HyNet North West

NATIONAL POLICY STATEMENT TRACKER

HyNet Carbon Dioxide Pipeline

Planning Act 2008

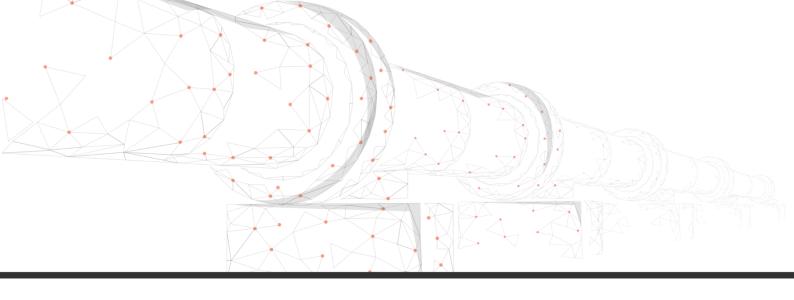
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1. INTRODUCTION

1.1. PURPOSE OF THIS DOCUMENT

- 1.1.1. This document has been prepared on behalf of Liverpool Bay CCS Limited ('the Applicant') and relates to an application ('the Application') for a Development Consent Order (DCO) that has been submitted to the Secretary of State (SoS) for Energy Security and Net Zero (DESNZ) under Section 37 of the Planning Act 2008 ('the PA 2008'). The Application relates to the carbon dioxide (CO₂) pipeline which constitutes the DCO Proposed Development.
- 1.1.2. Sections 104 and 105 of the PA2008 provide for the approach to be taken to decisions where an NPS has effect (section 104) and where no NPS has effect (section 105). The Applicant considers that, as there is no NPS in force for CO₂ pipelines, the Application falls to be determined under section 105.
- 1.1.3. While NPSs may not have effect in relation to schemes determined under section 105, matters incorporated within them are nonetheless likely to constitute important and relevant considerations in determining such applications and have therefore been considered for the DCO Proposed Development in Appendix B of the Planning Statement [APP-048] and this document.
- 1.1.4. This document is used to determine the accordance of the DCO Proposed Development with the National Policy Statements (NPSs) considered to be an important and relevant consideration in decision-making by the SoS. The Applicant considers these to be:
 - Overarching National Policy Statement for Energy (EN-1)
 - National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4)
- 1.1.5. This document does not include an assessment against the proposed change submitted to the Examining Authority (ExA) on 27 March 2023. If the ExA accepts this change into the examination, Tables 2.1 and 2.2, will be reviewed to include any changes to the compliance assessment, if required.
- 1.1.6. This document will be updated at Deadline 2 to include discussion on the compliance of the DCO Proposed Development to the draft NPS EN-1 and EN-4 released by DESNZ on 30 March 2023. Due to the limited time and focus on other requests from the Examining Authority, this was not possible for Deadline 1.
- 1.1.7. Additionally, this document will be reviewed and updated throughout the Examination, when required.

1.2. THE DCO PROPOSED DEVELOPMENT

- 1.2.1. HyNet (the Project) is an innovative low carbon hydrogen and carbon capture, transport and storage project that will unlock a low carbon economy for the North West of England and North Wales and put the region at the forefront of the UK's drive to Net-Zero. The details of the project can be found in the main DCO documentation.
- 1.2.2. A full description of the DCO Proposed Development is detailed in Chapter 3 of the 2022 Environmental Statement (ES) (as submitted with the DCO application) [APP-055]. The previously submitted ES is hereafter referred to as the '2022 ES'.
- 1.2.3. Following the Preliminary Meeting on 20 March 2023 and the Applicant's submission of its Notification of Intention to Submit a Change Request [AS-060] on 21 March 2023, the Applicant submitted a Change Request on 27 March 2023. The Applicant's Change Request includes '2023 ES Addendum Change Request 1' (document reference: D.7.7) and ES Addendum Chapter 3 provides an update to the description of the DCO Proposed Development [APP-055] resulting from the proposed design changes and clarifications to assessments.

2. APPLICANT'S RESPONSE

2.1.1. This chapter sets out the Applicant's assessment of the accordance of the DCO Proposed Development with NPS EN-1 and EN-4 which are submitted by the Applicant to be important and relevant considerations in decision-making by the SoS.

Table 2-1 Accordance with NPS EN-1

Overarching National Policy	Overarching National Policy Statement for Energy (EN-1) (July 2011)			
Part 4 – Assessment Principles				
Topic/Policy	NPS Requirement (Relevant Policy Text)	Compliance Assessment		
4.1 General points	4.1.2 Given the level and urgency of need for infrastructure of the types covered by the energy NPSs set out in Part 3 of this NPS, the IPC should start with a presumption in favour of granting consent to applications for energy NSIPs. That presumption applies unless any more specific and relevant policies set out in the relevant NPSs clearly indicate that consent should be refused. The presumption is also subject to the provisions of the Planning Act 2008 referred to at paragraph 1.1.2 of this NPS.	The DCO Proposed Development is considered to have demonstrated the financial and technical viability required within this policy. The Funding Statement [APP-029] demonstrates the DCO Proposed Development is financially viable and funding is not an impediment to delivery. The Applicant has taken into account environmental, social and economic benefits and adverse impacts, at national, regional and local levels.		
	4.1.3 In considering any proposed development, and in particular when weighing its adverse impacts against its benefits, the IPC should take into account:	Chapter 6 of the Planning Statement [APP-048] sets out the likely benefits and dis-benefits of the DCO Proposed Development. The Planning Statement also sets out the overall planning balance and policy support for the CO ₂ pipeline.		
	 its potential benefits including its contribution to meeting the need for energy infrastructure, job creation and any long-term or wider benefits; and 	The urgent need for the DCO Proposed Development and its role in facilitating the wider HyNet Project is explained in the Needs Case [APP-049].		
	 its potential adverse impacts, including any long-term and cumulative adverse impacts, as well as any measures to avoid, reduce or compensate for any adverse impacts. 	Please also refer to the supporting Statement of Reasons [AS-021]. This demonstrates that the Applicant has complied with Part 4.1 of EN-1.		
	4.1.4 In this context, the IPC should take into account environmental, social and economic benefits and adverse impacts, at national, regional and local levels. These may be identified in this NPS, the relevant technology-specific NPS, in the application or elsewhere (including in local impact reports).			
	4.1.9 In deciding to bring forward a proposal for infrastructure development, the applicant will have made a judgement on the financial and technical viability of the proposed development, within the market framework and taking account of Government interventions. Where the IPC considers, on information provided in an application, that the financial viability and technical feasibility of the proposal has been properly assessed by the applicant it is unlikely to be of relevance in IPC decision making (any exceptions to this principle are dealt with where they arise in this or other energy NPSs and the reasons why financial viability or technical feasibility is likely to be of relevance explained).			
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	The DCO Proposed Development is considered to be Schedule 1 development under paragraph 23 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 ('the EIA Regulations 2017'). It falls under the category of 'Installations for the capture of carbon dioxide streams for the purposes of geological storage pursuant to Directive 2009/31/EC from installations referred to in this Schedule'.		

Overarching National Policy Statement for Energy (EN-1) (July 2011) Part 4 - Assessment Principles Topic/Policy **NPS Requirement (Relevant Policy Text) Compliance Assessment** of the likely significant effects of the proposed project on the environment, covering In accordance with the EIA Regulations 2017, the Application therefore includes an ES [APP-051 to APP-245]. the direct effects and any indirect, secondary, cumulative, short, medium and longterm, permanent and temporary, positive and negative effects at all stages of the An assessment of the DCO Proposed Development's combined and project, and also of the measures envisaged for avoiding or mitigating significant cumulative impacts is included in **Chapter 19** of the ES [APP-071]. adverse effects. This demonstrates that the Applicant has complied with Part 4.2 of EN-1. 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 wellbeing. 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 preconstruction, 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 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. 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.

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	4.2.6 The IPC should consider how the accumulation of, and interrelationship between, effects might affect the environment, economy or community as a whole, even though they may be acceptable when considered on an individual basis with mitigation measures in place.	
	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.	
	4.2.8 Where some details are still to be finalised the ES should set out, to the best of the applicant's knowledge, what the maximum extent of the proposed development may be in terms of site and plant specifications, and assess, on that basis, the effects which the project could have to ensure that the impacts of the project as it may be constructed have been properly assessed.	
	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.	
	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.	
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	The Applicant has provided a Habitat Regulations Assessment [APP-226]. This report has been submitted to the Planning Inspectorate as part of the DCO Application and included in the Environmental Statement (ES) [APP-053 to APP-060, AS-025, APP-062 to APP-072] which shows accordance with Part 4.3 of NPS EN-1.

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	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 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.	Chapter 4 (section 4.2) of the Planning Statement [APP-048] provides an assessment of the DCO Proposed Development against Part 4.3 (Habitats and Species Regulations) of the NPS. Chapter 4 (section 4.3) of the Planning Statement [APP-048] also provides an assessment of the DCO Proposed Development against Part 5.3 (Biodiversity and Geological Conservation) of the NPS. With the inclusion of mitigation measures, it is concluded that the DCO Proposed Development would not adversely affect the integrity of the European Sites either alone or in-combination. Significant effects can be avoided with the inclusion of mitigation and compensation measures. This demonstrates that the Applicant has complied with Part 4.3 of EN-1.	
4.4 Alternatives	 4.4.1 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. 4.4.2 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). 4.4.3 "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 IPC should, subject to any relevant legal requirements (e.g. under the Habitats 	A number of options for the route of the new pipeline were identified and considered, and a sifting process carried out based on environmental, planning and engineering factors. The number of corridor options has been reduced to a single preferred corridor which will be further consolidated through detailed design. The Applicant is considered to have demonstrated the most viable and least harmful route through the options appraisal as demonstrated within the ES Chapter 4 [APP-056] in compliance with Part 4.4 of EN-1. Chapter 4 (section 4.2) of the Planning Statement [APP-048] provides an assessment of the DCO Proposed Development against Part 4.4 (Alternatives) of the NPS. The consideration of alternatives as set out in the ES is considered to be appropriate and proportionate. This demonstrates that the Applicant has complied with Part 4.4 of EN-1.	

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	Directive) which indicate otherwise, be guided by the following principles when deciding what weight should be given to alternatives:	
	- the consideration of alternatives in order to comply with policy requirements should be carried out in a proportionate manner;	
	 the IPC 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 and climate change benefits) in the same timescale as the proposed development; 	
	- where (as in the case of renewables) legislation imposes a specific quantitative target for particular technologies or (as in the case of nuclear) there is reason to suppose that the number of sites suitable for deployment of a technology on the scale and within the period of time envisaged by the relevant NPSs is constrained, the IPC should not reject 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 IPC thinks they are both important and relevant to its decision;	
	- as the IPC must decide an application in accordance with the relevant NPS (subject to the exceptions set out in the Planning Act 2008), if the IPC 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 IPC'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 the grounds that they are not important and relevant to the IPC's decision; 	
	- alternative proposals which are vague or inchoate can be excluded on the grounds that they are not important and relevant to the IPC's decision; and	
	- it is intended that potential alternatives to a proposed development should, wherever possible, be identified before an application is made to the IPC in respect of it (so as to allow appropriate consultation and the development of a suitable evidence base in relation to any alternatives which are particularly relevant).	

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	Therefore where an alternative is first put forward by a third party after an application has been made, the IPC may place the onus on the person proposing the alternative to provide the evidence for its suitability as such and the IPC should not necessarily expect the applicant to have assessed it.			
4.5 Criteria for "good design" for energy infrastructure	 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. 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. 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, th	The DCO Proposed Development will utilise best practice through the available technology, industry standards and construction techniques to minimise impacts and local inconvenience appropriately and effectively as demonstrated within Chapter 3 of the Environmental Statement [APP-055]. The design development process included the identification of mitigation commitments, both for mitigation embedded in the design and also good practice mitigation. There will be a number of permanent BVS and AGI locations across the pipeline route which will typically consist of a fenced compound, cathodic protection transformer rectifier cabinets and some above ground connection. Chapter 12 of the ES [APP-064] concludes that with the application of mitigation these would not give rise to an adverse significant impact in terms of their visual prominence. Chapter 12 of the ES [APP-064] concludes that with the application of mitigation these would not give rise to a significant adverse impact in terms of their visual prominence. Chapter 4 (section 4.2) of the Planning Statement [APP-048] provides an assessment of the DCO Proposed Development against Part 4.5 (Criteria for Good Design for Energy Infrastructure) of the NPS. This demonstrates that the Applicant has complied with Part 4.5 of EN-1.		

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	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. 4.5.5 Applicants and the IPC should consider taking independent professional			
	advice on the design aspects of a proposal. In particular, Design Council CABE can be asked to provide design review for nationally significant infrastructure projects and applicants are encouraged to use this service			
4.7 Carbon Capture and Storage (CCS) and Carbon Capture Readiness (CCR)	4.7.7 The most likely method for transporting the captured carbon dioxide is through pipelines. These will be located both onshore and offshore. There are currently no carbon dioxide pipelines in the UK and considerable future investment in pipelines will be required for the purpose of the demonstration programme. If CCS is deployed more widely, it is likely that these initial investments could form the basis of a wider carbon dioxide pipeline network, which is likely to require greater capacity pipelines. In considering applications the IPC should therefore take into account that the Government wants developers to bear in mind foreseeable future demand when considering the size and route of their investments and may therefore propose pipelines with a greater capacity than necessary for the project alone. Existing legislation already provides powers to require modification of pipelines where this would reduce the need for additional pipelines to be constructed in the future.	The DCO Proposed Development will deliver approximately 36km of carbon transporting infrastructure with associated above ground installations, which will lay the foundations for the wider Project as described in Chapter 1 and Chapter 3 of this Planning Statement [APP-048]. The Needs Case for the DCO Proposed Development [APP-049] also provides further detailed information. Chapter 4 (section 4.2) of the Planning Statement [APP-048] provides an assessment of the DCO Proposed Development against Part 4.7 (Carbon Capture and Storage) of the NPS. The Applicant concludes that the DCO Proposed Development aligns with the Government's encouragement of CCS technology, with potential to exceed the assumed figures set out in Part 4.7 This demonstrates that the Applicant has complied with Part 4.7 of EN-1.		
4.8 Climate Change Adaption	4.8.3 To support planning decisions, the Government produces a set of UK Climate Projections and is developing a statutory National Adaptation Programme. In addition, the Government's Adaptation Reporting Power will ensure that reporting authorities (a defined list of public bodies and statutory undertakers, including energy utilities) assess the risks to their organisation presented by climate change. The IPC may take into account energy utilities' reports to the Secretary of State when considering adaptation measures proposed by an applicant for new energy infrastructure. 4.8.4 In certain circumstances, measures implemented to ensure a scheme can adapt to climate change may give rise to additional impacts, for example as a result of protecting against flood risk, there may be consequential impacts on coastal change (see Section 5.5).	Climate change adaption has been considered throughout the design and selection process for the proposed route. The risk of flooding, effect of greenhouse gas emissions to the atmosphere, and embedded carbon have been considered as part of the design and assessment of impact and mitigation. This is further expanded on in ES Chapter 7 [APP-059] on climate resilience, ES Chapter 10 [APP-062] on Greenhouse Gases, and ES Chapter 18 [APP-070] on water resource and flood risk and their associated appendices. Climate Change has also been considered cumulatively across each chapter of the ES, wherein the inter-dependencies are assessed. Where a combined impact is considered, it is mitigated or justified accordingly. The design of the pipeline has considered those measures to make it resilient to climate change, and the ES concludes that there are no significant impacts on climate change resulting from the laying of this pipeline.		

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	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.	Generally, the use of pipelines offers a betterment on emissions given alternative means of transport such as tanker via road. Chapter 4 (section 4.2) of the Planning Statement [APP-048] provides an assessment of the DCO Proposed Development against Part 4.8 (Climate Change Adaptation) of the NPS. This demonstrates that the Applicant has complied with Part 4.8 of EN-1	
	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.		
	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		
	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.		
	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.		

on flooding, water resources or coastal change) the IPC should consider the impact

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	of the latter in relation to the application as a whole and the impacts guidance set out in Part 5 of this NPS.		
	4.8.11 Any adaptation measures should be based on the latest set of UK Climate Projections, the Government's latest UK Climate Change Risk Assessment, when available and in consultation with the EA.		
	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).		
4.10 Pollution control and other environmental regulatory regimes	 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. 4.10.4 Applicants should consult the Marine Management Organisation (MMO) on nationally significant projects which would affect, or would be likely to affect, any relevant marine areas as defined in the Planning Act 2008 (as amended by s.23 of the Marine and Coastal Access Act 2009). The IPC consent may include a deemed marine licence and the MMO will advise on what conditions should apply to the deemed marine licence. The IPC and MMO should cooperate closely to ensure that energy NSIPs are licensed in accordance with environmental legislation, including European directives. 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 	An initial assessment of potential environmental impacts was carried out and included in the EIA Scoping Report [APP-073 and APP-074]. The Outline Construction Environmental Management Plan (OCEMP) [AS-055] sets out the actions and measures that would be implemented to control the risk of a pollution incident. This would be consolidated into a Construction Environmental Management Plan (CEMP) during detailed design and applied by a construction contractor. The design will be defined and set out in the ES and elsewhere in the DCO application. The ES Volume II [APP-053 to APP-060, AS-025, APP-062 to APP-072] further illustrates this approach. The project will comply with all required regulations under the pollution control framework or other consenting and licensing regimes. Appendix A of the Consultation Report [APP-032] provides a list of meetings with relevant environmental stakeholders. Chapter 4 (section 4.2) of the Planning Statement [APP-048] provides an assessment of the DCO Proposed Development against Part 4.10 (Pollution Control and Other Environmental Regulatory Regimes) of the NPS. This demonstrates that the Applicant has complied with Part 4.10 of EN-1.	

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	wish to consult the regulator on any management plans that would be included in an Environmental Permit application.	
	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.	
	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." 	
	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.	
4.11 Safety	4.11.1 HSE is responsible for enforcing a range of occupational health and safety legislation some of which is relevant to the construction, operation and decommissioning of energy infrastructure. Applicants should consult with the Health	The Applicant has engaged and will continue to engage with the HSE with respect to compliance with health and safety legislation, this is shown within the Consultation Report [APP-031].
	4.11.3 Some energy infrastructure will be subject to the Control of Major Accident	The OCEMP [AS-055] set out the actions and measures that would be implemented to control the risk of a pollution incident.
	Hazards (COMAH) Regulations 1999. These Regulations aim to prevent major accidents involving dangerous substances and limit the consequences to people and the environment of any that do occur. COMAH regulations apply throughout the life cycle of the facility, i.e. from the design and build stage through to decommissioning. They are enforced by the Competent Authority comprising HSE and the EA acting jointly in England and Wales (and by the HSE and Scottish	Although the pipeline is not a COMAH, COMAH guidance has been referred to in development of the methodologies for hazard identification and the assessment of major accidents.

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	Environment Protection Agency acting jointly in Scotland). The same principles apply here as for those set out in the previous section on pollution control and other environmental permitting regimes. 4.11.4 Applicants seeking to develop infrastructure subject to the COMAH regulations should make early contact with the Competent Authority. If a safety report is required it is important to discuss with the Competent Authority the type of information that should be provided at the design and development stage, and what form this should take. This will enable the Competent Authority to review as much information as possible before construction begins, in order to assess whether the inherent features of the design are sufficient to prevent, control and mitigate major accidents. The IPC should be satisfied that an assessment has been done where required and that the Competent Authority has assessed that it meets the safety objectives described above.	Chapter 4 (section 4.2) of the Planning Statement [APP-048] provides an assessment of the DCO Proposed Development against Part 4.11 (Safety) of the NPS. This demonstrates that the Applicant has complied with Part 4.11 of EN-1.	
4.12 Hazardous Substances	4.12.1 All establishments wishing to hold stocks of certain hazardous substances above a threshold need Hazardous Substances consent. Applicants should consult the HSE at pre-application stage if the project is likely to need hazardous substances consent. Where hazardous substances consent is applied for, the IPC will consider whether to make an order directing that hazardous substances consent shall be deemed to be granted alongside making an order granting development consent. The IPC should consult HSE about this. 4.12.2 HSE will assess the risks based on the development consent application. Where HSE does not advise against the IPC granting the consent, it will also recommend whether the consent should be granted subject to any requirements. 4.12.3 HSE sets a consultation distance around every site with hazardous substances consent and notifies the relevant local planning authorities. The applicant should therefore consult the local planning authority at pre-application stage to identify whether its proposed site is within the consultation distance of any site with hazardous substances consent and, if so, should consult the HSE for its advice on locating the particular development on that site.	The Applicant has engaged and will continue to engage with the HSE with respect to compliance with hazardous substances legislation, this is shown within the Consultation Report [APP-031]. Where it is required, other consents have been shown in the Other Consents and Licences Document [APP-046]. The Applicant knows of no reason as to why these will not be secured. Chapter 4 (section 4.2) of the Planning Statement [APP-048] provides an assessment of the DCO Proposed Development against Part 4.12 (Hazardous Substances) of the NPS. This demonstrates that the Applicant has complied with Part 4.12 of EN-1.	
4.13 Health	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	From the EIA Scoping Report [APP-073 and APP-074] to the assessment within the ES Volume II Chapters [APP-053 to APP-060, AS-025, APP-062 to APP-072]. The key health impacts have been assessed to be the disruption to green space and nature, effects on communities, traffic, transport, connectivity,	

impacts as appropriate. The impacts of more than one development may affect

Overarching National Policy Statement for Energy (EN-1) (July 2011) Part 4 – Assessment Principles Topic/Policy **NPS Requirement (Relevant Policy Text) Compliance Assessment** people simultaneously, so the applicant and the IPC should consider the cumulative severance and physical injury from accidents, soil contamination, noise and impact on health. vibration, water, major accidents and community wellbeing. 4.13.3 The direct impacts on health may include increased traffic, air or water Chapter 4 (section 4.2) of the Planning Statement [APP-048] provides an assessment of the DCO Proposed Development against Part 4.13 (Health) of pollution, dust, odour, hazardous waste and substances, noise, exposure to radiation, and increases in pests. the NPS. 4.13.4 New energy infrastructure may also affect the composition, size and Overall, it has been demonstrated within the ES Volume II [APP-053 to APPproximity of the local population, and in doing so have indirect health impacts, for 060, AS-025, APP-062 to APP-072] that there will be no significant adverse example if it in some way affects access to key public services, transport or the use health impacts as a result of the DCO Proposed Development. of open space for recreation and physical activity. This demonstrates that the Applicant has complied with Part 4.13 of EN-1. 4.13.5 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 constitute a reason to refused consents or require specific mitigation under the Planning Act 2008. However, the IPC will want to take account of health concerns when setting requirements relating to a range of impacts such as noise. 4.12 Common Law 4.14.2 It is very important that, at the application stage of an energy NSIP, possible To reduce the risk of nuisance or environmental incident, which includes noise, **Nuisance and Statutory** sources of nuisance under section 79(1) of the 1990 Act and how they may be vibration and air quality, the OCEMP [AS-055] sets out a number of good Nuisance mitigated or limited are considered by the IPC so that appropriate requirements can housekeeping measures to be implemented by the contractor at compound be included in any subsequent order granting development consent. (See Section sites. **5.6** on Dust, odour, artificial light etc. and **Section 5.11** on Noise and vibration.) In accordance with the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (APFP) Regulation 5(2)(f), paragraph 4.14.2 of EN-1 states that it is very important that, at the application stage of an energy NSIP, possible sources of nuisance under section 79(1) of the Environmental Protection Act 1990 ('EPA'), and how they may be mitigated or limited, are considered by the Secretary of State (SoS) so that appropriate requirements can be included in any subsequent order granting development

consent.

The DCO Application is supported with a Statutory Nuisance Statement [APP-

047] in order to satisfy the requirements of APFP Regulation 5(2)(f) and paragraph 4.14.2 of EN-1. This document lays out both the likely significant

and insignificant impacts of proposed works and provides mitigation.

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		Chapter 4 (section 4.2) of the Planning Statement [APP-048] provides an assessment of the DCO Proposed Development against Part 4.14 (Common Law Nuisance and Statutory Nuisance) of the NPS. This demonstrates that the Applicant has complied with Part 4.14 of EN-1.
4.13 Security Considerations	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 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. 4.15.4 The applicant should only include sufficient information in the application as is necessary to enable the IPC to examine the development consent issues and make a properly informed decision on the application.	The Applicant has engaged and will continue to engage with BEIS with respect to compliance with security, this is shown within the Consultation Report [APP-031]. Chapter 4 (section 4.2) of the Planning Statement [APP-048] provides an assessment of the DCO Proposed Development against Part 4.15 (Security Considerations) of the NPS. This demonstrates that the Applicant has complied with Part 4.15 of EN-1.
Part 5 – Generic Impacts		
5.1 Generic Impacts	 5.1.1 Some impacts (such as landscape and visual impacts) arise from the development of any of the types of energy infrastructure covered by the energy NPSs. Others (such as air quality impacts) are relevant to all types of energy infrastructure but nevertheless arise in similar ways from the development of types of energy infrastructure covered in at least two of the energy NPSs. Both these classes of impacts are considered in this Part and are referred to as "generic impacts". However, in some cases the technology-specific NPSs provide detail on the way these impacts arise or are to be considered in the context of applications which is specific to the technology in question. Impacts which are more or less limited to one particular technology are only covered in the relevant technology-specific NPS. 5.1.2 The list of impacts (generic and technology-specific) and the policy in respect of the consideration of impacts in this Part and in the impact section of the technology-specific NPSs is not exhaustive. The NPSs address those impacts and means of mitigation that are anticipated to arise most frequently; they are not 	An initial assessment has been carried out to identify the potential impacts of the DCO Proposed Development. They have been addressed in the EIA Scoping Report [APP-073 and APP-074] submitted to The Planning Inspectorate. The full assessment of the impacts and related mitigation measures are detailed in the ES [APP-053 to APP-060, AS-025, APP-062 to APP-072] submitted as part of this DCO Application. The DCO Proposed Development has engaged with a wide range of national and local environmental organisations, local authorities, other local groups and individual land owners as shown in the Consultation Report [APP-031]. Chapter 4 (section 4.3) of the Planning Statement [APP-048] provides an assessment of the DCO Proposed Development against Part 5.1 (Generic and Specific Impacts) of the NPS. This demonstrates that the Applicant has complied with Part 5.1 of EN-1.

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	intended to provide a list of all possible effects or ways to mitigate such effects. The IPC should therefore consider other impacts and means of mitigation where it determines that the impact is relevant and important to its decision. The technology-specific NPSs may state that certain impacts should be given a particular weight. Where they do not do so, the IPC should follow any policy set out on the level of weight to be given to such impact set out in this NPS. Applicants should identify the impacts of their proposals in the ES in terms of those covered in this NPS and any others that may be relevant to their application.	
	5.1.3 Some of the impact sections in this NPS and the technology-specific NPSs refer to development consent requirements or obligations being a means of securing appropriate mitigation. The fact that the possible use of requirements or obligations are not mentioned in relation to other impacts does not mean that they may not be relevant.	
	5.1.4 Some of the impact sections in this NPS and the technology-specific NPSs also refer to bodies whom the applicant or IPC should consult. The references to specific bodies are not intended to be exhaustive. The fact that in other impact sections no mention is made of such consultation does not mean that the applicant or IPC should not, where appropriate, engage in it. Applicants must also ensure they consult the relevant bodies about their proposed applications in accordance with section 42 to 44 of the Planning Act 2008 and the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009.	
5.2 Air Quality and Emissions	5.2.1 Infrastructure development can have adverse effects on air quality. The construction, operation and decommissioning phases can involve emissions to air which could lead to adverse impacts on health, on protected species and habitats, or on the wider countryside. Impacts on protected species and habitats are covered in Section 5.3 . Air emissions include particulate matter (for example dust) up to a diameter of ten microns (PM10) as well as gases such as sulphur dioxide, carbon monoxide and nitrogen oxides (NOx). Levels for pollutants in ambient air are set out in the Air Quality Strategy which in turn embodies EU legal requirements. The Secretary of State for the Department for Environment Food and Rural Affairs is required to make available up to date information on air quality to any relevant interested party.	Air Quality has been taken into consideration in the EIA for the DCO Proposed Development. It has been identified that air quality changes could occur through dust and changes in pollutant levels caused by emissions during construction, through plant machinery and dust pollution and also during operation. However, with the implementation of mitigation measures and controls, the likely effect on human health, amenity and ecological receptors during construction is concluded to be not significant. This is demonstrated in Chapter 6 of the ES [APP-058] and its appendices. It has been identified that air quality changes could occur during construction activity. However, with the application of mitigation measures, the DCO Proposed Development will have no significant adverse effect on air quality
	5.2.2 CO2 emissions are a significant adverse impact from some types of energy infrastructure which cannot be totally avoided (even with full deployment of CCS technology). However, given the characteristics of these and other technologies, as noted in Part 3 of this NPS, and the range of non-planning policies aimed at	during construction, operation and decommissioning stages.

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	decarbonising electricity generation such as EU ETS (see Section 2.2 above), Government has determined that CO2 emissions are not reasons to prohibit the consenting of projects which use these technologies or to impose more restrictions on them in the planning policy framework than are set out in the energy NPSs (e.g. the CCR and, for coal, CCS requirements). Any ES on air emissions will include an assessment of CO2 emissions, but the policies set out in Section 2 , including the EU ETS, apply to these emissions. The IPC does not, therefore need to assess individual applications in terms of carbon emissions against carbon budgets and this section does not address CO2 emissions or any Emissions Performance Standard that may apply to plant.	Chapter 4 (section 4.3) of the Planning Statement [APP-048] provides an assessment of the DCO Proposed Development against Part 5.2 (Air Quality and Emissions) of the NPS. This demonstrates that the Applicant has complied with Part 5.2 of EN-1.
	5.2.6 Where the project is likely to have adverse effects on air quality the applicant should undertake an assessment of the impacts of the proposed project as part of the Environmental Statement (ES).	
	5.2.7 The ES should describe:	
	- any significant air emissions, their mitigation and any residual effects distinguishing between the project stages and taking account of any significant emissions from any road traffic generated by the project;	
	- the predicted absolute emission levels of the proposed project, after mitigation methods have been applied;	
	- existing air quality levels and the relative change in air quality from existing levels; and	
	- any potential eutrophication impacts.	
	5.2.8 Many activities involving air emissions are subject to pollution control. The considerations set out in Section 4.10 on the interface between planning and pollution control therefore apply.	
	5.2.9 The IPC should generally give air quality considerations substantial weight where a project would lead to a deterioration in air quality in an area, or leads to a new area where air quality breaches any national air quality limits. However air quality considerations will also be important where substantial changes in air quality levels are expected, even if this does not lead to any breaches of national air quality limits.	
	5.2.10 In all cases the IPC must take account of any relevant statutory air quality limits. Where a project is likely to lead to a breach of such limits the developers should work with the relevant authorities to secure appropriate mitigation measures	

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	to allow the proposal to proceed. In the event that a project will lead to non-compliance with a statutory limit the IPC should refuse consent. 5.2.11 The IPC should consider whether mitigation measures are needed both for operational and construction emissions over and above any which may form part of the project application. A construction management plan may help codify mitigation at this stage. 5.2.12 In doing so the IPC may refer to the conditions and advice in the Air Quality Strategy or any successor to it.	
5.3 Biodiversity and Geological Conservation	 5.3.3 Where the development is subject to EIA the applicant should ensure that the ES clearly sets out any effects on internationally, nationally and locally designated sites of ecological or geological conservation importance, on protected species and on habitats and other species identified as being of principal importance for the conservation of biodiversity. The applicant should provide environmental information proportionate to the infrastructure where EIA is not required to help the IPC consider thoroughly the potential effects of a proposed project. 5.3.4 The applicant should show how the project has taken advantage of opportunities to conserve and enhance biodiversity and geological conservation interests. 5.3.5 The Government's biodiversity strategy is set out in 'Working with the grain of nature'. Its aim is to ensure: - a halting, and if possible a reversal, of declines in priority habitats and species, with wild species and habitats as part of healthy, functioning ecosystems; and - the general acceptance of biodiversity's essential role in enhancing the quality of life, with its conservation becoming a natural consideration in all relevant public, private and non-governmental decisions and policies. 5.3.6 In having regard to the aim of the Government's biodiversity strategy the IPC should take account of the context of the challenge of climate change: failure to address this challenge will result in significant adverse impacts to biodiversity. The policy set out in the following sections recognises the need to protect the most important biodiversity and geological conservation interests. The benefits of 	Chapter 9 [AS-025] and Chapter 11 [APP-063] of the ES identifies the baseline biodiversity value, sensitive receptors and ground conditions assessment along the route of the DCO Proposed Development. The impact of construction and operation has been considered. There is a negligible concern related to ecological receptors. Mitigation is applied to seek some minor, positive, long terms effects at a local scale. Whilst maintenance of the DCO Proposed Development may be required throughout its lifecycle, potentially resulting in the need to excavate ground to access the DCO Proposed Development, this is likely to be a rare occurrence and impacts associated with such maintenance activities will be short term, temporary and localised. A Habitats Regulations Assessment [APP-226] has also been undertaken and reported in relation to any likely significant effects. All mitigation measures are set out in the Register of Environmental Actions and Commitments (REAC) [AS-053]. Chapter 4 (section 4.3) of the Planning Statement [APP-048] provides an assessment of the DCO Proposed Development against Part 5.3 (Biodiversity and Geological Conservation) of the NPS. This demonstrates that the Applicant has complied with Part 5.3 of EN-1.
	policy set out in the following sections recognises the need to protect the most	

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	may outweigh harm to these interests. The IPC may take account of any such net benefit in cases where it can be demonstrated.	
	5.3.7 As a general principle, and subject to the specific policies below, development should aim to avoid significant harm to biodiversity and geological conservation interests, including through mitigation and consideration of reasonable alternatives (as set out in Section 4.4 above); where significant harm cannot be avoided, then appropriate compensation measures should be sought.	
	5.3.8 In taking decisions, the IPC should ensure that appropriate weight is attached to designated sites of international, national and local importance; protected species; habitats and other species of principal importance for the conservation of biodiversity; and to biodiversity and geological interests within the wider environment.	
	5.3.9 The most important sites for biodiversity are those identified through international conventions and European Directives. The Habitats Regulations provide statutory protection for these sites but do not provide statutory protection for potential Special Protection Areas (pSPAs) before they have been classified as a Special Protection Area. For the purposes of considering development proposals affecting them, as a matter of policy the Government wishes pSPAs to be considered in the same way as if they had already been classified. Listed Ramsar sites should, also as a matter of policy, receive the same protection.	
	5.3.10 Many SSSIs are also designated as sites of international importance and will be protected accordingly. Those that are not, or those features of SSSIs not covered by an international designation, should be given a high degree of protection. All National Nature Reserves are notified as SSSIs.	
	5.3.11 Where a proposed development on land within or outside an SSSI is likely to have an adverse effect on an SSSI (either individually or in combination with other developments), development consent should not normally be granted. Where an adverse effect, after mitigation, on the site's notified special interest features is likely, an exception should only be made where the benefits (including need) of the development at this site, clearly outweigh both the impacts that it is likely to have on the features of the site that make it of special scientific interest and any broader impacts on the national network of SSSIs. The IPC should use requirements and/or planning obligations to mitigate the harmful aspects of the development and, where possible, to ensure the conservation and enhancement of the site's biodiversity or geological interest.	

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	5.3.13 Sites of regional and local biodiversity and geological interest, which include Regionally Important Geological Sites, Local Nature Reserves and Local Sites, have a fundamental role to play in meeting overall national biodiversity targets; contributing to the quality of life and the well-being of the community; and in supporting research and education. The IPC should give due consideration to such regional or local designations. However, given the need for new infrastructure, these designations should not be used in themselves to refuse development consent.	
	5.3.14 Ancient woodland is a valuable biodiversity resource both for its diversity of species and for its longevity as woodland. Once lost it cannot be recreated. The IPC should not grant development consent for any development that would result in its loss or deterioration unless the benefits (including need) of the development, in that location outweigh the loss of the woodland habitat. Aged or 'veteran' trees found outside ancient woodland are also particularly valuable for biodiversity and their loss should be avoided. Where such trees would be affected by development proposals the applicant should set out proposals for their conservation or, where their loss is unavoidable, the reasons why.	
	5.3.17 Other species and habitats have been identified as being of principal importance for the conservation of biodiversity in England and Wales and thereby requiring conservation action. The IPC should ensure that these species and habitats are protected from the adverse effects of development by using requirements or planning obligations. The IPC should refuse consent where harm to the habitats or species and their habitats would result, unless the benefits (including need) of the development outweigh that harm. In this context the IPC should give substantial weight to any such harm to the detriment of biodiversity features of national or regional importance which it considers may result from a proposed development.	
	5.3.18 "The applicant should include appropriate mitigation measures as an integral part of the proposed development. In particular, the applicant should demonstrate that:	
	- during construction, they will seek to ensure that activities will be confined to the minimum areas required for the works;	
	- during construction and operation best practice will be followed to ensure that risk of disturbance or damage to species or habitats is minimised, including as a consequence of transport access arrangements;	

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	 habitats will, where practicable, be restored after construction works have finished; and opportunities will be taken to enhance existing habitats and, where practicable, to 	
	create new habitats of value within the site landscaping proposals.	
	5.3.19 Where the applicant cannot demonstrate that appropriate mitigation measures will be put in place the IPC should consider what appropriate requirements should be attached to any consent and/or planning obligations entered into.	
	5.3.20 The IPC will need to take account of what mitigation measures may have been agreed between the applicant and Natural England (or the Countryside Council for Wales) or the Marine Management Organisation (MMO), and whether Natural England (or the Countryside Council for Wales) or the MMO has granted or refused or intends to grant or refuse, any relevant licences, including protected species mitigation licences.	
5.4 Civil and Military Aviation and Defence Interests	5.4.9 Other operational defence assets may be affected by new development, for example the Seismological Monitoring Station at Eskdalemuir and maritime acoustic facilities used to test and calibrate noise emissions from naval vessels, such as at Portland Harbour. The MoD also operates Air Defence radars and Meteorological radars which have wide coverage over the UK (onshore and offshore). It is important that new energy infrastructure does not significantly impede or compromise the safe and effective use of any defence assets. 5.4.10 Where the proposed development may have an effect on civil or military aviation and/or other defence assets an assessment of potential effects should be set out in the ES (see Section 4.2). 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. 5.4.12 Any assessment of aviation or other defence interests should include potential impacts of the project upon the operation of CNS infrastructure, flight patterns (both civil and military), other defence assets and aerodrome operational procedures. It should also assess the cumulative effects of the project with other relevant projects in relation to aviation and defence.	The DCO Proposed Development falls adjacent to MoD land in Saughill, England. With a construction compound being located in an adjacent land parcel. It is not considered that any impact will be had on this land. This is confirmed through the EIA Scoping Report [APP-073 and APP-074] and response received which concluded that the MoD had no objections to the DCO Proposed Development. There is an Airbus Aerodrome located 1.68km south of the Order Limits within Flintshire, Wales. Correspondence has been held with Airbus and this can be found within Appendix A of the Consultation Report [APP-032]. It is not considered that the construction, operation or decommissioning of the DCO Proposed Development would impact the setting or operation of the Airbus facility. Where mitigation (such as lighting or height limitations) may be required, it will be embedded accordingly. Chapter 4 (section 4.3) of the Planning Statement [APP-048] provides an assessment of the DCO Proposed Development against Part 5.4 (Civil and Military Aviation and Defence Interests) of the NPS. This demonstrates that the Applicant has complied with Part 5.4 of EN-1.
	5.4.13 If any relevant changes are made to proposals during the pre-application and determination period, it is the responsibility of the applicant to ensure that the	

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	relevant aviation and defence consultees are informed as soon as reasonably possible.	
	5.4.14 The IPC should be satisfied that the effects on civil and military aerodromes, aviation technical sites and other defence assets have been addressed by the applicant and that any necessary assessment of the proposal on aviation or defence interests has been carried out. In particular, it should be satisfied that the proposal has been designed to minimise adverse impacts on the operation and safety of aerodromes and that reasonable mitigation is carried out. It may also be appropriate to expect operators of the aerodrome to consider making reasonable changes to operational procedures. When assessing the necessity, acceptability and reasonableness of operational changes to aerodromes, the IPC should satisfy itself that it has the necessary information regarding the operational procedures along with any demonstrable risks or harm of such changes, taking into account the cases put forward by all parties. When making such a judgement in the case of military aerodromes, the IPC should have regard to interests of defence and national security.	
	5.4.15 If there are conflicts between the Government's energy and transport policies and military interests in relation to the application, the IPC should expect the relevant parties to have made appropriate efforts to work together to identify realistic and pragmatic solutions to the conflicts. In so doing, the parties should seek to protect the aims and interests of the other parties as far as possible.	
	5.4.16 There are statutory requirements concerning lighting to tall structures. Where lighting is requested on structures that goes beyond statutory requirements by any of the relevant aviation and defence consultees, the IPC should satisfy itself of the necessity of such lighting taking into account the case put forward by the consultees. The effect of such lighting on the landscape and ecology may be a relevant consideration.	
	5.4.17 "Where, after reasonable mitigation, operational changes, obligations and requirements have been proposed, the IPC considers that:	
	- a development would prevent a licensed aerodrome from maintaining its licence;	
	- the benefits of the proposed development are outweighed by the harm to aerodromes serving business, training or emergency service needs, taking into account the relevant importance and need for such aviation infrastructure; or	
	- the development would significantly impede or compromise the safe and effective use of defence assets or significantly limit military training;	

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	 the development would have an impact on the safe and efficient provision of en route air traffic control services for civil aviation, in particular through an adverse effect on the infrastructure required to support communications, navigation or surveillance systems; 	
	consent should not be granted."	
	5.4.18 Where a proposed energy infrastructure development would significantly impede or compromise the safe and effective use of civil or military aviation or defence assets and or significantly limit military training, the IPC may consider the use of 'Grampian, or other forms of condition which relate to the use of future technological solutions, to mitigate impacts. Where technological solutions have not yet been developed or proven, the IPC will need to consider the likelihood of a solution becoming available within the time limit for implementation of the development consent. In this context, where new technologies to mitigate the adverse effects of wind farms on radar are concerned, the IPC should have regard to any Government guidance which emerges from the joint Government/Industry Aviation Plan.	
	5.4.19 "Mitigation for infringement of OLS may include:	
	- amendments to layout or scale of infrastructure to reduce the height, provided that it does not result in an unreasonable reduction of capacity or unreasonable constraints on the operation of the proposed energy infrastructure;	
	- changes to operational procedures of the aerodromes in accordance with relevant guidance, provided that safety assurances can be provided by the operator that are acceptable to the CAA where the changes are proposed to a civilian aerodrome (and provided that it does not result in an unreasonable reduction of capacity or unreasonable constraints on the operation of the aerodrome); and	
	- installation of obstacle lighting and/or by notification in Aeronautical Information Service publications."	
	5.4.20 "For CNS infrastructure, the UK military Low Flying system (including TTAs) and designated air traffic routes, mitigation may also include:	
	- lighting;	
	- operational airspace changes; and	
	- upgrading of existing CNS infrastructure, the cost of which the applicant may reasonably be required to contribute in part or in full. "	

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	5.4.21 Mitigation for effects on radar, communications and navigational systems may include reducing the scale of a project, although in some cases it is likely to be unreasonable for the IPC to require mitigation by way of a reduction in the scale of development, for example, where reducing the tip height of wind turbines in a wind farm would result in a material reduction in electricity generating capacity or operation would be severely constrained. However, there may be exceptional circumstances where a small reduction in such function will result in proportionately greater mitigation. In these cases, the IPC may consider that the benefits of the mitigation outweighs the marginal loss of function.	
5.6 Dust, Odour, Artificial Light, Smoke, Steam and Insect Infestation	5.6.3 For energy NSIPs of the type covered by this NPS, some impact on amenity for local communities is likely to be unavoidable. The aim should be to keep impacts to a minimum, and at a level that is acceptable.	It has been identified that air quality changes could occur through dust and changes in pollutant levels during construction works. Changes in air quality are not anticipated during the operation or decommissioning phases of the
	 5.6.4 The applicant should assess the potential for insect infestation and emissions of odour, dust, steam, smoke and artificial light to have a detrimental impact on amenity, as part of the Environmental Statement. 5.6.5 In particular, the assessment provided by the applicant should describe: 	DCO Proposed Development. Chapter 6 of the ES [APP-058] concludes that with the application of mitigation measures, the DCO Proposed Development will have no significant adverse effect on air quality during the construction, operation and
	the type, quantity and timing of emissions;aspects of the development which may give rise to emissions;	decommissioning. The Construction Dust Assessment [APP-081] provides further detail regarding the approach to mitigation.
	 premises or locations that may be affected by the emissions; effects of the emission on identified premises or locations; and measures to be employed in preventing or mitigating the emissions. 	The DCO Proposed Development is submitted with a Statutory Nuisance Statement [APP-047] which concludes that with appropriate and embedded mitigation, any adverse impacts can be removed.
	5.6.6 The applicant is advised to consult the relevant local planning authority and, where appropriate, the EA about the scope and methodology of the assessment.	Chapter 4 (section 4.3) of the Planning Statement [APP-048] provides an assessment of the DCO Proposed Development against Part 5.6 (Dust, Odour, Artificial Light, Smoke, Steam and Insect Manifestation) of the NPS.
	5.6.7 The IPC should satisfy itself that:- an assessment of the potential for artificial light, dust, odour, smoke, steam and insect infestation to have a detrimental impact on amenity has been carried out; and	This demonstrates that the Applicant has complied with Part 5.6 of EN-1.
	- that all reasonable steps have been taken, and will be taken, to minimise any such detrimental impacts.	
	5.6.8 If the IPC does grant development consent for a project, it should consider whether there is a justification for all of the authorised project (including any associated development) being covered by a defence of statutory authority against	

Overarching National Policy Statement for Energy (EN-1) (July 2011) Part 4 – Assessment Principles Topic/Policy **NPS Requirement (Relevant Policy Text) Compliance Assessment** nuisance claims. If it cannot conclude that this is justified, it should disapply in whole or in part the defence through a provision in the development consent order. 5.6.10 In particular, the IPC should consider whether to require the applicant to abide by a scheme of management and mitigation concerning insect infestation and emissions of odour, dust, steam, smoke and artificial light from the development. The IPC should consider the need for such a scheme to reduce any loss to amenity which might arise during the construction, operation and decommissioning of the development. A construction management plan may help codify mitigation at that stage. 5.6.11 Mitigation measures may include one or more of the following: - engineering: prevention of a specific emission at the point of generation; control, containment and abatement of emissions if generated; - lay-out: adequate distance between source and sensitive receptors; reduced transport or handling of material; and administrative: limiting operating times; restricting activities allowed on the site; implementing management plans. 5.7 Flood Risk 5.7.2 Climate change over the next few decades is likely to mean milder, wetter Initial assessments of groundwater and surface water quality and resource, winters and hotter, drier summers in the UK, while sea levels will continue to rise. fluvial geomorphology and flood risk have been carried out in order to identify Within the lifetime of energy projects, these factors will lead to increased flood risks the potential significant effects associated with the construction, operation and decommissioning of the DCO Proposed Development on potentially sensitive in areas susceptible to flooding, and to an increased risk of the occurrence of floods in some areas which are not currently thought of as being at risk. The applicant and receptors. the IPC should take account of the policy on climate change adaptation in Section The pipeline route was selected and designed to reduce the impact on flood 4.8. risk, avoiding high levels of flood risk with the whole route within FZ1. 5.7.4 Applications for energy projects of 1 hectare or greater in Flood Zone 1 in Chapter 18 of the ES [APP-070] and its associated appendices assess the England or Zone A in Wales and all proposals for energy projects located in Flood likely significant effects of the DCO Proposed Development on Water Zones 2 and 3 in England or Zones B and C in Wales should be accompanied by a Resources and Flood Risk. This chapter concludes that significant impacts are flood risk assessment (FRA). An FRA will also be required where an energy project

less than 1 hectare may be subject to sources of flooding other than rivers and the

sea (for example surface water), or where the EA, Internal Drainage Board or other

body have indicated that there may be drainage problems. This should identify and

assess the risks of all forms of flooding to and from the project and demonstrate

how these flood risks will be managed, taking climate change into account.

5.7.5 The minimum requirements for FRAs are that they should:

likely during the construction phase, rather than the operation or

adverse impacts regarding water resource and flood risk.

decommissioning phases. Embedded mitigation is proposed to remove any

The DCO Proposed Development is supported with a Flood Risk Assessment

Consequences Assessment (FCA) [AS-004 to AS-006] for Wales. These have

(FRA) [APP-166 and APP-167] for flood risk areas in England and a Flood

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	- be proportionate to the risk and appropriate to the scale, nature and location of the project;	been informed through ongoing engagement with EA, NRW internal drainage boards, local authorities and Natural England.
	- consider the risk of flooding arising from the project in addition to the risk of flooding to the project;	These documents are considered to be in accordance with paragraph 5.7.5 of EN-1 which sets out the minimum requirements in addition to supplementary
	- take the impacts of climate change into account, clearly stating the development lifetime over which the assessment has been made;	guidance documents, Planning Policy Statement 25 (PPS25), TAN15 for Wales (or the latest versions since the adoption of EN-1).
	- be undertaken by competent people, as early as possible in the process of preparing the proposal;	Alltami Brook is noted as an area which is likely to experience a moderate adverse impact as a result of the DCO Proposed Development. However, a
	- consider both the potential adverse and beneficial effects of flood risk	WFD Assessment [APP-165] has concluded compliance with legislation and retention of good status for the water body.
	management infrastructure, including raised defences, flow channels, flood storage areas and other artificial features, together with the consequences of their failure;	Mitigation measures and management plans are secured through the REAC [AS-053].
	 consider the vulnerability of those using the site, including arrangements for safe access; 	Chapter 4 (section 4.3) of the Planning Statement [APP-048] provides an assessment of the DCO Proposed Development against Part 5.7 (Flood Risk)
	- consider and quantify the different types of flooding (whether from natural and	of the NPS.
	human sources and including joint and cumulative effects) and identify flood risk reduction measures, so that assessments are fit for the purpose of the decisions being made;	This demonstrates that the Applicant has complied with Part 5.7 of EN-1.
	 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.	
	5.7.7 Applicants for projects which may be affected by, or may add to, flood risk should arrange pre-application discussions with the EA, and, where relevant, other bodies such as Internal Drainage Boards, sewerage undertakers, navigation	

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	authorities, highways authorities and reservoir owners and operators. Such discussions should identify the likelihood and possible extent and nature of the flood risk, help scope the FRA, and identify the information that will be required by the IPC to reach a decision on the application when it is submitted. The IPC should advise applicants to undertake these steps where they appear necessary, but have not yet been addressed.	
	5.7.8 If the EA has concerns about the proposal on flood risk grounds, the applicant should discuss these concerns with the EA and take all reasonable steps to agree ways in which the proposal might be amended, or additional information provided, which would satisfy the Environment Agency's concerns.	
	5.7.9 In determining an application for development consent, the IPC 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 required, and that any residual risk can be safely managed over the lifetime of the development.	
	5.7.10 For construction work which has drainage implications, approval for the project's drainage system will form part of the development consent issued by the IPC. The IPC will therefore need to be satisfied that the proposed drainage system complies with any National Standards published by Ministers under Paragraph 5(1) of Schedule 3 to the Flood and Water Management Act 2010. In addition, the development consent order, or any associated planning obligations, will need to make provision for the adoption and maintenance of any SuDS, including any necessary access rights to property. The IPC should be satisfied that the most appropriate body is being given the responsibility for maintaining any SuDS, taking into account the nature and security of the infrastructure on the proposed site. The	

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	responsible body could include, for example, the applicant, the landowner, the relevant local authority, or another body, such as an Internal Drainage Board.	Compliance Assessment
	5.7.11 If the EA continues to have concerns and objects to the grant of development consent on the grounds of flood risk, the IPC can grant consent, but would need to be satisfied before deciding whether or not to do so that all reasonable steps have been taken by the applicant and the EA to try to resolve the concerns.	
	5.7.12 The IPC should not consent development in Flood Zone 2 in England or Zone B in Wales unless it is satisfied that the sequential test requirements have been met. It should not consent development in Flood Zone 3 or Zone C unless it is satisfied that the Sequential and Exception Test requirements have been met. The technology-specific NPSs set out some exceptions to the application of the sequential test. However, when seeking development consent on a site allocated in a development plan through the application of the Sequential Test, informed by a strategic flood risk assessment, applicants need not apply the Sequential Test, but should apply the sequential approach to locating development within the site.	
	5.7.13 Preference should be given to locating projects in Flood Zone 1 in England or Zone A in Wales. If there is no reasonably available site in Flood Zone 1 or Zone A, then projects can be located in Flood Zone 2 or Zone B. If there is no reasonably available site in Flood Zones 1 or 2 or Zones A & B, then nationally significant energy infrastructure projects can be located in Flood Zone 3 or Zone C subject to the Exception Test. Consideration of alternative sites should take account of the policy on alternatives set out in Section 4.4 above.	
	5.7.14 If, following application of the sequential test, it is not possible, consistent with wider sustainability objectives, for the project to be located in zones of lower probability of flooding than Flood Zone 3 or Zone C, the Exception Test can be applied. The test provides a method of managing flood risk while still allowing necessary development to occur.	
	5.7.15 The Exception Test is only appropriate for use where the sequential test alone cannot deliver an acceptable site, taking into account the need for energy infrastructure to remain operational during floods. It may also be appropriate to use it where as a result of the alternative site(s) at lower risk of flooding being subject to national designations such as landscape, heritage and nature conservation designations, for example Areas of Outstanding Natural Beauty (AONBs), Sites of Special Scientific Interest (SSSIs) and World Heritage Sites (WHS) it would not be appropriate to require the development to be located on the alternative site(s).	

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	5.7.16 All three elements of the test will have to be passed for development to be consented. For the Exception Test to be passed:	
	- it must be demonstrated that the project provides wider sustainability benefits to the community that outweigh flood risk;	
	 the project should be on developable, previously developed land or, if it is not on previously developed land, that there are no reasonable alternative sites on developable previously developed land subject to any exceptions set out in the technology-specific NPSs; and 	
	- a FRA must demonstrate that the project will be safe, without increasing flood risk elsewhere subject to the exception below and, where possible, will reduce flood risk overall.	
	5.7.17 Exceptionally, where an increase in flood risk elsewhere cannot be avoided or wholly mitigated, the IPC may grant consent if it is satisfied that the increase in present and future flood risk can be mitigated to an acceptable level and taking account of the benefits of, including the need for, nationally significant energy infrastructure as set out in Part 3 above. In any such case the IPC should make clear how, in reaching its decision, it has weighed up the increased flood risk against the benefits of the project, taking account of the nature and degree of the risk, the future impacts on climate change, and advice provided by the EA and other relevant bodies.	
	5.7.19 In this NPS, the term Sustainable Drainage Systems (SuDS) refers to the whole range of sustainable approaches to surface water drainage management including, where appropriate:	
	- source control measures including rainwater recycling and drainage;	
	- infiltration devices to allow water to soak into the ground, that can include individual soakaways and communal facilities;	
	- filter strips and swales, which are vegetated features that hold and drain water downhill mimicking natural drainage patterns;	
	- filter drains and porous pavements to allow rainwater and run-off to infiltrate into permeable material below ground and provide storage if needed;	
	- basins ponds and tanks to hold excess water after rain and allow controlled discharge that avoids flooding; and	

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	 flood routes to carry and direct excess water through developments to minimise the impact of severe rainfall flooding. 	
	5.7.20 Site layout and surface water drainage systems should cope with events that exceed the design capacity of the system, so that excess water can be safely stored on or conveyed from the site without adverse impacts.	
	5.7.21 The surface water drainage arrangements for any project should be such that the volumes and peak flow rates of surface water leaving the site are no greater than the rates prior to the proposed project, unless specific off-site arrangements are made and result in the same net effect.	
	5.7.22 It may be necessary to provide surface water storage and infiltration to limit and reduce both the peak rate of discharge from the site and the total volume discharged from the site. There may be circumstances where it is appropriate for infiltration facilities or attenuation storage to be provided outside the project site, if necessary through the use of a planning obligation.	
	5.7.23 The sequential approach should be applied to the layout and design of the project. More vulnerable uses should be located on parts of the site at lower probability and residual risk of flooding. Applicants should seek opportunities to use open space for multiple purposes such as amenity, wildlife habitat and flood storage uses. Opportunities should be taken to lower flood risk by reducing the built footprint of previously developed sites and using SuDS.	
	5.7.24 Essential energy infrastructure which has to be located in flood risk areas should be designed to remain operational when floods occur. In addition, any energy projects proposed in Flood Zone 3b the Functional Floodplain (where water has to flow or be stored in times of flood), or Zone C2 in Wales, should only be permitted if the development will not result in a net loss of floodplain storage, and will not impede water flows.	
	5.7.25 The receipt of and response to warnings of floods is an essential element in the management of the residual risk of flooding. Flood Warning and evacuation plans should be in place for those areas at an identified risk of flooding. The applicant should take advice from the emergency services when producing an evacuation plan for a manned energy project as part of the FRA. Any emergency planning documents, flood warning and evacuation procedures that are required should be identified in the FRA.	

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5.8 Historic Environment	5.8.5 The absence of designation for such heritage assets does not indicate lower significance. If the evidence before the IPC indicates to it that a non-designated heritage asset of the type described in 5.8.4 may be affected by the proposed development then the heritage asset should be considered subject to the same policy considerations as those that apply to designated heritage assets. 5.8.6 The IPC should also consider the impacts on other non-designated heritage assets, as identified either through the development plan making process (local listing) or through the IPC's decision making process on the basis of clear evidence that the assets have a heritage significance that merits consideration in its decisions, even though those assets are of lesser value than designated heritage assets. 5.8.8 As part of the ES (see Section 4.2) the applicant should provide a description of the significance of the heritage assets affected by the proposed development and the contribution of their setting to that significance. The level of detail should be proportionate to the importance of the heritage assets and no more than is sufficient to understand the potential impact of the proposal on the significance of the heritage asset. As a minimum the applicant should have consulted the relevant Historic Environment Record (or, where the development is in English or Welsh waters, English Heritage or Cadw) and assessed the heritage assets themselves using expertise where necessary according to the proposed development's impact. 5.8.9 Where a development site includes, or the available evidence suggests it has the potential to include, heritage assets with an archaeological interest, the applicant should carry out appropriate desk-based assessment and, where such desk-based research is insufficient to properly assess the interest, a field evaluation. Where proposed development will affect the setting of a heritage asset, representative visualisations may be necessary to explain the impact. 5.8.10 The applicant should ensure	The pipeline route of the DCO Proposed Development has been selected to reduce the impact on the historic environment by avoiding where practicable designated heritage assets. Non-designated and designated heritage assets have been included in the environmental impact assessment as identified within Part 5.8 and assessed against its value based on professional judgements informed by guidance and national policy, this is reported in Chapter 8 of the ES [APP-060]. Consultation and ongoing engagement with heritage advisors of the local planning authority and Historic England identified the need for, scope and scale of archaeological evaluation in support of the application. Chapter 8 of the ES contains the historic environment assessment undertaken for the DCO Proposed Development. The focus of the assessment is on buried heritage assets (archaeological remains and paleoenvironmental deposits) and above ground heritage assets (buildings, structures, monuments and landscapes of heritage interest), including the character and setting of designated heritage assets. This visual impact to the landscape is considered further within Chapter 12 of the ES [APP-064] which further concludes that through the use of sufficient mitigation, the impacts of the new above ground infrastructure can be mitigated. These Chapters conclude that no significant residual effects are anticipated on any other heritage assets or their settings as a result of the construction or operation works. Chapter 4 (section 4.3) of the Planning Statement [APP-048] provides an assessment of the DCO Proposed Development against Part 5.8 (Historic Environment) of the NPS. This demonstrates that the Applicant has complied with Part 5.8 of EN-1.

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	- evidence provided with the application;	
	- any designation records;	
	- the Historic Environment Record, and similar sources of information;	
	- the heritage assets themselves;	
	- the outcome of consultations with interested parties; and	
	- where appropriate and when the need to understand the significance of the heritage asset demands it, expert advice.	
	5.8.12 In considering the impact of a proposed development on any heritage assets, the IPC should take into account the particular nature of the significance of the heritage assets and the value that they hold for this and future generations. This understanding should be used to avoid or minimise conflict between conservation of that significance and proposals for development.	
	5.8.13 The IPC should take into account the desirability of sustaining and, where appropriate, enhancing the significance of heritage assets, the contribution of their settings and the positive contribution they can make to sustainable communities and economic vitality The IPC should take into account the desirability of new development making a positive contribution to the character and local distinctiveness of the historic environment. The consideration of design should include scale, height, massing, alignment, materials and use. The IPC should have regard to any relevant local authority development plans or local impact report on the proposed development in respect of the factors set out in footnote 122.	
	5.8.17 Where loss of significance of any heritage asset is justified on the merits of the new development, the IPC should consider imposing a condition on the consent or requiring the applicant to enter into an obligation that will prevent the loss occurring until it is reasonably certain that the relevant part of the development is to proceed.	
	5.8.18 When considering applications for development affecting the setting of a designated heritage asset, the IPC should treat favourably applications that preserve those elements of the setting that make a positive contribution to, or better reveal the significance of, the asset. When considering applications that do not do this, the IPC should weigh any negative effects against the wider benefits of the application. The greater the negative impact on the significance of the designated heritage asset, the greater the benefits that will be needed to justify approval.	

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	5.8.20 Where the loss of the whole or a material part of a heritage asset's significance is justified, the IPC should require the developer to record and advance understanding of the significance of the heritage asset before it is lost. The extent of the requirement should be proportionate to the nature and level of the asset's significance. Developers should be required to publish this evidence and deposit copies of the reports with the relevant Historic Environment Record. They should also be required to deposit the archive generated in a local museum or other public depository willing to receive it.	
	5.8.21 Where appropriate, the IPC should impose requirements on a consent that such work is carried out in a timely manner in accordance with a written scheme of investigation that meets the requirements of this Section and has been agreed in writing with the relevant Local Authority (where the development is in English waters, the Marine Management Organisation and English Heritage, or where it is in Welsh waters, the MMO and Cadw)) and that the completion of the exercise is properly secured.	
	5.8.22 Where the IPC considers there to be a high probability that a development site may include as yet undiscovered heritage assets with archaeological interest, the IPC should consider requirements to ensure that appropriate procedures are in place for the identification and treatment of such assets discovered during construction.	
5.9 Landscape and Visual	5.9.5 The applicant should carry out a landscape and visual assessment and report it in the ES. (See Section 4.2) A number of guides have been produced to assist in addressing landscape issues. The landscape and visual assessment	Chapter 12 of the ES [APP-064] and its relevant appendices provide an assessment of the likely significant effects of the DCO Proposed Development on landscape character and visual amenity.
	should include reference to any landscape character assessment and associated studies as a means of assessing landscape impacts relevant to the proposed project. The applicant's assessment should also take account of any relevant policies based on these assessments in local development documents in England and local development plans in Wales.	The appendices contain an LVIA Methodology [APP-139]. Chapter 12 concludes that whilst all proposed mitigation will bring a reduction to the visual impact, some significant effects are expected to result on the landscape character and sensitive views as a result of the construction phase of the DCO Proposed Development.
	5.9.6 The applicant's assessment should include the effects during construction of the project and the effects of the completed development and its operation on landscape components and landscape character.	Vegetation loss prior to construction would cause a primary impact on views during both construction and operation, though this is temporary and proposed to be screened where required. It has been identified, however, that significant
	5.9.7 The assessment should include the visibility and conspicuousness of the project during construction and of the presence and operation of the project and potential impacts on views and visual amenity. This should include light pollution effects, including on local amenity, and nature conservation.	visual effects would be possible from residential properties close to the pipeline route and sections of Public Right of Way that are in close proximity to, or cross, the emerging route.

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Topic/Policy	5.9.8 Landscape effects depend on the existing character of the local landscape, its current quality, how highly it is valued and its capacity to accommodate change. All of these factors need to be considered in judging the impact of a project on landscape. Virtually all nationally significant energy infrastructure projects will have effects on the landscape. Projects need to be designed carefully, taking account of the potential impact on the landscape. Having regard to siting, operational and other relevant constraints the aim should be to minimise harm to the landscape, providing reasonable mitigation where possible and appropriate. 5.9.9 National Parks, the Broads and AONBs have been confirmed by the Government as having the highest status of protection in relation to landscape and scenic beauty. Each of these designated areas has specific statutory purposes which help ensure their continued protection and which the IPC should have regard to in its decisions. The conservation of the natural beauty of the landscape and countryside should be given substantial weight by the IPC in deciding on applications for development consent in these areas. 5.9.10 Nevertheless, the IPC may grant development consent in these areas in exceptional circumstances. The development should be demonstrated to be in the public interest and consideration of such applications should include an assessment of: - the need for the development, including in terms of national considerations, and the impact of consenting or not consenting it upon the local economy; - the cost of, and scope for, developing elsewhere outside the designated area or meeting the need for it in some other way, taking account of the policy on alternatives set out in Section 4.4; and - any detrimental effect on the environment, the landscape and recreational	The DCO Proposed Development will not impact any AONB's and Designated National Parks. During operation, above ground infrastructure will be a more permanent fixture on the landscape. Mitigation is proposed as outlined within the REAC [AS-053] such as landscape planting found within the Outline Landscape and Ecological Mitigation Plan (OLEMP) [APP-229]. Chapter 4 (section 4.3) of the Planning Statement [APP-048] provides an assessment of the DCO Proposed Development against Part 5.9 (Landscape and Visual) of the NPS. This demonstrates that the Applicant has complied with Part 5.9 of EN-1.
	opportunities, and the extent to which that could be moderated. 5.9.11 The IPC should ensure that any projects consented in these designated areas should be carried out to high environmental standards, including through the application of appropriate requirements where necessary. 5.9.12 The duty to have regard to the purposes of nationally designated areas also	
	applies when considering applications for projects outside the boundaries of these areas which may have impacts within them. The aim should be to avoid compromising the purposes of designation and such projects should be designed sensitively given the various siting, operational, and other relevant constraints. This	

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	should include projects in England which may have impacts on National Scenic Areas in Scotland.	
	5.9.14 Outside nationally designated areas, there are local landscapes that may be highly valued locally and protected by local designation. Where a local development document in England or a local development plan in Wales has policies based on landscape character assessment, these should be paid particular attention. However, local landscape designations should not be used in themselves to refuse consent, as this may unduly restrict acceptable development.	
	5.9.15 The scale of such projects means that they will often be visible within many miles of the site of the proposed infrastructure. The IPC should judge whether any adverse impact on the landscape would be so damaging that it is not offset by the benefits (including need) of the project.	
	5.9.16 In reaching a judgment, the IPC should consider whether any adverse impact is temporary, such as during construction, and/or whether any adverse impact on the landscape will be capable of being reversed in a timescale that the IPC considers reasonable.	
	5.9.17 The IPC should consider whether the project has been designed carefully, taking account of environmental effects on the landscape and siting, operational and other relevant constraints, to minimise harm to the landscape, including by reasonable mitigation.	
	5.9.18 All proposed energy infrastructure is likely to have visual effects for many receptors around proposed sites. The IPC will have to judge whether the visual effects on sensitive receptors, such as local residents, and other receptors, such as visitors to the local area, outweigh the benefits of the project. Coastal areas are particularly vulnerable to visual intrusion because of the potential high visibility of development on the foreshore, on the skyline and affecting views along stretches of undeveloped coast.	
	5.9.19 It may be helpful for applicants to draw attention, in the supporting evidence to their applications, to any examples of existing permitted infrastructure they are aware of with a similar magnitude of impact on sensitive receptors. This may assist the IPC in judging the weight it should give to the assessed visual impacts of the proposed development.	
	5.9.21 Reducing the scale of a project can help to mitigate the visual and landscape effects of a proposed project. However, reducing the scale or otherwise amending the design of a proposed energy infrastructure project may result in a significant	

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	operational constraint and reduction in function – for example, the electricity generation output. There may, however, be exceptional circumstances, where mitigation could have a very significant benefit and warrant a small reduction in function. In these circumstances, the IPC may decide that the benefits of the mitigation to reduce the landscape and/or visual effects outweigh the marginal loss of function.	
	5.9.22 Within a defined site, adverse landscape and visual effects may be minimised through appropriate siting of infrastructure within that site, design including colours and materials, and landscaping schemes, depending on the size and type of the proposed project. Materials and designs of buildings should always be given careful consideration.	
	5.9.23 Depending on the topography of the surrounding terrain and areas of population it may be appropriate to undertake landscaping off site. For example, filling in gaps in existing tree and hedge lines would mitigate the impact when viewed from a more distant vista.	
5.10 Land Use including open space, green infrastructure and Green Belt	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.	ES Chapter 11 [APP-063] provides a detailed assessment of the land use impacts of the DCO Proposed Development. It concludes that no significant residual effects for Land and Soils associated with the Construction, Operational or Decommissioning Stages of the DCO Proposed Development are identified.
	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.	Chapter 16 of the ES [APP-068] summarises that there would be a residual impact associated with the DCO Proposed Development during construction on community receptors, PRoW's and green infrastructure. Mitigation is included to reduce its significance.
		In addition to this, Chapter 12 of the ES [APP-064] provides a detailed assessment of the visual impacts of the DCO Proposed Development. This chapter concludes that through appropriate mitigation, the magnitude of the construction can bring a reduction to potential impacts notwithstanding an
 5.10.7 During any pre-application discussions with the applicant the LPA should identify any concerns it has about the impacts of the application on land use, having regard to the development plan and relevant applications and including, where relevant, whether it agrees with any independent assessment that the land is surplus to requirements. 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 	identify any concerns it has about the impacts of the application on land use, having regard to the development plan and relevant applications and including, where relevant, whether it agrees with any independent assessment that the land is	acknowledgement of a permanent change. The pipeline route has been designed to avoid built development and proposed major development allocations in adopted and emerging local plans. Existing land use of open space, sports and recreational facilities is not
	affected during the operational stage of the DCO Proposed Development, due	

Overarching National Policy Statement for Energy (EN-1) (July 2011) Part 4 – Assessment Principles Topic/Policy **NPS Requirement (Relevant Policy Text) Compliance Assessment** 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.

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.

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).

5.10.11 However, infilling or redevelopment of major developed sites in the Green Belt, if identified as such by the local planning authority, may be suitable for energy infrastructure. It may help to secure jobs and prosperity without further prejudicing the Green Belt or offer the opportunity for environmental improvement. Applicants should refer to relevant criteria 133 on such developments in Green Belts.

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.

5.10.13 Where the project conflicts with a proposal in a development plan, the IPC should take account of the stage which the development plan document in England or local development plan in Wales has reached in deciding what weight to give to the plan for the purposes of determining the planning significance of what is replaced, prevented or precluded. The closer the development plan document in

to the fact that the pipeline would be mainly located below ground and operating impacts are minimal.

The pipeline must cross the Cheshire West and Chester Council (CWCC) Green Belt in order to reach the Wales border. As per Chapter 5 of the Planning Statement [APP-048] the DCO Proposed Development has established "very special circumstances" that demonstrate that the harm to the Green Belt is outweighed by the benefits of the DCO Proposed Development.

Statutory and non-statutory consultation has been completed and the views of the consultees have been given full consideration when selecting the pipeline route as identified within the Consultation Report [APP-031] and the Chapter 4 of the ES [APP-056] on consideration of alternatives.

The DCO Proposed Development crosses grades 1, 2 and 3 agricultural land. This is assessed in ES Chapter 11 [APP-063], which concludes that there will be a net loss of agricultural land through the permanent acquisition of land for above ground infrastructure and land designated for mitigation delivery. Mitigation is proposed, but this does not remove the impact which is acknowledged and considered on balance to be acceptable given the scale of loss.

Chapter 4 (section 4.3) of the Planning Statement [APP-048] provides an assessment of the DCO Proposed Development against Part 5.10 (Land use including Open Space, Green Infrastructure and Green Belt) of the NPS.

This demonstrates that the Applicant has complied with Part 5.10 of EN-1.

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	England or local development plan in Wales is to being adopted by the LPA, the greater weight which can be attached to it.	
	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.	
	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.	
	5.10.16 In considering the impact on maintaining coastal recreation sites and features, the IPC should expect applicants to have taken advantage of opportunities to maintain and enhance access to the coast. In doing so the IPC should consider the implications for development of the creation of a continuous signed and managed route around the coast, as provided for in the Marine and Coastal Access Act 2009.	
	5.10.17 When located in the Green Belt, energy infrastructure projects are likely to comprise 'inappropriate development' 134. 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.	

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	5.10.18 In Wales, 'green wedges' may be designated locally135. These enjoy the same protection as Green Belt in Wales and the IPC should adopt a similar approach. Green wedges give the same protection as Green Belt in Wales. Green wedges do not convey the same level of permanence of a Green Belt and should be reviewed by the local authority as part of the development plan review process. As with Green Belt, there is a presumption against inappropriate development and the IPC should assess whether there are very special circumstances to justify any proposed inappropriate development.	
	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.	
	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.	
	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.	
	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.	
	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.	

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	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.	
5.11 Noise and Vibration	5.11.3 Factors that will determine the likely noise impact include: - the inherent operational noise from the proposed development, and its characteristics; - the proximity of the proposed development to noise sensitive premises (including residential properties, schools and hospitals) and noise sensitive areas (including certain parks and open spaces); - the proximity of the proposed development to quiet places and other areas that are particularly valued for their acoustic environment or landscape quality; and - the proximity of the proposed development to designated sites where noise may have an adverse impact on protected species or other wildlife. 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.	Chapter 15 of the ES [APP-067] and its relevant appendices reports the outcome of the assessment of likely significant environmental effects arising from the DCO Proposed Development on noise and vibration during the construction, operation and decommissioning stages. Significant impacts caused from likely noise effects arising from the DCO Proposed Development construction activities are proposed to be accordingly mitigated as part of the development of the Detailed Design. The Noise Policy Statement for England and other relevant national policies, regulations, guidance and standards have been considered in the environmental assessment of the potential noise and vibration impacts generated by the DCO Proposed Development. A noise and vibration assessment [APP-146] has informed the EIA. Where the pipeline is to be constructed in urban areas the noise impacts are not considered to be significantly more impactful compared to the typically rural route. Good practice measures will be used to minimise the impact on the closest properties, however, there may be some noise impacts temporarily during construction. Ongoing engagement and consultation has taken place with the EA, Local Authorities and Natural England to discuss the approach. Anticipated likely noise impacts are raised in the ES as significant. Effects arise from the DCO Proposed Development's construction and decommissioning activities, this established in Chapter 15 [APP-067]. In the most part, significant impacts caused from noise effects arising from construction activities will be adequately mitigated through measures detailed in the Noise and Vibration Management Plan. The production of a Noise and
	- an assessment of the effect of predicted changes in the noise environment on any noise sensitive premises and noise sensitive areas; and	Vibration Management Plan and agreement with the Local Authorities will be secured as part of the consolidated CEMP as a DCO requirement. This is considered to reduce the overall impact.

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	- measures to be employed in mitigating noise.	Whilst in most part the construction of the DCO Proposed Development would
	The nature and extent of the noise assessment should be proportionate to the likely noise impact.	accord with the objectives of Part 5.11 of EN-1 and Part 2.20 of EN-4, in some localised areas along the route the construction and (potential) decommissioning activities will give rise to residual noise effects which would
	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.	conflict with Part 5.11 of EN-1 and Part 2.20.
	5.11.6 Operational noise, with respect to human receptors, should be assessed	
	using the principles of the relevant British Standards137 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 Standards138 and other guidance which also give examples of mitigation strategies.	
	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.	
	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.	
	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.	
	5.11.10 When preparing the development consent order, the IPC should consider including measurable requirements or specifying the mitigation measures	

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	to be put in place to ensure that noise levels do not exceed any limits specified in the development consent.	
	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.	
	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.	
	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.	
regional levels, the applicant should undertake and include in their application an financial and technical viabilit	The DCO Proposed Development is considered to address matters related to financial and technical viability required within policy as demonstrated by the supporting Needs Case for the DCO Proposed Development [APP-049]. The	
	5.12.3 This assessment should consider all relevant socio-economic impacts, which may include:	Funding Statement [APP-029] demonstrates the DCO Proposed Development is financially viable and funding is not an impediment to delivery.
	- the creation of jobs and training opportunities;	Chapter 16 of the ES [APP-068] and its relevant appendices provides an
	- the provision of additional local services and improvements to local infrastructure, including the provision of educational and visitor facilities;	assessment of the likely significant effects of the DCO Proposed Development on Population and Human Health. It has been identified that potential effects are expected during construction. These effects relate to traffic affecting
	- effects on tourism;	communities in rural and urban areas, noise and vibration, visual, community
	- the impact of a changing influx of workers during the different construction, operation and decommissioning phases of the energy infrastructure. This could	severance and change in access. There are no significant effects anticipate during operation.
	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).	Consideration of the potential impact of the DCO Proposed Development has informed the selection of the pipeline route, design and construction. The

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	There could also be effects on social cohesion depending on how populations and service provision change as a result of the development; and	impact of the pipeline has been assessed as part of the ES [APP-053 to APP-060, AS-025, APP-062 to APP-072].
	projects within a region and these were developed in a similar timeframe, there	Chapter 4 (section 4.3) of the Planning Statement [APP-048] provides an assessment of the DCO Proposed Development against Part 5.12 (Socio-Economic) of the NPS.
	construction workers to meet the needs of other industries and major projects within the region.	This demonstrates that the Applicant has complied with Part 5.12 of EN-1.
	5.12.4 Applicants should describe the existing socio-economic conditions in the areas surrounding the proposed development and should also refer to how the development's socio-economic impacts correlate with local planning policies.	
	5.12.6 The IPC should have regard to the potential socio-economic impacts of new energy infrastructure identified by the applicant and from any other sources that the IPC considers to be both relevant and important to its decision.	
	5.12.7 The IPC may conclude that limited weight is to be given to assertions of socio-economic impacts that are not supported by evidence (particularly in view of the need for energy infrastructure as set out in this NPS).	
	5.12.8 The IPC should consider any relevant positive provisions the developer 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.	
	5.12.9 The IPC should consider whether mitigation measures are necessary to mitigate any adverse socio-economic impacts of the development. For example, high quality design can improve the visual and environmental experience for visitors and the local community alike.	
5.13 Traffic and Transport	5.13.3 If a project is likely to have significant transport implications, the applicant's ES (see Section 4.2) should include a transport assessment, using the NATA/WebTAG139 methodology stipulated in Department for Transport guidance140, or any successor to such methodology. Applicants should consult the Highways Agency and Highways Authorities as appropriate on the assessment and mitigation.	Chapter 17 of the ES [APP-069] and its relevant appendices include an assessment of the likely significant effects of the DCO Proposed Developme on the environment in respect of Traffic and Transport. This Chapter identifies a number of sensitive receptors and potential effects which are limited exclusively to the construction period of the DCO Proposed Development, are would therefore, by definition, be exclusively temporary in nature, with no
demand management measures to mitigate transport impacts	5.13.4 Where appropriate, the applicant should prepare a travel plan including demand management measures to mitigate transport impacts. The applicant should also provide details of proposed measures to improve access by public transport,	permanent effects likely. Some temporary effects would be likely to last longer than others and it is considered appropriate to reflect the predicted duration of effects when determining the likelihood of significant effects. Operation and decommissioning of the proposed pipeline are not likely to be significant for

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	walking and cycling, to reduce the need for parking associated with the proposal and to mitigate transport impacts.	transport effects and this is supported by the Transport Assessment [APP-161].
	5.13.5 If additional transport infrastructure is proposed, applicants should discuss with network providers the possibility of co-funding by Government for any third-party benefits. Guidance has been issued141 in England142 which explains the circumstances where this may be possible, although the Government cannot	Consultation has been ongoing with both Flintshire County Council (FCC) and Cheshire West and Chester Council (CWCC) Highways Authorities. This consultation has included sharing the scope and conclusions of the transport assessment.
	guarantee in advance that funding will be available for any given uncommitted scheme at any specified time. 5.13.6 A new energy NSIP may give rise to substantial impacts on the surrounding	The DCO Proposed Development does not propose to provide any improvement to, new or additional permanent highway infrastructure. There are temporary measures, diversions etc. which will be introduced during
	transport infrastructure and the IPC should therefore ensure that the applicant has sought to mitigate these impacts, including during the construction phase of the development. Where the proposed mitigation measures are insufficient to reduce the impact on the transport infrastructure to acceptable levels, the IPC should consider requirements to mitigate adverse impacts on transport networks arising from the development, as set out below. Applicants may also be willing to enter into planning obligations for funding infrastructure and otherwise mitigating adverse impacts.	construction. This will be agreed with the highways authorities. Mitigation measures are outlined in the Outline Construction Traffic Management Plan (OCTMP) [APP-224]. Traffic management will be used to mitigate any residual constraints identified along construction traffic routes, as set out in the OCTMP [APP-224]. This includes the use of restrictions such as speed limit reductions, one-way systems, and traffic signals. The need for these measures has been determined on a case-by-case basis to address identified local risks.
	5.13.7 Provided that the applicant is willing to enter into planning obligations or requirements can be imposed to mitigate transport impacts identified in the NATA/WebTAG transport assessment, with attribution of costs calculated in accordance with the Department for Transport's guidance, then development consent should not be withheld, and appropriately limited weight should be applied to residual effects on the surrounding transport infrastructure.	Trenchless crossing techniques will be utilised to restrict the disturbance to major public highways. Construction compounds will also be used to manage construction traffic and delivery of materials and resources. These facilities will allow works to progress smoothly without reliance on peak time deliveries of staff and materials.
	5.13.8 Where mitigation is needed, possible demand management measures must be considered and if feasible and operationally reasonable, required, before considering requirements for the provision of new inland transport infrastructure to deal with remaining transport impacts.	Chapter 4 of the ES [APP-056] provides a logistical assessment of route selection. A key consideration was to avoid and/or reduce adverse environmental effects, maintain operational efficiency and cost-effective design solutions, and consideration of other relevant matters such as available land planning policy. A three-stage appraisals process was developed to identify the
	5.13.11 The IPC may attach requirements to a consent where there is likely to be substantial HGV traffic that:	preferred route option, which included development of strategic corridors, then route options and then finally, refinement of the preferred route option and siting which best achieves the appraisal criteria.
	- control numbers of HGV movements to and from the site in a specified period during its construction and possibly on the routing of such movements;	Chapter 4 (section 4.3) of the Planning Statement [APP-048] provides an assessment of the DCO Proposed Development against Part 5.13 (Traffic and Transport) of the NPS.
	- make sufficient provision for HGV parking, either on the site or at dedicated facilities elsewhere, to avoid 'overspill' parking on public roads, prolonged queuing	This demonstrates that the Applicant has complied with Part 5.13 of EN-1.

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	on approach roads and uncontrolled on-street HGV parking in normal operating conditions; and	
	- ensure satisfactory arrangements for reasonably foreseeable abnormal disruption, in consultation with network providers and the responsible police force.	
	5.13.12 If an applicant suggests that the costs of meeting any obligations or requirements would make the proposal economically unviable this should not in itself justify the relaxation by the IPC of any obligations or requirements needed to secure the mitigation.	
5.14 Waste Management	5.14.4 All large infrastructure projects are likely to generate hazardous and non-hazardous waste. The EA's Environmental Permitting (EP) regime incorporates operational waste management requirements for certain activities. When an applicant applies to the EA for an Environmental Permit, the EA will require the application to demonstrate that processes are in place to meet all relevant EP requirements.	Waste management regulations will be adhered too. Waste will be disposed of in a way that is least damaging to the environment and to human health. The DCO Application is submitted with the Other Consents and Licences Document [APP-046] which sets out other environmental licences, consents, and permits (that sit outside of the DCO) including waste, that would be required to build, operate and maintain the DCO Proposed Development.
	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.	Chapter 14 of the ES [APP-066] and its relevant appendices reports the outcome of the assessment of the likely significant environmental effects of the DCO Proposed Development on Material Assets and Waste. This Chapter concludes that the assessment of material resource consumption and waste generation and disposal to landfill demonstrates that the DCO Proposed Development will have no significant adverse environmental effects. As such, no additional mitigation measures are required. Chapter 4 (section 4.3) of the Planning Statement [APP-048] provides an assessment of the DCO Proposed Development against Part 5.14 (Resource and Waste Management) of the NPS.
	5.14.7 The IPC should consider the extent to which the applicant has proposed an effective system for managing hazardous and non-hazardous waste arising from the construction, operation and decommissioning of the proposed development. It should be satisfied that:	This demonstrates that the Applicant has complied with Part 5.14 of EN-1.
	- 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	

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	 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. 	
	5.14.8 Where necessary, the IPC should use requirements or obligations to ensure that appropriate measures for waste management are applied. The IPC may wish to include a condition on revision of waste management plans at reasonable intervals when giving consent.	
	5.14.9 Where the project will be subject to the EP regime, waste management arrangements during operations will be covered by the permit and the considerations set out in Section 4.10 will apply.	
5.15 Water Quality and Resource	5.15.2 Where the project is likely to have effects on the water environment, the applicant should undertake an assessment of the existing status of, and impacts of the proposed project on, water quality, water resources and physical characteristics of the water environment as part of the ES or equivalent. (See Section 4.2 .) 5.15.3 The ES should in particular describe:	Initial assessments of groundwater and surface water quality and resource, fluvial geomorphology and flood risk have been carried out in order to identify the potential significant effects associated with the construction, operation and decommissioning of the DCO Proposed Development on potentially sensitive receptors.
	- the existing quality of waters affected by the proposed project and the impacts of the proposed project on water quality, noting any relevant existing discharges,	The pipeline route was selected and designed to reduce the impact on flood risk, avoiding high levels of flood risk with the whole route within FZ1.
	proposed new discharges and proposed changes to discharges; - existing water resources147 affected by the proposed project and the impacts of the proposed project on water resources, noting any relevant existing abstraction rates, proposed new abstraction rates and proposed changes to abstraction rates (including any impact on or use of mains supplies and reference to Catchment Abstraction Management Strategies);	Chapter 18 of the ES (Water Resource and Flood Risk) [APP-070] and its associated appendices assess the likely significant effects of the DCO Proposed Development on Water Resources and Flood Risk. This chapter concludes that significant impacts are likely during the construction phase, rather than the operation or decommissioning phases. Embedded mitigation is proposed to remove any adverse impacts regarding water resource and flood risk.
	- existing physical characteristics of the water environment (including quantity and dynamics of flow) affected by the proposed project and any impact of physical modifications to these characteristics; and	The DCO Proposed Development is supported with a FRA [APP-166 and APP-167] for flood risk areas in England and a FCA [AS-004 to AS-006] for Wales. Ongoing engagement with the EA, NRW, the local authorities and Natural
- any impacts of the proposed project on water bodies or protected areas under the Water Framework Directive and source protection zones (SPZs) around potable groundwater abstractions. England informed the assessment These documents are considered to the proposed project on water bodies or protected areas under the England informed the assessment aroundwater abstractions.	England informed the assessment of flood risk. These documents are considered to be in accordance with paragraph 5.7.5 of	
	5.15.4 Activities that discharge to the water environment are subject to pollution control. The considerations set out in Section 4.10 on the interface between planning and pollution control therefore apply. These considerations will also apply	EN-1 which sets out the minimum requirements in addition to supplementary guidance documents Planning Policy Statement 25 (PPS25), TAN15 for Wales (or the latest versions since the adoption of EN-1).
	in an analogous way to the abstraction licensing regime regulating activities that	Alltami Brook is noted as an area which is likely to experience a moderate adverse impact as a result of the DCO Proposed Development. However, a

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	take water from the water environment, and to the control regimes relating to works to, and structures in, on, or under a controlled water148.	WFD Assessment [APP-165] has concluded compliance with legislation and retention of good status for the water body.
	5.15.5 The IPC will generally need to give impacts on the water environment more weight where a project would have an adverse effect on the achievement of the environmental objectives established under the Water Framework Directive. 5.15.6 The IPC should satisfy itself that a proposal has regard to the River Basin Management Plans and meets the requirements of the Water Framework Directive (including Article 4.7) and its daughter directives, including those on priority substances and groundwater. The specific objectives for particular river basins are set out in River Basin Management Plans. The IPC should also consider the interactions of the proposed project with other plans such as Water Resources Management Plans and Shoreline/Estuary Management Plans.	Mitigation measures and management plans are secured through the REAC [AS-053]. Chapter 4 (section 4.3) of the Planning Statement [APP-048] provides an assessment of the DCO Proposed Development against Part 5.15 (Water Quality and Resources) of the NPS. This demonstrates that the Applicant has complied with Part 5.15 of EN-1.
	5.15.7 The IPC should consider whether appropriate requirements should be attached to any development consent and/or planning obligations entered into to mitigate adverse effects on the water environment.	
	5.15.8 The IPC should consider whether mitigation measures are needed over and above any which may form part of the project application. (See Sections 4.2 and 5.1.) A construction management plan may help codify mitigation at that stage.	

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Table 2-2 Accordance with NPS EN-4

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Part 2 - Assessment and Technology-Specific Informati

Part 2 - Assessment and Technology-Specific Information		
Policy	Policy	Policy
2.2 Climate Change Adaption	 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. 2.2.3 The IPC should expect that climate change resilience measures will form part of the relevant impact assessment in the Environment Statement (ES) accompanying an application. For example, future increased risk of flooding should be covered in the flood risk assessment. 	Climate change adaption has been considered when designing and selecting the route option. The risk of flooding, effect of greenhouse gas emissions to the atmosphere, and embedded carbon have been considered as part of the design and assessment of impact and mitigation. This is further expanded on in ES Chapter 7 [APP-059] and ES Chapter 10 [APP-062] and their associated appendices. Climate Change has also been considered cumulatively across each chapter of the ES, wherein the inter-dependencies are assessed. Where a combined impact is considered, it is mitigated or justified accordingly. The design of the pipeline has considered those measures to make the pipeline more resilient and safer to climate change, there are no significant impacts on climate change resulting from the laying of this pipeline. Generally, the use of pipelines offers a betterment on emissions given alternative means of transport such as tanker via road. Compliance with the Climate Change Adaptation policy in Part 4.8 of EN-1 has been covered in Chapter 4 (section 4.2) of the Planning Statement [APP-048]. The Applicant also explains in Chapter 4 that the DCO Proposed Development accords with Part 2.2 of EN-4.
2.3 Consideration of good design	 2.3.1 Section 4.5 of EN-1 sets out the principles for good design that should be applied to all energy infrastructure. 2.3.2 For the reasons given there, applicants should demonstrate good design, in particular where mitigating the impacts relevant to the infrastructure. 	The DCO Proposed Development will utilise best practice through the available technology, industry standards and construction techniques to minimise impacts and local inconvenience appropriately and effectively as demonstrated within Chapter 3 of the Environmental Statement [APP-055]. The design development process included the identification of mitigation commitments, both for mitigation embedded in the design and also good practice mitigation. There will be a number of permanent BVS and AGI locations across the pipeline route which will typically consist of a fenced compound, cathodic protection transformer rectifier cabinets and some above ground connection. Chapter 12 of the ES [APP-064] concludes that with the application of mitigation these would not give rise to a significant adverse impact in terms of their visual prominence.

		The design development process includes the identification of mitigation commitments, for mitigation embedded in design and also good practice mitigation, this is secured through the REAC [AS-053] and OCEMP [AS-055]. Compliance with the Consideration of Good Design policy in Part 4.5 of EN-1 has already been covered in Chapter 4 (section 4.2) of the Planning Statement [APP-048]. The Applicant also explains in Chapter 4 that the DCO Proposed Development accords with Part 2.3 of EN-4.
2.4 Hazardous Substances	2.4.1 Section 4.12 of EN-1 sets out the regime for obtaining hazardous substances consent from the IPC where it is required. All establishments wishing to hold stocks of certain hazardous substances, which include oil and gas, above a threshold quantity must apply to the Hazardous Substances Authority (HSA) for hazardous substances consent. In the case of natural gas, the threshold is 15 tonnes. In relation to gas supply infrastructure, the Health and Safety Executive (HSE) will advise the IPC on the risks, taking into account the quantities of gas to be stored, the installation type and specification, and the local population.	The Pipeline Safety Regulations define a 'major accident hazard pipeline' as one which conveys a dangerous fluid, and which has the potential to cause an accident. The Applicant has engaged and will continue to engage with the HSE with respect to compliance with hazardous substances legislation as shown within the Consultation Report [APP-031]. Where it is required, other consents have been shown in the Other Consents and Licences Document [APP-046]. The Applicant knows of no reason as to why these would not be secured. Compliance with the Hazardous Substances policy in Part 4.12 of EN-1 has already been covered in Chapter 4 (section 4.2) of the Planning Statement [APP-048]. The Applicant also explains in Chapter 4 that the DCO Proposed Development accords with Part 2.4 of EN-4.
2.19 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. 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	A large number of options for the route of the new pipeline were identified and considered, and a sifting process carried out based on environmental, planning and engineering factors. The number of corridor options has been reduced to a single preferred corridor which will be further consolidated through detailed design. The Applicant is considered to have demonstrated the most viable and least harmful route through options appraisal as demonstrated within the Chapter 4 of the ES [APP-056] in compliance with Part 4.4 of EN-1 and Part 2.19 of EN-4.

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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.

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. Contaminated material may need to be removed and disposed of.

Following Statutory consultation some detailed design refinement to reduce the impact of the pipeline has been undertaken and this route is now proposed in this DCO Application.

2.20 Gas and Oil Pipelines: Noise and Vibration

2.20.2 During the pre-construction phase there could be vibration effects from seismic surveys. During construction, tasks may include site clearance, soil movement, ground excavation, tunnelling, trenching, pipe laying and welding, and ground reinstatement. In addition, increased HGV traffic will be generated on local roads for the movement of materials. These types of noise and vibration impacts will need to be assessed.

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.

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.

2.20.5 The ES should include an assessment of noise and vibration effects (see **Section 5.11** of EN-1) including the specific issues outlined above, where they are relevant.

2.20.7 Noise mitigation measures for gas and oil pipelines, in particular their associated above-ground installations, include screening or enclosure of compressors and pumps. Other measures could include the use of sound attenuators on ventilation systems, acoustic lagging on pipework, multi-stage (inherently quiet) control valves, gas turbine exhaust silencers, and high efficiency low speed cooler fans, depending on the specific issues. Vibration mitigation measures could include the use of non-impact piling such as augur boring.

Chapter 15 of the ES **[APP-067]** and its relevant appendices reports the outcome of the assessment of likely significant environmental effects arising from the DCO Proposed Development on noise and vibration during the construction, operation and decommissioning phases. Significant impacts caused from likely noise effects arising from the DCO Proposed Development construction activities are proposed to be accordingly mitigated as part of the development of the Detailed Design.

The Noise Policy Statement for England and other relevant national policies, regulations, guidance and standards have been considered in the environmental assessment of the potential noise and vibration impacts of generated by the DCO Proposed Development. A noise and vibration assessment [APP-146] has informed the EIA.

Where the pipeline is to be constructed in urban areas the noise impacts are not considered to be significantly more impactful compared to the typically rural route. Good practice measures will be used to minimise the impact on the closest properties, however, there may be some noise impacts temporarily during construction.

Ongoing engagement and consultation with the EA, Local Authorities and Natural England will be undertaken to discuss approach.

Anticipated likely noise impacts are raised in the ES as significant. Effects arise from the DCO Proposed Development's construction and decommissioning activities, this established in **Chapter 15 [APP-067].** In the most part, significant impacts caused from noise effects arising from construction activities will be adequately mitigated through measures detailed in the Noise and Vibration Management Plan. The production of a Noise and Vibration

	t for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4) (July 2011)	Management Plan and agreement with the Local Authorities will be secured as part of the consolidated CEMP as a DCO requirement. This considered to reduce the overall impact.	
		Whilst in most part the construction of the DCO Proposed Development would accord with the objectives of Part 5.11 of EN-1 and Part 2.20 of EN-4, in some localised areas along the route the construction and (potential) decommissioning activities will give rise to residual noise effects which would conflict with Part 5.11 of EN-1 and Part 2.20.	
2.21 Gas and Oil Pipeline impacts: Biodiversity, Landscape and Visual	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 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. 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. 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.	Chapter 12 of the ES [APP-064] and its relevant appendices provide an assessment of the likely significant effects of the DCO Proposed Development on landscape character and visual amenity. The appendices contain the Landscape and Visual Impact Assessment (LVIA) Methodology [APP-140]. Chapter 12 concludes that whilst all proposed mitigation will bring a reduction to the visual impact, some significant effects are expected to result on the landscape character and sensitive views as a result of the construction phase of the DCO Proposed Development. Vegetation loss prior to construction would cause a primary impact on views during both construction and operation, though this is temporary and proposed to be screened where required. It is proposed to reinstate land to its former use where possible. During operation, above ground infrastructure will be a more permanent fixture on the landscape. Mitigation is proposed as outlined within the REAC [AS-053] such as landscape planting. Whilst this will take time to fully screen any infrastructure, it is considered that it will reduce the impact of the DCO Proposed Development over time. The Landscape and Ecological Mitigation Plan [APP-230] highlights the proposed screening. Compliance with the Biodiversity policy in Part 5.13 of EN-1 and the Landscape policy in Part 5.9 of EN-1 has already been covered in Chapter 4 (section 4.2) of the Planning Statement [APP-048].	
		Development accords with Part 2.21 of EN-4.	
2.22 Gas and Oil Pipeline impacts: Water Quality and Resource	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.	Initial assessments of groundwater and surface water quality and resource, fluvial geomorphology and flood risk have been carried out in order to identify the potential significant effects associated with the construction, operation and decommissioning of the DCO Proposed Development on potentially sensitive receptors.	

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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.

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.

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.

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;
- 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.

The pipeline route was selected and designed to reduce the impact on flood risk, avoiding high levels of flood risk with the whole route within FZ1.

Chapter 18 of the ES **[APP-070]** and its associated appendices assess the likely significant effects of the DCO Proposed Development on Water Resources and Flood Risk. This chapter concludes that significant impacts are likely during the construction phase, rather than the operation or decommissioning phases. Embedded mitigation is proposed to remove any adverse impacts regarding water resource and flood risk.

The DCO Proposed Development is supported with a FRA [APP-166 and APP-167] for flood risk areas in England and a FCA [AS-004 to AS-006] for Wales. Ongoing engagement with the EA, NRW, the local authorities and Natural England informed the assessment of flood risk.

These documents are considered to be in accordance with paragraph 5.7.5 of EN-1 which sets out the minimum requirements in addition to supplementary guidance documents Planning Policy Statement 25 (PPS25), TAN15 for Wales (or the latest versions since the adoption of EN-1).

Compliance with the Water Quality and Resource policy in Part 5.15 of EN-1 has already been covered in **Chapter 4 (section 4.2)** of the Planning Statement [APP-048].

The Applicant also explains in Chapter 4 that the DCO Proposed Development accords with Part 2.22 of EN-4.

2.23 Gas and Oil Pipeline impacts: Soil and Geology

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.

2.23.3 When considering any application where the pipeline goes under a designated area of geological or geomorphological interest, the applicant should

The predominant soils are freely draining slightly acid to acid loamy soils with more limited areas of freely draining lime-rich soils along with more limited areas of freely draining lime-rich soils and seasonally waterlogged loamy and clayey soils. The area of soil mapped as peat is relatively small.

The DCO Proposed Development has looked at a range of impacts relating to land contamination, geology, soils (type and quality) and mineral resource. Trenchless construction techniques including Horizontal Direction Drilling is proposed as part of the DCO Proposed Development.

Chapter 11 of the ES **[APP-063]** provides a detailed assessment of the land use impacts of the DCO Proposed Development. It concludes that no significant residual effects for Land and Soil associated with the Construction,

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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.

2.23.4 Applicants should consult with the relevant statutory consultees at an early stage.

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 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.

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.

2.23.8 Where HDD is proposed, the applicant should provide an alternative plan for installing the pipeline in the event that HDD fails. Such alternative means could include open cut, micro-tunnelling and tunnelling.

Operational or Decommissioning phases of the DCO Proposed Development are identified. A loss of agricultural land is acknowledged as permanent.

All mitigation measures can be found in the ES [APP-053 to APP-060, AS-025, APP-062 to APP-072] and REAC [AS-053] with Consultation with relevant stakeholders recorded in the Consultation Report [APP-032].

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