Lower Thames Crossing

7.2 Planning Statement Appendix B National Policy Statements for Energy Infrastructure Accordance Tables

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Lower Thames Crossing

7.2 Planning Statement Appendix B National Policy Statements for Energy Infrastructure Accordance Tables

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Appendix B National Policy Statements for Energy Infrastructure Accordance Tables

B.1.1 In order to construct the Project, a number of utility assets need to be diverted. Four of these utility diversions meet the requirements to constitute Nationally Significant Infrastructure Projects in their own right. These are as follows:

a. Works No. G2 (Feeder 5 Phase 1) – a short (approximately 125m) gas pipeline diversion running through the south-east corner of Claylane Wood.

b. Works No. G4 (Feeder 5 Phase 2) – an approximately 2.7km gas pipeline diversion, running in a roughly south-west direction from Gravesend Road south of St Mary's Church, crossing Thong Lane and the A122 finishing west of Thong village and north of Claylane Wood.

c. Works No. G3 (Feeder 18) – an approximately 1.6km gas pipeline diversion running from north of Thong village, crossing Thong Lane and the A122 before diverting south-south-west and finishing in Claylane Wood.

d. Works No. OH7 (overhead line (OHL) diversion ZB Route OHL) – The diverted line runs laterally from approximately 1.0km east of Hornsby Lane before turning north for approximately 1.5km.

B.1.2 The utility works, including those meeting the criteria to be considered as NSIPS in their own right, were considered and integrated as part of the entirety of the Project in terms of design, impacts, mitigation measures and relevant controls, and as such, in some instances, the response is that of the Applicants Project rather than to the relevant Work Nos OH7, G2, G3 and G4.

B.1.3 The Project is required to be assessed against both the National Policy Statement for National Networks (NPSNN) as well as the Overarching National Policy Statement for Energy (NPSEN-1), National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (NPSEN-4) and National Policy Statement for Electricity Infrastructure (NPSEN-5). As these NPSs "have effect" in relation to the Project under section 104, the NPSs have also been considered. It should be noted all National Policy Statements are designated utilising and conforming to the same legislation requirements, guidance and international obligations, and accordingly, there is consistency across them.

B.1.4 NPSEN-1 sets out the Government's policy on energy and infrastructure development as well as the need for new nationally significant energy infrastructure projects. It also covers the cross-NPS Assessment Principles and Generic Impacts which are reflected across the wider suite of NPSs. NPSEN-4 and NPSEN-5 are described as 'technology specific', simply meaning they relate to a particular form of infrastructure. In the case of NPSEN-4, this relates

to gas supply and gas and oil pipelines; NPSEN-5 relates to electricity networks. NPSEN-4 and NPSEN-5 sit under the umbrella of NPSEN-1 but draw out specific assessment criteria which are bespoke to their technology.

B.1.5 Only those criteria which are relevant to the works and which are not reflected in the NPSNN are drawn out in the tables below. The tables serve a signposting purpose to the NPSNN and provide a response to the bespoke elements of NPSEN-4 and NPSEN-5 which are relevant to the Project.

B.1.6 The need case for the Project is addressed in the Need for the Project (Application Document 7.1) and the NPSNN Accordance Table in Appendix A1 of this Planning Statement. The need case for the Project is for a road; therefore, direct responses to Chapters 1 to 3 of EN-1, Chapter 1 of EN-4 and Chapter 1 of EN-5 are excluded from the Accordance Tables below.

B.1.7 It is also noted that the NPSNN is more recent than the energy NPSs and hence in some instances is more up to date than EN-1. For example, the former refers to the Governments Biodiversity Strategy as “Biodiversity 2020” whereas in EN-1 it is “Working with the Grain of Nature”, which was replaced by the later document.

B.1.8 The tables highlight the key cross-NPS themes and, for clarity, confirms accordance with key Environmental Impact Assessment (EIA) requirements. Note that the key cross-NPS EIA requirements only are highlighted rather than contextual paragraphs from NPSEN-1.

B.1.9 In September 2021 Government published a suite of draft Energy NPSs for consultation. This included draft replacements for NPSs EN-1, EN-4 and EN-5. Eventually the suite of draft NPSs will replace the designated NPSs described above.

B.1.10 The draft NPSs were prepared in the context of Government’s Energy White Paper published in December 2020 which presents its vision of how the country makes the transition to clean energy / ‘net zero’ by 2050. Government is currently considering its response to the comments received during the consultation process.

B.1.11 The consultation document ‘Planning for New Energy Infrastructure – Draft National Policy Statement for energy infrastructure’ (September 2021), includes a section on transitional arrangements and states:

“While the review is undertaken, the current suite of NPS … remain relevant government policy and EN-1 to 5 have effect for the purposes of the 2008 Act. They continue to provide a proper basis on which applications can be prepared, the Planning Inspectorate can examine, and the Secretary of State can make decisions on, applications for development consent.

The Secretary of State has decided that for any application accepted for examination before designation of the amendments to the NPS, the original suite of NPSs should have effect. The amended NPS will therefore only have effect in relation to those applications for development consent accepted for examination after the designation of those amendments." (Page 11-12)

B.1.12 It has been suggested informally by Government that the suite of replacement NPSs will be 'designated' (and so supersede the July 2011 suite of NPSs) by Autumn 2022. Under current Project timescales it is estimated that the draft DCO application for the Project will have been submitted and accepted for examination in advance of designation of the new Energy NPSs.

B.1.13 Accordingly, the DCO Application for this Project will be assessed against the current suite of designated (2011) NPSs meaning that the draft review NPSs will be of limited, if any, relevance to this draft DCO Application. Not least since the Energy elements of the Project are for the direct replacement of energy infrastructure that already exists and which are needed as a direct result of the Project rather than constituting the introduction of wholly new energy infrastructure in its own right. Also, because, they are concerned with the transportation / transmission of energy and not its generation, the latter being the key consideration of the Energy White Paper and, in turn, the draft Energy NPSs.

B.1.14 Nonetheless, as an indication of a 'direction of travel' of Government Energy Policy, references to the review Energy NPSs are made in the sections of this Planning Statement which follow as appropriate where this is relevant and/or pertinent to the issue being presented. As requested by the Planning Inspectorate, full accordance tables are provided for both the designated and draft Energy NPSs.

B.1.15 In simple terms, in so far as they are relevant to the consideration of this Project, the manifestation of emerging Government Energy Policy reflected in the draft Energy NPSs seek to achieve the following objectives which may differ from the designated NPSs:

a. A diversification in energy supply capitalising on the use of innovative technologies

b. A general decarbonisation of energy supply

c. A target to achieve net zero greenhouse gas emissions by 2050 (rather than achieving an 80% reduction by that date) and achieving a 78% reduction by 2035 compared to 1990 levels

d. An increased desire to achieve energy security in the light of recent world events

e. Increased emphasis on energy storage

f. A greater emphasis on the environmental impacts of energy infrastructure including biodiversity net gain

g. In terms of gas, there is a recognition of the ongoing role for gas infrastructure in the transition to net zero and a need for continued investment in infrastructure and its maintenance in order to ensure increasingly efficient operation of the supply network

h. In terms of electricity, again the focus is on decarbonisation, guaranteeing robustness and security of supply in the transition to net zero. In practical terms there is a new emphasis on the use of permanent land rights rather than wayleaves, new guidance on measures to achieve bio-diversity net gain and on measures to reduce the landscape and visual impacts of electricity infrastructure. A key feature of the new NPSEN-5 is the introduction of a new and strong Government policy presumption in favour of undergrounding in National Parks and AONBs unless the harm of doing so outweighs the landscape and visual benefit. Elsewhere pylon-supported overhead conductors remain the starting presumption.

Table B.1 Overarching National Policy Statement for Energy (EN-1), July 2011

Para	Relevant EN-1 text	Project response
4.2	Environmental Statement	
4.2.1	All proposals for projects that are subject to the European Environmental Impact Assessment Directive must be accompanied by an Environmental Statement (ES) describing the aspects of the environment likely to be significantly affected by the project. 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.	This paragraph sets out the same material requirements relating to EIAs as set out in paragraph 4.15 of the NPSNN. The response to these tests is articulated in the NPSNN Accordance Table (Appendix A of this Planning Statement).
4.2.2	To consider the potential effects, including benefits, of a proposal for a project, the IPC will find it helpful if the applicant sets out information on the likely significant social and economic effects of the development, and shows how any likely significant negative effects would be avoided or mitigated. This information could include matters such as employment, equality, community cohesion and well-being.	These matters are addressed in the main body of the Planning Statement and in Application Document 7.1: Need for the Project. The need for the utility NSIP infrastructure is defined by the need for the main road aspects of the Project and are assessed against the requirements of the NPSNN rather than the Energy NPSs.
4.2.3	For the purposes of this NPS and the technology-specific NPSs the ES should cover the environmental, social and economic effects arising from pre-construction, construction, operation and decommissioning of the project. In some circumstances (for example, gas pipe-lines) it may be appropriate to assess effects arising from commissioning infrastructure once it is completed but before it comes into operation. Details of this and any other additional assessments are set out where necessary in sections on	The Environmental Statement (Application Document 6.1) outlines the environmental, social and economic impacts for each stage of development. The Environmental Statement is broken down into assessing the impacts of air quality, cultural heritage, landscape and visual, terrestrial biodiversity, marine biodiversity, geology and soils, material assets and wastes, noise and vibration, population and human health, the road drainage and water environment and climate.

Para	Relevant EN-1 text	Project response
	individual impacts in this NPS and in the technology-specific NPSs. In the absence of any additional information on additional assessments, the principles set out in this Section will apply to all assessments.	
4.2.4	When considering a proposal the IPC should satisfy itself that likely significant effects, including any significant residual effects taking account of any proposed mitigation measures or any adverse effects of those measures, have been adequately assessed. In doing so the IPC should also examine whether the assessment distinguishes between the project stages and identifies any mitigation measures at those stages. The IPC should request further information where necessary to ensure compliance with the EIA Directive.	Chapter 17, the summary of the Environmental Statement (Application Document 6.1) outlines all receptors, the description of effects and method of mitigation at all stages in the pre-construction, construction and operation of the Project.
4.2.5	When considering cumulative effects, the ES should provide information on how the effects of the applicant's proposal would combine and interact with the effects of other development (including projects for which consent has been sought or granted, as well as those already in existence). The IPC may also have other evidence before it, for example from appraisals of sustainability of relevant NPSs or development plans, on such effects and potential interactions. Any such information may assist the IPC in reaching decisions on proposals and on mitigation measures that may be required.	This paragraph covers the same material requirements relating to cumulative effects as set out in paragraph 4.16 of the NPSNN. The response to these tests is articulated in the NPSNN Accordance Table (Appendix A of this Planning Statement).
4.2.7	In some instances it may not be possible at the time of the application for development consent for all aspects of the proposal to have been settled in precise detail. Where this is the case, the applicant should explain in its application which elements of the proposal have yet to be finalised, and the reasons why this is the case.	This paragraph covers the same tests as set out in paragraph 4.18 of the NPSNN. The response to these tests is articulated in the NPSNN Accordance Table (Appendix A of this Planning Statement).
4.2.8	Where some details are still to be finalised the ES should set out, to the best of the applicant's knowledge, what the maximum extent of the proposed development may be in terms of site and plant specifications, and assess, on that basis, the effects which the	This paragraph covers the same tests as set out in paragraph 4.19 of the NPSNN. The response to these tests is articulated in the NPSNN Accordance Table (Appendix A of this Planning Statement).

Para	Relevant EN-1 text	Project response
	project could have to ensure that the impacts of the project as it may be constructed have been properly assessed.	
4.2.9	Should the IPC determine to grant development consent for an application where details are still to be finalised, it will need to reflect this in appropriate development consent requirements. Clearly, if development consent is granted for a proposal and at a later stage the developer wishes for technical or commercial reasons to construct it in such a way that its extent will be greater than has been provided for in the terms of the consent, it may be necessary to apply for a change to be made to the development consent, and the application to change the consent may need to be accompanied by further environmental information to supplement the original ES.	This paragraph covers the same material requirements relating to cumulative effects as set out in paragraph 4.20 of the NPSNN. The response to these tests is articulated in the NPSNN Accordance Table (Appendix A of this Planning Statement).
4.2.10	To help the IPC consider thoroughly the potential effects of a proposed project in cases where the EIA Directive does not apply and an ES is not therefore required, the applicant should instead provide information proportionate to the scale of the project on the likely significant environmental, social and economic effects. References to an Environmental Statement in this NPS should be taken as including a statement which provides this information, even if the EIA Directive does not apply.	This paragraph covers the same material requirements relating to cumulative effects as set out in paragraph 4.21 of the NPSNN. The response to these tests is articulated in the NPSNN Accordance Table (Appendix A of this Planning Statement).
4.3	Habitats and Species Regulations	
4.3.1	Prior to granting a development consent order, the IPC must, under the Habitats and Species Regulations, (which implement the relevant parts of the Habitats Directive and the Birds Directive in England and Wales) consider whether the project may have a significant effect on a European site, or on any site to which the same protection is applied as a matter of policy, either alone or in combination with other plans or projects. Further information on the requirements of the Habitats and Species Regulations can be found in a Government Circular. Applicants should also refer to Section 5.3 of this NPS on biodiversity and geological conservation. The applicant should seek the advice of Natural England and/or the	This paragraph covers the same material requirements as set out in paragraphs 4.22 and 4.23 of the NPSNN and is dealt with accordingly in the NPSNN Accordance Table (Appendix A of this Planning Statement).

Para	Relevant EN-1 text	Project response
	Countryside Council for Wales, and provide the IPC with such information as it may reasonably require to determine whether an Appropriate Assessment is required. In the event that an Appropriate Assessment is required, the applicant must provide the IPC with such information as may reasonably be required to enable it to conduct the Appropriate Assessment. This should include information on any mitigation measures that are proposed to minimise or avoid likely effects.	
4.4	Alternatives	
4.4.1 – 4.4.3	As in any planning case, the relevance or otherwise to the decision-making process of the existence (or alleged existence) of alternatives to the proposed development is in the first instance a matter of law, detailed guidance on which falls outside the scope of this NPS. From a policy perspective this NPS does not contain any general requirement to consider alternatives or to establish whether the proposed project represents the best option. However: • applicants are obliged to include in their ES, as a matter of fact, information about the main alternatives they have studied. This should include an indication of the main reasons for the applicant's choice, taking into account the environmental, social and economic effects and including, where relevant, technical and commercial feasibility; • in some circumstances there are specific legislative requirements, notably under the Habitats Directive, for the IPC to consider alternatives. These should also be identified in the ES by the applicant; and • in some circumstances, the relevant energy NPSs may impose a policy requirement to consider alternatives (as this NPS does in Sections 5.3, 5.7 and 5.9).	These paragraphs outline the same material requirements in regards to alternative testing as paragraphs 4.26 and 4.27 of the NPSNN and are dealt with accordingly in the NPSNN Accordance Table (Appendix A of this Planning Statement) and in Table 4.1 of ES Chapter 4: EIA Methodology (Application Document 6.1). Consideration of possible alternative options for the utility diversions (including alternative routes and construction techniques and the pros and cons of each) which fall to be considered against the energy NSIPs is presented at Section 3.28 of Chapter 3: Assessment of Reasonable Alternatives, of the ES (Application Document 6.1) and Chapter 5: Project Evolution and Alternatives in this Planning Statement.
4.5	Criteria for "good design" of energy infrastructure	

Para	Relevant EN-1 text	Project response
4.5.1	The visual appearance of a building is sometimes considered to be the most important factor in good design. But high quality and inclusive design goes far beyond aesthetic considerations. The functionality of an object — be it a building or other type of infrastructure — including fitness for purpose and sustainability, is equally important. Applying "good design" to energy projects should produce sustainable infrastructure sensitive to place, efficient in the use of natural resources and energy used in their construction and operation, matched by an appearance that demonstrates good aesthetic as far as possible. It is acknowledged, however that the nature of much energy infrastructure development will often limit the extent to which it can contribute to the enhancement of the quality of the area.	This paragraph covers the same material requirements as set out in paragraphs 4.29 and 4.30 of the NPSNN and is dealt with accordingly in the NPSNN Accordance Table (Appendix A of this Planning Statement).
4.5.2	Good design is also a means by which many policy objectives in the NPS can be met, for example the impact sections show how good design, in terms of siting and use of appropriate technologies can help mitigate adverse impacts such as noise.	This paragraph covers the same material requirements as set out in paragraph 4.31 of the NPSNN and is dealt with accordingly in the NPSNN Accordance Table (Appendix A of this Planning Statement).
4.5.3	In the light of the above, and given the importance which the Planning Act 2008 places on good design and sustainability, the IPC needs to be satisfied that energy infrastructure developments are sustainable and, having regard to regulatory and other constraints, are as attractive, durable and adaptable (including taking account of natural hazards such as flooding) as they can be. In so doing, the IPC should satisfy itself that the applicant has taken into account both functionality (including fitness for purpose and sustainability) and aesthetics (including its contribution to the quality of the area in which it would be located) as far as possible. Whilst the applicant may not have any or very limited choice in the physical appearance of some energy infrastructure, there may be opportunities for the applicant to demonstrate good design in terms of siting relative to existing landscape character, landform and vegetation. Furthermore, the design and sensitive use of materials in any associated	In terms of the energy infrastructure aspects of the Project the main considerations of design relate to the proposed re-routing of the overhead electricity lines, known as Work No OH7. The design options for that aspect of the Project reflect National Grid's guidance documents "Our approach to the Design and Routeing of New Electricity Transmission Lines", "Our approach to Options Appraisal" and "National Grid's Commitments when undertaking works in the UK". The options also seek to meet all relevant technical specifications and to avoid / minimise impacts on known ecological, historic, landscape & visual and socioeconomic constraints. They also reflect the 'Holford Rules' – see commentary on NPSEN-5 in Table B6 below. In spite of the above, the design of the line re-routing is dictated, in the main, by the technical and topographical

Para	Relevant EN-1 text	Project response
	development such as electricity substations will assist in ensuring that such development contributes to the quality of the area.	obstacles faced in determining a route This is particularly the case in respect of the height of the towers which are dictated by the technical clearances required by safety regulations (see Section 3.28 of Chapter 3: Assessment of Reasonable Alternatives, of the ES (Application Document 6.1)) and Chapter 5: Project Evolution and Alternatives in this Planning Statement.
4.5.4	For the IPC to consider the proposal for a project, applicants should be able to demonstrate in their application documents how the design process was conducted and how the proposed design evolved. Where a number of different designs were considered, applicants should set out the reasons why the favoured choice has been selected. In considering applications the IPC should take into account the ultimate purpose of the infrastructure and bear in mind the operational, safety and security requirements which the design has to satisfy.	In terms of the evolution of the design of the Project this is addressed in detail in the NPSNN accordance table (Appendix A to this Planning Statement) in response to paragraph 4.35 of the NPSNN. Consideration of possible alternative options for the utility diversions (including alternative routes and construction techniques and the pros and cons of each) which fall to be considered against the energy NSIPs is presented at Section 3.28 of Chapter 3: Assessment of Reasonable Alternatives, of the ES (Application Document 6.1) and Chapter 5: Project Evolution and Alternatives in this Planning Statement.
4.6	Consideration of Combined Heat and Power (CHP)	This section relates to new energy infrastructure (power generation) and is not relevant to the Project.
4.7	Carbon Capture and Storage (CCS) and Carbon Capture Readiness (CCR)	This section relates to new energy infrastructure (power generation) and is not relevant to the Project.

Para	Relevant EN-1 text	Project response
4.8	Climate change adaptation	
4.8.5	New energy infrastructure will typically be a long-term investment and will need to remain operational over many decades, in the face of a changing climate. Consequently, applicants must consider the impacts of climate change when planning the location, design, build, operation and, where appropriate, decommissioning of new energy infrastructure. The ES should set out how the proposal will take account of the projected impacts of climate change. While not required by the EIA Directive, this information will be needed by the IPC.	This paragraph covers the same material requirements as set out in paragraph 4.40 of the NPSNN. Please see the response to this paragraph in the NPSNN Accordance Table (Appendix A of this Planning Statement). However, there is an additional reference in 4.8.5 of NPSEN-1 to considering the decommissioning impacts of new energy infrastructure, where appropriate, which is not covered in NPSNN. It is noted in Chapter 15: Climate of the ES (Application Document 6.1) that GHG emissions from the end-of-life stage (decommissioning) of the Project's permanent works have been scoped out of the assessment due to the anticipated operational life of the Project. This is in line with the Scoping Opinion – see Section 4.10 of Table 1.2 in Appendix 4.1: The Inspectorate's Scoping Opinion and National Highways' Responses (Application Document 6.3).
4.8.6	The IPC should be satisfied that applicants for new energy infrastructure have taken into account the potential impacts of climate change using the latest UK Climate Projections available at the time the ES was prepared to ensure they have identified appropriate mitigation or adaptation measures. This should cover the estimated lifetime of the new infrastructure. Should a new set of UK Climate Projections become available after the preparation of the ES, the IPC should consider whether they need to request further information from the applicant.	This paragraph covers the same material requirements as set out in paragraph 4.42 of the NPSNN. Please see the response to this paragraph in the NPSNN Accordance Table (Appendix A of this Planning Statement).

Para	Relevant EN-1 text	Project response
4.8.7	Applicants should apply as a minimum, the emissions scenario that the Independent Committee on Climate Change suggests the world is currently most closely following – and the 10%, 50% and 90% estimate ranges. These results should be considered alongside relevant research which is based on the climate change projections.	This paragraph covers the same material requirements as set out in paragraph 4.41 of the NPSNN. Please see the response to this paragraph in the NPSNN Accordance Table (Appendix A of this Planning Statement). New climate projections (UKCP18) (Met Office, 2019) have been released since the publication of the NPSNN. Section 15.3 and Section 15.6 of Chapter 15: Climate (Application Document 6.1) demonstrate the application of the updated UKCP18 Representative Concentration Pathway (RCP) 8.5 scenario against the 2080 projections at the 50% probability level. RCP8.5 is the most similar to the high emissions scenario in UKCP09.
4.8.8	The IPC should be satisfied that there are not features of the design of new energy infrastructure critical to its operation which may be seriously affected by more radical changes to the climate beyond that projected in the latest set of UK climate projections, taking account of the latest credible scientific evidence on, for example, sea level rise (for example by referring to additional maximum credible scenarios – i.e. from the Intergovernmental Panel on Climate Change or EA) and that necessary action can be taken to ensure the operation of the infrastructure over its estimated lifetime.	This paragraph covers the same material requirements as set out in paragraph 4.43 of the NPSNN. Please see the response to this paragraph in the NPSNN Accordance Table (Appendix A of this Planning Statement).
4.8.9	Where energy infrastructure has safety critical elements (for example parts of new fossil fuel power stations or some electricity sub-stations), the applicant should apply the high emissions scenario (high impact, low likelihood) to those elements. Although the likelihood of this scenario is thought to be low, it is appropriate to take a more risk-averse approach with elements of infrastructure which are critical to the safety of its operation.	New climate projections (UKCP18) (Met Office, 2019) have been released since the publication of the EN-1, when UKCP09 was applicable. Section 15.3 and Section 15.6 of Chapter 15 Climate (Application Document 6.1) demonstrate the application of the updated UKCP18 Representative Concentration Pathway (RCP) 8.5 scenario against the 2080 projections at the 50% probability level. RCP8.5 is the most similar to the high emissions scenario in UKCP09.

Para	Relevant EN-1 text	Project response
4.8.10	If any adaptation measures give rise to consequential impacts (for example on flooding, water resources or coastal change) the IPC should consider the impact of the latter in relation to the application as a whole and the impacts guidance set out in Part 5 of this NPS.	The adaptation measures which are proposed are not expected to give rise to any adverse consequential impacts.
4.8.11	Any adaptation measures should be based on the latest set of UK Climate Projections, the Government's latest UK Climate Change Risk Assessment, when available92 and in consultation with the EA.	This paragraph covers the same material requirements as set out in paragraph 4.44 of the NPSNN. Please see the response to this paragraph in the NPSNN Accordance Table (Appendix A of this Planning Statement).
4.8.12	Adaptation measures can be required to be implemented at the time of construction where necessary and appropriate to do so. However, where they are necessary to deal with the impact of climate change, and that measure would have an adverse effect on other aspects of the project and/or surrounding environment (for example coastal processes), the IPC may consider requiring the applicant to ensure that the adaptation measure could be implemented should the need arise, rather than at the outset of the development (for example increasing height of existing, or requiring new, sea walls).	This paragraph covers the same material requirements as set out in paragraph 4.46 of the NPSNN. Please see the response to this paragraph in the NPSNN Accordance Table (Appendix A of this Planning Statement).
4.9	Grid connection	This section refers to the connection of new electricity generating plant to the electricity network and is not relevant to the Project.
4.10	Pollution control and other environmental regulatory regimes	
4.10.1	Issues relating to discharges or emissions from a proposed project which affect air quality, water quality, land quality and the marine environment, or which include noise and vibration may be subject to separate regulation under the pollution control framework or other consenting and licensing regimes.	This paragraph covers the same material requirements as set out in paragraph 4.48 of the NPSNN and is dealt with accordingly in the NPSNN Accordance Table (Appendix A of this Planning Statement).

Para	Relevant EN-1 text	Project response
4.10.3	In considering an application for development consent, the IPC should focus on whether the development itself is an acceptable use of the land, and on the impacts of that use, rather than the control of processes, emissions or discharges themselves. The IPC should work on the assumption that the relevant pollution control regime and other environmental regulatory regimes, including those on land drainage, water abstraction and biodiversity, will be properly applied and enforced by the relevant regulator. It should act to complement but not seek to duplicate them.	This paragraph covers the same material requirements as set out in paragraph 4.50 of the NPSNN and is dealt with accordingly in the NPSNN Accordance Table (Appendix A of this Planning Statement).
4.10.5	Many projects covered by this NPS will be subject to the Environmental Permitting (EP) regime, which also incorporates operational waste management requirements for certain activities. When a developer applies for an Environmental Permit, the relevant regulator (usually EA but sometimes the local authority) requires that the application demonstrates that processes are in place to meet all relevant EP requirements. In considering the impacts of the project, the IPC may wish to consult the regulator on any management plans that would be included in an Environmental Permit application.	This paragraph covers the same material requirements as set out in paragraph 4.53 of the NPSNN and is dealt with accordingly in the NPSNN Accordance Table (Appendix A of this Planning Statement).
4.10.6	Applicants are advised to make early contact with relevant regulators, including EA and the MMO, to discuss their requirements for environmental permits and other consents. This will help ensure that applications take account of all relevant environmental considerations and that the relevant regulators are able to provide timely advice and assurance to the IPC. Wherever possible, applicants are encouraged to submit applications for Environmental Permits and other necessary consents at the same time as applying to the IPC for development consent.	This paragraph covers the same material requirements as set out in paragraph 4.54 of the NPSNN and is dealt with accordingly in the NPSNN Accordance Table (Appendix A of this Planning Statement).

Para	Relevant EN-1 text	Project response
4.10.7	The IPC should be satisfied that development consent can be granted taking full account of environmental impacts. Working in close cooperation with EA and/or the pollution control authority, and other relevant bodies, such as the MMO, Natural England, the Countryside Council for Wales, Drainage Boards, and water and sewerage undertakers, the IPC should be satisfied, before consenting any potentially polluting developments, that: • the relevant pollution control authority is satisfied that potential releases can be adequately regulated under the pollution control framework; and • the effects of existing sources of pollution in and around the site are not such that the cumulative effects of pollution when the proposed development is added would make that development unacceptable, particularly in relation to statutory environmental quality limits.	This paragraph covers the same material requirements as set out in paragraph 4.55 of the NPSNN and is dealt with accordingly in the NPSNN Accordance Table (Appendix A of this Planning Statement).
4.10.8	The IPC should not refuse consent on the basis of pollution impacts unless it has good reason to believe that any relevant necessary operational pollution control permits or licences or other consents will not subsequently be granted.	This paragraph covers the same material requirements as set out in paragraph 4.56 of the NPSNN and is dealt with accordingly in the NPSNN Accordance Table (Appendix A of this Planning Statement).
4.11	Safety	The proposed utilities works are not subject to the Control of Major Accidents Hazards Regulations 2015. Therefore, no further response is needed.
4.12	Hazardous Substances	This section is not directly relevant to the Project.

Para	Relevant EN-1 text	Project response
4.13	Health	This section outlines the same material requirements of paragraphs 4.79 to 4.82 of the NPSNN. See response in NPSNN Accordance Table (Appendix A of this Planning Statement). In addition, where specific assessments are required as a result of technology specific infrastructure, these are identified in Table B.2 (EN-4) and Table B.3 (EN-5) of this appendix below.
4.13.2	As described in the relevant sections of this NPS and in the technology specific NPSs, where the proposed project has an effect on human beings, the ES should assess these effects for each element of the project, identifying any adverse health impacts, and identifying measures to avoid, reduce or compensate for these impacts as appropriate. The impacts of more than one development may affect people simultaneously, so the applicant and the IPC should consider the cumulative impact on health.	The Environmental Statement (Application Document 6.1) outlines the human health outcomes. Health impacts have been assessed for both the construction and operational phases of the Project, including impacts on accessibility, local transport, opportunities for cycling and walking and the use of open space for recreation and physical activity. In addition, a stand-alone Health and Equalities Impact Assessment (HEqIA) (Application Document 7.10) has been produced alongside the other accompanying reports as part of this submission.
4.13.3	The direct impacts on health may include increased traffic, air or water pollution, dust, odour, hazardous waste and substances, noise, exposure to radiation, and increases in pests.	The Environmental Statement (Application Document 6.1) identifies a negative health outcome relating to noise and vibration for sensitive populations and wards, however during construction, the impact of noise has been minimised as a result of design and planning. In so far as they are relevant health matters related to the proposed electricity line rerouting works (Work No OH7) are addressed in Table B.3 in respect of NPSEN-5.
4.13.4	New energy infrastructure may also affect the composition, size and proximity of the local population, and in doing so have indirect health impacts, for example if it in some way affects access to key public services, transport or the use of open space for recreation and physical activity.	The energy infrastructure elements of this Project replace existing infrastructure which is already in situ. While there may be temporary impacts during the construction work for the rerouted underground gas pipelines and overhead line works these are considered minimal and mitigating actions

Para	Relevant EN-1 text	Project response
		are proposed to minimise construction impacts as described in various chapters to the ES (Application Document 6.1). A number of different management plans will need to be produced by site and works contractors prior to any work commencing. The delivery of these plans are secured through the REAC which forms section 7 of the CoCP (Application Document 6.3) which, in turn, is secured through Requirements 1 and 4 of Part 1 of Schedule 2 of the draft DCO (Application Document 3.1).
4.14	Common law nuisance and statutory nuisance	
4.14.2	It is very important that, at the application stage of an energy NSIP, possible sources of nuisance under section 79(1) of the 1990 Act and how they may be mitigated or limited are considered by the IPC so that appropriate requirements can be included in any subsequent order granting development consent. (See Section 5.6 on Dust, odour, artificial light etc. and Section 5.11 on Noise and vibration.)	This paragraph covers the same material requirements as set out in paragraph 4.58 of the NPSNN and is dealt with accordingly in the NPSNN Accordance Table (Appendix A of this Planning Statement).
4.15	Security considerations	
4.15.2	Government policy is to ensure that, where possible, proportionate protective security measures are designed into new infrastructure projects at an early stage in the project development. Where applications for development consent for infrastructure covered by this NPS relate to potentially 'critical' infrastructure, there may be national security considerations.	This paragraph covers the same material requirements as set out in paragraph 4.75 of the NPSNN and is dealt with accordingly in the NPSNN Accordance Table (Appendix A of this Planning Statement).
4.15.3	DECC will be notified at pre-application stage about every likely future application for energy NSIPs, so that any national security implications can be identified. Where national security implications have been identified, the applicant should consult with relevant security experts from CPNI, OCNS and DECC to ensure that physical, procedural and personnel security measures have been adequately considered in the design process and that adequate consideration has been given to the management of security risks. If	This paragraph covers the same material requirements as set out in paragraph 4.76 of the NPSNN and is dealt with accordingly in the NPSNN Accordance Table (Appendix A of this Planning Statement).

Para	Relevant EN-1 text	Project response
	CPNI, OCNS and/or DECC are satisfied that security issues have been adequately addressed in the project when the application is submitted to the IPC, it will provide confirmation of this to the IPC. The IPC should not need to give any further consideration to the details of the security measures in its examination.	
Part 5 Generic Impacts		
5.2	Air quality and emissions	NPSEN-1 notes that Eutrophication can be a particular effect from some energy infrastructure but notes that main emissions come from generating stations which are not relevant to the Project. However, this section does not introduce any different policy tests and outlines the same material requirements as paragraphs 5.3 – 5.13 of the NPSNN, with the advice that the Secretary of State should give air quality considerations substantial weight. See response in NPSNN Accordance Table (Appendix A of this Planning Statement).
5.3	Biodiversity and geological conservation	The material requirements of the NPSEN-1 section dealing with biodiversity and geological conservation replicate those contained in the NPSNN. Please see responses to paragraphs 5.22 to 5.38 of the NPSNN in Appendix A to this Planning Statement. Other sector specific matters are addressed in the topic specific guidance on gas infrastructure (EN-4) and electricity infrastructure (EN-5) as set-out in Table B.2 and Table B.3 below.
5.4	Civil and military aviation and defence interests	

Para	Relevant EN-1 text	Project response
5.4.11	The applicant should consult the MoD, CAA, NATS and any aerodrome – licensed or otherwise – likely to be affected by the proposed development in preparing an assessment of the proposal on aviation or other defence interests	The National Air Traffic Service (NATS) has been consulted on the Project as part of the Environmental Scoping consultation undertaken by the Planning Inspectorate. In response, NATS advised that, 'The proposed development has been examined from a technical safeguarding aspect and does not conflict with our safeguarding criteria. Accordingly, NATS (En Route) Public Limited Company ("NERL") has no safeguarding objection to the proposal.' There are no effects of the Project which would impact on the CAA or MOD.
5.4.12 – 5.4.13	Not relevant to this Project.	No response required.
5.5	Coastal change	This section relates to the effects of energy schemes on the coast. However, neither the gas or electricity diversions fall within this definition, and therefore no assessment is required.
5.6	Dust, odour, artificial light, smoke, steam and insect infestation	This section does not introduce any different policy tests and outlines the same material requirements as paragraphs 5.81 to 5.89 of the NPSNN, save for the fact that NPSEN-1 adds consideration of insect infestation. Insect infestation is not relevant to the energy aspects of this Project. See response to the NPSNN Accordance Table Appendix A to this Planning Statement.
5.7	Flood risk	
5.7.3	The aims of planning policy on development and flood risk are to ensure that flood risk from all sources of flooding is taken into account at all stages in the planning process to avoid inappropriate development in areas at risk of flooding, and to direct development away from areas at highest risk. Where new energy infrastructure is, exceptionally, necessary in such areas, policy aims to make it safe	The risk of flooding has influenced the design of the Project. It has been informed by the preparation of a Flood Risk Assessment (Appendix 14.6), a Hydromorphology Assessment (Appendix 14.4), a Hydrogeological Risk Assessment (Appendix 14.5) (Application Document 6.3) and other assessments of the water environment. These documents form part of Chapter 14 Road Drainage and

Para	Relevant EN-1 text	Project response
	without increasing flood risk elsewhere and, where possible, by reducing flood risk overall.	Water Environment of the ES (Application Document 6.1), Road Drainage and the Water Environment. The majority of the Project lies within land classified as at the lowest risk of flooding. The energy elements of the Project are for the replacement of existing energy infrastructure. While the new energy infrastructure would be re-routed from its current orientation it is in broadly the same location (in flood risk classification terms) as the existing infrastructure. Accordingly, there would be no change in flood risk caused by the energy infrastructure aspects of the Project.
5.7.5	The minimum requirements for FRAs are that they should: • be proportionate to the risk and appropriate to the scale, nature and location of the project; • consider the risk of flooding arising from the project in addition to the risk of flooding to the project; • take the impacts of climate change into account, clearly stating the development lifetime over which the assessment has been made; • be undertaken by competent people, as early as possible in the process of preparing the proposal; • consider both the potential adverse and beneficial effects of flood risk management infrastructure, including raised defences, flow channels, flood storage areas and other artificial features, together with the consequences of their failure; • consider the vulnerability of those using the site, including arrangements for safe access; • consider and quantify the different types of flooding (whether from natural and human sources and including joint and cumulative effects) and identify flood risk reduction measures, so	The Project has prepared an FRA (ES Appendix 14.6, Application Document 6.3), that assesses all relevant forms of flooding and that has been informed by detailed modelling studies of river and tidal flooding for a range of flooding events, including extreme events, and which has been prepared by engaging with the Environment Agency and LLFAs. Part 6 of the FRA details the flood risk management and mitigation measures proposed and Part 7 of the FRA considers surface water drainage.

Para	Relevant EN-1 text	Project response
	that assessments are fit for the purpose of the decisions being made; • consider the effects of a range of flooding events including extreme events on people, property, the natural and historic environment and river and coastal processes; • include the assessment of the remaining (known as 'residual') risk after risk reduction measures have been taken into account and demonstrate that this is acceptable for the particular project; • consider how the ability of water to soak into the ground may change with development, along with how the proposed layout of the project may affect drainage systems; • consider if there is a need to be safe and remain operational during a worst case flood event over the development's lifetime; and • be supported by appropriate data and information, including historical information on previous events.	
5.7.9	In determining an application for development consent, the IPS should be satisfied that, where relevant: • the application is supported by an appropriate FRA; • the Sequential Test has been applied as part of site selection; • a sequential approach has been applied at the site level to minimise risk by directing the most vulnerable uses to areas of lowest flood risk; • the proposal is in line with any relevant national and local flood risk management strategy; • priority has been given to the use of sustainable drainage systems (SuDs) (as required in the next paragraph on National Standards); and • in flood risk areas the project is appropriately flood resilient and resistant, including safe access and escape routes where	This requirement in NPSEN-1 differs from the position on local flood risk set out at paragraph 5.97 of the NPSNN which only refers to local flood risk management strategies as useful sources of information. Part 2 of Appendix 14.6: Flood Risk Assessment) (Application Document 6.3) contains a summary of current planning policy, legislation and guidance notes relating to flood risk, and comments on the extent to which each document affects this Project. This includes local flood risk policy and the local flood risk management strategies produced the various local flood risk management authorities as follows: • Kent Local Flood Risk Management Strategy 2017-2023 • Thurrock Local Flood Risk Management Strategy 2015

Para	Relevant EN-1 text	Project response
	required, and that any residual risk can be safely managed over the lifetime of the development.	• Essex Local Flood Risk Management Strategy 2018
5.7.6 to 5.7.25	The remainder of the Flood Risk section of NPSEN-1 deals with the same matters addressed in paragraphs 5.92 to 5.115 of the NPSNN in terms of the requirements to apply the sequential test and, if necessary the exception test, the need to engage with the Environment agency, the need to minimise the risk of flooding and the use of appropriate mitigation (where necessary), for example, in the form of SuDS	See response to the NPSNN Accordance Table Appendix A to this Planning Statement dealing with paragraphs 5.92 to 5.115 of the NPSNN.
5.8	Historic environment	EN-1 states a presumption in favour of the conservation of designated heritage assets, which is wording that differs from the NPSNN which states great weight should be given to the assets' conservation. However, these effectively set the same test. Otherwise, this section does not introduce any different policy tests and outlines the same material requirements as paragraphs 5.120 to 5.142 of the NPSNN, with any substantial harm to designated heritage assets being permitted on an 'exceptional' or 'wholly exceptional' basis. See response in NPSNN Accordance Table (Appendix A of this Planning Statement).
5.9	Landscape and visual	This section of the NPS highlights the particular landscape and visual impacts which can arise as a consequence of some forms of energy infrastructure due to the size and height of some of the structures involved (paragraphs 5.9.1 to 5.9.3). It also states that it may be helpful for applicants to draw attention to examples of existing permitted infrastructure with a similar magnitude of impact on sensitive receptors in order to aid the IPC's decision-making (paragraph 5.9.19). As the energy infrastructure elements of the Project are for replacement infrastructure it is considered that any landscape and visual impacts will be no worse than those arising from

Para	Relevant EN-1 text	Project response
		the existing infrastructure even though some of pylons involved in Work No OH7 are taller than those that currently exist. Landscape and visual impacts matters are addressed in Chapter 7: Landscape and Visual of the ES (Application Document 6.1). Chapter 6 of the Planning Statement addresses the landscape and visual impact aspects of the energy NSIP aspects of the Project. In other respects, this section does not introduce any different policy tests and outlines the same material requirements as paragraphs 5.143 to 5.161 of the NPSNN with stringent tests being applied to development which may impact on designated and other important landscapes. See response in NPSNN Accordance Table at Appendix A to this Planning Statement. However, topic specific guidance on gas infrastructure (EN-4) and electricity infrastructure (EN-5) introduce additional requirements in respect of landscape and visual impacts arising from energy infrastructure proposals which are addressed in the Table B.2 and Table B.3 below for those NPSs.
5.10	Land use including open space, green infrastructure & Green Belt	
5.10.1-5.10.4	Introductory paragraphs.	No response required.
5.10.5	The ES (see Section 4.2) should identify existing and proposed land uses near the project, any effects of replacing an existing development or use of the site with the proposed project or preventing a development or use on a neighbouring site from continuing. Applicants should also assess any effects of precluding a new development or use proposed in the development plan.	See response to the NPSNN Accordance Table Appendix A to this Planning Statement dealing with paragraph 5.165 of the NPSNN.

Para	Relevant EN-1 text	Project response
5.10.6	Applicants will need to consult the local community on their proposals to build on open space, sports or recreational buildings and land. Taking account of the consultations, applicants should consider providing new or additional open space including green infrastructure, sport or recreation facilities, to substitute for any losses as a result of their proposal. Applicants should use any up-to-date local authority assessment or, if there is none, provide an independent assessment to show whether the existing open space, sports and recreational buildings and land is surplus to requirements	A full assessment of the Project's impacts on public open space, sport and recreational buildings and land has been carried out in Chapters 6 of this Planning Statement (Chapter 7 of the Statement of Reasons (Application Document 4.1). The assessment, where necessary, has identified replacement land. Pre-application consultation undertaken is detailed in the Consultation Report (Application Document 5.1), showing how consultation feedback has been incorporated into the Project. As part of the Supplementary Consultation additional information has been included within the 'Guide to Supplementary Consultation' and the relevant plans set out in the 'Map Book 1 – General Arrangements'. Due to further design refinement, the open space / private recreational facilities, and replacement land were consulted on as part of the Design Refinement Consultation. Additional information was included within the 'Guide to Design Refinement Consultation', describing the special category land that the Project would impact and explaining the reasons for this.
5.10.8	Applicants should seek to minimise impacts on the best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification) and preferably use land in areas of poorer quality (grades 3b, 4 and 5) except where this would be inconsistent with other sustainability considerations. Applicants should also identify any effects and seek to minimise impacts on soil quality taking into account any mitigation measures proposed. For developments on previously developed land, applicants should ensure that they have considered the risk posed by land contamination	The requirements of this paragraph broadly replicate those set out in paragraph 5.168 of the NPSNN. See response to paragraph 5.168 of the NPSNN in the NPSNN Accordance Table (Appendix A to this Planning Statement).

Para	Relevant EN-1 text	Project response
5.10.9	Applicants should safeguard any mineral resources on the proposed site as far as possible, taking into account the long-term potential of the land use after any future decommissioning has taken place.	The wording of this paragraph is broadly the same as that contained in paragraph 5.169 of the NPSNN. See response to paragraph 5.169 of the NPSNN in the NPSNN Accordance Table (Appendix A to this Planning Statement). See response to para. 4.8.5 above regarding decommissioning / after use which was screened out of the Project assessment.
5.10.10	The general policies controlling development in the countryside apply with equal force in Green Belts but there is, in addition, a general presumption against inappropriate development within them. Such development should not be approved except in very special circumstances. Applicants should therefore determine whether their proposal, or any part of it, is within an established Green Belt and if it is, whether their proposal may be inappropriate development within the meaning of Green Belt policy (see paragraph 5.10.17 below).	The requirements of this paragraph broadly replicate those set out in paragraph 5.170 of the NPSNN. See response to paragraph 5.170 of the NPSNN in the NPSNN Accordance Table (Appendix A to this Planning Statement).
5.10.12	An applicant may be able to demonstrate that a particular type of energy infrastructure, such as an underground pipeline, which, in Green Belt policy terms, may be considered as an “engineering operation” rather than a building is not in the circumstances of the application inappropriate development. It may also be possible for an applicant to show that the physical characteristics of a proposed overhead line development or wind farm are such that it has no adverse effects which conflict with the fundamental purposes of Green Belt designation.	Appendix E to this Planning Statement contains an assessment of the Project’s impacts within the Green Belt. Paragraph E.5.4 notes that the underground gas pipelines are considered an engineering operation which would not harm the openness of the Green Belt and so are considered appropriate development in Green Belt policy terms. Paragraph E.5.5 describes how the overhead pylons are also considered appropriate development in Green Belt terms in that they constitute an alteration to an existing network and, as such largely comprise an engineering operation which would have no greater intrusion to the openness of the Green Belt than currently exists in respect of the existing pylons. The above ground sub-stations and utility maintenance compounds are considered inappropriate development due to their permanent nature. However, they are small built elements within the landscape and have been designed to minimise their visual impact and. As such, the Project would

Para	Relevant EN-1 text	Project response
		have minimal localised visual impact on the openness of the Green Belt. However, it is acknowledged that these form a small element of the Project, which as a whole comprises inappropriate development and therefore the policy tests justifying its location within the Green Belt has been engaged.
5.10.14	The IPC should not grant consent for development on existing open space, sports and recreational buildings and land unless an assessment has been undertaken either by the local authority or independently, which has shown the open space or the buildings and land to be surplus to requirements or the IPC determines that the benefits of the project (including need), outweigh the potential loss of such facilities, taking into account any positive proposals made by the applicant to provide new, improved or compensatory land or facilities. The loss of playing fields should only be allowed where applicants can demonstrate that they will be replaced with facilities of equivalent or better quantity or quality in a suitable location.	The requirements of this paragraph broadly replicate those set out in paragraph 5.174 of the NPSNN. See response to paragraph 5.174 of the NPSNN in the NPSNN Accordance Table (Appendix A to this Planning Statement). The final sentence regarding the loss of playing fields is not contained in the NPSNN. None of the NSIP utilities works impact on playing fields directly. A full assessment of the impacts of the Project on open space (including playing fields) is provided at Appendix D Open Space and Common Land and Appendix G Private Recreational Facilities of this Planning Statement. Table D.2 in Appendix D identifies a number of playing fields which would be impacted by the Project. Appendix G identifies playing fields/ sports pitches which would be impacted by the Project. In respect of all impacted playing fields, the impact would either be temporary, would not impact on the activity carried out on the facility of would benefit from alternative provision. There would therefore be no loss without replacement where appropriate in respect of playing fields. Where new facilities are proposed they are secured through the EMP / LEMP which, in turn are secured through Requirements 4 and 5 of Part 1 to Schedule 2 to the draft DCO (Application Document 3.1).

Para	Relevant EN-1 text	Project response
5.10.15	The IPC should ensure that applicants do not site their scheme on the best and most versatile agricultural land without justification. It should give little weight to the loss of poorer quality agricultural land (in grades 3b, 4 and 5), except in areas (such as uplands) where particular agricultural practices may themselves contribute to the quality and character of the environment or the local economy.	The requirements of this paragraph broadly match those set out in paragraph 5.176 of the NPSNN. See response to paragraph 5.176 of the NPSNN in the NPSNN Accordance Table (Appendix A to this Planning Statement).
5.10.17	When located in the Green Belt, energy infrastructure projects are likely to comprise 'inappropriate development'. Inappropriate development is by definition harmful to the Green Belt and the general planning policy presumption against it applies with equal force in relation to major energy infrastructure projects. The IPC will need to assess whether there are very special circumstances to justify inappropriate development. Very special circumstances will not exist unless the harm by reason of inappropriateness, and any other harm, is outweighed by other considerations. In view of the presumption against inappropriate development, the IPC will attach substantial weight to the harm to the Green Belt when considering any application for such development while taking account, in relation to renewable and linear infrastructure, of the extent to which its physical characteristics are such that it has limited or no impact on the fundamental purposes of Green Belt designation.	As noted in response to paragraphs 5.10.10 and 5.10.12 above, both the diversion of the underground gas pipeline and overhead electricity line are regarded as appropriate development in the Green Belt, although the Project as a whole, comprising a strategic highway scheme is inappropriate development. As an 'inappropriate' form of development within the Green Belt, Section E.8 of Appendix E accompanying this Planning Statement explains, by reference to the following matters, the 'very special circumstances' that exist in justifying the Project within the Green Belt: • The defined and overriding need for the Project: The need case for the Project, as a form of linear infrastructure. • No viable alternatives: The unavailability of viable alternatives with less adverse impacts on the Green Belt. • Policy support: Specific policy support for the Project as a major new road infrastructure and for the proposed route alignment through the Green Belt. • Temporary and limited impacts: The potential temporary visual impacts and effects on the landscape character of the Green Belt that are reversible and amount to 'very special circumstances'. These matters are considered to demonstrate the 'very special circumstances' in support of the Project, sufficient to

Para	Relevant EN-1 text	Project response
		overcome the presumption against 'inappropriate' development in the Green Belt.
5.10.19	Although in the case of much energy infrastructure there may be little that can be done to mitigate the direct effects of an energy project on the existing use of the proposed site (assuming that some at least of that use can still be retained post project construction) applicants should nevertheless seek to minimise these effects and the effects on existing or planned uses near the site by the application of good design principles, including the layout of the project.	In respect of the energy NSIP aspect of the Project direct impacts on existing land use are temporary and take place during the construction process. There would be long-term visual impacts from the new electricity pylons but these are replacement pylons and the existing pylons would be removed. As diversions of existing infrastructure, there is a limit to the extent that project layout and design can wholly avoid adverse impacts as the replacement infrastructure must join the existing network at each end of the diversion. Nonetheless, section 3.28 of Chapter 3: Assessment of Reasonable Alternatives, of the ES (Application Document 6.1) and Chapter 5: Project Evolution and Alternatives in this Planning Statement document demonstrates that a number of options were considered and a commitment is given to following established project design and construction guidelines (see also response in Table B.3 below dealing with NPSEN-5 which addresses the 'Holford Principles'). Also, consideration of possible alternative options for the utility diversions (including alternative routes and construction techniques and the pros and cons of each) which fall to be considered against the energy NSIPs is presented at Section 3.28 of Chapter 3: Assessment of Reasonable Alternatives, of the ES (Application Document 6.1).
5.10.20	Where green infrastructure is affected, the IPC should consider imposing requirements to ensure the connectivity of the green infrastructure network is maintained in the vicinity of the development and that any necessary works are undertaken, where possible, to mitigate any adverse impact and, where appropriate, to improve that network and other areas of open space including appropriate access to new coastal access routes.	The requirements of this paragraph broadly replicate those set out in paragraph 5.180 of the NPSNN. See response to paragraph 5.180 of the NPSNN in the NPSNN Accordance Table (Appendix A to this Planning Statement).

Para	Relevant EN-1 text	Project response
5.10.21	The IPC should also consider whether mitigation of any adverse effects on green infrastructure and other forms of open space is adequately provided for by means of any planning obligations, for example exchange land and provide for appropriate management and maintenance agreements. Any exchange land should be at least as good in terms of size, usefulness, attractiveness and quality and, where possible, at least as accessible. Alternatively, where Sections 131 and 132 of the Planning Act 2008 apply, replacement land provided under those sections will need to conform to the requirements of those sections.	The requirements of this paragraph repeat those set out in paragraph 5.181 of the NPSNN. See response to paragraph 5.181 of the NPSNN in the NPSNN Accordance Table (Appendix A to this Planning Statement).
5.10.22	Where a proposed development has an impact upon a Mineral Safeguarding Area (MSA), the IPC should ensure that appropriate mitigation measures have been put in place to safeguard mineral resources.	The requirements of this paragraph match those set out in paragraph 5.182 of the NPSNN. See response to paragraph 5.182 of the NPSNN in the NPSNN Accordance Table (Appendix A to this Planning Statement).
5.10.23	Where a project has a sterilising effect on land use (for example in some cases under transmission lines) there may be scope for this to be mitigated through, for example, using or incorporating the land for nature conservation or wildlife corridors or for parking and storage in employment areas.	As noted in respect of paragraph 5.183 of the NPSNN in the NPSNN Accordance Table (Appendix A to this Planning Statement), the Project would not sterilise any existing land use.
5.10.24	Rights of way, National Trails and other rights of access to land are important recreational facilities for example for walkers, cyclists and horse riders. The IPC should expect applicants to take appropriate mitigation measures to address adverse effects on coastal access, National Trails and other rights of way. Where this is not the case the IPC should consider what appropriate mitigation requirements might be attached to any grant of development consent.	The requirements of this paragraph broadly repeat those set out in paragraph 5.184 of the NPSNN. See response to paragraph 5.184 of the NPSNN in the NPSNN Accordance Table (Appendix A to this Planning Statement).

Para	Relevant EN-1 text	Project response
5.11	Noise and vibration	
5.11.1 – 5.11.3	Introductory paragraphs.	No response required.
5.11.4	Where noise impacts are likely to arise from the proposed development, the applicant should include the following in the noise assessment: • a description of the noise generating aspects of the development proposal leading to noise impacts, including the identification of any distinctive tonal, impulsive or low frequency characteristics of the noise; • identification of noise sensitive premises and noise sensitive areas that may be affected; • the characteristics of the existing noise environment; • a prediction of how the noise environment will change with the proposed development; • in the shorter term such as during the construction period; • in the longer term during the operating life of the infrastructure; • at particular times of the day, evening and night as appropriate. • an assessment of the effect of predicted changes in the noise environment on any noise sensitive premises and noise sensitive areas; and • measures to be employed in mitigating noise. The nature and extent of the noise assessment should be proportionate to the likely noise impact.	Noise impacts linked to the Project are fully assessed and considered within the bounds of UK legislation and guidance within the scope of Section 12.6 of Chapter 12 Noise and Vibration, of the ES (Application Document 6.1). Noise and vibration impacts linked to the Project as a whole are fully assessed and considered within the bounds of UK legislation and guidance as listed in Section 12.2 Chapter 12 of the ES (Application Document 6.1): • Operational noise predictions have been undertaken in accordance with CRTN and assessed in accordance with DMRB LA 111. • Construction impacts have been predicted and assessed in accordance with BS 5228-1 2009 (+A1:2014) and BS 5228-2 2009 (+A1:2014) • Tunnel ventilation noise has been assessed in accordance with BS 4142. A description of likely noise sources has been provided in the construction noise assessment and ventilation noise assessment within Section 12.6 of Chapter 12 of the ES (Application Document 6.1). The assessment of any tonal or impulsive characteristics from the tunnel ventilation has been taken into account in accordance with British Standard (BS) 4142: Methods for rating and assessing industrial and commercial sound. NPSEN-5 introduces specific noise requirements in respect of overhead electricity lines. These are addressed in Table B.3 below.

Para	Relevant EN-1 text	Project response
5.11.5	The noise impact of ancillary activities associated with the development, such as increased road and rail traffic movements, or other forms of transportation, should also be considered.	Noise and vibration impacts linked to the Project are fully assessed and considered within the bounds of UK legislation and guidance within the scope of Section 12.2 of Chapter 12 of the ES (Application Document 6.1). The study area is defined within the bounds of the DMRBLA 111 guidance and covers not only the Project and the bypassed route but also any other road link, including unaltered links, within the LTAM modelled area identified to experience a change in traffic flows or patterns accounting for a perceptible short-term change in road traffic noise as a result of the Project. As such the noise assessment considers impacts elsewhere on the national networks as a result of the Project in accordance with the DMRB LA 111 guidance.
5.11.6	Operational noise, with respect to human receptors, should be assessed using the principles of the relevant British Standards and other guidance. Further information on assessment of particular noise sources may be contained in the technology-specific NPSs. In particular, for renewables (EN-3) and electricity networks (EN-5) there is assessment guidance for specific features of those technologies. For the prediction, assessment and management of construction noise, reference should be made to any relevant British Standards and other guidance which also give examples of mitigation strategies.	The assessment has been undertaken using DMRB LA 111 standards and relevant British Standards and is considered proportionate to the likely noise impact of the Project. The assessment has been undertaken covering the extent of the Project's transport model which satisfies the requirements of paragraph 5.190 of NPSNN. In respect of the NPSEN-5 noise requirements in respect of overhead electricity lines, these are addressed in the NPSEN-5 Accordance Table (Table B.3) below.
5.11.7	The applicant should consult EA and Natural England (NE), or the Countryside Council for Wales (CCW), as necessary and in particular with regard to assessment of noise on protected species or other wildlife. The results of any noise surveys and predictions may inform the ecological assessment. The seasonality of potentially affected species in nearby sites may also need to be taken into account.	Noise and vibration effects on designated sites are considered by species as part of Section 8.7 of Chapter 8: Terrestrial Biodiversity of the ES (Application Document 6.1) and the Habitats Regulations Assessment Screening Report and Statement to Inform an Appropriate Assessment (Application Document 6.5) Natural England was engaged in its preparation.

Para	Relevant EN-1 text	Project response
		See also the response to paragraph 5.192 of the NPSNN in the NPSNN Accordance Table (Appendix A to this Planning Statement) which covers broadly the same matters.
5.11.8	The project should demonstrate good design through selection of the quietest cost-effective plant available; containment of noise within buildings wherever possible; optimisation of plant layout to minimise noise emissions; and, where possible, the use of landscaping, bunds or noise barriers to reduce noise transmission.	Section 12.5 of Chapter 12: Noise and Vibration of the ES (Application Document 6.1) provides details of the Project's mitigation, noting that a range of environmental commitments have been incorporated into the design of the Project in relation to noise and vibration. It notes that the design of the Project has followed an iterative approach calling on the expertise of various elements of the design team to ensure the good acoustic design of the Project. Primarily the design approach followed, advocates the use of more natural landscaping and earthworks as the main method of noise mitigation, combined with thin surfacing systems (with acoustic mitigation properties). This has been augmented by the inclusion of acoustic fencing where earthworks measures were not possible, but mitigation considered to be beneficial.
5.11.9	The IPC should not grant development consent unless it is satisfied that the proposals will meet the following aims: • avoid significant adverse impacts on health and quality of life from noise; • mitigate and minimise other adverse impacts on health and quality of life from noise; and • where possible, contribute to improvements to health and quality of life through the effective management and control of noise.	The noise and vibration assessment (ES Chapter 12 (Application Document 6.1)) has predicted noise levels and implemented mitigation into the Project design where necessary to avoid significant adverse impacts on health and quality of life and to minimise other adverse effects on life as discussed in Chapter 13 of the ES: Population and Human Health (Application Document 6.1), through the mitigation implemented to control noise. Mitigation measures and the rationale behind the design are presented in Section 12.5: Project design and mitigation of Chapter 12 of the ES (Application Document 6.1). Issues of policy compliance are fully considered within Section 12.6, summarised in paragraphs 12.6.223 to 12.6.231 of Chapter 12 of the ES (Application Document 6.1).

Para	Relevant EN-1 text	Project response
		The Project's conformity with these requirements is also discussed in the NPSNN Accordance Table (Appendix A to this Planning Statement).
5.11.10	Explanatory Note.	No response required.
5.11.11	The IPC should consider whether mitigation measures are needed both for operational and construction noise over and above any which may form part of the project application. In doing so the IPC may wish to impose requirements. Any such requirements should take account of the guidance set out in Circular 11/95 (see Section 4.1) or any successor to it.	Mitigation measures and the rationale behind the design are presented in Section 12.5, Project design and mitigation (of Chapter 12 of the ES (Application Document 6.1).
5.11.12	Mitigation measures may include one or more of the following: • engineering: reduction of noise at point of generation and containment of noise generated • lay-out: adequate distance between source and noise-sensitive receptors; incorporating good design to minimise noise transmission through screening by natural barriers, or other buildings; and • administrative: restricting activities allowed on the site; specifying acceptable noise limits; and taking into account seasonality of wildlife in nearby designated sites.	Section 12.5 of Chapter 12: Noise and Vibration of the ES (Application Document 6.1) provides details of the proposed mitigation measures for the Project The design of the Project has followed an iterative approach with noise considered as a key controlling factor in the location, alignment and elevation of the Project. The primary measure being the use of more natural landscaping and earthworks as the main method of noise mitigation, combined with thin surfacing systems (with acoustic mitigation properties). This has been augmented by the inclusion of acoustic fencing where earthworks measures were not possible, but mitigation considered to be beneficial. See also the response to paragraph 5.198 of the NPSNN in the NPSNN Accordance Table (Appendix A to this Planning Statement) which covers the same issue.
5.11.13	In certain situations, and only when all other forms of noise mitigation have been exhausted, it may be appropriate for the IPC to consider requiring noise mitigation through improved sound insulation to dwellings.	The Noise Impact Regulations have been considered within the assessment of operational effects as presented within Section 12.6 of ES Chapter 12 (Application Document 6.1) and Appendix 12.7 Noise Insulation Regulations Assessment (Application Document 6.3).

Para	Relevant EN-1 text	Project response
5.12	Socio-economic	The socio-economic chapter is a new generic impact introduced in the NPSEN-1 which is not directly reflected in Chapter 6: Generic Impacts of the NPSNN of this Planning Statement. However, the relevant assessments in terms of the impacts of the Project as a whole on jobs, skills, training, tourism etc are set out in Chapter 13: Population and Human Health of the Environmental Statement (Application Document 6.1). The socio-economic impacts arising solely out of the energy NSIP aspects of the Project (i.e. replacement of existing energy infrastructure in the form of Work No's G2, G3, G4 and OH7) set in the context of the socio-economic impacts of the Project as a whole are considered to be minimal
5.12.1	Introductory text	No response required
5.12.2 - 5.12.9	This section of the NPSEN-1 requires that applicants asses the socio economic impacts of their developments as part of the ES. It sets out the type of impacts which should be assessed which should include effects on tourism, infrastructure, local services, opportunities for skills and training and cumulative impacts. so on. The IPC is required to have regard to these impacts and to any positive provisions the developer is proposing or any legacy benefits which may arise.	Application Document 7.18 sets out the Benefits and Outcomes arising as a result of delivery of the Project as a whole. The economic benefits of the Project in particular are described in Chapter 5 of the Planning Statement and supported by Application Document 7.1, the Need for the Project. That document shows that the largest monetised benefits of the Project are journey time savings, static productivity benefits and journey time reliability benefits. In total, the benefits of the Project sum up to £4091.8 million. Appendix D (Level 3 Wider Economic Impacts Report) to Application Document 7.7 (Combined Modelling and Appraisal Report) identifies the wider economic impacts which are not monetised in the Project's economic appraisal but are used to inform the Project's Value for Money assessment. All of these socio-economic impacts arise as a result of implementation of the Project as a whole. However, the

Para	Relevant EN-1 text	Project response
		elements of the Project which fall to be considered against NPSEN-1 are only those energy NSIP projects which are necessary to facilitate delivery of the main Project. These energy projects involve the replacement of existing infrastructure rather than wholly new infrastructure. For that reason, they are considered to have a neutral socio-economic effect in their own right. Accordingly, no further assessment is required in respect of Section 5.12 of NPSEN-1.
5.13	Traffic and transport	This section does not introduce any different policy tests and outlines the same aims and intentions as paragraphs 5.201 to 5.216 of the NPSNN. See response in NPSNN Accordance Table (Appendix A of this Statement).
5.14	Waste management	This section does not introduce any different policy tests and outlines the same material requirements as paragraphs 5.39 to 5.45 of the NPSNN. See response in NPSNN Accordance Table (Appendix A of this Statement).
5.14.1 – 5.14.5	Introductory paragraphs.	No responses required.
5.14.6	The applicant should set out the arrangements that are proposed for managing any waste produced and prepare a Site Waste Management Plan. The arrangements described and Management Plan should include information on the proposed waste recovery and disposal system for all waste generated by the development, and an assessment of the impact of the waste arising from development on the capacity of waste management facilities to deal with other waste arising in the area for at least five years of operation. The applicant should seek to minimise the volume of waste produced and the volume of waste sent for disposal unless it can be demonstrated that this is the best overall environmental outcome.	The anticipated waste arrangements proposed for construction and operation are detailed in Table 1.1 and Table 1.2 of Appendix 11.5: Waste Assessment Supporting Data to the ES (Application Document 6.3). Section 11.5 in Chapter 11: Material Assets and Waste of the ES (Application Document 6.1) outlines how the proposed arrangements have sought to minimise the volume of waste produced and the volume of waste sent for disposal. See also response in NPSNN Accordance Table (Appendix A to this Planning Statement) dealing with paragraph 5.42 of the NPSNN which addresses broadly similar points.

Para	Relevant EN-1 text	Project response
5.14.7	The IPC should consider the extent to which the applicant has proposed an effective system for managing hazardous and non-hazardous waste arising from the construction, operation and decommissioning of the proposed development. It should be satisfied that: • any such waste will be properly managed, both on-site and off-site; • the waste from the proposed facility can be dealt with appropriately by the waste infrastructure which is, or is likely to be, available. Such waste arisings should not have an adverse effect on the capacity of existing waste management facilities to deal with other waste arisings in the area; and • adequate steps have been taken to minimise the volume of waste arisings, and of the volume of waste arisings sent to disposal, except where that is the best overall environmental outcome.	An effective process has been proposed to ensure effective management of hazardous and non-hazardous waste onsite and offsite, as described in Section 11.5 of Chapter 11 of the ES (Application Document 6.1). The volumes of hazardous and non-hazardous waste arising from construction and operation have been forecast in Table 1.1 and Table 1.2 of ES Appendix 11.5: Waste Assessment Supporting Data (Application Document 6.3) and compared with the local, regional and national waste infrastructure capacity in Section 11.6 of Chapter 11 of the ES (Application Document 6.1). The assessment shows that waste from the Project can be dealt with appropriately by the waste infrastructure, which is, or is likely to be, available. With regard to paragraph 5.43 of the NPSNN, which refers to the 'adverse effect on the capacity of existing waste management facilities', the assessment demonstrates that an adverse effect on the capacity of existing waste management facilities, as a whole, to deal with other waste arisings in the area would not occur. Tables 11.13 in ES Chapter 11 sets out the landfill capacity assessment, the Project would require non-hazardous (2.59%) and inert waste (3.8%) landfill capacity, however, the Project is committed to 70% of construction non-hazardous waste to be diverted from landfill through the outline Site Waste Management Plan. The assessment has shown this would require only 0.5% of the capacity of recycling and recovery facilities in the study area, which is unlikely to preclude the receipt of waste from other sources. There is one hazardous landfill which accepts asbestos waste within the study area. It is highly unlikely that project hazardous waste (contaminated soils, coal tar road planings etc) would be sent to this landfill. Should this hazardous waste require landfill disposal it would be managed outside of the study area. The Project would require 0.33% of the

Para	Relevant EN-1 text	Project response
		available national hazardous waste capacity. It is therefore unlikely to adversely affect the capacity of existing waste management facilities to deal with other waste arisings.
5.14.8 – 5.14.9	Explanatory paragraphs.	No response required.
5.15	Water quality and resources	
5.15.3	Outlines the need for the ES to describe 'the impacts of the proposed project on water quality, noting any relevant existing discharges, proposed new discharges and proposed changes to discharges; and any relevant existing abstraction rates, proposed new abstraction rates and proposed changes to abstraction rates (including any impact on or use of mains supplies and reference to Catchment Abstraction Management Strategies)'.	ES Chapter 14: Road Drainage and the Water Environment (Application Document 6.1) describes and assesses the effects of the Project on water quality, including the effects of proposed new discharges to watercourses and to ground. The Project has also undertaken a comprehensive Water Features Survey, detailed in Appendix 14.2 of the ES (Application Document 6.3), that has identified and characterised existing discharges and abstractions. Where relevant, effects on these receptors are also presented in Chapter 14 of the ES. See also responses to paragraphs 5.2.19 to 5.2.31 of the NPSNN set out in the NPSNN Accordance Tables (Appendix A to this Planning Statement) which deals with similar matters to section 5.15 of the NPSEN-1.

Table B.2 National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4), July 2011

Para	Relevant text EN-4	Project response
2.2	Climate Change Adaption	
2.2.1	Introductory paragraph.	No response required
2.2.2	As climate change is likely to increase risks to some of this infrastructure, from flooding or rising sea levels for example, applicants should in particular set out how the proposal would be resilient to: • increased risk of flooding; • effects of rising sea levels and increased risk of storm surge; • higher temperatures; • increased risk of earth movement or subsidence from increased risk of flooding and drought; and • any other increased risks identified in the applicant's assessment.	The gas NSIPs are all located in Flood Zone 1 at low risk of flooding from rivers and the sea so would be inherently resilient. The gas pipeline will be located a minimum of 1.2m below ground level where increased temperature/frequency of hot days and increased mean rainfall are not likely to have an adverse impact on the pipeline as the original design parameters are not likely to be breached.
2.2.3	Explanatory note.	No response required
2.3	Consideration of good design	This section simply refers back to Section 4.5 of EN-1, which outlines the same material requirements as paragraphs 4.28 to 4.35 of the NPSNN. See response in NPSNN Accordance Table (Appendix A of this Statement).
2.4	Hazardous substances	This section is an expansion of Section 4.12 of EN-1 and is not directly relevant to the Project.
2.5	Control of Major Accident Hazards	This is not relevant to the Project
2.6	Borehole sites	This is not relevant to the Project
2.7	EU rules for the Internal Market in Natural Gas	This is not relevant to the Project
2.8	Underground Natural Gas Storage	This is not relevant to the Project
2.9	Underground Natural Gas Storage: Noise and Vibration	This is not relevant to the Project

Para	Relevant text EN-4	Project response
2.10	Underground Natural Gas Storage: Water Quality and Resources	This is not relevant to the Project
2.11	Underground Natural Gas Storage: Disposal of Brine	This is not relevant to the Project
2.12	LNG Import Facilities	This is not relevant to the Project
2.13	LNG Import Facilities Impacts: Noise and Vibration	This is not relevant to the Project
2.14	LNG Import Facilities: Landscape and Visual	This is not relevant to the Project
2.15	LNG Import Facilities: Dredging	This is not relevant to the Project
2.16	Gas Reception Facilities	This is not relevant to the Project
2.17	Gas Reception Facilities Impacts: Noise and Vibration	This is not relevant to the Project
2.18	Gas Reception Facilities Impacts: Gas Emissions	This is not relevant to the Project
2.19	Gas and Oil Pipelines	
2.19.1 – 2.19.7	Introductory paragraphs.	No response required other than to note that paragraph 2.19.2 acknowledges that many of the generic impacts set out in NPSEN-1 are relevant to the consideration of applications for gas and oil pipelines.
2.19.8	When designing the route of new pipelines applicants should research relevant constraints including proximity of existing and planned residential properties, schools and hospitals, railway crossings, major road crossings, below surface usage and proximity to environmentally sensitive areas, main river and watercourse crossings. These can be undertaken by means of desk top studies in the first instance, followed up by consulting the appropriate authority, operator, or conservation body if necessary.	In designing routes for the diversion of Application Work No's G2, G3 and G4 (the underground gas pipelines which meet the criteria to be considered as NSIPs in their own right) the Applicant undertook an options assessment which considered a number or potential alternative routes for the diversions. Further information on the consideration of possible alternative options for the utility diversions (including alternative routes and construction techniques and the pros and cons of each) which fall to be considered against the energy NSIPs is presented at Section 3.28 of Chapter 3: Assessment of Reasonable Alternatives, of the ES (Application Document 6.1) and Chapter 5: Project Evolution and Alternatives in this Planning Statement.

Para	Relevant text EN-4	Project response
2.19.9	Undetected underground cavities from mine workings, abandoned industrial sites and other activities, such as waste disposal, or other utilities' services (water, telecommunication, etc.) could have an effect on the integrity and safety of a pipeline. The effects might include collapse of underground tunnels, damage to utility services and pollution of water courses. Applicants should undertake desktop surveys to identify historic or current mine workings, underground cavities serving industrial usage, the nature of any made ground, waste sites, unexploded ordnance, utility services and any other below surface usage when assessing routes for a pipeline	This is an expansion on paragraph 5.119 of the NPSNN. To clarify compliance: In line with the requirements of the NPSNN and National Planning Policy Framework, a preliminary assessment of land instability was completed at the early design stage and is presented in ES Appendix 10.2: Stability Report (Application Document 6.3). This reviews the potential for unacceptable risks from land instability and geohazards within a wide study area around the Project route to help avoid hazards, where possible, or identify where technical solutions are required within the engineering design. A number of other studies were also undertaken in support of ES Chapter 10: Geology and Soils (Application Document 6.1) to demonstrate the suitability of the route chosen to deliver the Project. These included: • A Geology Site Walkover Factual Report (Appendix 10.3); • A Ground Model (Appendix 10.5); • A Preliminary Risk Assessment (Appendix 10.6); • An Unexploded Ordnance Desk Study Report (Appendix 10.10); and • A Remediation Options Appraisal and Outline Remediation Strategy (Appendix 10.11).
2.19.10	When choosing a pipeline route, applicants should seek to avoid or minimise adverse effects from usage below the surface. Where it is not considered practicable to select a route that avoids below surface usage, applicants should demonstrate in the ES that mitigating measures will be put in place to avoid adverse effects both on other below ground works and on the pipeline. Mitigating measures may include: protection or diversion of underground services; gas detection near landfill sites; horizontal direct drilling (HDD) techniques and rerouting.	Pipeline diversion routes have been designed around functionality and infrastructure and environmental constraints. However, the consideration that there are four gas pipeline diversion Nationally Significant Infrastructure Projects within the Project is a direct result of a screening assessment (ES Appendix 1.3, Application Document 6.3), which identified potentially significant environmental impacts. The impacts relate to cultural heritage and terrestrial biodiversity, the assessments of which are set out in Chapter 6 and Chapter 8 of the Environmental Statement (Application Document 6.1), respectively.

Para	Relevant text EN-4	Project response
	Contaminated material may need to be removed and disposed of.	
2.20	Gas and Oil Pipelines Impacts: Noise and Vibration	
2.20.3	The commissioning of a new pipeline can involve extensive periods of drying after hydrotesting, using air compressors, and noise mitigation may be required for this type of activity.	Table 2.3 of ES Appendix 12.4 (Application Document 6.3) sets out the envisaged construction plant itinerary related to the utilities works associated with the Project. It does involve the use of compressors. The control of noise is addressed in the REAC which forms part of the CoCP (Application Document 6.3). It contains a suite of measures which would minimise and mitigate noise impacts which include: • NV001 Noise and vibration level controls • NV002 Noise and vibration plan • NV006 Noise assessment • NV007 Best practicable means • NV009 Noise and vibration monitoring
2.20.4	A new gas pipeline may require an above ground installation such as a gas compression station on the route of the pipeline to boost transmission line pressure. A new oil pipeline may require pumping stations. These may be located in quiet rural areas, and therefore the control of noise from these facilities is likely to be an important consideration.	No such works are required as part of this Project. Therefore, this paragraph is not relevant.
2.21	Gas and Oil Pipelines Impacts: Biodiversity, Landscape and Visual	
2.21.1 – 2.21.2	Introductory paragraphs.	No response required.
2.21.3	The ES should include an assessment of the biodiversity and landscape and visual effects of the proposed route and of the main alternative routes considered (see Section 5.9 of EN-1). The application should also include proposals for reinstatement of the pipeline route as close to its original state as possible and	Chapter 7: Landscape and Visual and Chapter 8: Terrestrial Biodiversity of the Environmental Statement (Application Document 6.1) set out a '…full assessment of the landscape and visual and biodiversity impacts of the Project'. In addition, Section 3.7 of Chapter 3: Assessment of Reasonable Alternatives of the

Para	Relevant text EN-4	Project response
	take into account any requirements for agreements with the landowner to access areas for aftercare and management work. Where it is unlikely to be possible to restore landscape to its original state, the applicant should set out measures to avoid, mitigate, or employ other landscape measures to compensate for, any adverse effect on the landscape.	Environmental Statement (Application Document 6.1) provides further details of the alternatives considered. In relation to reinstatement, commitment LV001 in the REAC (Application Document 6.3, Appendix 2.2 of the Environmental Statement) requires that 'Detailed design for the alignment of diverted utilities to avoid trees and vegetation as far as reasonably practicable, and in accordance with the landscaping scheme as approved by the SoS.'
2.21.4	The IPC should follow the principles for decision making set out in Sections 4.3 and 5.9 of EN-1.	See response to sections 4.3 and 5.9 of NPSEN-1 in Table B.1 above
2.21.5	Mitigation measures to protect the landscape and ecology could include reducing the working width required for the installation of the pipeline in order to reduce the impact on the landscape where it will not be possible to fully reinstate the route.	LV002 in the REAC which forms Section 7 of the CoCP (Application Document 6.3) which, in turn is secured through Requirements 1 and 4 of Part 1 of Schedule 2 of the draft DCO (Application Document 3.1) notes that: "Land temporarily impacted by works to divert utilities would be reinstated to its former condition and composition upon completion, as far as reasonably practicable, unless otherwise specified in the Environmental Masterplan or under the terms of article 35 of the draft DCO which sets out the temporary possession powers."
2.21.6	In circumstances where the habitat to be crossed contains ancient woodland, trees subject to a Tree Preservation Order, or hedgerows subject to the Hedgerows Regulations 1997, the applicant should consider whether it would be feasible to use horizontal direct drilling under the ancient woodland or thrust bore under the protected tree or hedgerow and the IPC should consider requiring this, where not included in the proposal.	Trenchless method of installation beneath woodland has been considered but discounted. This is on the basis that the woodland would still need to be significantly disturbed to allow for the drilling of ground investigation boreholes which would be required to inform the design for any trenchless installation. Initial design proposals which looked at putting two pipelines in the same trench were also discounted, as it would conflict with the requirement of minimum separation distance and therefore could present a safety threat.
2.22	**Gas and Oil Pipelines: Water Quality and Resources**	
2.22.1	Introductory paragraphs.	No response required.

Para	Relevant text EN-4	Project response
2.22.2	Constructing pipelines creates corridors of surface clearance and excavation that can potentially affect watercourses, aquifers, water abstraction and discharge points, areas prone to flooding and ecological receptors. Pipeline impacts could include inadequate or excessive drainage, interference with groundwater flow pathways, mobilisation of contaminants already in the ground, the introduction of new pollutants, flooding, disturbance to water ecology, pollution due to silt from construction and disturbance to species and their habitats. Impacts during construction should be avoided as far as possible through route selection or mitigated if unavoidable and ground should be reinstated after construction.	Chapter 14: Road Drainage and the Water Environment of the ES (Application Document 6.1) provides an assessment of the effects of the Project on all of the receptors and potential impact pathways listed. Proposed mitigation measures to reduce Project effects on the water environment during construction and operation are described in Section 14.5 of Chapter 14: Road Drainage and the Water Environment of the Environmental Statement (Application Document 6.1)
2.22.3	Where the project is likely to have effects on water resources or water quality, for example impacts on groundwater recharge or on existing surface water or groundwater abstraction points, or on associated ecological receptors, the applicant should provide an assessment of the impacts in line with Section 5.15 of EN-1 as part of the ES.	See response to Section 5.15 of the NPSEN-1 Accordance Table above. That also refers to responses to paragraphs 5.2.19 to 5.2.31 of the NPSNN set out in the NPSNN Accordance Tables (Appendix A to this Planning Statement) which deals with similar matters to section 5.15 of the NPSEN-1.
2.22.4	Where the project is likely to give rise to effects on water quality, for example through siltation or spillages, discharges from maintenance activities or the discharge of disposals such as wastewater or solvents, the applicant should provide an assessment of the impacts.	Chapter 14 of the ES: Road Drainage and the Water Environment (Application Document 6.1) is supported by a number of appendices dealing with the potential impacts of the Project on the water environment. These include Appendix 14.7: Water Framework Directive assessment and Appendix 14.3: Operational Surface Water Drainage Pollution Risk Assessments (Application Document 6.3). REAC Commitment RDWE008 (which forms Section 7 of the CoCP (Application Document 6.3) which, in turn is secured through Requirements 1 and 4 of Part 1 of Schedule 2 of the draft DCO (Application Document 3.1) notes that: "Where below ground utilities diversions are required, watercourses would be crossed using trenchless techniques in order to avoid disturbance to channel form, flow regimes and

Para	Relevant text EN-4	Project response
		riparian habitats and species, unless other techniques are agreed with the Environment Agency or LLFA, where relevant. In addition, where utility diversion works are required below the water table, trenchless techniques or appropriate temporary groundwater control measures would be adopted to reduce adverse impacts on groundwater levels and flows, unless otherwise agreed with the Environment Agency. In addition, utility works that require dewatering, would be subject to Environment Agency consent under the Environmental Permitting (England and Wales) Regulations."
2.22.5	The IPC should be satisfied that the impacts on water quality and resources are acceptable in accordance with Section 5.15 of EN-1. The IPC should liaise with the EA over the potential for the new development to result in loss or reduction of supply to any licensed abstraction or unlicensed groundwater abstraction, or any potential interference with current legitimate uses of groundwater or surface waters, taking account of the terms of any relevant environmental permits or any negative effect on a groundwater dependent ecosystem.	The Project's effects on groundwater dependent ecosystems and on licenced and unlicensed groundwater abstractions are presented in the Hydrogeological Risk Assessment (ES Appendix 14.5, Application Document 6.3).
2.22.6	Mitigation measures to protect the water environment may include techniques for crossing rivers and managing surface water before and after construction, including restoring vegetation and using sustainable drainage systems to control run-off	The Project has included a commitment, detailed within the Register of Environmental Actions and Commitments, part of the outline Code of Construction Practice (Application Document 6.3), to adopting appropriate techniques for river crossings, for managing surface water using suitable SuDS measures and for protecting water quality and re-instating riverbanks and riparian vegetation.
2.22.7	Mitigation measures to protect water quality may include: • the avoidance of vulnerable groundwater areas or appropriate use of above ground pipeline facilities; • use of the highest specification pipework and best practice in the storage and handling of pollutants to prevent spillage;	The Project has included a commitment, detailed within the Register of Environmental Actions and Commitments, part of the outline Code of Construction Practice (Application Document 6.3), to adopting appropriate techniques for river crossings, for managing surface water using suitable SuDS measures and for

Para	Relevant text EN-4	Project response
	• careful storage of excavated material away from watercourses and facilities for the disposal of sewage and waste; • use of sustainable drainage systems; and • careful reinstatement of riverbanks and reed beds.	protecting water quality and re-instating riverbanks and riparian vegetation.
2.23	Gas and Oil Pipelines Impacts: Soil and Geology	
2.23.1	Introductory paragraph.	
2.23.2	Applicants should assess the stability of the ground conditions associated with the pipeline route and incorporate the findings of that assessment in the ES (see Section 4.2 of EN-1) as appropriate. Desktop studies, which include known geology and previous borehole data, can form the basis of the applicant's assessment. The applicant may find it necessary to sink new boreholes along the preferred route to better understand the ground conditions present. The assessment should cover the options considered for installing the pipeline and weigh up the impacts of the means of installation. Where the applicant proposes to use horizontal directional drilling (HDD) as the means of installing a pipeline under a National or European Site and mitigating the impacts, the assessment should cover whether the geological conditions are suitable for HDD.	See response to paragraphs 5.117 and 5.118 of the NPSNN as set out in the NPSNN Accordance Table presented at Appendix A of this Planning Statement which covers broadly similar generic land stability matters. In terms of pipeline specific points, the gas pipelines which fall to be considered against the provisions of the NPSEN-4 are diversions of pipelines which already exist. They are not wholly new infrastructure. With that in mind, the start and end-point of each pipeline diversion is dictated by the position of the existing pipeline network. Where the existing network already exists beneath existing protected sites there is a limit to which the diversion can avoid those same protected sites. In drawing up proposals for the pipeline diversions, (Work No's G2, G3 and G4) the Applicant undertook an options assessment which considered a number or potential alternative routes for the diversions. This options assessment is contained in a report produced by Jacobs entitled 'Options Selection Report Feeders 5 and 18 diversion options' dated February 2018. The report summarised the options considered and why the preferred route was selected and the considerations which influenced the route design as the assessment evolved. It was followed up by a conceptual design study for Feeders 5 and 18 pipeline diversions also produced by Jacobs dated 11th November 2020 which explains how the diversions would be

Para	Relevant text EN-4	Project response
		designed and constructed to demonstrate that the preferred option is feasible and deliverable. The options selection work included meetings with National Grid Gas and also consideration of trenchless methods of installation beneath the Claylane Woods ASNW. However, it was concluded that (section 3.2 of the Options report): "Trenchless method of installation beneath the woodland has been considered but discounted on the basis that the woodland would still need to be significantly disturbed to allow for the drilling of ground investigation boreholes which will be required to inform the design for any trenchless crossing." Various further surveys were undertaken in the Claylane Woods area which influenced the choice of the preferred routes (section 3.3.1 of the Options report). The conceptual design study considered different construction techniques to implement the pipeline diversions including open cut, HDD and pipejacking. It involved the carrying out of a Geotechnical Desk Study, which provides a summary of anticipated ground conditions, identifies potential geotechnical risks, and outlines recommendations for intrusive ground investigations to confirm the findings of the desk study and ground conditions present. Further information on the consideration of possible alternative options for the utility diversions (including alternative routes and construction techniques and the pros and cons of each) which fall to be considered against the energy NSIPs is presented at Section 3.28 of Chapter 3: Assessment of Reasonable Alternatives, of the ES (Application Document 6.1). It is also noted at paragraph 1.2.6 of Appendix 10.2: Land Stability Report, of the ES (Application Document 6.1) that; "By carrying out the preliminary risk assessment within the defined study area presented in Figure 1, the potential for ground instability has been considered in relation to the

Para	Relevant text EN-4	Project response
		proposed method of installation of underground utility diversions including those works that qualify under EN-4. It should be noted that the Project is not proposing any HDD installation under a National or European Site."
2.23.3	When considering any application where the pipeline goes under a designated area of geological or geomorphological interest, the applicant should submit details of alternative routes, which either bypass the designated area or reduce the length of pipeline through the designated area to the minimum possible, and the reasons why they were discounted.	The proposed pipeline does not go under an area of designated geological or geomorphological interest.
2.23.4	Applicants should consult with the relevant statutory consultees at an early stage.	Application Document 5.1: Consultation Report and Application Document 5.2: Statement of Engagement sets out the extensive exercise of consultation and engagement which has been undertaken in the preparation of the draft DCO for this Project. This includes consultation with the Environment Agency. There was no need to consult the Coal Authority as no coal bearing geology is present within the Project boundary. Similarly, a review of published historical and geological mapping indicates that there are no metalliferous mines present within the Project boundary. It is also proposed that Statements of Common Ground be completed with the HSE and other relevant statutory undertakers and utilities providers to provide IPC with the necessary assurances on these matters.
2.23.5	The IPC should take into account the impact on and from geology and soils when considering a pipeline project. A proposal will be acceptable from the point of view of soil and geology if the applicant has proposed a route and other measures (if applicable) that either eliminates any adverse impacts on soil and geology or reduces them to an acceptable level and that the route chosen does not adversely affect the integrity of the pipeline, for example, by increasing materially the risk of fracture or impact on areas of high population. The HSE	See responses to paragraphs 2.23.2 to 2.23.4 above.

Para	Relevant text EN-4	Project response
	can advise on the suitability of the pipeline route and on the design of the pipeline.	
2.23.6	Where the applicant has considered and discounted a route or routes on the ground that the soil is unstable and susceptible to landslip, the IPC should consult the HSE for their views on its suitability and its impact on the integrity of the pipeline.	No routes have been discounted on the grounds of instability or landslip therefore this paragraph does not apply to the Project.
2.23.7	Mitigation measures to minimise any adverse effects on soil and geology should include measures to ensure that residual impacts on the surface are minor, for example some differential vegetation growth. Mitigation measures should include appropriate treatment of soil (and in particular topsoil) during site construction and other infrastructure activity (and appropriate soil storage and reinstatement in line with the principles and practices outlined in the Code of Practice for the Sustainable Management of Soils on Construction Sites. The IPC should consider what appropriate conditions should be attached to any consent.	The REAC (Application Document 6.3, Appendix 2.2 of the Environmental Statement) contains a number of commitments which seek to ensure appropriate soil management, including GS009 which states that soils would be handled and stored to allow their suitable reuse in line with the Department for Environment, Food and Rural Affair's (2009) Construction Code of Practice for the Sustainable Use of Soils on Construction Sites and the Ministry of Agriculture, Fisheries and Food's (2000) Good Practice Guide for Handling Soils. Full details of the soil resources present and the procedures for soils management (covering vegetation clearance, setting out haul routes, soil stripping, stockpile creation and management, soil reconditioning (where required) and soil reuse) would be set out prior to any soil stripping works commencing, covering all proposed end uses (e.g. agricultural land, woodland or other habitat types). Further commitments are made under REAC Refs. GS010, GS011, GS012 and GS013 which seek to minimise potential impacts.
2.23.8	Not relevant to this Project.	No response required.

Table B.3 National Policy Statement for Electricity Networks Infrastructure (EN-5), July 2011

Para	Relevant EN-5 text	Project response
2.2	Factors influencing site selection by applicants	
2.2.2	The general location of electricity network projects is often determined by the location, or anticipated location, of a particular generating station and the existing network infrastructure taking electricity to centres of energy use. This gives a locationally specific beginning and end to a line. On other occasions the requirement for a line may not be directly associated with a specific power station but rather the result of the need for more strategic reinforcement of the network. In neither circumstance is it necessarily the case that the connection between the beginning and end points should be via the most direct route (indeed this may be practically impossible), as the applicant will need to take a number of factors, including engineering and environmental aspects, into account.	This reflects the situation in respect of the overhead line (OHL) diversion aspect of this Project. The start and end-points are fixed and the factors which influenced the route selection reflect engineering, environmental and other appropriate considerations as set out in the Overhead Line Modifications Options Appraisal Report Further information on the consideration of possible alternative options for the utility diversions (including alternative routes and construction techniques and the pros and cons of each) which fall to be considered against the energy NSIPs is presented at Section 3.28 of Chapter 3: Assessment of Reasonable Alternatives, of the ES (Application Document 6.1).
2.2.3	In order to be able lawfully to install, inspect, maintain, repair, adjust, alter, replace or remove an electric line (above or below ground) and any related equipment such as poles, pylons/transmission towers, transformers and cables, network companies need either to own the land on, over or under which construction is to take place or to hold sufficient rights over, or interest in that land (typically in the form of an easement), or to have permission from the current owner or occupier to install their electric lines and associated equipment and carry out related works (usually referred to as a “wayleave”).	Articles 35 and 36 of the draft DCO (Application Document 3.1) make the necessary provisions for the temporary use of land for carrying out and maintaining the authorised development which includes works related to any electrical line or plant. Work No OH7 is listed in Schedule 1 of the draft DCO as comprising part of the authorised development
2.2.4	Where the network company does not own (or wish to own) the relevant land itself, it may reach a voluntary agreement that gives it either an easement over the land or at least a wayleave permission to use it during the tenure of the current	It is not proposed to seek a CPO in respect of any land associated with Work No OH7 (which is the part of the Project which falls to be considered against NPSEN-5).

Para	Relevant EN-5 text	Project response
	owner or occupier. Where it does not succeed in reaching the agreement it wants, the company may, as part of its application to the IPC, seek to acquire rights compulsorily over the relevant land by means of a provision in the DCO. The applicant may also apply for the compulsory purchase of land: this is not normally sought where lines and cables are installed, but may occur where other electricity network infrastructure, such as a new substation, is required. The above issues may be relevant considerations when the electricity company is considering various potential routes.	
2.2.6	As well as having duties under section 9 of the Electricity Act 1989, (in relation to developing and maintaining an economical and efficient network), developers will be influenced by Schedule 9 to the Electricity Act 19897, which places a duty on all transmission and distribution licence holders, in formulating proposals for new electricity networks infrastructure, to "have regard to the desirability of preserving natural beauty, of conserving flora, fauna and geological or physiographical features of special interest and of protecting sites, buildings and objects of architectural, historic or archaeological interest; and ... do what [they] reasonably can to mitigate any effect which the proposals would have on the natural beauty of the countryside or on any such flora, fauna, features, sites, buildings or objects." Depending on the location of the proposed development, statutory duties under section 85 of the Countryside and Rights of Way Act 2000 and section 11A of the National Parks and Access to the Countryside Act 1949 may be relevant.	See response to Sections 2.7 and 2.8 below.
2.3	General assessment principles for electricity networks	Not relevant to the Project
2.4	Climate change adaption	
2.4.1	Part 2 of EN-1 provides information regarding the Government's energy and climate change strategy including	Chapter 15: Climate of the Environmental Statement (ES) (Application Document 6.1) assesses the potential climate impacts of the

Para	Relevant EN-5 text	Project response
	policies for mitigating climate change. Section 4.8 of EN-1 sets out the generic considerations that applicants and the IPC should take into account to help ensure that electricity networks infrastructure is resilient to climate change. As climate change is likely to increase risks to the resilience of some of this infrastructure, from flooding for example, or in situations where it is located near the coast or an estuary or is underground, applicants should in particular set out to what extent the proposed development is expected to be vulnerable, and, as appropriate, how it would be resilient to: • flooding, particularly for substations that are vital for the electricity transmission and distribution network; • effects of wind and storms on overhead lines; • higher average temperatures leading to increased transmission losses; and earth movement or subsidence caused by flooding or drought (for underground cables).	construction and operation of the Project and provides details of the design and mitigation measures proposed during the operational and construction phases to address these impacts. A series of mitigation and adaptation measures to address the potential impacts associated with climate change events have been considered, based on the latest UK Climate Change Risk Assessment (Department for Environment, Food and Rural Affairs (Defra), 2017) and in consultation with the relevant bodies. In summary, these can be described, as follows: • Flood alleviation measures have been considered as part of the drainage design to reduce the vulnerability of the Project to potential flooding events as a result of climate change. For example, Sustainable Drainage Systems (SuDs) would be implemented where appropriate and runoff would be conveyed via filter drains and attenuation ponds. The climate change allowance for SuDS features as part of the Project design would be 40% (as an addition to a 100-year storm event). • The Project has been designed to accommodate a 1 in 100-year flood event (with a climate change allowance of 50% added). • The Project drainage strategy takes into account the potential effects of climate change. See also the response to paragraphs 4.36 to 4.47 of the NPSNN (presented in Appendix A to this Planning Statement) which addresses similar points.
2.4.2	Explanatory note.	No response required.
2.5	Consideration of good design	This is a minor expansion on Section 4.5 of EN-1 but also draws attention to Sections 2.7 and 2.10 of EN-5, which are addressed below.
2.6	Impacts of electricity networks	This identifies that all of the generic impacts presented in Part 5 of the NPSEN-1 are likely to be relevant to all energy infrastructure projects and should be addressed, where relevant, in the evidence base

Para	Relevant EN-5 text	Project response
		supporting applications for projects. These are addressed in Table B.1 above. Section 2.6 of this NPS sets out the bespoke elements of EN-5 relevant specifically to electricity networks which are addressed below.
2.7	Biodiversity and Geological Conservation	
2.7.1	Generic biodiversity effects are covered in Section 5.3 of EN-1. However, large birds such as swans and geese may collide with overhead lines associated with power infrastructure, particularly in poor visibility. Large birds in particular may also be electrocuted when landing or taking off by completing an electric circuit between live and ground wires. Even perching birds can be killed as soon as their wings touch energised parts.	Paragraph 8.3.63 of Chapter 8: Terrestrial Biodiversity of the Environmental Statement (Application Document 6.1) states that: 'Impacts associated with utilities diversions and other ancillary construction activities are included within the assessment of likely construction effects, with likely effects including habitat loss, fragmentation and disturbance. Likely significant effects associated with increased risk of bird-strike with overhead lines are not predicted, since the proposed works associated with the utilities infrastructure include the restringing or slight diversions of existing overhead line alignments and, therefore, are unlikely to pose a greater risk to birds than is already experienced as part of the existing baseline.'
2.7.2	The applicant will need to consider whether the proposed line will cause such problems at any point along its length and take this into consideration in the preparation of the Environmental Impact Assessment (EIA) and ES (see Section 4.2 of EN-1). Particular consideration should be given to feeding and hunting grounds, migration corridors and breeding grounds.	
2.7.3	Explanatory note.	No response required.
2.7.4	Careful siting of a line away from, or parallel to, but not across, known flight paths can reduce the numbers of birds colliding with overhead lines considerably.	These matters are similar to the matters raised by the 'Holford Rules introduced at paragraph 2.8.6 of the NPSEN-5 and the 'Horlock Rules' introduced at paragraph 2.11.12 of the draft NPSEN-5. A response is provided below regarding the Holford Rules and in Table B.6 regarding the Horlock Rules. These principles are also broadly consistent with those set out in the 14 over-arching principles set out at paragraph 2.3.1 of the above Overhead Line Modifications Options Appraisal Report. They are also
2.7.5	Making lines more visible by methods such as the fitting of bird flappers and diverters to the earth wire, which swivel in the wind, glow in the dark and use fluorescent colours designed specifically for bird vision can also reduce the number of deaths. The design and colour of the diverters will	

Para	Relevant EN-5 text	Project response
	be specific to the conditions – the line and pylon/transmission tower specifications and the species at risk.	addressed in the individual chapters of the ES (Application Document 6.1) dealing with impacts of the Project on biodiversity, landscape and visual impacts, land use and water resources. Where impacts remain, they are mitigated as far as is practicable and, where residual impacts remain, these are considered to be justified in view of the benefits arising out of the Project as a whole as set out in Application Documents 7.1 and 7.20 (The Need for the Project and Benefits & Outcomes).
2.7.6	Electrocution risks can be reduced through the design of crossarms, insulators and the construction of other parts of high voltage power lines so that birds find no opportunity to perch near energised power lines on which they might electrocute themselves.	
2.8	Landscape and Visual	
2.8.1	Explanatory note.	No response required.
2.8.2	In practice new above ground electricity lines, whether supported by lattice steel towers/pylons or wooden poles, can give rise to adverse landscape and visual impacts, dependent upon their scale, siting, degree of screening and the nature of the landscape and local environment through which they are routed. For the most part these impacts can be mitigated, however at particularly sensitive locations the potential adverse landscape and visual impacts of an overhead line proposal may make it unacceptable in planning terms, taking account of the specific local environment and context. New substations, sealing end compounds and other above ground installations that form connection, switching and voltage transformation points on the electricity networks can also give rise to landscape and visual impacts. Cumulative landscape and visual impacts can arise where new overhead lines are required along with other related developments such as substations, wind farms and/or other new sources of power generation.	The intent of the NPS in this regard is to ensure that newly located power lines are as visually unobtrusive as practical within the landscape and to seek particular protection for designated landscape areas. Visual appearance and impacts of the Project have been a key factor in both the selection of the preferred route and the design of elements of the Project. The design response is that the Project route lies subservient within its context, the landscape. It is, however, difficult to draw parallels between the visual impact of the main route and that of the utility diversions. The primary function of the Project is the creation of a new road, not the diversion of utilities. The utilities diversions are already constrained by both the location of the route and existing connections (although this is not entirely definitive) and therefore there are limitations in mitigating visual impact. Notwithstanding this, the wider approach to developing the design within the context of the landscape is also applicable to the utility diversions. It is important to recognise, however, that the utilities are diversions and not new intrusions into the landscape. The visual and landscape impacts of the Project as a whole are described in Chapter 7: Landscape and Visual, of the ES (Application
2.8.3	Sometimes positive landscape and visual benefits can arise through the reconfiguration or rationalisation of existing electricity network infrastructure.	

Para	Relevant EN-5 text	Project response
		Document 6.1) and are summarised in Chapter 6 of this Planning Statement.
2.8.4	Where possible, applicants should follow the principles below in designing the route of their overhead line proposals and it will be for applicants to offer constructive proposals for additional mitigation of the proposed overhead line. While proposed underground lines do not require development consent under the Planning Act 2008, wherever the nature or proposed route of an overhead line proposal makes it likely that its visual impact will be particularly significant, the applicant should have given appropriate consideration to the potential costs and benefits of other feasible means of connection or reinforcement, including underground and sub-sea cables where appropriate. 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.	The in-combination approach to the landscape and visual assessment identifies that the Project as a whole is likely to have adverse landscape and visual impacts. It is, however, important to reiterate that the utilities works are not new infrastructure but rather diversions of existing infrastructure. Any perceived landscape and visual impact already exists, and the diversion/realignment does not create a new effect. Section 3.28 of Chapter 3: Assessment of Reasonable Alternatives of the Environmental Statement (Application Document 6.1) sets out the options and alternatives that were considered as part of the development of the utilities design. It outlines the following considerations that have influenced the design: • Limiting diversions • Utility undertakers' alignment requirements • Reducing working areas • Minimising the environmental impact • Minimising the amount and duration of traffic management • Using the same corridors to combine multiple utilities Section 3.28 of Chapter 3 of the Environmental Statement (Application Document 6.1) further identifies examples of the detailed environmental considerations and stakeholder feedback that have resulted in the chosen routes for the electricity line diversions. The decisions set out how balanced considerations such as methodology of delivery, safety, landscape impact and cost have informed the eventual chosen route.

Para	Relevant EN-5 text	Project response
2.8.5	Guidelines for the routeing of new overhead lines, the Holford Rules11, were originally set out in 1959 by Lord Holford, and are intended as a common sense approach to the routeing of new overhead lines. These guidelines were reviewed and updated by the industry in the 1990s and should be followed by developers when designing their proposals.	As with paragraph 2.8.2 above, the intent of the NPS in this regard is to ensure that newly located power lines are as visually unobtrusive as practical within the landscape and to seek particular protection for designated landscape areas. Visual appearance and impacts of the Project have been a key factor in both the selection of the preferred route and the design of elements of the Project. The design response is that the Project route lies subservient within its context, the landscape. It is, however, difficult to draw parallels between the visual impact of the main route and that of the utilities diversions. The primary function of the Project is the creation of a new road, not the diversion of utilities. Nevertheless, the Project has sought to develop the utilities designs in a sensitive manner. However, it is again important to recognise that these rules are focused on new development rather than diversions of existing. Indeed, the diverted lines do not stray more than approximately 200m from their original locations so the ability to design the lines in accordance with the Holford Rules is limited, particularly where other existing infrastructure and building includes other physical barriers. Notwithstanding this, the rules have been taken into account as far as is reasonably practicable. The design development is detailed within the Project Design Report (Application Document 7.4) and sets out how landscape considerations as well as functional requirements have driven the design. The utility diversions need to also have regard to potential impacts on residential areas as well as ensuring customer supply is maintained. The Holford rules are specifically addressed in the options report for the overhead line diversion works “LSTC Group Overhead Line
2.8.6	In overview, the Holford Rules state that developers should: • avoid altogether, if possible, the major areas of highest amenity value, by so planning the general route of the line in the first place, even if total mileage is somewhat increased in consequence; • avoid smaller areas of high amenity value or scientific interest by deviation, provided this can be done without using too many angle towers, i.e. the bigger structures which are used when lines change direction; • other things being equal, choose the most direct line, with no sharp changes of direction and thus with fewer angle towers; • choose tree and hill backgrounds in preference to sky backgrounds wherever possible. When a line has to cross a ridge, secure this opaque background as long as possible, cross obliquely when a dip in the ridge provides an opportunity. Where it does not, cross directly, preferably between belts of trees; • prefer moderately open valleys with woods where the apparent height of towers will be reduced, and views of the line will be broken by trees; • where country is flat and sparsely planted, keep the high voltage lines as far as possible independent of smaller lines, converging routes, distribution poles and other	

Para	Relevant EN-5 text	Project response
	masts, wires and cables, so as to avoid a concentration of lines or "wirescape"; and • approach urban areas through industrial zones, where they exist; and when pleasant residential and recreational land intervenes between the approach line and the substation, carefully assess the comparative costs of undergrounding.	Modifications – Options Appraisal Report". The report was commissioned by the National Grid. Section 2.3 of the report details the options methodology and sets out a long-list of overarching principles which have been used to assess route options. These principles as a whole reflect the requirements of the 'Holford Rules' summarised opposite. However, Principle xii (at paragraph 2.3.1 of the options report) explicitly states that the methodology followed did: "Take account of industry standard routeing practices through the application of the Holford Rules and compliance with National Policy Statement EN-5" Therefore, a balanced approach to the impacts has to be considered which, at times, results in impacts on sensitive landscape designations.
2.8.7	The IPC should recognise that the Holford Rules, and any updates, form the basis for the approach to routeing new overhead lines and take them into account in any consideration of alternatives and in considering the need for any additional mitigation measures.	
2.8.8	Paragraph 3.7.10 of EN-1 sets out the need for new electricity lines of 132kV and above, including overhead lines. Although Government expects that fulfilling this need through the development of overhead lines will often be appropriate, it recognises that there will be cases where this is not so. Where there are serious concerns about the potential adverse landscape and visual effects of a proposed overhead line, the IPC will have to balance these against other relevant factors, including the need for the proposed infrastructure, the availability and cost of alternative sites and routes and methods of installation (including undergrounding).	Chapter 4 of this Planning Statement has responded in detail to the consideration of the need for the Project, the cost of, and scope for, developing elsewhere and any detrimental effects on the environment, landscape and recreational opportunities and the extent of moderation. The landscape and visual assessment presented in Chapter 7: Landscape and Visual, of the Environmental Statement (Application Document 6.1) considers siting of structures and infrastructure (both temporary and permanent) as well as associated works to overhead powerlines and utility diversions to minimise the impacts of the Project on the landscape character and visual amenity. Further information on the consideration of possible alternative options for the utility diversions (including alternative routes and construction techniques (including undergrounding) and the pros and cons of each) which fall to be considered against the energy NSIPs is presented at Section 3.28 of Chapter 3: Assessment of Reasonable Alternatives, of the ES (Application Document 6.1).

Para	Relevant EN-5 text	Project response
2.8.9	The impacts and costs of both overhead and underground options vary considerably between individual projects (both in absolute and relative terms). Therefore, each project should be assessed individually on the basis of its specific circumstances and taking account of the fact that Government has not laid down any general rule about when an overhead line should be considered unacceptable. The IPC should, however only refuse consent for overhead line proposals in favour of an underground or sub-sea line if it is satisfied that the benefits from the non-overhead line alternative will clearly outweigh any extra economic, social and environmental impacts and the technical difficulties are surmountable. In this context it should consider: • the landscape in which the proposed line will be set, (in particular, the impact on residential areas, and those of natural beauty or historic importance such as National Parks, AONBs and the Broads); • the additional cost of any undergrounding or sub-sea cabling (which experience shows is generally significantly more expensive than overhead lines, but varies considerably from project to project depending on a range of factors, including whether the line is buried directly in open agricultural land or whether more complex tunnelling and civil engineering through conurbations and major cities is required. Repair impacts are also significantly higher than for overhead lines as are the costs associated with any later uprating.); and • the environmental and archaeological consequences (undergrounding a 400kV line may mean disturbing a swathe of ground up to 40 metres across16, which can disturb sensitive habitats, have an impact on soils and	OHLs will often be appropriate, and EN-5 recognises that OHLs are needed. While they can give rise to unavoidable environmental effects, these are usually in themselves insufficient justification for promoting undergrounding as a preferred mitigation solution, which itself can have more adverse effects. As repeated above, the focus of EN-5 here is on new schemes not diversions. The landscape and visual impact already exists and it is entirely reasonable to seek to limit any additional harm that would arise as a result of undergrounding of infrastructure rather than relocation of existing. It was concluded that an overhead line could be sensitively diverted and carefully routed within the existing landscape and that no part of the diversion was required to be placed underground. Further information on the consideration of possible alternative options for the utility diversions (including alternative routes and construction techniques (including undergrounding) and the pros and cons of each) which fall to be considered against the energy NSIPs is presented at Section 3.28 of Chapter 3: Assessment of Reasonable Alternatives, of the ES (Application Document 6.1).

Para	Relevant EN-5 text	Project response
	geology, and damage heritage assets, in many cases more than an overhead line would).	
2.8.10	Not considered relevant to the diversion of an existing overhead powerline.	No response required.
2.8.11	There are some more specific measures that might be taken, and which the IPC could require through requirements if appropriate, as follows: • Landscape schemes, comprising off-site tree and hedgerow planting are sometimes used for larger new overhead line projects to mitigate potential landscape and visual impacts, softening the effect of a new above ground line whilst providing some screening from important visual receptors. These can only be implemented with the agreement of the relevant landowner(s) and advice from the relevant statutory advisor may also be needed; and • Screening, comprising localised planting in the immediate vicinity of residential properties and principal viewpoints can also help to screen or soften the effect of the line, reducing the visual impact from a particular receptor	These measures are already factored into the selection and design of Work No OH7 as set out in Section 3.28 of Chapter 3: Assessment of Reasonable Alternatives, of the ES (Application Document 6.1) and in Chapter 7: Landscape and Visual, of the ES (Application Document 6.1).
2.9	Noise and Vibration	
2.9.1–2.9.7	Introductory paragraphs.	No response required.
2.9.8	While standard methods of assessment and interpretation using the principles of the relevant British Standards are satisfactory for dry weather conditions, they are not appropriate for assessing noise during rain, which is when overhead line noise mostly occurs, and when the background noise itself will vary according to the intensity of the rain.	The Applicant has worked alongside National Grid Electricity Transmission (NGET) in order to identify and agree a suitable noise assessment methodology. ES Appendix 12.8: National Grid Electricity Transmission Network, Assessment for Audible Noise (Application Document 6.1) outlines an alternative methodology considered by NGET and the Applicant to be appropriate for the permanent diversion of existing OHLs in the context of the Project.
2.9.9	Therefore an alternative noise assessment method to deal with rain-induced noise is needed, such as the one developed	

Para	Relevant EN-5 text	Project response
	by National Grid as described in report TR(T)94,199319. This follows recommendations broadly outlined in ISO 1996 (BS 7445:1991)20 and in that respect is consistent with BS 4142:1997. The IPC is likely to be able to regard it as acceptable for the applicant to use this or another methodology that appropriately addresses these particular issues.	The methodology considers the occurrence of OHL noise in both dry and wet conditions and follows the principles outlined in PS(T)134 'Operational Audible Noise Policy for Overhead Lines (New Build, Reconductoring, Diversion and Uprating)' Issue 2, National Grid, June 2021 which has replaced Technical Report TR(T)94 (National Grid, 1993), now withdrawn, to predict OHL source noise levels. The assessment concludes that both the temporary and permanent realignment of any OHL associated with the Project would not constitute a significant environmental effect.
2.9.10	The IPC should ensure that relevant assessment methodologies have been used in the evidence presented to them, and that the appropriate mitigation options have been considered and adopted. Where the applicant can demonstrate that appropriate mitigation measures will be put in place, the residual noise impacts are unlikely to be significant.	See response to paragraphs 2.9.8 and 2.9.9 above. As Work No OH7 is a replacement OHL it is not anticipated that any noise and vibration issues associated with planned maintenance of the diverted line would be any different to that caused by planned maintenance of the existing line.
2.9.11	Consequently, noise from overhead lines is unlikely to lead to the IPC refusing an application, but it may need to consider the use of appropriate requirements to ensure noise is minimised as far as possible.	
2.9.12	2.9.12 Applicants should have considered the following measures: • the positioning of lines (see Section 2.8 (landscape/visual impact)) to help mitigate noise; • ensuring that the appropriately sized conductor arrangement is used to minimise potential noise; • quality assurance through manufacturing and transportation to avoid damage to overhead line conductors which can increase potential noise effects; and • ensuring that conductors are kept clean and free of surface contaminants during stringing/installation.	

Para	Relevant EN-5 text	Project response
2.9.13	The ES should include information on planned maintenance arrangements. Where this is not the case, the IPC should consider including these by way of requirements attached to any grant of development consent.	
2.10	Electric and Magnetic Fields (EMFs)	
2.10.1 – 2.10.8	Introductory paragraphs.	No response required.
2.10.9	This NPS does not repeat the detail of the ICNIRP 1998 guidelines on restrictions or reference levels nor the 1999 EU Recommendation. Government has developed with the electricity industry a Code of Practice, "Power Lines: Demonstrating compliance with EMF public exposure guidelines – a voluntary Code of Practice", published in February 2011 that specifies the evidence acceptable to show compliance with ICNIRP (1998) in terms of the EU Recommendation. Before granting consent to an overhead line application, the IPC should satisfy itself that the proposal is in accordance with the guidelines, considering the evidence provided by the applicant and any other relevant evidence. It may also need to take expert advice from the Department of Health.	Appendix D: National Grid Electric and Magnetic Field Report, of the Health and Equalities Impact Assessment (Application Document 7.10) provides an assessment of the likely environmental effects of electric and magnetic fields (EMF) associated with the modification of existing electricity infrastructure. The assessment has been carried out in accordance with these guidelines.
2.10.10	Not relevant to this Project.	No response required.
2.10.11	The Government has developed with industry a voluntary Code of Practice, "Optimum Phasing of high voltage double-circuit Power Lines – A Voluntary Code of Practice", published in February 2011 that defines the circumstances where industry can and will optimally phase lines with a voltage of 132kV and above. 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	Appendix D: National Grid Electric and Magnetic Field Report, of the Health and Equalities Impact Assessment (Application Document 7.10) provides an assessment of the likely environmental effects of electric and magnetic fields (EMF) associated with the modification of existing electricity infrastructure. The assessment is undertaken in accordance with the requirements outlined in Section 2.10 of EN-5 and in compliance with the ESQC Regulations 2002. The assessment

Para	Relevant EN-5 text	Project response
	compliance, and with the policy on phasing as specified in the Code of Practice on optimal phasing then the IPC should not grant consent.	concludes that, cumulatively, the modifications to the network result in no significant impacts. The results of this assessment are summarised in Chapter 13: Population and Human Health of the Environmental Statement (Application Document 6.1) which identifies, at Table 13.72 (Human health assessment – construction) and Table 13.77 (Human health assessment – operation), that there are no health impacts relating to electric and magnetic fields.
2.10.12	Undergrounding of a line would reduce the level of EMFs experienced, but high magnetic field levels may still occur immediately above the cable. It is not the Government's policy that power lines should be undergrounded solely for the purpose of reducing exposure to EMFs. Although there may be circumstances where the costs of undergrounding are justified for a particular development, this is unlikely to be on the basis of EMF National Policy Statement for Electricity Networks Infrastructure (EN-5) 22 exposure alone, for which there are likely to be more cost-efficient mitigation measures. Undergrounding is covered in more detail in paragraphs 2.8.8 – 2.8.9 (landscape and visual).	
2.10.13 – 2.10.14	Not relevant to this Project.	No response required.
2.10.15	The applicant should have considered the following factors: • height, position, insulation and protection (electrical or mechanical as appropriate) measures subject to ensuring compliance with the Electricity Safety, Quality and Continuity Regulations 2002; • that optimal phasing of high voltage overhead power lines is introduced wherever possible and practicable in accordance with the Code of Practice to minimise effects of EMFs; and • any new advice emerging from the Department of Health relating to Government policy for EMF exposure guidelines.	Appendix D: National Grid Electric and Magnetic Field Report of the Health and Equalities Impact Assessment (Application Document 7.10) outlines that although only modifications to existing OHLs are being made to accommodate the Project, the principles of compliance (with the Electrical Safety, Quality and Continuity Regulations 2002) have been followed in the same way as a new OHL proposal. Paragraph 4.7.4 of the assessment states that: 'All the overhead line routes considered in this assessment are designed with transposed phasing meaning that it is optimally phased as per the Code of Practice. Therefore, the two circuits are arranged to produce the greatest degree of cancellation between the magnetic fields produced by the two circuits and hence the lowest resultant magnetic field. This will remain the same after the proposed modifications.'

Para	Relevant EN-5 text	Project response
	However, where it can be shown that the line will comply with the current public exposure guidelines and the policy on phasing, no further mitigation should be necessary.	Appendix D has taken into account the latest advice on EMF exposure and the policy on phasing.
2.10.16	Where EMF exposure is within the relevant public exposure guidelines, re-routeing a proposed overhead line purely on the basis of EMF exposure or undergrounding a line solely to further reduce the level of EMF exposure are unlikely to be proportionate mitigation measures.	No response required

Table B.4 Draft Overarching National Policy Statement for Energy (EN-1), September 2021

Para	Relevant EN-1 text	Project response
4.2.1	All proposals for projects that are subject to the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) must be accompanied by an Environmental Statement (ES) describing the aspects of the environment likely to be significantly affected by the project.54 The Regulations specifically refer to effects on population, human health,55 biodiversity, land, soil, water, air, climate, the landscape, material assets and cultural heritage, and the interaction between them. The Regulations require an assessment of the likely significant effects of the proposed project on the environment, covering the direct effects and any indirect, secondary, cumulative, transboundary, 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	This paragraph sets out the same material requirements relating to EIAs as set out in paragraph 4.2.1 of the designated NPSEN-1 which, in turn, replicates paragraph 4.15 of the NPSNN. The response to these tests is articulated in the NPSNN Accordance Table (Appendix A of this Planning Statement).
4.2.2	To consider the potential effects, including benefits, of a proposal for a project, the applicant should set out information on the likely significant social and economic effects of the development, and show how any likely significant negative effects would be avoided, reduced, or mitigated. This information could include matters such as employment, equality, biodiversity net gain, community cohesion and well-being.	This paragraph sets out the same material requirements as paragraph 4.2.2 of the designated NPSEN-1. Please see response given in Table B.1.
4.2.3	For the purposes of this NPS and the technology specific NPSs the ES should cover the environmental, social and economic effects arising from pre-construction, construction, operation and decommissioning of the project. In the absence of any additional information on additional assessments, the principles set out in this Section will apply to all assessments.	This paragraph sets out the same material requirements as paragraph 4.2.3 of the designated NPSEN-1. Please see response given in Table B.1.

Para	Relevant EN-1 text	Project response
4.2.4	The Secretary of State should consider how the accumulation of, and interrelationship between, effects might affect the environment, economy, or community as a whole, even though they may be acceptable when considered on an individual basis with mitigation measures in place.	Chapter 16 of the ES (Application Document 6.1) comprises a Cumulative Effects Assessment which sets out to provide the evidence that will allow the Secretary of State to come to a clear decision on this matter. Table 16.11 of the assessment summarises the nature and extent of intra-project cumulative effects. Table 16.12 summarises the effects of the Project cumulatively when considered against 18 other developments.
4.2.5	In some instances, it may not be possible at the time of the application for development consent for all aspects of the proposal to have been settled in precise detail. Where this is the case, the applicant should explain in its application which elements of the proposal have yet to be finalised, and the reasons why this is the case.	This paragraph sets out the same material requirements as paragraph 4.2.7 of the designated NPSEN-1 (which, in turn, replicates paragraph 4.18 of the NPSNN). Please see response given in Table B.1 above and that presented in the NPSNN Accordance Table (Appendix A to this Planning Statement).
4.2.6	Where some details are still to be finalised, the ES should set out to the best of the applicant's knowledge, what the likely worst-case environmental, social and economic effects of the proposed development may be and assess, on that basis, to ensure that the impacts of the project as it may be constructed have been properly assessed.	This paragraph sets out the same material requirements as paragraph 4.2.8 of the designated NPSEN-1 (which, in turn, replicates paragraph 4.19 of the NPSNN). Please see response given in Table B.1 above and that presented in the NPSNN Accordance Table (Appendix A to this Planning Statement).
4.2.7	To help the Secretary of State consider thoroughly the potential effects of a proposed project in cases where the EIA Regulations do not apply and an ES is not therefore required, the applicant should instead provide information proportionate to the scale of the project on the likely significant environmental, social, and economic effects. References to an ES in this NPS and the technology specific NPSs should be taken as including a statement which provides this information, even if the EIA Regulations do not apply and where the NPSs requires specific information to be provided in the ES. such information should still be provided in this statement.	This paragraph sets out the same material requirements as paragraph 4.2.10 of the designated NPSEN-1 (which, in turn, replicates paragraph 4.21 of the NPSNN). Please see response given in Table B.1 above and that presented in the NPSNN Accordance Table (Appendix A to this Planning Statement).
Habitats Regulations		

Para	Relevant EN-1 text	Project response
4.2.9	The Secretary of State must, under the Habitats Regulations, consider whether the project may have a significant effect on a protected site which is part of the National Site Network, or on any site to which the same protection is applied as a matter of policy, either alone or in combination with other plans or projects. The applicant should seek the advice of the appropriate SNCB and provide the Secretary of State with such information as the Secretary of State may reasonably require, to determine whether an Appropriate Assessment (AA) is required. If an AA is required, the applicant must provide the Secretary of State with such information as may reasonably be required to enable the Secretary of State to conduct the AA. This should include information on any mitigation measures that are proposed to minimise or avoid likely effects.	This paragraph sets out the same material requirements as paragraph 4.3.1 of the designated NPSEN-1 (which, in turn, replicates paragraphs 4.22 and 4.23 of the NPSNN). Please see response given in Table B.1 above and that presented in the NPSNN Accordance Table (Appendix A to this Planning Statement).
4.2.10	If, during the pre-application stage, the SNCB indicate that the proposed development is likely to adversely impact the integrity of HRA sites, the applicant must include with their application such information as may reasonably be required to assess a potential derogation under the Habitats Regulations. If the SNCB gives such an indication at a later stage in the development consent process, the applicant must provide this information as soon as is reasonably possible and before the close of the examination. This information must include assessment of alternative solutions, a case for Imperative Reasons of Overriding Public Interest (IROPI) and appropriate environmental compensation. Applicants must have discussed with SNCB whether any proposed compensation is appropriate, and the compensation must be secured, or an indication given as to how it can be secured. Provision of such information will not be taken as an acceptance of adverse impacts and if an applicant disputes the likelihood of adverse impacts, it can provide this information without prejudice to the Secretary of State's final decision on the impacts of the potential development. If, in these circumstances, an applicant does not supply	This paragraph sets out the same material requirements as paragraph 4.24 and 4.25 of the NPSNN. Please see response given in the NPSNN Accordance Table (Appendix A to this Planning Statement). In summary, the HRA Stage 2 Appropriate Assessment Report (Application Document 6.6) has concluded that there is sufficient evidence to demonstrate, 'beyond reasonable scientific doubt that there would be an absence of adverse effects from the Project alone and in combination with other plans or projects on 6 identified European sites'. It also concluded that the Project would not have an adverse effect on priority habitats or species on a site for which they are a protected feature and so the matter of IROPI is therefore not applicable.

Para	Relevant EN-1 text	Project response
	information required for the assessment of a potential derogation, there will be no expectation that the Secretary of State will allow the applicant the opportunity to provide such information following the examination.	
Alternatives		
4.2.11	As in any planning case, the relevance or otherwise to the decision making process of the existence (or alleged existence) of alternatives to the proposed development is in the first instance a matter of law, detailed guidance on which falls outside the scope of this NPS. From a policy perspective this NPS does not contain any general requirement to consider alternatives or to establish whether the proposed project represents the best option.	Paragraphs 4.2.11 to 4.2.13 of the draft NPSEN-1 set out the same material requirements as paragraphs 4.4.1 to 4.4.3 of the designated NPSEN-1 (which, in turn, replicate paragraphs 4.26 and 4.27 of the NPSNN). Please see response given in Table B.1 above and that presented in the NPSNN Accordance Table (Appendix A to this Planning Statement). Consideration of possible alternative options for the utility diversions (including alternative routes and construction techniques and the pros and cons of each) which fall to be considered against the energy NSIPs is presented at Section 3.28 of Chapter 3: Assessment of Reasonable Alternatives, of the ES (Application Document 6.1). It demonstrates how these matters set out in paragraphs 4.2.12 and 4.2.13 have been taken into account in the preferred route options for the utility diversions.
4.2.12	However: • applicants are obliged to include in their ES, information about the reasonable alternatives they have studied. This should include an indication of the main reasons for the applicant's choice, taking into account the environmental, social and economic effects and including, where relevant, technical and commercial feasibility • in some circumstances, the NPSs may impose a policy requirement to consider alternatives (see below in Sections 5.4, 5.8 and 5.10)	
4.2.13	Where there is a policy or legal requirement to consider alternatives, the applicant should describe the alternatives considered in compliance with these requirements. Given the level and urgency of need for new energy infrastructure, the Secretary of State should, subject to any relevant legal requirements (e.g. under the Habitats Regulations) which indicate otherwise, be guided by the following principles when deciding what weight should be given to alternatives:	

Para	Relevant EN-1 text	Project response
	• the consideration of alternatives in order to comply with policy requirements should be carried out in a proportionate manner • only alternatives that can meet the objectives of the proposed development need be considered • the Secretary of State should be guided in considering alternative proposals by whether there is a realistic prospect of the alternative delivering the same infrastructure capacity (including energy security, climate change, and other environmental benefits) in the same timescale as the proposed development • the Secretary of State should not refuse an application for development on one site simply because fewer adverse impacts would result from developing similar infrastructure on another suitable site, and it should have regard as appropriate to the possibility that all suitable sites for energy infrastructure of the type proposed may be needed for future proposals • alternatives not among the main alternatives studied by the applicant (as reflected in the ES) should only be considered to the extent that the Secretary of State thinks they are both important and relevant to the decision • as the Secretary of State must assess an application in accordance with the relevant NPS (subject to the exceptions set out in the Planning Act 2008), if the Secretary of State concludes that a decision to grant consent to a hypothetical alternative proposal would not be in accordance with the policies set out in the relevant NPS, the existence of that alternative is unlikely to be important and relevant to the Secretary of State's decision • • alternative proposals which mean the necessary development could not proceed, for example because the alternative proposals are not commercially viable or alternative proposals for sites would not be physically suitable, can be excluded on	

Para	Relevant EN-1 text	Project response
	the grounds that they are not important and relevant to the Secretary of State's decision • alternative proposals which are vague or inchoate can be excluded on the grounds that they are not important and relevant to the Secretary of State's decision • it is intended that potential alternatives to a proposed development should, wherever possible, be identified before an application is made to the Secretary of State (so as to allow appropriate consultation and the development of a suitable evidence base in relation to any alternatives which are particularly relevant). Therefore, where an alternative is first put forward by a third party after an application has been made, the Secretary of State may place the onus on the person proposing the alternative to provide the evidence for its suitability as such and the Secretary of State should not necessarily expect the applicant to have assessed it	
4.3	Health	
4.3.2	As described in the relevant sections of this NPS and in the technology specific NPSs, where the proposed project has an effect on human beings, the ES should assess these effects for each element of the project, identifying any potential adverse health impacts, and identifying measures to avoid, reduce or compensate for these impacts as appropriate. The impacts of more than one development may affect people simultaneously, so the applicant should consider the cumulative impact on health in the ES where appropriate.	This paragraph sets out the same material requirements as paragraph 4.13.2 of the designated NPSEN-1. Please see response given in Table B.1.
4.3.3	The direct impacts on health may include increased traffic, air or water pollution, dust, odour, hazardous waste and substances, noise, exposure to radiation, and increases in pests.	This paragraph sets out the same material requirements as paragraph 4.13.3 of the designated NPSEN-1. Please see response given in Table B.1.

Para	Relevant EN-1 text	Project response
4.3.4	New energy infrastructure may also affect the composition and size of the local population, and in doing so have indirect health impacts, for example if it in some way affects access to key public services, transport or the use of open space for recreation and physical activity	This paragraph sets out the same material requirements as paragraph 4.13.4 of the designated NPSEN-1. Please see response given in Table B.1.
4.3.5	Generally, those aspects of energy infrastructure which are most likely to have a significantly detrimental impact on health are subject to separate regulation (for example for air pollution) which will constitute effective mitigation of them, so that it is unlikely that health concerns will either by themselves constitute a reason to refuse consent or require specific mitigation under the Planning Act 2008. However, not all potential sources of health impacts will be mitigated in this way and the Secretary of State will want to take account of health concerns when setting requirements relating to a range of impacts such as noise. Opportunities should also be taken to mitigate indirect impacts, by promoting local improvements to encourage health and wellbeing, this includes potential impacts on vulnerable groups within society i.e. those groups within society which may be differentially impacted by a development compared to wider society as a whole.	This paragraph sets out the similar requirements as paragraph 4.13.5 of the designated NPSEN-1. Please see response given in Table B.1. The reference to health and well-being, particularly of vulnerable groups, is new text in this draft NPS. A stand-alone Health and Equalities Impact Assessment (HEqIA) (Application Document 7.10) has been produced alongside the other accompanying reports as part of this submission. Section 7.12 of that assessment addresses potential impacts on mental health and wellbeing including both those geographical locations and sensitive populations which may have lower levels of resilience to health and well-being challenges and measures which might be adopted to address them.
4.4	Marine Considerations	None of the utility diversion works are located in a ‘marine area’ therefore this section of the draft NPS is not applicable.
4.5	Environmental and Biodiversity Net Gain	
4.5.1	Environmental net gain is an approach to development that aims to leave the natural environment in a measurably better state than beforehand. Applicants should therefore not just look to mitigate direct harms, but also consider whether there are opportunities for enhancements. Biodiversity net gain is an essential component of environmental net gain. Projects should consider and seek to incorporate improvements in natural capital, ecosystem services	This section in the draft NPS is a new one not included (as an ‘assessment principle’; it is addressed in general terms as a generic impact) in the designated NPS. Chapter 8: Terrestrial Biodiversity of the Environmental Statement (ES) (Application Document 6.1) considers all ecological features, identifying those that are of principal

Para	Relevant EN-1 text	Project response
	and the benefits they deliver when planning how to deliver biodiversity net gain.	importance and assesses the residual effects as a result of the Project. Ecology and nature conservation have been assessed in accordance with recognised standards. The mitigation and enhancement measures to be implemented have been incorporated into Appendix 2.2: Register of Environmental Actions and Commitments (REAC) (Application Document 6.3) of the ES which consolidates the mitigation commitments arising from the EIA process. Habitat loss and gains associated with the Project are summarised in Section 8.6 of Chapter 8 of the ES (Application Document 6.1). Tables 8.31 and 8.35 set out the habitat losses and gains south and north of the River Thames respectively. Overall, the Project would result in an increase of semi-natural habitats which would contribute to enhancing the natural environment over time. The benefits in terms of habitat creation have therefore been considered to outweigh the losses. ES Appendix 8.21: Biodiversity Metric Calculations presents the results of the Biodiversity Metric calculations (Application Document 6.1). Overall, the report identifies that the Project would, as a precautionary, worst case scenario, result in a loss of biodiversity when calculated using the Biodiversity Metric 3.1 Calculation Tool. However, the Calculation Tool does not allow the nitrogen deposition compensation areas to be factored in to the assessment as they are bespoke compensation for potential indirect effects of nitrogen deposition on protected sites and irreplaceable habitats. This is despite the fact that they will result in a significant increase in provision for biodiversity.
4.5.2	Although achieving biodiversity net gain is not an obligation for projects under the Planning Act 2008, energy NSIP proposals should seek opportunities to contribute to and enhance the natural environment by providing net gains for biodiversity where possible. Applicants are encouraged to use the most current version of the Defra biodiversity metric to calculate their biodiversity baseline and inform their biodiversity net gain outcomes and to present this data as part of their application. Biodiversity net gain should be applied in conjunction with the mitigation hierarchy and does not change or replace existing environmental obligations.	

Para	Relevant EN-1 text	Project response
4.5.3	In addition to delivering biodiversity net gain, developments may also deliver wider environmental gains relevant to the local area, and to national policy priorities, such as reductions in GHG emissions, reduced flood risk, improvements to air or water quality, or increased access to natural greenspace. The scope of potential gains will be dependent on the type, scale, and location of specific projects. Applications for development consent should be accompanied by a statement demonstrating how opportunities for delivering wider environmental net gains have been considered, and where appropriate, incorporated into the design (including any relevant operational aspects) of the project. Applicants should make use of available guidance and tools for measuring natural capital assets and ecosystem services, such as the Natural Capitals Committee's 'How to Do it: natural capital workbook' and Defra's guidance on Enabling a Natural Capital Approach (ENCA). Where environmental net gain considerations have featured as part of the strategic options appraisal process to select a project, the statement should reference that information to supplement the site-specific details.	These wider gains are addressed in detail in the 'generic impacts' section of the draft NPS covered below. They are also identified in Application Document 7.18: Benefits and Outcomes Document. The purpose of this biodiversity metric assessment (ES Appendix 8.21 (Application Document 6.3) is to provide a forecast of the Project biodiversity unit net change outcome and to justify how this forecast has been developed in alignment with the Project design and environmental commitments. Overall, the report identifies that the Project would, as a precautionary, worst case scenario, result in a loss of biodiversity when calculated using the Biodiversity Metric 3.1 Calculation Tool. However, the Calculation Tool does not allow the nitrogen deposition compensation areas to be factored in to the assessment as they are bespoke compensation for potential indirect effects of nitrogen deposition on protected sites and irreplaceable habitats. This is despite the fact that they will result in a significant increase in provision for biodiversity.
4.6	Criteria for "Good Design" for Energy Infrastructure	
4.6.1	The visual appearance of a building, structure, or piece of infrastructure, and how it relates to the landscape it sits within, is sometimes considered to be the most important factor in good design. But high quality and inclusive design goes far beyond aesthetic considerations. The functionality of an object - be it a building or other type of infrastructure - including fitness for purpose and sustainability, is equally important. Applying "good design" to energy projects should produce sustainable infrastructure sensitive to place, efficient in the use of natural resources and energy used in their construction and operation, matched by an appearance that demonstrates good aesthetic as far as possible. It is acknowledged, however that the nature of much energy infrastructure development will often limit the extent	This paragraph sets out the same material requirements as paragraph 4.5.1 of the designated NPSEN-1 which, in turn replicates the requirements of paragraphs 4.29 and 4.30 of the NPSNN. Please see response given to these paragraphs in Table B.1 and in Appendix A to this Planning Statement.

Para	Relevant EN-1 text	Project response
	to which it can contribute to the enhancement of the quality of the area.	
4.6.2	Good design is also a means by which many policy objectives in the NPS can be met, for example the impact sections show how good design, in terms of siting and use of appropriate technologies, can help mitigate adverse impacts such as noise. Given the benefits of "good design" in mitigating the adverse impacts of a project, applicants should consider how "good design" can be applied to a project during the early stages of the project lifecycle. Design principles should be established from the outset of the project to guide the development from conception to operation.	This paragraph sets out the same material requirements as paragraph 4.5.2 of the designated NPSEN-1 which, in turn replicates the requirements of paragraphs 4.31 of the NPSNN. Please see response given to these paragraphs in Table B.1 and in Appendix A to this Planning Statement.
4.6.3	In the light of the above and given the importance which the Planning Act 2008 places on good design and sustainability, the Secretary of State needs to be satisfied that energy infrastructure developments are sustainable and, having regard to regulatory and other constraints, are as attractive, durable, and adaptable (including taking account of natural hazards such as flooding) as they can be. In doing so, the Secretary of State should be satisfied that the applicant has taken into account both functionality (including fitness for purpose and sustainability) and aesthetics (including its contribution to the quality of the area in which it would be located, any potential amenity benefits, and visual impacts on the landscape or seascape) as far as possible. Whilst the applicant may not have any or very limited choice in the physical appearance of some energy infrastructure, there may be opportunities for the applicant to demonstrate good design in terms of siting relative to existing landscape character, land form and vegetation. Furthermore, the design and sensitive use of materials in any associated development such as electricity substations will assist in ensuring that such development contributes to the quality of the area. Applicants should also, so far	This paragraph sets out the same material requirements as paragraph 4.5.3 of the designated NPSEN-1. Please see response given to this paragraph in Table B.1.

Para	Relevant EN-1 text	Project response
	as is possible, seek to embed opportunities for nature inclusive design within the design process.	
4.6.4	For the Secretary of State to consider the proposal for a project, applicants should be able to demonstrate in their application documents, how the design process was conducted and how the proposed design evolved. Where a number of different designs were considered, applicants should set out the reasons why the favoured choice has been selected. In considering applications, the Secretary of State should take into account the ultimate purpose of the infrastructure and bear in mind the operational, safety and security requirements which the design has to satisfy. Many of the wider impacts of a development, such as landscape and environmental impacts, will be important factors in the design process. The Secretary of State will consider such impacts under the relevant policies in this NPS. Assessment of impacts must be for the stated design life of the scheme rather than a shorter time period.	This paragraph sets out the same material requirements as paragraph 4.5.4 of the designated NPSEN-1 which, in turn replicates the requirements of paragraph 4.33 of the NPSNN. Please see response given to these paragraphs in Table B.1 and in Appendix A to this Planning Statement.
4.6.5	Applicants and the Secretary of State should consider taking independent professional advice on the design aspects of a proposal. In particular, the Design Council can be asked to provide design review for nationally significant infrastructure projects and applicants are encouraged to use this service	Application Document 7.4: Project Design Report sets out how the preliminary design for the Project as a whole was developed. In terms of the design of the energy NSIP aspects of the Project which fall to be assessed against the Energy NPSs this is explained at section 3.28 of Chapter 3 of the ES (Application Document 6.1). In practical terms, the design is largely influenced by technical, safety and geological / topographical considerations rather than physical appearance or aesthetics. This is due to the nature of the energy infrastructure itself and the fact that it is replacement infrastructure which has to be compatible with existing infrastructure with which it must seamlessly link, at each end of the diversion.
4.7	Consideration of Combined Heat and Power (CHP)	The Project does not involve or impact upon CHP matters

Para	Relevant EN-1 text	Project response
4.8	Carbon Capture and Storage (CCS)	The Project does not involve or impact upon CCS.
4.9	Climate Change Adaptation	
4.9.5	In preparing measures to support climate change adaptation applicants should consider whether nature-based solutions could provide a basis for such adaptation. In addition to avoiding further GHG emissions when compared with some more traditional adaptation approaches, nature based solutions can also result in biodiversity benefits as well as increasing absorption of carbon dioxide from the atmosphere (see also Section 5.11 on the role of green infrastructure).	Nature-based proposals have been designed into the Project as a whole, including the Energy NSIP elements, in so far as relevant. Impacts of these design solutions on achieving climate change and adaptation objectives are addressed in are assessed in Chapter 15: Climate of the ES (Application Document 6.1).
4.9.6	New energy infrastructure will typically be a long-term investment and will need to remain operational over many decades, in the face of a changing climate. Consequently, applicants must consider the impacts of climate change when planning the location, design, build, operation and, where appropriate, decommissioning of new energy infrastructure. The ES should set out how the proposal will take account of the projected impacts of climate change, in accordance with the EIA Regulations. This information will be needed by the Secretary of State.	This paragraph covers the same material requirements as set out in paragraph 4.8.5 of the designated NPSEN-1 (which, in turn reflects paragraph 4.40 of the NPSNN). Please see the response to this paragraph in Table 2.1 and in the NPSNN Accordance Table (Appendix A of this Planning Statement).
4.9.7	The Secretary of State should be satisfied that applicants for new energy infrastructure have taken into account the potential impacts of climate change using the latest UK Climate Projections and associated research and expert guidance (such as the EA's Climate Change Allowances for Flood Risk Assessments) available at the time the ES was prepared to ensure they have identified appropriate mitigation or adaptation measures. This should cover the estimated lifetime of the new infrastructure. Should a new set of UK Climate Projections or associated research become available after the preparation of the ES, the Secretary of State should consider whether they need to request further information from the applicant.	This paragraph covers the same material requirements as set out in paragraph 4.8.6 of the designated NPSEN-1 (which, in turn reflects paragraph 4.42 of the NPSNN). Please see the response to this paragraph in Table B.1 and in the NPSNN Accordance Table (Appendix A of this Planning Statement).

Para	Relevant EN-1 text	Project response
4.9.8	Applicants should assess the impacts on and from their proposed energy project across a range of climate change scenarios, in line with appropriate expert advice and guidance available at the time. Applicants should be able to demonstrate that proposals have a high level of climate resilience built-in from the outset. They should also be able to demonstrate how proposals can be adapted over their predicted lifetimes to remain resilient to a credible maximum climate change scenario. These results should be considered alongside relevant research which is based on the climate change projections.	This paragraph covers the same material requirements as set out in paragraph 4.8.7 of the designated NPSEN-1 (which, in turn reflects paragraph 4.41 of the NPSNN). Please see the response to this paragraph in Table B.1 and in the NPSNN Accordance Table (Appendix A of this Planning Statement). As small stretches of replacement infrastructure sitting within wider energy infrastructure networks, the resilience of the energy elements of the Project will be determined by the resilience of those wider energy networks.
4.9.9	The Secretary of State should be satisfied that there are not features of the design of new energy infrastructure critical to its operation which may be seriously affected by more radical changes to the climate beyond that projected in the latest set of UK climate projections, taking account of the latest credible scientific evidence on, for example, sea level rise (for example by referring to additional maximum credible scenarios – i.e. from the Intergovernmental Panel on Climate Change or EA) and that necessary action can be taken to ensure the operation of the infrastructure over its estimated lifetime.	This paragraph covers the same material requirements as set out in paragraph 4.8.8 of the designated NPSEN-1 (which, in turn reflects paragraph 4.43 of the NPSNN). Please see the response to this paragraph in Table B.1 and in the NPSNN Accordance Table (Appendix A of this Planning Statement).
4.9.11	If any adaptation measures give rise to consequential impacts (for example on flooding, water resources or coastal change) the Secretary of State should consider the impact of the latter in relation to the application as a whole and the impacts guidance set out in Part 5 of this NPS.	The adaptation measures which are proposed are not expected to give rise to any adverse consequential impacts.

Para	Relevant EN-1 text	Project response
4.9.12	Any adaptation measures should be based on the latest set of UK Climate Projections, the Government's latest UK Climate Change Risk Assessment, when available and in consultation with the EA's Climate Change Allowances for Flood Risk Assessments.	This paragraph covers the same material requirements as set out in paragraph 4.8.11 of the designated NPSEN-1 (which, in turn reflects paragraph 4.41 of the NPSNN). Please see the response to this paragraph in Table B.1 and in the NPSNN Accordance Table (Appendix A of this Planning Statement).
4.9.13	Adaptation measures can be required to be implemented at the time of construction where necessary and appropriate to do so. However, where they are necessary to deal with the impact of climate change, and that measure would have an adverse effect on other aspects of the project and/or surrounding environment (for example coastal processes), the Secretary of State may consider requiring the applicant to ensure that the adaptation measure could be implemented should the need arise, rather than at the outset of the development (for example increasing height of existing, or requiring new, sea walls).	This paragraph covers the same material requirements as set out in paragraph 4.8.12 of the designated NPSEN-1 (which, in turn reflects paragraph 4.46 of the NPSNN). Please see the response to this paragraph in Table B.1 and in the NPSNN Accordance Table (Appendix A of this Planning Statement).
4.10	Grid Connection	This section refers to the connection of new electricity generating plant to the electricity network and so is not relevant to the Project.
4.11	Pollution Control and Other Regulatory Regimes	
4.11.1	Issues relating to discharges or emissions from a proposed project and which lead to other direct or indirect impacts on terrestrial, freshwater, marine, onshore and offshore environments, or which include noise and vibration may be subject to separate regulation under the pollution control framework or other consenting and licensing regimes.	This paragraph covers the same material requirements as set out in paragraph 4.10.1 of the designated NPSEN-1 (which, in turn reflects paragraph 4.48 of the NPSNN). Please see the response to this paragraph in Table B.1 and in the NPSNN Accordance Table (Appendix A of this Planning Statement).
4.11.5	In considering an application for development consent, the Secretary of State should focus on whether the development itself is an acceptable use of the land or sea, and on the impacts of that use, rather than the control of processes, emissions or discharges themselves. The Secretary of State should work on the assumption that the relevant pollution control regime and other	This paragraph covers the same material requirements as set out in paragraph 4.10.3 of the designated NPSEN-1 (which, in turn reflects paragraph 4.50 of the NPSNN). Please see the response to this paragraph in Table B.1 and in the NPSNN Accordance Table (Appendix A of this Planning Statement).

Para	Relevant EN-1 text	Project response
	environmental regulatory regimes, including those on land drainage, water abstraction and biodiversity, will be properly applied and enforced by the relevant regulator. The Secretary of State should act to complement but not seek to duplicate them.	
4.11.6	Applicants should consult the MMO on energy NSIP projects which would affect, or would be likely to affect, any relevant marine areas as defined in the Planning Act 2008 (as amended by section 23 of the Marine and Coastal Access Act 2009). Applicants are encouraged to consider the relevant marine plans in advance of consulting the MMO for England or the relevant policy teams at the Welsh government. The Secretary of State's consent may include a deemed marine licence and the MMO will advise on what conditions should apply to the deemed marine licence. The Secretary of State and MMO should cooperate closely to ensure that energy NSIPs are licensed in accordance with environmental legislation.	The energy NSIP aspects of the Project do not affect any marine areas. This paragraph is, therefore, not relevant.
4.11.7	Many projects covered by this NPS will be subject to the EP regime, which also incorporates operational waste management requirements for certain activities. When an applicant applies for an EP, the relevant regulator (usually EA or NRW but sometimes the local authority) requires that the application demonstrates that processes are in place to meet all relevant EP requirements. In considering the impacts of the project, the Secretary of State may wish to consult the regulator on any management plans that would be included in an EP application.	This paragraph covers the same material requirements as set out in paragraph 4.10.5 of the designated NPSEN-1 (which, in turn reflects paragraph 4.53 of the NPSNN). Please see the response to this paragraph in Table B.1 and in the NPSNN Accordance Table (Appendix A of this Planning Statement).

Para	Relevant EN-1 text	Project response
4.11.8	Applicants should make early contact with relevant regulators, including EA or NRW and the MMO, to discuss their requirements for EPs and other consents. Early contact with relevant regulators will ensure that applications take account of all relevant environmental considerations and that the relevant regulators are able to provide timely advice and assurance to the Secretary of State. Wherever possible, applicants should submit applications for Eps and other necessary consents at the same time as applying to the Secretary of State for development consent.	This paragraph covers the same material requirements as set out in paragraph 4.10.6 of the designated NPSEN-1 (which, in turn reflects paragraph 4.54 of the NPSNN). Please see the response to this paragraph in Table B.1 and in the NPSNN Accordance Table (Appendix A of this Planning Statement).
4.11.9	The Secretary of State should be satisfied that development consent can be granted taking full account of environmental impacts. Working in close cooperation with EA or NRW and/or the pollution control authority, and other relevant bodies, such as the MMO, the SNCB, Drainage Boards, and water and sewerage undertakers, the Secretary of State should be satisfied, before consenting any potentially polluting developments, that: • the relevant pollution control authority is satisfied that potential releases can be adequately regulated under the pollution control framework • the effects of existing sources of pollution in and around the site are not such that the cumulative effects of pollution when the proposed development is added would make that development unacceptable, particularly in relation to statutory environmental quality limits	This paragraph covers the same material requirements as set out in paragraph 4.10.7 of the designated NPSEN-1 (which, in turn reflects paragraph 4.55 of the NPSNN). Please see the response to this paragraph in Table B.1 and in the NPSNN Accordance Table (Appendix A of this Planning Statement).
4.11.10	The Secretary of State should not refuse consent on the basis of pollution impacts unless there is good reason to believe that any relevant necessary operational pollution control permits or licences or other consents will not subsequently be granted.	This paragraph covers the same material requirements as set out in paragraph 4.10.8 of the designated NPSEN-1 (which, in turn reflects paragraph 4.56 of the NPSNN). Please see the response to this paragraph in Table B.1 and in the NPSNN Accordance Table (Appendix A of this Planning Statement).

Para	Relevant EN-1 text	Project response
4.12	Safety	The proposed utilities works are not subject to the Control of Major Accidents Hazards Regulations 2015. Therefore, no further response is needed.
4.13	Hazardous Substances	This section is not directly relevant to the Project
4.14	Common Law Nuisance and Statutory Nuisance	
4.14.2	At the application stage of an energy NSIP, possible sources of nuisance under section 79(1) of the 1990 Act and how they may be mitigated or limited should be considered by the Secretary of State so that appropriate requirements can be included in any subsequent order granting development consent (see Section 5.7 on Dust, odour, artificial light etc. and Section 5.12 on Noise and vibration).	This paragraph covers the same material requirements as set out in paragraph 4.14.2 of the designated NPSEN-1 (which, in turn reflects paragraph 4.58 of the NPSNN). Please see the response to this paragraph in Table B.1 above and in the NPSNN Accordance Table (Appendix A of this Planning Statement).
4.15	Security Considerations	
4.15.2	Government policy is to ensure that, where possible, proportionate protective security measures are designed into new infrastructure projects at an early stage in the project development. Where applications for development consent for infrastructure covered by this NPS relate to potentially 'critical' infrastructure, there may be national security considerations.	This paragraph covers the same material requirements as set out in paragraph 4.15.2 of the designated NPSEN-1 (which, in turn reflects paragraph 4.75 of the NPSNN). Please see the response to this paragraph in Table B.1 and in the NPSNN Accordance Table (Appendix A of this Planning Statement).
4.15.3	BEIS will be notified at pre-application stage about every likely future application for energy NSIPs, so that any national security implications can be identified. Where national security implications have been identified, the applicant should consult with relevant security experts from CPNI, ONR (for civil nuclear) and/or BEIS to ensure security measures have been adequately considered in the design process and that adequate consideration has been given to the management of security risks. If CPNI, ONR (for civil nuclear) and/or BEIS are satisfied that security issues have been adequately addressed in the project when the application is submitted to the Secretary of State, it will provide confirmation of	This paragraph covers the same material requirements as set out in paragraph 4.15.3 of the designated NPSEN-1 (which, in turn reflects paragraph 4.76 of the NPSNN). Please see the response to this paragraph in Table B.1 and in the NPSNN Accordance Table (Appendix A of this Planning Statement).

Para	Relevant EN-1 text	Project response
	this to the Secretary of State. The Secretary of State should not need to give any further consideration to the details of the security measures in its examination.	
Part 5 Generic Impacts		
5.2	Air Quality and Emissions	The requirements of the draft NPSEN-1 are broadly the same as those contained in designated NPSEN-1 which, in turn, other than in respect of the additional reference to eutrophication (which is not relevant to this Project) and the increased weight the Secretary of State is required to give to air quality matters, is comparable to the air quality requirements of the NPSNN. Accordingly, please see the response given in respect of paragraphs 5.6 to 5.15 of the NPSNN presented in Appendix A to this Planning Statement. In summary, an air quality assessment has been carried out and is presented as Chapter 5 of the ES (Application Document 6.1). There are no additional adverse impacts identified in respect of designated AQMAs, nor any need for the designation of additional AQMAs. There are air quality impacts identified but these are localised and temporary. Appropriate mitigation is proposed in these cases. The Project would result in a larger number of sensitive receptors experiencing an improvement in air quality than will experience a worsening. Finally, where adverse air quality impacts do arise they do so as a result of the main Project itself and not any of the energy NSIP aspects of the Project.
5.3	Greenhouse Gas Emissions	The matter of Greenhouse Gas (GHG) Emissions is a new addition to the draft NPSEN-1 which does not feature in the designated NPSEN-1. However, it largely reflects (in essence, though it provides more detail) the section in the NPSNN dealing with the matter of Carbon Emissions. The section of Appendix A to this Planning Statement (NPSNN Accordance Table) explains

Para	Relevant EN-1 text	Project response
		how carbon impacts and climate change matters have been addressed in the design, construction and operation of the Project. See response to paragraphs 5.16 to 5.19 of the NPSNN in Appendix A. It should also be noted that the energy elements of the Project which fall to be assessed against this draft NPS (in so far as any draft NPS is relevant to the consideration of a DCO application) are diversions / replacements of energy infrastructure which already exists. It is not wholly new infrastructure.
5.3.4	All proposals for energy infrastructure projects should include a carbon assessment as part of their ES (See Section 4.2). This should include: • A whole life carbon assessment showing construction, operational and decommissioning carbon impacts • An explanation of the steps that have been taken to drive down the climate change impacts at each of those stages • Measurement of embodied carbon impact from the construction stage • How reduction in energy demand and consumption during operation has been prioritised in comparison with other measures • How operational emissions have been reduced as much as possible through the application of best available technology for that type of technology • Calculation of operational energy consumption and associated carbon emissions • Whether and how any residual carbon emissions will be (voluntarily) offset or removed using a recognised framework Where there are residual emissions, the level of emissions and the impact of those on national and international efforts to limit climate change, both alone and where relevant in combination with other	Section 15.3 of Chapter 15 of the ES: Climate (Application Document 6.1) contains a GHG emissions impact assessment which, itself, is a summary of the Carbon and Energy Management Plan (Application Document 7.19). This assesses GHG emissions through the lifetime of the Project as a whole starting from the principle of a 'low carbon position' that comprises carbon emission reduction commitments based on applying state-of-the-art technologies and best practice carbon management commitments. The Applicant's carbon commitments are listed in Appendix E of the Carbon and Energy Management Plan (Application Document 7.19) and set out in Table 15.11 of Chapter 15: Climate of the ES (Application Document 6.1). These are all considered good practice measures.

Para	Relevant EN-1 text	Project response
	developments at a regional or national level, or sector level, if sectoral targets are developed	
5.3.5	The Secretary of State must be satisfied that the applicant has as far as possible assessed the GHG emissions of all stages of the development.	See response to paragraph 5.3.4 above. In addition, through the Carbon Energy Management Plan (Application Document 7.19), the Applicant commits to publish an annual carbon report which will provide an update on progress towards carbon neutrality and set out the key actions and targets for the following year.
5.3.6	The Secretary of State should be content that the applicant has taken all reasonable steps to reduce the GHG emissions of the construction and decommissioning stage of the development. The Secretary of State should also give positive weight to projects that embed nature-based or technological processes to mitigate or offset the emissions of construction and decommissioning within the proposed development. However, in light of the vital role energy infrastructure plays in the process of economy wide decarbonisation, the Secretary of State accepts that there are likely to be some residual emissions from construction and decommissioning of energy infrastructure.	See responses to paragraphs 5.3.4 and 5.3.5 above. In addition, because the Applicant recognises that, even with this low carbon approach, there would still be residual emissions from construction activities. For this reason, the Applicant would also develop a carbon offsetting strategy (see Section 3.7 of the Carbon Energy Management Plan, Application Document 7.19), designed to address them. The strategy will prioritise actions in the construction industry, in transport and within the region. The Applicant considers offsetting to be a measure of last resort, to be considered only when efforts to reduce emissions have been expended.
5.3.8	A carbon assessment should be used to drive down GHG emissions at every stage of the proposed development and ensure that emissions are minimised as far as possible for the type of technology, taking into account the overall objectives of ensuring our supply of energy always remains secure, reliable and affordable, as we transition to net zero.	See responses to paragraphs 5.3.4, 5.3.5 and 5.3.6 above. The Applicant commits through the Carbon Energy Management Plan (Application Document 7.19) to adopt a best practice carbon management approach on the Project (see section 3.8)
5.3.9	Applicants should look for opportunities within the proposed development to embed nature-based or technological solutions to mitigate or offset the emissions of construction and decommissioning.	See responses to section 5.4 of the draft NPSEN-1 below

Para	Relevant EN-1 text	Project response
5.3.10	To be taken into account in Secretary of State decision making, steps taken to minimise and offset emissions should be set out in a GHG Reduction Strategy, secured under the development consent order.	Requirement 16 of Part 1 of Schedule 2 of the draft DCO (Application Document 3.1) requires that no part of the authorised development must commence until a 2nd iteration Carbon and Energy Plan (which must be substantially in accordance with that set out at Application Document 7.19) has been submitted to and approved in writing by the Secretary of State. A third iteration is required by the end of the construction, commissioning and handover stage of the Project.
5.4	Biodiversity and Geological Conservation	The requirements of the draft NPSEN-1 on biodiversity and geological conservation largely replicate those of the designated NPSEN-1 which, in turn match those contained in the NPSNN. Accordingly, the bulk of the response on this section is addressed in the response to paragraphs 5.20 to 5.38 of the NPSNN presented in Appendix A to this Planning Statement. There is one key difference, however, in terms of the references throughout this section of the draft NPSEN-1 which do not appear in either the designated NPSEN-1 or the NPSNN relating to biodiversity net gain (e.g. paragraph 5.4.4) and the suggestion that applicants might consider producing and implementing a Biodiversity Management Strategy (5.4.19) and a Geodiversity Management Strategy (paragraph 5.4.21) as part of their development proposals.
5.4.4	The applicant should show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests. As set out in Section 4.6, the design process should embed opportunities for nature inclusive design. The applicant is encouraged to consider how their proposal can contribute towards Biodiversity Net Gain in line with the ambition set out in the 25 Year Environment Plan. Energy infrastructure projects have the potential to deliver significant benefits and enhancements beyond Biodiversity Net Gain, which	The Project has sought to avoid significant harm to features of biodiversity and geological interest during the consideration of route alternatives (Application Document 6.1, ES Chapter 3: Assessment of Reasonable Alternatives), including the consideration of alternative routes for the energy NPS elements of the Project The route corridor has also been designed to be a biodiverse wildlife corridor connecting suitable habitats throughout the wider landscape. The energy NSIP elements of the Project would involve temporary disturbance during construction but once installed, would remain as open and

Para	Relevant EN-1 text	Project response
	result in wider environmental gains. The scope of potential gains will be dependent on the type, scale, and location of each project.	undeveloped green linear pathways for wildlife at ground level. Where practicable, the mitigation/compensation proposed has been identified to link otherwise fragmented features together. In particular, the loss of ancient woodland and increased nitrogen deposition resulting from the project would be offset by creating approximately 240 ha of nitrogen deposition compensation, specifically designed to improve connectivity between existing habitats. These nitrogen deposition compensation sites fall within the order limits, are identified on the Environmental Management Plan (EMP) (Figure 2.4, Application Document 6.2) and are included within the Design Principles Document (Application Document 7.5) which would be legally secured through DCO Requirement 3. Nitrogen deposition compensation sites have been identified due to their size and proximity to several affected designated habitats, as well as other designated sites that are not impacted by the Lower Thames Crossing. They would involve the creation of significant new areas of wildlife-rich habitats, along with smaller areas that connect habitats that have previously been fragmented. Across the project, landscape mitigation has been designed to create a linked and strategic scale enhancement. Extensions to public spaces are proposed at scale, including the proposed community woodland provision at Hole Farm, Thames Chase and Jeskyns woodland (also included within the Design Principles Document (Application Document 7.5). Taken together this mitigation and compensatory habitat provision provides considerable opportunity to deliver significant environmental and biodiversity net gain (BNG) which is a requirement of emerging Government planning policy and environmental legislation. It also helps demonstrate compliance with the BNG requirements of this paragraph of the draft NPSEN-1

Para	Relevant EN-1 text	Project response
5.4.19	Applicants should consider producing and implementing a Biodiversity Management Strategy as part of their development proposals. This could include provision for biodiversity awareness training to employees and contractors so as to avoid unnecessary adverse impacts on biodiversity during the construction and operation stages.	Appendix 8.21 to Chapter 8: Terrestrial Biodiversity, of the ES (Application Document 6.1) comprises a biodiversity metric assessment to provide a forecast of the Project biodiversity unit net change outcome. The Project has an Environmental Masterplan to guide the landscape mitigation, planting and restoration see ES Appendix 2.4 (Application Document 6.2) and the construction impacts and control to ensure delivery of the mitigation is secured through the commitments in the COCP (Application Document 6.3) and delivered through the Environmental Management Plan under dDCO requirements 4 and 5 (Application Document 3.1)
5.4.21	To further minimise any adverse impacts on geodiversity, where appropriate applicants are encouraged to produce and implement a Geodiversity Management Strategy to preserve and enhance access to geological interest features, as part of relevant development proposals.	While the Applicant has not prepared a Geodiversity Management Strategy as such (this is a new requirement of an emerging draft NPS) there are numerous measures in place to ensure the protection of geodiversity features of interest through the REAC. In relation to the energy NSIP aspects of the Project impacts on geodiversity, such as they are likely to arise at all, are likely to arise during the construction of the new electricity pylons in relation to the diversion of Work No OH7 and the diversion of the underground gas pipelines (Work No's G2, G3 and G4). ES Chapter 10: Geology and Soils (Application Document 6.1) and its supporting appendices presents a characterisation of the geological baseline in the study area – this includes a review of sites designated for their geological importance (Regionally Important Geological Sites, SSSIs and local geological sites etc), a geological cross section (via the Project ground model) and a review of geohazards/geomorphological risk assessment in the Stability Report. The chapter presents an assessment of likely significant effects on these geological receptors and concludes that any effects are not significant. In any event, measures are in place through the REAC to address these impacts.

Para	Relevant EN-1 text	Project response
		• Commitment GS006 deals with material management and requires the preparation of a Materials Management Plan. • Commitments GS009 to GS015 all deal with proposals for soil management, reinstatement and aftercare. • Commitment LV002 requires reinstatement of land temporarily impacted by works to divert utilities to be reinstated to its former condition and composition. These REAC commitments are secured through the CoCP (Application Document 6.3) which, in turn, is secured through Requirement 1 of Part 1 to Schedule to the draft DCO (Application Document 3.1).
5.5	Civil and Military Aviation and Defence Interests	These requirements replicate those contained in section 5.4 of the designated NPSEN-1. The National Air Traffic Service (NATS) has been consulted on the Project as part of the Environmental Scoping consultation undertaken by the Planning Inspectorate. In response, NATS advised that, 'The proposed development has been examined from a technical safeguarding aspect and does not conflict with our safeguarding criteria. Accordingly, NATS (En Route) Public Limited Company ("NERL") has no safeguarding objection to the proposal.' There are no effects of the Project which would impact on the CAA or MOD.
5.6	Coastal Change	None of the energy NSIP aspect of the Project are on or close to the coast. Therefore, no response is necessary
5.7	Dust, Odour, Artificial Light, Smoke, Steam and Insect Infestation	This section of the draft NPSEN-1 replicates the requirements of section 5.6 of the designated NPSEN-1. Accordingly, no further response is necessary.
5.8	Flood Risk	This section of the draft NPSEN-1 is broadly consistent with section 5.7 of the designated NPSEN-1. The main differences in

Para	Relevant EN-1 text	Project response
		terms of references to Sustainable Drainage Systems (SuDS) which do not appear in the designated NPS. Accordingly, the responses given in the designated NPSEN-1 Table B.1 apply here. In terms of SuDS, a strategy for managing operational surface water drainage has been prepared centred on the application of Sustainable Drainage Systems (SuDS), appropriate to local conditions. The strategy is summarised in Part 7 of Appendix 14.6: Flood Risk Assessment (Application Document 6.1) in the ES. The drainage principles have been discussed and agreed with relevant Lead Local Flood Authorities (LLFAs), as detailed in Chapter 14 of the ES (Application Document 6.1).
5.9	Historic Environment	Section 5.9 of the draft NPSEN-1 is broadly consistent with the equivalent section 5.8 of the designated NPSEN-1 other than in two respects highlighted below at paragraphs 5.9.14 and 5.9.24. Please see the response to designated NPSEN-3 in Table B.1 above which also refers to the response to paragraphs 5.120 to 5.142 of the NPSNN presented at Appendix A to this Planning Statement.

Para	Relevant EN-1 text	Project response
5.9.14	The applicant is encouraged, where opportunities exist, to prepare proposals which can make a positive contribution to the historic environment, and to consider how their scheme takes account of the significance of heritage assets affected. This can include, where possible: • enhancing, through a range of measures such a sensitive design, the significance of heritage assets or setting affected • considering measures that address those heritage assets which are at risk or which may become at risk, as a result of the scheme • considering how visual or noise impacts can affect heritage assets, and whether there may be opportunities to enhance access to, or interpretation, understanding and appreciation of, the heritage assets affected by the scheme	Project wide Design Principles are detailed in Application Document 7.5. The Design principles embedded into the design of the Project which reflect the provisions of paragraph 5.9.14 include: • Connecting People, which includes a design principle to celebrate local heritage and to provide interpretation material for selected historic features (PEO.07) • Structures, which includes design principles aimed at integrating components within the landscape (STR.01); the creation of green bridges (STR.08); and balancing the requirements for noise barriers against visual impact (STR.10) • Lighting, which aims to preserve historic rural character of the landscape at night as far as possible (LST.02, LST.03) • Landscape which includes design principles to minimise removal of existing vegetation (LSP.01); integration of earthworks with the local topography (LSP.03); planting to minimise the visual impact of the Project (LSP.04); reinstatement of land used for construction (LSP.05); and landscape design which reflects the local historic landscape (LSP.07)
5.9.24	Where the proposed development will lead to substantial harm to (or total loss of significance of) a designated heritage asset the Secretary of State should refuse consent unless it can be demonstrated that the substantial harm to or loss of significance is necessary to achieve substantial public benefits that outweigh that harm or loss, or all of the following apply: • the nature of the heritage asset prevents all reasonable uses of the site	This paragraph replicates paragraph 5.133 in the NPSNN. Please see the response to that paragraph in Appendix A to this Planning Statement.

Para	Relevant EN-1 text	Project response
	• no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation • conservation by grant-funding or some form of not for profit, charitable or public ownership is demonstrably not possible • the harm or loss is outweighed by the benefit of bringing the site back into use	
5.10	Landscape and Visual	Section 5.10 of the draft NPSEN-1 contains the same requirements as the equivalent section (5.9) of the designated NPSEN-1. The one difference, as above with regard to the historic environment, is a new requirement at paragraph 5.10.10 for Applicants to take proactive steps to make a positive contribution to the environment rather than just to minimise harm.
5.10.10	Applicants should consider how landscapes can be enhanced using landscape management plans, as this will help to enhance environmental assets where they contribute to landscape and townscape quality.	The Project's effects on landscape character and landscape components are presented in section 7.6 of Chapter 7: Landscape and Visual of the ES (Application Document 6.1) and Appendix 7.9: Schedule of Landscape Effects. It is acknowledged that the Project as a whole would have adverse impacts on the landscape, particularly in respect of the loss of ancient woodland, those that loss has been minimised as far as is reasonably practicable. However, the compensation measures proposed as part of the Project would result in a net positive in terms of the amount of compensation land provided. These are discussed in the Design Principles document (Application Document 7.5), specifically LSP.19 in terms of ancient woodland compensation. In terms of the energy NSIP aspects of the Project it should be borne in mind that these are replacements for infrastructure which already exists. The options considered in devising the routes for these utility diversions is explained in section 3.28 of

Para	Relevant EN-1 text	Project response
		Chapter 3: Assessment of Reasonable Alternatives, of the ES (Application Document 6.1). Finally, a first iteration outline Landscape and Ecology Management Plan (oLEMP) has been prepared (Application Document 6.7) and further iterations are to be prepared as requirement 5 of Part 1 of Schedule 2 of the draft DCO (Application Document 3.1)
5.11	Land Use, including Open Space, Green Infrastructure and Green Belt	This section of the draft NPSEN-1 largely replicates the provisions set out in the designated NPS and no further response is considered necessary. Following the theme of positive and proactive enhancements of facilities described above in respect of other sections of the draft NPS, paragraph 5.11.2 introduces new text as set out below.
5.11.2	The provision and enhancement of green infrastructure can improve air quality, particularly in urban areas. Applicants are therefore encouraged to consider how new green infrastructure can be provided, or how existing green infrastructure can be enhanced, as part of their application.	The Applicant acknowledges the impacts of the Project on some areas of existing green infrastructure and important landscapes and habitats. As mitigation and compensation for those impacts the Project includes a considerable net green infrastructure benefit for WCH in the form of two new country parks at the North and South Portal (Chalk Park and Goshems Farm / Tilbury Fields) which more than outweigh the losses incurred as a result of the Project. These new facilities are secured through the EMP / LEMP which, in turn are secured through Requirements 4 and 5 of Part 1 to Schedule 2 to the DCO (Application Document 3.1). There would also be a comprehensive provision of new PRoW and cycleways as a result of the Project including: • Existing - Diverted - 3.45km of Footpath diverted - 2.14km Bridleway diverted • Existing - Improved

Para	Relevant EN-1 text	Project response
		- 0.48km of improved Byway - 3.02m of improved bridleway - 1.5km of improved footpaths - 4.08km of improved ped-cycle track • Existing - Designation upgrades - 10.69km of footpaths upgraded to bridleway - 0.87km of footpaths upgraded to ped-cycle track • New - 3.2km of New footpath - 15.95km of new bridleway - 7.2km of new ped-cycle track - 5.6km of new ped-cycle-equestrian track - 4.5km of new permissive footpath - 1.4km of new permissive bridleway - 0.95km of new permissive ped-cycle track Issues related to air quality are set out at section 5.2 of this table above.
5.12	Noise and Vibration	This section replicates section 5.11 on noise and vibration in the designated NPSEN-1. The only minor difference is in respect of paragraph 5.12.9 of the draft (which reflects paragraph 5.11.8 of the designated NPS other than the draft NPS now allows the project to: "demonstrate good design through the selection of the quietest or most acceptable cost-effective plant available…." No further response is considered necessary
5.13	Socio-economic	This section broadly replicates the equivalent section (5.12) in the designated NPSEN-1. The only material changes are set out below and reflect the approach taken across the suite of draft

Para	Relevant EN-1 text	Project response
		energy NPSs as a whole which seek to reflect Government's climate change and carbon targets and a transition to net zero. Neither of these are significant matters in respect of the energy NSIP aspects of the Project as they are replacements of infrastructure which already exists rather than wholly new infrastructure in a wholly new location.

Para	Relevant EN-1 text	Project response
5.13.3	Addition of 3 new criteria highlighted in bold italics: This assessment should consider all relevant socio-economic impacts, which may include: • the creation of jobs and training opportunities. Applicants may wish to provide information on the sustainability of the jobs created, including where they will help to develop the skills needed for the UK's transition to Net Zero • the contribution to the development of low-carbon industries at the local and regional level as well as nationally • the provision of additional local services and improvements to local infrastructure, including the provision of educational and visitor facilities • any indirect beneficial impacts for the region hosting the infrastructure, in particular in relation to use of local support services and supply chains • effects on tourism • the impact of a changing influx of workers during the different construction, operation and decommissioning phases of the energy infrastructure. This could change the local population dynamics and could alter the demand for services and facilities in the settlements nearest to the construction work (including community facilities and physical infrastructure such as energy, water, transport and waste). There could also be effects on social cohesion depending on how populations and service provision change as a result of the development • cumulative effects - if development consent were to be granted to for a number of projects within a region and these were developed in a similar timeframe, there could be some short-term negative effects, for example a potential shortage of construction workers to meet the needs of other industries and major projects within the region	Application Document 7.20: Benefits and Outcomes Document sets out to capture some of the many benefits that would result from the delivery of the Project but that sit outside the DCO application. This includes jobs and skills and paragraph 4.1.8 of the document sets out the following targets contained in the Skills, Education & Employment Strategy: • Apprenticeships – 473 • Workless Job Starts (26 weeks retention) – 500 • Graduates / Trainees (26 weeks retention) – 291 • Work Placement (pre-employment) – 650 • Training for Local Residents – 350 • Work Placement Opportunities (Education) – 470 • Support for Education Leads – 2000 Hours of support • School Engagement – 5000 hours • Sector Skills Qualifications - 500 Application Document 7.1: The Need for the Project highlights the local economic growth benefits and opportunities at section 4.2 (paragraphs 4.2.1 to 4.2.6) including the economic benefits to local businesses. Information on employment and skills is to be found at Chapter 13 of the ES: Population and Human Skills (Application Document 6.1).

Para	Relevant EN-1 text	Project response
5.13.6	Applicants should also consider developing accommodation strategies where appropriate, especially during construction and decommissioning phases, that would include for the need to provide temporary accommodation for construction workers if required.	Information on construction worker accommodation is to be found Part 2 of Chapter 13: Population and Human Health of the ES (Application Document 6.1), paragraphs 13.1.59 to 13.1.69. In turn this draws on information presented in the Worker Accommodation Report (Application Document 7.18)
5.13.9	New text in bold italics added to this paragraph over paragraph 5.12.8 in the designated NPS. The Secretary of State should consider any relevant positive provisions the applicant has made or is proposing to make to mitigate impacts (for example through planning obligations) and any legacy benefits that may arise as well as any options for phasing development in relation to the socio-economic impacts. The Secretary of State may wish to include a requirement that specifies the approval by the local authority of an employment and skills plan detailing arrangements to promote local employment and skills development opportunities, including apprenticeships, education, engagement with local schools and colleges and training programmes to be enacted.	Noted. As stated above, the information to allow the Secretary of State to come to a view on this is provided in Skills, Education & Employment Strategy which forms part of the CoCP (Application Document 6.3)
5.14	Traffic and Transport	This section of the draft NPS is unchanged from the designated version
5.15	Resource and Waste Management	This section of the draft NPSEN-1 is materially the same as the equivalent section (5.14) in the designated NPSEN-1 other than in respect of two additional paragraphs of text as set out below. Neither of these are significant matters in respect of the energy NSIP aspects of the Project.
5.15.7	Where possible, applicants are encouraged to source materials from recycled or reused sources and use low carbon materials, sustainable sources and local suppliers. Construction best practices should be used to ensure that material is reused or recycled onsite where possible.	Section 11.5 of Chapter 11 (Materials and Waste) of the ES (Application Document 6.1) and Appendix 11.1 (Excavated Materials Assessment) outline how the proposed arrangements have sought to minimise the both the volume of waste produced and the volume sent for disposal.

Para	Relevant EN-1 text	Project response
		Appendix 11.1 (Excavated Materials Assessment) estimates that the project would generate approximately 12.35 million m3 of uncontaminated inert ground materials (paragraph 2.1.6). 11.2 million m3 (i.e. the vast majority) of that would be reused and recovered within the Project design (paragraph 2.1.9). Having applied the principles of designing out waste and increasing the reuse and recovery of materials within the design proposals, calculations indicate that there would be a net surplus of approximately 350,000m3 of excavated materials (paragraph 2.1.10) to be removed from the Project. Commitments to the preferential use of recycled materials are contained in the following commitments of the REAC which forms Section 7 of the CoCP (Application Document 6.3) which, in turn is secured through Requirement 1 of Part 1 to Schedule 2 of the draft DCO (Application Document 3.1) • MW007 Reuse of excavated materials and soils • MW010 Construction site waste management • MW016 Site Waste Management - operation
5.15.8	Applicants are also encouraged to use construction best practices in relation to storing materials in an adequate and protected place on site to prevent waste, for example, from damage or vandalism. The use of Building Information Management tools (or similar) to record the materials used in construction can help to reduce waste in future decommissioning of facilities, by identifying materials that can be recycled or reused.	Commitments to best practice in the storage and management of materials is contained in the following commitments of the REAC which forms Section 7 of the CoCP (Application Document 6.3) which, in turn is secured through Requirement 1 of Part 1 to Schedule 2 of the draft DCO (Application Document 3.1) • MW001 Preferentially avoiding use of primary materials • MW002 Responsible sourcing • MW007 Excavated materials and soils
5.16	Water Quality and Resources	This section of the draft NPSEN-1 broadly replicates the provisions of the equivalent section (5.15) of the designated NPSEN-1 other than in respect of the addition of the two new paragraphs below. Neither of these are significant matters in respect of the energy NSIP aspects of the Project

Para	Relevant EN-1 text	Project response
5.16.3	Where possible, applicants are encouraged to manage surface water during construction by treating surface water runoff from exposed topsoil prior to discharging and to limit the discharge of suspended solids e.g. from car parks or other areas of hard standing, during operation.	Commitments to best practice in the management and treatment of surface water runoff is contained in the following commitments of the REAC which forms Section 7 of the CoCP (Application Document 6.3) which, in turn is secured through Requirement 1 of Part 1 to Schedule 2 of the draft DCO (Application Document 3.1) • RDWE006 Construction water management • RDWE025 Operational drainage design
5.16.4	Applicants are encouraged to consider protective measures to control the risk of pollution to groundwater beyond those outlined in Water Resource Management Plans - this could include, for example, the use of protective barriers.	Commitment to minimising the risk of pollution to groundwater is contained in the following commitments of the REAC which forms Section 7 of the CoCP (Application Document 6.3) which, in turn is secured through Requirement 1 of Part 1 to Schedule 2 of the draft DCO (Application Document 3.1) • RDWE019 Ground treatment – construction storage of chemicals and materials • RDWE020 Ground treatment - groundwater control techniques • RDWE032 Potable groundwater protection • RDWE034 Operational drainage – infiltration basins

Table B.5 Draft National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4), September 2021

Para	Relevant text	Project response
Introductory comment		The draft NPSEN-4 broadly replicates the provisions of the designated version of NPSEN-4. As with the draft NPSEN-1 above, the main differences to the designated version of the NPS derive from the context set by the Government's Energy White Paper published in December 2020 which presents its vision of how the country makes the transition to clean energy / 'net zero' by 2050. From the assessment below, it is clear that this context has not materially affected those sections of the draft NPSEN-4 dealing with gas and oil pipeline impacts (2.19 to 2.23) as these replicate the equivalent provisions in the designated NPSEN-4. It is also worth noting that the energy NSIP aspects of the Project which fall to be considered against NPSEN-4; namely Work No's G2, G3 and G4 are diversions of existing gas pipelines which limits the Applicant's ability to deliver major changes in approach as the start and end-points for the infrastructure are fixed by the connection points to the existing energy network.
2.19	Introduction to Gas and Oil Pipelines	These introductory paragraphs 2.19.1 to 2.19.10 replicate the equivalent paragraphs presented in the designated NPS (also paragraphs 2.19.1 to 2.19.10). No further response is necessary to that regarding these same paragraphs contained in Table B.2.
2.20	Gas and Oil Pipeline Impacts: Noise and Vibration	Paragraphs 2.20.1 to 2.20.7 of this draft NPS replicate the equivalent paragraphs (also 2.20.1 to 2.20.7) of the designated NPS. No further response is necessary to that regarding these same paragraphs contained in Table B.2.
2.21	Gas and Oil Pipelines Impacts: Biodiversity, Landscape and Visual	Paragraphs 2.21.1 to 2.21.6 of this draft NPS replicate the equivalent paragraphs (also 2.21.1 to 2.21.6) of the

Para	Relevant text	Project response
		designated NPS. No further response is necessary to that regarding these same paragraphs contained in Table B.2.
2.22	Gas and Oil Pipelines Impacts: Water Quality and Resources	Paragraphs 2.22.1 to 2.22.7 of this draft NPS do not materially differ from the equivalent paragraphs (also 2.22.1 to 2.22.7) of the designated NPS. No further response is necessary to that regarding these same paragraphs contained in Table B.2.
2.23	Gas and Oil Pipelines Impacts: Soil and Geology	Paragraphs 2.23.1 to 2.3.8 of this draft NPS do not materially differ from the equivalent paragraphs (also 2.23.1 to 2.23.8) of the designated NPS. No further response is necessary to that regarding these same paragraphs contained in Table B.2.

Table B.6 Draft National Policy Statement for Electricity Networks Infrastructure (EN-5), September 2021

Para	Relevant text	Project response
Introductory comment		The draft NPSEN-5 broadly replicates the provisions of the designated version of NPSEN-5. As with the draft NPSEN-1 above, the main differences to the designated version of the NPS derive from the context set by the Government's Energy White Paper published in December 2020 which presents its vision of how the country makes the transition to clean energy / 'net zero' by 2050. This changing context is manifest in new sections introduced to this draft version of NPSEN-5 dealing with: • Land rights and land interests • Special assessment principles for onshore-offshore • Biodiversity Net Gain and • Sulphur Hexafluoride There is also a new section in the Landscape and Visual section dealing with the 'Horlock Rules' as a further consideration in addition to the 'Holford Rules' set out in the designated NPSEN-5. As with the assessment of draft NPSEN-1 and draft NPSEN-4 above, this table only addresses those areas relevant to the energy NSIP elements of this Project which differ in this draft NPS compared to the designated version. Also, as noted above, the energy NSIP aspects of the Project which fall to be considered against NPSEN-5; namely Work No OH7, is a diversion of an existing overhead electricity line which limits the Applicant's ability to deliver major changes in approach as the start and end-points for the infrastructure are fixed by the connection points to the existing energy network.
2.3	Land Rights and Land Interests	

Para	Relevant text	Project response
2.3.1	In order to be lawfully able to install, inspect, maintain, repair, adjust, alter, replace or remove an electricity line (above or below ground), its related equipment (such as poles, pylons/transmission towers, transformers and cables), and/or its associated mitigation schemes, developers must own the land on, over, or under which the relevant activity is to take place; or hold sufficient rights over or interests in that land (typically in the form of an easement); or have permission for the activity from the present owner or occupier of that land (typically in the form of a wayleave).	While these requirements are introduced under a new section heading in the draft NPSEN-5 they actually replicate text contained in paragraph 2.2.3 under the 'Factors influencing site selection by applicants' heading of the designated NPSEN-5. See response to that paragraph in Table B.3.
2.3.2	Where the network company does not own or wish to own the land in question, it may reach a voluntary agreement giving it sufficient rights and/or permissions to undertake the relevant work. Where it does not succeed in reaching the agreement that it wants, the network company may, as part of its application to the Secretary of State, seek to acquire rights compulsorily over the land in question by means of a provision in the Development Consent Order (DCO). In such cases (i.e. where the compulsory acquisition of rights is sought) permanent arrangements are strongly preferred over wayleaves (which are terminable on notice by the landowner) in virtue of their greater reliability and economic efficiency, and reflecting the importance of the relevant infrastructure to the nation's net zero goals.	It is anticipated that access to undertake necessary works would be secured by voluntary agreements with landowners. The Applicant has entered into a Statement of Common Ground with National Grid Electricity Transmission (NGET) to this end (see Application Document 7.3). However, if this proves not to be possible, Part 5: Powers of acquisition and possession of land, of the draft DCO (Application Document 3.1) contains the necessary provisions to allow the compulsory acquisition of land should that be necessary.
2.5	Special Assessment Principles for Onshore-Offshore	This section of the draft NPSEN-5 is not relevant to the energy NSIP aspects of the Project. No further response is necessary
2.8	Environmental and Biodiversity Net Gain	
2.8.1	When planning and evaluating the proposed development's contribution to environmental and biodiversity net gain, it will be important – for both the Applicant and the Secretary of State – to supplement the generic guidance set out in EN-1 (Section 4.5) with	As the energy NSIP element of the Project which falls to be considered against draft NPSEN-5 is for the diversion to an existing electricity line (rather than wholly new infrastructure) the opportunity for delivering a net gain in biodiversity purely

Para	Relevant text	Project response
	recognition that the linear nature of electricity networks infrastructure allows excellent opportunities to: • reconnect important habitats via green corridors, biodiversity stepping zones, and reestablishment of appropriate hedgerows; and/or • connect people to the environment, for instance via footpaths and cycleways constructed in tandem with biodiversity enhancements.	from the energy infrastructure is limited. Nonetheless this point is noted. Over the full extent of the Project as a whole significant benefits are being delivered in terms of green infrastructure and for WCH which would act as ecological corridors and so help deliver the gains sought in this paragraph.
2.11	Landscape and Visual	
2.11.6	Though mitigation of the landscape and visual impacts arising from overhead lines and their associated infrastructure is usually possible, it may not always be so, and the impossibility of full mitigation in these cases does not countermand the need for the infrastructure. However, in nationally designated landscapes (for instance, National Parks and Areas of Outstanding Natural Beauty) even residual impacts may well make an overhead line proposal unacceptable in planning terms. (See Section 2.11.13. below for guidance on this case.)	The energy NSIP aspect of this Project (Work No OH7) which falls to be considered against draft NPSEN-5 (in so far as it is relevant) does not lie within a nationally designated landscape. As such, this paragraph is not relevant to this Project, so no further response is required.
2.11.11	The Horlock Rules – guidelines for the design and siting of substations – were established by National Grid in 2009 in pursuance of its duties under Schedule 9 of the Electricity Act 1989. These principles should be embodied in Applicants' proposals for the infrastructure associated with new overhead lines	While the much of the planning of the route for the Work No OH7 was undertaken prior to the publication of draft NPSEN-5, and while this is for a diversion of an existing line which already exists rather than a wholly new piece of infrastructure, the essence of the 'Horlock Rules' was factored into the route assessment work, albeit not under the banner of the 'Horlock Rules'. The report "LSTC Group Overhead Line Modifications – Options Appraisal Report", which was commissioned by the National Grid identified a set of 'generic overarching principles' which were used to plan the preferred route for the electricity line diversion. These principles were: • Provide technically feasible options

Para	Relevant text	Project response
		• Ensure all final towers are positioned sufficiently clear of the proposed road design to avoid any conflict during initial construction, operation and during any future maintenance activities; • Minimise the impact on the existing OHL network from a system design, security and flexibility perspective • Are designed to achieve perpendicular crossings (not oblique) and to achieve the relevant clearance to scaffold protection in all locations; • Length of change is minimised and do not unnecessarily divert away from the existing OHL; • Include the minimum number of new and temporary towers; • Include the minimum number of existing towers to be dismantled and/or modified; • Minimise the capital and lifetime cost of the diversions in accordance with National Grid Electricity Transmission's (NGET) duty to be economic and efficient; • Are designed to ensure initial construction and future maintenance can be carried out in an efficient, safe and economic fashion. The designs factor in allowance for construction work areas associated with access, scaffolding and stringing activities; • Include the provision of single circuit temporary diversions, required during the construction phase (as double circuit outages may not be available); • Take account of industry standard routeing practices through application of the Holford Rules and compliance with National Policy Statement EN-5; • Take account of NGET's own guidance and policy as documented in 'Our approach to the Design and Routeing

Para	Relevant text	Project response
		of New Electricity Transmission Lines', 'Our approach to Options Appraisal' and 'National Grid's Commitments when Undertaking Works in the UK'; • Meet the relevant technical specifications; and • Avoid and/or minimise impacts on known Ecological, historic, landscape and visual, and socio-economic constraints.
2.11.12	In brief, the Horlock Rules state that developers should: • consider environmental issues from the earliest stage to balance the technical benefits and capital cost requirements for new developments against the consequential environmental effects in order to keep adverse effects to a reasonably practicable minimum • seek to avoid altogether internationally and nationally designated areas of the highest amenity, cultural or scientific value by the overall planning of the system connections • protect as far as reasonably practicable areas of local amenity value, important existing habitats and landscape features including ancient woodland, historic hedgerows, surface and ground water sources and nature conservation areas • take advantage of the screening provided by land form and existing features and the potential use of site layout and levels to keep intrusion into surrounding areas to a reasonably practicable minimum • keep the visual, noise and other environmental effects to a reasonably practicable minimum consider the land use effects of the proposal when planning the siting of substations or extensions • consider the options available for terminal towers, equipment, buildings and ancillary development appropriate to individual locations, seeking to keep effects to a reasonably practicable minimum	Section 3.6 of Chapter 3: Assessment of Reasonable Alternatives of the Environmental Statement (Application Document 6.1) sets out the options and alternatives that were considered as part of the development of the utilities design. It outlines the following considerations that have influenced the design: • Reducing working areas • Minimising the environmental impact • Minimising the amount and duration of traffic management • Using the same corridors to combine multiple utilities • Minimising separation between pipes and cables • Improving use of stockpiling and storage areas Section 3.28 of Chapter 3 of the Environmental Statement further identifies examples of the detailed environmental considerations and stakeholder feedback that have resulted in the chosen routes for the electricity line diversions. The decisions set out how balanced considerations such as methodology of delivery, safety, landscape impact and cost have informed the eventual chosen route. These principles are also broadly consistent with those set out in the 14 over-arching principles set out at paragraph 2.3.1 of the above Overhead Line Modifications Options Appraisal Report (see response to para 2.11.11 above). They are also

Para	Relevant text	Project response
	• use space effectively to limit the area required for development consistent with appropriate mitigation measures and to minimise the adverse effects on existing land use and rights of way, whilst also having regard to future extension of the substation • make the design of access roads, perimeter fencing, earth-shaping, planting and ancillary development an integral part of the site layout and design, so as to fit in with the surroundings • in open landscape especially, high voltage line entries should be keep high voltage line entries, especially in open landscape, as far as possible visually separate from low voltage lines and other overhead lines so as to avoid a confusing appearance • study the inter-relationship between towers and substation structures and background and foreground features so as to reduce the prominence of structures from main viewpoints. Where practicable the exposure of terminal towers on prominent ridges should be minimised by siting towers against a background of trees rather than open skylines	addressed in the individual chapters of the ES (Application Document 6.1) dealing with impacts of the Project on biodiversity, landscape and visual impacts, land use and water resources. Where impacts remain, they are mitigated as far as is practicable and, where residual impacts remain, these are considered to be justified in view of the benefits arising out of the Project as a whole as set out in Application Documents 7.1 and 7.20 (The Need for the Project and Benefits & Outcomes).
2.11.13	Although it is the government's position that overhead lines should be the strong starting presumption for electricity networks developments in general, this presumption is reversed when proposed developments will cross part of a nationally designated landscape (i.e. National Park, Broads, or Area of Outstanding Natural Beauty). In these areas, and where harm to the landscape cannot feasibly be avoided by mitigation or re-routing, the strong starting presumption will be that the developer should underground the relevant Section of the line. Note however that undergrounding will not be required where it is infeasible in engineering terms, or where the harm that it causes is not outweighed by its corresponding landscape and/or visual benefits.	The energy NSIP aspect of the Project which falls to be considered against the provisions of draft NPSEN-5, in so far as it is relevant, does not lie within a nationally designated landscape. Accordingly, there is no need for the diverted lines to be undergrounded.
2.11.14	Additionally, cases will arise where – though no part of the proposed development crosses a designated landscape – a high potential for widespread and significant adverse landscape and/or visual impacts	Despite the above, as part of the development of route options for the diverted line, the matter of undergrounding was considered. See section 3.28 of Chapter 3: Assessment of

Para	Relevant text	Project response
	along certain Sections of its route may nonetheless recommend undergrounding the relevant segments of the line. In these cases, and taking account of the fact that the government has not laid down any further rule on the circumstances requiring undergrounding, the Secretary of State must weigh the feasibility, cost, and any harm of the undergrounding option against i) the adverse implications of the overhead line proposal; ii) the cost and feasibility of re- routing the relevant line Section; and iii) the cost and feasibility of the reconfiguration, rationalisation, and/or undergrounding of proximate existing or proposed electricity networks infrastructure. In such cases the Secretary of State should only grant development consent for underground (or subsea) Sections of a proposed line over an overhead alternative if it is satisfied that the benefits accruing from the former proposal clearly outweigh any extra economic, social, or environmental impacts that it presents, and that any technical obstacles associated with it are surmountable. In this context it should consider: • the landscape and visual baseline characteristics of the setting of the proposed route (in particular, the impact on high sensitivity visual receptors as defined in the current edition of the Landscape Institute's Guidelines for Landscape and Visual Impact Assessment, residential areas, and areas of natural beauty or historic importance, including those in proximity to nationally designated landscapes) • the additional cost of the proposed underground or sub-sea alternatives, including their significantly higher lifetime cost of repair and later uprating • the potentially very disruptive effects of undergrounding on local communities, habitats, archaeological and heritage sites, soil, geology, and, for a substantial time after construction, landscape and visual amenity. (Undergrounding a 400kV line may mean digging a deep trench 40-110m wide along the length of the route, and so such works will often be considerably more disruptive –	Reasonable Alternatives of the ES (Application Document 6.1). Paragraphs 3.28.22 and 3.28.23, specifically in relation to Work No OH7 state: "3.28.22 The two underground cable routes were discounted by the Project in agreement with National Grid as they required the construction of a Cable Sealing End Compound at the transition point of overground to underground at each end for each network, four in total, resulting in a larger construction and easement area. The undergrounding would have required complex installation methods (trenchless methods of installation) in sensitive locations such as near to Scheduled Monuments, Blackshots Nature Area Local Wildlife Site and potentially contaminated land potentially resulting in greater environmental, ecological and archaeological impacts than the proposed design. The proposal would have added significant complexity to the network (due to ratings and system design) as well as increasing costs. This proposal would have committed the Project to modifying a larger section of the existing overhead line networks than is proposed. 3.28.23 Undergrounding would have presented construction, operation and maintenance considerations for National Grid who had communicated to the Project that they could not accept any adverse impact on the safety, security, efficiency or reliability of the electricity and gas transmission networks or increase in the cost of the operation of these as a result of the Project."

Para	Relevant text	Project response
	albeit temporarily – to the receptors listed above than would an overhead line of equivalent rating) • the developer's commitment, as set out in their ES, to mitigate the potential detrimental effects of undergrounding works on any relevant agricultural land and soils, particularly regarding Best and Most Versatile land. Such a commitment must guarantee appropriate handling of soil, backfilling, and return of the land to the baseline Agricultural Land Classification (ALC), thus ensuring no loss or degradation of agricultural land. Such a commitment should be based on soil and ALC surveys in line with the 1988 ALC criteria and due consideration of the Defra Construction Code	
2.11.19	The Secretary of State should be satisfied that the development, so far as is reasonably possible, complies with the Holford and Horlock Rules or any updates to them. The Secretary of State should also be satisfied that all pertinent options for mitigation – including the rationalisation, reconfiguration, or undergrounding of existing electricity networks infrastructure, have been considered and evaluated appropriately.	See responses to paragraphs 2.11.11, 2.11.12 and 2.11.14 above
2.11.20	The Secretary of State should also have special regard to nationally designated landscapes, where the general presumption in favour of overhead lines should be inverted to favour undergrounding. Away from these protected landscapes, and where there is a high potential for widespread and significant landscape and/or visual impacts, the Secretary of State should also consider whether undergrounding may be appropriate, now on a case-by-case basis, weighing the considerations outlined above.	See responses to paragraphs 2.11.11 and 2.11.12 above
2.12	Noise and Vibration	
2.12.9	For the assessment of noise from overhead lines, the Applicant must use an appropriate method to determine the sound level produced by the line in both dry and wet weather conditions, in addition to	ES Appendix 12.8 (Application Document 6.3) comprises a National Grid Electricity Transmission Network, Assessment for Audible Noise. It assesses the likely operational audible

Para	Relevant text	Project response
	assessing the impact on noise-sensitive receptors. For instance, the Applicant may use an appropriate noise modelling tool or tools for the prediction of overhead line noise and its propagation over distance. When assessing the impact of noise generated by overhead lines in wet weather relative to existing background sound levels, the Applicant should consider the effect of varying background sound levels due to rainfall. The Secretary of State is likely to regard it as acceptable for the Applicant to use a methodology that demonstrably addresses these criteria.	noise impacts on noise-sensitive receptors where OHLs would move closer to them. The assessment has been carried out in accordance with National Grid Policy Statement PS(T)134 "Operational Audible Noise Policy for Overhead Lines (New Build, Reconductoring, Diversions and Uprating" It includes all aspects of corona discharge noise and wind-induced audible noise in both wet and dry conditions. The assessment identified 30 potential noise-sensitive receptors including 27 residential receptors and three educational facilities. Table 7.1 summarises the OHL noise impacts on these identified receptors. The overall conclusion is that (paragraph 7.1.5): "With consideration of the predicted change in OHL noise level, the context of the future noise climate with the Project implemented and the frequency that wet noise conditions would occur, it is concluded that the temporary and permanent realignment of any OHL associated with the Project would not constitute a significant environmental effect."
2.12.10	Applicants must consider the following measures: • the positioning of lines to help mitigate noise • ensuring that the appropriately sized conductor arrangement is used to minimise potential noise • quality assurance through manufacturing and transportation to avoid damage to overhead line conductors which can increase potential noise effects • ensuring that conductors are kept clean and free of surface contaminants during stringing/installation • the selection of the quietest cost-effective plant available	Only the last bullet point in this paragraph is newly introduced in the draft NPSEN-5. Embedded environmental measures to reduce audible noise effects from conductors, fixtures and fittings through quality assurance are detailed in paragraphs 2.1.8 to 2.1.9 of Appendix 12.8 and is reflected in the REAC/COCP (ES Appendix 2.2 (Application Document 6.3)). 'Plant' in this context means generation plants, sub-stations and switchgear equipment; not pylons. "2.1.9 Noise from pylon fittings such as dampers, spacers, clamps and insulators will be controlled through technical specifications: TS2.04 'Generic Design Principles for

Para	Relevant text	Project response
		Overhead Lines' (issue 6 July 2021; TS3.04.35 'Components for Overhead Lines' (issue 5 April 2021); TS3.04.36 "Insulators and Insulator Sets for Overhead Lines' (Issue 7 February 2022) and TS3.04037 'Conductors and Conductor Systems for Overhead Lines' (Issue 8 January 2022), which include requirements for wind tunnel testing and/or corona extinction tests to minimise the occurrence of both corona and wind induced noise, and PS(T)134 'Operational Audible Noise Policy of Overhead Lines (New Build, Reconductoring, Diversion and Uprating)' (Issue 2 June 2021) and TGN E 322 'Operational Audible Noise Assessment Process for Overhead Lines (New Build, Reconductoring, Diversion and Uprating)' (Issue 2 June 2021). In accordance with the technical specifications, policy and guidance document listed above, good practice environmental and quality control processes to control audible noise generated by the operation of the new and refurbished sections of the OHL shall include: • Pylon fittings designed and procured in accordance with National Grid's functional and performance requirements • Compliance with performance requirements for corona inception and audible noise on all fittings • Wind tunnel testing of all insulators for audible tones generated by Aeolian mechanisms • Sample testing to ensure each fitting type conforms to the specification • Care taken during installation to ensure conductors are kept clean and free of surface contaminants during stringing."
2.14	Sulphur Hexafluoride	

Para	Relevant text	Project response
2.14.6	The Secretary of State should grant consent for an electricity networks development only if the applicant has demonstrated either that • the development will not use SF6; or • ii(a)) that there is no proven commercially available alternative to the use of SF6, and • ii(b)) that a bespoke SF6-free alternative would be grossly disproportionate in terms of cost, and ii(c)) that emissions monitoring and control measures compliant with the F-gas Regulation and/or its successors are in place.	National Grid Electricity Transmission have confirmed in writing that no Sulphur Hexafluoride will be used as part of Work No OH7. Accordingly, this section of the draft NPS is not relevant.

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