

YG-DCO-033

Yorkshire Green Energy Enablement (GREEN) Project

Volume 5

Document 5.2.4 ES Chapter 4: Approach to preparing the ES

Final Issue A

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nationalgrid

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4. Approach to Preparing the ES

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4. Approach to Preparing the Environmental Statement

4.1 Introduction

- 4.1.1 Environmental Impact Assessment (EIA) is a process for identifying and assessing the likely significant environmental effects (positive and negative) of a proposed project. The assessment provides decision makers and statutory consultees with the environmental information required to support the determination of applications for consent to develop projects, including applications for Development Consent Orders (DCO).
- 4.1.2 The EIA process culminates in the provision of an Environmental Statement (ES) which, in this case, provides environmental information in accordance with the Infrastructure Planning (EIA) Regulations (As Amended) 2017¹ (The EIA Regulations) and following the guidance outlined in Planning Inspectorate Advice Note Seven: Environmental Impact Assessment: Preliminary Environmental Information, Screening and Scoping². In particular, this ES provides an assessment of the likely significant effects associated with the Project during its construction, operation and decommissioning.
- 4.1.3 The environmental aspect assessments (**Chapters 6 to 17, Volume 5, Documents 5.2.6 to 5.2.17**) have been carried out using the general approach and processes set out in this chapter. Where required, specific aspect chapters have refined the approach set out in this chapter in order to properly address particular requirements in a suitable manner. Any changes to the approach set out here are detailed in the appropriate environmental aspect chapter.

4.2 The EIA process

- 4.2.1 As outlined in **Chapter 1, Introduction, Volume 5, Document 5.2.1**, the Project is defined as a Nationally Significant Infrastructure Project (NSIP) under Section 14(1)(b) and Section 16 of the Planning Act 2008³ (“the Act”). The EIA Regulations set out the procedures to be followed in relation to EIAs undertaken for NSIPs in England and Wales.
- 4.2.2 The EIA undertaken for the Project has focused on aspects and matters where a likely significant effect may occur. This approach ensures that the EIA process is

¹ UK Government (2017). Infrastructure Planning (EIA) Regulations (As Amended) 2017. (Online) Available at: <https://www.legislation.gov.uk/uksi/2017/572/contents> (Accessed 24 October 2022).

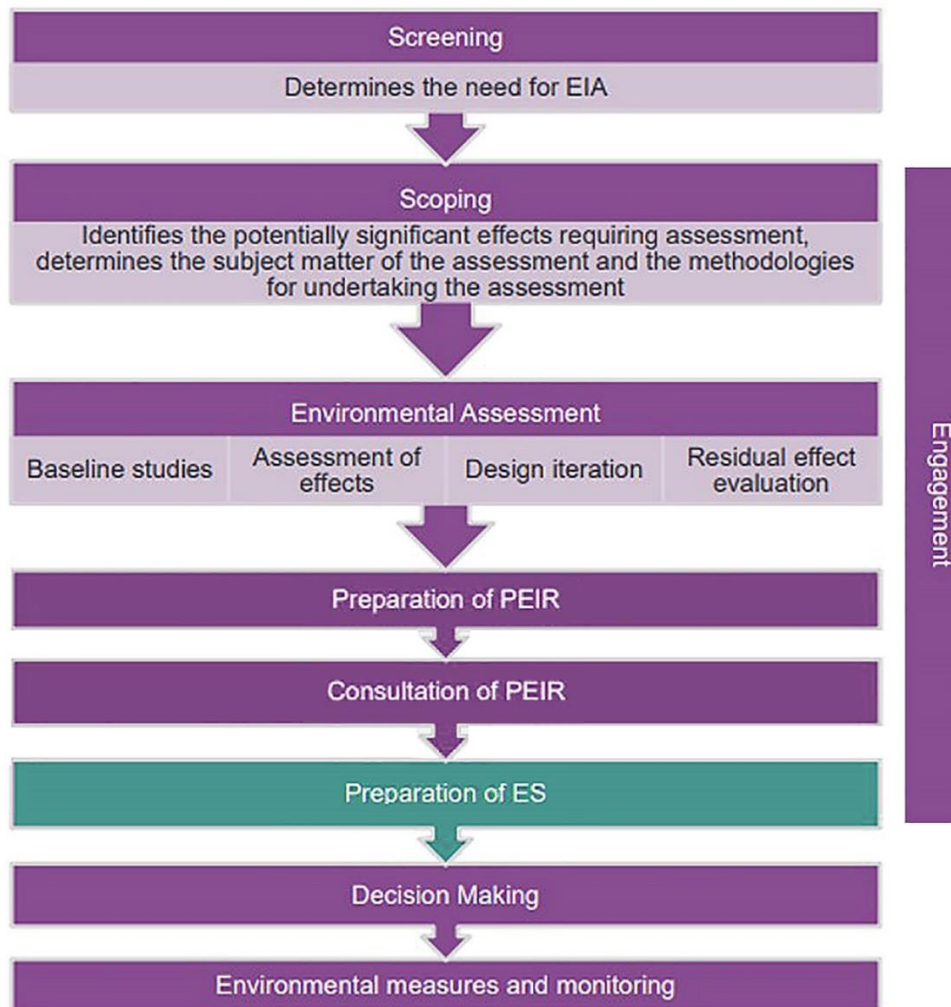
² Planning Inspectorate (2020). Advice Note Seven: Environmental Impact Assessment: Preliminary Environmental Information, Screening and Scoping Republished June 2020 (version 7). (Online) Available at: <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-seven-environmental-impact-assessment-process-preliminary-environmental-information-and-environmental-statements/> (Accessed 24 October 2022).

³ UK Government (2008). Planning Act 2008. (Online) Available at: <https://www.legislation.gov.uk/ukpga/2008/29/contents> (Accessed 24 October 2022).

proportionate in line with best practice and focuses effort in those areas where significant effects are likely as required by Regulation 14(2)(b) of the EIA Regulations.

4.2.3 The preparation of the ES is one of the key stages in the EIA process as it brings together information about any likely significant environmental effects. This process is summarised in **Graphic 4.1** below. The remainder of this chapter provides further detail around the key stages in this process with a focus on those stages most relevant to this stage of the assessment.

Graphic 4.1 - The EIA Process



4.3 EIA Screening

4.3.1 The Project falls within paragraph 3(b) of Schedule 2 of the EIA Regulations, as it comprises “*transmission of electrical energy by overhead cables*”. Those development projects defined in Schedule 2 only require EIA if they are likely to have significant effects on the environment by virtue of their nature, size or location. As set out in paragraph 1.4.5 of the EIA Scoping Report⁴, considering the nature and size of the

⁴ National Grid (2021). Yorkshire GREEN Project – Environmental Impact Assessment Scoping Report. (Online) Available at: <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/EN020024/EN020024-000008-YGRN%20Scoping%20Report.pdf> (Accessed 24 October 2022).

Project, National Grid Electricity Transmission plc (“National Grid”) gave notice in line with Regulation 8(1)(b) of the EIA Regulations that an EIA will be prepared for the Project and that the application for a DCO will be accompanied by an ES.

4.4 EIA scoping

- 4.4.1 A Scoping Report⁴ for the Project was submitted by National Grid to the Secretary of State (SoS) for Business, Energy and Industrial Strategy (BEIS), administered by the Planning Inspectorate on 18 March 2021. The Scoping Report presented a Scoping Red Line Boundary which defined the area within which the Project would be located, including the temporary and permanent construction and operational work areas. This set out the potentially significant environmental effects (as identified at that time) that would be assessed in more detail (i.e. scoped-in) as well as those that were unlikely to be significant and could therefore be scoped-out of the assessment.
- 4.4.2 A Scoping Opinion (see **Appendix 5.3.4A** within **Volume 5, Document 5.3.4**) was adopted by the Planning Inspectorate on behalf of the SoS on 28 April 2021. The Scoping Opinion and the statutory consultee responses have subsequently informed the assessment work and further design evolution undertaken to date. A summary of the Scoping Opinion comments and where they are addressed in this ES is given in the aspect **Chapters 6 to 18** within **Volume 5, Documents 5.2.6 to 5.2.18**.
- 4.4.3 Regulation 14(3)(a) of the EIA Regulations requires an ES to “*be based on the most recent scoping opinion adopted (so far as the proposed development remains materially the same as the proposed development which was subject to that opinion)*”. The iterative assessment process and stakeholder engagement has resulted in minor changes to the scope of the assessment and the methods of assessment from that which was provided for in the Scoping Report and/or Scoping Opinion. Any changes and a record of agreement on these with the relevant stakeholders are set out in each of the environmental aspect chapters (**Volume 5, Chapters 6 to 18, Document 5.2.6 to 5.2.18**). However, the Project remains materially the same as that on which the Scoping Opinion is based.
- 4.4.4 In the Scoping Report it was proposed to scope out three aspects: major accidents and disasters, electric and magnetic fields and climate change. Further explanation as to the reasons why major accidents and disasters and electric and magnetic fields were scoped out of the assessment is provided in **Section 4.7**. The Scoping Report sought to scope out climate change effects as well, however, in line with the Scoping Opinion an assessment of climate change effects, including a greenhouse gas emissions assessment is provided in **Chapter 17, Volume 5, Document 5.2.17**.

4.5 Preliminary Environmental Information Report

- 4.5.1 A Preliminary Environmental Information Report (PEIR) was prepared by National Grid as part of the statutory pre-application consultation process required under Sections 42 and 47 of the Act³ (hereafter referred to as Statutory Consultation) and made available on the Project website. The PEIR was published in October 2021 and enabled consultees and other interested parties to develop an informed view of the environmental effects of the Project and provide comments on the proposals. Where relevant to this ES, the comments are summarised, in the aspect **Volume 5, Chapters 6 to 17** within this **Volume 5, Documents 5.2.6 to 5.2.17**, together with an explanation of where they are addressed in this ES.

4.6 Consultation and engagement

- 4.6.1 Over the past two years, National Grid has undertaken consultation to help shape the route, layout and design of the Project, refine the EIA and assist in the development of any required mitigation. Further details are provided in the Consultation Report (**Volume 6, Document 6.1**).
- 4.6.2 There has been one round of non-statutory consultation and one formal statutory consultation as well as targeted consultation as summarised below.

Non statutory consultation

- 4.6.3 The non-statutory consultation on the Project took place from 11 March to 15 April 2021 and was extended to 04 May 2021 in response to a request from Skelton and Wigginton Parish Council for this parish council. As part of the consultation the Yorkshire Green Energy Enablement (GREEN) Project (“the Project” or “Yorkshire GREEN”) Corridor and Preliminary Routing and Siting Study and its Non-Technical Summary (**Volume 7, Document 7.8**) as well as a Project Background Document were made available on the Yorkshire GREEN Project website. A newsletter provided a summary of information about the Project, details about the consultation, including how to get involved and where more information could be found, and was circulated to the local community and wider stakeholders. A series of Project webinars and telephone drop-in sessions were held to provide information and assist those responding to the consultation.
- 4.6.4 During this consultation National Grid outlined and sought views on the Cable Sealing End Compound (CSEC) and substation siting options and route corridor for the new overhead lines. Details of the non-statutory consultation is included in **Section 4, Document 6.1, Volume 6**. A summary is provided in the ES in **Chapter 2, Volume 5, Document 5.2.2**.

Statutory consultation

- 4.6.5 In October 2021, National Grid began its statutory consultation under sections 42 and 47 of the Act³ from 28 October to 09 December 2021. This included four consultation events and seven online question and answer sessions where the project team engaged with the local community. A recording of a webinar presentation describing the Project was made available on the Yorkshire GREEN Project website.
- 4.6.6 The consultation sought feedback on National Grid’s proposed application and provided information on how the Project design had developed since non-statutory consultation. The core documents that were consulted on were the PEIR and statutory consultation plans.
- 4.6.7 This consultation formed the statutory stage of consultation i.e. consultation completed in accordance with the requirements of the Act³ on the proposed DCO application. The statutory consultation was completed to meet the requirements of sections 42 to 49 of the Act³. Further information about this process can be found in the Consultation Report (**Volume 6, Document 6.1**) and a summary is also provided in the ES in **Chapter 2: Project need and alternatives, Volume 5, Document 5.2.2**.

Targeted consultation

- 4.6.8 Once statutory consultation was completed the design was refined in accordance with stakeholder feedback, as well as to develop the operational design further and avoid environmental effects identified from ongoing baseline surveys (**Chapter 2, Volume 5,**

Document 5.2.2). In some cases this required amendments to the draft Order Limits consulted on during statutory consultation. Where such changes occurred targeted consultation was undertaken with landowners and other potentially affected stakeholders for feedback on the change proposed. Further information on the process followed and the stakeholders consulted can be found in **Sections 8 and 9** of the **Consultation Report (Volume 6, Document 6.1)**.

Consideration of engagement in the EIA process

4.6.9 The approach to the EIA has been, and continues to be, informed by public consultation and stakeholder engagement. This has been ongoing throughout the pre-application phase of the DCO application.

4.6.10 Each environmental aspect chapter (**Chapters 6 to 18 (Volume 5, Documents 5.2.6 to 5.2.18)**) includes a 'Consultation and Stakeholder engagement' section which provides a record of all relevant comments received in relation to that aspect with information as to how the Scoping Opinion and consultation responses have been addressed in the ES as follows:

- The EIA Scoping Opinion (see **Appendix 4A** within **Volume 5, Document 5.3.4A**).
- Statutory consultation responses (see **Consultation Report, Volume 6, Document 6.1**).
- Ongoing technical engagement with prescribed and other consultees, including the host local planning authorities.

4.6.11 Technical stakeholder engagement has included further aspect specific meetings and one to one meetings with a range of stakeholders and prescribed consultees across the environmental aspects. These meetings informed a more detailed assessment, agreed the scope of assessment and identified and agreed the appropriate measures to mitigate the effects of the Project.

4.7 Preparation of the ES

Compliance with the EIA Regulations

4.7.1 The content of this ES has to comply, as a minimum, with Regulation 14 and Schedule 4 of the EIA Regulations. In addition, the approach to the EIA has been informed by a number of sources of guidance. Planning Inspectorate Advice Note Seven⁵ states that the ES should clearly explain the processes followed, the forecasting methods used and the measures envisaged to prevent, reduce and where possible offset any significant negative effects. Other source of guidance have included the following:

⁵ Planning Inspectorate (June 2020), Advice Note Seven: Environmental Impact Assessment: Preliminary Environmental Information, Screening and Scoping. (Online) Available at: <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-seven-environmental-impact-assessment-process-preliminary-environmental-information-and-environmental-statements/> (Accessed 24 October 2022).

- Institute of Environmental Management and Assessment (IEMA) Environmental Impact Assessment Guide to Delivering Quality Development⁶;
- EIA Planning Practice Guidance⁷;
- Planning Inspectorate Advice Note 3: EIA Notification and Consultation⁸;
- Planning Inspectorate Advice Note 9: Rochdale Envelope⁹;
- Planning Inspectorate Advice Note 11: Working with Public Bodies in the Infrastructure Planning Process¹⁰; and
- Planning Inspectorate Advice Note 17: Cumulative Effects Assessment¹¹.

4.7.2 This ES accords with the requirements of the EIA Regulations 2017 in relation to the content of this ES. **Table 4.1** signposts where the information is provided in the ES pursuant to Regulation 14 and Schedule 4 of the EIA Regulations.

Table 4.1 Compliance with the EIA Regulations 2017 and location of the information in this ES

Requirement from Schedule 4 and Regulation 14	Location in this ES
Regulation 14	
2. An environmental statement is a statement that includes at least: (a) a description of the proposed development comprising information on the site, design, size and other relevant features of the development;	Chapter 3 Description of the Project, Volume 5, Document 5.2.3

⁶ IEMA (2016). Environmental Impact Assessment Guide to: Delivery Quality Development. (Online) Available at: [REDACTED] (Accessed 24 October 2022).

⁷ Department for Levelling Up, Housing and Communities and Ministry of Housing (2020). Guidance: Environmental Impact Assessment. (Online) Available at: <https://www.gov.uk/guidance/environmental-impact-assessment> (Accessed 24 October 2022).

⁸ The Planning Inspectorate (2017). Advice Note 3: EIA consultation and notification (version 7). (Online) Available at: <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-three-eia-notification-and-consultation-2/> (Accessed 24 October 2022).

⁹ The Planning Inspectorate (2018). Advice Note 9: Rochdale Envelope (version 3). (Online) Available at: <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-nine-rochdale-envelope/> (Accessed 24 October 2022).

¹⁰ The Planning Inspectorate (2017). Advice Note 11: Working with Public Bodies in the Infrastructure Planning Process (version 4). (Online) Available at: <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-eleven-working-with-public-bodies-in-the-infrastructure-planning-process/> (Accessed 24 October 2022).

¹¹ The Planning Inspectorate (2015). Advice Note 17: Cumulative effects assessment relevant to nationally significant infrastructure projects (version 2). (Online) Available at: <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-17/> (Accessed 24 October 2022).

Requirement from Schedule 4 and Regulation 14	Location in this ES
(b) a description of the likely significant effects of the proposed development on the environment;	Technical aspect Chapters 6 to 18, Volume 5, Document 5.2.6 to 5.2.18 (subsections on Assessment of effects)
(c) a description of any features of the proposed development, or measures envisaged in order to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment	Chapter 3 Description of the Project, Volume 5, Document 5.2.3, Chapters 6 to 17 (subsections on Embedded environmental measures,), Volume 5, Document 5.2.6 to 5.2.17, Embedded measures schedule, Appendix 5.3.3A, Document 5.3.3A
(d) a description of the reasonable alternatives studied by the applicant, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the development on the environment;	Chapter 2 Project need and alternatives, Volume 5, Document 5.2.2
(e) a non-technical summary of the information referred to in subparagraphs (a) to (d); and	Non-Technical Summary, Volume 5, Document 5.1
(f) any additional information specified in Schedule 4 relevant to the specific characteristics of the particular development or type of development and to the environmental features likely to be significantly affected.	Chapter 3 Description of the Project, Volume 5, Document 5.2.3, Chapters 6 to 17, Volume 5, Documents 5.2.6 to 5.2.17, Figures Volume 5.4, Appendices Volume 5.3
3. The environmental statement referred to in paragraph (1) must (a) where a Scoping Opinion has been adopted, be based on the most recent Scoping Opinion adopted (so far as the proposed development remains materially the same as the proposed development which was subject to that opinion);	Chapter 4 Approach to preparing the ES, Volume 5, Document 5.2.4, Chapters 6 to 18, Volume 5, Documents 5.2.6 to 5.2.18 (subsections on Scope of the Assessment)
b) include the information reasonably required for reaching a reasoned conclusion on the significant effects of the development	Chapter 4 Approach to the ES, Volume 5, Document 5.2.4,

Requirement from Schedule 4 and Regulation 14	Location in this ES
on the environment, taking into account current knowledge and methods of assessment; and	Chapters 6 to 17, Volume 5, Document 5.2.6 to 5.2.17 (subsections on the Assessment of Effects),
(c) be prepared, taking into account the results of any relevant UK environmental assessment, which is reasonably available to the applicant with a view to avoiding duplication of assessment.	Technical aspect Chapters 6 to 18, Volume 5, Documents 5.2.6 to 5.2.18 (subsections on Assessment of effects)
4. In order to ensure the completeness and quality of the environmental statement – (a) the applicant must ensure that the environmental statement is prepared by competent experts; and	Chapter 1 Introduction, Volume 5, Document 5.2.1
(b) the environmental statement must be accompanied by a statement from the applicant outlining the relevant expertise or qualifications of such experts.	Appendix 1A, Volume 5, Document 5.3.1A
Schedule 4	
1. A description of the development, including in particular: (a) a description of the location of the development;	Chapter 3 Description of the Project, Volume 5, Document 5.2.3
(b) a description of the physical characteristics of the whole development, including, where relevant, requisite demolition works and the land-use requirements during the construction and operational phases;	Chapter 3 Description of the Project, Volume 5, Document 5.2.3, Figures, Volume 5, Document 5.4.3
(c) a description of the main characteristics of the operational phase of the development (in particular any production process), for instance, energy demand and energy used, nature and quantity of the materials and natural resources (including water, land, soil and biodiversity) used; and	Chapter 3 Description of the Project, Volume 5, Document 5.2.3
(d) an estimate, by type and quantity, of expected residues and emissions (such as water, air, soil and sub soil pollution, noise, vibration, light, heat, radiation, and quantities and types of waste produced during the construction and operation phases.	Aspect chapters relating to hydrology (Volume 5, Document 5.2.9), Agriculture and soils (Volume 5, Document 5.2.11) , Traffic and transport (Volume 5, Document 5.2.12) , Air quality (Volume 5, Document 5.2.13) , Noise and vibration (Volume 5, Document 5.2.14) , Climate change (Volume 5, Document

Requirement from Schedule 4 and Regulation 14	Location in this ES
<p>2. A description of the reasonable alternatives (for example in terms of development design, technology, location, size and scale) studied by the developer which are relevant to the proposed project and its specific characteristics, and an indication of the main reasons for selecting the chosen option, including a comparison of the environmental effects.</p>	<p>5.2.17), Code of Construction Practice (Volume 5, Document 5.3.3B)</p> <p>Chapter 2 Project need and alternatives, Volume 5, Document 5.2.2</p>
<p>3. A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge.</p>	<p>Technical aspect Chapters 6 to 17 Volume 5, Documents 5.2.6 to 5.2.17 (subsections on Overall baseline)</p>
<p>4. A description of the factors specified in regulation 5 (2) likely to be significantly affected by the development: population, human health, biodiversity (for example fauna and flora) land (for example land take), soil (for example organic matter, erosion, compaction, sealing), water (for example hydromorphological changes, quantity and quality), air, climate (for example greenhouse gas emissions, impacts relevant to adaptation), material assets, cultural heritage, including architectural and archaeological aspects, and landscape.</p>	<p>Population: Landscape and visual (Volume 5, Document 5.2.6), Hydrology (Volume 5, Document 5.2.9), Geology and hydrogeology (Volume 5, Document 5.2.10), Traffic and transport (Volume 5, Document 5.2.12), Air quality (Volume 5, Document 5.2.13), Noise and vibration (Volume 5, Document 5.2.14), Socio-economic (Volume 5, Document 5.2.16), Human Health (Volume 5, Document 5.2.15), Biodiversity (Volume 5, Document 5.2.8), Land (Volume 5, Document 5.2.11), Soil (Volume 5, Document 5.2.11), Water (Volume 5, Documents 5.2.9, 5.2.10), Air (Volume 5, Document 5.2.13), Climate(Volume 5, Document 5.2.17), Material assets (Volume 5, Document 5.2.8,</p>

Requirement from Schedule 4 and Regulation 14	Location in this ES
<p>5. A description of the likely significant effects of the development on the environment resulting from, inter alia:</p> <p>(a) The construction and existence of the development including, where relevant, demolition works;</p>	<p>5.2.11, 5.2.16), Cultural heritage (Volume 5, Document 5.2.7), Landscape (Volume 5, Document 5.2.6)</p>
<p>(b) The use of natural resources, in particular, land, soil, water and biodiversity, considering as far as possible the sustainable availability of these resources;</p>	<p>Chapters 6 to 18 (Assessment of effects subsections), Volume 5, Document 5.2.6 to 5.2.18</p>
<p>(c) the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances and the disposal and recovery of waste;</p>	<p>Chapters 6 to 18 (Assessment of effects subsections), Volume 5, Document 5.2.6 to 5.2.18</p>
<p>(d) The risks to human health, cultural heritage or the environment (for example due to accidents or disasters);</p>	<p>Chapters 6 to 18 (Assessment of effects subsections), Volume 5, Document 5.2.6 to 5.2.18</p>
<p>(e) The cumulation of effects with other existing and/or approved projects taking into account any existing environmental problems relating to areas of particular environmental importance likely to be affected or the use of natural resources;</p>	<p>Volume 5, Chapters 6 to 17 (Assessment of cumulative effects subsections), Chapter 18: Cumulative effects assessment, Volume 5, Document 5.2.6 to 5.2.18</p>
<p>(f) The impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change; and</p>	<p>Chapter 17, Volume 5, Document 5.2.17</p>
<p>(g) The technology and the substances used.</p>	<p>Chapters 6 to 18 (Assessment of effects subsections), Volume 5, Document 5.2.6 to 5.2.18</p>
<p>The description of the likely significant effects on the factors specified in regulation 5 (2) should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive</p>	<p>Technical aspect Chapters 6 to 17 (subsections 'Assessment of effects')</p>

Requirement from Schedule 4 and Regulation 14	Location in this ES
and negative effects of the development. This description should take into account the environmental protection objectives established at Union or Member State level which are relevant to the project, including in particular those established under Council Directive 92/43/EEC (a) and Directive 2009/147/EC (b).	and 'Significance conclusions'), Volume 5, Documents 5.2.7 to 5.2.17
6. A description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information and the main uncertainties involved.	Technical aspect Chapters 6 to 17 (subsections 'Assessment methodology'), Volume 5, Documents 5.2.7 to 5.2.17
7. A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment and, where appropriate, of any proposed monitoring arrangements (for example the preparation of a post-project analysis). That description should explain the extent, to which significant adverse effects on the environment are avoided, prevented, reduced or offset, and should cover both the construction and operational phases.	Technical aspect Chapters 6 to 17 (subsections 'Embedded measures' and 'Assessment of effects'), Volume 5, Documents 5.2.7 to 5.2.17 , Embedded Measures Schedule, Appendix 5.3.3A, Volume 5, Document 5.3.3A
8. A description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned. Relevant information available and obtained through risk assessments pursuant to Union legislation such as Directive 2012/18/EU of the European Parliament and of the Council (c) or Council Directive 2009/71/Euratom (d) or UK environmental assessments may be used for this purpose provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies.	Major accidents and disasters have been scoped out of the assessment (see Section 4.7).
9. A non-technical summary of the information provided under paragraphs 1 to 8.	Non-Technical Summary, Volume 5, Document 5.1.
10. A reference list detailing the sources used for the descriptions and assessments included in the environmental statement.	Referenced throughout all documents as footnotes

4.7.3 This ES has also been prepared with a view to compliance with the requirements of Regulation 5(2)(a) of the Infrastructure Planning (Applications: Prescribed Forms and

Procedure) Regulations 2009. **Table 4.2** sets out where the relevant information can be found in this ES.

Table 4.2 - Compliance with Regulation 5(2) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 No. 2264 in this ES

Regulation 5(2)	Location in this ES
(g) any report identifying any European site to which regulation 48 of the Conservation (Natural Habitats, &c.) Regulations 1994(3) applies	Biodiversity assessment, Chapter 8: Biodiversity (Volume 5, Document 5.2.8) . Habitat Regulations Assessment: No Significant Effects Report (Volume 6, Document 6.3)
(l) where applicable, a plan with accompanying information identifying*	
I(i) any statutory or non-statutory sites or features of nature conservation such as sites of geological or landscape importance	Chapter 8: Biodiversity, Volume 5, Document 5.4.8
I(ii) habitats of protected species, important habitats or other diversity features	Chapter 8: Biodiversity, Volume 5, Document 5.4.8
I(iii) water bodies in a river basin management plan	Chapter 9, Hydrology: Volume 5, Document 5.4.9
I(m) where applicable, a plan with accompanying information identifying any statutory or non statutory sites or features of the historic environment, including scheduled monuments, World Heritage sites, listed buildings and other historic structures, archaeological sites and registered battlefields, together with an assessment of any effects on such sites, features or structures likely to be caused by the proposed development	Chapter 7, Landscape and visual: Volume 5, Document 5.4.7

* These plans are also part of the DCO Submission **Volume 2**

- 4.7.4 The ES has also been prepared in accordance with PINS Advice Note Six¹² and under section 37 of the Act³ as the ES is an application document.
- 4.7.5 On 19 July 2011 the Secretary of State designated the Energy National Policy Statements (NPSs) under the provisions of Section 5(1) of the Act³. These NPSs set out guidance to inform the decision-making process for NSIPs. A summary of the main elements of the Overarching National Policy Statement for Energy (EN-1); and the National Policy Statement for Electricity Networks Infrastructure (EN-5) which are

¹² The Planning Inspectorate (2014). Advice Note Six: Preparation and submission of application documents, (Version 11). (Online) Available at: <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-six-preparation-and-submission-of-application-documents/> (Accessed 24 October 2022).

relevant to the Project is set out in **Chapter 5, Volume 5, Document 5.2.5**. Each technical chapter (**6-18, Volume 5, Document 5.2.6 to 5.2.18**) also includes policy context relevant to the assessment.

- 4.7.6 A separate Planning Statement (**Volume 7, Document 7.1**) has been prepared to accompany the DCO application, which outlines how the Project complies with the requirements of national and local planning policy.
- 4.7.7 A separate Biodiversity Net Gain Report (**Volume 7, Document 7.9**) provides an initial BNG calculation undertaken for the Project based on a worst-case scenario for temporary and permanent habitat loss, and modelled scenarios for achieving the minimum 10% BNG in line with the Environment Act 2021, which will mandate for NSIPs to achieve Biodiversity Net Gain (BNG) and is expected to come into force in 2025. The Environment Act has a requirement to achieve a minimum 10% uplift in biodiversity value and requires that this is calculated using an appropriate biodiversity metric and maintained for a specified period. National Grid's commitment to delivering environmental gain and BNG is independent of development consent requirements. Therefore BNG measures have been considered but not assessed in the ES as the delivery of BNG may fall outside the Order Limits. Similarly the landscape and visual assessment (**Chapter 6, Volume 5, Document 5.2.6**) has considered the potential for off-site (i.e. outside the Order Limits) landscape enhancement and planting where there is the potential for significant visual effects but such planting has not been taken into account when determining the significance of effects.

Scope of the assessment

Identification of baseline conditions

- 4.7.8 Determining the existing environmental conditions is an important part of the EIA process. Baseline data are collected to better understand the potentially significant effects from the Project and may quantify existing levels of pollutants (e.g. for noise, air and water pollution) and identify potentially vulnerable/sensitive habitats, species or human populations/groups and other environmentally sensitive receptors such as historic environment receptors. Where a baseline aspect cannot be quantified then nominal levels of importance, quality or value are assigned based on widely accepted criteria in fields such as ecology, historic environment, landscape and socio-economic assessment.
- 4.7.9 The baseline is established through desk-based studies and/or surveys of the relevant Study Area for each environmental aspect/receptor and provides a 'baseline' against which changes, potentially caused by the Project, can be compared. The baseline environment encompasses the Order Limits and wider Study Areas, which are set out in the aspect chapters (**Chapters 6 to 17, Volume 5, Document 5.2.6 to 5.2.17**). The timescales over which the baseline studies have been undertaken to inform the ES are identified within the relevant environmental aspect chapters.
- 4.7.10 Each aspect chapter also provides a description of the 'future baseline', which considers whether in the absence of the Project, there is likely to be a change in the baseline conditions (relating to particular aspects or receptors), over the lifetime of the Project (future baseline). For some aspects such as transport, there may be traffic growth based on regional or national trends, and this would normally be applied consistently across all road transport-related receptors. However, for other aspects, it is possible that a specific part of a Study Area is predicted to change, by virtue of other potential developments being likely to take place and introducing new future receptors.

4.7.11 Detailed methodologies for baseline data gathering specific to each aspect assessment can be found in **Chapters 6 to 17, Volume 5, Document 5.2.6 to 5.2.17**.

Spatial scope

4.7.12 The spatial scope for each environmental aspect, the area over which changes to the environment are predicted to occur as a consequence of the Project, will depend on the nature of the potential effects and the location of receptors that could be affected. It takes account of:

- the physical area of the Project;
- the nature of the baseline environment; and
- the manner and extent to which environmental effects may occur.

4.7.13 Each of the environmental aspect chapters (**Chapters 6 to 17, Volume 5, Document 5.2.6 to 5.2.17**) describes the Study Area to be considered, providing a clear explanation as to why the Study Area has been adopted. The spatial scope of each assessment has taken account of comments received from stakeholders, the EIA Scoping Opinion and statutory consultation responses. In response to these the draft Order Limits consulted on as part of the statutory consultation have been refined to form the Order Limits which now comprise the boundary of the Project (**Section 3.3, Volume 5, Document 5.2.3**).

Temporal scope

4.7.14 The temporal scope refers to the time periods over which impacts and effects may be experienced by sensitive receptors which may be permanent, temporary, long term or short term. The EIA assesses effects during the construction (2024 to 2028), operation and maintenance and where appropriate, decommissioning phases of the Project. The Project is assumed to have a design life of 80 years with the decommissioning phase expected to be approximately two years in duration. The temporal scope for each aspect-based assessment is defined in **Chapters 6 to 17, Volume 5, Documents 5.2.6 to 5.2.17**.

Design envelope

4.7.15 In order to establish the scope of environmental assessment, this ES adopts what is termed a 'Rochdale Envelope' or parameter-based design envelope approach. The Planning Inspectorate Advice Note Nine¹³ outlines the approach that can be taken, in accordance with the requirements of the EIA Regulations, where some details of the Project have not yet been confirmed when the Application is submitted and where flexibility is sought to address this uncertainty.

4.7.16 Assessing using a parameter-based design envelope approach means that the assessment will consider a maximum design scenario which represents the worst case scenario for each aspect whilst allowing the flexibility to make improvements in the future in ways that cannot be predicted at the time of submission of the DCO application. Development permitted by the DCO will not extend beyond the clearly defined parameters assessed in this ES. For example, defined Limits of Deviation are

¹³ Planning Inspectorate (2018). Advice Note Nine: Rochdale Envelope (version 3). (Online) Available at: <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-nine-rochdale-envelope/> (Accessed 24 October 2022).

assumed to provide the flexibility to relocate a pylon due to poor ground conditions. Further information is provided in **Section 3.3 (Volume 5, Document 5.2.3)**.

Approach to environmental measures

Embedded environmental measures

- 4.7.17 EIA is an iterative process and opportunities for measures to mitigate effects, have been considered throughout the design evolution of the Project, embedded into the Project and in the assessment undertaken for the ES where likely significant effects have been identified. All of the types of measures listed below are referred to as 'embedded environmental measures' as it is the intention to implement all of these types of measures as part of the Project. Therefore, the assessment of likely significant effects is based on this assumption and takes these measures into account when drawing conclusions regarding significance of effects
- 4.7.18 The iterative design evolution process followed has been driven by collaborative working between the design, environment and land teams. This may have been through the consideration and adoption of alternatives or through measures incorporated within the design itself. Where possible, these measures have been developed with input from key stakeholders together with appropriate technical standards, policies and guidance.
- 4.7.19 Good practice consideration and application of environmental measures involves a hierarchal approach, considering avoidance of negative effects as the primary objective. In accordance with the IEMA 'Delivering Quality Development' (2016)¹⁴ definitions the embedded measures have been classified into the following categories.
- Primary (inherent) measures: Measures which form part of the design of the Project. They can include modifications to the location, design or operation of the Project made during the pre-application phase. Examples would include amending the location of the Project to avoid a sensitive feature such as a designated nature conservation site or reducing the height of a structure to minimise visual effects. They form an inherent part of the Project, and do not require additional action to be taken.
 - Secondary (foreseeable): Measures that require further activity in order to achieve the anticipated outcome, for example action post-consent. Examples would include the Archaeological Written Scheme of Investigation which outline proposals for further investigation post-consent.
 - Tertiary (inexorable): Measures that would occur with or without input from the EIA feeding into the design development process. These include actions that will be undertaken to meet other existing legislative requirements or actions that are considered to be standard good practice used to manage commonly occurring environmental effects. Examples include construction management measures implemented to minimise the risk of nuisance or pollution effects.

Monitoring measures

- 4.7.20 Monitoring measures may be required in relation to any significant negative effects on the environment caused by the Project, and secured through DCO requirements. Any

¹⁴ IEMA (2016). Environmental Impact Assessment Guide to: Delivering Quality Development (Online). Available at: [REDACTED] (Accessed 06 April 2021).

monitoring proposed with respect to significant adverse effects is identified in the environmental aspect chapters (**Chapters 6 to 18, Volume 5, Documents 5.2.6 to 5.2.18**).

Securing mitigation and monitoring measures

4.7.21 The Embedded Measures Schedule (presented in full in **Appendix 5.3.3.A, Volume 5, Document 5.3.3A**) acts as the primary tool to capture and agree all embedded environmental mitigation measures, and the mechanisms for securing them. The ES is based on the assumption that all of these measures will be implemented as part of the Project. Implementation of the embedded environmental measures relied upon in the assessment are secured in the DCO. For example, through the setting of Limits of Deviation or specifying measures via a DCO requirement.

Approach to the assessment of significance

4.7.22 One of the requirements of an ES is to set out the conclusions that have been reached about the likely significant environmental effects that are predicted to occur as a result of the Project. Reaching a conclusion about which effects, if any, are likely to be significant is the culmination of an iterative process that involves the following stages:

- identifying those effects that could be likely to be significant;
- identifying the people and environmental resources (collectively known as 'receptors' that could be significantly affected by the Project);
- assessing the effects of the Project against the baseline (current or future, as appropriate); and
- concluding whether these resultant effects are likely to be significant.

4.7.23 **Chapters 6 to 17 (Volume 5, Document 5.2.6 to 5.2.17)** of the ES describe the approaches that have been used for each of the environmental aspects scoped into the assessment, in relation to the stages outlined in the bullet points above. These chapters also describe how environmental changes and resulting effects for different environmental aspects are assessed, together with the topic specific approaches that have been used to identify the receptors that could be significantly affected by the Project.

Types of effects

4.7.24 Paragraph 5 of Schedule 4 to the EIA Regulations states that "*The description of the likely significant effects on the factors specified in regulation 5(2) should cover the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development.*" A description of each category of effect is provided below.

Direct effects

4.7.25 Direct effects are those that result directly from a Project. For example, where a machine disturbs an area of habitat; the associated physical activity could result in a change to the receptor.

Indirect and secondary effects

4.7.26 Indirect and secondary effects are those that result from consequential change caused by the Project. As such they would normally occur later in time or at locations further away than direct effects. An example would be where water or gas pipes are damaged as a result of the Project, and the consequence of that damage is fire or flood risk to other receptors.

Temporal effects

4.7.27 Temporal effects are typically defined as being permanent or temporary as follows:

- Permanent – these are effects that would remain even when the Project is complete, although these effects may be caused by environmental changes that are permanent or temporary. For example, an excavator that is temporarily driven over an area of valuable habitat could cause so much damage that the effect on this vegetation would be permanent.
- Temporary – these are effects that are related to environmental changes associated with a particular activity and that would cease when that activity finishes.

Transboundary effects

4.7.28 Transboundary effects are those that would affect the environment in another state within the European Economic Area (EEA)¹⁵. The EIA Regulations require an ES to consider the transboundary effects of a development (paragraph 5 of Schedule 4). Given the nature of the Project and its proposed location, significant transboundary effects are unlikely. However, the transboundary screening matrix has been completed as detailed in the Planning Inspectorate's Advice Note Twelve¹⁶ and included within this ES within **Appendix 4B (Volume 5, Document 5.3.4B)**.

Cumulative effects

4.7.29 **Chapter 18, Volume 5, Document 5.3.18** sets out the approach to the Cumulative Effects Assessment (CEA).

4.7.30 Two types of CEA have been considered in the assessment:

- **Inter-project (combined with other development) cumulative effects;** effects resulting from the Project combining with the same topic-related effects generated by other developments to affect a common receptor. For example, where the effects from traffic flows during the construction of Yorkshire GREEN combine with traffic flows from another development undergoing construction nearby to result in significant effects on a local resident.
- **Intra-project (within the Project) cumulative effects;** individual environmental aspect effects resulting from the Project, which are not

¹⁵ The UK consists of England, Scotland, Wales and Northern Ireland, and forms a single EEA State.

¹⁶ Planning Inspectorate (2020). Advice Note Twelve, Transboundary Impacts and Process (version 6). (Online) Available at: <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-twelve-transboundary-impacts-and-process/> (Accessed 24 October 2022).

significant in their own right, but could combine with other environmental aspect effects from the same development to create effects that are significant. For example, where changes in visual amenity and noise, dust and traffic related effects from the Project construction works combine to result in significant effects on a local resident.

- 4.7.31 **Chapter 18 Cumulative Effects, Volume 5, Document 5.2.18** presents the inter-project and intra-project assessment methodologies and the results of a screening exercise to identify projects and plans for inclusion in the inter-project CEA with supporting information provided in **Appendix 5.3.18A, Volume 5, Document 5.3.18A**. It summarises the outcome of the assessment inter-project effects (with additional detail provided in **Chapters 6 to 17, Volume 5, Document 5.2.6 to 5.2.17**) and provides an assessment of intra-project effects. Where appropriate, this has taken account of the projects and plans identified by relevant stakeholders following Statutory Consultation.

Significance evaluation

- 4.7.32 The receptors that could be significantly affected by the Project are identified within each aspect chapter. The approach adopted to determine whether the effects on these receptors are significant is to apply a combination of professional judgement and a topic-specific significance evaluation methodology that draws on the results of the assessment work carried out.
- 4.7.33 In applying this approach to significance evaluation, it is necessary to ensure consistency between each environmental aspect at the level at which effects are considered significant. Therefore, in general, it is inappropriate for the assessment of one aspect to conclude that minor effects are significant, when, for another aspect, only comparatively major effects are significant.
- 4.7.34 The conclusion regarding significance is arrived at using the relevant aspect-specific significance evaluation methodology and professional judgement, with reference to the Project description, and available information about the magnitude and other characteristics of the potential changes that are expected to be caused by the Project, receptors' sensitivity to these changes and the effects of these changes on relevant receptors.
- 4.7.35 The overall approach to significance is summarised in more detail below.

Evaluation matrices

- 4.7.36 Significance evaluation involves combining information about the sensitivity, importance or value of a receptor, and the magnitude and other characteristics of the changes that affect the receptor. The approach to using this information for significance evaluation is outlined below.

Receptor sensitivity, importance, or value

- 4.7.37 The sensitivity or value of a receptor is largely a product of the importance of an asset, as may be informed by legislation and policy, and as qualified by professional judgement. For example, receptors for landscape, biodiversity or the historic environment may be defined as being of international or national importance. Lower value resources may be defined as being sensitive or important at a county or district level. For each environmental topic, it is necessary to provide a detailed rationale that explains how the categories of sensitivity/importance/value have been used.

4.7.38 The use of a location or physical element that may be representative of receptors, e.g., human beings, would also play a part in its classification in terms of sensitivity, importance, or value. For example, when considering effects on the amenity of a human population, a location used for recreational purposes may be valued more than a place of work.

Magnitude of change

4.7.39 The magnitude of change affecting a receptor that would be affected by the Project would be identified on a scale from very low (or negligible depending on the aspect being assessed) to high. As with receptor sensitivity and value, a rationale is provided in each aspect chapter that explains how the categories of environmental change are defined. For certain aspects, the magnitude of change would be related to guidance on what levels of change are acceptable (e.g., for air quality or noise), and be based on numerical parameters. For other changes, it would be a matter of professional judgement to determine the magnitude of change, using descriptive terms.

Determination of significance

4.7.40 The significance of effects is determined with reference to information about the nature of the Project, the receptors that could be significantly affected and their sensitivity, importance or value, together with the magnitudes of environmental change that are likely to occur.

4.7.41 Other than for certain environmental topics, for which significance evaluation does not involve the use of matrices, sensitivity/value and the characteristics of environmental changes can be combined using a matrix (see **Graphic 4.2** Significance evaluation matrix). In addition, professional judgement is applied because, for certain environmental topics, the lines between the sensitivities or magnitudes of change may not be clearly defined and the resulting assessment conclusions may need clarifying.

4.7.42 Variations to this approach, which may be applicable to specific environmental aspects, would be detailed in the relevant 'Significance evaluation methodology' sub-section contained in each environmental aspect chapter.

4.7.43 Definitions of how the categories that are used in the matrix are derived for each aspect are also set out in each applicable environmental aspect chapter, along with the relevant explanation and descriptions of receptor sensitivity, magnitude of change and levels of effect that are considered significant under the EIA Regulations.

4.7.44 Within the matrix that is used in most significance evaluation exercises, reference is made to:

- Major effects (a combination of sensitivity and magnitude), which would always be determined as being significant in EIA terms. These can be beneficial or adverse.
- Moderate effects (a combination of sensitivity and magnitude) which could be significant, although there may be circumstances where such effects are considered not significant on the basis of professional judgement. These can be beneficial or adverse.
- Minor or negligible effects, which would always be determined as not significant whether beneficial or adverse.

Graphic 4.2 - Significance evaluation matrix

		Magnitude of change			
		High	Medium	Low	Very Low
Sensitivity/ Importance / value	High	Major (Significant)	Major (Significant)	Moderate (Potentially significant)	Minor (Not significant)
	Medium	Major (Significant)	Moderate (Potentially significant)	Minor (Not significant)	Minor (Not significant)
	Low	Moderate (Potentially significant)	Minor (Not significant)	Minor (Not significant)	Negligible (Not significant)
	Very Low	Minor (Not significant)	Minor (Not significant)	Negligible (Not significant)	Negligible (Not significant)

Additional measures and residual effects

4.7.45 Embedding environmental measures within the Project design may mean that no significant effects would occur because those measures mitigate potentially significant effects. However, for receptors where significant effects have been concluded even with embedded measures in place, additional measures which do not form part of the Project may be identified. Typically, additional measures cannot be implemented as part of the Project and/or within the Order Limits. An example would include off-site landscape planting schemes within privately owned land where agreement would need to be reached with the landowner in order to implement the planting. In such instances these additional measures are identified, and consideration given to residual effects should such measures be implemented. However, such mitigation does not form part of the Project. The assessment of residual effects is only provided as an indication of whether the additional measures could potentially mitigate significant effects.

Technical aspect chapter structure

4.7.46 With a few exceptions, each environmental aspect chapter follows a common format, as outlined below:

- 1. Introduction;
- 2. Relevant legislation, planning policy and technical guidance;
- 3. Consultation and engagement;
- 4. Data gathering methodology;
- 5. Overall baseline;

- 6. Embedded environmental measures;
- 7. Scope of the assessment;
- 8. Assessment methodology;
- 9. Assessment of effects (may comprise a number of sub-sections depending on number and type of effects and/or receptors);
- 10. Assessment of cumulative effects;
- 11. Significance conclusions;
- 12. Additional mitigation (only included if additional mitigation has been identified which is not implemented as part of the Project); and
- 13. Residual effects assessment (only included if additional mitigation has been identified).

Environmental aspects scoped out of the ES

Electric and Magnetic Fields

- 4.7.47 All equipment that generates, distributes or uses electricity produces Electric and Magnetic Fields (EMFs), and EMFs also occur naturally. The UK power frequency (the frequency at which electric power is generated and distributed) is 50 Hertz (Hz) which is the principal frequency of the EMFs produced, which are also known as Extremely Low Frequency (ELF) EMFs. The strength of electric fields depend on the operating voltage of the equipment producing them and are measured in V/m (volts per metre). The voltage applied to equipment is a relatively constant value. Magnetic fields depend on the electrical currents flowing, which vary according to the electrical power requirements at any given time and are measured in μT (microtesla). Both fields diminish rapidly with distance from the source and are present in all areas where electricity is in use (e.g. office and homes), arising from electric cabling and equipment in the area.
- 4.7.48 All overhead lines produce EMFs, and these tend to be highest directly under an overhead line and decrease to the sides at increasing distance. Underground cables produce no external electric fields, and the magnetic field falls more rapidly, falling to the levels typically found in UK homes within approximately 20m compared to approximately 150m for an overhead line. Substations and CSECs do not produce EMFs in excess of the exposure limits outside their boundaries. Overhead lines and underground cables have the ability to produce EMFs in excess of the guidelines; however, it is National Grid's policy to ensure that all equipment complies with all EMF guidelines and policies. Compliance with these policies and guidelines is documented in the Electric and Magnetic Fields Report (**Volume 6, Document 6.2**).
- 4.7.49 All relevant policies and guidance, such as those contained within the National Policy Statements EN-1¹⁷ and EN-5¹⁸ have been reviewed and are embedded within National

¹⁷ Department of Energy and Climate Change (2011) Overarching National Policy Statement (NPS) for Energy (EN-1). (Online) Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/47854/1938-overarching-nps-for-energy-en1.pdf (Accessed 24 October 2022).

¹⁸ Department of Energy and Climate Change (2011) National Policy Statement for Electricity Network Infrastructure (EN-5). (Online) Available at:

Grid's design specifications and policies for all assets. In September 2021, the Department of Business, Energy and Industrial Strategy (BEIS) consulted upon a review of energy National Policy Statements (NPS) with consultation closing on 29 November 2021. The energy NPS were reviewed to reflect the policies and broader strategic approach set out in the Energy white paper and ensure a planning framework was in place to support the infrastructure requirement for the transition to net zero. There are no substantive changes with regard to EMFs within those draft Energy National Policy Statements which are considered to be relevant to the Project.

- 4.7.50 NPS EN-5 (July 2011)¹⁸, gives clear guidance on the EMF requirements of all electricity infrastructure projects stating (paragraph 2.10.9) *'Before granting consent to an overhead line application, the [SoS] should satisfy itself that the proposal is in accordance with the guidelines, considering the evidence provided by the applicant and any other relevant evidence.'* Paragraph 2.10.11 states *'Where the applicant cannot demonstrate that the line will be compliant with the Electricity Safety, Quality and Continuity Regulations 2002, with the exposure guidelines as specified in the Code of Practice on compliance, and with the policy on phasing as specified in the Code of Practice on optimal phasing then the [SoS] should not grant consent.'*
- 4.7.51 Whilst there are no statutory regulations in the UK that limit the exposure of people to power-frequency EMF, responsibility for implementing appropriate measures for the protection of the public lies with the UK Government. In 2004, the Government adopted guidelines published in 1998 by the International Commission on Non-Ionizing Radiation Protection (ICNIRP)¹⁹ in line with the terms of the 1999 EU recommendation²⁰ on public exposure to EMFs. National Policy Statement EN-5 documents this policy.
- 4.7.52 National Grid's policy, as set out in its Public Position Statement (National Grid, 2021), states that *'...as a minimum we comply with EMF regulations, guidelines or practices in force... in which we operate'*. To achieve this National Grid design policies and technical specifications ensure that all electricity assets are designed to comply with the requirements of NPS EN-5 in worst-case conditions. This ensures that all the assets installed as part of this and every project will be incapable of producing EMF in excess of the Government exposure guidelines. Therefore no significant effects are likely and this aspect is scoped-out of the assessment.
- 4.7.53 National Grid has provided relevant information on EMFs as part of the application in a standalone compliance report (see **Volume 6, Document 6.2**).

Major accidents and disasters

- 4.7.54 Chapter 17 of the Scoping Report proposed to scope out the assessment of Major Accidents and Disasters from the EIA. In the consideration of potential Major Accident and Disaster effects at Scoping, it was identified that there are a number of existing utility systems in the vicinity of the Project, and the Applicant committed to consulting with the Health and Safety Executive (HSE) with respect to any Major Accident Hazard site or pipelines.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1015238/en-5-draft-for-consultation.pdf (Accessed 24 October 2022).

¹⁹ International Commission on Non-Ionising Radiation Protection (1998) Guidelines for Limiting Exposure to Time-Varying Electric, Magnetic and Electromagnetic Fields, Health Physics.

²⁰ EU Council (1999) Recommendation of 12 July 1999 on the limitation of exposure of the general public to electromagnetic fields (0 Hz to 300 GHz) (1999/519/EC).

- 4.7.55 In paragraph 3.3.23 of the Scoping Opinion, the Planning Inspectorate reflected the HSE response to the Scoping Report, by highlighting the Northern Gas Networks (NGN) high pressure gas main known as Northern Gasworks Towton/Askham Bryan (HSE ref: 7708). The Planning Inspectorate stated that *'the Applicant should make the necessary approaches to the relevant pipeline operators. The ES should include a description of the risks associated with the Proposed Development's proximity to the identified pipelines and any mitigation required, together with, where relevant, an assessment of the likely significant effects'*. The potential risks and proposed mitigation measures are outlined in paragraphs 4.7.61 to 4.7.64.
- 4.7.56 In responding to statutory consultation the HSE noted that the Project falls within the Consultation Zones of a number of major accident hazard pipelines including:
- HSE ref 4032673; National Grid Gas PLC, Asselby/Panel (Ref: 2784), Saxton Area;
 - HSE ref 7737; National Grid Gas PLC, 7 Feeder Pannal/Cawood, HSE ref 7735; National Grid Gas PLC, 13 Feeder Baldersby/Towton, HSE ref 7659; Northern Gas Networks, Barwick/Towton, Stutton with Hazlewood Area; and
 - HSE ref 7708; Northern Gas Networks, Towton/Askham Bryan, Tadcaster Area.
- 4.7.57 The HSE response requested that National Grid consult with the relevant pipeline operators for the following reasons:
- the pipeline operator may have a legal interest in developments in the vicinity of the pipeline. This may restrict developments within a certain proximity of the pipeline;
 - the standards to which the pipeline is designed and operated may restrict major traffic routes within a certain proximity of the pipeline. Consequently, there may be a need for the operator to modify the pipeline or its operation, if the development proceeds; and
 - to establish the necessary measures required to alter/upgrade the pipeline to appropriate standards.
- 4.7.58 Technical engagement has been undertaken with various utility companies to understand the assets present, and where applicable, agree any required diversions and agree construction methodologies in the vicinity of such assets.
- 4.7.59 The principal potential Major Accident risk associated with the Project near buried pipelines is the potential to cause harm to receptors in the vicinity, in the unlikely event of pipeline failure. During the construction phase, in some locations, the construction workforce will be in proximity to pipelines and hence may be exposed to harm resulting from the pipeline failure, for example, an ignited release.
- 4.7.60 National Grid has processes in place to identify all buried infrastructure, with this forming a key consideration in the placement of new pylons and the other associated infrastructure within this Project. The utilities survey within the Order Limits is updated every six months to ensure that all infrastructure within close proximity to the Project has been identified and documented prior to construction.
- 4.7.61 Where the Project is in close proximity to underground utility systems, relevant protective provisions will be included in the DCO. This will ensure the employment of certain protection/construction methods, which may include hand digging, separation

distances, structural reinforcement, or relocation. All construction works will be risk assessed under the Construction (Design and Management) Regulations 2015 (CDM) and will be carried out in accordance with Good Industry Practice. Good Industry Practice will include work planning/scheduling to minimise the works required in the vicinity and manage the risk of those activities which remain. Driven by the CDM Risk Assessments, the construction compounds will be located a safe distance away from the areas where pipelines are crossed. The appropriate risk management measures to be applied will be determined by risk assessment in line with the CDM Regulations. These measures will also mitigate the risk of a release from a pipeline, which is unrelated to the Project, for example, due to third party interference or corrosion.

4.7.62 In relation to the NGN high pressure gas main, if damage were to be caused to the pipeline, then there could be a significant release of gas leading to a fire/explosion. In the worst case, this could lead to serious injuries or fatalities to those directly impacted, most likely, the construction workers. In addition to the general safeguards described above and in the Code of Construction Practice (CoCP), **Volume 5, Document 5.3.3B**, all works required in respect of the proposed crossing approach within proximity to the pipeline will be undertaken in accordance with the approval of NGN as set out in the DCO. The approach to crossing the pipeline is still to be determined by design studies, however, once determined, all designs, drawings, specifications, method statements, soil reports, programmes, calculations, risk assessments and other documents that are necessary to carry out the works for the proposed crossing approach will be sent to NGN for their approval. NGN may also elect to supervise the works. This would ensure that any works in the vicinity of the pipeline are carried out safely and therefore there are no significant effects relating to the presence of the high-pressure gas main.

4.8 COVID-19 implications

4.8.1 The restrictions imposed during the COVID-19 pandemic have had potential implications for the Project, in particular with regard to traditional consultation activities and conducting site surveys. The following measures have been undertaken by the project team to achieve as much as possible during the EIA programme whilst working fully within the restrictions, and being mindful of and managing any potential implications:

- EIA surveys that required land access whilst restrictions were in place during 2021 were planned to proceed within the appropriate survey seasons where possible, whilst applying social distancing measures to keep surveyors and members of the public safe.
- EIA surveys that did not require land access but relied on the baseline environment to reflect the normal situation such as noise and traffic surveys or those that were significantly hindered during 2021 because of the restrictions imposed by the pandemic were undertaken after 24 February 2022 when domestic restrictions were lifted in England and survey results reflected a more normal pattern. In the case of baseline traffic data, either pre-pandemic data has been used for the assessment, as agreed with the local highways authorities, or traffic counts have been obtained once restrictions were lifted.

- In accordance with the Planning Inspectorate's Advice Note Seven²¹, the applicant conducted early technical consultation with some stakeholders. The purpose of this engagement was to share and seek agreement on assessment approaches and to obtain as much relevant environmental information as possible in advance of key project milestones. As recognised in Advice Note Seven, the Planning Inspectorate expects consultation bodies to work with applicants in finding suitable approaches to aid the robust preparation of applications, and the applicant will continue to engage with stakeholders on this basis.

²¹ Planning Inspectorate (2020). Advice Note Seven: Environmental Impact Assessment: Process, Preliminary Environmental Information and Environmental Statements, (Version 7). (Online). Available at: <https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/advice-note-seven-environmental-impact-assessment-process-preliminary-environmental-information-and-environmental-statements/> (Accessed 06 April 2021).

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