ensure that all issues at 'sensitive' locations are addressed. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | is available.<br><br>Supervision of the installation, maintenance and removal of temporary access structures through the construction period will be onerous on the regulating bodies and funding of costs to cover this may be sought through the s106 agreement to ensure mitigation measures are provided. | The necessary consents (either to the EA or the relevant drainage authority dependent on classification) will be made post-DCO when the exact locations of the crossings are known National Grid will be required to pay the appropriate consent fees to the IDBs and EA. As part of the CEMP we are committed to monitoring and managing the works to minimise the local environmental impact if we fail to do that then there are relevant statutory procedures of enforcement that may be applied. |
| 219 | 10.7.26 – 10.7.27 | Reliance on National Grid's safety, health and environmental management procedures for operation and maintenance of the asset is noted. However, this will not comprehensively remove the need for appropriate DCO requirements in this context. | The DCO requirement is addressed in the CEMP, Volume 5.26.1, which provides details of additional mitigation. |
| 220 | 10.10.9 – 10.10.11 | The local impact of the proposed development on the numerous water features crossed by the overground and underground routes is acknowledged and the potential for variable adverse effects to occur. The limited potential impacts that could occur during the operational phase are noted, but there remains a need to provide further assessment on some topics such as obstruction of flows by T pylon pile caps, permanent watercourse crossings, diversions etc. | Information on groundwater and sub-surface flows in so are as these may impact on or be impacted upon in terms of flood risk by the Proposed Development is contained within the Hinkley Point C Connection Route FRA (**Volume 5.23.9**).<br>The DMP will provide further details on subsurface flows around foundation pads and existing drainage networks for the underground sections |
| 221 | Draft Fig 3.15.4 | Towerhead Culvert is unlikely to be acceptable as illustrated and will be subject to Land Drainage Consent with hydraulic modelling of the structure and adjacent watercourse necessary. | The use of a box culvert at Towerhead Brook is an option only. Full details and design of the crossing will be developed in consultation with the regulatory bodies in preparation for the Land Drainage consent.<br><br>The Route FRA (**Volume 5.23.9**) assesses the crossing of Towerhead Brook and proposes mitigation measures to address any issues with flows. |
| 222 | Draft Figs 3.16.1 to 4 | Culvert details may not be acceptable in many locations as illustrated – local assessments will be necessary. | Culvert crossings are subject to consent and details will be agreed with relevant consenting authorities |
| **Volume 5.26 - CEMP** | | | |
| 223 | 3.5 | River crossings – all require consent, details yet to be provided for the underground section. While directional drilling may result in no impact directly on the ditch/watercourse, impacts may arise from the construction pits.<br>Temporary bridges/structures will require consents (as referred to elsewhere).<br>R Axe cable bridge; Lox Yeo – bridge; Towerhead Brook (not referred to) – is this an omission or incorrect naming of the crossing? | It is understood that all crossings (via culvert or bridge) are subject to consent and details will be agreed with relevant consenting authorities. Potential effects on water quality from HDD operations are highlighted and mitigation measures identified to prevent pollution. |
| 224 | 3.5.2 | "There will be no direct impacts on the majors rivers listed within Table 3.1." Details of permanent and temporary bridges need to be supplied to ensure this is the case. | Most of the Main Rivers along the route of the Proposed Development are oversailed by the overhead lines. Where haul roads and/or cables need to cross Main Rivers, these crossings will take the form |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | | of a temporary bridge (for the haul road) and either a bridge or HDD for the cables. In all events, consent to cross the rivers will be sought and details of crossing methods agreed with the relevant authorities. |
| 225 | 3.5.8 - 3.5.41 | The Watercourse Crossings Method Statement sets out reasonable measures for protection of watercourses from silt, chemical and materials spillage pollution etc during the construction phase including removal of temporary culverts.<br><br>Consents will be required from EA, IDB, LLFA as appropriate. Overseeing regulatory bodies may need funding to adequately supervise installation, monitoring and removal of culverts etc. | Noted. Where not granted by the DCO National Grid will seek the appropriate consents from the relevant regulatory bodies. |
| **Appendix A6 – Historic Environment<br>Including: Chapter 11 – Historic Environment, Chapter 11 Appendices, Draft ES Chapter 17 Cumulative Effects<br>CEMP Draft Appendix 3** | | | |
| **General** | | | |
| 226 | General Inc. Table 11.17 and 11.7.9 | In general there appears to be a mis-match between the various documents regarding the mitigation measures to be taken. Evaluation should have been undertaken before the issuing of the ES to provide a firmer foundation for the mitigation measures being proposed (as advocated in the NPPF, para 128). | National Grid considers the proposed response in relation to LD129 which affects asset ID AR 256 is proportionate to the nature and level of the asset's significance. However, the Outline WSI (Volume 5.26.4) has been amended to show evaluation at this location<br><br>In relation to LD126, as noted above, the Outline WSI has been amended to show evaluation at that location. |
| 227 | General Inc. Table 11.17 and 11.7.9 | The lack of any evaluation in the Bristol part of the route makes it difficult to have confidence in the proposed mitigation strategy as set out in Table 11.17. The potential site of an Iron Age settlement in the Hallen Marsh area (AR249 on Table 11.17) should be subject to detailed archaeological evaluation before decisions are made regarding detailed mitigation measures. Similarly the area of proposed undergrounding for the realigned 132kV route close to the M49 should be subject to evaluation since this area has not received any previous archaeological work and thus its archaeological potential remains unknown. This area is currently shown (on fig G1979.2209.18C) as to be subject to an archaeological watching brief – this is premature as a conclusion as to the appropriate action / mitigation | National Grid considers the measures proposed in relation to the 132kV route are proportionate to the nature of the proposed development affects at this location (no known assets are located within the area affected) and measures proposed in relation to the watching brief are appropriate to the identification of treatment of any assets with archaeological interest discovered during construction (EN-1, 5.8.22).<br>Pylons LD125 and 126 are within proximity to the site of an Iron Age settlement the extent of which is not known and could extend into these construction areas. The proposed response to this potential has been revised in the Outline WSI (Volume 5.26.4) to evaluation. |
| 228 | General Inc. Table 11.17 and 11.7.9 | There is discordance between the WSI and the accompanying plan, with the latter indicating that the site of pylon LD121 (north of the line of the Mere Bank) is to be subject to an archaeological controlled strip and the former proposing an archaeological excavation. This needs clarification, especially since the basis for the decision to undertake an excavation is to investigate a possible circular anomaly showing in the geophysical survey (shown on the geophysical survey on the site shown as LD117, | The Outline WSI (**Volume 5.26.4**) states excavate in advance of construction for LD121. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | now LD121). | |
| 229 | General Inc. Table 11.17 and 11.7.9 | There is a further discordance between the WSI and accompanying figure, the latter showing a formal excavation on the continuation of the line of the Mere Bank (HL68), with the WSI indicating an archaeological controlled strip. Table 11.17 also indicates an excavation in this area | The Outline WSI (**Volume 5.26.4**) states excavate in advance of construction for LD121. |
| 230 | General Inc. Table 11.17 and 11.7.9 | However, no evaluation has been undertaken in the Bristol area despite the clear potential of the Hallen Marsh area (potential Iron Age settlement), while the site of proposed pylon LD126 will have an impact upon a post-medieval farm site with possible medieval antecedents. An archaeological controlled strip, which appears to be perceived as part of the construction phase, would be too late and initial on-site evaluation and survey of the site is needed to inform the eventual mitigation strategy, which may involve more formal excavation and potentially preservation in situ. Similarly, the site of pylon LD129 impacts upon the site of a post-medieval farm. Proposed mitigation consists of a controlled strip and record, which may be fine, but again is based on no prior archaeological data, apart from that contained within the Bristol HER. | National Grid considers the measures proposed in relation to the 132kV route are proportionate to the nature of the proposed development affects at this location (no known assets are located within the area affected) and measures proposed in relation to the watching brief are appropriate to the identification of treatment of any assets with archaeological interest discovered during construction (EN-1, 5.8.22).<br><br>Pylons LD125 and 126 are within proximity to the site of an Iron Age settlement the extent of which is not known and could extend into these construction areas.<br><br>The proposed response in relation to LD129 which affects asset ID AR 256 is proportionate to the nature and level of the asset's significance. However, the Outline WSI (**Volume 5.26.4**) has been amended to show evaluation at this location<br><br>In relation to LD126, as noted above, the Outline WSI is amended to show evaluation at that location.<br><br>The Outline WSI has been amended to include trenched evaluation within the Bristol area.<br><br>The Outline WSI has been amended to show evaluation at pylon location LD130. This is the only development proposed within South Gloucestershire |
| 231 | General | National Grid considers that all predicted residual effects of the route development upon the settings of built heritage assets to be permanent. In planning terms National Grid identifies the residual effects as causing 'less than substantial harm'.<br><br>NPPF (Para 134) advises that 'Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal, including securing its optimum viable use. | This comment has been noted and agreed<br><br>**Volume 5.11.1** does not suggest that the harm caused in any one location can be balanced against other positive benefits elsewhere along the route, it simply records both the predicted beneficial and adverse effect of the proposed development. The balance of the predicted adverse effects against the benefits of the proposed development will be undertaken by PINS during the examination. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | For most Built heritage assets National Grid are not proposing any mitigation measures to reduce the harm caused. Within the proposal as a whole, National Grid indicates that harm caused in any one location is balanced against other positive benefits elsewhere along the route | |
| 232 | General | S106 as mitigation<br>It is not considered appropriate to use benefits on other geographically very separate and unrelated heritage asset sites to mitigate the permanent harm resulting to the impact on the setting of others. Section 5.8 of NPS EN-1 is clear that the applicant's assessments of heritage assets should be individual. The Secretary of State's decision needs to consider that: "Any harmful impact on the significance of a designated heritage asset should be weighed against the public benefit of the development..." (paragraph 5.8.15). We have added emphasis to note the singular reference to heritage assets, not the overall 'averaged' impact of the development on such receptors.<br><br>In an attempt to mitigate the harm caused (although even this will not result in all impacts being mitigated), s106 financial contributions are sought towards localised projects that could:<br>• Enhance the micro local setting of each historic asset<br>• Be put towards physical restoration or conservation works that would help to ensure the viable continued use of the asset into the longer term<br>• Provision of local historic interpretation so that the assets can better be appreciated by the public<br>• Be put to a fund for the Joint Councils to spend on environmental enhancements to local areas where amenity and environmental quality is being harmed during construction and permanently thereafter by the proposals' for example:<br>  • Tickenham, Stone-edge Batch, Tickenham Valley environment;<br>  • St Quiricus and Julietta's Church, Tickenham;<br>  • St Mary church, Portbury; and<br>  Mark and Biddisham | The ES reports that there are no 'substantial' harmful effects in relation to heritage assets after embedded mitigation. So essentially the scheme, while harmful to the setting of some heritage assets, is not so harmful that offsetting measures are necessary to make it acceptable or to balance against that harm. However having regard to PPS5 Historic Environment Practice Guide National Grid is considering what measures might or might not be appropriate to include within a s106 agreement |
| 233 | General | T' Pylons & colour<br>No consideration appears to have been given to the use of colour as mitigation in the Built Environment section. In a number of locations where T pylons are to be predominantly seen against a back drop of tree covered hills the use of a sage green colour is felt marginally preferable to grey/white/silver shown on current photomontages. Sage green might assist blending the solid structure better into the back drop landscape in | Within its DCO application National Grid has specified appropriate colour finishes which could be used for the proposed pylons. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | some settings. The Joint Councils expect that justification of the pylon colour choice will be included in the final ES to demonstrate the how this minimises impacts and will also seek flexibility in pylon colour in certain locations through requirement | |
| 234 | General | Photomontages are requested to demonstrate the effect in particular at:<br>• Tickenham Valley east of and including Stony Edge Batch Positions LD81 onwards to LD87<br>Views south against Tickenham Ridge seen from Clapton in Gordano valley and Portishead positions LD90 – LD 102 | The existing photomontages presented in **Volume 5.18.3** are sufficient in terms of EN-1 5.8.9 to explain the predicted impact of the proposed development on the settings of heritage assets.<br><br>At the time of the February 2014 consultation not all photomontages were available for comment. |
| 235 | General | <u>St Quiricus and Julietta's Church, Tickenham - Grade I</u><br>• Pylon route to be closer to church than before (approx 534m presently to only 320m), and the T Pylons will be more visually significant within the landscape than the existing lattice Pylons by nature of their solid construction and increased height.<br>• National Grid acknowledge that this will be detrimental to the setting of the Grade I listed church and views to and from it across Tickenham Moor to Nailsea & Wraxall.<br>• National Grid acknowledge that as a permanent change the residual harm resulting following construction is classified as MODERATE ADVERSE *(resulting in the partial loss of the assets heritage significance as a result of the changes to its setting, affecting the viewers appreciation of it from certain view points)*. National Grid concludes that in planning terms this equates to **less than substantial harm.**<br><br>Revised photomontages do not appear in the package showing before and after views out from the church towards Nailsea confirming pylon positions do not conflict with views of Nailsea (Holy Trinity, St Mary's Grove Grade I) and Wraxall (All Saints Church, Wraxall Hill Grade I) church towers. These need to be supplied in order for NSC to agree if the residual harm is Moderate adverse or more significant than that.<br><br>Local enhancements to setting and repairs to church should be included as part of S106 contributions to mitigate the permanent harm caused to the setting to this grade I listed building and its associated group of related designated historic assets. Suggestions have been included within a draft list of S106 requests in consultation with the church | The existing photomontages **Volume 5.18.3** are sufficient in terms of EN-1 5.8.9 to explain the predicted impact of the proposed development on the settings of heritage assets.<br><br>At the time of the February 2014 consultation not all photomontages were available for comment. |
| 236 | General | <u>Batch Farm, Stone-edge Batch, Tickenham</u> – Grade II - National Grid Ref LB1052<br>The descriptions set out in Appendix 11B: the settings of heritage assets relating to farm are not accepted. The proposed positions of the new T | The assessment of the effects on Batch Farm has been reviewed in light of the amendment by English Heritage of the recorded position of the listed building. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | pylon LD82 would be positioned much closer to Batch Farm at approximately 158m than the approx 246m closest of two present lattice towers. It is noted that the closest of the present towers is sage green and the other grey. The sage green tower appears marginally less intrusive against the back drop of trees to Tickenham Ridge/St Johns Wood.<br>It would appear that National Grid may have the wrong position of the location of Batch Farm house which has recently been corrected by English Heritage.<br>The new Pylon Numbers quoted do not accord to those on drawing G1979.1828.14E Volume 5.25.14<br>Until the description is revised and the setting assessment updated the present assessment of residual effect as **minor adverse cannot be accepted**.<br>Photomontages should be produced showing view photographed below and illustrating new T pylon with option for standard and sage green for comparison.<br><u>Stone edge Batch /Tickenham area</u><br>Request:<br>Photomontage looking SW from B3128 outside Batch Farm to show before and after views of the impact of installation of T Pylon LD81 on general views and settings to LB1052, 1057 and general landscape setting | National Grid considers the existing photomontages presented **Volume 5.18.3** are sufficient in terms of EN-1 5.8.9 to explain the predicted impact of the proposed development on the settings of heritage assets..<br><br>At the time of the February 2014 consultation not all photomontages were available for comment. |
| 237 | 11.6.3 | The potential for impact on unknown heritage assets as part of planting schemes through the Offsite Planting and Enhancement Scheme (OSPES) is not fully addressed as stated in Volume 5.11 chapter 11 11.6.3. As the OSPES only considers known assets (see Volume 5.25 6.6.5). Field assessment of planting areas would be more appropriate. | The majority of the proposed OSPES is in relation to thickening of hedgerows and of such scope that evaluation would be disproportionate. However, where broader areas of planting are proposed it is noted that as the delivery of these works will be within the control of the LPAs, we strongly advise their internal consultation to ensure that the potential of the impact of the planting on heritage assets with archaeological interest is evaluated |
| 238 | 11.7 | Potential for offsetting mitigations should be discussed and agreed with the Local Authorities as soon as possible and in any case prior to the submission of the DCO application. | National Grid to confirm that it does not intend to enter into a s106 agreement regarding the offsetting of adverse effects on the settings of heritage assets |
| 239 | 11.7.9 | Raised in s42 response – Areas of high archaeological potential (e.g. Puriton Ridge) are recognised but no field assessment has taken place. The proposal is that further assessment takes place "*So that the details of the proposed mitigation can be defined*" (11.7.9). This does not conform to paragraph 5.8.9 of NPS EN-1 nor paragraph 128 of the National Planning Policy Framework. The approach will require on-going communication with Council officers. No targeted evaluation is proposed in the Bristol area. As indicated above, this must be carried out in agreed locations to provide a more robust impact assessment and mitigation | If the authority lacks a vital piece of information to assess whether significant effects are likely, it cannot leave that matter to be ascertained under a condition after planning permission has been granted: Hardy<br>Taking into account possible measures to mitigate environmental effects where those measures are uncertain in their efficacy or may themselves have significant effects: Gillespie.<br>**Volume 5.11** demonstrates that there are no significant effects predicted in relation to heritage assets with archaeological interest |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | strategy. | that cannot be mitigated; that those mitigation measures are effective and will not themselves have significant effects. The mitigation proposed includes avoidance and archaeological recording and the limits of deviation allow for both options to also be considered for as yet undiscovered heritage assets. EN-1 fully acknowledges the possibility that some development sites will have a high probability for as yet undiscovered heritage assets and paragraph 5.8.22 provides details of how this should be treated.<br>The risk noted here that the ES could be deficient is contradictory to the previous statement that the material is comprehensive in terms of the requirements of the NPS. |
| 240 | 11.7.9 | Remove the term "topsoil" and replace with "overburden" (in line with WSIs) | This comment has been noted and the Outline WSI (**Volume 5.26.4**) has been amended accordingly. |
| 241 | 11.7.10 | Due to the reliance on further field assessment (to inform detailed mitigation) on-going communication with appropriate council officers will be required. In particular field visits by officers and approval of detailed mitigation Written Schemes of Investigations (WSIs). These site visits, consultations and agreements may well require rapid response from officers and it is unclear when this work is proposed to be undertaken given the limited time available in which to do it and include it in the final ES. | Noted. |
| **Volume 5.11, Chapter 11 Appendices** | | | |
| 242 | Appendix 11A p193, reference AR 257 Farmhouse at Hallen<br><br>5.11 p 66 | Mitigation methodology indicated in respect of site AR 257 (former farm) is indicated as a watching brief. Past experience has indicated that farmsteads occupy sites of earlier archaeology so an alternative mitigation strategy of controlled strip (as proposed for the adjacent site AR 256) would be the preferred response and provides a lower risk of delay to the project. | The Outline WSI (**Volume 5.26.4**) has been amended to show evaluation at pylon location LD130. This is the only development proposed within South Gloucestershire |
| **Volume 5.26, Draft Appendix 3** | | | |
| 243 | Appendix 3 inset 2 | The mitigation proposal at Crandon Bridge (possible Roman Port AR 29) should be changed from a Watching Brief to Controlled Soils Strip followed by excavation, as a Watching Brief is inappropriate to the significance and potential complexity of the asset.<br><br>Trial Trench evaluation should be carried out at pylon location ZGA7, ZGA12, LD1, and LD2 not Watching Briefs. | The effect of the proposed development in relation to this asset is for the creation of one access track. The Outline WSI has however been amended to show controlled strip, assuming that this access track requires topsoil stripping |
| 244 | Appendix 3 Inset 2 | Trial Trench evaluation should be carried out at pylon location ZGA7 not a Watching Brief as proposed, as it is the likely location of Roman settlement (AR38). | Pylon ZGA7 is adjacent to and not within the area identified as AR38 and the watching brief is therefore precautionary to identify if any associated archaeology extends into this area. The Outline WSI has however been amended to evaluation at this location. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| 245 | Appendix 3 Inset 3 | Trial Trench evaluation should be carried out at pylon locations ZGA12, LD1 and LD2 not Watching Briefs as proposed as they are potential locations of Roman salterns. | The locations listed are some distance from the nearest recorded salterns but topographically similar. The Outline WSI (**Volume 5.26.4**) has been amended. |
| **Appendix A7 - Volume 5.12 Chapter 12 – Traffic and Transport** | | | |
| 246 | 12.1.10 + Table 12.2 | For avoidance of doubt, neither the CTMP, nor the TA have been agreed in principle by the Local Authorities or JMP on behalf of the Local Authorities. Comments have been provided to help steer the production of these documents, but there is insufficient information to agree to the content.<br>The accesses have been approved in principle, however, it should also be noted that any in principle agreement does not preclude the requirement for 'detailed technical audits' to finalise any arrangements.<br>The impact assessment as part of the TA remains incomplete and as such the relevance of the CTMP is yet to be determined.<br>The results of the TA and the junction assessments are yet to be provided and therefore no comment can be provided as to the level of driver delay.<br>Regarding the AIL report, North Somerset Council has not yet been provided with tracking assessments. Whilst they have agreed in principle to deliver a scheme (at cost to National Grid) for the design/modification of the A38/A368 junction, a scheme and tracking assessment should still be submitted and approved in advance of construction work at the Sandford site to ensure it can be accessed by AILs. Since there is no suitable alternative, the authority must be convinced of the appropriateness and deliverability of the proposed route. | National Grid acknowledges this comment. |
| 247 | 12.5.18-12.5.24 | The core hours for working identified in the report are between 07:00-19:00. Given the number of schools, workplaces and residential communities on the construction route, it would be inappropriate for an unrestricted number of construction vehicles to be travelling along links or through junctions at traditional peak hours. North Somerset Council has therefore requested that there be no HGV traffic during peak hours, or at a minimum no more than 30 two-way movements during peak hours. Working hours and restrictions on activity are a key issue addressed elsewhere within our responses (e.g. in relation to Noise and Vibration and the CEMP). | **Volume 5.12.1**, paragraph 12.5.18 has been amended stating - "Details on the restrictions of the number of construction vehicles travelling along the construction route are provided in the Draft CTMP, Volume 5.26.5. |
| 248 | General Policy comment | The policy section could be extended to identify any key routes identified in relevant local plans and compare how these routes relate to the Construction routes. | The policy section has been amended to reference key routes identified in local policies. |
| 249 | 12.2.3 | No reference to policy T/10 of the NSRLP or Policy CS10 of the NS Core Strategy which consider traffic impacts of new development. CS10 includes safeguarded major schemes such as Portishead Rail. Links should be made to these policies. | This reference has been added to Section 12.2 of **Volume 5.12.1**. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| 250 | 12.2 | Makes no reference to Travel Plan or Sustainable Travel Strategies. Whilst it is recognised that traditional travel planning may not be appropriate given the linear and multi-site nature of the development, there are a number of sites in proximity to sustainable travel alternatives and links. This should be recognised in the policy section.<br><br>No reference to the Infrastructure Delivery Plan's and no reference to emerging sites and policies DPD – which identify infrastructure required to support development across North Somerset. | This reference has been added to Section 12.2 of **Volume 5.12.1**. |
| 251 | General Baseline | The assessment compares 'Future Base' with 'Future Base and Development Traffic'. From a transport perspective this is considered acceptable, although it is recognised that for the ES this is usually broken down into further assessments. | National Grid acknowledges this comment. |
| 252 | General Methodology | Individual sensitive receptors should be identified and listed in an appendix. | Sensitive Receptors are provided in **Volume 5.12.2**, Appendix 12A. |
| 253 | 12.3.17 | Whilst it is acknowledged that should a sensitive receptor be screened or set back from the road, then there could be less of an impact than those fronting onto the highway. However, in the case of receptors such as schools, consideration should also be given to access routes and suitable crossing points to access the receptor. | The baseline section of **Volume 5.12.1** considers and references access routes and crossing points. |
| 254 | 12.3.20 | Pedestrian and cyclist amenity should be considered in regard to traffic flows as well as where the links are temporarily suspended or diverted. Where there is an increase in HGV traffic on roads where there are no cycle facilities there will be an adverse impact on the amenity of cyclists. Crossing facilities etc. should be considered when ensuring minimal impacts on delay, severance and safety, not only pedestrian facilities impacted by TM measures. In addition, consideration of impacts on pedestrian and cycle provision should not be restricted to PRoWs. The Strawberry Line, for example, is not a PRoW but should be considered. | The method, section 12.3 of **Volume 5.12.1**, details that the assessment considers pedestrian and cyclist amenity. |
| 255 | Table 12.4 | Hospitals and GP surgeries should be included as sensitive receptors, as should playing fields (Sidcot/Winscombe for example).<br>No assessment has been made of accident clusters, a defined number of accidents within a set area should be considered as this could lead to the identification of trends in road safety.<br>Consideration should also be given as to the existing National Average Count at a junction, compared to the count with the additional traffic associated with the construction.<br>It is noted that highway links should be considered as well the junctions. | The method, section 12.3 of **Volume 5.12.1**, details that the assessment considers hospitals and GP surgeries as sensitive receptors.<br><br>The baseline environment, section 12.4 of **Volume 5.12.1** details that a review of the specific highway links to be used by construction traffic has been undertaken and any accident clusters or significant correlations in the data discussed |
| 256 | 12.5.14 | Refers to the Transport Assessment for more detailed information relating to vehicles. At the time of this review, the TA had not been provided and therefore limited comments can be made as to the vehicle profile and routing or the validity of any assessment that relies on these | National Grid acknowledges the comments made. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | numbers.<br><br>Due to the delay in providing the TA and junction assessments no comment can yet be provided as to the level of driver delay as this is still under review. | |
| 257 | 12.4.9 | Reference is made to Puriton Primary School, but not Sunshine Pre-School located on Riverton Road, which is located closer (c.180m) to J23 and the construction route (though is unlikely to be impacted due to screening by vegetation and lack of need to cross the construction route to gain access) | Sunshine Pre-School is referenced in the baseline assessment (Section 12.4) of **Volume 5.12.1** |
| 258 | 12.4.10 | Whilst the residences south of the carriageway are screened by vegetation, their sole access point is along the carriageway, therefore access to the centre of Puriton requires crossing the construction route. Impact on crossing for pedestrians should be considered. Same for access to Knowle Hall (particularly from bus stop on opposite side of carriageway). | The impact on pedestrians crossing at this location has been considered in the baseline assessment (Section 12.4) of **Volume 5.12.1**. |
| 259 | 12.4.15 | The numerous sections of 'small number of properties' cumulatively gives a reasonable amount of residential properties fronting the carriageway with little screening. | National Grid considers that the link is relatively long, and therefore there are still relatively few residential properties situated along it. The assessment detailed in **Volume 5.12.1** has changed the Sensitivity to Moderate in light of Kingsmoor School. |
| 260 | 12.4.19 | Since the entire section has good quality pavements and runs through a residential area, impact on pedestrians crossing the construction route should be considered as well as the lack of screening (in particular near the Prince of Wales Pub which is likely to attract pedestrians and fronts directly onto the road, and at the junction with Higher Road, which leads to Woolavington Village Primary School therefore is likely to be a school route). | The impact on pedestrians crossing at this location has been considered in the baseline assessment (Section 12.4) of **Volume 5.12.1** |
| 261 | 12.4.41 | Also likely to have children walking to Woolavington Village Primary School from this area, therefore crossing points should be considered. | As detailed in the baseline assessment (Section 12.4) of **Volume 5.12.1**, at this location is states,' For those needing to cross the carriageway, there is a Zebra pedestrian crossing complete with dropped kerbs, tactile paving and flashing indicator beacons adjacent to the Higher Road/Woolavington Road junction'. |
| 262 | 12.21 | Dinghurst Road should be classified as high given the locations of the pubs, the junction with front street, narrowings, frontage of properties and children crossing/walking in the carriageway to and from the school. | The assessment of the Sensitivity of Dinghurst Road being used as a highway link during construction has been considered as high in Table 12.23 of **Volume 5.12.1**. |
| 263 | 12.4.55 | Church Road should potentially be raised to High Sensitivity rather than Moderate. Alongside the close proximity of many residences to the construction route, there is a pub, village hall and church fronting the road. Whilst East Huntspill Primary School is 75m from the carriageway on New Road, due to the linear nature of the settlement there is likely to be a large movement up and down Church Road to access the school from residential areas. Church Road is likely to be a primary access | The playing fields on New Road have been detailed in the baseline assessment (Section 12.4) of **Volume 5.12.1.** |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | route for most school children. There are also playing fields on New Road next to the school which are not mentioned but are likely to act as a high sensitivity receptor. | |
| 264 | 12.4.73 | Rose Cottage Farm Children's Nursery, located on Windmill Close, has not been noted. | The baseline assessment has been amended to include reference to Rose Cottage Farm Children's Nursery |
| 265 | 12.4.74 | Fox & Goose Hotel and Restaurant also fronts onto the junction here. Also a petrol garage. | The baseline assessment has been amended to include reference to the Fox & Goose Hotel and Restaurant and the petrol station. |
| 266 | 12.4.98 | Access for these residents to amenities on Old Coach Road should be considered (will need to cross construction route for pedestrian access). | Access for residents to Old Coach Road has been considered in the baseline assessment (Section 12.4) of **Volume 5.12.1** |
| 267 | 12.4.100 | Whilst Sidcot School is screened by vegetation, access to the school is from the Bristol Road construction route. In addition, the school playing fields are located further south on the opposite side of Bristol Road from the school, meaning pupils will walk along and over the construction route to reach the playing fields. Considering the road crossings involved, this section should be reclassified as high sensitivity. | The comments related to the access to Sidcot School have been addressed in in the baseline assessment (Section 12.4, paragraph 12.4.99) of **Volume 5.12.1**. |
| 268 | 12.4.104-107 | Why is this section included here, then parts of it repeated in Section D? (from 12.4.135 onwards) | **Volume 5.12.1** has been amended to reflect these comments |
| 269 | 12.4.107 | Churchill is a highly sensitive location – community school and sixth form, a number of local pubs and buildings which front the highway. Narrow pinch points. Children/Young adults regularly walking on or adjacent to the carriageway particularly during term time. | The assessment of the Sensitivity of Churchill has been amended in Section 12.4 of **Volume 5.12.1** to high in light of these comments. |
| 270 | 12.4.142 | Sandford Primary School fronts directly onto the construction route and is a high sensitivity receptor. May need attention regarding how children will cross the construction route to reach the pupil entrance (especially since most nearby residences are to the south of the road). There is also a retirement village in Sandford. | The baseline assessment has been updated to include a comment regarding the crossing of the road to access Sandford Primary School. |
| 271 | 12.4.186 | Greenslade Pre-School and Kingshill Church School are also located on Pound Lane – 3 schools covering wide age range, therefore mixture of children travelling independently and with parents. Large number of high sensitivity receptors may justify upgrading the sensitivity classification here to High. Also, the use of Clevedon Road in providing access to these schools needs to be considered (no pedestrian crossings present) rather than just the screening (in particular crossing to access the footpath opposite Greenfield Crescent, which may provide pedestrian access to the schools). | The baseline assessment has been updated in light of these comments and the sensitivity classification upgraded to high. |
| 272 | 12.4.188-189 | Large number of bungalows along this route are likely to attract an elderly population which is more vulnerable to developments. | National Grid acknowledges this comment. |
| 273 | 12.4.195 | Typo and sentence needs re-wording slightly to make sense | National Grid acknowledges this comment and the sentence was amended. |
| 274 | 12.4.202 | Queen's Road continues west from Station Road rather than east? | National Grid acknowledges this comment and this has been amended. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| 275 | 12.4.203 | Large number of residences in this area justify revising this section to moderate sensitivity classification, despite the screening of the residences. The large number of properties means the route is likely to attract pedestrians walking to Nailsea School or Crown Glass Shopping Centre (around 10 minutes' walk from the junction of Queens Road and Mizzymead Road). Impact on access for these people should be considered. | National Grid acknowledges this comment |
| 276 | 12.4.203/205/ 208 | Also note proximity to other high sensitivity receptors including Grove Junior School, Hannah More Infants School and playing fields along St Mary's Grove. These are all well screened from the construction route, but St Mary's Grove in particular is likely to be used by those travelling to the schools. | National Grid acknowledges this comment, the baseline section has been amended to include reference to the receptors listed. |
| 277 | 12.4.243 | Note proximity to Clevedon Hospital | National Grid acknowledges this comment |
| 278 | 12.4.245 | Main access to Tickenham Primary School is directly from construction route. Likely to be a large number of school children crossing route here. | National Grid acknowledges this comment |
| 279 | 12.4.272 | Text is a direct copy of point 12.4.267, and does not relate to Wharf Lane. | National Grid acknowledges this comment the text has been amended. |
| 280 | 12.4.314 | Note Avonmouth Fire Station on St Andrew's Road near the roundabout. | National Grid acknowledges this comment the text has been amended to include Avonmouth Fire Station. |
| 281 | 12.4.357 | Butterflies Day Nursery, a high sensitivity receptor, is also located here. | National Grid acknowledges this comment the text has been amended to include Butterflies Day Nursey. |
| 282 | 12.4.366 | Signalised pedestrian crossings provide access to Chilton Street (therefore the school) from Western Way. | National Grid acknowledges this comment the text has been amended to include the signalised pedestrian crossing |
| 283 | 12.4.393 | Construction route passes through Wick Park Covet, an area of ecological value (refuge habitat within agricultural area) which may be impacted. | National Grid acknowledges this comment, Wick Park Covet has been referenced in the text. |
| 284 | 12.5.20 | Further information is required with regard to the Street Furniture: A368/A38 cross roads and how this will be dealt with when AILs traverse the junction. | A separate AIL report is submitted as part of the Transport Assessment (TA), **Volume 5.22.2**, Appendix 22D. |
| 285 | Impact assessment general | The analysis highlights the following areas of increased traffic on sensitive links: -<br>Nailsea Wall – this is a sensitive link, which will have an increase of HGVs, of over 36% over the course of the day. This will therefore be a moderate impact and mitigation should be considered. Avonway cycle route.<br>Kenmoor Road and Caswell Hill – both these links have an increase of HGVs of between 30-60% (minor), but are considered to be minor sensitive receptors and therefore have a slight impact.<br>Whitewick Lane has an increase of HGVs of between 60-90% (moderate), however the link is considered to be minor and therefore the | Nailsea Wall iss referred to in the **Volume 5.12.1** text as being a highly sensitive route. Mitigation is discussed in the PRoW Implementation Plan, **Volume 5.26.6.**<br><br>Kenmoor Road and Caswell Hill are referred to in the Volume 5.12.1 text as having minor sensitivity.<br><br>The impact on Whitewick Lane has been amended to moderate. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | impact is considered to be moderate. There are a number of properties along Whitewick Lane which are not set back from the road or screened by vegetation. Rather, the external walls of these properties directly front the road. In addition, Whitewick Lane is narrow and along much of its length bordered by large hedges. It therefore difficult for vehicles to pass one another on this stretch of the route. | |
| 286 | Mitigation | Since the mechanisms for monitoring, reporting and implementing remedial measures have not been confirmed, any mitigation commitments are very preliminary at this stage.<br>Due to the delay in providing the CTMP, National Grid's commitments regarding HGV movements cannot be assessed. Detailed comments will however be provided separately on the 17th February. | National Grid acknowledges this comment |
| 287 | Table 12.52: | The Mitigation Measures Table is very light and does not state specific measures. Furthermore, due to the delay in providing the CTMP (which the mitigation table relies heavily upon) it is not possible to comment on the validity of this mitigation at this stage; please note comment above in relation to the 17th February.<br><br>The table does not clarify whether a dedicated TMG (Transport Management Group) will be established for each site, or a single TMG for the whole development. It also does not clarify what reporting mechanism will be used. A single TMG is our preferred approach.<br><br>Regarding the restricted timescale for vehicle movements, see the comments in the General section above.<br><br>No timescale is provided for highways schemes. These schemes must be delivered prior to commencement of works on the site.<br>Regarding highways condition surveys, National Grid should undertake surveys where appropriate and as agreed with the Highways Authority. | National Grid acknowledges this comment |
| 288 | 12.7.4–12.7.5 | It is not clear what the construction workforce travel planning comprises, therefore commitment to this resource is vague. Greater commitment to this travel plan is required, with monitoring and evaluation costs to be covered by National Grid. The travel planning strategy should identify sites where there is a greater potential to influence travel by sustainable modes, such as those in proximity to well-served bus and rail links.<br>The travel plan and shift pattern to be implemented contradicts the current National Grid response to the request for travel planning. Commitment to this and a delivery mechanism needs to be specified in the travel plan. | The TA, **Volume 5.22.1** provides reference to a travel plan. |
| 289 | Requirements and | *"A proposal also to reinstate the Strawberry line along part of its original route, to remove the need to cycle of a short stretch of road is also part* | National Grid acknowledges this comment |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | Obligations Table | *of this proposal. Both these provide mitigation of the issues described above."*<br>Further information is required as to the realignment of the Strawberry Route. It is noted that this will also require a detailed technical audit before it can be implemented.<br><br>*"National Grid will construct all those parts of the link within the land it acquires at Sandford. It does not believe that providing funds for a light controlled crossing at Nye Road is appropriate."*<br>It is understood from previous discussions that National Grid would fund the light controlled crossing at Nye Road.<br><br>The Joint Councils will require all developers to fund technical approvals upfront. National Grid must provide funding to cover technical approval and inspection fees. | |
| **Appendix A8 - Air Quality and Emissions<br>Including:<br>Volume 5.13 - Chapter 13 – Air Quality and Emissions<br>Volume 5.26 - Construction Environmental Management Plan<br>Volume 5.17 - Chapter 17 – Cumulative Effects** | | | |
| **General** | | | |
| 290 | Table 13.6 | There is an error in the heading of this table; Dust Emissions Classes are not specified. | National Grid acknowledges this comment and the table has been amended. |
| 291 | Para 13.4.13 | This paragraph states 'The 2013 air quality monitoring in the borough……" when in the previous sentence it states that 2013 data isn't available. It should be clarified which air quality monitoring this refers to. | National Grid acknowledges this comment and this has been amended. |
| 292 | Para 13.4.14 | Should this read 2001 or 2011? | Amended to 2011. |
| 293 | Para 13.5.16 | The sensitivity of the study area for this section should be classified as 'Very High' instead of 'High' due to the presence of an SAC within 20m of the order limits. | Amended to 'Very High' on the basis of the presence of European designated ecological site, for a conservative assessment, although other factors may suggest a lower category |
| 294 | Para 13.5.21 | The sensitivity of the study area for this section should be classified as 'Very High' instead of 'High' due to the presence of an SAC within 20m of the order limits. | Amended to 'Very High' on the basis of the presence of European designated ecological site, for a conservative assessment, although other factors may suggest a lower category |
| 295 | Para 13.5.22 | The sensitivity of the study area for this section should be classified as 'Very High' instead of 'High' due to the presence of an SAC within 20m of the order limits. | Amended to 'Very High' on the basis of the presence of European designated ecological site, for a conservative assessment, although other factors may suggest a lower category |
| 296 | Table 13.27 | If the above changes to sensitivity of study area are included the significance of effect before mitigation would be increased to substantial adverse at Section C, G and H. | National Grid agrees with this comment and this has been amended. |
| 297 | Table 13.28 | The full title row should be repeated across pages. | Amended. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| **Volume 5.26 - Construction Environmental Management Plan (Air Quality)** | | | |
| 298 | | In general, all mitigation measures included in the CEMP are also included in Chapter 13 of the ES. It should be a condition of planning that all measures are implemented across the scheme. | National Grid acknowledges this comment. |
| 299 | Para 13.1.1 | It would be beneficial for this to reference particularly Table 13.27 of the ES. | National Grid acknowledges this comment and this has been amended. |
| 300 | Para 13.4.2 | This should read "Where appropriate, records would be kept of air quality complaints and air quality incidents" | National Grid acknowledges this comment and this has been amended. |
| 301 | Para 13.4.2 (last sentence and bullet points) | This states that procedures to assess the effectiveness of measures to prevent dust and air pollutant emissions would include site inspections, inspections of areas adjacent to the construction site, review of schedules for construction vehicles, plant and machinery and inspection of level of traffic movements, use and condition of haul road.<br>It does not mention how often these site inspections and inspection of areas adjacent to the construction site will take place. IAQM guidance indicates on-site and off-site (where receptors are nearby) inspections to monitor dust should be undertaken daily and the results of these inspection should be made available to the local authority when requested. As part of this inspection it is advised that dust soiling checks of surfaces such as street furniture, cars and window sills within 100m of the site boundary be undertaken. This is contained within the IAQM Dust and Air Emissions Mitigation Measures document. | Daily inspections will be undertaken by the contractor(s). |
| 302 | Para 13.4.13 | The 2013 air quality progress report for South Gloucestershire has been circulated to National Grid by SGC's EHO. It is noted that this should be used to determine baseline conditions in the area, although it is not envisaged that this would change the outcome of the assessment provided in the Draft ES. It is unclear why the 2012 Air Quality Action Plan has been referenced here which looks at particular hotspots, the 2012 Updating and Screening Assessment available on the website gives a much broader view of baseline conditions across the district." | National Grid acknowledges this comment and this has been amended. |
| **Chapter 17 – Cumulative Effects** | | | |
| 303 | Para 17.3.43 | The methodology applied for the assessment of cumulative fugitive dust emissions is appropriate. | National Grid acknowledges this comment. |
| 304 | Table 17.13 | It is noted that in this table the AQMA for BCC is described as designated for $NO_2$, it should be noted that this is designated for $PM_{10}$ also however this does not change the outcome of the cumulative effects assessment for this area. | National Grid acknowledges this comment. |
| 305 | Para 17.3.49 | It is noted that the majority of increase in vehicle movements is due to committed development and therefore outside of the control and mitigation of National Grid. It is also noted that any effect would be temporary during the construction phase. | National Grid acknowledges this comment. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| **Appendix A9 - Noise and Vibration<br>Including:<br>Chapter 14 – Noise and Vibration<br>Draft Appendix 14A Scoping Out<br>Draft Appendix 14B Sandford Substation CadnaA Noise Modelling<br>Draft Appendix 14C Summary of night time background noise measurements<br>Draft Appendix 14D Generic data curves to assess spans of 400kV overhead line noise<br>Draft Appendix 14E 400kV Overhead line CadnaA Noise Modelling Draft Figure 14.1 Sandford Sub Operational Noise Night Time No Mitigation<br>Draft Figure 14.2 OHL Noise Assessment Example CADNAA Model<br>Draft Figure 14.3 Sandford Sub Operational Noise Night Time Mitigation<br>Volume 5.26 Construction Environment Management Plan (CEMP)** | | | |
| **General** | | | |
| 306 | 14.2.13 | Refers to a list of policies not shown in the text. | The list of policies has been revised in the submitted chapter, **Volume 5.14.1**. |
| 307 | 14.2.21 | Defines durations of temporary effects under BS5228 heading. Suggest reword to make clear that these durations are not defined in the BS. | This text has been removed as it forms no basis of the assessment presented in **Volume 5.14.1**. Timeframes are discussed later in the chapter. |
| 308 | 14.2.24 | Describes the 5dB Change method from BS5228. The BS considers significance where the "***total noise*** *(pre-construction ambient plus construction noise) exceeds the pre-construction ambient noise by 5 dB or more*" and not the construction noise only as stated in the text. If this difference is intentional, further explanation is required in justification. | It is expected that noise levels at the vast majority of locations would be significantly below 65dBA. As such, the sum of pre-construction ambient plus construction noise is not expected to be significantly affected by the pre-construction noise. Where the pre-construction ambient noise approaches or exceeds 65dBA, a higher noise limit may be applicable. The 65dB criterion is therefore considered to provide a worst case assessment.<br>The text has been amended in an attempt to clarify this. |
| 309 | Table 14.3 | Title states 'Noise Levels Applicable' with no qualification. Suggest rewording to describe the noise level threshold. | The title of this Table has been corrected. It did not refer to eligibility for noise insulation |
| 310 | 14.2.29 | Part of the reference for DRMB is incorrect. It should be 'HD 231/11' and not 'Had 231/11' as written. | National Grid acknowledges this comment and the text has been amended |
| 311 | 14.2.29 | The criteria from DMRB presented are for definition of short term impacts. Suggests the text reworded to make clear that these impact criteria are being used to define effects. | Additional text has been added. No long term effects are expected. |
| 312 | Table 14.9 | No definition is given of the assessment location where these effects need to occur. | This table indicates the magnitude of effect. The locations are defined in the sensitivities table above. These values from both tables are used in to define significance of effect |
| 313 | Table 14.11 | No definition is given of whether the impact is at façade or free field and should be defined by the assessor. | The background and rating levels are free field |
| 314 | 14.3 | Section should be expanded to give more detail on the where the ranges were measured and at what times to demonstrate the applicability in the assessment. | Full survey details are contained within **Volume 5.14.2**, Appendix 14E<br><br>The local authorities and surrounding communities will be informed of known activities that will be undertaken outside of the core working |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | Section 4.3 also states that the core working hours will be from 07.00 to 19.00 Mondays to Saturdays and 07.00 and 17.00 on Sundays, but there should be localised additional restrictions near to residential properties. Bristol CC normal restrictions should be used to mitigate construction noise in this location and limit working hours to 08 00 Hours and 18 00 Hours on Mondays to Fridays, 08 00 and 13 00 Hours on Saturdays and at no time on Sundays and Bank Holidays. Joint Councils agreement will be required in respect of working hours, activities within start up and shut down and any departures from these defined activities. | hours. Where advised, consent will be sought under Section 61 of the Control of Pollution Act 1974. A Section 61 is a formal agreement between the contractor and the Local Authority. This agreement is applied for before work commences and allows the contractor and Local Authority to agree, for example noise levels and hours of work and protects the contractor from Local Authority Action |
| 315 | | In area G the route passes near to residential properties at Portview Road , Clayton Street, Queen Street and King Street (LD109-LD113 page 18 of 5.3 draft figure 3.1) but there appears to be no reference in the other documentation as to predicted noise levels from the overhead power cables or noise from the construction phase of the development at the nearby residential the properties. | Table 14.14 is now in **Volume 5.14.2**, Appendix 14A, Table 3 and contains details of the effects of construction in this area. Generic data curves were produced (**Volume 5.14.2,** Appendix 14F) and were used to identify spans of the overhead line where more detailed modelling of effect was required, due to either proximity of residential properties or low background noise levels. At this stage, some spans with residential receptors within 200m of the overhead line were scoped out of further assessment. These spans are listed in **Volume 5.14.2,** Appendix 14G |
| 316 | 14.3.2 | Remove 'ambient' from the description of night time levels; these are 'background' noise levels. Define the time period in the $L_{A90,T}$ index. T should ideally be 5 minutes to be consistent with the BS5228 methodology for night time assessment. | This has been removed due to ambiguity of terminology |
| 317 | 14.3.3 | Remove 'ambient' from the description of the conditions (presume these are 'background' level measurements). | This has been removed due to ambiguity of terminology |
| 318 | 14.13 | The thresholds presented in the table need a definition. Are these $dBL_{Aeq}$ construction noise only for different time periods? Are they free field or façade noise levels? | This table has been moved to Table 2 in **Volume 5.14.2**, Appendix 14A. These are $L_{Aeq}$ for variable time periods, depending on the percentage on time for the various sources, as described in Table 1 of Appendix 14A (formally in the report). This should make this clearer. The distances assume that the activity is continuous for the full working day duration and are therefore worst case distances. These are façade levels |
| 319 | Table 14.15 & Table 14.16 & Table 14.17 | The façade construction noise level field needs and index, presumably $L_{Aeq}$ over a time period? | $L_{Aeq,T}$ included in Table heading. 'T' cannot be defined as this depends on the actual duration of the activity. |
| 320 | 14.4.11 | Refers to an enclosure 'sound reduction'. Needs further definition; suspect this should be 'insertion loss'; linear or A-weighted? | The text has been reworded for clarity. |
| 321 | Table 14.18 | The thresholds presented in the table need a definition. Assume these are dBLAeq construction noise only for different time periods. Are they free field or façade noise levels? | As the response to 14.13 details the distances assume that the activity is continuous for the full working day duration and are therefore worst case distances. These are façade levels |
| 322 | Inset 14.1 | Figure shows noise levels at receptor locations but doesn't define if these are free field or façade levels. | Inset 14.3 is now inset 14.1 (Original 14.1 removed). Additional text has been added for clarity |
| 323 | Table 14.21 | Noise level fields need an index and should be consistent when using '+'. | This has been revised. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| 324 | Inset 14.2 | The numbers on the receptors are not defined. Can the receptor labels display the receptor name, as in the previous inset? | This figure shows an example of the CadnaA model and serves no assessment purpose within the Chapter itself. Full Figures, with definitions are provided in **Volume 5.14.2**, Appendix 14G. However, for clarity, this has been revised. |
| 325 | Table 14.22 | What does the 'Ref' column refer to? Assume it can be removed? | The ref. cross refers to the receptors described in **Volume 5.14.2**, **Appendix 14G.** |
| 326 | 14.4.29 | Refers to receptors (e.g. Honeysuckle Cottage) that do not appear in the preceding table. | National Grid acknowledges this comment the text has been corrected to match the table. |
| 327 | 14.4.29 | Text notes a 'medium to high' effect at the Star Inn, yet the table above and below both state 'medium'. | National Grid acknowledges this comment the text has been corrected to match the table. |
| 328 | Table 14.23 | Gives two effect magnitudes on one row. It is unclear why this is the case; could the 'medium' effect not be grouped in the row below? | This has been corrected. |
| 329 | Table 14.25 | Transition Jointing offers two effect magnitudes. The significant magnitude should be presented separately. | This has been corrected. |
| 330 | Inset 14.3 | Figure shows noise levels at receptor locations but doesn't define if these are free field or façade levels. | Inset 14.3 is now inset 14.1 (Original 14.1 removed). Additional text has been added for clarity |
| 331 | Table 14.26 | Medium effects identified in Appendix B Table 14B.5 are not reproduced here. | The assessment has been revised to night time periods only. |
| 332 | Table 14.16 | Noise level fields need and index. | This has been revised. |
| 333 | 14.7.4 | Should clarify that the statement is true with mitigation. | The substation operational noise section has been revised. |
| 334 | Table 14.27 | Gives two effect magnitudes on one row. It is unclear why this is the case; could the 'medium' effect not be grouped in the row below? | This has been revised. |
| 335 | 14.8 | No reference is made to consideration of intra-project cumulative effects. | Intra-project effects are discussed in **Volume 5.14.1, sections 14.5** (for construction and decommissioning noise) and **13.13** (for operational noise) |
| 336 | 14.9.3 | Operational noise from Sandford Substation is stated to be not significant after mitigation, but the assessment in Appendix B indicates a medium effect at two sensitive receptors during the daytime, which should be referenced. | The night time is considered the worst case periods due to the low background noise level |
| 337 | Appendix B 2.6 | Text should state where the 5dB acoustic character correction originates. | The text has been revised. |
| 338 | Appendix B 2.8 | 'medium hardness ground' needs defining acoustically. National Grid should use G= 0 at Sandford Substation for consistency with other models rather than G=0.5 assumed in other modelled noise levels. | This has been revised to include hard ground although this is a worst case assumption. Ground is typically soft to medium in the area |
| 339 | Appendix B 2.14 | Façade or free field noise levels calculated at immission points? | Free field |
| 340 | Appendix B Table 14B.5 | Medium effects tabulated here are not in the main ES chapter text. | The night time is considered the worst case periods due to the low background noise level |
| 341 | Appendix E All figures | The noise levels presented in the box at the bottom right need an index. Avoid using the '-'character before numbers (unless they are negative). | This has been revised |
| 342 | Appendix C | Survey report still refers to PEIR. | This has been revised. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| **Volume 5.26 - CEMP** | | | |
| 343 | | No provision has been included for Noise Insulation and Temporary Rehousing. This should be included as a provision in the CEMP and adopt threshold criteria as outlined within the draft ES text in 14.2.25 | Noise levels and durations required for NI and TR are not expected to reached. |
| **Appendix A10 – Chapter 15 - Socio economics and Land Use** | | | |
| 344 | Overarching comment | References to South West Coast Path should read West Somerset Coast Path | This has been amended. |
| 345 | Table 15.1 | Refers to Transport Assessment (Volume 5.22) but this has not been made available | National Grid acknowledges this comment. |
| 346 | 15.1.11 | Para 15.1.11 states that: *An additional meeting with South Gloucestershire Council, Bristol City Council and the project manager for the Avonmouth Severnside Enterprise Area (ASEA[2])was held on 7 October 2013 to discuss the specific challenges of development within the ASEA. The discussions at this meeting sought to minimise effects of the Proposed Development on the viability and desirability of land parcels within the ASEA*.<br><br>The Councils wish to clarify that although following this meeting National Grid have sought to reduce impact on the consented land parcel in South Gloucestershire and on Hallen Marsh (potential ecological offset area) only; no adjustments have been forthcoming to avoid or reduce impact on the remainder of the ASEA, and significant concerns remain about the impact of HCCP on the ASEA, and also that the ES does not provide evidence to underpin its analysis of impact. | Additional text has been provided in relation to the Severnside Enterprise Area to address the concerns raised. |
| 347 | 15.2.8 | Refers to the Design Manual for Roads and Bridges as useful methodology for PROW user counts. The DMRB methodology is specific to pedestrians impacted upon by new roads and does not necessarily relate to recreational users of PROW. | Clarification has been provided within **Volume 5.15.1**. Whilst the DMRB is intended principally to guide the environmental assessment of road and bridge schemes, its principles provide useful context for the assessment of effects of linear infrastructure, such as the Proposed Development. Volume 11, Section 3 Part 8 makes specific provision for user flow counts and notes that recreational routes should be assessed at weekends to ensure that samples are representative. |
| 348 | 15.2.24 | SGC listing of policy at p16 appears to be inadequate and, specifically, is missing:<br>1. South Gloucestershire Core Strategy policy CS35 seeks delivery of the economic potential of the regionally significant employment location, yet this does not seem to be cited in the documentation. HCCP should be assessed against this policy.<br>2. The document cites Gloucestershire Core Strategy 'Rural Areas' | Reference to Policy CS35 has been added into the policy section of **Volume 5.15.1** and policy CS34 which relates to rural areas has been removed. References to the saved policies have been removed. |

[2] Enterprise Area is commonly abbreviated to EA, but herewith referred to as the ASEA to avoid confusion with the Environment Agency

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | policy, yet this is of relatively minor relevance given the HCCP's location within the Enterprise Area.<br>3. The relevance of reference to South Gloucestershire Local Plan policy L16 Best Agricultural Land, LC9 which seeks to protect open spaces and playing fields is questioned.<br>4. The documentation incorrectly includes reference to Local Plan policies that have been replaced as a result of the Adoption of the South Gloucestershire Core Strategy (Dec 2013) (National Grid was notified of this).<br>5. While referenced, assessment of the impact on the Severnside Avonmouth Enterprise Area that has been adopted by both Councils is inadequate CS12 Safeguarded areas for economic development should also be referenced. | |
| 349 | 15.2.26 | BCC local policy covered at 15.2.26 does not include:<br>1. Core Strategy Policies BCS 4: Avonmouth is a priority for industrial and warehousing and renewal […] whilst protecting its environmental assets.<br>2. Site Allocation and Development management Policies (now post hearing) identify two Primary Industrial and Warehousing Areas and protected Avonmouth and Kingsweston levels and proposals to review development area in 2016 following current review.<br>3. Designation as an Enterprise Area | Policy text has been added in relation to BCS4. |
| 350 | 15.4.42 | The delivery of the Avonmouth Severnside Enterprise Area (ASEA) underpins the City Region Deal, which has been signed off by all four West of England Councils (July 2013) and this depends on financial modelling based on the WYG development strategy drawn up for the area. The delivery of the ASEA is work in progress with flood options being consulted on and site allocations being drawn up. | Additional text has been provided in relation to the Severnside Enterprise Area to address the concerns raised |
| 351 | Figure 15.7 | Figure has a symbol for Visitor attractions which does not appear on the pages covering Sedgemoor district. This is at odds with the symbol for Tourist Accommodation which is used in many locations. | **Volume 5.15.3**, **Figure 15.7** has been amended accordingly |
| 352 | 15.4.51 | 154 PRoW routes were surveyed out of 1,057 which pass within 2km of the proposed development. This represents only 14%. The sample size is not felt to be large enough on which to base the assumptions on the 86% within the 2km? | PRoW condition surveys were undertaken for approximately 70% of routes within the Local Area of Influence (i.e. the 250m buffer around the Order Limits), which is the area that was selected due to the potential for direct impacts to occur (noting that the design of the Proposed Development was still emerging at the time of the surveys). Clarification has been provided within the text |
| 353 | Table 15.27 | States "West Somerset Coast Path may, in due course, connect with the England Coast Path". There appears to be a misunderstanding of the status of promoted trails and their hierarchy. The 40 km WSCP will form part of the Somerset section (90km) of the England Coast Path National Trail when it opens later in 2014. The WSCP will retain its own local | The text has been amended to reflect this comment. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | identity within the National Trail. | |
| 354 | Insets 15.9 & 15.10 | Figures are unclear in terms of what they are showing and should be amended such that it is clear to the reader what points the data is illustrating. | The figures have been amended. |
| 355 | 15.5.42 | Businesses were not provided with sufficient information about the scheme and its likely impacts to make an informed judgement on whether there would be positive, neutral or adverse impacts. Businesses were also not asked (despite recommendation) whether and to what extent their locational decisions are affected by landscape quality. | Clarification has been provided within **Volume 5.15.1**. As a perceptions survey, the purpose of the survey was to establish the businesses' existing awareness of the Proposed Development and their perception of effects, based on any extant knowledge that they had of the Proposed Development (at the time of the survey). It would not have been possible to establish existing awareness and perceptions of businesses if a briefing of the Proposed Development had been provided in advance of conducting the survey |
| 356 | 15.5.48 | This paragraph states that 'the type and massing of land use in the easement of the overhead line may be restricted'. But Table 15.33 states that the type of land developed within the direct route corridor may be limited to compatible land use, such as roads, car parking and landscaping'. The proposed line crosses part of a consented land parcel plus a number of other potential development parcels identified in the Enterprise Area development, and with these restrictions may well affect developability. For the consented land parcel there seems to be a supposition that the area of land affected by HCCP is not critical to its overall development, yet this is not backed up by evidence. The conclusion that impact is 'minor adverse' is not adequately explained or justified. | Additional text has been provided in relation to the Severnside Enterprise Area to address the concerns raised |
| 357 | 15.5.49 | Para 15.5.49 recognises sites for potential development may be restricted in terms of type and massing but does not quantify this impact and effect on the ASEA . Nor does it recognise the impact on redevelopment and renewal of existing developed areas in Avonmouth (Third Way) | Additional text has been provided in relation to the Severnside Enterprise Area to address the concerns raised |
| 358 | 15.5.50 | Bullet points assessing the construction phase effects on business operators do not state the magnitude assessment. These should be clearly stated. | The text has been amended |
| 359 | 15.5.58 | Bullet points assessing construction phase effects on agricultural land and operations include errors. In particular, the Droveway Farm assessment includes a 'very high magnitude' which is not a category in the assessment framework. | The text has been amended |
| 360 | 15.5.60 | The rationale for reaching a 'low magnitude effect' for the construction phase impact on BMV agricultural land appears questionable. The assessment states: 'The proposed construction corridor would affect 390 ha of BMV land which equates to approximately 7% of the BMV within the local Area of Influence.' Given that it is a socio-economic assessment, the magnitude rating should be made on the basis of the | The text has been amended |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | economic impact of this land. In particular, it appears unlikely that it would impact 'a small number of businesses' as defined in the 'low magnitude rating'. The receptor sensitivity is also missing from this assessment. | |
| 361 | 15.5.66 | It is stated that: 'If Droveway Farm is relocated then no socio-economic effects would occur during the operational phase'. This is not a reasonable assumption; relocation of a business can have multiple and long-lasting socio-economic impacts. | The text has been amended |
| 362 | Table 15.33 | The operation phase impact for the Royal Ordnance Factory is assessed as being 'No effect' – this is not a category in the assessment framework. This occurs for the assessment of CF/4 Safeguarded Site for Proposed Public Utilities/Services Portishead Quays.<br><br>The 'Minor Adverse' assessment of impact on development potential in the ASEA is challenged: the assessment is neither quantified nor justified. We would expect views of land owner to be factored in this the assessment as well as a valuation assessment including impact on business rates, as this would have a direct impact on local councils because rates are retained by councils in the Enterprise Area<br><br>With reference to NW open storage area by Bristol Port Company: the views of the Port should have been sought and reported in order that the severity of impact on storage (particularly in terms of height and crane movement) can be understood. In light of which, the assessment of 'Moderate Adverse' effect is challenged. | The operation phase impact for the Royal Ordnance factory has been amended.<br><br>Additional text has been provided in relation to the Severnside Enterprise Area to address concerns.<br><br>The assessment of effects for the NW open storage area was based on the application plans and other information available, which were reviewed to establish the proposed layout and arrangement of the proposal. This approach was applied for each of the applications frustrated by the Proposed Development |
| 363 | 15.5.76 | Sample sizes (246 respondents) are too low to make many of the conclusions and assumptions statistically viable. Interviews took place in a short timescale which does not reflect the different types of visitor at different times of year. To indicate that '661 visitors were identified' is inferring that each interview can be counted 2-3 times (which is not a statistically sound conclusion). | The text in **Volume 5.15.1** has been amended to provide clarification. |
| 364 | 15.5.79 | It is unclear how the survey results outlined in the above paragraphs (Para 15.5.74 – 15.5.79) have led to the conclusion set out in paragraph 15.5.79, as the question "Would the infrastructure deter local residents and visitors from undertaking outdoor activities" was not actually asked. Given that the survey was carried out at various outdoor locations, it would not have captured respondents who may currently be deterred. | The text in **Volume 5.15.1** has been amended to provide clarification. |
| 365 | 15.5.86;<br>15.5.90;<br>15.5.91 | Users surveyed were provided with fairly minimal information about the scheme and its likely impacts which would have been insufficient to make an informed judgement on how it might affect their activities and expenditure, and whether there would be positive, neutral or adverse impacts. | The text in **Volume 5.15.1** has been amended to provide clarification. As a perceptions survey, the purpose of the survey was to establish the users' existing awareness of the Proposed Development and their perception of effects, based on any extant knowledge that they had of the Proposed Development (at the time of the survey). It would not |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | | have been possible to establish existing awareness and perceptions of users if a briefing of the Proposed Development had been provided in advance of conducting the survey. Although, interestingly, when asked and provided with a description of the Proposed Development, 50% of interviewees were aware of it, of which 66% felt well informed about it. |
| 366 | 15.5.91 | The percentages here (38% and 56% think that the area would be worse as a place to visit and a place to live respectively) contradict the statements made in 15.5.104 (assessment of minor adverse impact on the local visitor economy). | National Grid acknowledges this comment. As a perceptions survey, the purpose of the survey was to establish the users' existing awareness of the Proposed Development and their perception of effects, based on any extant knowledge that they had of the Proposed Development (at the time of the survey). It would not have been possible to establish existing awareness and perceptions of users if a briefing of the Proposed Development had been provided in advance of conducting the survey. Although, interestingly, when asked and provided with a description of the Proposed Development, 50% of interviewees were aware of it, of which 66% felt well informed about it. |
| 367 | 15.5.94 | The statement '…the most common perception was that the Proposed Development would not influence user decisions…' is not evidenced by the survey results. | The majority of respondents felt that the Proposed Development would have no effect or influence on:<br>• their decision to come to the area (87%, (88% of local residents and 86% of visitors);<br>• what they are doing in the area or how often (86% (86% both local residents and visitors); or<br>recreational activities they might undertake in the area (71% (70% of local residents and 73% of visitors). |
| 368 | 15.5.96 | It should be noted that day visitor expenditure figures derived from the user survey are considerably lower than UK averages £32.59 (UKTS) which compares with £11.24 indicated by the user survey). | Because the figures are location and user specific they are unlikely to reflect findings from other surveys undertaken at wider geographical levels or for specific types of users or visitors (for example, the GBTS, formally known as the UKTS, which is a national consumer survey measuring the volume and value of overnight domestic tourism trips taken by residents of the Great Britain). |
| 369 | 15.5.98 | It is noted that the information provided here is 'what if' analysis rather than a full economic impact appraisal (in line with recommendations in the PIER and Inspector's Scoping Report). However, this is not made sufficiently clear in the text, leading to the impression of spurious accuracy. The text should make explicit that these figures are not the result of a rigorous quantitative tourism impact assessment and do not represent statistically valid projections. Given the discrepancy between the survey-derived expenditure estimates and regional averages (highlighted above) it would be germane to present a range of values with some calculated on the basis of regional averages and some on the basis of user surveys. | It is not possible to undertake a complete and wholly rigorous economic impact assessment of the effect of the Proposed Development on user and visitor spending in the area because current ('without project') user and visitor spending is not known. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| 370 | 15.5.99 | There is no evidence for the assumption made that: 'the likelihood is that they would choose somewhere else local to visit'. | This reasoning is based upon the economic concept of 'displacement', where the benefits of a project are offset through reductions of output, employment, spending or trips offered by similar projects elsewhere. Displacement is highest when local competition from other similar resources is high, and low where services are more unique. Thus, if a footpath is closed, similar local alternatives would be sought first, with alternatives further away being preferred if local alternatives are not available or lack the same qualities |
| 371 | 15.5.101 | The average spend on activities is not consistent with the regional average spend: - Accom: 18% / Shopping: 26% / Food and Drink: 31% / Attractions: 11% / Travel: 14%. The assumptions and conclusions made in 15.5.101 and 15.5.102 which flow from this are therefore questionable. At minimum the discrepancy between the user-derived expenditure figures and regional averages should be referenced. | This reasoning is based upon the economic concept of 'displacement', where the benefits of a project are offset through reductions of output, employment, spending or trips offered by similar projects elsewhere. Displacement is highest when local competition from other similar resources is high, and low where services are more unique. Thus, if a footpath is closed, similar local alternatives would be sought first, with alternatives further away being preferred if local alternatives are not available or lack the same qualities |
| 372 | 15.5.102 | Whilst it is recognised that the conclusion re: the reduced turnover of 1.5% for accommodation businesses the 'what if' style quantitative analysis requested in previous consultations, this is not made sufficiently clear in the text, leading to the impression of spurious accuracy. The text should make explicit that these figures are not the result of a rigorous quantitative tourism impact assessment and do not represent statistically valid projections. Given the discrepancy between the survey-derived expenditure estimates and regional averages (highlighted above) it would be germane to present a range of values with some calculated on the basis of regional averages and some on the basis of user surveys. | This reasoning is based upon the economic concept of 'displacement', where the benefits of a project are offset through reductions of output, employment, spending or trips offered by similar projects elsewhere. Displacement is highest when local competition from other similar resources is high, and low where services are more unique. Thus, if a footpath is closed, similar local alternatives would be sought first, with alternatives further away being preferred if local alternatives are not available or lack the same qualities |
| 373 | 15.5.103 | The assumption 'some losses may be re-assigned to businesses elsewhere' is unsubstantiated and should be amended to reflect the possibility that this equally may not happen. Likewise, the assessment states that 'losses should be set against potential benefits…' without summarising those benefits. | This is displacement which is described in the response above. |
| 374 | 15.5.104 | The tourism assessment states a low magnitude and low sensitivity but the conclusion states 'no more than a minor adverse'. Whilst the assessment does state some degree of uncertainty in the assessment, the rationale to upgrade the significance from negligible to minor adverse is unclear. | The text has been amended. |
| 375 | 15.5.105 | There is no evidence for the assumption made re: no effect on popular visitor attractions. | This is justified. These attractions are destinations in their own right associated with attractors, infrastructure, services and brand such that they would not be affected by the Proposed Development |
| 376 | 15.5.112 | The bullet points states that 42 local communities/settlements were identified. It is not clear how these relate to the assessment which does not appear to assess 42 local communities/settlements. The | Table 15.44 presents the likely significant amenity effects by receptor type, for those receptors where potential in-combination effects were identified, whilst the full assessment of amenity effects is presented in |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | assessment that the development is not expected to limit the current land use and functions is challenged. | **Volume 5.15.2,** Appendix 15J. |
| 377 | Table 15.44 (NB two tables are named 15.44 – this refers to the table on p.115 titled 'Summary of Amenity effects') | A number of significance ratings in the table are given as a range. A clear conclusion should be drawn as to whether an effect is significant or not.<br><br>Impact on settlements: For Avonmouth (residential area) table says: 'significant visual affects during operation'. This is not expressed using the scaling system for other impacts and should be 'Major Adverse' effect on visual amenity. | The assessment uses an in-combination appraisal, incorporating factors which could affect the ability to use or enjoy the receptor, such as ability to access a receptor, noise, visual and air quality effects. As an in-combination appraisal, the amenity assessment therefore draws from the magnitude of effects identified in some of the other technical assessments (such as transport, noise, landscape and air quality), and considers these effects in the context of the amenity value or sensitivity. This means that in some cases a range has been applied to classify the effects, and also, there may be differences in the classification of effects on the same receptor between ES chapters |
| 378 | Table 15.44 (NB two tables are named 15.44 – this refers to the table on p.131 titled 'Data and Research Sources') | Although cited by National Grid as reference documents, it is considered that the ES does not adequately take account of the baseline conditions as set out in the WYG Outline Development Strategy for Avonmouth Severnside, or the 'Cresswell Report' resulting from the HRA Review of Consents at Avonmouth Severnside. This should be carried forward into the methodology which should robustly assess impact, including of alternatives and propose mitigation. Relevant information is contained in:<br><br>http://www.bristol.gov.uk/sites/default/files/documents/planning_and_building_regulations/planning_policy/local_development_framework/Avonmouth%20Severnside%20Development%20Strategy%20Report.pdf<br><br>http://www.bristol.gov.uk/sites/default/files/documents/planning_and_building_regulations/planning_policy/local_development_framework/Stage2%20Report%20Dec%202011%20FINALISSUE.pdf<br><br>and most recently in the current consultation on flood options to support delivery of the ASEA:<br>https://consultations.southglos.gov.uk/consult.ti/Severnsidefloodoptions14/consultationHome<br><br>Supplied with these comments is a sketch plan showing likely additional releases of development land arising out of the current review of Site Allocation and Development Policy DM18 in order to support the Enterprise Area. | Additional text has been provided in relation to the Severnside Enterprise Area to address the concerns raised. |
| 379 | 15.7.4 | The assessment that the development is not expected to limit the current land use and functions is challenged. | The wording has been amended to address this. |
| 380 | 15.8 | The residual effects should clearly distinguish between significant effects and those which are not significant. Residual impacts during operation: | An amendment has been made. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | Negligible adverse effect on allocated development areas not proved (as above) and impact on Avonmouth renewal of areas not covered in the assessment (as above) | |
| 381 | 5.9.6 | It is stated that 'The Proposed Development is considered to be likely to have minor adverse to minor beneficial cumulative effects with Steart Peninsula'. An assessment outcome which is a range including both positive and negative outcomes is not a reasonable conclusion. | The cumulative assessment is provided at **Volume 5.17** and includes potential cumulative effects of the Proposed Development together with other major development proposals. A summary of the cumulative effects only is provided in the socio-economic and land use ES chapter at **Volume 5.1.5.1.**<br><br>The visitor assessment (2011) for the Steart Peninsula estimates that the existing peak annual throughput for the site is 11,271 persons per annum. Once the project is at the established stage, an annual total of some 43,550 visitors are expected, with associated economic benefits. The catchment areas assumed for the Steart Peninsula include a residential population of 158,000 within 30 minutes and some 916,000 within one hour. The ES for the Steart Peninsula notes:<br><br>"…such a low key nature reserve would be expected to provide only limited long-term socio economic benefit, through attracting additional visitors, but also for the local community… Overall, these positive effects are considered to be of minor beneficial significance for the local economy of the Steart Peninsula"<br><br>Based on the above, it is likely that the catchment area for the Steart Peninsula would therefore overlap with the study area of the Proposed Development. There is therefore potential for the Steart Peninsula project to counter balance the potential minor adverse effect on local visitor economy that is predicted for the Proposed Development, although it is not possible to quantify this. The significance of effect of these projects cumulatively is therefore considered to have the potential to range from minor adverse to minor beneficial significance |
| 382 | 15.11 | It is unclear why the references section appears twice in different formats. | One part is data sources and the other references – this has been clarified within the text. |
| 383 | Appendix 15H | It appears this list may not include relevant consents in Severnside Area such as the 1957/8 consent, SITA energy from waste. | Additional text has been provided in relation to the Severnside Enterprise Area to address the concerns raised |
| 384 | Appendix 15J | There is neither reference to nor assessment of South Gloucestershire Local Plan LC12 recreational routes in the vicinity of HCCP in this Appendix. | Reference added into **Volume 5.15.1.** |
| 385 | Appendix 15k | Examples of embedded mitigation states: *Request from Severnside Distribution Land Ltd to minimise the impact on the development area. This concern has already been addressed where a similar* | Additional text has been provided in relation to the Severnside Enterprise Area to address the concerns raised. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | *request was received from South Gloucester and Bristol City Council's to consider an alignment that minimises impact on Severnside development area. A proposed route change has been made to move closer to Severn Road and the motorway. The revised route is also impacted a change which requires towers to be moved from locations close to drains. The revised route introduces an additional tower but the revision has been accepted as it generally meets the requirements of the Local Authorities and is supported by the socio economic assessment.* BCC and SGC wish to wish to reiterate that while the proposed route has reduced impact on a consented land parcel within the Enterprise Area, the proposed alignment is likely to compromise the developability of this consented land parcel and is therefore contrary to Core Strategy policy CS35 and the objectives of the Enterprise Area in terms of both economic development, jobs delivery and ecological offset to facilitate that development. Furthermore moving the route back to a more peripheral alignment on Hallen Marsh has an additional landscape impact. The additional ecological impact (as indicated in comments on chapter 8) of this route must be assessed against the likely additional development land being identified in the Enterprise Area, with a likely reduction to the size of Hallen Marsh, and not the current situation. Put another way, with the extensive existing and proposed development in the Avonmouth Severnside area as a whole, this makes the remaining open areas proposed for ecological offset such as Hallen Marsh more significant and therefore the residual level of impact of HCCP is greater. | |
| **Appendix A11 - PROW** | | | |
| **General** | | | |
| 386 | General comment applicable to all documents relating to PRoW | It is disappointing that National Grid have been unable to produce a topic specific chapter on PRoW as suggested in previous consultation responses from the Joint Councils and agreed at Thematic Group meetings. The topic is still placed within numerous chapters and corresponding documents. It is understood that National Grid will have a justification for taking this approach, however cross referencing between documents is extremely poor. National Grid is strongly advised to address this. | Effects on PRoW are not typically addressed in EIA as a separate standalone topic. National Grid sees no reason to divert from this approach, especially given that such effects are inter-related (as acknowledged by the Joint Councils) with environmental topics landscape; visual effects; traffic and transport; socio-economics and land use. The affected receptor is the user(s) rather than the PRoW themselves hence the wide coverage in several ES chapters. In addition an amenity assessment has been undertaken (see **Volume 5.15.2, Appendix 15J**), which includes PRoW effects. |
| 387 | General comment on consultation | It is the case that meetings took place with PRoW officers but the meetings were very generic as would be the case with a number of authorities represented. There has been no specific discussion regarding e.g. alternative routes for paths which will be subject to temporary closure. | The OSPES makes reference to the West Somerset Coast Path. |
| 388 | General | Makes reference to the “South West Coast Path” however the correct reference is the “West Somerset Coast Path”. | National Grid acknowledges this comment. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| 389 | Table 15.27 | States "*West Somerset Coast Path may, in due course, connect with the England Coast Path*". There appears to be a misunderstanding of the status of promoted trails and their hierarchy. The 40 km West Somerset Coast Path (WSCP) will form part of the Somerset section (90km) of the England Coast Path National Trail when it opens later in 2014. The WSCP will retain its own local identity within the National Trail. | National Grid is not prepared to provide funding for new National Trails or PRoW not yet designated. The principals of management remain the same whatever PRoW is there. |
| 390 | 4.9.5.1 | Plans have still not been amended to include additional promoted trails such as the Coast Path as suggested to National Grid. Despite reference to the emerging new National Trail along the coast of Somerset which also goes along both sides of the River Parrett estuary in previous consultation response, National Grid has failed to account for it in the ES. | National Grid has acknowledged Natural England's proposals to improve public access along the Somerset coast between Brean Down and Minehead, and notes that proposals are currently subject to approval by the Secretary of State.<br><br>With regards to the OSPES National Grid is not prepared to provide funding for new National Trails or PRoW not yet designated. The principals of management remain the same whatever PRoW is there.<br><br>With regards to views, the Visual Effects ES Chapter provided at **Volume 5.7.1**, (supported with Visual Assessment Tables at **Volume 5.7.2),** considers the anticipated visual effects of the Proposed Development in views from representative viewpoints at Brean Down, Brean and Berrow; along the River Parrett Trail and West Somerset Coast long distance routes within 3km of the Proposed Development in Sections A and H; and from valued viewpoints (including viewpoints provided by the Landscape and Views Thematic Group) along or close to the River Parrett Trail and West Somerset Coast Path beyond 3km of the Proposed Development. These viewpoints and long distance routes are on, along or in the vicinity of the proposals for the Brean Down to Minehead section of the England Coast Path. |
| 391 | 4.9.6.8 Previous representation not addressed in the draft ES | Joint Councils Stage 4 Consultation – Technical Review: - Para 4.9.6.8 - No cumulative effects for PRoW network in the vicinity of the HPC/Hinkley Line entries have been included. | The final cumulative assessment provided at **Volume 5.17.1** includes a cumulative visual assessment of the Proposed Development and the proposed Hinkley Point C Power Station (HPC). The cumulative visual assessment assesses the visual effects of the proposed Hinkley Line Entries and the proposed HPC in views from a number of receptors across Section H, including PRoW in the vicinity of these development proposals. |
| **Chapter 12 Traffic and Transport** | | | |
| 392 | 12.4.29-32<br>12.4.89-91<br>12.4.117-119 | The PRoW user counts mentioned are a snapshot in time. Rural PRoW may not be well used but are valued highly by local communities and users and any disruption in the form of delays, impact on the peace and enjoyment of use of the routes will need to be carefully managed. Maps of alternative routes should be available on site. | A Public Rights of Way Management Plan is provided in **Volume 5.26.6**. |
| 393 | Table 12.1 | Paragraph 3.63 of the Secretary of State's Scoping Opinion and paragraph 4.9.7.2 of the Joint Councils Stage 4 Consultation Technical | National Grid is undertaking discussions regarding PRoW mitigation including enhancements to the network. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | Review previously commented that mitigation proposals should consider enhancements to the network. Table 12.1 however fails to include this representation and provide a response. This is a significant comment and should be included within the table and given consideration by National Grid. | |
| 394 | Table 12.1 | The representation from the Secretary of State in relation to the identification of impacts on PRoW has been included in Table 12.1. The response to this representation is a signpost to relevant documents, including the PRoW Management Plan. It is considered however that although the PRoW Management Plan expands on path management there are no further details on the effect of PRoW to be used as haul/access roads. This is particularly important in relation to any likely impact on the Coast Path. This needs to be addressed. | Effects on PRoW are discussed within **Volumes 5.12.1** and **5.15.1**. It is anticipated that only five public rights of way need to be temporarily closed during the construction of the proposed development. |
| 395 | 4.6.3.8 Previous representation not addressed in the draft ES | Joint Councils Stage 4 Consultation – Technical Review: - Para 4.6.3.8- Path management has been clarified in the ES but further information is needed regarding timescales for short term closures. | This information is provided within the Public Rights of Way Management Plan, **Volume 5.26.6**. |
| 396 | 4.6.5.4 Previous representation not addressed in the draft ES | Joint Councils Stage 4 Consultation – Technical Review: - Para 4.6.5.4 – The draft ES still does not consider the cumulative impact of the delivery of the Hinkley Point C S.106 mitigation which includes key infrastructure improvements for pedestrians, cyclists and road safety measures. This needs to be addressed. | **Volume 5.12.1** considers the effects of the Proposed Development including proposed junction infrastructure improvements. |
| 397 | 4.6.5.6 Previous representation not addressed in the draft ES | Joint Councils Stage 4 Consultation – Technical Review: - Para 4.6.5.6 – The draft Transport Assessment still does not provide consideration to horse riders or the impact that the proposals will have on them. | Details of PRoW closures are identified within the PRoW Management Plan, **Volume 5.26.6**. Reference has been made to equestrians within the TA, **Volume 5.22.1** and **Volume 5.12.1.** |
| 398 | 4.6.4.12 Previous representation not addressed in the draft ES | Joint Councils Stage 4 Consultation – Technical Review: - Para 4.6.4.12 – No consideration has been given to the comment that the Design Manual for Roads and Bridges does not relate to recreational users of PRoW. It is therefore still unclear how this will be assessed. | It is anticipated that five PRoW will require temporary closure during the construction of the Proposed Development. Impacts are discussed within **Volume 5.12.1** and follow ES guidance. |
| 399 | Page 61 | 154 PRoW routes were surveyed out of 1,057 which pass within 2Km of the proposed development. This represents only 14%. The Joint Councils query whether the sample size is sufficiently large on which to base the assumptions on the other 86% within the 2Km. | National Grid Acknowledges this comment. |
| **Volume 5.26 Appendix 5 – Public Rights of Way Management Plan** | | | |
| 400 | 1.1.3 | Refers to the proposed development crossing PRoW. There are some PRoW which will be used as access routes | National Grid acknowledges this comment. |
| 401 | 3.3.1 | Contrary to the text, there have been no specific discussions regarding alternative routes for paths which will be subject to temporary closure | National Grid acknowledges this comment. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | with PRoW Officers. It is requested that these discussions start as soon as possible. | |
| 402 | 3.8.1 | It is disappointing to note that PRoW will be reinstated to the same condition as was recorded prior to commencement of construction. In some cases prow may benefit from works done by National Grid to improve access and it would be beneficial to the network if any improvements to surfaces could be left in place. As this may well reduce works required by National Grid it is assumed that this can be agreed with the Councils. | National Grid acknowledges this comment.<br><br>PRoW Management is detailed in **Volume 5.26.6.** |
| 403 | Access/RoW plans - 13/NG/0155 Sheets 1 – 2 (Hinkley Line Entries) AND Table 2.2 | The information contained relating to the Hinkley Point C Line Entries does not take account of the HPC development itself. The document lists paths for path management which are already subject to closure through the HPC DCO and does not make reference to the temporary alternative path which is in place around the perimeter of the HPC site as mitigation for the number of paths closed. The alternative path (which is also the temporary Coast Path and will later this year from part of the new National Trail) is affected by the new line entries. | National Grid is in discussion with NE and SCC Footpath officer regarding alternative options for routeing the proposed diversion of the West Somerset Coast path away from our proposed haul road in this locality. |
| 404 | Appendix maps | The maps attached to the Appendix show the PRoW affected by the proposed development. Some of these have mitigation measures in terms of access improvements and signage set out in the OSPES but others do not. This needs to be reviewed. Chapter 3 sets out how prow will be managed. No account has been taken of the impact of use of the West Somerset Coast Path (which will be a National Trail by the time construction commences) as a haul/access road. | The construction haul road/access road would not be along the West Somerset Coast Path during construction operations therefore management is not required. However the PROW Management Plan (**Volume 5.26.6**) addresses short-term management during construction. The OSPES provides PRoW enhancements based on medium and long-term operational effects; this is why some PRoW identified in the PRoW Management Plan are not included in the OSPES. National Grid will support the improvement of long distance footpath and cycle routes by providing the Local Authority with a lump sum to fund improvements to access, signage and general repairs or improvements along the West Somerset Coast Path within 1km of the Proposed Development and this is detailed in the OSPES at **Volume 5.25**. |
| 405 | Section 3 | No account has been taken of the impact of use of the West Somerset Coast Path (which will be a National Trail by the time construction commences) as a haul/access road. | National Grid is in discussion with NE and SCC Footpath officer regarding alternative options for routeing the proposed diversion of the West Somerset Coast path away from our proposed haul road in this locality. |
| 406 | Section 3 | The Path Management set out in the document appears to be a pragmatic way to deal with some of the paths affected by the proposed development. However, SCC does not view this as a complete mitigation package. There will still be impacts relating to disruption and delays to users and noise, mud and impacts on their enjoyment of the paths which will need to be addressed. | National Grid acknowledges this comment. |
| **Volume 5.25 Offsite Planting and Enhancement Scheme** | | | |
| 407 | 6.1.1 | A 15 year maintenance period should be included within the s106 as | 5 years is the appropriate period for maintenance and that is what has |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | outlined in our letter comments and in Appendix A2. | been proposed in the OSPES (**Volume 5.25.1**). This is also the timeframe set out in the model DCO provisions in PINS guidance. |
| 408 | 6.3 | Confirmation is required as to why the Access and Signage improvement, as referred to in the Draft Landscape Strategy Para 6.3.3 dated Oct 13, has reduced from 3Km to 1Km? | The OSPES (**Volume 5.25.1**) sets out landscaping proposals. Effects on Public Rights of Way have been considered in setting out the OSPES. There is provision in the OSPES for PRoW works to be spent at the reasonable discretion of the Councils. Although logically this funding should relate to PRoWs in the vicinity of the Proposed Development, as identified in the OSPES PRoW improvements. |
| 409 | 6.3.1 | The lump sum for improvement of local PRoW is intended to be allocated where most benefit would derive. The OSPES plans in section A-H in Appendix A are very limited to relatively short sections of the PRoW near the Pylons. This does not allow for the cumulative impacts of the both direct and indirect physical use and the Visual, amenity and tranquillity of the PRoW which pass through the development. | As part of the OSPES National Grid will provide a fund to allow Local Authorities to implement and prioritise improvements to access and signage where appropriate. The sum would include the costs for Local Authorities to manage the delivery works and to secure agreement with landowners. The sum is based on improvement of local PRoW where most benefit would be derived. The OSPES plans identify these PRoWs in Sections A-H at **Volume 5.25.3, Figures 25.1.1 to 25.1.19**.<br><br>In addition to the PRoW improvements National Grid will support the improvement of long distance footpath and cycle routes by providing Local Authorities with a lump sum to fund improvements to access, signage and general repairs or improvements along each route within 1km of the Proposed Development. This includes the Long Distance Routes (LDR) and National Cycle Routes (NCR) located within 1km of the Proposed Development and identified at **Volume 5.25.1, section 6.3**. |
| 410 | 6.3.3 | The OPSES mentions a lump sum (not specified) for certain PRoW improvements to access and signage. No account has been taken of improvement schemes which form part of the Somerset RoWIP which have been previously brought to National Grids attention. Para 6.3.3 states however that "*the lump sum funds will be available to contribute to works that have been identified by LAs in their Rights of Way Improvement Plans*"; however National Grid have not yet engaged with the Councils on this level of detail. The proposed new links are in addition to the signage and access improvements suggested by National Grid. | National Grid is not prepared to provide funding for new PRoW not yet designated. However it is for the LPA to decide if they wish to use the OSPES lump sum fund to contribute to works identified within the RoWIP within 1km of the Proposed Development.<br><br>As part of the OSPES National Grid will provide a lump sum fund to allow Local Authorities to implement and prioritise improvements to access and signage where appropriate. The lump sum would include the costs for Local Authorities to manage the delivery works and to secure agreement with landowners. The lump sum is based on improvement of local PRoW where most benefit would be derived. The OSPES plans identify these PRoWs in Sections A-H at **Volume 5.25.3, Figures 25.1.1 to 25.1.19**.<br><br>In addition to the PRoW improvements National Grid will support the |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | | improvement of long distance footpath and cycle routes by providing Local Authorities with a lump sum to fund improvements to access, signage and general repairs or improvements along each route within 1km of the Proposed Development. This includes the Long Distance Routes (LDR) and National Cycle Routes (NCR) located within 1km of the Proposed Development and identified at **Volume 5.25.1, section 6.3**. |
| 411 | General comment on National Grid's mitigation approach | It is difficult to tell from the scale of the maps at Appendix A and the meterage listed in Appendix B if the PRoW access and improvements proposed include all PRoW within 3km of the proposed development. This needs to be clarified to the Councils as soon as possible so that discussions on appropriate mitigation can take place within the project timescale. | As part of the OSPES National Grid will provide a lump sum fund to allow Local Authorities to implement and prioritise improvements to access and signage where appropriate. The lump sum would include the costs for Local Authorities to manage the delivery works and to secure agreement with landowners. The lump sum is based on improvement of local PRoW where most benefit would be derived. The OSPES plans identify these PRoWs in Sections A-H at **Volume 5.25.3, Figures 25.1.1 to 25.1.19**.<br><br>In addition to the PRoW improvements National Grid will support the improvement of long distance footpath and cycle routes by providing Local Authorities with a lump sum to fund improvements to access, signage and general repairs or improvements along each route within 1km of the Proposed Development. This includes the Long Distance Routes (LDR) and National Cycle Routes (NCR) located within 1km of the Proposed Development and identified at **Volume 5.25.1, section 6.3** |
| 412 | Appendix B – Schedule of Enhancements | The list of PRoW included for mitigation in Appendix B includes some PRoW which do not appear to be directly affected by the development. Others which are directly affected have not been included in the list. No explanation for this is provided and the list therefore appears to lack justification. | As part of the OSPES National Grid will provide a fund to allow Local Authorities to implement and prioritise improvements to access and signage where appropriate. The sum would include the costs for Local Authorities to manage the delivery works and to secure agreement with landowners. The sum is based on improvement of local PRoW where most benefit would be derived. The OSPES plans identify these PRoWs in Sections A-H at **Volume 5.25.3, Figures 25.1.1 to 25.1.19**.<br><br>In addition to the PRoW improvements National Grid will support the improvement of long distance footpath and cycle routes by providing Local Authorities with a fund for improvements to access, signage and general repairs or improvements along each route within 1km of the Proposed Development. This includes the Long Distance Routes (LDR) and National Cycle Routes (NCR) within 1km of the Proposed Development and identified at Volume 5.25.1, Section 6.3.<br><br>The OSPES sets out landscaping proposals. Effects on Public Rights |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | | of Way have been considered in setting out the OSPES. There is provision in the OSPES for PRoW works to be implemented to PRoWs in the vicinity of the Proposed Development, as identified in the OSPES PRoW improvements, although the expenditure of the allocated funds would be at the reasonable discretion of the Councils. |
| 413 | Section C - F | There are inconsistencies between PRoW path numbers shown on the OPES plans in Appendix A and Appendix 25B Schedule of Enhancements. | This has been amended and the Schedule of Enhancements at **Volume 5.25.2, Appendix A** has been updated to include the correct PRoW path numbers shown on the OSPES plans at **Volume 5.25.3, Figures 25.1.1 to 25.1.19**. |
| 414 | | The Community Forest Path listed under Para 6.3.2 of the OPES is not included in Appendix 25 Schedule of Enhancements. | The Community Forest Path has been removed from the list at **Volume 5.25.1, section 6.3** as it is further than 1km from the Proposed Development and is not included in the Schedule of Enhancements at **Volume 5.25.2, Appendix A**. |
| 415 | | The Two Rivers Way listed under 6.3.2 of the OPES is not included in Appendix 25B Schedule of Enhancements. | The Two Rivers Way has been removed from the list at **Volume 5.25.1, section 6.3** as it is further than 1km from the Proposed Development and is not included in the Schedule of Enhancements at **Volume 5.25.2, Appendix A**. |
| 416 | | It would be helpful if the “Measure” in the schedule could be separated out for each Local Authority, PRoW, Long Distance footpath and National Cycle Routes. | The Schedule of Enhancements at **Volume 5.25.2, Appendix A** has been updated to clearly itemise each enhancement proposal, its measure (quanitities) and the Local Authority boundary it is within. |
| 417 | Section G | The PROW in Bristol and South Gloucestershire should be considered as a single network, and improvement works should be proposed accordingly:<br><br>. | PRoW improvements have been split by Local Authority boundaries as requested by the Joint Councils. Measures are provided based on this and included in **Volume 5.25.2, Appendix A** Schedule of Enhancements. If Bristol and South Gloucestershire wish to combine the improvement works within their boundaries National Grid would consider this reasonable. |
| 418 | | To mitigate the impact of the proposed overhead lines and pylons on the intact landscape of Hallen Marsh which is dissected by a number of PROW, mitigation is required comprising a combination of screening, local diversions, and path and signage upgrades | The OSPES (**Volume 5.25.1**) sets out landscaping proposals. Effects on Public Rights of Way have been considered in setting out the OSPES. There is provision in the OSPES for PRoW works to be spent at the reasonable discretion of the Councils. Although logically this funding should relate to PRoWs in the vicinity of the Proposed Development, as identified in the OSPES PRoW improvements.<br><br>As part of the OSPES National Grid will provide a lump sum fund to allow Local Authorities to implement and prioritise improvements to access and signage. The PRoW network across Hallen Marsh is identified in the OSPES and funds included for access and signage improvements. Diversions of PRoW during construction operations are detailed in the CEMP PRoW Management Plan at **Volume 5.26.6, Appendix 5**. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | | Land at Hallen Marsh has been selected as compensation habitat for wintering birds associated with the Severn Estuary SPA and Ramsar designation. Many wader and wildfowl bird species are deterred from foraging in habitats with small field sizes where hedgerows or other physical structures can have a displacement effect thought to originate from a predator avoidance strategy, as such features limit the ability of the birds to see an approaching threat. For this reason, suggestions for planting have been kept to the perimeter of the Hallen Marsh area along roads where there is existing development or where there is proposed development. However, due to the ongoing review of the Local Plan and development of bird habitat enhancement proposals for Hallen Marsh, details of any planting should be discussed and agreed with Bristol City Council's Ecologist |
| 419 | | The PRoWs in South Gloucestershire that are also directly affected are not currently identified for improvement, however given the impact on them these should also be included as paths for improvement (ORN27 and OAY 111). | National Grid has not identified these PRoW for improvement or as PRoW where most benefit would be derived. Receptors would not experience significant adverse visual effects due to the G Route and BW Route presently passing over these routes, reducing the magnitude of effect of the Proposed Development. Further details on predicted effects on these receptors are provided at **Volume 5.7.2, Appendix 7G** |
| 420 | | The Councils can provide costed proposals for the PROW network in this locality. These works would form part of wider scheme of rationalisation and improvement that is being delivered in association with development in the Enterprise Area.<br><br>We agree that improvements to the Severn Way are necessary given the compounding of visual impact due to the introduction of additional overhead lines into this tract of relatively undisturbed rural landscape. | The OSPES sets out landscaping proposals. Effects on Public Rights of Way have been considered in setting out the OSPES. There is provision in the OSPES for PRoW works to be spent at the reasonable discretion of the Councils. Although logically this funding should relate to PRoWs in the vicinity of the Proposed Development, as identified in the OSPES PRoW improvements.<br><br>National Grid acknowledge the Local Authorities response |
| **Appendix A12 – Chapter 16 Electric and Magnetic Fields** | | | |
| 421 | Table 16.1 | No reference is made to the need for an HIA in the summary of representations. | There is no specific legislation in the UK which requires a standalone HIA to be undertaken as part of the infrastructure planning process. Although the EU EIA Directive is due to come into force in 2014, this is not expected to be transposed into UK law and thereby come into effect until 2016. Potential impacts which are likely to result in health outcomes have been assessed and mitigated in the appropriate chapters including, but not limited to, impacts associated with noise, air quality, EMF and visual amenity. |
| 422 | 16.2.63 | National Grid's Technical Construction File satisfies the requirements of the EMC Directive for the grid transmission system. The T pylon is not included in the TCF but is assumed to be designed within the same acceptable limits due to use of similar equipment. National Grid should | The technical construction file includes on site testing of the existing transmission system assets but also a technical evaluation of the specifications that National Grid design equipment to meet. When designing the T-Pylon the specifications for radio frequency emissions |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | confirm whether the T pylon is intended to be included in the TCF. | and corona which can potentially cause electromagnetic compatibility (EMC) issues, were identical to those which National Grid apply to its existing transmission system. This ensures that any emissions' from the T-pylon will not exceed those currently produced by National Grid's transmission system. Therefore the Technical Construction File satisfies the requirements of the EMC Directive, but National Grid intends to include the T-pylon after construction |
| **Appendix A13 – Statement of Statutory Nuisance and CEMP** | | | |
| **Volume 5.24 - Draft Statement of Statutory Nuisance** | | | |
| 423 | Overview | Statements made in relation to mitigation are vague in some areas, although the scope of issues identified seems to be appropriate to the scope of proposed works. | Noted and amended. |
| 424 | 4.2.4 | Stated mitigation measures are vague, lacking reference to specific guidelines – e.g. 'Friable materials would be stored appropriately'. | Noted and amended. |
| **Volume 5.26 - CEMP** | | | |
| 425 | Overarching | Change the tense from passive conditional as it leaves an element of doubt i.e. "Contractor would do" to "Contractor will".<br>Insufficient detail is provided on proposed mitigation methods. | Tense has been changed to 'will'. |
| 426 | Overarching | The Councils do not agree with the use of "where possible", "where practical" or similar phrases. The CEMP needs to be clear and enforceable, particularly given the heavy reliance which National Grid appears to be placing on it (and similar documents) as set out in its Response to the Councils Request for R&O. If there are situations in which a particular mitigation measure would not be required, then that should be set out as a clear exception, rather than applying a woolly phrase such as those noted above which could undermine the controls in the CEMP. This comment applies particularly where the Councils have requested specific requirements and National Grid's response is that the matter is dealt with in the CEMP – a requirement would not include such phrases (otherwise it would not meet the relevant tests for requirements), and neither should the CEMP. | National Grid acknowledges this comment. Updates have been made to ensure the mitigation measures are enforceable. |
| 427 | 2.1.6, 3.5.1, 6.1.3 | Responsibility for implementation of the CEMP is placed on the contractors. At 3.5.1 this is defined as being a contractual requirement on National Grid, WPD and their contractors. It is assumed that NG and WPD would be bound by a requirement and their contractors by contract. Whilst it is useful for the Secretary of State and the Councils to understand the contractual position, from a planning perspective the enforcement position must be clear. The CEMP must be enforceable by the relevant local authority against National Grid / WPD through a requirement on the DCO. It would then be up to those parties as to the allocation of responsibilities between them and their respective contractors. | National Grid acknowledges this comment. Updates have been made to ensure the mitigation measures are enforceable. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| 428 | 3.1.1, 3.6.3 | Performance and compliance with the CEMP is to be reported to the CDMC. It is unclear why the CDMC rather than an environmental lead would take this role. | Roles and Responsibilities are now described at Section 1.12 of **Volume 5.26.1.** |
| 429 | 3.3 | Must be site specific for Avonmouth due to the wide variety of working environments and potential hazards from location and existing ground conditions. | A Project Environmental Management Plan (PEMP) will be prepared by the contractor(s). This will be specific to each element of the works. Described at Section 1.5. |
| 430 | 3.6.1 | Point of contact for each contractor along the route required.<br>Local Authorities must have notification prior to commencement of works.<br>Progress updates should be regularly circulated to Local Authorities. | This is covered in section 1.10 of **Volume 5.26.1.** |
| 431 | 3.5.6, 5.2.2 | A new ISO standard is anticipated for ISO14001 later this year. The text should allow for the EMS to reflect the change in standard. | This is covered in section 1.5 of **Volume 5.26.1.** |
| 432 | 4.1.1 | Rainwater harvesting should be considered in the list of good practice measures. | National Grid acknowledges this comment. SUDs will be considered as described at Section 3.5 |
| 433 | 4.10.1 | Should be agreed with Local Authority prior to being put into practice | This is covered in section 1.5 of **Volume 5.26.1.** |
| 434 | 4.3 | Core working hours goes against the CoPA Act prescribed times.<br>Liaison with Local Authority Noise team for works in residential areas to agree times | This is covered in section 2.3 of **Volume 5.26.1.** |
| 435 | 4.3.1 | Core working hours to be secured by requirement. 07.00-19.00 Monday to Saturday and 07.00-17.00 on Sundays | This is covered in section 2.3 of **Volume 5.26.1.** |
| 436 | 4.3.2, 4.3.4 | Requirement is needed to manage agreement of works outside of core hours, which are highlighted for certain construction activities. Paragraph 4.3.4 as currently worded implies that other unspecified 24 hour activities may be undertaken and should be rephrased. See also comments made in Appendix A9 – Noise and Vibration | This is covered in section 2.3 of **Volume 5.26.1.** |
| 437 | 4.8 | There are a number of commitments to 'industry best practice', without stating what best practice is considered to be. E.g. specific reference to guidance/policies. This information should be included. | **Volume 5.26.1** has been updated following consideration of this comment. |
| 438 | 7.3.2 | National Grid states that offsite planting 'would be implemented upon the completion of the construction works'. No indication is given of the on-site planting timescales. Given that the scheme lasts over a period of years, it is considered that a phased approach to reinstatement should be taken and that this should be set out in the draft ES and secured through appropriate control mechanisms. | Landscape mitigation during the construction of the Proposed Development is covered in Section 3.2 of **Volume 5.26.1.** |
| 439 | 7.3.3 | The section is titled 'Planting to screen construction works'. The text does not make reference to planting, instead referencing hoardings. Screen planting for construction compounds would only have merit if it is to form part of the permanent planting mitigation for the scheme, since the construction period is too short to allow full establishment of planting. | **Volume 5.26.1** has been updated following consideration of this comment. |
| 440 | 7.3.12 | The commitment to one storey high temporary buildings will need to be secured by requirement. | National Grid acknowledges this comment. |
| 441 | 7.3.16 | Planting is committed to 'where practicable'. A more defined commitment | **Volume 5.26.1** has been updated following consideration of this |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | is required. | comment. |
| 442 | 8.3.3 | The ECoW is to be required to provide annual reports to the 'relevant planning authorities'. This places a potential obligation on the Councils to review material and appropriate funding should be provided through the s106. | National Grid acknowledges this comment. |
| 443 | 9.3.3 | Local Authority review and approval is required of site specific surveys and the Soil Management Plan. The Soil Management Plan & site specific surveys must have a section specifying methods of validation. | This is covered in section 1.5 of **Volume 5.26.1.** |
| 444 | 9.3.5 | More precise locations for Piling Risk Assessments are required and require approval by the Joint Councils through a requirement. | This is covered in section 1.5 of **Volume 5.26.1.** |
| 445 | 9.3.13 | Siting of the compounds in Avonmouth may cause potential issues as the sites selected are surrounded by rhines and drainage ditches. | National Grid acknowledges this comment. Section 3.4 and 3.5 of **Volume 5.26.1** cover drainage. |
| 446 | 9.3.27 | More precise locations for gas risk assessment are required – these should be agreed with the Local Authorities and Coal Mining Authority. | National Grid acknowledges this comment. This is covered in section 3.4 of **Volume 5.26.1.** |
| 447 | 9.3.28 | Material brought to site as well as removed from site is to be covered by the waste management plan. National Grid should confirm that there is no separate materials management plan. | An Outline WMP is provided and SWMP will be prepared, as described at Section 1.5 of **Volume 5.26.1.** |
| 448 | 10.3.5 | More detail is required regarding water diversion and potential contamination issues of the rhine network in Avonmouth, proposed mitigation in Chapter 5.10 is more detailed than in Appendix 2. | National Grid acknowledges this comment. This is covered in section 3.4 of **Volume 5.26.1.** |
| 449 | 10.3.6 | It is unclear whether a 9m way leave between surface water features and pylons is possible within Section G due to the abundance of drainage features.<br>Bank reinstatement will need to be secured by requirement. | Working areas will not be within 9m of watercourses. Where this is not possible, approaches will follow guidance in PPG5: Works in, near or liable to affect watercourses. As covered in Section 3.5 of **Volume 5.26.1.** |
| 450 | 10.3.7 | There is some inconsistency between offset distances of works from watercourses, with offset for works being 9m then for SSSIs being 6m. 10m is usually suggested as a minimum offset in PPG guidance, although given the terrain this would be difficult to achieve. This should be clarified by National Grid. | This is covered in section 3.5 of **Volume 5.26.1.** |
| 451 | 10.3.10 | The methodology for deeming SUDS acceptable needs to be agreed with the relevant Local Authority drainage teams. | National Grid acknowledges this comment. SUDs will be considered as described at Section 3.5. Management Plans to be reviewed by LPAs are listed at Section 1.5. |
| 452 | 10.3.20 | The guidance could usefully include CIRIAs Control of water pollution from linear construction projects. Technical guidance (C648). | National Grid acknowledges this comment. Guidance on this matter is described at Section 3.5. |
| 453 | 11.3.10 | The watching brief for historically significant hedgerows affected by works will need to be secured by requirement. | National Grid acknowledges this comment. |
| 454 | 13.3.25 | 'Burning of waste would be avoided' should be rephrased as not permitted. | **Volume 5.26.1** has been updated in accordance with this comment at section 3.8. |
| 455 | 14.3.2 | Working within the hours set out in the CEMP is defined as noise | **Volume 5.26.1** has been updated in accordance with this comment at |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | mitigation, however as the CEMP defines 24 hour working, this commitment provides no assurance and should be reworded. | section 2.3. |
| **Volume 5.26 CEMP Appendix 1 Draft Waste Management Plan** | | | |
| 456 | Overarching | Site Waste Management Plans are prepared per section rather than entire route. SWMP information should be provided relevant to each local authority area, in particular in areas where ground contamination is likely to be a constraint. E.g. Avonmouth. | An Outline Waste Management Plan (Outline WMP) is provided for submission; prior to commencement of construction, Site Waste Management Plans will be prepared for each construction discipline: overhead lines, underground cables and substations/CSE compounds. |
| 457 | 5.2.7 | National Grid should confirm how the guideline values for reuse will be established? Will it be for the entire route as a whole or site specific depending on a site's land use? Who will approve such guideline values? | Guideline Values for reuse will be established through a combination of site specific analysis and NG existing waste policy and procedures. |
| **Joint Councils Response to Transport Assessment** | | | |
| 458 | General | It is noted that there have been a number of amendments to the models from the previous submission. Any alterations that have been made to the models to validate them should be included within the Transport Assessment (TA). | This information is not required to validate the base models. JMP have all the information required to assess the junction models. If it is considered a junction does not validate then discussions in regards to that model can occur and any required information provided. |
| 459 | | The TA should include a statement regarding the current status of the TA scope. It should also include that a Staff Travel Plan is required as part of the submission. | The TA (**Volume 5.22.1**) includes a comment in regards to the status of the TA scope. In addition, a framework travel plan is included within the document. |
| 460 | | It is noted that given the amount of information received, the LAs have not been able to conduct a full assessment as to the validity of these results.<br>However, the amount of congestion on the network during the future scenario provides the LAs with concerns. This will need to be managed through either<br>restrictions on the number of vehicles travelling at peak times, physical measures or a combination of both. | **Volume 5.22** (TA) identifies through assessment where junctions capacity is an operational issue in the existing and future year assessment scenarios. Where a potential capacity issue has been identified National Grid has suggested vehicle restrictions as mitigation. These are to be agreed with the LPAs/ HA. |
| 461 | | Reformatting of the document and breaking up pages has improved clarity, but including a section summaries and clear outline of assumptions made at<br>the start of each section would be useful | The TA (**Volume 5.22.1**) text has been amended where appropriate. |
| 462 | | 4.5.17 - It is noted that workers / deliveries may start on site up to one hour before / after the core working hours. This will need to be a discussed on a site by site basis due to the sensitivity of some roads which are close to residences | Extended working hours outside of the identified core hours would have to be discussed and agreed with the relevant LPA. If a specific issue is raised then the working hours will be discussed on a site by site basis. Working hours will be secured via a DCO Requirement.<br><br>The purpose of the 1 hour extension is for 'start up' work. No plant will be operated during these one hour periods. Vehicle movements to the site will be outside peak periods and therefore delivery of materials and staff movements would not be detrimental to the operation of the LRN or SRN. The 1 hour extension is described in |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | | more detail in the Draft CTMP (**Volume 5.26.5**) which will be secured and implemented via a DCO Requirement. |
| 463 | | Section 13 - The mitigation section adds little to the document at this stage, and only directs attention towards the CTMP. This section needs to be built up<br>and reference made to the impact on schools, public transport routes, cycle routes, PRoW impact at peak hours and the development peak hours. | Mitigation has now been reviewed and greater detail provided on the proposed mitigation measures which are provided in Section 15 of **Volume 5.22.1**. Greater detail has also been provided in the Draft CTMP (**Volume 5.26.5**). National Grid, the LPAs and the HA are currently in discussions regarding content and mitigation which will be included within and secured via the CTMP. |
| 464 | Policy | There are a number of local policy documents to which the Transport Assessment does not refer: including North Somerset Replacement Local Plan, adopted Core Strategy and Travel Plan SPD. Key policies include T/10 T/6 (superseded by Parking Standards SPD), CS10. | **Volume 5.22.1** TA text amended to reflect comments. |
| 465 | | The policy review section should include information on safety and network<br>management and efficiency | **Volume 5.22.1** TA text amended to reflect comments. |
| 466 | Methodology | Section 12 - A standard (over) capacity reference should be clearly identified and used throughout section 12. It is noted that the LAs would seek a Ratio of Page 2 of 6 Flow to Capacity (RFC) of 0.85 and Degree of Saturation (DoS) of 90% as sign that a junction is not operating sufficiently. Delay should also be included in the tables in addition to RFC and Q length | This was contained in the Section 11 – Junction Assessment Scope of the TA reviewed by the Joint Councils in February 2014. **Volume 5.22.1,** Section 12, Highway Impact, presents the results of the capacity assessments, providing commentary on the critical lanes, arms or junction where desirable capacity (capacity thresholds) have been exceeded for all scenarios. Junctions assessed as having a capacity (RFC or DoS) at 1.00 or above are identified for mitigation regardless of the volume of NG construction traffic passing through the junction (as per meeting with 6/02/2014 with the LPAs). |
| 467 | | The trip generation section needs to include information relating to abnormal indivisible loads | **Volume 5.22.1** TA text amended to reflect comments. |
| 468 | Baseline | All junctions modelled should be supplied demonstrating junction geometry used to determine results. The TA should also confirm that data relating to Junction 21 has now been received from North Somerset | All junctions modelled are now supplied demonstrating junction geometry. These in the form of LinSig/PICADY/ ARCADY files. Junction 21 data has been received the junction has been modelled and the results incorporated in the latest version of the TA. |
| 469 | | 3.5.13 - The planned timescales for the delivery of the Portishead rail line would coincide with construction of the Hinkley connections project. This Portishead Rail project will itself be subject to the Development Consent Order (DCO) process but mitigation to ensure the integrity of the land use must be addressed in the TA | For the purposes of the assessment of the Proposed Development the rail line has been treated as being live. |
| 470 | | 4.2.52 - Reference should be made to the need for condition surveys prior to undertaking works and reinstating. | The need for conditions surveys to be undertaken prior to construction works and reinstating has been included within the TA (**Volume 5.22.1)** and Draft CTMP (**Volume 5.26.5**). |
| 471 | | 4.4.3 – Some confusion in sentence regarding widths | Text with **Volume 5.22.1**, TA has been amended. |
| 472 | | 4.4.3 onwards – Discussions regarding bellmouth designs, visibility standards should be referenced | Text with **Volume 5.22.1,** TA has been amended to reflect that discussions regarding the locations, design and visibility splays of the |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | | bellmouths have been undertaken through the consultation process with the LPAs. |
| 473 | | 4.5.12 (and 7.5.7) - Paragraph 4.5.12 states that there would be no parking for private vehicles belonging to members of staff. All members of staff would therefore be transported to / from the sites by minibus. Further information is requested as to how this translates into the number of staff trips associated with construction. | Whilst overall staff number have been estimated in the socio-economic assessment (**Volume 5.15.1**) and included within the TA (**Volume 5.22.1**) this level of detail is unknown and therefore not possible to provide any commentary for. Furthermore, exact breakdown of staff by location is not known. |
| 474 | | 4.5.15 - The core hours identified in the report are between 07:00-19:00. North Somerset Council has requested that there be no HGV traffic during peak hours, or at a minimum no more than 30 two-way movements during peak hours, as noted in section 9.4.17 – reference to this should be made here. | Any restrictions on any vehicle movements will be agreed with the relevant LPAs and will be included within the CTMP. National Grid, the LPAs and the HA are currently in discussions regarding content and mitigation which will be included within and secured via **Volume 5.26.5** (Draft CTMP). |
| 475 | | Section 5 - Any planned highway works which are likely to affect the route, where known, should be included in each section. | Planned highway works have been discussed where known and CC have established they are in place, to be taking place or LPAs have specifically raised concerns. |
| 476 | | For all PRoW count surveys, the weather conditions on the day of survey should be included – one day surveys are not very robust, so the information<br>on the background conditions should be available. | Condition surveys will be undertaken ahead of any works in line with the mitigation measures as detailed in the Draft CTMP (**Volume 5.26.5**). Conditions survey methodologies will be agreed with the LPA's. |
| 477 | | Statements regarding public transport provision should consistently include detail on the frequency of services (missing for example in 5.6.32). | Bus service frequency tables added to each section of the Proposed Development. |
| 478 | | 5.3.4 - The A38 has now been mentioned, but a section detailing the features along this potential diversion route (the same as the sections for each link) should also be included (even though it is not part of the intended route). | This diversion route will be included within an Incident Management Plan which will be included within the CTMP. |
| 479 | | 5.9.54 - Paragraph 5.9.54 discusses the route through Rodway. It should be noted that on the current programme, the Cannington Bypass could be in place before the start of construction traffic associated with the National Grid traffic. This should be noted within the routing as it will result in traffic bypassing the village of Cannington | CC commentary added to **Volume 5.22.1**, TA (5.9.59): Construction of the Cannington Bypass is part of the consented Hinkley Point C Nuclear Power Station development, enabling vehicles travelling to and from the power station to bypass the village of Cannington. The EDF DCO Application (Document: 8.6, October 2011) states that the construction period would be for a period of 21 months following planning approval for the power station. Hinkley Point C Power station was approved 19th March 2013. Following this it is anticipated that construction is due to begin in 2014. Following completion of the bypass, the predicted construction traffic will bypass the village of Cannington. |
| 480 | | Table 5.1 - The TA should include summer counts for the A370 if available. | Data collected and added to **Volume 5.22.1,** table 5.3. |
| 481 | | Section 6 - The Road Safety Analysis section assesses the junctions along the route. However, links should also be considered to determine whether there are any accident clusters on sections of road as well as at | Section reviewed and updated to reflect comment. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | junctions. | |
| 482 | | 6.2.6 – 6.2.39 - A summary of the slight and serious injuries, highlighting any groups which have a higher number of incidents, would be useful following the<br>geographical groupings. | Section reviewed and updated to reflect comment. |
| 483 | | 7.5.12 - Paragraph 7.5.12 states that the identified quarries 'are located close to the Strategic Road Network (SRN) either to the north or south of the<br>development'. However, the maps appear to indicate that a number of the quarries are located to the east of the development (close to Shepton Mallet).<br>The TA should confirm whether these trips have been accounted for travelling through the A39 and on to the M5 Junction 23. | All quarries including those east of the development (near Shepton Mallet) have been accounted for and predicted trip generation of 50 deliveries per day and included in the assessment. Plans indicating the locations of the quarries were submitted as part of **Volume 5.22.3.** These have been accounted for being split by quarry as detailed in Table 10.2 of the reviewed TA which clearly indicates that trips and routeing of the vehicles is detailed.<br>The routeing from each quarry is discussed and detailed with trip generation in Table 10.4 of the latest version of the report. |
| 484 | | 8.2.1 - Link flows and turning counts should also be included. | Link flows and turning counts were provided in Paragraph 8.2.1 of the TA reviewed by the Joint Councils in February 2014. The bullet points below reflect the information provided and this is also included within the submitted **Volume 5.22.1**.<br><br>• Collection of Automatic Traffic Counts (ATCs) along significant road links; and<br>• Collection of turning counts at the assessed junctions; and<br>• Queue length surveys undertaken simultaneously with the junction turning counts. |
| 485 | | 9.4.15 - The sentence should be re-worded as it doesn't make sense. | Text amended within the **Volume 5.22.1**. |
| 486 | | 9.4.37 - Section only picks up on one application on this site – the Mead application 12.1266/OT2 also approved c1200 homes plus employment. | The committed development section is based on a list of seven developments which the LPA's requested were accounted for in the cumulative development capacity assessments. The Mead application was not on the list of committed developments supplied by JMP/LPA's to be considered.<br>In terms of North Somerset we were requested to look at Weston Villages (build out approx. 2,400 units) which has been accounted for. The TA, **Volume 5.22.1**, also accounts for Locking Parklands. Combined these account for a total building out of over 2,800 units. |
| 487 | | 11.2.1 - Paragraph 11.2.1 states that there are 47 junctions that have been assessed as part of the TA. However, only 46 are assessed in the TA and the accompanying 'Modelling Results Summary' shows 51 junctions. Junctions 49, 50 and 51 have not been included (Nailsea junctions). | The LPA's listed 51 junction in total of which only 47 were on the construction routes. All junctions have been assessed in the TA. |
| 488 | | 12.2.51 – These highways works are now complete therefore the area can be surveyed | North Somerset have supplied traffic flows to enable capacity assessments to be undertaken on the M5 Junction 21. This capacity |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | | assessment has been undertaken and included within **Volume 5.22.1**. |
| 489 | | Additional information has been included within the Transport Assessment, since the previous issue. Notably, a series of junction capacity assessment have been conducted, which show that a number of the junctions operate over capacity in the 'future baseline' scenario | This statement is acknowledged and correct. |
| 490 | Impact Assessment - General | There is no consideration given to horse riders or the impact that the proposals will have on them | It is considered that impacts on horse riders will be accounted for through the CTMP mitigation. |
| 491 | | There is no section/assessment of integration with pedestrian and cycling facilities and links etc. such as crossings, local routes to schools etc. PRoW is addressed and National Cycle Network (NCN) but local facilities and impacts are not assessed in detail. NCN 26 should also be referred to as the Strawberry Line | As per response to comment 752. The TA (**Volume 5.22.1**) and Draft CTMP (**Volume 5.26.5**) state that condition surveys will be undertaken to establish existing conditions for all affected PRoW and national and local cycle routes, this will include the Strawberry Line. It is anticipated that Strawberry Line intervention methods will be established as part of the implementation of the CTMP and detailed assessment of affected PRoW and cycle routes will be undertaken following the conditions surveys. |
| 492 | | Section 5 - A number of areas where the route passes close to schools (or other high sensitivity receptors) have not been highlighted (these are listed in the draft ES, therefore should be easy to include). Traffic conditions in these areas should also be included (some have been included since the previous draft, but others are still missing). | **Volume 5.22.1** amended to address comments as appropriate. |
| 493 | | Whilst there is significant emphasis on screening, other details such as severance and pedestrian access to sites has only been addressed for some sites. Given the proximity of routes to schools, residences, pubs etc. access routes, rather than just screening, to all high sensitivity receptors should be considered | **Volume 5.22.1** amended to address comments as appropriate. |
| 494 | | Section 12 - Commentary should also be provided on the potential cumulative delay along routes where there are a number of junctions that are over capacity | Section 12 – Highway Impacts provides a detailed assessment of all the junctions with capacity issues. |
| 495 | | There is limited information relating to the duration of the impact at each of the junctions. The 'Temporary Nature' of the works could be a key factor in the level of mitigation that is required at each of the junctions listed. Further information should be provided showing the traffic impact by duration at each of the junctions | **Volume 5.22.1** provides detailed analysis of the 'temporary nature of the proposed development' i.e. the construction traffic through the provision of annual traffic profiling analysis. |
| 496 | | No reference is made to Factory Lane, which needs to be included. | Text amended within **Volume 5.22.1** |
| 497 | | The impact on Severn Road needs to be included | Text amended within **Volume 5.22.1** |
| 498 | | The impact on St Mary's Grove should be checked | Text amended within **Volume 5.22.1** |
| 499 | | The impact of crossing the Severn Beach Line to the north of Avonmouth Station should be checked | Text amended within **Volume 5.22.1** |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| 500 | | Impact on businesses on Crowley Way and on Avonmouth Way needs to be clarified. | Text amended within **Volume 5.22.1** |
| 501 | Mitigation Strategies - General | The mitigation strategy does not provide sufficient detail. Refers to Management Plans for NCN but no wider pedestrian / cycle links and facilities management plan or strategy also the length of impact and length of required mitigation measures. Some impacts may be 'temporary' but over a lengthy period which has permanent travel behaviour impacts. The TA should specifically address sensitive receptor locations. | Text amended within **Volume 5.22.1**. The CEMP will detail all mitigation to be implemented. |
| 502 | | A management strategy outlining how National Grid intends to prohibit workers from parking in local roads needs to be demonstrated. This could be an issue at the site as well as minibus pick up / drop off locations. This should be addressed in the CTMP and Travel Plan. | Staff transport strategy added to **Volume 5.22.1** which addresses comment 711. |
| 503 | | The TA should state the size and anticipated occupancy of the minibus to determine the number of trips that they would need to make. Pick up / drop off<br>points should also be suggested to demonstrate how the minibuses could work. | Welfare vans will be used to transport staff. At this stage occupancy rates for welfare vans is unknown, however, welfare van trips are incorporated within the predicted traffic generation and account for total staff movement. Agreed localities exterior to the construction works. Staff would be picked up at these locations prior to the start of the working day, transported to their respective working locations and returned by welfare van to the local pick up/drop off points at the end of the working day. |
| 504 | | A number of National Cycle Routes are affected by the proposals and will need to be mitigated so as not to detrimentally affect the continued use of these facilities. Mitigation should be devised in consultation with Las. | The TA (**Volume 5.22.1)** and Draft CTMP (**Volume 5.26.5**) state that condition surveys will be undertaken to establish existing conditions for all affected PRoW and national and local cycle routes, this will include the Strawberry Line. It is anticipated that Strawberry Line intervention methods will be established as part of the implementation of the CTMP and detailed assessment of affected PRoW and cycle routes will be undertaken following the conditions surveys. |
| 505 | | A number of pinch-points along the route are identified – the assessment must also demonstrate how these issues will be addressed | Section 12 of **Volume 5.22.1** – Highway Impacts provides a detailed assessment of all the junctions with capacity issues.<br>All construction traffic related issues will be addressed through the mitigation proposed and secured (once agreed with the LPAs/HA) within the CTMP. |
| 506 | | Mitigation section is weak and does not include any reference to the junctions identified as overcapacity in Section 12 and how the impact of this will be mitigated. | Mitigation section has been amended. National Grid is in discussion with and will continue to engage with the relevant Highways Authorities and Highways Agency during the examination of the DCO in order to agree a final version of this Draft CTMP prior to the DCO being determined. The final CTMP (and compliance with it) will be secured as a Requirement of the DCO. National Grid, the LPAs and the HA are currently in discussions regarding mitigation which will be secured via the CTMP. |
| 507 | | National Grid has previously agreed in principle that a route maintenance | National Grid will continue to consult with the relevant Highways |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | budget will be made available to the individual local authorities. | Authorities and Highways Agency during the examination of the DCO in order to agree a final version of this Draft CTMP (**Volume 5.26.5**) prior to the DCO being determined. The final CTMP (and compliance with it) will be secured as a Requirement of the DCO. National Grid, the LPAs and the HA are currently in discussions regarding mitigation which will be secured via the CTMP. |
| 508 | | Somerset County Council believe, that given the temporary nature of the project and the existing physical constraints at a number of the identified junctions, it is not unreasonable to assume that construction traffic management (non-physical measures) could be found to be the most appropriate method of mitigation in the majority of locations (subject to a full audit of the modelling work). Two key junctions have however been identified where for a number of reasons physical measures might be deemed an appropriate means of mitigation. The identified junctions as referenced within the Curtins TA are:<br>• (4) A39 Puriton Hill/Bath Road<br>• (6) A39 Bath Road/Woolavington | No physical measures/ temporary or permanent highway improvement schemes are proposed with the exception of Factory Lane and where TTM are proposed. |
| 509 | | Further review and investigatory work will be required in order to ascertain the most appropriate solution. These two junctions are also of particular concern,<br>due to their location on the potential route from the quarries in Shepton Mallet | No physical measures/ temporary or permanent highway improvement schemes are proposed with the exception of Factory Lane and where TTM are proposed. |
| 510 | | As above, North Somerset Council has identified the following junctions where physical improvement measures may be required:<br>• 32 Clevedon Road/Tickenham Hill<br>• 50 Stock Way North/Stock Way North | No physical measures/ temporary or permanent highway improvement schemes are proposed with the exception of Factory Lane and where TTM are proposed. |
| 511 | | Section 14 - There is no mention of improvements to existing cycle routes or pedestrian routes. | Condition surveys will be conducted on the LRN (including haul roads and connections to the LRN), PRoW and cycle routes. The methodology for undertaking the surveys will be agreed with the LPAs prior to being undertaken. All affected infrastructure will be reinsated following completion of the temporary works. All works will be conducted in consultation with the LPAs |
| 512 | | Plans regarding Personalised Journey Planning could be expanded at this stage and more detail provided. | **Volume 5.21.1** and TP amended as appropriate. |
| 513 | | The TA should consider the idea of 'off setting' in regards to the TP. Contributions could be secured toward community/district sustainable travel initiatives to reduce private vehicle trips for residents and offset Hinkley impact. | National Grid acknowledges this comment. |
| 514 | | No information is provided on monitoring or the resources available to the TPC. | This level of detail will be developed in consultation with the LPAs and the development of the TP/CTMP. |
| 515 | | The CTMP has acknowledged that restrictions may be required during | This is correct. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | sensitive network hours. | |
| 516 | | Section 14 – Framework Travel Plan remains weak and non-committal. | Framework TP updated. |
| 517 | Design | 4.4.8 - One bellmouth in NSC is still to be approved in principal | Agreed |
| 518 | | It is noted that the temporary construction route still details access to bell mouth's **ZZ7-BM01** and **ZG7-BM01** via Wick Lane. Concerns were raised regarding the suitability of this lane as a construction route within Paul DeMaria's memo dated 25th November 2013. Whilst SCC have identified concerns, it is the responsibility of National Grid and their consultants to demonstrate that this is the most appropriate means of access and that the lane can safely be utilised by the proposed construction traffic. National Grid were going to investigate the possibility of splitting deliveries and utilising tractors with trailers to access this section of the route, these proposals should be incorporated into the CTMP | Agreed. National Grid, the LPAs and the HA are currently in discussions regarding mitigation which will be secured via the CTMP. |
| 519 | | SCC continue to have reservations about the use of this lane and are keen to ensure that there is a robust and auditable trail that demonstrates, that if deemed suitable for use, adequate and appropriate mitigation measures have been implemented | National Grid, the LPAs and the HA are currently in discussions regarding mitigation which will be secured via the CTMP. |
| 520 | Other Comments | 1.1.4 The word 'significant' should be added before effects. | We do not consider that this is appropriate and therefore it has not been amended. |
| **Highways Agency – Response to TA** | | | |
| 521 | | The TA does not make any reference to merge/diverge assessments. These are imperative to ensure a full understanding as to how this development may impact upon the SRN | Merge / diverge assessment undertaken and all assessments and results are included within **Volume 5.22.1.** |
| 522 | | We have been unable to locate any queue length data on the online portal. Any conclusions based on the adequacy of slip roads to accommodate an increase in queuing must be completed using properly validated and calibrated models. Raw data from queue length surveys must be provided to the Agency in order that we can fully review the impact upon the SRN. | This data has been appended to **Volume 5.22.1.** |
| 523 | | Given that a number of SRN junction capacity assessments indicate notable capacity constraint, the use of queue length survey data is essential in justifying the findings of the forecast assessment. Comments included in the TA, including an "anticipation" that slip roads can accommodate an increase in queuing, will not be sufficient to justify the impact of the development upon the SRN. Currently the HA cannot agree with a number of comments that suggest there to be "no issues as a result of queuing" and consider the forecast capacity assessments, and lack of mitigation measures, will need to be revisited. | All requested capacity assessments/ merge and diverge assessments have been undertaken with results, analysis and mitigation detailed in **Volume 5.22.1** and the Draft CTMP (**Volume 5.26.5**). National Grid, the LPAs and the HA are currently in discussions regarding mitigation which will be secured via the CTMP. |
| 524 | | The HA will require an assessment of M5, Junction 21. We note the comment in the TA that this junction is currently the subject of highway | Assessment of M5 Junction 21 has been undertaken and all assessments and results are included within **Volume 5.22.1**. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | improvement works however that does not justify exclusion of forecast assessments for this junction. Both North Somerset Council and the Highways Agency possess models that have assessed the baseline and forecast scenarios, without National Grid, for this junction and as such this information can be made available if NG/Curtins do not wish to undertake their own separate assessment | |
| 525 | | We note a commitment to managing the volume of trips in the peak hours upon the local road network and consultation being undertaken with Local Planning Authorities on this matter. Given the scale of forecast trips it is essential that the impact and mitigation of these trips is also considered for the SRN. Restricting trips accessing the SRN in peak hours, as well as the local roads, is considered an essential mitigation measure to minimise the impact of this development | National Grid is committed to working with the local authorities and Highways Agency to limit the impacts of the Proposed Development in line with current national, regional and local transportation policy. It is explicit throughout the Draft CTMP (**Volume 5.26.5**) that consultation will be undertaken with the local authorities and the HA. It is considered that the HGV vehicle movement restrictions which will be applied to the LRN will have a positive mitigation effects on the SRN. Peak period HGV restrictions on the LRN will be experienced on the SRN. HGVs may be required to travel some distance on the SRN and restrictions on the use of the SRN are likely to be detrimental to the delivery of materials and the progress of the construction works. |
| 526 | | Given the scale and evolving nature of the development the HA acknowledge the need to allow for a contingency factor to be added to the predicted construction traffic baseline data. However, this could result in inaccurate future baseline assessment and there is a possibility that NG/Curtins may have over or under compensated using this level of factoring. An elaboration of the methodology or reasons as to why a 20% contingency factor was used must be provided | The 20% contingency factor represents a variant of the volume of construction traffic which may arise due to the ground conditions which may impact on the laying of the haul road and the construction of the foundations for the pylons. However, National Grid consider the 20% contingency factor is a generous contingency and in their experience any additional traffic as a result of ground conditions would result in less than 20% additional construction traffic. |
| 527 | | Given the concerns identified further analysis of the Draft TA and CTMP, including junction assessments, will be required as will ongoing discussions as to the impact of the development upon the SRN | All requested capacity assessments have been undertaken with results, analysis and mitigation detailed in **Volume 5.21.1** and **Volume 5.26.5**. |
| **Joint Councils Response to CTMP** | | | |
| 528 | General | The Construction Traffic Management Plan (CTMP) is contradictory in its reference to a Transport Plan (TP). The TA recognises the impracticality of a TP and the commitment is weak. No existing data on staff numbers, locations, local vs. non-local staff, targets, funding and delivery mechanisms, monitoring and evaluation (for which North Somerset Council (NSC) apply a fee) is given. However, the CTMP references TP in the mitigation measures and TP measures are outlined. It is regrettable that a more detailed TP strategy has not been developed at this stage with a clear indication of achievable targets – particularly at site locations which are known to National Grid, there must be a degree of certainty regarding staff numbers (both local and those permanently affiliated to the applicant). The TP and 'commitment' to mitigation in this respect is not acceptable. | Staff numbers have been estimated based on National Grid experience and local v non-local staff levels also predicted. This information has now been included within **Volume 5.21.1** and **Volume 5.26.5**.<br><br>The TA recognises that the Proposed Development is not a typical development and therefore the standard TP processes are not wholly appropriate.<br>The TA provides a TP Framework and discusses mitigation. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| 529 | | Table 1.1 - Objectives C, F and G should be reworded to remove the term 'Take all reasonable steps'. The term is considered too ambiguous and does not provide the necessary robustness required for the CTMP. | Text amended in **Volume 5.26.5.** |
| 530 | | Objective E ...of the CTMP and should include the sentence "and mitigation measures contained herein". Suitable monitoring strategies for the mitigations measures should be included. For example, vehicle restrictions on the network may need Automatic Number Plate Recognition (ANPR) and suitable funding for such monitoring should be made available by the applicant | Text amended in **Volume 5.26.5.** |
| 531 | | There is no reference in the CTMP to an incident management plan. The A38 and A370 are diversion routes should an incident on the M5 prohibit or restrict access to the motorway network. This is required to demonstrate to NSC that the operation and safety of the local network will not be further prejudiced by<br>vehicular traffic generated by the development at the time of such an incident | Incident Management Plan (IMP) has now been incorporated as a tool/ mitigation measure within the Draft CTMP (**Volume 5.26.5**). An Incident Management Plan will be produced setting out the procedure to be taken if part of the LRN or SRN in the vicinity of the Proposed Development is affected by an incident. National Grid will continue to consult with the relevant Highways Authorities and Highways Agency during the examination of the DCO in order to agree a final version of this Draft CTMP prior to the DCO being determined. The final CTMP (and compliance with it) will be secured as a Requirement of the DCO. |
| 532 | Policy | A cross reference to the policy section in the TA would enhance the CTMP | It is clear within the text of the Draft CTMP (**Volume 5.26.5**) that it is a supporting document to the TA (**Volume 5.22**) |
| 533 | Methodology | The mitigation measures proposed logically follow from the findings of the TA however, some of the TA findings have been queried (see proforma response to TA) Revisions to the CTMP will need to reflect revisions made to TA in light of the comments. | **Volume 5.22.1** (TA) and **Volume 5.26.5** (Draft CTMP) have been reviewed and amended following previous comments from the Joint Councils and the HA. The TA and the Draft CTMP have provided specific mitigation measures (including vehicle movement restrictions) which are as a result of the capacity assessments undertaken. National Grid, the LPAs and the HA are currently in discussions regarding content and mitigation which will be included within and secured via the CTMP. |
| 534 | Baseline | Sandford substation: it should be clarified why construction traffic cannot access from the A368 as the Abnormal Indivisible Loads (AILs) will access from here | Once operational, traffic movements to Sandford substation would be associated with the maintenance and traffic flows would be minimal. It is therefore considered that the use of Nye Road is suitable to link to the permanent access on Nye Road. |
| 535 | | Further information is needed in the CTMP on AILs. Information on AILs should include the total number AIL movements anticipated over the construction period, when they will occur, the route they will take etc | AIL trip generation is detailed in the **Volume 5.22.1**, para.8.3.5. A comprehensive routeing assessment undertaken by ALE/ Jacobs in conjunction with the HA, and the appropriate LPAs (NSC) and the routeing of the AIL vehicles has established and has been presented in a separate Route Feasibility Report which is a supporting document to the application (**Volume 5.22.1,** para.7.5.20). |
| 536 | | 2.1.43 - Refers to the AIL route. If this is being addressed separately, the route and access to the Laydown area should be detailed within the CTMP so | A comprehensive routeing assessment undertaken by ALE/ Jacobs in conjunction with the HA, and the appropriate LPAs (NSC) and the routeing of the AIL vehicles has established (**Volume 5.22.2**, |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | that it is properly addressed and clear | Appendix 22D) and has been presented in a separate Route Feasibility Report which is a supporting document to the application (**Volume 5.22.1**, para.7.5.20). |
| 537 | | 2.1.46 – There is a typo between Clevedon and Cleveland. | Text amended |
| 538 | | 2.1.57 - Churchill substation construction traffic has not been identified/quantified in the TA. There is a concern about slow moving heavy traffic making a right turn at the A370/B3133 signals. Peak hour restrictions will need to apply. The route also becomes particularly congested should access to the M5 be restricted or closed. | All Churchill substation construction traffic has been included within **Volume 5.22.1.**<br>Construction traffic routes have all been agreed with the local authorities. National Grid, the LPAs and the HA are currently in discussions regarding mitigation which will be secured via the CTMP. This will include vehicle movement restrictions. An Incident Management Plan will be also be included as a mitigation measure within the CTMP which will be in place to address transport related issues including diversions etc. |
| 539 | Impact Assessment | 5.4.3 - The CTMP acknowledges there may now be a need to restrict vehicle movements during the network peak hours (i.e. 07:00-08:00 and 17:00- 18:00). Section 5.4.3 on Core Hours essentially gives an unrestricted extension to construction hours and enables construction traffic to travel to and from the site over a 14 hour period daily. This is a concern | The purpose of the 1 hour extension is for 'start up' work. No plan will be operated during these one hour periods. Vehicle movements to the site will be outside peak periods and therefore delivery of materials and staff movements would not be detrimental to the operation of the LRN or SRN. |
| 540 | | It is noted that highway safety improvement measures will possibly be required at junction 32 due to concerns over safety. | Accident analysis indicates that there have been a total of two slight accidents in a five year period. This is not considered to be a significant safety concern and therefore the TA makes no recommendations for any highway improvements schemes at Junction 32. |
| 541 | | Reference to monitoring and reviewing highway safety along the construction routes, particularly in proximity to sensitive receptors should be included. Increases in injury accidents associated with construction traffic must be funded by the applicant addressed by appropriate remedial measures agreed with the local authority | The Draft CTMP (**Volume 5.26.5**) states that the contractor will undertake monitoring as in necessary to ensure compliance with the requirements of the CTMP and this will include the maintenance of records and traffic management measures. This will include all traffic and transportation (including accident records) issues/ concerns/ incidents relating to the construction routes.<br>The TMG will monitor and review all records of performance and all traffic and transportation (including accident records) issues/ concerns/ incidents relating to the construction routes. |
| 542 | Mitigation | TA refers to mitigation in the CTMP. The CTMP does not provide or elaborate sufficiently on any of the strategies set out within 13.3.1 of the TA. There is no specific reference to the Strawberry Line intervention measures. Specific mitigation measures should be clearly outlined demonstrating the location and<br>extent of infrastructure improvements (including pedestrian, cycle improvements and highway safety interventions). | The TA (**Volume 5.22.1**) and CTMP **(Volume 5.26.5**) state that condition surveys will be undertaken to establish existing conditions for all affected PRoW and national and local cycle routes, this will include the Strawberry Line. It is anticipated that Strawberry Line intervention methods will be established as part of the implementation of the CTMP and detailed assessment of affected PRoW and cycle routes will be undertaken following the conditions surveys. |
| 543 | | There must be an explicit commitment to ensuring construction traffic does not route through Banwell. This should also be explicit in the travel | This has been stated within the Draft CTMP, **Volume 5.26.5**. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | plan, particularly in relation to Castle Hill Lay down area. | |
| 544 | | The draft ES identifies a number of links in NS, some of which pass by sensitive receptors including schools, which exceed Rule 2 of the IEMA guidance. The draft ES refers to mitigation within the CTMP particularly in regard to severance, pedestrian amenity, pedestrian delay, driver delay etc but no detailed mitigation has been provided to address the impact. It is also noted that the draft ES cites the 'temporary nature of the development' to support only a slight impact but the TA will need to clarify the duration of the temporary impact and this will need to be consistent with the draft ES | The Draft CTMP (**Volume 5.26.5**) and the TA (**Volume 5.22.1**) focus on managing out the impacts of the development through the implementation of management tools and vehicle movement restrictions, where vehicle movement restrictions are based on existing and future levels of capacity.<br>The latest version of the TA provides detailed analysis of the 'temporary nature of the proposed development' i.e. the construction traffic through the provision of annual traffic profiling analysis. |
| 545 | | The monitoring strategy requires greater clarity on what is going to be monitored and how it will be monitored. Review procedures and corrective actions also need to be clarified. | National Grid, the LPAs and the HA are currently in discussions regarding content and mitigation which will be included within and secured via the CTMP. |
| 546 | Table 6.1 | Implement Traffic Management Group (TMG):<br>Greater explanation of the TMG is needed i.e. who will be involved in the group, how often will the group meet, what role will each member play, what is the remit and objectives for the group etc. The Transport Coordinator (TCO) is not mentioned in the table 0.1 and should be. The role and responsibilities of the TCO need to be clearly defined. | The TA (**Volume 5.22.1**) and Draft CTMP (**Volume 5.26.5**) state that a TCO will need to be appointed as part of the CTMP and the TMG. The Draft CTMP also identifies who will be involved in the TMG, frequency of meetings and the monitoring and review responsibilities of the group. |
| 547 | | Vehicle Identification methods:<br>Clarification is needed on how the construction vehicles will be clearly identifiable | Text amended within the Draft CTMP ((**Volume 5.26.5**): It is envisaged that this will by a magnetic sign attached to the side of all HGVs entering/exiting the working areas onto the LRN. |
| 548 | | Vehicle booking system:<br>A vehicle booking system (Delivery Management System) is mentioned in points 3.2.12 and 6.8.1. However it is not incorporated into the mitigation measures table. This is considered to be a crucial element of the CTMP and should be used to manage and mitigate the impact of construction on the<br>Strategic Road Network (SRN) and Local Road Network (LRN). Used to its full potential a vehicle booking system has the ability to successfully control<br>the flow of construction traffic between origin and destination, which is considered key for a project of this scale and nature | Text amended within the Draft CTMP (**Volume 5.26.5**) (para.6.7.1): A booking system (Delivery Management System) will be used to ensure deliveries to the sites will be spread across the whole day where possible. This will minimise the impact of HGV traffic during the network peak periods. This booking schedule (DMS) will also form part of and inform the monitoring process of the CTMP. |
| 549 | | Monitoring highway safety-comments as above | An Incident Management Plan will be produced setting out the procedure to be taken if part of the LRN or SRN in the vicinity of the Proposed Development is affected by an incident. |
| 550 | | The mitigation measures outlined in table 0.1 (amend numbering) are welcomed along with the subsequent explanations in the proceeding sections.<br>However a number of amendments are needed to help progress this section. The outlined measures need significantly more | The Draft CTMP (**Volume 5.22.1**) provides detailed mitigation measures for the implementation, monitoring and control of the CTMP. National Grid, the LPAs and the HA are currently in discussions regarding mitigation which will be secured via the CTMP. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | explanation/detail or a requirement that detail will be worked-up and agreed with the local authority. | |
| **Highways Agency Comments on Draft CTMP** | | | |
| 551 | | Many of the proposed measures for mitigation are vague or ambiguous. Full and clear commitment must be provided in the CTMP in order that the HA can agree a set of clear and relevant mitigation measures | National Grid is committed to implementing effective and appropriate mitigation measures. The Draft CTMP (**Volume 5.26.5**) contains the mitigation measures as detailed within previous versions of the CTMP (which were submitted to the LPAs/HA as part of the consultation process). It is recognised that National Grid, the LPAs and the HA are currently in discussions regarding mitigation which will be secured via the CTMP. |
| 552 | | As a general comment consultation with the HA along with the local authorities is essential. There are a number of instances in the CTMP where consultation with the HA or review of effects on the SRN are overlooked. Based on the evidence provided and the volume of trips proposed the HA cannot accept that HGV traffic movement restrictions do not apply to the SRN. | National Grid is committed to working with the Local Authorities and Highways Agency to limit the impacts of the Proposed Development in line with current national, regional and local transportation policy. It is explicit throughout the Draft CTMP (**Volume 5.26.5**) that consultation will be undertaken with the Local Authorities and the HA. It is considered that the HGV vehicle movement restrictions which will be applied to the LRN will have a positive mitigation effects on the SRN. Peak period HGV restrictions on the LRN will be experienced on the SRN. HGVs may be required to travel some distance on the SRN and restrictions on the use of the SRN may be detrimental to the delivery of materials and the progress of the construction works. |
| 553 | | Further information is needed on Abnormal Indivisible Loads (AILs). Information on AILs should include the total number of AIL movements anticipated over the construction period, when they will occur, the route they will take etc. The HA must also be consulted early in the process in order to agree a process to managing access to the SRN by AIL. We would recommend early consultation in order to minimise impact on your project timescales | There will be a maximum of four AIL movements (**Volume 5.22.1**, para.8.3.5). A comprehensive routeing assessment undertaken by ALE in conjunction with the HA, and the appropriate LPAs (NSC) and the routeing of the AIL vehicles has established and has been presented in a separate Route Feasibility Report which is a supporting document to the application (**Volume 5.22.1**, para.7.5.20). |
| 554 | | Given the concerns identified further analysis of the Draft TA and CTMP, including junction assessments, will be required as will ongoing discussions as to the impact of the development upon the SRN | **Volume 5.22.1** includes all capacity assessments as requested by the LPAs/HA during and following the scoping and consultation period. All results are included with the TA. At the time of writing, discussions are on-going regarding the appropriate mitigation measures to be implemented. |
| **Highways Agency Comments on Draft ES** | | | |
| 555 | | We note that in paragraph 12.3.6 you state that guidelines from the Institute of Environmental Assessment state "*that any increases in traffic flows of less than 10% are generally accepted as having no discernible environmental impact..*" These guidelines should not be confused with the Department for Transport's (DfT) 'Guidance on Transport Assessment that makes clear that using percentage impact to determine the need for further/capacity testing is no longer appropriate for Transport Assessments | National Grid acknowledges this comment. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| 556 | | It is noted that we have not been asked to consult on the original draft of the TA although we have now received a copy of version C for our consideration. It is our understanding that information on matters including mitigation, traffic routeing and management agreements are provided in the Draft TA. If this is the case we will provide comment on the acceptability of these issues following our review of the TA. | National Grid acknowledges this comment. |
| 557 | | In line with the HA's guidance and the Road Vehicles (Authorisation of Special Types) (General) Order 2003, any requirement for the movement of abnormal indivisible loads (AILs) must be agreed in advance with the HA. We would recommend early consultation in order to minimise impact on your project timescales | National Grid acknowledges this comment. |
| 558 | | In addition to the detailed comments above we have more general comments in regards to the management of the construction of the proposed line. We have identified several points where the proposed route will cross the SRN by going either under or over the road. These works will need to comply fully with the requirements of the Design Manual for Roads and Bridges and we would expect to see a commitment to this in submitted application, most likely as a requirement in the draft DCO. | National Grid acknowledges this comment. |
| 559 | | There are also several areas identified in the Draft ES where work associated with your project will be located in very close proximity to the SRN, in particular the M5, M49 and A4. Particular attention will need to be paid to these works to ensure that they do not compromise the safety of the SRN or adversely impact on the drainage of the SRN | National Grid acknowledges this comment. |
| 560 | Volume 5.12, Chapter 12<br><br>Para 12.3.5 | Following from the previous responses to the Transport scoping, notably the letter dated 04th November 2013 (our ref: HA/SW/Seabank/Tech Notes) regarding Technical Note (TN002) Traffic Assessment Methodology, the agency would expect a different method to be used to determine further capacity testing than the "screening process used to delimit the scale and extent of the (environmental) assessment". It is assumed that this will be provided within the Transport Assessment which is referenced within the ES Chapter, but has not been reviewed at the time of writing. | National Grid acknowledges this comment. |
| 561 | 12.3.6 | IEA guidelines stating that any increase in traffic flows less than 10% are generally accepted as having no discernible environmental impacts should not be confused with DfT's *'Guidance on Transport Assessment'* that makes clear that using percentage impact to determine the need for further/capacity testing is no longer appropriate for Transport Assessments | National Grid acknowledges this comment. |
| 562 | 12.3.10 | Please clarify the whereabouts of Figure 12.1. The ATC locations are shown in figures 12.1.1 to 12.1.11 | The figures have been updated and are provided as part of the TA, **Volume 5.22.3** |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| 563 | Table 12.3 | It is noted that the accompanying TA will provide information on driver delay. This is seen as an essential piece of information to determine the impact of the development on the SRN and we will provide our thoughts following review of the TA. | National Grid acknowledges this comment. |
| 564 | Table 12.4 | Accident clusters should be considered as a moderate receptor. | National Grid disagrees with this assertion. We have taken our method from standard guidance and have assessed against National Averages. |
| 565 | 12.3.25 | The accident data has only been recorded at the SRN junctions, not along approach roads where the layout or the condition of the highway could have contributed to the type and number of accidents. This should be revisited due to the potential impact upon the operation of the SRN. | The run up to junctions have been considered, and a review of the data indicated no specific accident hotspots along links. |
| 566 | 12.4.470 | Further testing reported in TA should consider impact on trip generation and thus consider whether additional trips may contribute to the number of accidents. | The run up to junctions have been considered, and a review of the data indicated no specific accident hotspots along links. |
| 567 | 12.5.14 | It is noted that the accompanying TA will provide information on volume of vehicles, vehicle profiling and vehicle routeing. This is seen as an essential piece of information to determine the impact of the development on the SRN and we will provide our thoughts following review of the TA. | National Grid acknowledges this comment |
| 568 | Table 12.52 | The impact of the National Grid traffic will be determined by the TA, this will then dictate the need for restrictions within the Mitigation Table. The Agency will provide comment on these matters once known. | National Grid acknowledges this comment |
| 569 | 12.7.3 | The HA will also need to be consulted with regards to traffic routeing and management agreements. We recommend early consultation in order to minimise impact to any planned timescales you may be working to. | National Grid acknowledges this comment |
| 570 | Section 12.7 | “Mitigation measures *would* be introduced”; “initiatives *would* be introduced”. Whilst this is welcomed, there is still an uncertainty surrounding level of commitment or the extent of the restrictions and request further consideration and engagement on these matters. | National Grid acknowledges this comment |
| 571 | 12.8.1-2 | Slight or moderate residual environmental effects relating to driver delay “cannot be fully mitigated against”. “...these effects would be mitigated against wherever possible...” this again suggests a degree of uncertainty regarding commitments to mitigation.<br><br>Please clarify the whereabouts of the mitigation measure, outlined in Section 8. | National Grid acknowledges this comment |
| 572 | Table 12.53 | Mitigation for Hazardous Loads should be provided and any requirement for the movement of abnormal indivisible loads (AILs) must be agreed in | National Grid acknowledges this comment |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | advance with the HA. | |
| 573 | Other Comments | The HA has not previously been provided with opportunity to review the original draft of the transport assessment. We have now received a copy of version C of the Draft TA which we will review and provide comment on under separate cover. Our review of the TA may require us to alter or add to the findings stated above. | National Grid acknowledges this comment |
| **Natural England - Draft ES and Associated Documents** | | | |
| **5.20 - Habitats Regulation Assessment Report** | | | |
| 574 | Headline | The draft HRA document appears to be very much work in progress. There is currently insufficient commentary and lack of referencing (especially around evidence and mitigation) to support many of the conclusions reached | Following the February 2014 Consultation a series of Topic Papers were issued to NE for review, these dealt with the key issues identified in the consultation response. The Topic Papers and any NE comments on them (via written response, telephone calls and meetings), were incorporated into a revised HRA document which was also issued to NE for review prior to DCO submission. |
| 575 | | In terms of bats, Natural England's main concerns surround a lack of clarity around likely impact and mitigation proposals. It is difficult to ascertain whether or not this scheme will pose a threat to bats, SACs for bats and SAC species as the expected impact and proposed mitigation has not been clearly explained and quantified | |
| 576 | | With regards to birds, Natural England's key concerns include the lack of acknowledgement within the report of potential impacts (alone/in-combination/cumulative) to justify the mitigation package proposed and what seems an incorrect understanding of the in-combination & cumulative impact assessment/determination process | |
| 577 | **Detailed Comments -** SAC Bats | It seems that there has been sufficient survey effort undertaken for this project between 2010-2013, taking good account of weather conditions i.e. not trying to carry out surveys in unsuitable conditions when the data gathered would not necessarily be representative of the true use of the habitat by bats.<br><br>The surveyors 'picked up' all of the bat species known to be resident in Somerset through transects, static detectors, tree surveys etc, as well as identifying the Alcathoe bat (previously unrecorded here).<br><br>Bat species were generally widespread across the proposed route with the more common species being identified in greater number as would be expected, with common pipistrelle being the most widespread species with the greatest number of records. All of the Annex II species were recorded, with greater and lesser horseshoe being present throughout the route, and with both species identified in the 4km consultation zone for the North Somerset and Mendip Bats SAC, the Mendip Limestone Grasslands SAC and around Nailsea, which is in the Tickenham Ridge | This updated information is included in the HRA document, **Volume 5.20**. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | area and around Sandford. Barbastelle was picked up in limited numbers; however, they were recorded at Tickenham Ridge. Small numbers of Bechstein's bat were also recorded | |
| 578 | | The proposal has the potential to disrupt the commuting and foraging activity of SAC feature (lesser and greater horseshoe) bats through the active season. The proposal also has the potential to disrupt the bats moving to and from their hibernation sites | This updated information is included in the HRA document, **Volume 5.20**. |
| 579 | | It's not clear from the information contained within the report how significant the level of disruption may be. Whilst the numbers of both greater and lesser horseshoe bats recorded are relatively low, important commuting routes may be lost during the construction phase. The report mentions that temporary structures would be put in place to connect up these lost routes but it's not clear when this will happen or when the permanent replacement planting will take place. Potentially, the greater and lesser horseshoe bats may be left with a highly fragmented landscape within their core foraging areas | This updated information is included in the HRA document, **Volume 5.20**. |
| 580 | | More detail needs to be provided on this issue to adequately assess whether or not there is a likely significant threat to the species | This updated information is included in the HRA document, **Volume 5.20**. |
| 581 | | We would suggest that NG presents a single document which:<br>1. Explains in detail (cross-referencing evidence) how the SAC feature bats are using the area of construction – including locations of key commuting routes and key areas for foraging.<br>2. Details how long the construction period/period of reinstatement will be.<br>3. Quantifies the amount of foraging habitat lost and where.<br>4. Quantifies the amount of replacement habitat that will be provided and where (considering '2' above).<br>5. Details which/how key commuting routes will be affected.<br>6. Explains (considering '4' above) how key commuting routes will be maintained throughout construction.<br>7. A single map of the relevant route sections (especially Mendips undergrounding) illustrating 1-6 above | This updated information is included in the HRA document, **Volume 5.20**. |
| 582 | | Under paragraph 2.4.4 (page 26) it is stated that: *"Where avoidance is not possible, the effects are temporary and habitats will be reinstated on completion of works."*<br>This approach is not satisfactory from an HRA perspective. A four year construction period (400kV underground cable) is not considered temporary – a species population could be significantly reduced/destroyed within this space of time | Construction phase mitigation is proposed. This statement was misleading and has been removed |
| 583 | SPA & | *Table 4.10 (page 164):* | This updated information has been reviewed by NE and included in |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | Ramsar Birds | Plans/projects that might put pressure on SPA birds around Avonmouth need to be included in the table and considered together – i.e. leading to future increased usage of Hallen Marsh.<br>Local plan allocations (housing/commercial/industrial) need considering in this table.<br>The existing 132kV line needs including – i.e. for where it exists (not yet taken down) alongside the new 400kV line.<br>In terms of Withy Farm and Black Ditch wind farm proposals, it is important to note the agreed bird mortality thresholds for those projects will dictate the thresholds to be agreed for the HPC connection project monitoring and mitigation strategy | the HRA (**Volume 5.20**).<br>Discussions on bird mortality thresholds are ongoing and will be resolved prior to DCO consent |
| 584 | | *3.7.10 For most species, the very low numbers recorded flying in the risk zone, suggests that potential effects likely to give rise to an impact at the population level are unlikely. However, on a precautionary basis, the qualifying species and associated SPA and Ramsar sites listed above and in Table 2 are taken through into the appropriate assessment stage of the HRA*<br>This section does not mention the radar tracking data. It is the radar tracking data that introduces uncertainty and the resulting precautionary approach | Specific reference to the radar study has been included in this section. |
| 585 | | ***3.9.10/13**:*<br>This section should include Plans i.e. Local Development Plans/Site Allocations – especially relevant at Avonmouth | This updated information has been reviewed by NE and included in the HRA (**Volume 5.20**). |
| 586 | | ***3.9.15** The full Cumulative Effects Assessment is presented at **Chapter 17 of the ES**.*<br><br>The conclusions of the 'cumulative effects assessment' are relevant to the HRA and therefore need to be included (summarised) in the HRA report | This updated information has been included in the HRA (**Volume 5.20**). |
| 587 | | ***4.7.8** In 1986, the RSPB undertook a study of bird movements in relation to a 0.75km stretch of the overhead transmission lines from Hinkley Point nuclear power station where these cross Wick Moor. Over the 7 month study period a total of 53 bird carcasses probably attributable to collision with the overhead lines were recorded (Robins, 198675). The majority of the birds recorded were gulls and pigeons, although mallard made up 13% of the total. The total number of collisions was considered to be small and, at the local population level, of no nature conservation importance. However, the actual collision rate may have been higher as a result of a number of factors, including bias in the recording of carcasses and the fact that the survey was undertaken largely outside of the winter months when waterbirds may be more prevalent in the area. The only SPA designated species recorded during the three days of* | This location is included within the collision risk calculations. The text has been strengthened and clarified to demonstrate that it has not been excluded from the collision model |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | *searches for collision victims over the winter period was mallard. On the basis of the study (despite the recognised limitations), it was determined that the small number of recorded collisions would not merit any form of mitigation.*<br><br>The basis of this conclusion is not satisfactory from an HRA perspective. The conclusion rests on data collected almost 20 years ago and, furthermore, it is acknowledged (above) that "the actual collision rate may have been higher as a result of a number of factors". This section requires further work | |
| 588 | | ***4.7.99*** *There is no evidence to indicate that the existing network of overhead power lines in the vicinity of the Somerset Levels and the Severn Estuary, in particular, the existing 132kV line that the proposed 400kV line, is causing significant mortality of SPA designated species through collision. As the radar data suggests that there are potentially significant (and regular) movements of birds across the existing route of the 132kV overhead line (which has been in place for decades), the lack of any evidence of collision suggests that birds involved in these movements are either flying outside of the collision risk zone or that if collision is occurring that the level of mortality is low and not significant at the designated site population level. Given that the overall 'burden' of potential risk is not considered to be increased through the Proposed Development, it therefore follows that, as a minimum, the existing level of collision impact would prevail and no additional impact on designated site populations would occur.*<br><br>The basis of this conclusion is not satisfactory from an HRA perspective. The conclusion rests on a 'lack of evidence' rather than up-to-date evidence. In the absence of necessary objective data (evidence) a precautionary approach should be adopted. See below.<br>It is acknowledged (above) that bird collisions might be occurring: "if collision is occurring that the level of mortality is low and not significant". This confirms that there may well be a residual impact that needs assessing in-combination with other plans/projects. | This updated information has been reviewed by NE and included in the HRA (**Volume 5.20**). |
| 589 | | ***4.7.100*** *Notwithstanding the conclusions reached above that any collision mortality associated with the Proposed Development would be similar to that already occurring and unlikely to result in any impact at the level of the designated species populations, National Grid would provide measures to be incorporated into the Proposed Development in order to reduce potential collision risk and possible bird mortality.*<br><br>It needs to be acknowledged that there could potentially be an impact (no | This updated information has been reviewed by NE and included in the HRA (**Volume 5.20**). |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | evidence to suggest otherwise) – and the mitigation measures referred to in this section need to be explicitly linked to that impact | |
| 590 | | ***4.7.126*** *The new 400kV overhead line will pass through the eastern and northern edge of Hallen Marsh. This area is proposed as offsetting habitat for any future proposals at Avonmouth that affect the Seven Estuary SPA/Ramsar bird populations. This area is not considered to currently pose a significant collision risk to Severn Estuary SPA or Ramsar species due to the low suitability of habitats present and the low number of these species recorded in this area. It is therefore not currently proposed to fit bird diverters at this location. However, In the event that habitat creation works lead to a significant increase in usage of this area by SPA or Ramsar bird species, National Grid commits to undertaking appropriate measures to reduce collision risk such as the fitting of bird flight diverters.*<br><br>The 'future proposals' (strategic development plans) referred to in this section have not been included in the in-combination assessment. The interaction between the HPCCP and other proposals may result in an adverse effect on integrity – which could be mitigated by measures suggested above.<br>With regards to works at Hallen Marsh, NG has stated that it intends to monitor bird collisions/mortality at this location – and potentially 'retro-fit' deflectors if deemed necessary. It is important that NG provides details of the proposed monitoring strategy so that mitigation can be properly assessed as part of the HRA. Note: It is expected that monitoring is likely to be long-term, considering the birds might only begin using the habitat after a number of years i.e. as pressure from other developments increases. NG will need to consider the feasibility of long term monitoring over fitting deflectors up front | This updated information has been reviewed by NE and included in the HRA.<br><br>Further discussion has been undertaken with NE and the approach to monitoring has been revised and reissued for review by NE. The approach remains to monitor and fit bird diverters only if surveys determine they are necessary. |
| 591 | | ***4.7.149*** *The main species involved in potential movements between the Somerset Levels and Moors SPA and the Severn Estuary SPA are wigeon and teal. Wigeon and potentially teal could be fitted with GPS devices and their movements tracked over winter. The exact period would depend on the battery life of the devices available at the time. Funding would be provided to the BTO by National Grid to carry out the research.*<br><br>We would request that NG explicitly states how much funding will be provided and how it will be secured (e.g through s106). | S106 discussions are being undertaken by National Grid. |
| 592 | | ***Table 4.10 (page 169):***<br><br>This table does not include development pressure/planned development | This updated information has been reviewed by NE and included in the HRA. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | at Avonmouth. It is important that Local Authority Development Plan Documents are included in the in-combination assessment | |
| 593 | | ***4.12.2*** *Collision mortality associated with the two proposed wind farms at Black Ditch and Withy End has been calculated as part of the assessment process for these projects. The potential for collision mortality of birds forming part of the designated populations of both the Somerset Levels and Moors SPA and the Severn Estuary SPA is recognised. Appropriate mitigation measures based on adaptive management measures linked to post-construction monitoring of collision mortality are incorporated into the overall proposals for both wind farms. If implemented it has been determined that neither project would have an adverse effect upon the integrity of SPA designated waterbird populations.*<br><br>This is not correct. There is currently no mitigation proposed for the Withy End proposal – this is being challenged by Natural England and the RSPB. Also, it is important to note that if a post-construction monitoring and mitigation strategy is incorporated into a proposal it suggests that a residual impact cannot be ruled out. This HRA in-combination assessment will need to consider whether the residual impact from other relevant plans and projects added to the residual impact of the HPCCP could result in an adverse effect on integrity. Note: for some SPA bird species (where numbers are low) the mortality threshold is likely to be low | This updated information has been reviewed by NE and included in the HRA. |
| 594 | | ***4.12.3*** *Taking into account the proposed measures to deal with any potentially significant collision mortality associated with operation of the two wind farms, the overall in-combination impact is unlikely to be greater than that determined solely for the wind farms. This conclusion is based on the no net increase in collision mortality predicted for the proposed Hinkley Point C Connection project.*<br><br>This conclusion is incorrect. It cannot be concluded beyond reasonable doubt that the proposed overhead lines will have 'no net increase in collision mortality'. There may well be a residual impact associated with the overhead lines which, when added to the residual impact from other projects (e.g. wind farms), could result in an adverse effect on integrity | National Grid has confirmed that the removal of the 132kV south of Mark and will be undertaken prior to stringing of the new 400kV overhead line. All collision calculations have been re-run.<br><br>This updated information has been reviewed by NE and included in the HRA. |
| 595 | | *4.12.4* ***On the basis of the assessment information presented here it is therefore concluded that the Proposed Development in-combination with other plans and projects would not give rise to an adverse effect on the integrity of the designated waterbird populations of:*** | National Grid has confirmed that the removal of the 132kV south of Mark and will be undertaken prior to stringing of the new 400kV overhead line. All collision calculations have been re-run.<br><br>This updated information has been reviewed by NE and included in the HRA. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | This overall conclusion is flawed. See above | |
| 596 | | ***6.4.2*** *The bird collision monitoring and mitigation proposed for Sections A and B, the use of temporary bat flyways and the temporary management of land for bat foraging are all detailed in the Biodiversity Mitigation Strategy (**Volume 5.26 Appendix 2)** submitted with the DCO. These elements all fall within the DCO order limits and would be delivered by National Grid during or immediately following the construction period. It is expected these will be secured as a Requirement with details provided in the BMS.*<br>*6.4.4 National Grid will commit funds via an agreement with Bristol City Council for the Severnside Offsetting Scheme. The funds will allow for some habitat creation works and one year's bird collision monitoring. The habitat creation works will be undertaken by Bristol City Council as and when tenancy agreements allow. The Section 106 agreement would state that Bristol City Council will undertake bird collision monitoring once the habitat enhancement works have been undertaken.*<br><br>Note:<br>The key principles of proposed monitoring and mitigation will need to be agreed up-front i.e. prior to DCO determination.<br><br>One year's bird collision monitoring is unlikely to be satisfactory from a Habitats Regulations perspective | Monitoring and mitigation proposals have been updated and passed to NE for review and incorporated into the HRA and BMS as appropriate. |
| **Volume 5.8 (Biodiversity & Nature Conservation) and Appendix 2 (Biodiversity Mitigation Strategy)** | | | |
| 597 | | Natural England's Wildlife Licensing Team is currently providing pre-application advice to NG with regards to any activities which may require a Protected Species License.<br><br>Natural England would refer NG to the comments of the Local Authorities ecological representatives, the relevant Wildlife Trusts, the RSPB and other relevant environmental stakeholders in terms of wider/general biodiversity protection and enhancement | Consultation with the wildlife licencing team has continued. National Grid has reviewed comments from the Joint Councils and other relevant stakeholders. The responses are provided within this table. |
| 598 | **Bats** | Natural England would offer the following comments on bats:<br>The main areas of concern for this development are:<br>• The location of the proposed route in relation to the North Somerset and Mendip Bats SAC<br>• The Mendip Limestone Grasslands SAC and to a lesser extent the Exmoor and Quantock Oakwoods SAC.<br>• The permanent loss of hedgerows and trees at Sandford Substation.<br>• The loss of 128.7km hedgerow within the bat zone during development, with the permanent loss of 4.05km. | Noted. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | • The loss of 54.3ha grassland during the development with the permanent loss of 4.07ha grassland.<br>• The permanent loss of habitat at Tickenham Ridge.<br>• The permanent loss of roost trees | |
| 599 | Bats- Nailsea, Tickenham Ridge & Sandford | The surveyors recorded greater horseshoe, lesser horseshoe and barbastelle bat around Nailsea and Tickenham Ridge, which is a potentially important commuting and foraging route for those Annex II species. Again, it's not clear how much any habitat loss in this area will be compensated for and when. The loss of habitat in this area could have a negative effect on the barbastelles in particular. On reading the reports it seems like the loss of mature trees in this area may be permanent. Mature woodland is particularly important to this species as they prefer to commute through densely vegetated areas initially (though these areas are also used for feeding in) before commuting across other habitat to reach their foraging grounds | The loss of woodland habitat is across a narrow strip of woodland and scrub habitats will be managed beneath the overhead line to prevent complete fragmentation and hedgerows will be replanted. Further text on this has been included in **Volume 5.8.1.** |
| 600 | | Similar comments to those made above are true of the works at Sandford Substation. In this area there will be a permanent loss of hedgerow and pasture and all four Annex II species have been recorded in this area. There is to be replacement hedgerow planting in this area, which will take several years to establish itself. It's not clear if there will be temporary structures in place to maintain commuting routes in the interim and how any new planting scheme will connect with hedgerows that are to be retained. This needs greater explanation in order to understand the impact that the substation may have on the bats. It's also not clear from the report how significant the lighting of the substation may be in terms of its impact on bats | Further detail on the proposed landscaping scheme and measures during hedgerow establishment has been included in the ES. |
| 601 | | Noctules, leislers, serotines and pipistrelle species are attracted to lights, whereas the slower flying broad winged species i.e. long-eared, myotis species, barbastelle and the horseshoes tend to avoid lights | Substation lighting will only be used during periods of maintenance and this occasional use will not have a significant effect on bats. This information is included in the ES |
| 602 | | The substation at Standford should have an appropriate lighting scheme in place to mitigate for any potential disturbance to Annex II bat species in this area, which may prevent them using key commuting routes and foraging areas | Substation lighting will only be used during periods of maintenance and this occasional use will not have a significant effect on bats. This information is included in the ES |
| 603 | | The scheme could potentially cause significant commuting and foraging problems throughout its length through the amount of hedgerow being lost and the resulting fragmentation of the landscape. This is probably unlikely to be the case through re-planting schemes and the use of temporary barriers. It perhaps just needs to be drawn out a bit more in the report | Further text on this has been included in **Volume 5.8.1** to strengthen the conclusions. |
| 604 | | It appears that the loss of the tree roosts will be adequately compensated for | Noted. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| 605 | **SSSIs** | We are pleased to note that most of the issues we have raised at previous meetings and responses have been addressed, and we particularly welcome the following: | Noted. |
| 606 | | 8.7.60 and 8.7.99 The replacement sluice gate to be provided as part of offsetting. Please note that would like a tilting weir to be specified | **Volume 5.8.1** text and the BMS (**Volume 5.26.3**) has been refined to reflect these comments. |
| 607 | | 8.7.96 Compensatory planting will take place off the SSSI | **Volume 5.8.1** text and the BMS (**Volume 5.26.3**) has been refined to reflect these comments. |
| 608 | | 8.7.97 Re-profiling of ditches. Natural regeneration is also welcome rather than re-seeding. | **Volume 5.8.1** text and the BMS (**Volume 5.26.3**) has been refined to reflect these comments. |
| 609 | | Natural regeneration will need aftercare such as cutting weed species to allow the less competitive species to flourish. We would like to see detail in the ES of who will be carrying out this aftercare | **Volume 5.8.1** text and the BMS (**Volume 5.26.3**) has been refined to reflect these comments. |
| 610 | *Additional points:* | 8.7.62 and 8.7.63: Offsetting is discussed with reference to local wildlife sites and Hallen Marsh. Following discussions with the EA, both NE and the EA would like to explore the possibility of a reed bed by the Nailsea outfall. Pylon LD78 is situated by this ditch and perhaps the land within the order limits could be used for a reedbed | National Grid is not proposing to create a reed bed in this area. It considers appropriate levels of mitigation are being delivered through the imbedded landscape schemes, the BMS the OSPES and other s106 funds |
| 611 | | 8.7.86 Work should not be undertaken on SSSI land unless absolutely necessary | **Volume 5.8.1** text has been refined to clarify this. |
| 612 | | 8.7.89 There is mention of a report to be given to NE detailing the work done on SSSIs after it has been undertaken. This would be more useful before the work takes place | **Volume 5.8.1** text has been refined to clarify this. |
| 613 | | There is little information about the tracks here and how they will affect the vegetation of the SSSI. It is planned that the tracks will be in place for a number of years. We are concerned that the heavy vehicles using these tracks will cause compaction over the years and this will need to be compensated for after the tracks are removed. This needs to be considered carefully within the ES | Discussions have been undertaken with the Ground Environment consultants and **Volume 5.8.1** text has been updated to include this information |
| 614 | | The order limits are sometimes relatively wide across the SSSIs. We were given a map with ditch crossings but after discussion on a site visit, it seems that these locations could be subject to change within the order limits. We can therefore not give precise advice on the location of ditch crossings and the issues associated with any particular ditch | Once ditch crossing locations are agreed with NE (either areas to avoid or exact locations) no changes would be made without consultation and agreement with NE. The BMS sets out the approach to working within each SSSI, this includes obtaining S28E consent and the process for obtaining permission for any alterations to that consent. |
| 615 | | Re-establishment after the underground cabling has taken place is not detailed. As this is over such a large area this will have to be by re-seeding; the seed mix on SSSIs should be discussed and agreed with Natural England | The BMS sets out the approach to working within each SSSI including agreeing seed mixes with NE and the landowner. |
| **Volumes 5.6 (Landscape), 5.7 (Visual Effects), and 5.25 (OSPES** | | | |
| 616 | Quantock Hills | We note that some elements of the scheme will be approximately 5.5km of the Quantock Hills AONB. **We are reassured that this will not have** | National Grid consulted with and met the Quantock AONB unit during the early stages of project development. The unit was formally |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | **a significant effect on the AONB but we strongly recommend that the AONB Unit is consulted on the draft ES to confirm this** | consulted as part of the S42 consultation and no feedback was received. |
| 617 | Landscape character: construction phase effects<br><br>**Landscape sensitivity** | All AONB landscapes are considered by Natural England to be highly sensitive to development. It is therefore important to consider carefully whether a low sensitivity to change (taking account of the type of development proposed) identified by the ES for the Lox Yeo Valley is appropriate. Whilst this may be reasonable for the operational scheme (assuming successful implementation of all the mitigation and reinstatement measures), it is difficult to reconcile with a construction phase which will be highly intrusive and disruptive with excavations and the construction of temporary and permanent surface infrastructure. The ES helpfully lists the source of effects during a 5 year construction phase i.e.: | The AONB landscape is assessed as having a high sensitivity to the proposed installation of 400kV underground cables due this landscape having national value and a medium susceptibility to the change proposed.<br><br>Landscape effects have been assessed during the construction, operation, and decommissioning stages of the Proposed Development and have been reported separately in **Volume 5.6.1, section 6.5** |
| 618 | | These are clearly major construction activities and infrastructure, often impacting directly (especially with regard to undergrounding) on the landscape fabric of the AONB, and so their effect needs to be given due weight. Whilst the receiving landscape may have a low sensitivity to the operational scheme it is hard to justify that it is not highly sensitive to the construction of such a scheme given that this will entail a major (albeit temporary) impact on the fabric of the Lox Yeo Valley. Whilst this is necessary to protect the character and quality of a nationally designated landscape for the long term it is important that construct phase effects are fully anticipated, assessed and presented by the ES. This will:<br><br>• provide a basis from which to further explore opportunities for construction phase mitigation measures (recognising that designing mitigation measures can be an iterative process rather than fully confirmed by an ES); and<br>• allow the local community and visitors to be briefed on what to expect. We appreciate that to assess the magnitude of effect the duration of that effect and its reversibility is taken into account. However, whilst a five year construction phase (with fifteen years in total for all mitigation measures to mature) may be short in relation to the overall life of the scheme it is a long time for those living and working in the area or seeking to enjoy this nationally designated landscape. | Landscape and visual effects have been assessed during the construction, operation, and decommissioning stages of the Proposed Development and have been reported separately in **Volume 5.6.1, section 6.5** and **Volume 5.7.1, section 7.5**.<br><br>The method for the landscape and visual assessments are based on GLVIA3 guidance and take account of sensitivity and of the duration of effects.<br><br>The landscape assessment at **Volume 5.6.1, section 6.5** assesses the sensitivity of the AONB landscape in Section C to the installation of proposed 400kV underground cables as being high. The landscape assessment considers mitigation measures embedded in the design of the Proposed Development including the use of Horizontal Directional Drilling in sensitive locations to minimise tree and hedgerow loss, and the reduction of the cables swathe to minimise hedgerow loss. The landscape assessment also considers tree and hedgerow loss identified in the AIA at **Volume 5.21;** along with measures in the AIA, and in the CEMP at **Volume 5.26.1**, including tree, hedgerow, ground and soil protection measures, to minimise effects on landscape character and features both during construction and in the long-term. |
| 619 | | The impact of traffic movements and construction noise and activity on how the area is perceived and valued with impacts on characteristics such as relative tranquillity, should also be factored in. We note that Chapter 14 (Noise and Vibration) of the ES allocates a low sensitivity to construction and operational noise to 'Areas used primarily for leisure', including public rights of way. We don't have the technical competencies | **Volume 5.14.1** considers the effects of noise and vibration in terms of the understood human responses, rather than considering a particular feature such as a public footpath. In this respect, those categories assigned a higher order of sensitivity relate to private dwellings or defined public facilities within which freedom of movement is limited. The highest sensitivity is reserved for receptors both where people |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | to fully assess this chapter but we would question this categorisation of such areas. Those seeking to enjoy the relative tranquillity of the countryside via the rights of way network or visitor attractions are very sensitive to new sources or increased levels of noise, especially sounds not associated with an undeveloped rural setting and particularly within an AONB | are geographically restricted and where the influence of noise or vibration might be greater in terms of the health and well-being of their patrons (e.g. hospitals, schools). With respect to the 'low sensitivity' categorisation of users of leisure facilities, this takes account of the geographic mobility of individuals utilising assets, and therefore noise exposure can be pro-actively managed by users. This does not infer however that the noise and vibration effects on such users have not been considered in terms of exposure magnitude or duration. The potential noise and vibration effects on these assets in terms of both community facilities and leisure/tourism attractions have been considered in **Volume 5.15.1** (Socio-economics and Land Use). |
| 620 | | We therefore question the conclusion that the effects on landscape character on the undergrounding of the 400 kV cables during the construction phase would only be Moderate Adverse (Localised). We recommend that this conclusion is revisited to check whether a Major Adverse (Localised) assessment would be more appropriate | The proposed installation of 400kV underground cables in Section C is predicted to result in a moderate adverse magnitude of effect in accordance with the magnitude criteria in **Volume 5.6.1, Table 6.8**. Given the high sensitivity of the AONB landscape to this element of the Proposed development, and the moderate adverse magnitude of effect predicted, the significance of this effect would be moderate adverse for the short-term, in accordance with the significance criteria in **Volume 5.6.1, Table 6.9** |
| 621 | Construction compounds | The report identifies temporary construction compounds to be set up in two locations along the proposed 400kV underground cable routes in Section C, to the west of Barton Road close to the M5 motorway and to the west of Banwell Road. These would comprise vehicle parking, welfare facilities and site cabins. This information was not available when a Natural England officer carried out a site visit so we are not able to comment on their likely landscape or visual effect. We recommend that the AONB Unit's advice regarding these and any mitigation measures is given careful consideration | Noted. |
| 622 | Operational phase effects | The LVIA focuses on the benefits of undergrounding through Section C during the Operational Phase. The removal of the existing overhead line is clearly beneficial and we agree with the assessment of Moderate Beneficial of this in terms of landscape character. We hope that the assessment of 'Neutral' for the effect of the undergrounded cable will be achieved and successful reinstatement of pastureland above the route is crucial to that | National Grid can guarantee the re-instatement of land, the implementation of in-situ replacement planting and management of this planting for 5 years via a DCO requirement. |
| 623 | | We question whether an overall assessment of Moderate Beneficial landscape effect for the completed and operational scheme is fully justified. Whilst the removal of existing overhead lines is clearly a benefit, the AONB and its setting will still need to accommodate some new permanent surface infrastructure (Sealing End Compound, link pillars and a bridge across the River Axe) and there is no guarantee that landowners will permit the complete reinstatement of hedgerows and | The beneficial and adverse effects on the Mendip Hills AONB landscape predicted as a result of the Proposed Development in the short, medium and long-term (including in the setting of this AONB in Sections B and D) are presented at **Volume 6.5.1, section 6.5**, and have been determined in accordance with the landscape assessment method at **Volume 6.5.1, section 6.3**. |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | other landscape features. **On balance therefore, we ask that an overall assessment of 'Neutral' be considered for the operational phase.** | The overall effect of the operation of the Proposed Development on the AONB landscape has been assessed as being moderate beneficial as defined in **Volume 5.6.1, Table 6.9**.<br><br>National Grid can guarantee the re-instatement of land, the implementation of in-situ replacement planting and management of this planting for 5 years via a DCO requirement. |
| 624 | **Links to Heritage assets** | Chapter 6 recognises that cables installation would result in disruption to the field pattern. Chapter 11 (Historic Environment) says that 'In the study area, this landscape is predominately characterised by late medieval enclosed open fields, with some later alteration. The historic landscape within the study area is generally of moderate heritage significance, and is a representative and reasonably intact element of the wider historic landscape'. It is for English Heritage to provide detailed comments on this chapter, but Natural England would emphasise that maintenance of the existing field structure is vital to maintaining the character of this landscape. The Off-Site Planting and Enhancement Scheme may also have a valuable role in strengthening this component of the landscape | The OSPES includes landscape works to further reduce the adverse residual effects on landscape character and views of the Proposed Development. The works proposed are indicative and set out the principals and objectives of the enhancement measures. National Grid can agree the final details of these proposals with the LPAs within the agreed financial limits |
| 625 | Visual effects **Construction phase visual effects** | Chapter 7 concludes that visual effects on Section C would largely arise during the construction phase. We agree with this, assuming that:<br>• Pastureland above the route is successfully and quickly reinstated so that differences in surface vegetation do not persist to mark the route as a linear feature in the landscape over the longer term.<br>• The link pillars are sensitively located to minimise their visual impact in what will be a relatively open valley setting.<br>• The southern Sealing End Compound within the setting of the AONB and directly visible from Crook Peak is designed and screened to minimise its visual impact<br>• The bridge needed to take the cables across the River Axe is sensitively designed (as far as operational parameters will allow) and screened. The initial designs point to this being a substantial structure | National Grid can guarantee the re-instatement of land, the implementation of in-situ replacement planting and management of this planting for 5 years via a DCO requirement. Link box pillars would be sited close to field boundaries where possible. Proposed landscape mitigation planting for the South of Mendip Hills CSE Compound and River Axe cables bridge option will be implemented and maintained by National Grid |
| 626 | **Operational phase visual effects** | We are pleased that no Moderate or Major Adverse visual effects for the Mendip Hills have been identified for the operational phase. We agree with this conclusion although we have some comments about the assessment of lower magnitude effects | Noted. |
| 627 | **Short term** | The ES also concludes that construction effects would be short term and | The anticipated construction programme for the Proposed |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | **visual effects** | range from moderate adverse to minor adverse depending on the effects of a receptor's location, distance from the construction site and filtering of the view by vegetation. We would repeat the point we make regarding effects on landscape character i.e. whilst the construction phase is short term in relation to the life of the scheme it constitutes a relatively long period of time for people living in and visiting the area. It would be helpful to support the assessments of magnitude of effect with more precise estimates of how long those visual effects would persist. | Development (including 400kV underground cables in the Mendip Hills AONB) is provided at **Volume 5.3.2, Appendix 3B** |
| 628 | **Removal of existing overhead line** | The report concludes that removal of the existing overhead line (the F Route) will have a moderate beneficial effect, especially for receptors using Rights of Way who currently experience direct or filtered views of the line. We agree that the removal of this line will be beneficial. It will also improve views from the M5 into the AONB where the overhead line currently parallels the motorway. Whilst we appreciate that the removal of the overhead cables will be an important benefit, the uncertainty that land owners will accept full restoration of hedgerows and other landscape features, plus the presence of link pillars along the route* could negate some of that benefit to views within the Lox Yeo Valley. **We therefore question whether some assessments of Moderate Beneficial effects for the operational phase and residual effects would be more appropriately judged as Minor Beneficial.** | The assessment of visual effects during the operation of the proposed 400kV undergrounds has been undertaken on the basis that link box pillars would be sited close to field boundaries where possible. Exact locations are not known at this stage |
| 629 | | The setting for an AONB, i.e. the countryside which surrounds the designated area, is important to supporting the quality and character of the protected landscape itself. This can contribute to the defined 'special qualities' of the AONB as set out in its management plan. A defined special quality of the Mendip Hills AONB relates directly to its setting i.e. "far reaching views across the Severn Estuary to Wales and across the Somerset Levels to Glastonbury Tor and Hinkley Point". **Whilst we are not in a position to comment on the magnitude of the residual effect on views from the AONB we would ask for confirmation that that the effect on this special quality of the AONB has been factored into the assessment.** There may be no practical means of mitigating that effect without introducing some new vegetation to filter views from the AONB, but that would itself impact on that special quality by interfering with those open views. | An assessment of the effects on the special qualities of the Mendip Hills AONB is provided at **Volume 5.6.1, section 6.5**. |
| 630 | Cumulative impacts | We note that no cumulative impacts been identified for Section C of the route and we agree with that conclusion | Noted. |
| 631 | Mitigation | **Undergrounding**: As previously stated we welcome the major embedded mitigation provided by undergrounding | Noted. |
| 632 | | **South of Mendips Sealing End Compound**: We welcome the intention to implement proposed mitigation to screen the substations and cable sealing end compounds as early as is reasonably practicable and that a | Any trees or shrubs planted that, within a period of five years after planting, are removed, die or become seriously damaged or diseased, would be replaced in the first available planting season with a |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | Landscape Management Plan would be prepared for all permanent planting. We note however, that vegetation can only screen the lower parts of the Sealing End Compound located just to the south of the AONB. We assume therefore that from the summit of Crook Peak it may still be possible to see directly into and across the compound. We recommend that as the planting around the compound matures the planting scheme and its management regime are kept under review and if necessary adjusted to further improve the screening | specimen of the same species and size as that originally planted, unless otherwise agreed. |
| 633 | | **Soils**: A clear priority for the success of the scheme is the reinstatement of pastureland. We anticipate that this can be achieved quickly and do not expect any residual effects after 15 years. Careful protection and reinstatement of excavated soils will be crucial to achieving this. We note that the Construction Environment Management Plan (CEMP) promises that a Soils Management Plan would be prepared prior to construction commencing. It would have been preferable for this to have been part of the ES. Nonetheless we are reassured that the CEMP promises that stockpiled soils would be protected by appropriate measures to ensure soils remain suitable for proposed reinstatement works | An SMP will be prepared by the contractors and will be approved by the statutory authorities prior to each stage of works. The principles of the MP are prvided in section 3.4 of the CEMP. |
| 634 | | **River Axe bridge**: We note the construction mitigation measures proposed for the bridge. A greater concern is the mitigation proposed for the completed bridge given that this will be a relatively substantial structure crossing the Axe (wide enough to accommodate the cable 'swathe'). It should however, lend itself to being effectively screened and additionally blended into its landscape setting through appropriate planting and use/colour of building materials, including for the surface of this wide bridge. Further discussions with the AONB and LPA may be helpful before the design and mitigation package is finalised | Landscape mitigation proposals for the River Axe cables bridge option provided at **Volume 5.7.3, Figure 7.33.6** is considered appropriate and takes account of the underground cables easement, and constraints to planting adjacent to watercourses. |
| 635 | | **Temporary buildings and cabins**: We welcome the intention to keep, where practicable, the height of temporary buildings and cabins within the construction compounds to just one storey; and to minimise visual intrusion from lighting and equipment associated with sites and buildings | Noted. |
| 636 | Off-Site Planting and Enhancement Scheme (OSPES) | We welcome the proposed OSPES which has the potential to complement the embeded mitigation to be set out in the DCO by enhancing and strengthening the character of the immediate and wider wider landscape setting of the development. This is partcularly welcome in relation to a nationally dsignated landscape such as he Mendips AONB. We don't wish to comment in detail on the Scheme but we do wish to make the following points: | Noted. |
| 637 | | a. Rather than having a document which presents a high level strategy and a set of guiding principles crossed referenced to more detailed information about construction impacts, planting schemes etc. in other chapters and appendices, it would be helpful to bring all of that | National Grid considers that the presentation of the assessment and mitigation in separate volumes of the ES is appropriate. This is based on measures that National Grid can guarantee and will deliver via Requirements set out in the DCO and planting proposals which |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | information within a single OSPES for ease of reference and to provide a single detailed strategy document | National Grid cannot guarantee because others need to be involved and National Grid do not have the commitment necessary.<br><br>Guaranteed planting of replacement trees, tree groups and hedges 'in-situ' as part of reinstatement of land is detailed in the AIA at **Volume 5.21.1, section 9**. Guaranteed new planting of trees, tree groups and hedges with new site-specific infrastructure is detailed at **Volume 5.7.1, section 7.7**.<br><br>Planting replacement trees, tree groups and hedges in new locations with landowner agreement is detailed in the AIA at **Volume 5.21, section 9**. New planting as part of the OSPES is detailed in **Volume 5.25** and these mitigation measures are not guaranteed. |
| 638 | | b. We note that the OSPES cites a priority in one local landscape assessment to 'support traditional hedgerow management, and in particular conserve medieval field patterns'. This is very relevant given that the Historic Environment chapter identifies the study area as 'predominately characterised by late medieval enclosed open fields, with some later alteration'. The Scheme may therefore have an important role in complementing the reinstatement of hedgerows directly above the cable corridor in order to preserve and strengthen that traditional field pattern | Noted and the heritage implications of the OSPES proposals have been included in the Schedule of Enhancements at Appendix 25B. 'In-situ' hedgerow replacement planting is detailed in the AIA **Volume 5.21**. |
| 639 | | c. We wish to emphasise that the Scheme's implementation within the Mendip Hills AONB should be guided by the local expertise of the AONB unit and the policies, aims and objectives of the statutory AONB management plan. This will help to guarantee that the monies will be most appropriately and effectively targeted and increase the likelihood that local landowners can be persuaded to allow enhancement works on their land | National Grid has consulted the Mendip Hills AONB Unit on the OSPES and the Mendip Hills Area of Outstanding Natural Beauty (AONB) Management Plan 2014-19 (Mendip Hills AONB Partnership, November 2013) has been reviewed and used to guide the OSPES proposals.<br><br>The Mendip Hills AONB Unit have been consulted and the Mendip Hills AONB Management Plan 2014-19 has been reviewed and used to guide the OSPES proposals. |
| **The Environment Agency** | | | |
| 640 | Volume 5.5 Draft ES Chapter 5 EIA Approach and Method | We are of the view that the EIA has not appropriately assessed a number of impacts at this point. It is our understanding that this is the result of constraining timescales prior to the draft submission, however if this is not the case, the following points will need to be addressed: | |
| 641 | | The Lox Yeo – We have, throughout the consultation process, raised concerns about the potential impacts on the Lox Yeo as a result of the undergrounded 400kv line, which will run under this watercourse at two locations and adjacent to it for several hundred meters. In previous | The potential effects of heating on the Lox Yeo have been assessed in **Volume 5.10.1, section 10.5** and **Volume 5.8.1, section 8.5**. The potential effects on WFD objectives have been assessed and are included in **Volume 5.8.1 and 5.10.1** and **Volume 5.10.2 Appendix** |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | discussions with National Grid, the issue of temperature radiation from the underground lines was specifically raised as a potential impact, particularly with regards to the impact on the Water Framework Directive (WFD) status of this river and of downstream watercourses. | **10E.** |
| 642 | | In the most recent discussion with National Grid regarding this issue, National Grid representatives stated that it is unlikely that they will be able to provide sufficient evidence to illustrate that the level of impact on WFD would be acceptable. As such, we agreed that an acceptable approach would be for National Grid to provide a WFD assessment to the best of their ability and when concluding that impact may occur, they would suggest appropriate mitigation. Mitigation options were discussed and the most appropriate option was considered *in-situ* tree planting. Tree planting along the river bank would provide additional shading and help to mitigate against any increase in water temperature as a result of temperature dissipation from the underground lines. | A summary of the WFD assessment is provided in **Volume 5.10.1.**Furth details are provided in **Appendix 10E** of **Volume 5.10.2.**<br><br>Proposals for planting along the banks of the Lox Yeo, for habitat and landscape enhancement are included in OSPES at **Volume 5.25** |
| 643 | | No WFD assessment has been provided for the Lox Yeo; whilst it has been discussed verbally and an acceptable course of action has been agreed, the formality of the WFD assessment still needs to be undertaken in order to acknowledge the potential impacts and to ensure mitigation measures are accorded appropriate weighting. Fortunately, mitigation in the form of tree planting has been incorporated into the Lox Yeo SNCI. Accordingly, it will be a relatively simple paper exercise. | The potential effects of heating on the Lox Yeo have been assessed in **Volume 5.10.1, section 10.5** and **Volume 5.8.1, section 8.5**. The potential effects on WFD objectives have been assessed and are included in **Volume 5.8.1 and 5.10.1** and **Volume 5.10.2 Appendix 10E.**<br><br>A summary of the WFD assessment is provided in **Volume 5.10.1.**Furth details are provided in **Appendix 10E** of **Volume 5.10.2.**<br><br>Proposals for planting along the banks of the Lox Yeo, for habitat and landscape enhancement are included in OSPES at **Volume 5.25** |
| 644 | | A Flood Defence Consent (FDC) will be required before these works will be compliant with current legislation. We will be obligated to ensure that any FDC issued will not result in a deterioration in WFD status of any waterbody and therefore, these assessments will need to be undertaken before FDC can be issued | Noted. |
| 645 | ES Chapter 8 – Biodiversity and Nature conservation | Further to previous concerns raised regarding a lack of impact assessment for the Lox Yeo, the following points have, in our view, also been insufficiently assessed.<br>Protected species - Due to the transient nature of a number of the protected species assessed, including water voles and otters, pre-commencement surveys will be required before any vegetation clearance or on site works are undertaken. Appropriate mitigation will need to be in place, which will be informed by these surveys | Temperature effects on aquatic and terrestrial habitats have been clarified in light of current scientific information available and consultation with the other environmental disciplines<br><br>Requirement for pre-construction surveys is specified within **Volume 5.8.1 section 8.7**, and detailed within the BMS. The BMS will be a Requirement of the DCO. |
| 646 | | 8.3.83 – Fish – This is incorrect, we have provided fish population data where available but have been unable to provide data for a number of impacted water ways including the Lox Yeo | The text on this matter has been clarified |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| 647 | | Table 8.22 Valuation of Habitat Types – We disagree with the assertion that the salt marsh has no inherent value in its own right. Salt marsh habitat is not only of value for its part in the wider estuarine mosaic, but also as a habitat which supports a wide range of plants and animals which are specifically adapted to those conditions found on a salt marsh. There are also often socio-economic advantages to salt marshes, which should not be overlooked. | The text on this matter has been clarified |
| 648 | | 8.5.16 - National Grid have previously agreed to consider the replanting of ditches with vegetation transplanted from local ditches. This should increase the success and speed of colonisation as these plants will be better adapted to the local conditions than those sourced from plant nurseries. We can provide additional guidance in respect of this matter, if necessary | **Volume 5.8.1** text on this matter has been clarified at **section 8.4**: Embedded Habitat Reinstatement and information has been included in the BMS. |
| 649 | | 8.5.81 – Whilst significant fisheries and biodiversity impact is unlikely, shading caused by the bridge works could result in a loss of bank-stabilizing vegetation. This could result in geomorphological changes including increased erosion and even bank failure. National Grid should review this risk and mitigate accordingly | Bank stability is a key consideration of bridge design which will be determined at the detailed design stage. This has been clarified in **Volume 5.8.1**, **section 8.5.**<br><br>Two optional clear-span bridges are proposed at the River Axe and Towerhead Brook and in each case vegetation lost to the bridge construction has been included within the habitat loss calculations. At the River Axe, the bridge is set away from the water's edge with footings in the adjoining agricultural land. The banks of the watercourse support a grassy sward of common and widespread species, some tolerant of wet ground conditions, and marginal vegetation dominated by common reed. Any localised die back of this vegetation as a result of shading by the bridge is not anticipated to incur any significant impact on bank stability in terms of erosion. At Towerhead Brook, the bridge will cause loss of vegetation from the existing shaded riparian corridor (established hedgerow, scrub and herb layer) to facilitate work. The watercourse is a shallow flowing stream with low banks colonised by species typically associated with the adjoining pasture and hedgerow habitats. As such, potential effects of localised shading are unlikely to have a significant impact on bank stability in terms of erosion.<br><br>Nevertheless, local ground conditions will be taken into account during detailed design of each bridge and where, as a result of soft bank substrate, stability (in terms of erosion as well as bank failure) is reliant on vegetation, appropriate soft bank face protection techniques will be incorporated into the design in line with best practice guidance at that time. Such techniques may include bioengineered options and/or locally appropriate re-vegetation (establishment of young |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | | plants and trees or by planting seeds). Current guidance includes *Good Practice Guide for Bank Protection: Rivers and Lochs* (SEPA, 2008), *Waterway Bank Protection: A guide to erosion assessment and management* (EA, 1999) and *Environmentally Sensitive Channel and Bank Protection Measures* (NCHRP, 2005).<br><br>A number of smaller temporary bridge crossings and construction accesses are proposed, which will sit low across the ditch and may incur loss of bank habitat. Assuming worst-case scenario, habitat loss has therefore been calculated as for culverts. Potential additional shading effects from these low-set bridges are anticipated to be small-scale and are not anticipated to incur any significant impact on bank stability |
| 650 | | 8.5.82 – As previously mentioned, there is a high risk of these culverts remaining in place because land-owners choose to keep the improved infrastructure on their land. Additionally, the culverts will, in all probability, be *in-situ* for approximately 5 years. As such it is suggested that these structures should be assessed as permanent structures and appropriate mitigation suggested | The Proposed Development, and so too the Requirements of the DCO, will stipulate that the culverts will be removed in the latter stages of construction. Text in **Volume 5.8.1**, **section 8.5** 'Potential Construction Effect' has been amended to clarify this point.<br><br>**Volume 5.8.1** assesses potential effects of culverts being in place for the entire four year construction period, a medium-term temporary effect.<br><br>Any land owners seeking permanent retention of any specific culverts will need to apply for separate permission and any long term impacts should assessed in their application |
| 651 | | 8.5.91 – We disagree with this point – the probability of effect is, by definition, probable, not possible | The terminology has been revised to 'likelihood of effect' |
| 652 | | 8.5.183 to 8.5.189 – We are of the view that this represents an incorrect/incomplete assessment. There is no assessment on the potential increase in water temperature, as a result of the underground 400kV line. Temperature increase could potentially have a significant impact on the resident trout population in the Lox Yeo. | Temperature effects on aquatic and terrestrial habitats have been clarified in light of current scientific information available and consultation with the other environmental disciplines |
| 653 | | Table 8.27 Potential Operational Effects Prior to Mitigation – Lox Yeo SNCI – Temperature radiations – The fact that there is insufficient data on temperature radiation means that a precautionary assessment approach should be taken. It is inaccurate to state the magnitude is low and the impact minor because no evidence is available to substantiate that contention. The response should state 'unknown' or work along a precautionary approach because insufficient information is available to indicate the level of impact. | As above. Effects have been identified where possible but the certainty or likelihood of these reflects the precautionary approach suggested |
| 654 | | 8.7.56 – We are pleased to note that tree planting has been prioritized in the Lox Yeo SNCI but it should be specified that at least some planting | **Volume 5.8.1** & OSPES (**Volume 5.25**) text has been amended to clarify this |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | needs to occur on the river bank in order to provide shade to mitigate for any temperature increase, however this point is covered later in the document. | |
| 655 | | Water vole mitigation - 8.7.180 to 8.7.191 – National Grid needs to pre-determine a number of translocation sites where water voles are known to be absent. This is to avoid territorial fighting between resident and translocated voles. If any wetland habitat is being created as mitigation for impact (ditch creation) it may be worth ensuring this habitat is suitable for water voles and using it as a translocation option. | Sensitive vegetation clearance to displace water voles from working areas will be carried out in the season prior to territories becoming established, thereby avoiding territorial fighting between resident and relocated water voles later in the year. **Volume 5.8.1** has been amended to clarify this. |
| 656 | | 8.7.197 – As this is a funding dependant project, we would recommend that this is reworded to: 'in the event of an otter mortality, the ECoW will contact the EA for further instructions and if requested, will send the carcass to Cardiff University for assessment'. | **Volume 5.8.1** has been amended. |
| 657 | CEMP Schedule of Mitigation Table for LPAs 2 2 14 | Ref # 43 (also 53) – More detail will be required here. This needs to specify that it is referring to the dewatering of groundwater and then discharging to ground and should specifically exclude aquatic environments | This has been updated and is covered in the Draft CEMP (**Volume 5.26.1**) at section 3.4 and section 3.5. |
| 658 | | Ref # 50 – States that additional bank stabilization will be put in place if necessary – This requires additional detail and should also stipulate that green engineering solutions would be sought where practicable. Any main river works will require FDC | This has been updated and is covered in the Draft CEMP (**Volume 5.26.1**) at section 3.4 and section 3.5. |
| 659 | | Ref # 54 – This is incorrect and should be amended – Some bankside tree planting will need to occur to replace riparian foliage lost and to mitigate against other impacts. A presumption that tree planting will occur a minimum of 6m from all water courses is extremely misleading and should be omitted entirely; alternatively this can be rephrased under a separate 'terrestrial mitigation' heading and accompanied by an additional aquatic replanting methodology. | This has been removed. |
| 660 | | Ref # 65 – Is National Grid proposing to include this assessment as part of the DCO? All appropriate impacts and mitigation options should be within the EIA which accompanies the DCO submission. | This has now been completed. |
| 661 | | Ref # 99 – We are of the view that this should be amended to read - 'waste will not be burnt'. Given the quantities of waste which will be removed during development, the small amount which might usually be burnt would represent a negligible additional cost and the blanket ban on burning material would further avoid the accidental burning of inappropriate wastes. | This has now been updated at section 2.7 of the Draft CEMP, **Volume 5.26.1**. |
| 662 | Additional points | We would advise that greater emphasis is afforded to the following issues: | |
| 663 | | Invasive species; National Grid will need to ensure that areas of work are covered by appropriate invasive species management. Soil movements | Invasive species are covered by the Biodiversity Mitigation Strategy and it is expected that a Soil Management Plan will be a Requirement |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | will need to be limited if invasive species are present. If invasive species are present when bank works are to be carried out, they will need to be managed in accordance with EA guidelines (available on the Agency's website). | of the DCO. |
| 664 | | As previously advised, there have been discussions regarding existing drainage from the Tickenham, Nailsea and Kenn moors, in particular, how the potential for an improvement in water quality through the SSSI may be impacted by the current proposals. It would be useful to have further discussions with National Grid and Natural England, to establish National Grid's position in respect of this matter. | The CEMP at **Volume 5.26.1** includes commitments to protect the water quality of all watercourses along the route and the WFD assessment concludes there will be no deterioration in chemical quality as a result of the Proposed Development. It is our understanding the cause of pollution in the Nailsea storm drain is most likely to be a series of misconnections within Nailsea and is the subject of an investigation by the local water company. |
| 665 | | We currently have major concerns regarding the submitted WFD Assessment. It would have been preferable for the WFD assessment work to be presented together within the draft documentation, as opposed to being dispersed across a number of Chapters and Sections | A comprehensive WFD assessment is provided at **Volume 5.10.2 Appendix 10E**. |
| 666 | | We would advise that full details of any works proposed in respect of each waterbody must be provided, preferably in tabulated form. We are currently unable to determine the potential impacts of such works at the waterbody scale, which is the fundamental concept underpinning the WFD. | A comprehensive WFD assessment is provided at **Volume 5.10.2 Appendix 10E**. This is grouped by each waterbody identified along the route. |
| 667 | | The Lox Yeo is not identified in any of the reports as requiring a WFD assessment with regard to possible impacts on water temperature. As mentioned above, this would need to be done before any FDC was granted. | The Lox Yeo is now included in the WFD assessment. |
| 668 | | Section 8.8.3 refers to 'appropriate' methods of bank stabilisation. The use of hard engineering (e.g. gabions/sheet piles) should be avoided unless it can be demonstrated on a case-by-case basis that there is no suitable soft or bio-engineering solution. | Methods of bank stabilisation will be agreed with the EA prior to the commencement of construction and as part of the application for Flood Defence consent. |
| 669 | | Section 8.8.4 states that the total amount of temporary culverts is only a small proportion of the total network (it will actually be in excess of 4km) however, this does not allow an assessment of the significance for individual waterbodies. As previously discussed, there is a reasonable risk that a significant number of the culverts will become permanent features. | *Text amended as per response to 8.5.82*<br>Also, see **Volume 5.10.2, Appendix 10E** WFD Assessment |
| 670 | | Section 10.5.77 considers the implications of realigning the Parish Rhyne and concludes that realignment could deliver a gravel bed river. Unfortunately, no baseline assessment has been provided in respect of the current channel morphology to determine whether this is a viable proposition. As rhynes are typically low energy systems, it would appear unlikely. | Parish Rhyne was dry at the time of survey; further surveys will be required prior to commencement of construction. This survey will include current channel morphology. |
| **Mendip Hills AONB Unit** | | | |
| **General** | | | |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| 671 | **Summary** | We believe that the majority of what is being proposed by National Grid is well justified and results in a favourable solution to the project. We welcome the proposals to underground through the Mendip Hills AONB and appreciate the benefits the removal of the existing 132KV line will bring. | Noted. |
| 672 | | We are concerned however that too little emphasis has been put on the negative impacts of the proposals and we question whether it is appropriate to assess the overall impact on the Mendip Hills AONB as "***Moderate Beneficial"***. Given that the Yeo Valley will suffer 5 years of construction related issues, a number of years for the scars to heal, the imposition of the sealing end compound, river crossings and link pillars, **we recommend that this conclusion is revisited. We consider that "Neutral" would be a more appropriate assessment of the overall impact on the Mendip Hills AONB** | Landscape effects have been assessed during the construction, operation, and decommissioning stages of the Proposed Development and have been reported separately in **Volume 5.6.1, section 6.5.**<br><br>The overall effect of the operation of the Proposed Development on landscape character has been assessed as being beneficial. The landscape assessment at **Volume 6.5.1, section 6.5** assesses the beneficial and adverse effects on the Mendip Hills AONB landscape predicted as a result of the Proposed Development (including in the setting of this AONB in Sections B and D). Effects have been determined in accordance with the landscape assessment method at **Volume 6.5.1, section 6.3**.<br><br>The overall effect on the Mendip Hills AONB landscape has been assessed as being moderate beneficial as defined in **Volume 5.6.1, Table 6.9** |
| 673 | **Detailed comments** | <u>Methodology</u><br>We welcome the changes that have been made to the methodology and the way the assessments have been presented. We are pleased to see the addition of the table to illustrate the landscape effects and visual effects. We are concerned however that the methodology has changes substantially from what was presented in the PEIR and that new conclusions have been drawn. We remain concerned that the scale of assessment is insufficiently fine grained at<br>the southern edge of the Mendip Hills AONB; the junction of sections B and C. | The method has been refined to take account of GLVIA3 particularly with respect to determining sensitivity, and taking account of the duration of effects.<br><br>The ES landscape assessment has been undertaken to an appropriate level of detail to identify the likely significant effects of the Proposed Development on landscape character. |
| **Volume 5.6, Chapter 6 Landscape including:<br>Tables 6.4, 6.5 and 6.8 and Para 6.4.298<br>Page 108, Page 169** | | | |
| 674 | | We are concerned about the assessment made of susceptibility to change and consequent sensitivity of the landscape character of the Mendip Hills AONB.<br>We do not agree that the susceptibility of the AONB landscape to change, brought about by the proposed development is **"Low",** as stated. Elements of the proposed<br>development include visually and physically intrusive construction | The overall effect of the operation of the Proposed Development on landscape character has been assessed as being beneficial. The landscape assessment at **Volume 6.5.1, section 6.5** assesses the adverse indirect effects on the Mendip Hills AONB landscape that are predicted as a result of the Proposed Development in the setting of this AONB (in Sections B and D). The overall effect on the Mendip Hills AONB landscape has been assessed as being moderate |

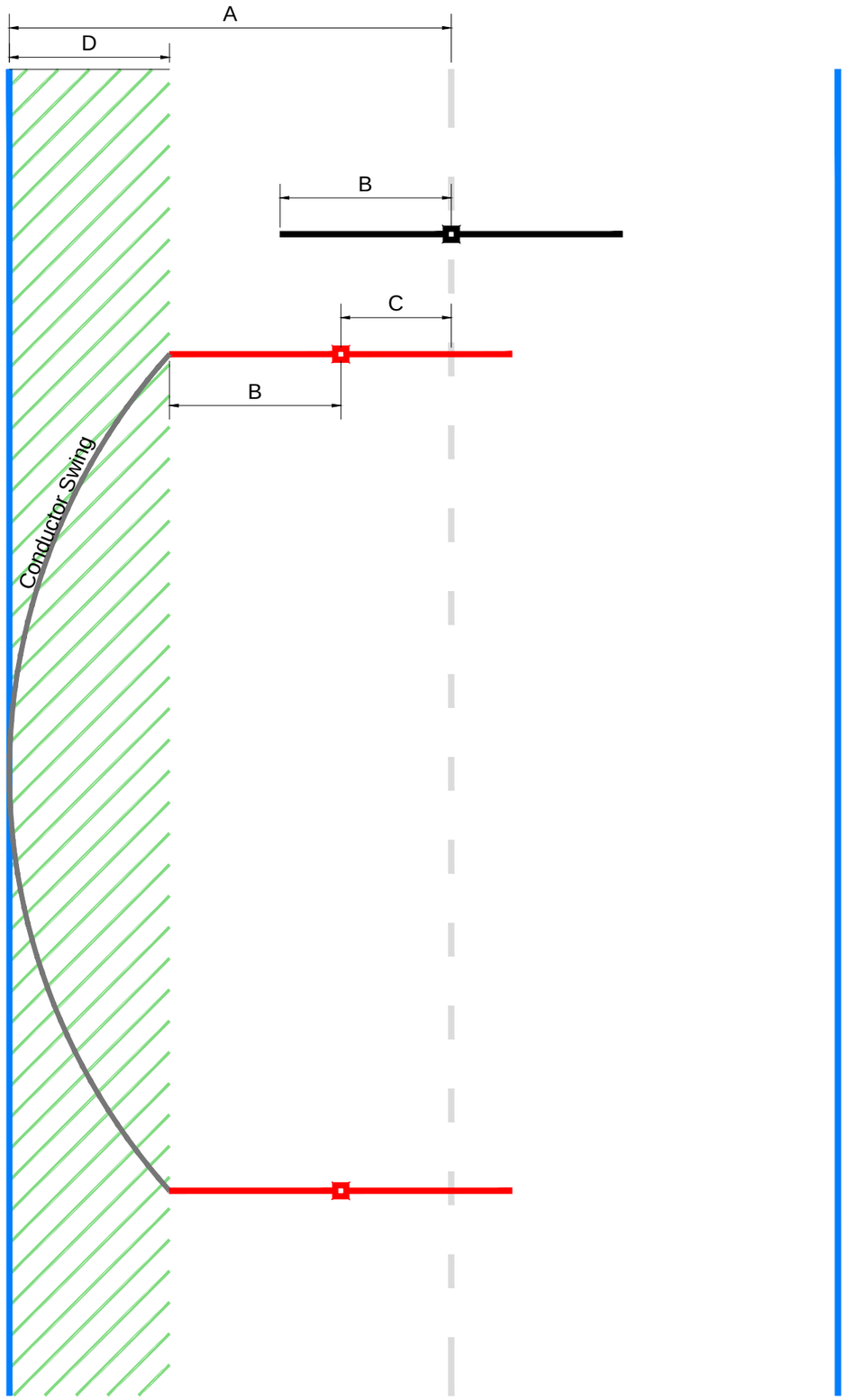
| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | activities, removal and only partial replacement of vegetation, introduction of built elements such as CSECs, link pillars, watercourse crossings and the undergrounding 'scar' on the landscape. The character of the whole AONB is considered to have a **Medium** susceptibility to change in accordance with the criteria in Table 6.4. which states,<br><br>*"there is one or more overhead line present in the landscape; and or there is some backgrounding by landform, woodland, and or built form; and or the landscape type is generally able to accommodate the Proposed Development without suffering detrimental effects on its character."*<br><br>It is considered however, as stated above, that the susceptibility and sensitivity of the AONB, should not be assessed as a whole, but at a finer grain of its many constituent LCAs. | beneficial as defined in **Volume 5.6.1, Table 6.9**.<br><br>National Grid can guarantee the re-instatement of land, the implementation of in-situ replacement planting and management of this planting for 5 years via a requirement in the DCO. |
| 675 | | Following on to apply the criteria in Table 6.5 to the entire AONB, a nationally valued landscape with a medium susceptibility should be ascribed a **High Sensitivity rating**, not **low** as stated. It is noted that the AONB Landscape was ascribed a high sensitivity rating in the PEIR. | The overall effect of the operation of the Proposed Development on landscape character has been assessed as being beneficial. The landscape assessment at **Volume 6.5.1, section 6.5** assesses the adverse indirect effects on the Mendip Hills AONB landscape that are predicted as a result of the Proposed Development in the setting of this AONB (in Sections B and D). The overall effect on the Mendip Hills AONB landscape has been assessed as being moderate beneficial as defined in **Volume 5.6.1, Table 6.9**.<br><br>National Grid can guarantee the re-instatement of land, the implementation of in-situ replacement planting and management of this planting for 5 years via a requirement in the DCO. |
| 676 | | This issue is considered likely to be as a result of the unevenly differentiated criteria used in Table 6.4 and 6.5, and calls into question all of the assessments made in respect of landscape sensitivity throughout the project study area that rely on the same criteria. | The overall effect of the operation of the Proposed Development on landscape character has been assessed as being beneficial. The landscape assessment at **Volume 6.5.1, section 6.5** assesses the adverse indirect effects on the Mendip Hills AONB landscape that are predicted as a result of the Proposed Development in the setting of this AONB (in Sections B and D). The overall effect on the Mendip Hills AONB landscape has been assessed as being moderate beneficial as defined in **Volume 5.6.1, Table 6.9**.<br><br>National Grid can guarantee the re-instatement of land, the implementation of in-situ replacement planting and management of this planting for 5 years via a requirement in the DCO. |
| 677 | | The Mendip Hills AONB unit has welcomed the proposal to underground Section C of the route. There is concern, however, that the ES does not adequately assess the effects the construction phase will have on the AONB and has focused too much on the benefits that the removal of the 132Kv line will bring during the operational phase. | |
| **Visual Effects Chapter 7, Para 7.5.122 - 7.5.128** | | | |
| 678 | | There appears to have been no assessment made of visual effects on motorist on the M5 in Section B or C. Consideration of this receptor is | The M5 has been assessed sequentially as a long distance route through Sections A to G and included in Visual Assessment Tables at |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | particularly important in the northern part of Section B and the southern part of Section C, given the proximity of the 400Kv overhead lines, the CSEC and the proposed River Axe bridge.<br><br>Whilst its value is relatively low it is still considered to be of regional importance as it is the main tourist route through the southwest. The number of receptors using this particular part of the route, with attractive views to the Mendip Hills, Brent Knoll and opening out over the Somerset levels, the susceptibility to changes as a result of this type of development and the associated construction activities is considered to be medium.<br><br>We are of the opinion that the sensitivity of this receptor should be considered to be medium.<br><br>The final ES needs to carefully assess the effects on views that will be experienced by users of the M5.<br><br>Sequential cumulative effects on users of the M5, A38 and main railway line have not been assessed. For the same reasons given above, in the comment on Para 7.5.122 -.128, these are considered to be receptors of regional importance with medium sensitivity to change. Therefore it is considered important that the sequential cumulative effects on the visual amenity of users travelling north and south bound on the relevant lengths of these routes | **Volume 5.7.2, Appendix 7I**. Tables are provided in the final ES, and an overview of effects is included in the draft ES visual effects chapter. Receptors using the M5 are of medium susceptibility to change and have views of regional value and have been ascribed as of medium sensitivity |
| 679 | Off site planting | We are also pleased at the efforts that have been made to mitigate against the impact on landscape character and visual impact through of site tree planting. We are concerned however that much of the planting is likely to be out of the control of National Grid and this questions whether it will be planted and maintained.<br><br>We consider that there may be more opportunity to consider off site planting to mitigate the bridges and joint pillars now that their locations are known.<br><br>Tree planting south of Sealing end compound, by M5 Motorway, shown on plan does not tally with the description in the schedule. 64 trees shown on plan but only 22 shown in the schedule – MB1 1.69 | The assessments in the Environmental Statement do not rely on implementation of the OSPES planting as mitigation.<br><br>Funding for the OSPES takes account of the costs to negotiate with landowners, prepare schemes, implement them and monitor and maintain them for 5 years.<br>5 years is the appropriate period for maintenance and is the timeframe set out in the model DCO provisions in PINS guidance.<br><br>The funding for the OSPES would be secured via a S106 agreement and would be drawn down as required. National Grid does not consider that 'compensation' other than funding planting is appropriate and that in the absence of the OSPES planting the proposals would remain acceptable considered against national planning policy.<br><br>Guaranteed site-specific mitigation proposals for the River Axe |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | | Cables Bridge Option and the Towerhead Brook Bridge are described at **Volume 5.7.1, section 7.7**, and are illustrated on **Figure 7.33.6 and Figure 7.34.6 at Volume 5.7.3.**<br><br>The OSPES includes 22 trees in this location. The remaining trees form part of the guaranteed site-specific mitigation planting for the South of Mendip Hills CSE compound and are shown for information only |
| 680 | Cable Bridges | These are larger and higher out of the ground than expected. The detail design includes cladding, use of steps and balustrades; these elements give a suggestion of scale. The structure is very large and it would be preferable not to reveal its size. It may be better to avoid these details and try to produce a structure that is hard for the viewer to scale in the landscape. Is the solid balustrade necessary? The (local) stone cladding is inappropriate. Would it be possible for the grasscrete to extend over the whole surface? Cannot see any mitigating planting associated with the bridges. A detail design scheme is needed to show how these large structures and the ramps are to be integrated into the landscape. | Landscape mitigation proposals are illustrated at **Volume 5.7.1, Figure 7.33.6**. National Grid will agree the detailed design and material finishes for the bridge with the LPA via Requirements set out in the DCO. |
| 681 | Pylon design | We are also concerned that the pylons will be visible from key views out of the AONB and also be visible in key views into the AONB. We are concerned that Chapters 6.and 7 do not appear to fully represent what we believe will be the true impacts of the development on the Mendip Hills AONB. We note the proposal to use the T pylon design in the sections close to the AONB<br><br>We appreciate that being lower in height, the pylon benefits many situations, however we are concerned that the pylon appears to be more visible over greater distance and is more visible when seen against a dark background. From the higher ground of the Mendip Hills AONB, seen against the ground, the masts will be visible and will be visible over greater distances than the lattice pylon. | The assessment of the potential effects of the different pylon design options is provided in the Pylon Design Options Report.<br><br>The assessment of effects on the special qualities of the Mendip Hills AONB (including views from and towards the Mendip Hills AONB) is provided at **Volume 5.6.1, section 6.5**<br><br>The assessment of visual effects resulting from the construction, operation and decommissioning of the Proposed Development in receptor views from the Mendip Hills in Section C, and in receptor views from the Somerset Level and Moors in Section B towards the Mendip Hills AONB is provided at **Volume 5.7.1, section 7.5** and **section 7.8**, and at **Volume 5.7.2, Appendix 7B** and **7C**.<br><br>Photomontages for the view from Crook Peak and from the West Mendip Way and a PRoW on Loxton Hill have been provided at **Volume 5.18.2** to support the visual assessment at **Volume 5.7.1**. |
| **Avon Wildlife Trust** | | | |
| **Chapter 8 Biodiversity and Nature Conservation** | | | |
| 682 | | Route B was introduced following consultation feedback in December 2012 and will cross the Reserve. A pylon will be located at a new access point adjoining the 132kv proposed undergrounded line at the southern end and a further pylon would be located on a field within the Reserve. The route will then pass directly onto Port land to the north-west. The | A route outside the Nature Reserve would bring the line closer to properties along Wharf Lane and Sheepway. The Holford Rules that advises “avoid routeing close to residential areas as far as possible on grounds of general amenity”. The alignment for Option B has sought to do this. Although it should be noted in this section that |

| REF NO | PARA | REPRESENTATION | RESPONSE |
|---|---|---|---|
| | | route will create a potential new obstruction for birds using the Estuary and Reserve and then flying down to the Gordano Valley. We have suggested that the route could be taken further east through the Port, but this doesn't appear to have been included in the ES. | National Grid's preference is for Option A. |

Figure 5.1 - Overhead Line Limits of Deviation – Lateral Pylon Movement




SITE MAP

Key

- Limits of Deviation (A)
- Current Alignment
- Max. Lateral Position of Pylon within LoD
- B — Pylon Arms and Conductors (Length in M)
- C — Max Lateral Movement of Pylon (Length in M)
- D — Max Buffer Zone Required for Conductor Swing
- Conductors

| ISSUE | DATE | COMMENTS | DRAW | CHK'D | APP'D |
|---|---|---|---|---|---|
| A | 25/03/2014 | DCO SUBMISSION | AJG | BC | BC |

Title

NATIONAL GRID (HINKLEY POINT C CONNECTION PROJECT)
ENVIRONMENTAL STATEMENT
VOLUME 5.5.3

400/132kV OVERHEAD LINE
LIMITS OF DEVIATION -
LATERAL PYLON MOVEMENT

nationalgrid

National Grid plc, Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA

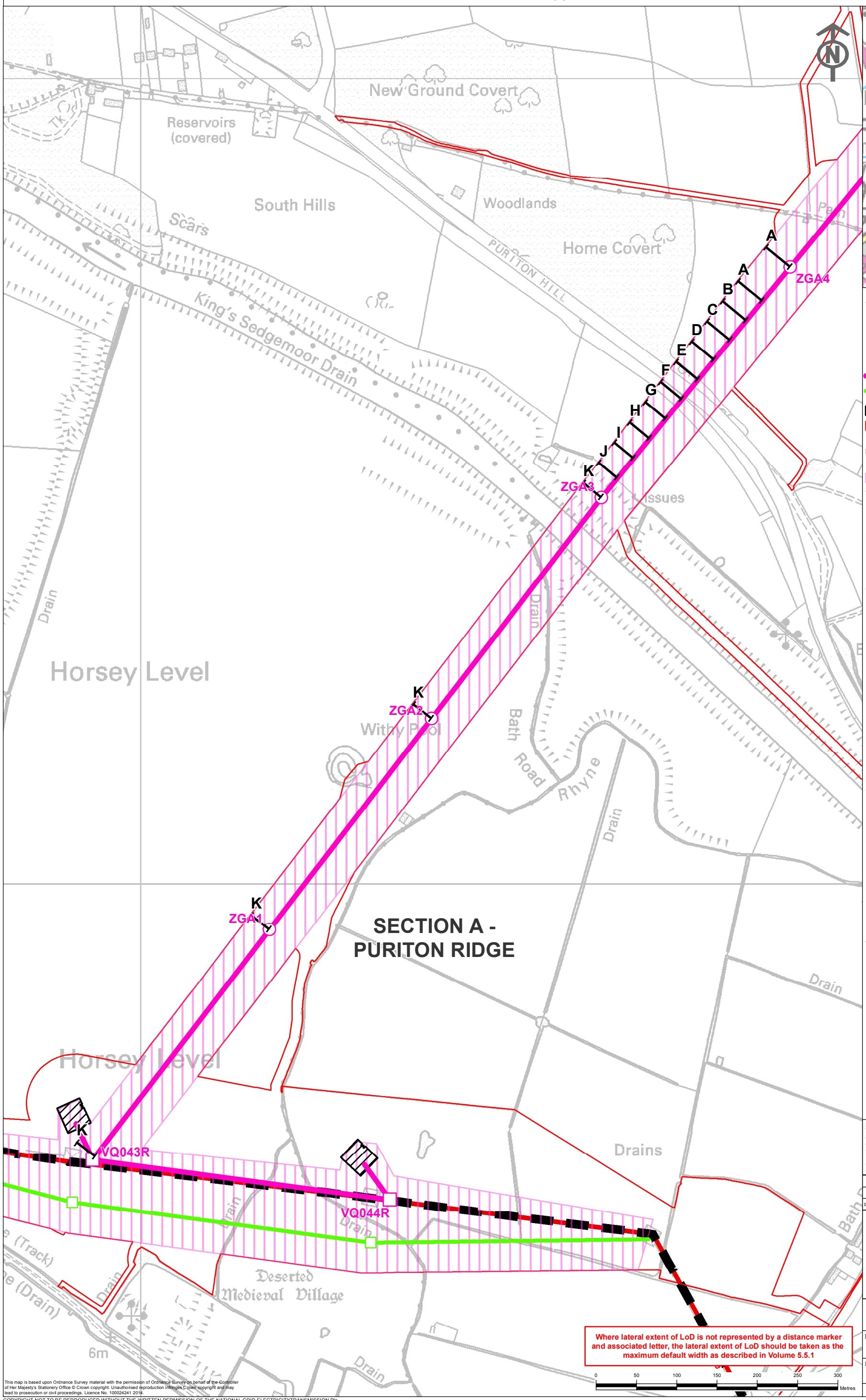
| NG INVESTMENT No. | APPLICATION No. | | CAD |
|---|---|---|---|
| 20897 | EN020001 | | A3 |
| FIGURE No. 5.1 | DRAWING No. D1979.005 | | SCALE NTS |
| SHEET 1 of 1 | | | ISSUE A |

COPYRIGHT NOT TO BE REPRODUCED WITHOUT THE WRITTEN PERMISSION OF THE NATIONAL GRID ELECTRICITYTRANSMISSION Plc

Figure 5.2 - Overhead Line Limits of Deviation – Pinch Points

NATIONAL GRID (HINKLEY POINT C CONNECTION PROJECT)
ENVIRONMENTAL STATEMENT
VOLUME 5.5.3

400/132KV OVERHEAD LINE LIMITS OF DEVIATION 'PINCH POINTS'
WITHY POOL




## Key

**Proposed Infrastructure**

- Proposed 400kV Standard Lattice Pylon Position
- Proposed 400kV T-Pylon Position
- Proposed Temporary Pylon Position
- Proposed Route for 400kV Overhead Line
- Proposed Route for Temporary 275kV Overhead Line
- Proposed Bridgwater Tee 400kV Cable Sealing End Compound Work Area
- Order Limits

**Existing Infrastructure**

- Existing 275kV Overhead Line

**Limits of Deviation (LoD)**

- Proposed 400kV Overhead Line Route LoD

**A** Lateral Extent of LoD (either side of route centreline) = 40m
Maximum Lateral Movement of Pylon from Proposed Alignment = **10m**

**B** Lateral Extent of LoD (either side of route centreline) = 39m
Maximum Lateral Movement of Pylon from Proposed Alignment = **9m**

**C** Lateral Extent of LoD (either side of route centreline) = 38m
Maximum Lateral Movement of Pylon from Proposed Alignment = **8m**

**D** Lateral Extent of LoD (either side of route centreline) = 37m
Maximum Lateral Movement of Pylon from Proposed Alignment = **7m**

**E** Lateral Extent of LoD (either side of route centreline) = 36m
Maximum Lateral Movement of Pylon from Proposed Alignment = **6m**

**F** Lateral Extent of LoD (either side of route centreline) = 35m
Maximum Lateral Movement of Pylon from Proposed Alignment = **5m**

**G** Lateral Extent of LoD (either side of route centreline) = 34m
Maximum Lateral Movement of Pylon from Proposed Alignment = **4m**

**H** Lateral Extent of LoD (either side of route centreline) = 33m
Maximum Lateral Movement of Pylon from Proposed Alignment = **3m**

**I** Lateral Extent of LoD (either side of route centreline) = 32m
Maximum Lateral Movement of Pylon from Proposed Alignment = **2m**

**J** Lateral Extent of LoD (either side of route centreline) = 31m
Maximum Lateral Movement of Pylon from Proposed Alignment = **1m**

**K** Lateral Extent of LoD (either side of route centreline) = 30m
Maximum Lateral Movement of Pylon from Proposed Alignment = **0m**

Note
This map includes data from the following sources:
- National Grid
- Ordnance Survey
- Contains Ordnance Survey data
© Crown copyright and database right 2014.
- Reproduced from Ordnance Survey digital map data
- © Crown copyright 2014. All rights reserved.

| ISSUE | DATE | COMMENTS | DRAW | CHK'D | APP'D |
|---|---|---|---|---|---|
| A | 06/05/2014 | DCO SUBMISSION | JS | BC | BC |

Title
NATIONAL GRID (HINKLEY POINT C CONNECTION PROJECT)
ENVIRONMENTAL STATEMENT
VOLUME 5.5.3

400/132KV OVERHEAD LINE
LIMITS OF DEVIATION 'PINCH POINTS'
WITHY POOL

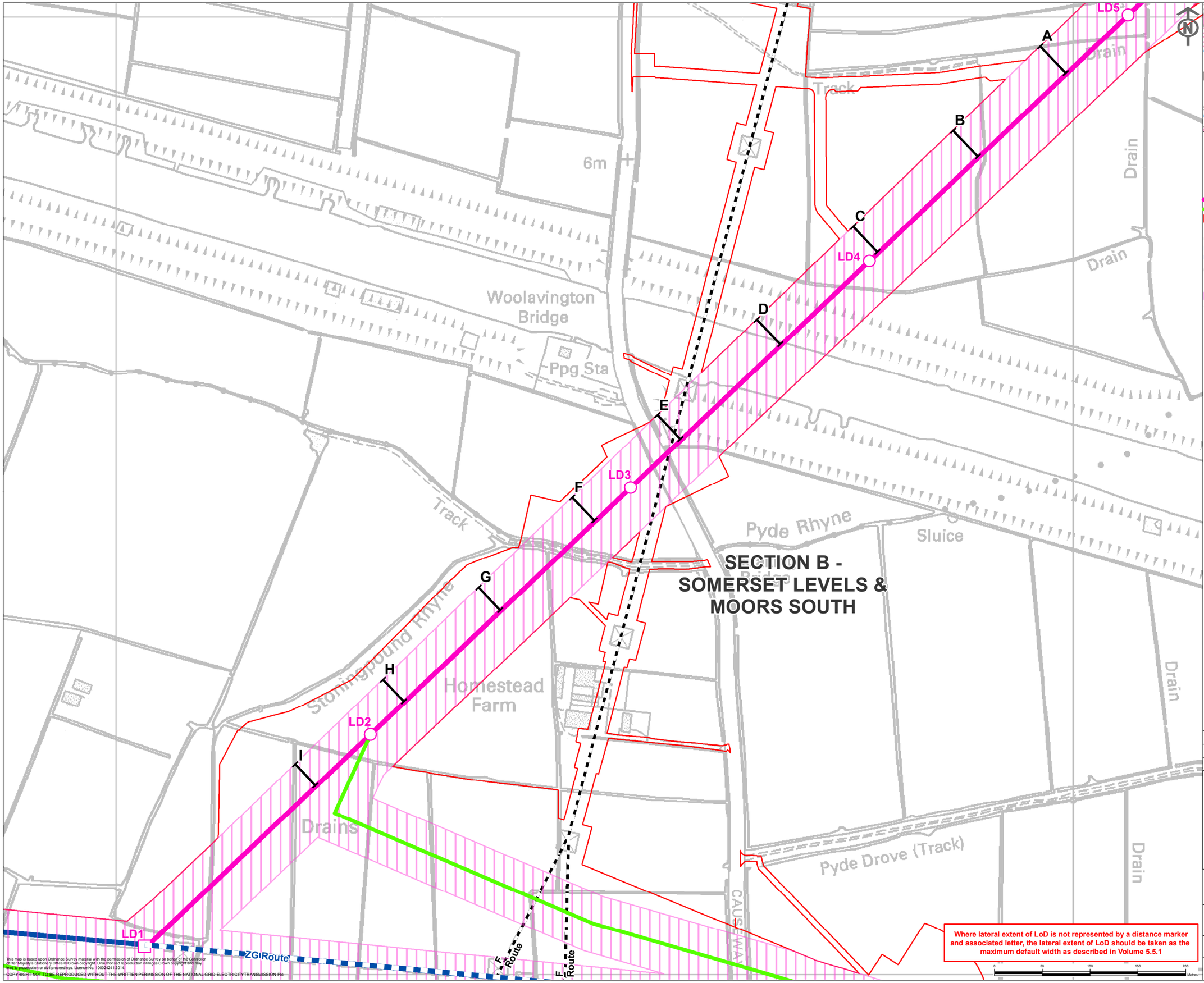
nationalgrid
National Grid plc, Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA

| NG INVESTMENT No. | APPLICATION No. | | GIS |
|---|---|---|---|
| 20897 | EN020001 | | A3 |
| FIGURE No. | DRAWING No. | | SCALE |
| 5.2.1 | G1979.2103.1E | | 1:4,500 |
| SHEET 1 OF 11 | | | ISSUE A |

This map is based upon Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown copyright. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings. Licence No. 100024241 2014.

COPYRIGHT NOT TO BE REPRODUCED WITHOUT THE WRITTEN PERMISSION OF THE NATIONAL GRID ELECTRICITYTRANSMISSION Plc

# SECTION B - SOMERSET LEVELS & MOORS SOUTH



## Key

**Proposed Infrastructure**

- Proposed 400kV Standard Lattice Pylon Position
- Proposed 400kV T-Pylon Position
- Proposed Route for 400kV Overhead Line
- Proposed Route for Temporary 400kV Overhead Line
- Order Limits

**Existing Infrastructure**

- Existing Western Power Distribution 132kV Overhead Line
- Existing 400kV Overhead Line
- Existing 400kV Overhead line to be Removed
- Existing Western Power Distribution 132kV Overhead Line for Removal

**Limits of Deviation (LoD)**

- Proposed 400kV Overhead Line Route LoD
- **A** Lateral Extent of LoD (either side of route centreline) = 40m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **10m**
- **B** Lateral Extent of LoD (either side of route centreline) = 39m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **9m**
- **C** Lateral Extent of LoD (either side of route centreline) = 38m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **8m**
- **D** Lateral Extent of LoD (either side of route centreline) = 37m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **7m**
- **E** Lateral Extent of LoD (either side of route centreline) = 36m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **6m**
- **F** Lateral Extent of LoD (either side of route centreline) = 35m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **5m**
- **G** Lateral Extent of LoD (either side of route centreline) = 34m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **4m**
- **H** Lateral Extent of LoD (either side of route centreline) = 33m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **3m**
- **I** Lateral Extent of LoD (either side of route centreline) = 32m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **2m**

Note
This map includes data from the following sources:
- National Grid
- Ordnance Survey
- Contains Ordnance Survey data © Crown copyright and database right 2014.
- Reproduced from Ordnance Survey digital map data
- © Crown copyright 2014. All rights reserved.

| ISSUE | DATE | COMMENTS | DRAW | CHK'D | APP'D |
|---|---|---|---|---|---|
| A | 06/05/2014 | DCO SUBMISSION | JS | BC | BC |

Title

NATIONAL GRID (HINKLEY POINT C CONNECTION PROJECT)
ENVIRONMENTAL STATEMENT
VOLUME 5.5.3

400/132KV OVERHEAD LINE
LIMITS OF DEVIATION 'PINCH POINTS'
HUNTSPILL RIVER

nationalgrid
National Grid plc, Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA

| NG INVESTMENT No. | APPLICATION No. | | GIS |
|---|---|---|---|
| 20897 | EN020001 | | A3 |
| FIGURE No. 5.2.2 | DRAWING No. G1979.2103.2E | | SCALE 1:3,600 |
| SHEET 2 OF 11 | | | ISSUE A |

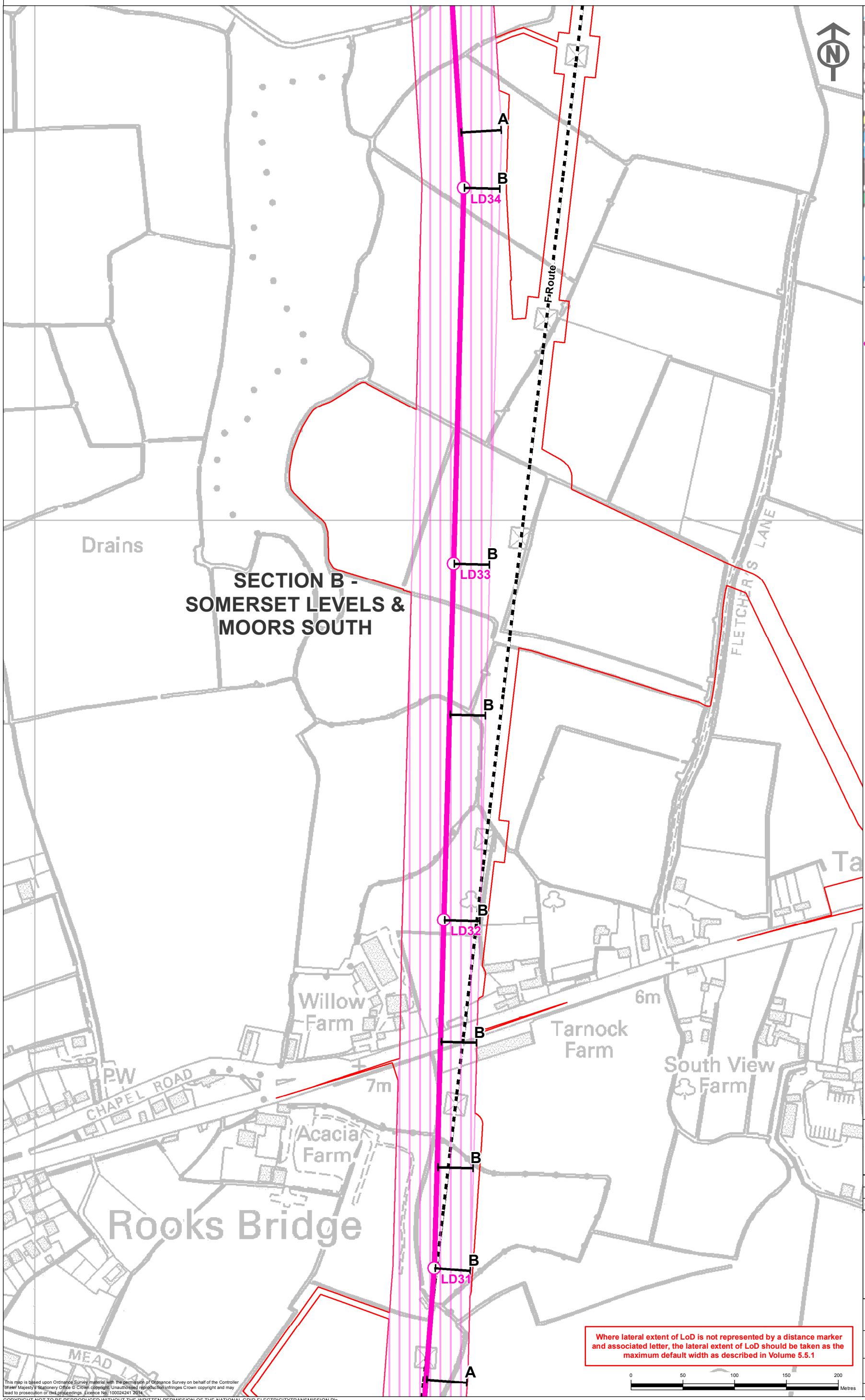
**Where lateral extent of LoD is not represented by a distance marker and associated letter, the lateral extent of LoD should be taken as the maximum default width as described in Volume 5.5.1**

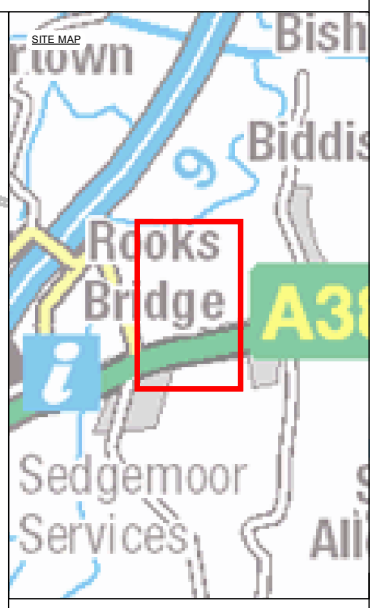
0 50 100 150 200 Metres

This map is based upon Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown copyright. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings. Licence No. 100024241 2014.
COPYRIGHT NOT TO BE REPRODUCED WITHOUT THE WRITTEN PERMISSION OF THE NATIONAL GRID ELECTRICITY TRANSMISSION Plc

NATIONAL GRID (HINKLEY POINT C CONNECTION PROJECT)
ENVIRONMENTAL STATEMENT
VOLUME 5.5.3

400/132KV OVERHEAD LINE LIMITS OF DEVIATION 'PINCH POINTS'
ROOKS BRIDGE




Key

**Proposed Infrastructure**

- Proposed 400kV T-Pylon Position
- Proposed Route for 400kV Overhead Line
- Order Limits

**Existing Infrastructure**

- Existing Western Power Distribution 132kV Overhead Line
- Existing Western Power Distribution 132kV Overhead Line for Removal

**Limits of Deviation (LoD)**

- Proposed 400kV Overhead Line Route LoD
- **A** Lateral Extent of LoD (either side of route centreline) = 40m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **10m**
- **B** Lateral Extent of LoD (either side of route centreline) = 35m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **5m**

Note
This map includes data from the following sources:
- National Grid
- Ordnance Survey
- Contains Ordnance Survey data
  © Crown copyright and database right 2014.
- Reproduced from Ordnance Survey digital map data
- © Crown copyright 2014. All rights reserved.

| ISSUE | DATE | COMMENTS | DRAW | CHK'D | APP'D |
|---|---|---|---|---|---|
| A | 06/05/2014 | DCO SUBMISSION | JS | BC | BC |

Title
NATIONAL GRID (HINKLEY POINT C CONNECTION PROJECT)
ENVIRONMENTAL STATEMENT
VOLUME 5.5.3

400/132KV OVERHEAD LINE
LIMITS OF DEVIATION 'PINCH POINTS'
ROOKS BRIDGE

nationalgrid
National Grid plc, Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA

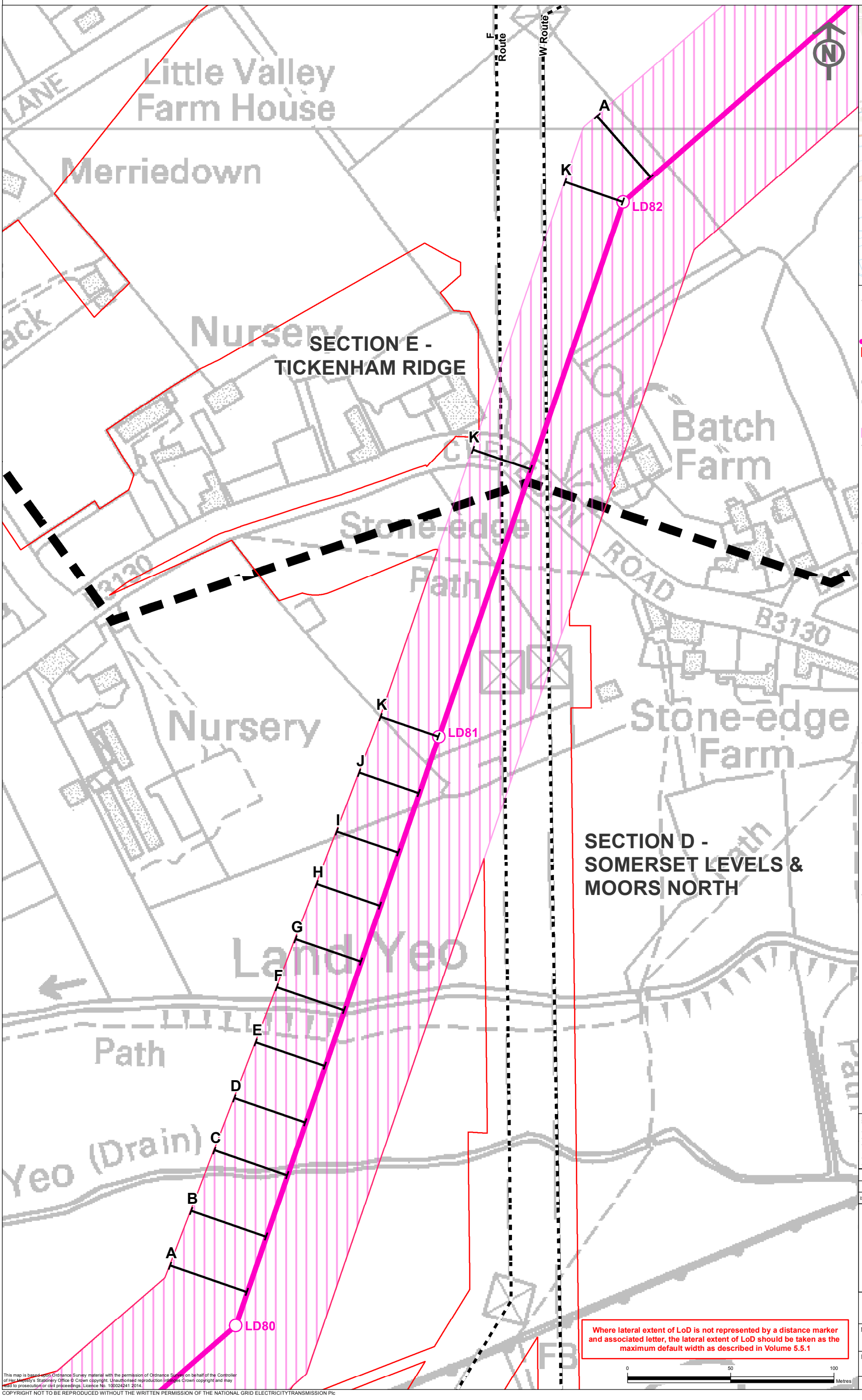
| NG INVESTMENT No. | APPLICATION No. | | GIS |
|---|---|---|---|
| 20897 | EN020001 | | A3 |
| FIGURE No. | DRAWING No. | | SCALE |
| 5.2.3 | G1979.2103.3E | | 1:3,500 |
| SHEET 3 OF 11 | | | ISSUE A |

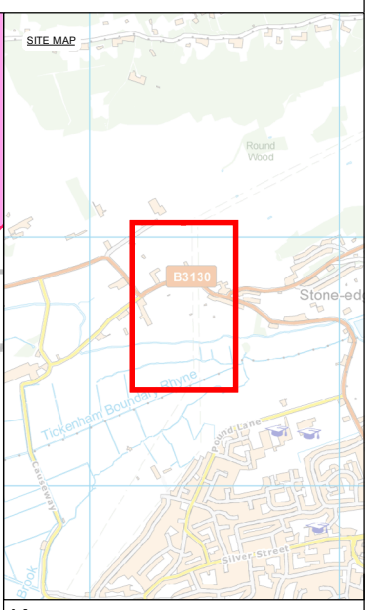
This map is based upon Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown copyright. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings. Licence No: 100024241 2014.

COPYRIGHT NOT TO BE REPRODUCED WITHOUT THE WRITTEN PERMISSION OF THE NATIONAL GRID ELECTRICITYTRANSMISSION Plc

NATIONAL GRID (HINKLEY POINT C CONNECTION PROJECT)
ENVIRONMENTAL STATEMENT
VOLUME 5.5.3

400/132KV OVERHEAD LINE LIMITS OF DEVIATION 'PINCH POINTS'
STONE-EDGE BATCH




## Key

**Proposed Infrastructure**

- Proposed 400kV T-Pylon Position
- Proposed Route for 400kV Overhead Line
- Order Limits

**Existing Infrastructure**

- Existing Western Power Distribution 132kV Overhead Line
- Existing Western Power Distribution 132kV Overhead Line for Removal

**Limits of Deviation (LoD)**

- Proposed 400kV Overhead Line Route LoD
- **A** Lateral Extent of LoD (either side of route centreline) = 40m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **10m**
- **B** Lateral Extent of LoD (either side of route centreline) = 39m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **9m**
- **C** Lateral Extent of LoD (either side of route centreline) = 38m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **8m**
- **D** Lateral Extent of LoD (either side of route centreline) = 37m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **7m**
- **E** Lateral Extent of LoD (either side of route centreline) = 36m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **6m**
- **F** Lateral Extent of LoD (either side of route centreline) = 35m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **5m**
- **G** Lateral Extent of LoD (either side of route centreline) = 34m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **4m**
- **H** Lateral Extent of LoD (either side of route centreline) = 33m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **3m**
- **I** Lateral Extent of LoD (either side of route centreline) = 32m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **2m**
- **J** Lateral Extent of LoD (either side of route centreline) = 31m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **1m**
- **K** Lateral Extent of LoD (either side of route centreline) = 30m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **0m**

**Where lateral extent of LoD is not represented by a distance marker and associated letter, the lateral extent of LoD should be taken as the maximum default width as described in Volume 5.5.1**

0 50 100 Metres

Note
This map includes data from the following sources:
- National Grid
- Ordnance Survey
- Contains Ordnance Survey data
  © Crown copyright and database right 2014.
- Reproduced from Ordnance Survey digital map data
- © Crown copyright 2014. All rights reserved.

| ISSUE | DATE | COMMENTS | DRAW | CHK'D | APP'D |
|---|---|---|---|---|---|
| A | 06/05/2014 | DCO SUBMISSION | JS | BC | BC |

Title
NATIONAL GRID (HINKLEY POINT C CONNECTION PROJECT)
ENVIRONMENTAL STATEMENT
VOLUME 5.5.3

400/132KV OVERHEAD LINE LIMITS OF DEVIATION 'PINCH POINTS' STONE-EDGE BATCH

nationalgrid
National Grid plc, Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA

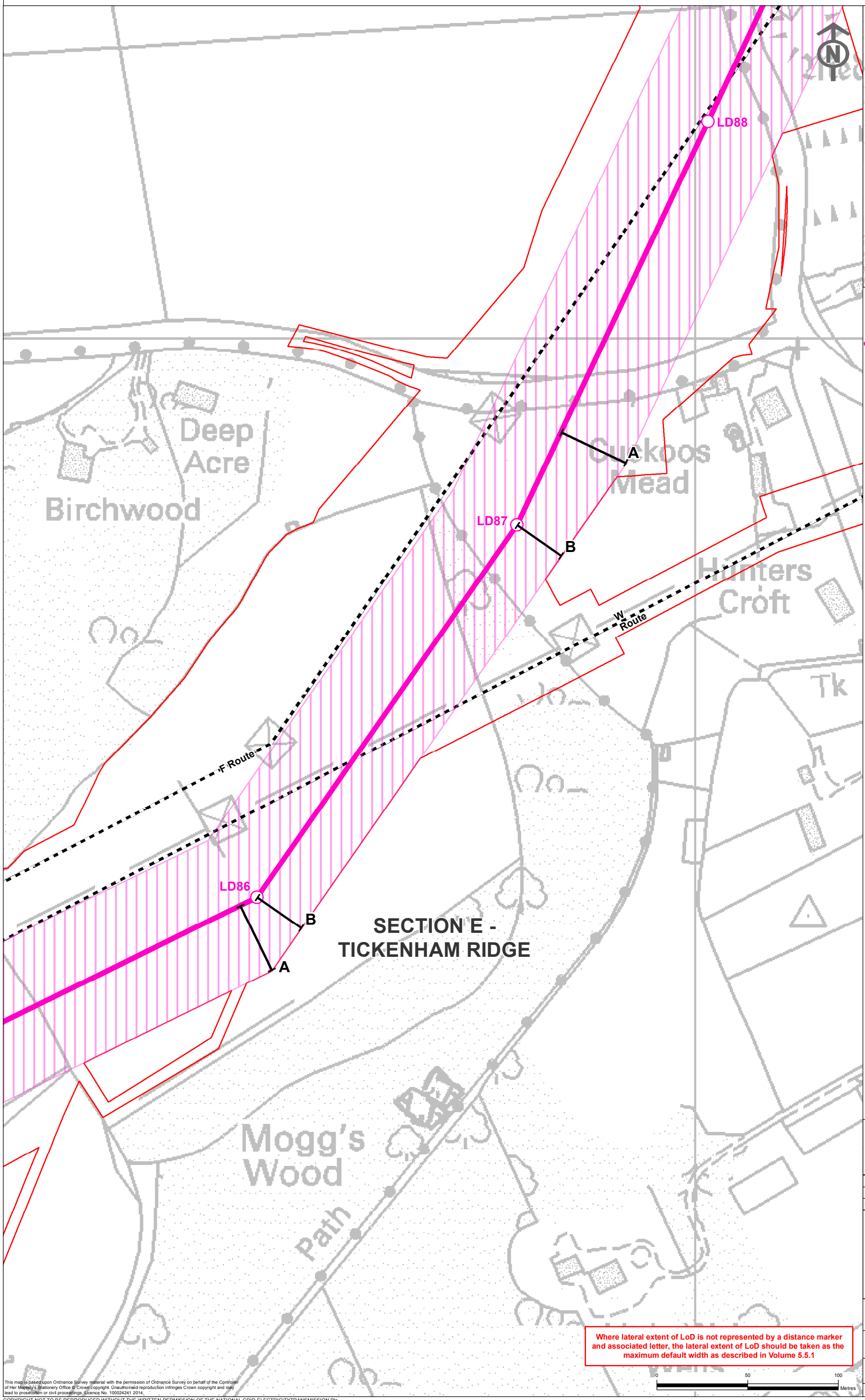
| NG INVESTMENT No. | APPLICATION No. | | GIS |
|---|---|---|---|
| 20897 | EN020001 | | A3 |
| FIGURE No. | DRAWING No. | | SCALE |
| 5.2.4 | G1979.2103.4E | | 1:1,750 |
| SHEET 4 OF 11 | | | ISSUE A |

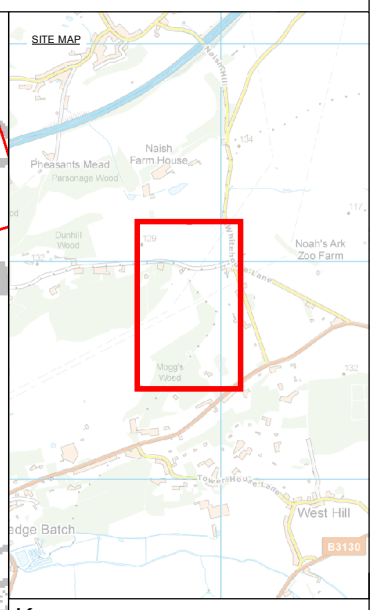
This map is based upon Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown copyright. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings. Licence No. 100024241 2014.

COPYRIGHT NOT TO BE REPRODUCED WITHOUT THE WRITTEN PERMISSION OF THE NATIONAL GRID ELECTRICITYTRANSMISSION Plc

NATIONAL GRID (HINKLEY POINT C CONNECTION PROJECT)
ENVIRONMENTAL STATEMENT
VOLUME 5.5.3

400/132KV OVERHEAD LINE LIMITS OF DEVIATION 'PINCH POINTS'
MOGG'S WOOD




## Key

**Proposed Infrastructure**

- Proposed 400kV T-Pylon Position
- Proposed Route for 400kV Overhead Line
- Order Limits

**Existing Infrastructure**

- Existing Western Power Distribution 132kV Overhead Line
- Existing Western Power Distribution 132kV Overhead Line for Removal

**Limits of Deviation (LoD)**

- Proposed 400kV Overhead Line Route LoD
- **A** Lateral Extent of LoD (either side of route centreline) = 40m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **10m**
- **B** Lateral Extent of LoD (either side of route centreline) = 30m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **0m**

**Where lateral extent of LoD is not represented by a distance marker and associated letter, the lateral extent of LoD should be taken as the maximum default width as described in Volume 5.5.1**

0 50 100 Metres

Note
This map includes data from the following sources:
- National Grid
- Ordnance Survey
- Contains Ordnance Survey data
  © Crown copyright and database right 2014.
- Reproduced from Ordnance Survey digital map data
- © Crown copyright 2014. All rights reserved.

| ISSUE | DATE | COMMENTS | DRAW | CHK'D | APP'D |
|---|---|---|---|---|---|
| A | 06/05/2014 | DCO SUBMISSION | JS | BC | BC |

Title
NATIONAL GRID (HINKLEY POINT C CONNECTION PROJECT)
ENVIRONMENTAL STATEMENT
VOLUME 5.5.3

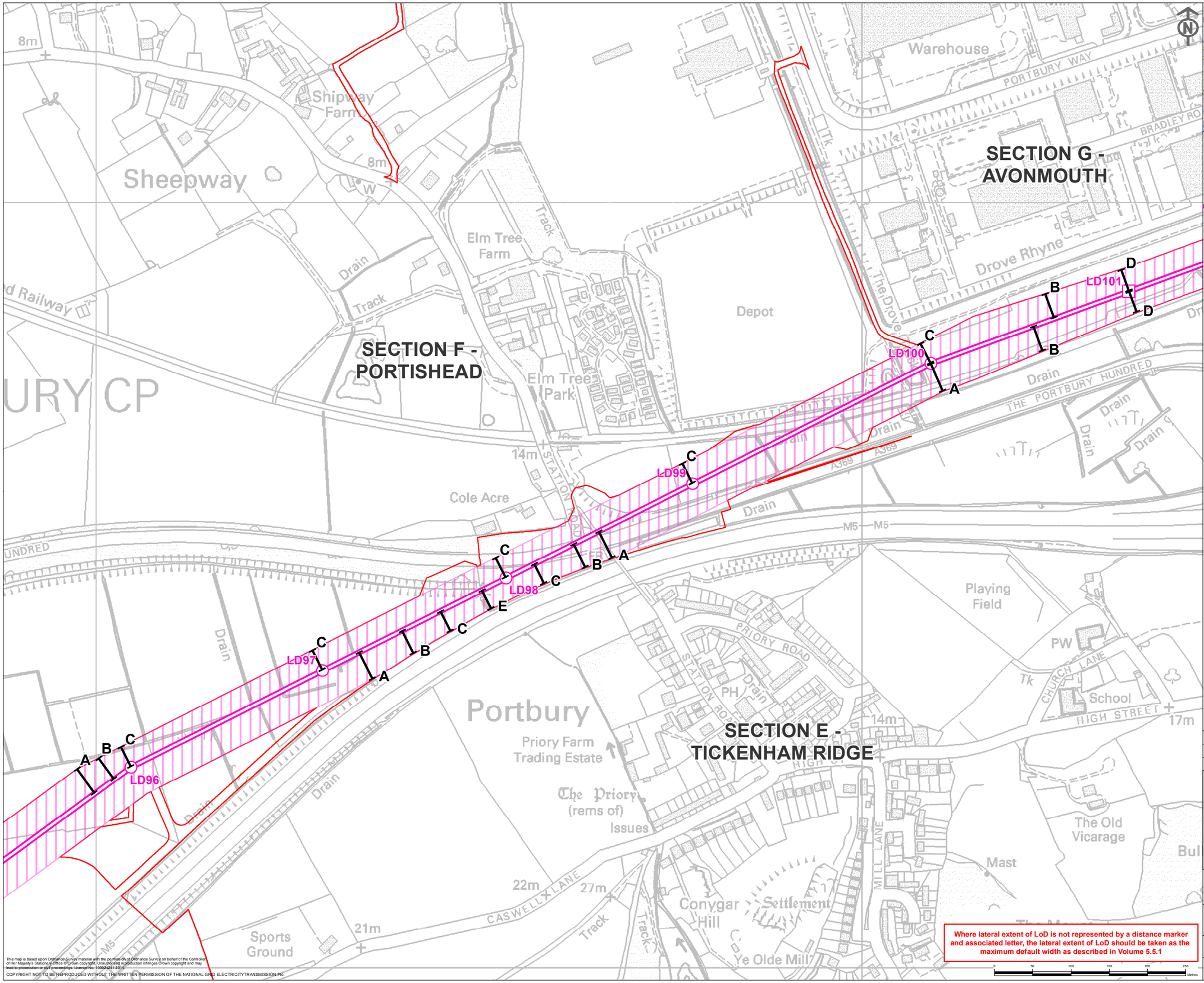
400/132KV OVERHEAD LINE
LIMITS OF DEVIATION 'PINCH POINTS'
MOGG'S WOOD

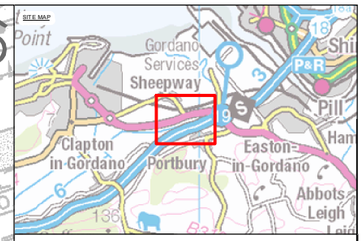
nationalgrid
National Grid plc, Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA

| NG INVESTMENT No. | APPLICATION No. | | GIS |
|---|---|---|---|
| 20897 | EN020001 | | A3 |
| FIGURE No. 5.2.5 | DRAWING No. G1979.2103.5E | | SCALE 1:2,000 |
| SHEET 5 OF 11 | | | ISSUE A |

This map is based upon Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown copyright. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings. Licence No. 100024241 2014.

COPYRIGHT NOT TO BE REPRODUCED WITHOUT THE WRITTEN PERMISSION OF THE NATIONAL GRID ELECTRICITYTRANSMISSION Plc




## Key

**Proposed Infrastructure**

- Proposed 400kV Standard Lattice Pylon Position
- Proposed 400kV T-Pylon Position
- Preferred Route (Option A) for 400kV Overhead Line
- Order Limits

**Limits of Deviation (LoD)**

- Proposed 400kV Overhead Line Route LoD

**A** Lateral Extent of LoD (either side of route centreline) = 40m
Maximum Lateral Movement of Pylon from Proposed Alignment = **10m**

**B** Lateral Extent of LoD (either side of route centreline) = 35m
Maximum Lateral Movement of Pylon from Proposed Alignment = **5m**

**C** Lateral Extent of LoD (either side of route centreline) = 30m
Maximum Lateral Movement of Pylon from Proposed Alignment = **0m**

**D** Lateral Extent of LoD (either side of route centreline) = 30m
Maximum Lateral Movement of Pylon from Proposed Alignment = **10m**

**E** Lateral Extent of LoD (either side of route centreline) = 28m
Maximum Lateral Movement of Pylon from Proposed Alignment = **0m**

**Changes to the LoD between pylons LD100 and LD101 are due to the transition from T-pylon to standard lattice pylon (See Volume 5.5.1 for further details).**

Note
This map includes data from the following sources:
- National Grid
- Ordnance Survey
- Contains Ordnance Survey data © Crown copyright and database right 2014.
- Reproduced from Ordnance Survey digital map data - © Crown copyright 2014. All rights reserved.

| ISSUE | DATE | COMMENTS | DRAW | CHK'D | APP'D |
|---|---|---|---|---|---|
| A | 06/05/2014 | DCO SUBMISSION | JS | BC | BC |

Title

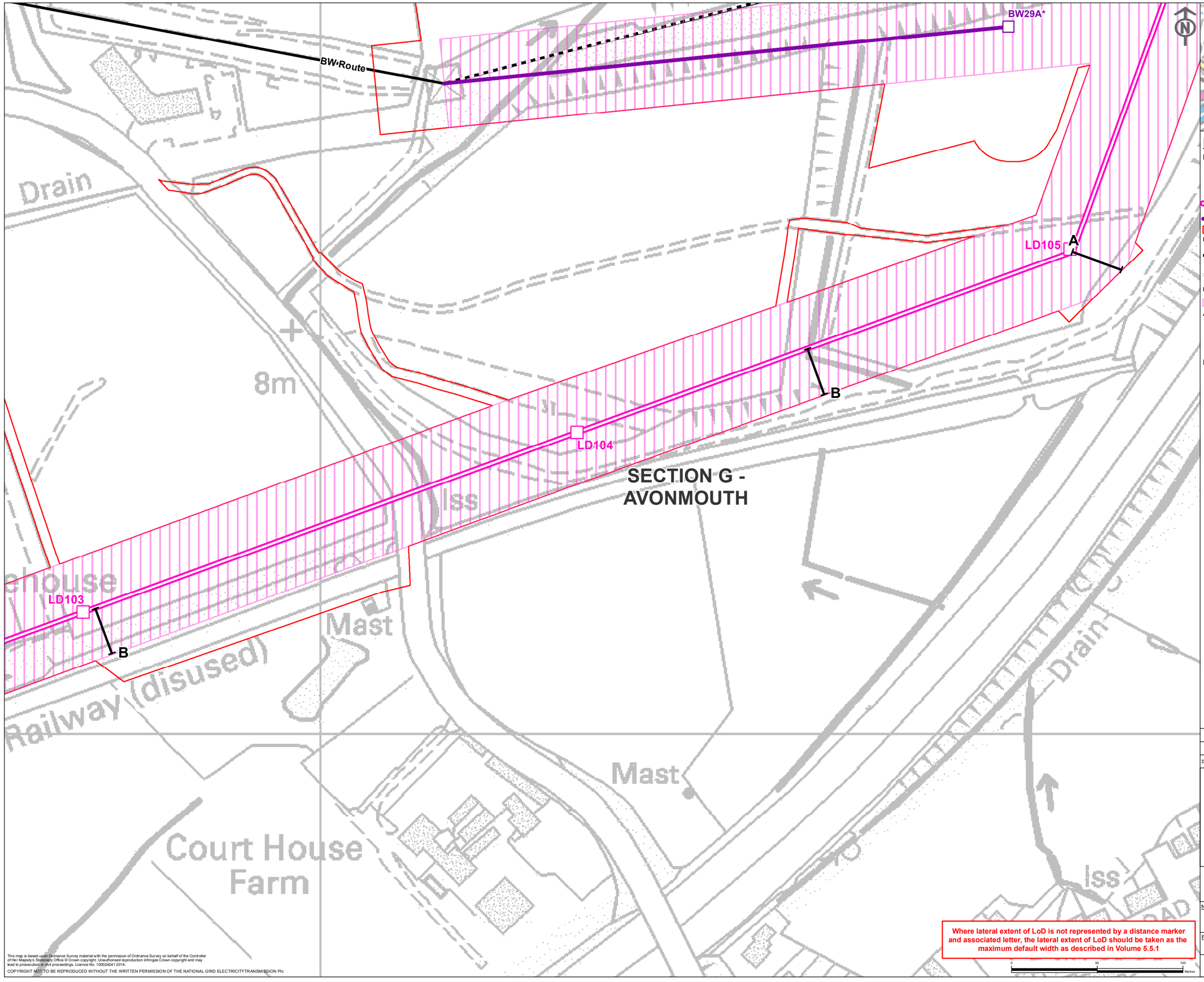
NATIONAL GRID (HINKLEY POINT C CONNECTION PROJECT)
ENVIRONMENTAL STATEMENT
VOLUME 5.5.3

400/132KV OVERHEAD LINE
LIMITS OF DEVIATION 'PINCH POINTS'
PORTBURY

nationalgrid
National Grid plc, Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA

| NG INVESTMENT No. | APPLICATION No. | | GIS |
|---|---|---|---|
| 20897 | EN020001 | | A3 |
| FIGURE No. 5.2.6 | DRAWING No. G1979.2103.6E | | SCALE 1:4,500 |
| SHEET 6 OF 11 | | | ISSUE A |

This map is based upon Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown copyright. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings. Licence No: 100042421 2014.
COPYRIGHT NOT TO BE REPRODUCED WITHOUT THE WRITTEN PERMISSION OF THE NATIONAL GRID ELECTRICITYTRANSMISSION PLC




## Key

**Proposed Infrastructure**

- Proposed 400kV Standard Lattice Pylon Position
- Proposed 132kV Lattice Platform Pylon Position
- Preferred Route (Option A) for 400kV Overhead Line
- Proposed Route for 132kV Overhead Line
- Order Limits

**Existing Infrastructure**

- Existing Western Power Distribution 132kV Overhead Line
- Existing Western Power Distribution 132kV Overhead Line for Removal

**Limits of Deviation (LoD)**

- Proposed 400kV Overhead Line Route LoD
- **A** Lateral Extent of LoD (either side of route centreline) = 30m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **10m**
- **B** Lateral Extent of LoD (either side of route centreline) = 29m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **9m**

**Where lateral extent of LoD is not represented by a distance marker and associated letter, the lateral extent of LoD should be taken as the maximum default width as described in Volume 5.5.1**

0 50 100 Metres

Note
This map includes data from the following sources:
- National Grid
- Ordnance Survey
- Contains Ordnance Survey data
  © Crown copyright and database right 2014.
- Reproduced from Ordnance Survey digital map data
- © Crown copyright 2014. All rights reserved.

| ISSUE | DATE | COMMENTS | DRAW | CHK'D | APP'D |
|---|---|---|---|---|---|
| A | 06/05/2014 | DCO SUBMISSION | JS | BC | BC |

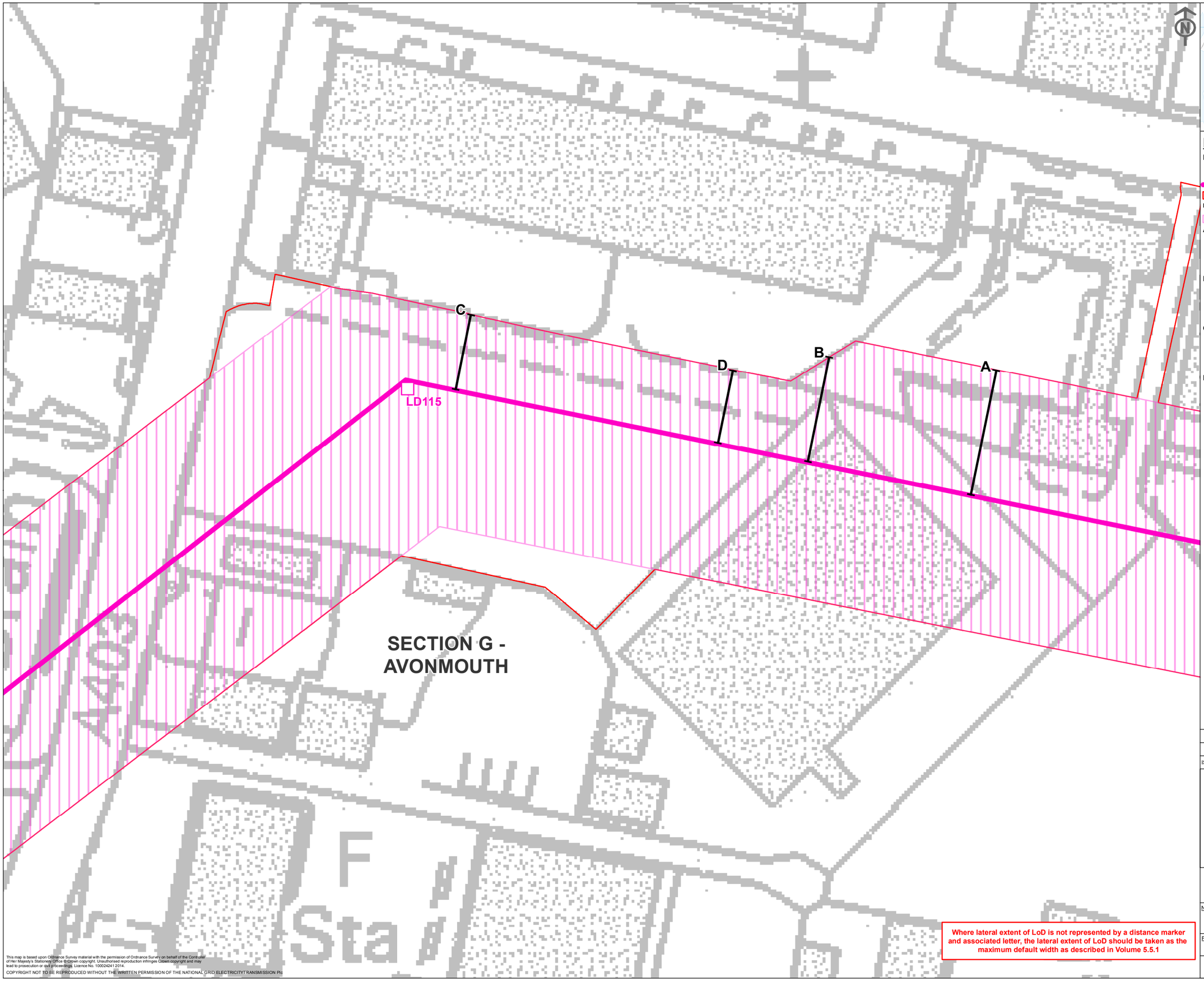
Title
NATIONAL GRID (HINKLEY POINT C CONNECTION PROJECT)
ENVIRONMENTAL STATEMENT
VOLUME 5.5.3

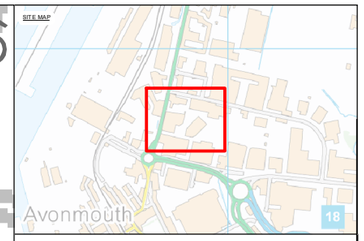
400/132KV OVERHEAD LINE
LIMITS OF DEVIATION 'PINCH POINTS'
MARSH LANE

nationalgrid
National Grid plc, Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA

| NG INVESTMENT No. | APPLICATION No. | | GIS |
|---|---|---|---|
| 20897 | EN020001 | | A3 |
| FIGURE No. 5.2.7 | DRAWING No. G1979.2103.7E | | SCALE 1:2,000 |
| SHEET 7 OF 11 | | | ISSUE A |

This map is based upon Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown copyright. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings. Licence No. 100024241 2014.
COPYRIGHT NOT TO BE REPRODUCED WITHOUT THE WRITTEN PERMISSION OF THE NATIONAL GRID ELECTRICITYTRANSMISSION Plc




## Key

**Proposed Infrastructure**

- Proposed 400kV Standard Lattice Pylon Position
- Proposed Route for 400kV Overhead Line
- Order Limits

**Limits of Deviation (LoD)**

- Proposed 400kV Overhead Line Route LoD

**A** Lateral Extent of LoD (either side of route centreline) = 30m
Maximum Lateral Movement of Pylon from Proposed Alignment = **10m**

**B** Lateral Extent of LoD (either side of route centreline) = 25m
Maximum Lateral Movement of Pylon from Proposed Alignment = **5m**

**C** Lateral Extent of LoD (either side of route centreline) = 18m
Maximum Lateral Movement of Pylon from Proposed Alignment = **0m**

**D** Lateral Extent of LoD (either side of route centreline) = 17.5m
Maximum Lateral Movement of Pylon from Proposed Alignment = **0m**

**Where lateral extent of LoD is not represented by a distance marker and associated letter, the lateral extent of LoD should be taken as the maximum default width as described in Volume 5.5.1**

Note
This map includes data from the following sources:
- National Grid
- Ordnance Survey
- Contains Ordnance Survey data © Crown copyright and database right 2014.
- Reproduced from Ordnance Survey digital map data
- © Crown copyright 2014. All rights reserved.

| ISSUE | DATE | COMMENTS | DRAW | CHK'D | APP'D |
|---|---|---|---|---|---|
| A | 06/05/2014 | DCO SUBMISSION | JS | BC | BC |

Title

NATIONAL GRID (HINKLEY POINT C CONNECTION PROJECT)
ENVIRONMENTAL STATEMENT
VOLUME 5.5.3

400/132KV OVERHEAD LINE
LIMITS OF DEVIATION 'PINCH POINTS'
A403

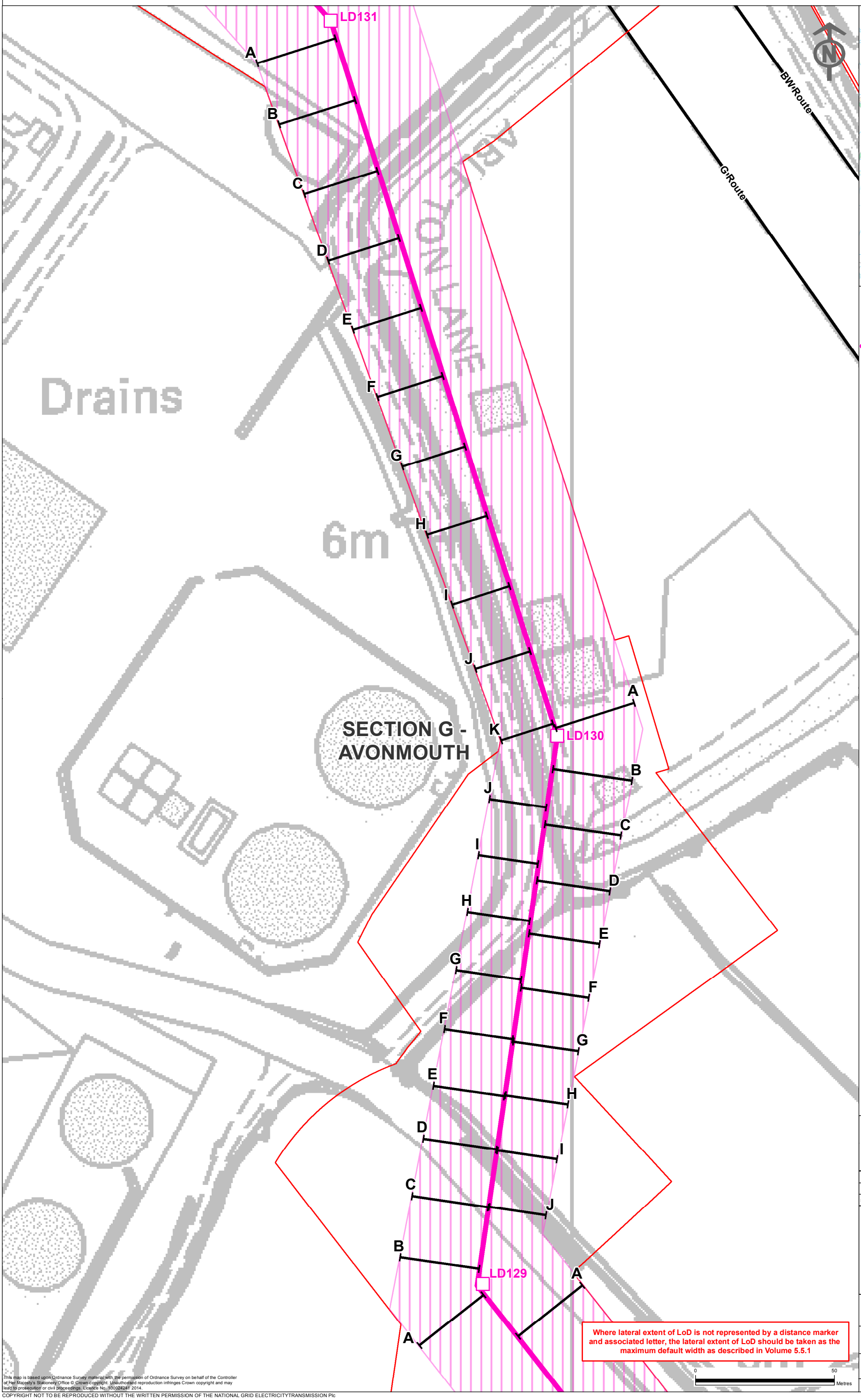
nationalgrid
National Grid plc, Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA

| NG INVESTMENT No. | APPLICATION No. | | GIS |
|---|---|---|---|
| 20897 | EN020001 | | A3 |
| FIGURE No. 5.2.8 | DRAWING No. G1979.2103.8E | | SCALE 1:800 |
| SHEET 8 OF 11 | | | ISSUE A |

This map is based upon Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown copyright. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings. Licence No. 100024241 2014.
COPYRIGHT NOT TO BE REPRODUCED WITHOUT THE WRITTEN PERMISSION OF THE NATIONAL GRID ELECTRICITYTRANSMISSION Plc

NATIONAL GRID (HINKLEY POINT C CONNECTION PROJECT)
ENVIRONMENTAL STATEMENT
VOLUME 5.5.3

400/132KV OVERHEAD LINE LIMITS OF DEVIATION 'PINCH POINTS'
HALLEN MARSH




## Key

**Proposed Infrastructure**

- Proposed 400kV Standard Lattice Pylon Position
- Proposed Route for 400kV Overhead Line
- Order Limits

**Existing Infrastructure**

- Existing Western Power Distribution 132kV Overhead Line

**Limits of Deviation (LoD)**

- Proposed 400kV Overhead Line Route LoD
- **A** Lateral Extent of LoD (either side of route centreline) = 30m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **10m**
- **B** Lateral Extent of LoD (either side of route centreline) = 29m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **9m**
- **C** Lateral Extent of LoD (either side of route centreline) = 28m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **8m**
- **D** Lateral Extent of LoD (either side of route centreline) = 27m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **7m**
- **E** Lateral Extent of LoD (either side of route centreline) = 26m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **6m**
- **F** Lateral Extent of LoD (either side of route centreline) = 25m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **5m**
- **G** Lateral Extent of LoD (either side of route centreline) = 24m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **4m**
- **H** Lateral Extent of LoD (either side of route centreline) = 23m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **3m**
- **I** Lateral Extent of LoD (either side of route centreline) = 22m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **2m**
- **J** Lateral Extent of LoD (either side of route centreline) = 21m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **1m**
- **K** Lateral Extent of LoD (either side of route centreline) = 20m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **0m**

**Where lateral extent of LoD is not represented by a distance marker and associated letter, the lateral extent of LoD should be taken as the maximum default width as described in Volume 5.5.1**

0 50 Metres

Note
This map includes data from the following sources:
- National Grid
- Ordnance Survey
- Contains Ordnance Survey data
  © Crown copyright and database right 2014.
- Reproduced from Ordnance Survey digital map data
- © Crown copyright 2014. All rights reserved.

| ISSUE | DATE | COMMENTS | DRAW | CHK'D | APP'D |
|---|---|---|---|---|---|
| A | 06/05/2014 | DCO SUBMISSION | JS | BC | BC |

Title
NATIONAL GRID (HINKLEY POINT C CONNECTION PROJECT)
ENVIRONMENTAL STATEMENT
VOLUME 5.5.3

400/132KV OVERHEAD LINE
LIMITS OF DEVIATION 'PINCH POINTS'
HALLEN MARSH

nationalgrid
National Grid plc, Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA

| NG INVESTMENT No. | APPLICATION No. | | GIS |
|---|---|---|---|
| 20897 | EN020001 | | A3 |
| FIGURE No. | DRAWING No. | | SCALE |
| 5.2.9 | G1979.2103.9E | | 1:1,300 |
| SHEET 9 OF 11 | | | ISSUE A |

This map is based upon Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown copyright. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings. Licence No. 100024241 2014.

COPYRIGHT NOT TO BE REPRODUCED WITHOUT THE WRITTEN PERMISSION OF THE NATIONAL GRID ELECTRICITYTRANSMISSION Plc

NATIONAL GRID (HINKLEY POINT C CONNECTION PROJECT)
ENVIRONMENTAL STATEMENT
VOLUME 5.5.3

400/132KV OVERHEAD LINE LIMITS OF DEVIATION 'PINCH POINTS'
NYE DROVE

AT25R
A
AT26R
AT Route
AT27R
B
C
AT28R
D
AT29
E
F
AT30
E
D
AT31
C
B
A
AT32

SECTION D -
SOMERSET LEVELS &
MOORS NORTH

SITE MAP

Key

**Proposed Infrastructure**

- Proposed 132kV Standard Lattice Pylon Position
- Proposed Temporary Pylon Position
- Proposed Route for 132kV Overhead Line
- Proposed Route for Temporary 132kV Overhead Line
- Order Limits

**Existing Infrastructure**

- Existing Western Power Distribution 132kV Overhead Line
- Existing Western Power Distribution 132kV Overhead Line for Removal

**Limits of Deviation (LoD)**

- Proposed 400kV Overhead Line Route LoD

**A** Lateral Extent of LoD (either side of route centreline) = 26m
Maximum Lateral Movement of Pylon from Proposed Alignment = **10m**

**B** Lateral Extent of LoD (either side of route centreline) = 24m
Maximum Lateral Movement of Pylon from Proposed Alignment = **8m**

**C** Lateral Extent of LoD (either side of route centreline) = 22m
Maximum Lateral Movement of Pylon from Proposed Alignment = **6m**

**D** Lateral Extent of LoD (either side of route centreline) = 20m
Maximum Lateral Movement of Pylon from Proposed Alignment = **4m**

**E** Lateral Extent of LoD (either side of route centreline) = 18m
Maximum Lateral Movement of Pylon from Proposed Alignment = **2m**

**F** Lateral Extent of LoD (either side of route centreline) = 16m
Maximum Lateral Movement of Pylon from Proposed Alignment = **0m**

**Where lateral extent of LoD is not represented by a distance marker and associated letter, the lateral extent of LoD should be taken as the maximum default width as described in Volume 5.5.1**

0 50 100 150 200 250 300 Metres

Note
This map includes data from the following sources:
- National Grid
- Ordnance Survey
- Contains Ordnance Survey data
  © Crown copyright and database right 2014.
- Reproduced from Ordnance Survey digital map data
- © Crown copyright 2014. All rights reserved.

| ISSUE | DATE | COMMENTS | DRAW | CHK'D | APP'D |
|---|---|---|---|---|---|
| A | 06/05/2014 | DCO SUBMISSION | JS | BC | BC |

Title
NATIONAL GRID (HINKLEY POINT C CONNECTION PROJECT)
ENVIRONMENTAL STATEMENT
VOLUME 5.5.3

400/132KV OVERHEAD LINE
LIMITS OF DEVIATION 'PINCH POINTS'
NYE DROVE

nationalgrid
National Grid plc, Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA

| NG INVESTMENT No. | APPLICATION No. | | GIS |
|---|---|---|---|
| 20897 | EN020001 | | A3 |
| FIGURE No. | DRAWING No. | | SCALE |
| 5.2.10 | G1979.2103.10E | | 1:5,000 |
| SHEET 10 OF 11 | | | ISSUE A |

This map is based upon Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown copyright. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings. Licence No. 100024241 2014.
COPYRIGHT NOT TO BE REPRODUCED WITHOUT THE WRITTEN PERMISSION OF THE NATIONAL GRID ELECTRICITYTRANSMISSION Plc

Drain

Drain

Drain

A

B

A

JP2

**SECTION H -**
**HINKLEY LINE ENTRIES**

**Where lateral extent of LoD is not represented by a distance marker and associated letter, the lateral extent of LoD should be taken as the maximum default width as described in Volume 5.5.1**

0 50 Metres

This map is based upon Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown copyright. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings. Licence No. 100024241 2014.

COPYRIGHT NOT TO BE REPRODUCED WITHOUT THE WRITTEN PERMISSION OF THE NATIONAL GRID ELECTRICITY TRANSMISSION Plc

SITE MAP

## Key

**Proposed Infrastructure**

- Proposed 400kV Standard Lattice Pylon Position
- Proposed Route for 400kV Overhead Line
- Order Limits

**Limits of Deviation (LoD)**

- Proposed 400kV Overhead Line Route LoD
- **A** Lateral Extent of LoD (either side of route centreline) = 30m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **10m**
- **B** Lateral Extent of LoD (either side of route centreline) = 27m
  Maximum Lateral Movement of Pylon from Proposed Alignment = **7m**

Note
This map includes data from the following sources:
- National Grid
- Ordnance Survey
- Contains Ordnance Survey data
  © Crown copyright and database right 2014.
- Reproduced from Ordnance Survey digital map data
- © Crown copyright 2014. All rights reserved.

| ISSUE | DATE | COMMENTS | DRAW | CHK'D | APP'D |
|---|---|---|---|---|---|
| A | 06/05/2014 | DCO SUBMISSION | JS | BC | BC |

Title

NATIONAL GRID (HINKLEY POINT C CONNECTION PROJECT)
ENVIRONMENTAL STATEMENT
VOLUME 5.5.3

400/132KV OVERHEAD LINE
LIMITS OF DEVIATION 'PINCH POINTS'
HINKLEY LINE ENTRIES

nationalgrid

National Grid plc, Warwick Technology Park, Gallows Hill, Warwick, CV34 6DA

| NG INVESTMENT No. | APPLICATION No. | | GIS |
|---|---|---|---|
| 20897 | EN020001 | | A3 |
| FIGURE No. 5.2.11 | DRAWING No. G1979.2103.11E | | SCALE 1:1,000 |
| SHEET 11 OF 11 | | | ISSUE A |