



SCOPING OPINION:

Proposed H2Teesside Project

Case Reference: EN070009

Adopted by the Planning Inspectorate (on behalf of the Secretary of State) pursuant to Regulation 10 of The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017

17 May 2023



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1. INTRODUCTION

- 1.0.1 On 06 April 2023, the Planning Inspectorate (the Inspectorate) received an application for a Scoping Opinion from H2 Teesside Limited (the Applicant) under Regulation 10 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) for the proposed H2Teesside Project (the Proposed Development). The Applicant notified the Secretary of State (SoS) under Regulation 8(1)(b) of those regulations that they propose to provide an Environmental Statement (ES) in respect of the Proposed Development and by virtue of Regulation 6(2)(a), the Proposed Development is 'EIA development'.
- 1.0.2 The Applicant provided the necessary information to inform a request under EIA Regulation 10(3) in the form of a Scoping Report, available from:

<http://infrastructure.planninginspectorate.gov.uk/document/EN070009-000037>
- 1.0.3 This document is the Scoping Opinion (the Opinion) adopted by the Inspectorate on behalf of the SoS. This Opinion is made on the basis of the information provided in the Scoping Report, reflecting the Proposed Development as currently described by the Applicant. This Opinion should be read in conjunction with the Applicant's Scoping Report.
- 1.0.4 The Inspectorate has set out in the following sections of this Opinion where it has / has not agreed to scope out certain aspects / matters on the basis of the information provided as part of the Scoping Report. The Inspectorate is content that the receipt of this Scoping Opinion should not prevent the Applicant from subsequently agreeing with the relevant consultation bodies to scope such aspects / matters out of the ES, where further evidence has been provided to justify this approach. However, in order to demonstrate that the aspects / matters have been appropriately addressed, the ES should explain the reasoning for scoping them out and justify the approach taken.
- 1.0.5 Before adopting this Opinion, the Inspectorate has consulted the 'consultation bodies' listed in Appendix 1 in accordance with EIA Regulation 10(6). A list of those consultation bodies who replied within the statutory timeframe (along with copies of their comments) is provided in Appendix 2. These comments have been taken into account in the preparation of this Opinion.
- 1.0.6 The Inspectorate has published a series of advice notes on the National Infrastructure Planning website, including [Advice Note 7: Environmental Impact Assessment: Preliminary Environmental Information, Screening and Scoping \(AN7\)](#). AN7 and its annexes provide guidance on EIA processes during the pre-application stages and advice to support applicants in the preparation of their ES.
- 1.0.7 Applicants should have particular regard to the standing advice in AN7, alongside other advice notes on the Planning Act 2008 (PA2008) process, available from:

<https://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/>

- 1.0.8 This Opinion should not be construed as implying that the Inspectorate agrees with the information or comments provided by the Applicant in their request for an opinion from the Inspectorate. In particular, comments from the Inspectorate in this Opinion are without prejudice to any later decisions taken (e.g. on formal submission of the application) that any development identified by the Applicant is necessarily to be treated as part of a Nationally Significant Infrastructure Project (NSIP) or Associated Development or development that does not require development consent.

2. OVERARCHING COMMENTS

2.1 Description of the Proposed Development

(Scoping Report Sections 2.0 and 3.0)

ID	Ref	Description	Inspectorate's comments
2.1.1	1.3.2	CO ₂ export via Northern Endurance Partnership (NEP) infrastructure	<p>The Scoping Report states that CO₂ from the Proposed Development would be exported to an offshore facility via NEP infrastructure on the adjacent Net Zero Teesside (NZT) site. NZT development consent order (DCO) application was due to be determined by the Secretary of State on 10 May 2023 but the Inspectorate notes that a new deadline of no later than 14 September 2023 was set on 9 May 2023.</p> <p>The ES should clearly describe the relationship between the Proposed Development and any connected projects including the offshore CO₂ facility. This should include the extent to which the Proposed Development is dependent on their delivery and the development timelines of the other projects, with an explanation of how these will be coordinated.</p>
2.1.2	2.1.2 and Sections 3.1 and 3.2	Natural resources	<p>The Scoping Report states that natural gas, oxygen (O₂), nitrogen (N₂) and water will be required for the operational phase of the Proposed Development. Paragraph 2.1.2 states that O₂ and N₂ will be from local sources; an alternative option for O₂ and N₂ supply from an air separation unit (ASU) is also identified (paragraph 3.1.1).</p> <p>The ES should include an estimate of the likely volume of the different natural resources, including those identified above, that will be required in the operation of the Proposed Development, how these will be transported to the site, and an assessment of any likely significant effects arising from the use of such resources.</p>

ID	Ref	Description	Inspectorate's comments
2.1.3	3.1.5	Carbon capture	<p>The Scoping Report states that CO₂ would be captured at a rate in excess of 95%, which is anticipated to be secured through an environmental permit. Should the draft DCO (dDCO) allow for the generating station component to operate independently of the carbon capture, a worst case assessment of likely significant effects should be undertaken. If assessments in the ES rely on a capture rate of 95% it should be clear how this would be secured in the dDCO.</p>
2.1.4	3.1.7 to 3.1.8 and Sections 3.2 to 3.8	Flexibility	<p>The Inspectorate notes the Applicant's desire to incorporate flexibility into their dDCO and its intention to apply a 'Rochdale Envelope' approach for this purpose. This includes options for the various required connection corridors required as part of the project, eg CO₂ export, hydrogen, natural gas, electrical and water connection. Paragraph 3.1.7 states that it is expected that optionality would be reduced, and preferred options confirmed prior to submission of an application. Paragraph 3.1.8 describes that some aspects and features will not be confirmed until an engineering, procurement and construction contractor has been appointed, ie post grant of any DCO. In this instance, it is stated that the Rochdale Envelope will be adopted to define appropriate parameters for use in the EIA.</p> <p>The Applicant should make every attempt to narrow the range of options and explain clearly in the ES which elements of the Proposed Development have yet to be finalised and provide the reasons. At the time of application, any Proposed Development parameters should not be so wide-ranging as to represent effectively different developments. The parameters should use the maximum envelope within which the built development may be undertaken to ensure a worst case assessment. The ES should identify the parameters that have been assumed as the worst case scenario for each aspect scoped in to the assessment and ensure that interactions between aspects are taken into account relevant to those scenarios.</p>

ID	Ref	Description	Inspectorate's comments
			<p>The development parameters should be clearly defined in the dDCO and in the accompanying ES. The Applicant, in preparing an ES, should consider whether it is possible to robustly assess a range of impacts resulting from a large number of undecided parameters. The description of the Proposed Development in the ES must not be so wide that it is insufficiently certain to comply with the requirements of Regulation 14 of the EIA Regulations. The Inspectorate draws the Applicant's attention to Advice Note 9: Rochdale Envelope, which states that <i>"it will be for the authority responsible for issuing the development consent to decide whether it is satisfied, given the nature of the project in question, that it has 'full knowledge' of its likely significant effects on the environment."</i></p> <p>Please also note the Inspectorate's comments regarding alternatives at ID 2.1.17 of this Scoping Opinion.</p> <p>It should be noted that if the Proposed Development materially changes prior to submission of the DCO application, the Applicant may wish to consider requesting a new scoping opinion.</p>
2.1.5	3.1.1 and Table 3-2	Phasing	<p>The Scoping Report states that the Proposed Development would be phased, with a total design capacity of 1.2 gigawatt (GW) thermal for hydrogen production facility across two phases of up to 600 megawatt (MW) thermal in each phase. Table 3-2 of the Scoping Report provides an indicative construction timeline, with Phase 1 commencing mid-2025 and lasting approximately 2 years and Phase 2 commencing late 2027/ early 2028 and lasting 2-3 years.</p> <p>The ES should include an assessment of any likely significant effects arising from the phased nature of the Proposed Development, including risks of major accidents from the proximity of construction activity to the operational hydrogen production plant. Measures required to mitigate any significant effects should be clearly described in drafts of the construction environmental management plan (CEMP)</p>

ID	Ref	Description	Inspectorate's comments
			and/ or operational environmental management plan (OEMP) submitted with the application.
2.1.6	Section 3.2	Hydrogen production facility built parameters	<p>Section 3.2 of the Scoping Report describes the above ground infrastructure that is likely to be required as part of the hydrogen production facility but does not specify any built parameters.</p> <p>The ES should confirm the final parameters (minimum and maximum height, width, length and depth) and location of each component of above ground infrastructure and assess any likely significant effects resulting from their construction, operation/ maintenance, or decommissioning.</p>
2.1.7	Sections 3.3 to 3.8	Construction working width and pipeline trenches	<p>The ES should define the applicable parameters for the construction working width and the pipeline trenches, including depth, or apply a worse case. It should be clear how these parameters are secured through the dDCO. Where significant effects are identified the ES should set out the mitigation proposed to avoid, reduce or offset such effects including where appropriate the specification of construction methods and / or limitations placed on construction activities, and how this would be secured.</p> <p>The Applicant's attention is drawn to the Environment Agency's (EA) comments in Appendix 2 regarding pipeline design.</p>
2.1.8	Sections 3.4 to 3.8 and Table 3-2	Special crossings	<p>The Scoping Report outlines that a range of crossing methodologies are under consideration for the natural gas supply and hydrogen pipeline corridors. This could include open cut and/ or trenchless methodologies depending on engineering and environmental constraints. The ES should confirm the minimum and maximum depths of the crossings. The ES should clarify whether it is intended to adopt a similar approach in respect of any below ground routing for the electrical, water and other gases connections.</p>

ID	Ref	Description	Inspectorate's comments
			<p>Table 3-1 of the Scoping Report confirms that only trenchless techniques are being considered for crossings of the River Tees and horizontal directional drilling (HDD) or use of existing pipeline for Greatham Creek. The Inspectorate welcomes the use of trenchless techniques in environmentally sensitive areas but notes that trenchless techniques have different land requirements; the full range of environmental effects should be considered when determining a preferred construction method.</p> <p>The ES should confirm the crossing methodologies assumed for each connection corridor. If flexibility is sought regarding the use of open cut or trenchless techniques, the ES should assess the available options or identify and assess a worst case scenario as relevant to each aspect and identify relevant mitigation, and how this would be secured.</p> <p>The Applicant's attention is drawn to the EA's comments in Appendix 2 regarding construction methodologies, including those affecting existing flood defences.</p>
2.1.9	Section 3.6	Electrical connection corridor	<p>The Scoping Report states that in addition to on-site electricity generated from the Steam Turbine Generator, an alternative supply will be required with options under consideration. Paragraph 3.6.4 of the Scoping Report states that the electrical connection could be above or below ground or a combination.</p> <p>The ES should confirm the final parameters for the selected electrical connection. If above ground, this should include the maximum number, height and locations of any pylons, and length of overhead line. The assessment of likely significant effects should take account of this infrastructure alongside the plan and other associated infrastructure.</p>

ID	Ref	Description	Inspectorate's comments
2.1.10	Section 3.11	Construction access	The ES should identify the locations of access routes to site for construction and maintenance of the connection corridors. Any likely significant effects resulting from their construction, operation and decommissioning should be assessed.
2.1.11	Section 3.11	Construction deliveries	The Scoping Report indicates that options are being explored for construction materials to be delivered by boat and/ or rail. The ES should include an assessment of the worst case allowed for in the dDCO.
2.1.12	3.11.5	Temporary working areas and construction compounds	The ES should identify the location and size of the temporary working areas for the connection corridors, as well as the temporary construction compounds. Any likely significant effects resulting from their use should be assessed.
2.1.13	Section 3.12	Site clearance and remediation	<p>The Scoping Report states that site clearance and remediation of Main Site A would be carried out by Teesworks under a separate consent. It is therefore not proposed to assess this within the ES. The ES should make clear the scope and status of the consent for site remediation, as well as the timescales for the works, and a clear description of how and at what point the baseline has been defined for the purpose of assessment.</p> <p>For Main Site B these powers would be sought within the DCO application, and an assessment is proposed within the ES, should this site be selected.</p> <p>The ES should include an assessment of any likely significant effects arising from site clearance and remediation works, for which powers are sought within the dDCO and confirm how this is to be secured.</p> <p>The ES should include information about works required to facilitate development that is proposed outside of the DCO application,</p>

ID	Ref	Description	Inspectorate's comments
			including their scope and extent, status of any relevant consents required, timescales and degree of certainty.
2.1.14	3.13.7	Waste	In order to inform a robust assessment of likely significant effects, the ES should provide information on the storage, management and disposal of waste, including tunnel arisings. Any assumptions in this regard, for example traffic movements, waste handling and contaminated land, should be clearly stated in the ES.
2.1.15	3.16.1	Lighting	In addition to operational lighting, the ES should clearly describe the location and design of lighting required along the construction working widths and at construction compounds. Any likely significant effects should be assessed.
2.1.16	3.18.2	Decommissioning	<p>The ES assessment of impacts resulting from decommissioning should be proportionate but include a description of the process and methods of decommissioning, land use requirements and estimated timescales. A description of any assumptions made in the assessment, eg about the approach to retention or removal of pipelines, should be provided.</p> <p>Any decommissioning associated with dismantling and replacing elements of the Proposed Development once they reach the end of their design life should be assessed if significant effects are likely to occur. The Inspectorate notes paragraph 4.2.3 of the overarching NPS for Energy (NPS EN-1), which states that the ES should cover the environmental effects arising from decommissioning of the project.</p>
2.1.17	Chapter 4	Alternatives	The Scoping Report identifies that several alternative options are under consideration, including two sites (Main Site A and Main Site B) for the hydrogen production plant. Paragraph 4.3.7 of the Scoping Report states that if alternatives still exist at the time of application, the ES will consider and assess the worst case impacts.

ID	Ref	Description	Inspectorate's comments
			The Inspectorate's comments at ID 2.1.4 about flexibility apply equally to alternatives. For the avoidance of doubt, the ES should consider the worst case impacts and identify mitigation as required for any options that are sought within the dDCO.
2.1.18	N/A	Easements	The description of the physical characteristics of the Proposed Development in the ES should include the details of required easements, to ensure that the extent of the likely impacts from the Proposed Development (for example, sterilisation of mineral resource) is fully understood.
2.1.19	N/A	Hydrogen pipeline safety criteria	The ES should explain what design guidelines and safety criteria are being followed for the hydrogen pipeline, and how any health and safety risks would be managed during operation/ maintenance. The Inspectorate notes that hydrogen is an emerging technology and that the regulatory framework and standards are likely to continue to evolve. Please also refer to the Inspectorate's comments at ID 3.13.3 of this Scoping Opinion.

2.2 EIA Methodology and Scope of Assessment

(Scoping Report Section 7.0)

ID	Ref	Description	Inspectorate's comments
2.2.1	7.3.4	Assessment methodology and significance criteria	The Scoping Report states that methods used in assessment will be outlined in each aspect chapter by reference to published standards, guidelines, and criteria. For some aspect sections in the Scoping Report, no reference is made to the standards proposed to be used so the Inspectorate is not able to provide substantive comment. The ES should describe the standards and guidelines used for each aspect and explain why these are appropriate to the assessment.
2.2.2	7.3.10	Baseline conditions	The Inspectorate notes that Main Sites A and B appear to partially overlap with the Order Limits of the NZT project. Any implications for the future baseline arising in the event of commencement of development authorised by the NZT DCO, should it be made, should be described in the ES.
2.2.3	Section 7.5	Transboundary	<p>The Inspectorate on behalf of the SoS has considered the Proposed Development and concludes that the Proposed Development is unlikely to have a significant effect either alone or cumulatively on the environment in a European Economic Area State. In reaching this conclusion the Inspectorate has identified and considered the Proposed Development's likely impacts including consideration of potential pathways and the extent, magnitude, probability, duration, frequency and reversibility of the impacts.</p> <p>The Inspectorate considers that the likelihood of transboundary effects resulting from the Proposed Development is so low that it does not warrant the issue of a detailed transboundary screening. However, this position will remain under review and will have regard</p>

ID	Ref	Description	Inspectorate's comments
			<p>to any new or materially different information coming to light which may alter that decision.</p> <p>Note: The SoS' duty under Regulation 32 of the 2017 EIA Regulations continues throughout the application process.</p> <p>The Inspectorate's screening of transboundary issues is based on the relevant considerations specified in the Annex to its Advice Note Twelve, available on our website at http://infrastructure.planninginspectorate.gov.uk/legislation-and-advice/advice-notes/</p>
2.2.4	N/A	Study areas	<p>Each ES aspect chapter should describe the study area used in the assessment. It should explain how the extent of the study area has been established by reference to guidelines and discussions with statutory consultation bodies as relevant. The ES should include a figure/ figures to identify the final study areas for each aspect, including the location of receptors considered.</p>
2.2.5	N/A	Matters scoped into the assessment	<p>For the avoidance of doubt, as there is no summary table identifying matters scoped in or out of the aspects listed below, this Scoping Opinion is adopted on the basis that the impacts on receptors listed at the specified paragraphs in the Scoping Report are scoped into the assessment subject to the Inspectorate's comments at 1.0.4:</p> <ul style="list-style-type: none"> ▪ Surface water, flood risk and water resources – paragraph 6.3.20. ▪ Geology, hydrogeology and contaminated land – paragraph 6.4.88. ▪ Ecology and nature conservation – paragraph 6.6.18. ▪ Marine ecology – paragraph 6.8.24. ▪ Traffic and transportation – paragraph 6.9.10. ▪ Landscape and visual amenity – paragraph 6.10.8.

ID	Ref	Description	Inspectorate's comments
			<ul style="list-style-type: none"> ▪ Cultural heritage – paragraph 6.11.10. ▪ Socio-economics and land use – paragraph 6.12.21. ▪ Climate change – paragraph 6.13.15. ▪ Materials and waste – paragraph 6.15.7.
2.2.6	N/A	Impacts from dewatering	<p>The Scoping Report does not specify if dewatering would be required in the construction of the Proposed Development. The ES should describe the likely need for dewatering, identify sensitive receptors which may be affected and assess any likely significant effects.</p> <p>The ES and associated management plan documents should set out the minimum environmental requirements that have been assessed and that contractors will be required to apply when managing dewatering discharges.</p>
2.2.7	N/A	CEMP	<p>The Inspectorate welcomes the commitment to submit a framework CEMP with the ES. In addition to the matters listed at paragraph 3.13.7 of the Scoping Report, the Inspectorate advises that the framework CEMP should contain details of all measures referred to in the ES required to mitigate construction impacts, unless these are secured by alternative mechanisms (in which case this should be explained and the alternative mechanism confirmed).</p> <p>The ES should clearly describe the efficacy of proposed measures and any residual effects following implementation, and it should also assess any inter-related effects of the mitigation measures, eg the presence of any noise screening required to be considered in landscape and visual impact assessment.</p>
2.2.8	N/A	Operational environmental management plan (OEMP)	<p>The Scoping Report references use of an environmental management plan during operation to mitigate potential significant adverse effects. The Applicant should provide a draft/ outline version of an OEMP</p>

ID	Ref	Description	Inspectorate's comments
			containing details of any measures referred to in the ES and demonstrate how these will be secured through the dDCO or an alternative legal mechanism.
2.2.9	N/A	Avoidance/ mitigation measures	The Scoping Report makes reference to the use of avoidance measures to reduce effects to not significant eg avoidance of tree / linear habitat feature removal. The ES should set out any measures relied upon to avoid significant effects and demonstrate how these will be secured through the dDCO or other legal mechanism.
2.2.10	N/A	Monitoring	The Scoping Report references monitoring of mitigation in several aspect sections. Where the ES concludes that monitoring is required, the Applicant should provide a document that describes the monitoring activities, who has responsibility for them, frequency, any trigger points for remedial action and how it is secured through the dDCO or other legal mechanism.

3. ENVIRONMENTAL ASPECT COMMENTS

3.1 Air Quality

(Scoping Report Section 6.2)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.1.1	6.2.14	Operational road traffic emissions	<p>The Scoping Report identifies that operational traffic flows will be below the screening criteria of 500 Light Duty Vehicles or 100 Heavy Duty Vehicles per day, as set out in the Institute of Air Quality Management (IAQM) guidance published in 2017 and therefore seeks to scope out operational road traffic emissions.</p> <p>The Inspectorate agrees that providing traffic flows are confirmed as being less than the IAQM criteria for detailed assessment, this matter can be scoped out. The ES should also demonstrate that cumulative vehicle movements with other developments would not exceed the IAQM thresholds based on worst case assessments. If such confirmation is not possible, an assessment should be provided.</p>
3.1.2	6.2.18	Construction phase Non-Road Mobile Machinery (NRMM) emissions	<p>The Scoping Report seeks to scope out construction phase NRMM emissions. The Scoping Report references relevant guidance and distance to receptors in concluding that significant effects from NRMM when best practice measures are in place are unlikely. The Inspectorate agrees with this matter being scoped out, however best practice measures and other such mitigation should be clearly secured through the dDCO.</p>
3.1.3	6.2.23	Operational emissions of water vapour, N ₂ , O ₂ , H ₂ , CH ₄ and CO ₂	<p>The Scoping Report seeks to scope out the assessment of water vapour, N₂, O₂, H₂, methane (CH₄), and carbon dioxide (CO₂). The Scoping Report explains that any emissions would be small and diluted, however does not provide information on volumes or</p>

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			<p>evidence to substantiate this statement. The Applicant's attention is drawn to the response from the United Kingdom Health Security Agency (UKHSA) regarding assessment of 'non-threshold pollutants'.</p> <p>The Inspectorate therefore does not agree that these matters can be scoped out of the ES at this stage. The ES should include confirmation of the likely volume of emissions and concentration of pollutants, and assess any potential for significant effects.</p> <p>Please refer to the Inspectorate's comments at ID 3.12.4 regarding the assessment of CH₄ as part of the greenhouse gas (GHG) assessment in the Climate Change ES Chapter.</p>
3.14	6.2.25	Emissions from the connection corridors	The Inspectorate agrees that operation of the hydrogen pipeline, natural gas, electrical and water connections is not likely to result in significant effects from emissions to air and this matter can be scoped out of the ES.

ID	Ref	Description	Inspectorate's comments
3.15	N/A	Public and private amenity areas	Paragraph 6.5.4 of the Scoping Report describes that there are areas of public and private amenity in proximity to the Proposed Development, eg around Coatham. These are not discussed in relation to this aspect. The assessment should consider the potential for any likely significant effects on these areas and users of the areas.
3.16	N/A	Construction emissions from vehicles	The assessment of effects arising from construction vehicle emissions should also be informed by Natural England's guidance relating to assessment of road traffic emissions under the Habitats Regulations, NEA001.

3.2 Surface Water, Flood Risk and Water Resources

(Scoping Report Section 6.3)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.2.1	N/A	N/A	No matters have been proposed to be scoped out of the assessment.

ID	Ref	Description	Inspectorate's comments
3.2.2	6.3.11 to 6.3.19	Flood zones	<p>The Scoping Report identifies Flood Zones across the Study Area however does not include sub-categories, such as an area of high probability (Flood Zone 3a) or functional floodplain (Flood Zone 3b). The ES should provide an accurate and consistent description of the baseline flood risk for each element of the Proposed Development and the description should clearly distinguish between Flood Zones, including Flood Zones 3a and 3b where relevant.</p> <p>The Applicant's attention is drawn to the EA's comments in Appendix 2 regarding Flood Zones; the Inspectorate notes that there is a discrepancy between information in the Scoping Report, which identifies that Main Site B is entirely within Flood Zone 1, and the EA's information, which states it is primarily within Flood Zone 1 but partially within Flood Zones 2 and 3. The Flood Zone should be confirmed within the ES and mitigation identified as required.</p>
3.2.3	6.3.20	Pollution of surface watercourses during operation	The Scoping Report scopes in assessment for this matter during construction and decommissioning. Consideration of the potential for accidental spillages during operation is proposed to be assessed as part of Geology, Hydrogeology and Contaminated Land (paragraph 6.4.88 of the Scoping Report). Cross-reference should be made to the

ID	Ref	Description	Inspectorate's comments
			outcome of that assessment in the Surface Water, Flood Risk and Water Resources chapter of the ES.
3.2.4	6.3.27	Effluent streams and discharges	<p>The ES should clearly describe the effluent streams and discharges associated with construction and operation of the Proposed Development and any permits required/ implications for existing permits. Effort should be made to agree the scope and methodology of assessment work, including water quality modelling, in respect of effluent streams and other discharges to water with relevant consultation bodies. Evidence of discussions and any agreements reached should be provided within the ES.</p> <p>The Applicant's attention is drawn to the EA's comments in Appendix 2 regarding assessment of foul drainage in the ES.</p>
3.2.5	Section 6.3	Additional assessments	<p>The Inspectorate notes that a Flood Risk Assessment (FRA), Water Framework Directive (WFD) assessment and nutrient neutrality assessment will be prepared. Information from these assessments should be used to inform preparation of the ES.</p> <p>The Scoping Report describes surface water bodies and groundwater bodies designated under the WFD, which are located close to the Proposed Development. The ES should include an assessment of the likely significant effects to both types of WFD water body.</p> <p>The Applicant's attention is drawn to the EA's comments in Appendix 2 regarding scope of the WFD and nutrient neutrality assessments.</p>
3.2.6	N/A	Scope of assessment – FRA	The FRA underpinning the ES assessment should additionally cover matters including the effect that temporary mounds of soil in the floodplain could have on flood risk, the volumes of water displacement involved and mitigation measures where necessary.

ID	Ref	Description	Inspectorate's comments
			The Applicant's attention is drawn to the EA's comments in Appendix 2 regarding scope of the FRA and climate change allowances.
3.2.7	N/A	Impacts from frac-out	<p>The ES should include an assessment of likely significant effects arising from frac-out, ie fracking fluid breakout during HDD works, on aquatic environment receptors and water resource receptors, including consideration of any impacts arising from clean-up works.</p> <p>The Applicant's attention is drawn to Natural England's comments in Appendix 2.</p>
3.2.8	N/A	Scope of assessment	The ES should assess the potential for an increase in offsite flood risk arising from any proposed ground raising within the development boundary, including the pipeline corridors. Effort should be made to agree the scope of the assessment, including the requirement for flood modelling, with the EA. The ES should identify any mitigation required to address likely significant effects.

3.3 Geology, Hydrogeology and Contaminated Land

(Scoping Report Section 6.4)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.3.1	6.4.88	Potential effects	In addition to the impact pathways described at paragraph 6.4.88 of the Scoping Report, the ES should include an assessment of effects arising from changes to groundwater flow, levels and quality during construction, operation and decommissioning, including from the presence of below ground pipelines, where likely significant effects could occur. The Inspectorate notes that paragraph 6.3.20 of the Scoping Report states that potential impacts to groundwater flow would be assessed as part of this aspect.

ID	Ref	Description	Inspectorate's comments
3.3.2	6.4.88	Drainage strategy	The Scoping Report refers to implementation and maintenance of operational drainage systems to control potential impacts from pollution to surface watercourses. The Applicant should provide a draft/outline version of the drainage strategy and demonstrate how this will be secured through the dDCO or other legal mechanism. Potential construction phase impacts should also be addressed in a drainage strategy.
3.3.3	6.4.89	Baseline information	The desk-based assessments and conceptual site model should be submitted as part of the ES. In addition to Main Sites A and B, these documents should provide information about land within the connection corridors. The baseline information should be sufficient to enable an assessment of the likely significant effects arising from the construction and operation of the Proposed Development, including consideration of the range of construction methods proposed or on

ID	Ref	Description	Inspectorate's comments
			<p>the basis of any assumed construction methods where they are not known at time of ES preparation. This should include ground investigation if deemed necessary to sufficiently understand the baseline environment.</p> <p>The Inspectorate notes that risk from unexploded ordnance (UXO) is scoped into the assessment of major accidents and hazards. UXO is not referenced in Section 6.4 of the Scoping Report, but the Inspectorate expects the collection of baseline data to include information to support assessment in the Major Accidents and Hazards ES Chapter.</p>
3.3.4	6.4.90	Intrusive investigation	<p>The ES should include a full description of any further intrusive investigation required and confirm how this is to be secured. Effort should be made to agree the scope with all relevant consultation bodies, eg Hartlepool Council and Stockton-on-Tees Council where it relates to land within their administrative area.</p>
3.3.5	N/A	Drinking water protected areas	<p>The Applicant's attention is drawn to the EA's comments in Appendix 2 regarding groundwater bodies being designated as drinking water protected areas. The status of the groundwater bodies should be reflected in the baseline description and assessment of potential impacts in the ES.</p>

3.4 Noise and Vibration

(Scoping Report Section 6.5)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.4.1	6.5.26	Operational road traffic noise	<p>The Scoping Report seeks to scope out effects from operational road traffic noise on the basis that the Proposed Development is unlikely to have a significant impact on existing traffic flows on the local road network. Paragraph 3.15.6 of the Scoping Report identifies that there is an anticipated maximum workforce of 85 staff and that deliveries of operational and maintenance consumables will be managed to minimise traffic movements. The Inspectorate recognises that significant effects are unlikely during operation, however the ES should provide further information on the predicted number of movements required for consumables during operation to demonstrate that these will remain under the thresholds.</p> <p>The Inspectorate considers that providing that this information is included in the ES, based on the low number of traffic movements predicted during operation, this matter can be scoped out of the ES. Please refer to the Inspectorate's comment about operational HGV movements at ID 3.8.1 of this Scoping Opinion.</p>

ID	Ref	Description	Inspectorate's comments
3.4.2	6.5.13	Assessment of vibration during operation	<p>The Scoping Report states that significant vibration impacts during operation are not likely due to the distance between the Proposed Development and receptors but operational activities will be briefly considered in the ES. The ES should describe the activities likely to give rise to vibration effects.</p>

ID	Ref	Description	Inspectorate's comments
			<p>The Inspectorate agrees with the Applicant's approach to this matter. The ES should include confirmation of any sources of vibration, and the likely levels together with the relevant thresholds for significant effects at the nearest receptor(s) to demonstrate that significant effects are not likely to occur.</p>

3.5 Ecology and Nature Conservation (including Aquatic Ecology)

(Scoping Report Section 6.6)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.5.1	6.6.15	Great crested newt (GCN) surveys	<p>The Scoping Report seeks to scope out surveys on land located to the south of the River Tees on the basis that the Industry Nature Conservation Association (INCA) (a membership organisation including the Tees Valley Wildlife Trust) confirmed for the NZT project that there are known occurrences of GCN in this area. Table 6-3 of the Scoping Report states that land to the north of the River Tees would be surveyed if a District Level Licensing (DLL) approach is not agreed with Natural England.</p> <p>The Inspectorate agrees that surveys on land to the south of the River Tees can be scoped out of the ES.</p>
3.5.2	6.6.18	Effects on relevant habitats and species from water quality changes during operation	<p>The Scoping Report states that temporary effects to water quality during construction would be considered but does not reference potential effects during operation, for example from spillages or discharges, extraction of water and/ or effluent discharge. The ES should include an assessment of this matter or otherwise demonstrate why significant effects are not likely to occur. Cross-reference should be made to the assessment in the Surface Water, Flood Risk and Water Resources ES Chapter.</p>
3.5.3	Table 6-3	Bat activity surveys along connection corridors	<p>The Scoping Report identifies the intention to limit surveys to areas of suitable habitat where permanent effects eg loss are predicted.</p> <p>The Inspectorate accepts, as stated in Table 6-3 of the Scoping Report, that such surveys may not be warranted in relation to temporary habitat loss. However, the Inspectorate considers that they may be required to inform the assessment of likely significant</p>

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			<p>effects and the design of appropriate mitigation in relation to the effects of construction lighting and effects resulting from impacts to linear habitat features.</p> <p>These matters should be considered in the ES where likely significant effects could occur, supported by appropriate evidence such as bat activity survey data. The Applicant should seek agreement from relevant consultees and provide a description of the approach taken in the ES, incorporating any relevant advice.</p>

ID	Ref	Description	Inspectorate's comments
3.5.4	6.6.18 and Section 6.2 (Air Quality)	Air quality effects on sensitive ecological receptors	<p>The Scoping Report states that air quality impacts from construction traffic emissions and operational emissions will be considered but does not specify for which pollutants. Section 6.2 (air quality) of the Scoping Report identifies which pollutants are proposed to be assessed but does not reference nitrogen deposition or acid deposition as potential impacts which could affect sensitive ecological receptors.</p> <p>For the avoidance of doubt, the potential for nitrogen deposition and/or acid deposition to arise and result in effects on ecological receptors should be considered in the ES, and subject to assessment where a pathway for significant effects is identified.</p>
3.5.5	Table 6-3	Bird surveys, including functionally linked land (FLL)	<p>The ES should give a full description of how areas of FLL have been identified for survey, the levels of precaution applied to this process, and the outcomes of consultation and degree of agreement reached with key stakeholders. It is also advised that the scope and methodology of the ornithological surveys is discussed with the relevant consultees and agreed where possible.</p>

ID	Ref	Description	Inspectorate's comments
3.5.6	Table 6-3	GCN – information to support of assessment of effects	<p>With regard to the Proposed Development site to the north of the River Tees, the Scoping Report states it is proposed to consult NE about whether a District Level Licensing (DLL) approach would be available for this project. If not, it is proposed to undertake habitat suitability assessment surveys to inform the assessment in the ES, in addition to eDNA and/ or presence/ absence surveys. It also sets out the circumstances where population size class assessment surveys may be undertaken to inform the assessment of effects.</p> <p>The Inspectorate is content with this approach to GCN.</p> <p>The Applicant's attention is drawn to Natural England's comments in Appendix 2 and the Inspectorate's Advice Note 11, Annex C.</p>
3.5.7	Table 6-3	Otter and water vole surveys	<p>The Scoping Report states that presence/ absence surveys will be undertaken in locations where open cut crossings of watercourses and ditches will be required.</p> <p>The Inspectorate notes that trenchless crossings are proposed at several locations, but no information is presented as to whether otter or water vole are likely to be present here and/ or whether crossing installation would generate potential impact pathways.</p> <p>The survey area should include trenchless crossing locations, or the ES should otherwise demonstrate why a significant effect is not likely to occur in these locations.</p>
3.5.8	Table 6-3	Detailed surveys for reptiles, freshwater species, terrestrial vertebrates and plants	<p>The Scoping Report states that the requirement for species' surveys will be informed by further desk-based assessment and the findings of the Phase 1 Habitat survey.</p> <p>The Inspectorate agrees with the approach set out. Effort should be made to agree the survey scope and methodology with the relevant consultation bodies.</p>

ID	Ref	Description	Inspectorate's comments
			<p>The ES should include an assessment of likely significant effects to these receptors where these could occur, or information demonstrating absence of a likely significant effect and where agreement has been reached with relevant consultation bodies.</p>
3.5.9	6.6.32	Biodiversity net gain (BNG)	<p>The Scoping Report states that the project will aspire to achieve net gain and that a BNG assessment will be undertaken. The ES should clearly distinguish between mitigation for significant adverse effects on biodiversity from wider enhancement measures.</p> <p>The Applicant's attention is drawn to Natural England's comments in Appendix 2 regarding the latest Biodiversity Metric 4.0.</p>
3.5.10	N/A	Scope of assessment	<p>The assessment of temporary disturbance impacts to habitats should include consideration of likely significant effects arising from the construction of the hydrogen pipeline in proximity to Greatham Creek and Saltern Wetlands.</p> <p>The Applicant's attention is drawn to the EA's comments in Appendix 2 in this regard.</p>
3.5.11	N/A	Confidential annexes	<p>Public bodies have a responsibility to avoid releasing environmental information that could bring about harm to sensitive or vulnerable ecological features. Specific survey and assessment data relating to the presence and locations of species such as badgers, rare birds and plants that could be subject to disturbance, damage, persecution, or commercial exploitation resulting from publication of the information, should be provided in the ES as a confidential annex. All other assessment information should be included in an ES chapter, as normal, with a placeholder explaining that a confidential annex has been submitted to the Inspectorate and may be made available subject to request.</p>

3.6 Ornithology

(Scoping Report Section 6.7)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.6.1	N/A	N/A	No matters have been proposed to be scoped out of the assessment.

ID	Ref	Description	Inspectorate's comments
3.6.2	N/A	Operational discharges to water	In addition to the impact pathways identified in the Scoping Report, the Inspectorate advises that consideration should be given to the potential for operational discharges to water to result in likely significant effects to bird qualifying features of the Teesmouth and Cleveland Coast Special Protection Area and Ramsar. The ES should include an assessment of these matters where significant effects are likely, or otherwise provide evidence to demonstrate why significant effects are not likely.
3.6.3	N/A	Confidential annexes	Please refer to the Inspectorate's comments at ID 3.5.11 of this Scoping Opinion.

3.7 Marine Ecology

(Scoping Report Section 6.8)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.7.1	6.8.11	Effects to the Southern North Sea Special Area of Conservation (SAC) during construction, operation and decommissioning	<p>The Scoping Report seeks to scope out effects to the Southern North Sea SAC, for which harbour porpoise is a qualifying feature, on the basis that it is located more than 100km from the Proposed Development and, as such, there are no impact pathways. In this regard, the Inspectorate also notes that paragraph 6.8.27 of the Scoping Report states that there are no impact pathways from underwater sound arising from the proposals.</p> <p>The Inspectorate agrees that the SAC can be scoped out of the ES on the basis described in the Scoping Report.</p>
3.7.2	6.8.12	Project specific marine ecology surveys	<p>The Scoping Report seeks to scope out surveys on the basis that the assessment will use baseline data from a range of other sources, including surveys completed for the nearby NZT project, as well as construction techniques that are designed to avoid impact pathways, eg trenchless crossings or existing pipelines for the proposed watercourse crossings. It is stated that requirement for surveys will be kept under review with NE and the MMO.</p> <p>The Inspectorate agrees that marine mammal and benthic ecology surveys can be scoped out on the basis set out in the Scoping Report. If the scope of the Proposed Development changes to include additional works within the marine environment (ie beyond watercourse crossings as described at paragraph 6.8.17 of the Scoping Report), the need for surveys of affected areas should be discussed with relevant consultation bodies with a view to seeking agreement on requirements and scope, as required.</p>

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			<p>The description of the baseline environment in the ES should reference any further data collected for pre-commencement or construction monitoring surveys associated with NZT and/or other nearby developments. The ES should explain any limitations or assumptions made about use of this data, together with how the assessment has addressed these difficulties.</p> <p>With regard to fish surveys, the Inspectorate notes that potential impact pathways from underwater sound, and possibly entrapment and entrainment have been identified. The Applicant should determine the need for fish surveys to provide an up-to-date and adequate understanding of the baseline to support assessment of these impact pathways in the ES. Effort should be made to agree the requirement for, and scope of, any survey work with the relevant consultation bodies.</p>
3.7.3	6.8.19 to 6.18.20	Effects from noise and vibration during construction of pipelines at River Tees and Greatham Creek	<p>The Scoping Report seeks to scope out effects from noise and vibration on the basis that trenchless technologies and/ or existing pipelines or tunnels would be used.</p> <p>The Inspectorate notes that paragraph 6.8.21 of the Scoping Report states that '<i>many design elements... have yet to be confirmed, development design and impact avoidance measures have not been finalised.</i>' The Scoping Report does not include any information about the predicted noise and vibration levels from the proposed works or sensitivity of ecological receptors.</p> <p>The Inspectorate therefore does not have sufficient information to reasonably conclude that there will be no likely significant effects. Accordingly, the ES should include an assessment of these matters, or information demonstrating agreement with the relevant consultation bodies and the absence of likely significant effects.</p>

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.7.4	6.8.27	Effects from underwater sound during construction, operation and decommissioning	<p>The Scoping Report seeks to scope out effects from underwater sound as there are no impact pathways eg no use of vessels, drilling/ piling and/ or UXO clearance is expected in the marine environment.</p> <p>The Inspectorate notes that the proposed hydrogen pipeline would cross the tidal River Tees and that there is potential for noise and vibration impacts arising from construction of the pipeline to migratory fish. This matter should be assessed in the ES. The assessment should consider the worst case construction methods sought within the dDCO, and the potential for cumulative effects with other developments in the area. The ES should identify mitigation required in respect of any significant effects identified and explain how this would be secured in the dDCO.</p>

ID	Ref	Description	Inspectorate's comments
3.7.5	6.8.23	BNG	<p>The Inspectorate notes that permanent loss of habitat in the intertidal area is not proposed but if the approach changes, consideration would be given to the '<i>requirements of the Environment Act 2021</i>' including a BNG assessment. The ES should clearly distinguish between mitigation for significant adverse effects on biodiversity from wider enhancement measures. The mitigation hierarchy should be adhered to where practicable.</p>
3.7.6	N/A	Coastal saltmarsh habitat	<p>The Applicant's attention is drawn to the EA's comments in Appendix 2 regarding the presence of coastal saltmarsh habitat adjacent to Greatham Creek. The baseline habitat should be correctly described in the ES and supporting figures. The assessment of impacts arising from installation of the proposed pipelines should include</p>

ID	Ref	Description	Inspectorate's comments
			consideration of this habitat and identify any mitigation required for likely significant effects, and how this would be secured in the dDCO.
3.7.7	N/A	Fish entrapment and entrainment	The ES should include an assessment of effects arising from the risk of fish entrapment and entrainment associated with abstraction of water from WFD waterbodies and/ or cooling water systems required for the Proposed Development. The ES should identify any mitigation required, and how this would be secured in the dDCO.
3.7.8	N/A	Discharge of cooling waters	If cooling water is proposed to be discharged to the Tees Estuary or other WFD waterbodies, the ES should include an assessment of likely significant effects arising from thermal properties of the discharge of the cooling water. The assessment should include consideration of cumulative effects with other development in the area. Effort should be made to agree the scope of assessment, and any modelling required, with relevant consultation bodies including the EA and Natural England. The ES should identify any mitigation required, and how this would be secured in the dDCO.
3.7.9	N/A	Hard structures	If any hard structures (eg pipe outflow, rock armouring or equivalent) are proposed then the assessment of habitat loss and disturbance should also consider potential changes in coastal processes and introduction of invasive non-native species (INNS).

3.8 Traffic and Transportation

(Scoping Report Section 6.9)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.8.1	6.9.14	Impacts from operational traffic	<p>The Scoping Report seeks to scope out operational road traffic flows from detailed assessment, stating that the anticipated maximum workforce of 85 staff on site within a 24 hour period is unlikely to give rise to significant effects. This approach is to be agreed with the Local Highway Authority.</p> <p>Having considered the nature and characteristics of the Proposed Development, the Inspectorate agrees that subject to confirmation of the number and type of all operational vehicle movements (ie HGVs in addition to staff) in the ES description of development, operational traffic movements are not likely to result in significant effects and that an assessment of this matter can be scoped out of the ES. Agreement should be sought from the relevant Highways Authority.</p>
ID	Ref	Description	Inspectorate's comments
3.8.2	6.9.22	Future baseline	<p>The ES should clearly explain how the future baseline has been calculated and how this has considered other planned development in the area using the same road network during the construction period.</p>
3.8.3	N/A	Abnormal indivisible loads (AIL)	<p>The Scoping Report states that local ports are being considered for transport of AIL and that consideration will be given to the appropriate port and AIL routes during the design process.</p> <p>The ES should include an assessment of the likely significant effects arising from transportation of AIL via each proposed transportation</p>

ID	Ref	Description	Inspectorate's comments
			method and identify any mitigation measures required and how these would be secured.
3.8.4	N/A	Hazardous loads	The ES should include an assessment of likely significant effects arising from the transportation of hazardous loads during construction and operation of the Proposed Development, and identify any mitigation required (including drainage systems) and how this would be secured through the dDCO.

3.9 Landscape and Visual Amenity

(Scoping Report Section 6.10)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.9.1	6.10.19	Night-time light pollution impacts	<p>The Applicant proposes to scope out impacts of night-time light pollution on landscape and visual amenity receptors. The Scoping Report states that due to the industrial nature of the surrounding area, existing levels of lighting are high and significant effects on sensitive receptors are unlikely to occur.</p> <p>The Inspectorate considers that, given the scale of the Proposed Development, the ES should provide an assessment of the effects of night-time light pollution on landscape and visual receptors during all phases of the Proposed Development or provide further justification for why significant effects would not arise.</p>

ID	Ref	Description	Inspectorate's comments
3.9.2	6.10.6	Visual amenity receptors	It is not clear if users of waterways have been identified as visual receptors in the assessment. The ES should either assess effects on users of the waterways, such as the River Tees, and the Tees Bay and Estuary, or provide a justification as to why they would not experience significant effects.
3.9.3	6.10.14	Zone of Theoretical Visibility (ZTV) / Study area	The Scoping Report states that the ZTV will be generated using a bare ground Digital Terrain Model (DTM) and the representative viewpoints will be identified in the ZTV considering the main building envelope, the potential stacks and taller columns and any structures required for the connections. The ES should clearly evidence and justify the final extent of the ZTV used and ensure that any

ID	Ref	Description	Inspectorate's comments
			assessment of significance is based on the worst-case scenario. Effort should be made to agree the ZTV with relevant consultation bodies.
3.9.4	6.10.14	Representative viewpoints	The Inspectorate notes that the Applicant proposes to produce representative viewpoints from approximately 12 locations identified within the ZTV. Both winter and summer views should be included. In finalising the viewpoint locations, the Applicant should consider the production of representative viewpoints from the North York Moors National Park, national trails, River Tees/Tees Bay and Estuary and the scheduled monuments at Eston Nab to support a comprehensive assessment of visual impact to recreational users. Effort should be made to agree the locations and photomontage type with relevant consultation bodies.
3.9.5	6.10.16	Site layout and parameters	The ES should explain how the siting and design of the proposed structures (and materials to be used) have been selected with the aim of minimising impacts to landscape and visual receptors. The Applicant's attention is drawn to Natural England's comments in Appendix 2 in respect of design policies and codes.
3.9.6	6.10.20	Landscape mitigation	The ES should clearly describe any proposed planting and how the landscape and visual effects are expected to alter as any such planting matures.
3.9.7	N/A	North Yorkshire Moors National Park	North Yorkshire Moors National Park should be considered as a receptor in the assessment of effects to landscape character, where significant effects are likely to occur to this receptor, or the ES should otherwise demonstrate why significant effects are not likely to occur. Any assessment should include effects on the special qualities of the designated landscape.

ID	Ref	Description	Inspectorate's comments
3.9.8	N/A	Photomontages	The ES should ensure that the viewpoints and subsequent photomontages chosen are appropriate and representative for whether Main Site A or Main Site B is taken forward as the final design for the Proposed Development. Where flexibility is sought, the photomontages produced should demonstrate the visual impacts arising from options still under consideration to enable effects to be fully understood.

3.10 Cultural Heritage

(Scoping Report Section 6.11)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.10.1	6.11.18	Direct impacts to marine cultural heritage assets (below Mean High Water Springs (MHWS))	<p>The Applicant intends to scope out direct impacts to marine cultural heritage assets during construction and operation of the Proposed Development. The Scoping Report states that no construction works are proposed in areas below MHWS where marine heritage assets are likely to be located and more highly concentrated.</p> <p>The Inspectorate agrees that based on the information provided, construction and operation of the Proposed Development is unlikely to give rise to significant effects from direct impacts to marine cultural heritage assets and is therefore content for this matter to be scoped out.</p>
3.10.2	6.11.18	Direct impacts to marine heritage assets located in River Tees	<p>The Applicant proposes to scope out direct impacts to heritage assets located in the River Tees as construction methodologies such as HDD or Micro-bored Tunnel (MBT) will be utilised to minimise disturbance to sensitive receptors during construction of the hydrogen pipeline beneath the river.</p> <p>The Inspectorate agrees that based on the information provided, construction and operation of the Proposed Development is unlikely to give rise to significant effects from direct impacts to marine cultural heritage assets in the River Tees and therefore agrees that this matter can be scoped out.</p>

ID	Ref	Description	Inspectorate's comments
3.10.3	6.11.11	Desk-based assessment	<p>The Scoping Report states that a desk-based assessment would be produced. No reference is made to whether any further surveys are required to inform the archaeological baseline.</p> <p>The Inspectorate is of the opinion that should the desk-based assessment identify the need for further investigation, such as geophysical survey, monitoring of geotechnical ground investigations or trial trenching, the Applicant should make every effort to agree the scope of such activities with relevant consultation bodies. The results and assessment of effects to archaeology should be clearly presented within the ES along with a description of any uncertainties or assumptions applied, and confirmation of any further survey and evaluation required and how this would be secured.</p>
3.10.4	6.11.12	Study Area	<p>The ES should clearly describe how the final study areas have been defined according to sensitivity of receiving heritage assets and potential impacts during construction and operation of the Proposed Development. The Applicant should seek agreement with the relevant consultation bodies regarding the study areas used to inform the assessment and evidence this in the ES.</p>
3.10.5	6.11.18	Indirect impacts to marine cultural heritage assets, including those within the River Tees	<p>Indirect impacts to marine cultural heritage assets, such as temporary and permanent changes to their setting during construction and operation of the Proposed Development respectively, have not been explicitly identified in the Scoping Report. The ES should consider the potential for indirect impacts to marine heritage assets to give rise to likely significant effects or provide a justification as to why they would not experience significant effects.</p>
3.10.6	N/A	Historic landscape character	<p>The ES should also assess effects to historic landscape character where significant effects are likely to occur.</p>

3.11 Socio-Economics and Land Use

(Scoping Report Section 6.12)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.11.1	6.12.22	Effects to best and most versatile (BMV) agricultural land – construction and operation	<p>The Scoping Report describes that parts of the proposed hydrogen pipeline corridor comprise BMV land under the Agricultural Land Classification (ALC) system. ALC Grade 2 land is located near Kirkleatham. Grade 3 land near Greatham is identified as being possible BMV land.</p> <p>The Applicant seeks to scope out effects on BMV land on the basis that impacts would be temporary during pipeline installation. It is stated that in the worst case scenario of open cut method, soil that is disturbed would be retained in-situ to infill the trench.</p> <p>The Scoping Report does not state the area of BMV land that would be affected or whether there would be a requirement for restrictions over the pipeline corridor during operation. No information is provided about soil handling and reinstatement following construction and/ or requirements for maintenance during operation. These matters should be addressed in the ES. The Inspectorate notes that National Policy Statement (NPS) EN-4, paragraph 2.23.7 requires information about mitigation measures for soil to be provided.</p> <p>The Inspectorate does not have sufficient information to agree that this matter can be scoped out of assessment. It is also noted that paragraph 3.5.3 of the Scoping Report states that the pipeline could be above ground and it is therefore unclear whether any BMV land would be permanently sterilised. The ES should provide an assessment of effects to BMV land and an explanation of how any loss of BMV land would be minimised, or demonstrate that impacts would</p>

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			not give rise to likely significant effects, including evidence of agreement with relevant consultation bodies.

ID	Ref	Description	Inspectorate's comments
3.11.2	6.12.4	Baseline data	The Scoping Report states that 2011 census data would be used. The Office for National Statistics (ONS) has commenced publication of 2021 census data and the Inspectorate advises that reference should be made to 2021 data where relevant to the assessment.
3.11.3	N/A	Effects on housing affordability and availability	<p>The Scoping Report does not reference potential impacts on housing during construction. It is noted that construction workforce peak will be approximately 3,100 people per day (paragraph 3.14.1 of the Scoping Report), but it is not stated whether these would be non-home-based workers or if there would be a requirement for temporary living accommodation.</p> <p>The Inspectorate advises that if a significant number of non-home-based construction workers are required, this could foreseeably have an impact on local availability of affordable housing, including from cumulative effects with other large developments nearby.</p> <p>The ES should provide an assessment of effects on the local private rented sector and tourist accommodation or demonstrate that impacts would not give rise to likely significant effects, including evidence of agreement with relevant consultation bodies.</p>

3.12 Climate Change

(Scoping Report Section 6.13)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.12.1	N/A	N/A	No matters have been proposed to be scoped out of the assessment.

ID	Ref	Description	Inspectorate's comments
3.12.2	Figure 10	GHG emissions arising from disturbance of landfill sites	The Inspectorate notes from Figure 10 of the Scoping Report that there are active and historic landfill sites present within the Proposed Development site. If any underground construction works cannot avoid these sites, the potential to increase, or give rise to, GHG emissions from these sites during construction should be included in the assessment.
3.12.3	N/A	CO ₂ emissions	The Inspectorate notes that the CO ₂ generated from the Proposed Development is proposed to be exported via the proposed NZT project and to the proposed NEP offshore storage. The ES should describe the status of these projects and any uncertainty around this method of exportation and/ or alternative proposals. Please refer to the Inspectorate's comments at ID 2.1.3 of this Scoping Opinion regarding assessment of CO ₂ emissions should the dDCO seek or allow for powers for the generating station component to operate independently of the carbon capture.
3.12.4	N/A	CH ₄	Paragraph 6.2.23 of the Scoping Report indicates that CH ₄ would be emitted during operation of the Proposed Development. It is stated that this would be small scale and be readily diluted, but the Scoping Report does not confirm the expected volume. The Inspectorate notes that CH ₄ is a GHG. The ES should include consideration of CH ₄

ID	Ref	Description	Inspectorate's comments
			emissions as part of the GHG assessment or otherwise demonstrate why the emissions are so small so as not to result in likely significant effects. The ES should describe any mitigation required in respect of CH ₄ emissions and confirm how this would be secured in the dDCO.

3.13 Major Accidents and Disasters

(Scoping Report Section 6.14)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.13.1	6.14.25 and Appendix B	Leaks and spills of specified substances – construction and operation (including transportation via road for diesel and aqueous ammonia)	<p>The Scoping Report lists substances which are considered to have no to low risk of resulting in major accidents and/ or hazards, and which are therefore proposed to be scoped out of further consideration in the ES. These substances are aqueous ammonia (NH₃), amine solution, substances used to treat water and effluent, diesel and substances used during construction (including liquid concrete), which would be subject to storage controls.</p> <p>For NH₃ and diesel, it is also stated that the quantity present on site and/ or in tankers is likely to be small and any impact would not reach the criteria for a major accident and/ or disaster. The ES should clarify whether the criteria referred to is that which is described at paragraph 6.14.20 of the Scoping Report, taken from the Control of Major Accidents and Hazards (COMAH) Regulations for ascertaining credible major accident and disaster scenarios. Regarding potential for road traffic accidents, it is stated that the quantity of any materials would be contained within drainage systems.</p> <p>The Inspectorate notes that these matters will be considered in the Geology, Hydrogeology and Contaminated Land ES Chapter (noting comments about operational phase impacts at ID 3.2.3 and ID 3.8.4, that these matters should also be considered in the Surface Water, Flood Risk and Water Resources, and Traffic and Transportation ES Chapters). However, the Inspectorate does not have sufficient information to exclude the possibility of leaks and spills resulting in risks of major accidents and disasters to the surrounding water environment, which is subject to international conservation designations. The ES should therefore include an assessment or</p>

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			otherwise explain why significant effects are not likely; cross-reference can be made to assessments in other ES Chapters to avoid duplication of effort.
3.13.2	Appendix B	Marine accident – operation	The Scoping Report states that primary process materials will be transported via pipeline and " <i>marine transport is not applicable.</i> " The Inspectorate agrees that this matter can be scoped out of the ES.
3.13.3	Appendix B	Failure of electrics and other systems/ utilities (water supply and effluent disposal) – operation	The Inspectorate notes the reasoning and evidence presented in the Scoping Report, including the provision of back-up power and the installation of safety systems to avoid a credible major accident and risk scenario. The Inspectorate considers that on this basis it is unlikely that risks to or from the Proposed Development from these matters would result in significant effects but notes that hydrogen is an emerging technology and that the regulatory framework and standards are likely to continue to evolve. As such the ES should provide information about how risks from failure of systems would be managed, including the design standards proposed to be used and why these are considered to be appropriate, together with an outline of any management plans proposed to demonstrate that likely significant effects can be excluded.
3.13.4	Appendix B	Meteorological hazards – operation	<p>The Scoping Report seeks to scope out impacts from high windspeed, low temperatures/ heavy snow, high temperatures/ heatwave, drought and electrical storms (including lightning), on the basis that such impacts would be managed through engineering design.</p> <p>The Inspectorate does not have sufficient evidence about the engineering design to exclude the possibility of significant effects from vulnerability to meteorological hazards. The Inspectorate is not in a position to agree to scope this matter out from the assessment.</p>

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			The ES should include an assessment of this matter or information demonstrating agreement with the relevant stakeholders and the absence of a likely significant environmental effect. The Inspectorate advises that cross-referencing can be made to assessments in other ES aspect chapters, eg Climate Change, to avoid duplication of effort.
3.13.5	Appendix B	Earthquakes and ground stability – construction and operation	Based on the reasoning and evidence presented in the Scoping Report, the Inspectorate is content that risks to or from the Proposed Development from these matters are not likely to result in significant effects. These matters can be scoped out of the assessment.
3.13.6	Appendix B	Poor air quality – operation	<p>The Scoping Report seeks to scope out effects as combustion emissions would be controlled and regulated in accordance with an environmental permit and subject to mitigation. It is stated that the Proposed Development will not contribute significantly towards road traffic pollution. The Inspectorate notes that this matter would be considered in other parts of the ES, including an air quality assessment of operational process emissions (as described at paragraph 6.2.24 of the Scoping Report) and is unlikely to lead to significant environmental effects and is satisfied that this matter can be scoped out of the Major Accidents and Disasters ES Chapter.</p> <p>In reaching this conclusion, the Inspectorate notes that potential risks from accidental release of toxic and/ or asphyxiant gas are separately scoped into the assessment.</p>
3.13.7	Appendix B	Wildfires – construction and operation	Based on the reasoning and evidence presented in the Scoping Report, the Inspectorate is content that risks to or from the Proposed Development from this matter are not likely to result in significant effects. It can be scoped out of the assessment.

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.13.8	Appendix B	Malicious attacks – operation	Based on the reasoning and evidence presented in the Scoping Report, the Inspectorate is content that risks to or from the Proposed Development from intentional violence, arson, cyber attacks and terrorism, are not likely to result in significant effects. These matters can be scoped out of the assessment.

ID	Ref	Description	Inspectorate's comments
3.13.9	6.14.27 to 6.14.28	Mitigation measures	The Inspectorate notes that the operational Proposed Development will be regulated through other consents and licences such as Hazardous Substances Consent, COMAH Licensing and environmental permits, which will include systems, controls and management procedures. A summary of the other consents and licences required, the aspects that they cover, and application status, should be included in the ES. The ES should include a clear description of mitigation measures required to reduce effects to not significant (or to a risk level as low as is reasonably practicable) and how they will be secured, including where this is through other consents and licences.
3.13.10	Appendix B	Construction hazards	In addition to the items listed in Table B-1 of the Scoping Report, potential risks of major accidents and/ or hazards from construction hazards to waterways and rail should be assessed, where significant effects likely to occur.
3.13.11	Appendix B	Nuclear facilities	Paragraph 6.14.7 of the Scoping Report states that Hartlepool nuclear power station is located nearby to the Proposed Development but no reference is made to the potential risks of major accidents and/ or hazards to or from nuclear facilities.

ID	Ref	Description	Inspectorate's comments
			<p>The Inspectorate notes that it is proposed to scope in potential risks from domino events at the Teesside cluster of major hazard sites. This should include consideration of nuclear facilities where significant effects are likely to occur. The Applicant is referred to the comments from The Office for Nuclear Regulation at Appendix 2 of this Scoping Opinion.</p>
3.13.12	N/A	Health and Safety Executive	<p>The Inspectorate notes that the Proposed Development is located in an area that has several COMAH installations and that it is proposed to assess the potential risks of major accidents and disasters arising from a domino event. Effort should be made to agree the scope and methodology of assessment work with relevant consultation bodies, including the Health and Safety Executive.</p>

3.14 Materials and Waste

(Scoping Report Section 6.15)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.14.1	6.15.14	Waste arising from extraction, processing and manufacture of construction components and products	The Inspectorate is content to scope this matter out noting controls that are in place meaning that significant effects are unlikely.
3.14.2	6.15.14	Environmental impacts associated with the management of waste	The Scoping Report states that likely significant effects on water resources, air quality, noise or traffic resulting from the generation, handling, on-site temporary storage or off-site transport of materials and waste would be assessed in other relevant chapters within the ES. The ES should identify likely waste streams, and should ensure an assessment of effects during construction, operation and decommissioning. The Inspectorate agrees that impacts associated with management of waste do not need to be addressed in detail in the standalone Materials and Waste ES Chapter provided that adequate cross referencing is made to where it is addressed elsewhere in the ES, to ensure a full and robust assessment is undertaken.
3.14.3	6.15.14	Direct impacts on Mineral Safeguarding Areas (MSAs)	<p>The Applicant proposes to scope out effects on MSAs (anhydrite and salt) on the basis that they occur at depth and could be extracted in an alternative manner (salt) or there is evidence that the resource has been sufficiently depleted (anhydrite).</p> <p>The Scoping Report does not state whether there would be a requirement for restrictions of development in the locations of the MSA (salt). The Proposed Development therefore has potential to sterilise the mineral resource and impact on any above ground infrastructure required in connection with salt extraction. The</p>

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
			<p>Inspectorate therefore considers that this matter cannot be scoped out. Potential impacts on sterilisation of salt resource should be assessed within the Socio-economics and Land-use ES Chapter or further information should be presented to demonstrate that significant effects are not likely to occur.</p> <p>With regards to anhydrite, the Inspectorate is content to scope this matter out of the ES provided that information is included to demonstrate that the resource is sufficiently depleted.</p>
3.14.4	6.15.14	Effects associated with decommissioning	The Inspectorate agrees that decommissioning effects can be scoped out of the ES providing the commitment to producing a Decommissioning Environmental Management Plan (DEMP) is secured within the dDCO. The DEMP should include assessment of matters listed in Table 6-8 of the Scoping Report.
3.14.5	Table 6-8	Operation – changes in availability of materials	Having considered the nature of the Proposed Development, the Inspectorate is satisfied that limited quantities of materials are likely to be required during operation and significant effects are therefore not likely to occur. The Inspectorate agrees that this matter can be scoped out of further assessment.

ID	Ref	Description	Inspectorate's comments
N/A	N/A	N/A	N/A

3.15 Human Health

(Scoping Report Section 6.16)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.15.1	6.16.11	Diet and nutrition, housing, relocation and radiation	<p>Having considered the nature and characteristics of the Proposed Development, the Inspectorate agrees that there are no likely sources of impact for diet and nutrition, relocation and radiation determinants and these matters can be scoped out of the ES.</p> <p>Regarding housing, please refer to the Inspectorate's comments at ID 3.11.3 and comments made by UKHSA in their representation relating to availability of housing. If significant effects are likely to arise from the requirement to temporarily accommodate construction workers, then the ES should also consider the effects on human health from reduced housing availability and increased housing costs.</p>

ID	Ref	Description	Inspectorate's comments
3.15.2	N/A	Scope of assessment – private water supplies	The Inspectorate advises that potential human health impacts, hazards and public health receptors surrounding private drinking water supplies during the construction phase, including the potential for contamination or disruption, should be scoped into further assessment work and reported upon within the human health chapter of the ES, where significant effects are likely.
3.15.3	N/A	Mental health impacts	The Scoping Report does not refer to mental health impacts. The Inspectorate advises that given the scale and nature of the Proposed Development, effects on mental health, including the potential for local public concern through understanding of risk/ risk perception for local communities and for the wider public in respect of the proposed

ID	Ref	Description	Inspectorate's comments
			hydrogen pipeline should be assessed and reported upon within the ES, where significant effects are likely.
3.15.4	N/A	Electronic and magnetic fields (EMF)	Please refer to the Inspectorate's comments at ID 3.17.1 with regard to assessment of the effects from EMF.

3.16 Cumulative and Combined Effects

(Scoping Report Section 6.17)

ID	Ref	Applicant's proposed matters to scope out	Inspectorate's comments
3.16.1	N/A	N/A	No matters have been proposed to be scoped out of the assessment.

ID	Ref	Description	Inspectorate's comments
3.16.2	6.17.2	Methodology	The Applicant's attention is drawn to Table 2 in the Planning Inspectorate's Advice Note 17 which sets out the expected approach to identifying projects to be included in a cumulative impact assessment. This approach includes projects wider than those with extant planning permission.
3.16.3	6.17.4	Long and short list of projects	The Inspectorate understands from the information provided that the list of projects will be revised as consultation with stakeholders is undertaken and the ES is prepared. The ES should identify a 'cut-off' date with respect to this process so that the currency of it can be understood.
3.16.4	N/A	Study area	The Inspectorate notes the information provided on Figure 15 of the Scoping Report; however, this is provided without any justification of the projects identified. The ES should explain the reasoning behind the study area and the relationship with that which has informed the aspect chapters.

3.17 Electronic Interference

(Scoping Report Section 8.2)

ID	Ref	Applicant's proposed aspect to scope out	Inspectorate's comments
3.17.1	8.2.3	Impacts to human health from EMF	<p>The Scoping Report seeks to scope out a standalone assessment of EMF on the basis that these will be considered in the human health assessment. It is stated that there are no nearby residential properties likely to be affected.</p> <p>Paragraph 3.6.4 of the Scoping Report states that there is potential for installation of new above and/ or below ground electrical connections. The human health assessment should demonstrate how the Proposed Development will comply, as a minimum, with relevant EMF guidelines in respect of these components (if they are required) to demonstrate that it will not give rise to significant effects.</p>
3.17.2	8.2.5	Electronic interference to television and radio signals, and mobile phone reception	<p>Based on the reasoning and evidence presented in the Scoping Report, the Inspectorate is content that this matter is not likely to result in significant effects. It can be scoped out of the assessment.</p>

3.18 Aviation

(Scoping Report Section 8.2)

ID	Ref	Applicant's proposed aspect to scope out	Inspectorate's comments
3.18.1	8.2.6	Impacts to aviation from the presence of tall structures	<p>The Scoping Report seeks to scope out this aspect on the basis that the maximum heights of new structures are anticipated to be comparable with structures that previously occupied the site. It is stated that the Civil Aviation Authority will be consulted and that the need for an assessment will be reviewed if structures are required to be taller. The Inspectorate agrees this aspect can be scoped out on that basis.</p> <p>Please refer to the Inspectorate's comments at ID 2.1.6 in respect of maximum (height) parameters.</p>

APPENDIX 1: CONSULTATION BODIES FORMALLY CONSULTED

TABLE A1: PRESCRIBED CONSULTATION BODIES¹

SCHEDULE 1 DESCRIPTION	ORGANISATION
The Health and Safety Executive	Health and Safety Executive
The National Health Service Commissioning Board	NHS England
The relevant Integrated Care Board	NHS North East and North Cumbria Integrated Care Board
Natural England	Natural England
The Historic Buildings and Monuments Commission for England	Historic England
The relevant fire and rescue authority	Cleveland Fire Brigade
The relevant police and crime commissioner	Cleveland Police and Crime Commissioner
The relevant parish council(s) or, where the application relates to land [in] Wales or Scotland, the relevant community council	Billingham Town Council
	Greatham Parish Council
The Environment Agency	The Environment Agency
The Maritime and Coastguard Agency	Maritime & Coastguard Agency
The Maritime and Coastguard Agency - Regional Office	The Maritime and Coastguard Agency - Hull (Beverley) Marine Office
The Marine Management Organisation	Marine Management Organisation (MMO)
The Civil Aviation Authority	Civil Aviation Authority
The Relevant Highways Authority	Hartlepool Borough Council
	Redcar and Cleveland Borough Council
	Stockton-on-Tees Borough Council

¹ Schedule 1 of The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009 (the 'APFP Regulations')

SCHEDULE 1 DESCRIPTION	ORGANISATION
The relevant strategic highways company	National Highways
Trinity House	Trinity House
United Kingdom Health Security Agency, an executive agency of the Department of Health and Social Care	United Kingdom Health Security Agency
The Crown Estate Commissioners	The Crown Estate
The Forestry Commission	Yorkshire and North East
The Secretary of State for Defence	Ministry of Defence
The Office for Nuclear Regulation (the ONR)	The Office for Nuclear Regulation (the ONR)

TABLE A2: RELEVANT STATUTORY UNDERTAKERS²

STATUTORY UNDERTAKER	ORGANISATION
The relevant NHS Foundation Trust	North East Ambulance Service NHS Foundation Trust
Railways	Network Rail Infrastructure Ltd
	National Highways Historical Railways Estate
Dock and Harbour authority	PD Teesport
Licence Holder (Chapter 1 Of Part 1 Of Transport Act 2000)	NATS En-Route Safeguarding
Universal Service Provider	Royal Mail Group
Homes and Communities Agency	Homes England
The relevant water and sewage undertaker	Hartlepool Water (Anglian Water)
	Northumbrian Water
The relevant public gas transporter	Cadent Gas Limited

² 'Statutory Undertaker' is defined in the APFP Regulations as having the same meaning as in Section 127 of the Planning Act 2008 (PA2008)

STATUTORY UNDERTAKER	ORGANISATION
	Northern Gas Networks Limited
	Scotland Gas Networks Plc
	Wales and West Utilities Ltd
	Energy Assets Pipelines Limited
	ES Pipelines Ltd
	ESP Connections Ltd
	Fulcrum Pipelines Limited
	GTC Pipelines Limited
	Harlaxton Gas Networks Limited
	Indigo Pipelines Limited
	Last Mile Gas Ltd
	Leep Gas Networks Limited
	Squire Energy Limited
	National Grid Gas Plc
The relevant electricity generator with CPO Powers	MGT Teesside Limited
	Sofia Offshore Wind Farm Limited
	SSE Renewables Wind Farms (UK) Limited
The relevant electricity distributor with CPO Powers	Eclipse Power Network Limited
	Energy Assets Networks Limited
	ESP Electricity Limited
	Fulcrum Electricity Assets Limited
	Harlaxton Energy Networks Limited
	Indigo Power Limited
	Last Mile Electricity Ltd

STATUTORY UNDERTAKER	ORGANISATION
	Leep Electricity Networks Limited
	Mua Electricity Limited
	Optimal Power Networks Limited
	UK Power Distribution Limited
	Utility Assets Limited
	Vattenfall Networks Limited
	Northern Powergrid (Northeast) Limited
The relevant electricity transmitter with CPO Powers	National Grid Electricity Transmission Plc
	National Grid Electricity System Operator Limited

TABLE A3: SECTION 43 LOCAL AUTHORITIES (FOR THE PURPOSES OF SECTION 42(1)(B))³

LOCAL AUTHORITY ⁴
North York Moors National Park Authority
Stockton-on-Tees Borough Council
Durham County Council
Darlington Borough Council
Hartlepool Borough Council
Middlesbrough Council
Redcar and Cleveland Borough Council
North Yorkshire Council

³ Sections 43 and 42(B) of the PA2008

⁴ As defined in Section 43(3) of the PA2008

TABLE A4: NON-PRESCRIBED CONSULTATION BODIES

ORGANISATION
Tees Valley Combined Authority
South Tees Development Corporation
Royal National Lifeboat Institution

APPENDIX 2: RESPONDENTS TO CONSULTATION AND COPIES OF REPLIES

CONSULTATION BODIES WHO REPLIED BY THE STATUTORY DEADLINE:
Environment Agency
Greatham Parish Council
Hartlepool Borough Council
Historic England
Middlesbrough Council
National Grid Electricity Transmission Plc
NATS En-Route Safeguarding
Natural England
North Yorkshire Council
Northern Gas Networks
Redcar and Cleveland Borough Council
Redcar and Cleveland Borough Council Highways Authority
South Tees Development Corporation
The Office for Nuclear Regulation
Trinity House
UK Health Security Agency

Ms Laura Feekins-Bate
The Planning Inspectorate
3/18 Eagle Wing
Temple Quay House (2 The Square)
Temple Quay
Bristol
BS1 6PN

Our ref: NA/2023/116251/01-L01
Your ref: EN070009
Date: 09 May 2023

Dear Ms Feekins-Bate

PLANNING ACT 2008 (AS AMENDED) AND THE INFRASTRUCTURE PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) REGULATIONS 2017 (THE EIA REGULATIONS) – REGULATIONS 10 AND 11 APPLICATION BY H2 TEESSIDE LTD (THE APPLICANT) FOR AN ORDER GRANTING DEVELOPMENT CONSENT FOR THE H2TEESSIDE PROJECT (THE PROPOSED DEVELOPMENT) SCOPING CONSULTATION AND NOTIFICATION OF THE APPLICANT’S CONTACT DETAILS AND DUTY TO MAKE AVAILABLE INFORMATION TO THE APPLICANT IF REQUESTED LAND AT AND IN THE VICINITY OF THE FORMER REDCAR STEEL WORKS SITE, REDCAR AND IN STOCKTON-ON-TEES, TEESSIDE

Please find enclosed our written representations for the above Development Consent Order (DCO) on behalf of the Environment Agency (EA).

If you have any questions or require any clarification on the points below, please do not hesitate to contact me.

Yours sincerely

Lucy Mo
Planning Technical Specialist - Sustainable Places

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

Flood Risk

Flood Zones

The red line boundary for the full development (Main Sites A & B, and the pipeline) are located within flood zone 3, 2 and 1. The majority of Main Site B is situated within flood zone 1. However small portions of Main Site B are also situated within flood zone 2 and 3. Parts of the Hydrogen Pipeline Corridor are also within flood zone 2 and 3.

Flood Risk Vulnerability Classification

No information has been provided on the flood risk vulnerability classification within the Scoping Report. Therefore, we are unable to advise on our policy position in relation to flood risk until the vulnerability of the development has been confirmed by the applicant and/or the local planning authority. It should be noted that 'highly vulnerable' uses, requiring a Hazardous Substance Consent, would not be appropriate within flood zones 3. In accordance with [Table 2](#) of the flood risk and coastal change section of the Planning Practice Guidance (PPG), 'highly vulnerable' developments are not appropriate in flood zone 3 and should not be permitted.

Flood Risk Assessment (FRA)

We welcome the inclusion of a FRA in support of the DCO application. The FRA must assess flood risk from all sources of flooding and recommend the mitigation measures that will be implemented to ensure a safe development for the design flood event (1 in 200 year including climate change). It must also demonstrate that flood risk will not be increased elsewhere.

Main Site Flood Risk Sources

The main source of potential flooding to the Main Site B is from the tidal stretch of the River Tees, but there could be other local sources of flooding such as groundwater and surface water. We have published a suite of interactive maps that indicate where possible flooding from different sources could occur [Check the long term flood risk for an area in England - GOV.UK \(www.gov.uk\)](#). Our maps are not suitable for a detailed Flood Risk Assessment (FRA), but they can indicate where further assessment may be needed.

Onsite Flood Risk

For Main Site B, flood risk mitigation measures will need to ensure it can remain safe for its' lifetime. Mitigation measures include raising the finished floor levels above the design flood event plus a freeboard allowance of 600mm.

Offsite Flood Risk

If ground raising is occurring within part of the development boundary, and the existing ground levels are below the design flood event, then an assessment will be required to confirm no increase in offsite flood risk. Given current topographical levels of the Main Site and if ground raising is significant which is below the design flood event, then flood modelling should be undertaken. If the pipeline is causing any ground raising, or is above ground which could impact local flood mechanisms, an assessment will be required to understand any increase in offsite flood risk and provide mitigation measures, this assessment could include modelling.

Flood Risk Information the Environment Agency (EA) Holds

We have an outline for a 1 in 200-year level undefended model that can be requested for the River Tees. The modelling we have for this location does not include climate change allowances and therefore this will need to be calculated in accordance with the ['Flood risk assessments: climate change allowances'](#). As the development location is at

risk from tidal flooding, sea level allowances will need to be applied to the 1 in 200-year level for the lifetime of the development using both higher central and upper end allowances.

The EA's Port Clarence and Greatham tidal study (includes climate change) are available upon request. Requests for data should be sent to northeast-newcastle@environment-agency.gov.uk. Please note that requests for data can take up to 20 working days to process.

Hydrogen pipeline corridor

The proposed hydrogen pipeline corridor routes will have impacts on our existing flood defences, our land and our future schemes. These are discussed below:

Pipeline Routes

The proposed hydrogen pipeline corridor heading north towards the Venator Plant, could affect our flood defence assets along Greatham Creek and the EA's land holding at Marsh House Farm. In addition, all three routes (labelled R1, R2 and R3 on a document previously supplied to the EA ('All Utility Connection Corridor, Figure 1') could have a significant impact on Greatham Creek and its associated saltmarsh habitat - the last remaining natural area of the original Tees Estuary. In particular, R2 and R3 in particular are of significant concern to the EA.

R2 runs along the line of one of our major flood defences at Cowpen Marsh. The defence lies between the Cowpen Bewley Landfill (to the West) and the Teesmouth and Cleveland Coast Special Protection Area (SPA) (to the East). As such, any work along this corridor could impact one the three current land uses.

To the north of Greatham Creek, R2 then runs through Saltern Wetlands (an area of saltmarsh owned by the EA) and under the EA's flood embankment to the south of the ConocoPhillips tank farm. The EA has concerns that this route will have an impact on the wetland area, which lies with the SPA, and flood defences.

R1 crosses the no. 4 brinefield (owned by Sabic and used for hydrocarbon storage), and under the flood embankment on the south bank of Greatham Creek (Sabic Embankment). It also lies under the flood embankment on the north bank of Greatham Creek, which is to be significantly repaired as part of EA's Greatham North East Flood Alleviation Scheme (FAS). This route also crosses the redundant no. 5 brinefield (owned by Inovyn Chlorvinyl Ltd) and the ConocoPhillips oil pipeline corridor and Seal Sands Emergency Access Road.

R3 crosses our land at Marsh House Farm to be used for the extraction of clay in 2024-2026 for our Greatham NE FAS.

The EA is also developing a scheme (Greatham North East FAS) to improve the defences to the south of the Venator Plant. We expect to submit an application for planning permission in Spring 2024, and hope to start construction of the scheme in summer 2024. We are currently seeking contributions from beneficiaries of the scheme. As the proposed pipeline could benefit from our works, we would welcome discussions with the applicant on the potential for financial contributions from DCO, if R1 is chosen as the preferred route.

The EA would require the existing flood standard of protection, provided by the defences to be maintained both during the construction of the pipeline, and after completion of the scheme, whichever route is chosen. In order minimise the impact of

the DCO on our flood defences, consideration should be given to the following comments:

Pipeline Design

- Where the pipeline crosses a flood defence structure below ground, designs for the pipeline must include a load case for the top water level. This may be different at each location. The pipeline must also be at a suitable depth to ensure the stability of the flood defence structure, this is to be demonstrated in submitted designs;
- The scoping report states the pipeline will not cross our flood defence structure above ground. If this is to change, loading to our asset will need to be considered and the design must not impede access for routine maintenance and inspections of the flood defence structure;
- If the pipeline crosses a watercourse above ground, it must be appropriately designed and positioned to prevent accumulation of debris and localised increases in water levels;
- Where the pipeline is to utilise existing pipework that crosses watercourses, it is expected that modifications to the structure will be made where possible for improved conveyance and reduce debris accumulation; and
- Where ground levels near a flood defence are to be disturbed on either a permanent or temporary basis, designs must not allow additional water to pond at the toe of the flood defence.

Pipeline Construction

- Open trench methodology is not permitted when crossing a flood defence. Excavations near the footprint of a flood defence must remain a safe distance away from the toe of the defence to ensure stability of the defence. This must be demonstrated in submitted designs; and
- Directional drilling would be permitted when crossing a flood defence provided:
 - The drilling operation does not affect the stability of the flood defence structure by inducing a geotechnical failure, including when it is retaining flood water; and
 - The drilling or permanent works do not provide a conduit for water seepage underneath the flood defence structure, including when it is retaining flood water.

Pipeline Maintenance

- Repairs or future improvement works will be subject to an Environmental Permit from the EA if taking place within 16m of a flood defence; and
- Routine maintenance activities on the pipeline should be detailed within the DCO application.

Flood Defence Maintenance

In order to maintain the standard of protection, the EA requires continued access to continue routine maintenance of the existing and planned defences. Any permissions or legal agreements to allow these works to go ahead, must be agreed in advance of pipeline construction. It should be noted that the EA have statutory powers to carry out works on our assets.

Groundwater

The scoping report states there are no drinking water protected areas within 1km (or in Section 6.3.8, 15km) of the proposed development area. In terms of groundwater, all groundwater bodies in England are designated as drinking water protected areas. As such, the development area sits upon a groundwater drinking protected area. Further

information is available at [Protect groundwater and prevent groundwater pollution - GOV.UK \(www.gov.uk\)](http://www.gov.uk)

Section 8.1.1 of the scoping report scopes in surface water, geology, hydrogeology and contaminated land. This is welcomed.

We also support section 6.3.20 where it states 'potential impacts on groundwater flows during construction and operation phase (for below ground pipelines). There will be no direct discharges to groundwater. However, the potential for contaminant mobilisation from the Proposed Development and the resultant impacts to groundwater will be considered with the Geology and Hydrogeology assessments.'

In terms of SUDs, we would recommend that there is no increase in infiltration within the development area. This is to avoid the risk of contaminant mobilisation given the industrial heritage of the area. This ties into section 6.4.88 where the scope of assessment includes 'disturbance of contaminated soils and perched groundwater, and the creation of new pathways to sensitive receptors (including construction workers and controlled waters) during construction.'

The Water Environment (Water Framework Directive) (WFD) Regulations

The undertaking in section 6.3.33 to complete a WFD assessment is acknowledged and supported. At this stage, it is not certain that the matter of water quality will be a significant environmental concern. Therefore, the applicant should provide an assessment of the impact of the proposal on water quality in respect to the following waterbodies:

- Tees (GB510302509900)
- Tees Coastal (GB650301500005)
- Tees Estuary (South Bank) GB103025072320)

The WFD assessment will need to have regard to the Water Environment Regulations (WER) / WFD, and the Northumbria River Basin Management Plan (NRBMP).

The applicant should ensure that:

- The pipeline corridors do not add to the physical modification of the water environment unless equivalent appropriate mitigation measures are put in place; and
- Pipeline corridor routes and excavations should as far as practicable minimise or avoid the crossing of watercourses, and not run proximate and parallel to watercourses. In particular, pipeline corridors should not be situated so as to jeopardise the potential for restoration of intertidal and riverine habitats that support the recovery of the Teesmouth and Cleveland Coast SPA. Preferably pipeline corridors should follow existing physical modifications such as road infrastructure or existing pipeline corridors.

Table 6.1 provides a summary of the water features which the proposed development may interact. The inclusion of an undertaking to assess the potential impacts on non-reportable waterbodies and minor watercourses is acknowledged and supported.

For clarification of the statement at 6.3.9, the Teesmouth and Cleveland Coast SPA is within the Tees catchment where future development must be nutrient neutral to ensure no deterioration in WER (WFD) Dissolved Inorganic Nitrogen (DIN) element status. Reductions below the current baseline are required to achieve the protected area objectives.

The undertaking in 6.3.20 (eighth bullet point) to evaluate options for discharge of effluents from the proposal, including consideration of nutrient neutrality is acknowledged and supported.

Similarly, the undertaking at 6.3.36 to carry out a Nutrient Neutrality Screening Assessment to assess likely impact on achievement of the targets for the WFD DIN element is acknowledged and supported. This should include the potential impact from emissions to air.

Scope

The scoping assessment of Major Accident Hazard and Disaster categories in Appendix B (page 213) scopes out 'Environmentally harmful liquid release' with commentary that, 'a release of aqueous ammonia or diesel which reached environmental receptors could have an impact, however the quantity present on site will likely be relatively small and impact would not reach the criteria for a MA&D therefore is scoped out.' It is recommended that the release of environmentally harmful liquid should be scoped into the assessment, in light of the international conservation designations of the surrounding water environment, their current condition assessment of unfavorable declining status, and the conservation objective of restore, including by meeting improved WFD DIN element status in the Tees estuary.

It is also recommended that the scoping assessment of 'road traffic accident (dangerous goods)' (page 214) should be scoped in to ensure that necessary mitigation is provided by way of appropriate design and operation of relevant drainage systems, the detail of which is yet to be confirmed.

Baseline conditions

Current Baseline

The Tees estuary currently fails to meet statutory environmental objectives set out in WFD legislation and the NRBMP. No deterioration of current quality is a minimum requirement of WER (WFD). Improvement and enhancement are also required to meet WFD objectives.

The Scoping Report identifies in section 2.2 that large areas of the proposed development site was historically intertidal habitat within the Tees estuary. The progressive infilling of the estuary, port development and subsequent flood protection modifications have contributed to the Tees estuary waterbody being designated as a Heavily Modified Waterbody (HMWB) under WFD. In order to achieve the overarching WFD objective of Good Ecological Potential (GEP) in HMWBs, mitigation measures must be taken to address the ongoing ecological impacts of such modifications, and prevent deterioration on this baseline. A Mitigation Measures Assessment has been undertaken and various information on appropriate mitigation measures is available. However, the limitations of the Catchment Data Explorer portal are such that this information cannot currently be provided through that platform.

Future Baseline

The Tees estuary is undergoing a period of ecological recovery after decades of industrial and sewage pollution. The future ecological baseline conditions are likely to be an improvement on the current conditions because of interventions already completed. Future baseline conditions will also be influenced by imminent legislation (Levelling Up Bill) and regulatory requirements (Water Company Price Review) that are likely to require significant reductions in the level of nutrients within the Tees estuary and within the timeframe of the proposed development. The area is also already subject

to nutrient neutrality advice that aims to ensure no deterioration of current environmental conditions. The WFD assessment should therefore take account of such future baseline conditions.

Construction Environment Management Plan (CEMP)

The provision of a CEMP is welcomed. The CEMP should specifically outline how construction and surface run-off will be managed and potential impacts mitigated. The CEMP should also include, but not limited to, the following:

- Treatment and removal of suspended solids from surface water run-off during construction works.
- Approach to ensure no sewage pollution or misconnections.
- Approach to ensure water mains are not damaged during construction works.
- Management of fuel and chemical spills during construction and operation, including the process in place to ensure the environment is not detrimentally impacted in the event of a spill.
- Due to the presence of contaminated land, construction runoff is likely to contain hazardous chemicals and elements. A scheme may be required to manage the associated risks, and minimise mobilisation of hydrocarbons, heavy metals, and any other hazardous pollutants into the water environment during construction and site operation.

Foul drainage

We would expect to see the following points to be addressed within the DCO application:

- Confirmation of which sewage treatment works will receive the foul flows.
- Confirmation that there is sufficient capacity in the receiving Northumbrian Water network to accept the flows without increasing storm overflow spills.
- Confirmation that there is sufficient capacity at the receiving sewage treatment works (STW) to accept the flows while still operating within the permitted flow and quality limits.
- The applicant will need to produce their own WFD assessment to demonstrate the impact of the proposed development on the receiving watercourse.
- If there is insufficient capacity within the network or at the STW, details of an appropriate phasing approach for the development to enable the necessary upgrades to the sewage network before connecting the development should be provided.

Marine Ecology and Fisheries

Baseline conditions

We are generally satisfied with the assessment of the baseline conditions for both marine ecology and fish. However, the applicant should be aware that large areas adjacent to Greatham Creek, which have been classified as 'Coastal and floodplain grazing marsh' on Figure 12, are in fact coastal saltmarsh habitat as a result of the EA's managed realignment projects of 2014 and 2018 respectively. These projects created 53 ha of saltmarsh. One of the proposed Hydrogen pipeline corridors dissects directly through the middle of this newly created habitat at the Greatham North site.

The areas of newly created saltmarsh habitat (misclassified as Coastal and floodplain grazing marsh) outlined in purple in Figure 12 require updating.

We are pleased to see that the applicant will be submitting a WFD assessment. The WFD assessment should also consider whether the proposed scheme, in combination

with other activities, will impact on WFD water body status. A cumulative impact can arise from the repeated occurrence of one pressure or from the simultaneous occurrence of many pressures. The resulting impact of a repeated or simultaneous pressures can have a greater impact than a single pressure. Pressures from multiple sources should therefore be considered including combined impacts of activities within the proposal, existing pressures, recent schemes and other planned schemes.

Fish entrainment

The scoping report highlights potential water sources as Demineralised water (DMW) from Wilton International or Reclaimed water (treated effluent) from Northumbrian Water Ltd's (NWL) Bran Sands Wastewater treatment plant. It is preferred that the abstraction from WFD waterbodies is avoided where possible to avoid the risk of fish entrainment. If abstraction from WFD waterbodies is proposed, the impact of fish entrainment should be assessed, and appropriate mitigation proposed to prevent entrainment. Screening to prevent ingress of fish is a requirement of both the Salmon and Freshwater Fisheries Act 1975 (SAFFA) and Eels (England and Wales) Regulations 2009.

Discharge of cooling waters

If cooling waters is discharged to the Tees estuary or other WFD waterbodies, the implications of this in relation to WFD status will need to be fully considered. Further details on the nature, volume, chemical and thermal properties of the effluent would be required. Thermal modelling will be required to assess the range of the thermal discharge. Sea temperature rise due to climate change over the operational lifespan of the and cumulative impacts from all thermal discharges within the Tees estuary should also be considered.

Effect of noise on fish

Anthropogenic noise can cause physical harm and behavioural responses (e.g. altered migration) in fish. It is unclear from the Scoping Report whether there is a potential for noise and/or vibration to occur during the creation of the hydrogen pipeline corridors. Therefore, the applicant should consider potential effects from noise and vibration on migratory fish. A noise assessment should be conducted for all methods being considered for use in the construction of the proposed hydrogen pipeline corridor under the river Tees. Further consideration should also be given to potential cumulative/in-combination impacts of noise on fish, as a result of other developments taking place in the area. If the assessment identifies potential impacts from noise and/or vibration on fish, suitable mitigation should be identified.

Water voles and otters

We are satisfied with the scope and proposed survey timescales and extents outlined in table 6.3 with respect to otters and water voles.

Proximity to landfill sites

The proposed development will interact with several areas of historic landfill and is also in close proximity to operational landfill sites (as identified in section 6.4 of the scoping report). The scoping report indicates that further assessment is to be undertaken to identify pollutions risks posed by the ground disturbance. It is important that this further work assesses the risks posed by any disturbance to ground in or around the existing historic and operational landfill sites. Landfill sites can generate leachate and landfill gas which pose a risk of harm to the environment. Historic landfill sites are generally not well engineered and, as such, may pose a greater risk of pollution if disturbed

Reuse of made ground

Use of made ground in development projects is often undertaken using the CL:AIRE

Definition of Waste Code of Practice (DoWCoP). This allows waste materials to be used outside of waste legislation, providing four key factors are met relating to certainty of use, quantity used, suitability for use and the environment and human health is protected.

Reuse of the made ground on this development site is unlikely to be suitable for use under the DoWCoP. This is because the material is likely to consist of blast furnace slag and other historic contaminants. As such, reuse of the material would not be considered low risk for use under the DoWCoP as it presents a risk of causing pollution to the environment. We would therefore recommend that an Environmental Permit is sought to authorise and condition any proposed reuse of the made ground. We would encourage the developer to request pre-application advice to discuss permitting options further: [Get advice before you apply for an environmental permit - GOV.UK \(www.gov.uk\)](http://www.gov.uk)

Other comments

Figure 14 shows potential receptors. It is recommended North Tees Mudflats should be included as a potential receptor.

EA and Partner Projects

The EA and partners are bringing forward a programme of projects designed to mitigate the ongoing ecological impact of historical physical modifications on the Tees estuary and tributaries. The current Programme is scheduled to be completed by the commissioning date of the proposed development.

The DCO should not jeopardise attainment of these WFD mitigation measures. Therefore, the developer may wish to support these projects so as to demonstrate appropriate mitigation of any impacts, or to secure betterment of the local environment:

- The Tees Tidelands Programme is led by the EA and Stockton-on-Tees Borough Council, and consists of a number of projects that aim to restore intertidal habitats and ecologically reconnect the Tees estuary to tributaries.
- The EA Seal Sands SSSI restoration project is initially focusing on building a Tees estuary baseline hydraulic model, but in the future also seeks to identify the prioritised physical interventions to manage excess growth of macroalgae.
- The Tees Rivers Trust (TRT) are undertaking a Tees Estuary Edges project to install a suite of bio-engineered designs that enhance ecology in the highly modified Tees navigation channel.
- TRT are also undertaking species (oyster, seagrass, mussel) reintroduction projects at locations within Tees Bay and the estuary.
- The Canal and River Trust (CRT) are developing designs to secure enhanced fish passage across the Tees Barrage and so throughout the Tees catchment.

EA Consents and requirements

Flood Risk Permit

The River Tees is a designated 'main river' and under the Environmental Permitting Regulations certain works within 16m of a tidal main river, or within 16m of any flood defence structure on a tidal main river, require a Flood Risk Activity Permit from the Environment Agency. Assessments are required for both the temporary and permanent works. This includes works such as but not limited to; directional drilling under the River Tees, construction of outfalls, ground raising and works to construct and maintain the pipeline. You can find more information on permit requirements using the following link: [Flood risk activities: environmental permits - GOV.UK \(www.gov.uk\)](http://www.gov.uk). If a permit is required, it must be obtained prior to beginning the works.

Water Quality Permit

You do not require a permit if you are only discharging uncontaminated surface runoff. If you intend to discharge to surface water for dewatering purposes, this may be covered by a Regulatory Position Statement (RPS) for water discharge activities. If you can comply with all the conditions within the RPS, then a permit is not required for this activity. Further information is available at [Temporary dewatering from excavations to surface water: RPS 261 - GOV.UK \(www.gov.uk\)](http://www.gov.uk/guidance/temporary-dewatering-from-excavations-to-surface-water-rps-261).

Discharges that do not fully comply with the RPS, will require a bespoke discharge permit will be required. Guidance on applying for a bespoke water discharge permit is available at [Discharges to surface water and groundwater: environmental permits - GOV.UK \(www.gov.uk\)](http://www.gov.uk/guidance/discharges-to-surface-water-and-groundwater-environmental-permits).

Water Resources Consent

If you intend to abstract more than 20 cubic metres of water per day from a surface water source e.g. a stream or from underground strata (via borehole or well) for any particular purpose then you will need an abstraction licence from the Environment Agency. There is no guarantee that a licence will be granted as this is dependent on available water resources and existing protected rights.

Dewatering is the removal/abstraction of water (predominantly, but not confined to, groundwater) to locally lower water levels near the excavation. This can allow operations to take place, such as mining, quarrying, building, engineering works or other operations, whether underground or on the surface. The dewatering activities on-site could have an impact upon local wells, water supplies and/or nearby watercourses and environmental interests. This activity was previously exempt from requiring an abstraction licence. Since 1 January 2018, most cases of new planned dewatering operations above 20 cubic metres a day will require a water abstraction licence from us prior to the commencement of dewatering activities at the site. Further information is available at [Apply for a water abstraction or impounding licence - GOV.UK \(www.gov.uk\)](http://www.gov.uk/guidance/apply-for-a-water-abstraction-or-impounding-licence)

Environmental Permitting Regulations

This development will require an Environmental Permitting Regulation (EPR) permit, see below for details on applicable section of Environmental Permitting (England and Wales) Regulations 2016. When appropriate we would encourage enhanced pre-app advice is sought in a timely manner, ahead of any submission for a EPR permit application. The timeline for processing of the permit is changeable and it is advisable that the operator consults with the EA on a regular basis during the project.

Control of Major Accident Hazards (COMAH) Regulations 2015

There is no indication of volume/ tonnage of hazardous chemicals which the Operator intends to store on site. Therefore, the Operator should refer directly to COMAH Regulations 2015 Part 1 Schedule 1 and Part 2 Schedule 1 and assess their status under COMAH. Diesel fuel is mentioned (ref 34 Petroleum products “including diesel fuel oils”).

H2

Consideration should be made of the millions so recently invested at Greatham Creek and Marsh House by the Environment Agency. This was compensating for loss elsewhere and is still developing towards its true environmental potential. Environmental impact in this transformational area cannot be based only on what has only just begun to establish today.

Timing of any works needs to be avoid environmental impact on nesting and migrating birds and the seal population.

Public Right of Ways (PROWs) in the vicinity of Greatham – linking Greatham South to the Tees Road and South West to Cowpen Bewley. As well as protecting these valued routes the potential for enhancement should be considered. Eg. While always preferable that pipelines are hidden underground, if a pipeline crosses a waterway by bridge could this provide a new PROW route to access such as the Cowpen Landfill which will promises a new attractive environmental asset.

Historic landfill between Marsh House Farm and Greatham Creek plus PROW on Thorn Tree Lane, Greatham not shown on map figure 10

Consultation in Greatham to explain in layman's terms the proposals for the pipeline in between Greatham village and Greatham Creek would be welcomed.



Our Ref: H/2023/0109

Contact Officer: Stephanie Bell 

9 May 2023

THE PLANNING INSPECTORATE
ENVIRONMENTAL SERVICES
OPERATIONS 3 GROUP
TEMPLE QUAY HOUSE
2 THE SQUARE
BRISTOL
BS1 6PN

Dear Sir/Madam

TOWN AND COUNTRY PLANNING ACT 1990

PROPOSAL: Adjoining Authority Consultation for Request from Planning Inspectorate for LPA's view on Scoping Opinion submitted in respect of an Application by H2 Teesside Ltd (the Applicant) for an Order granting Development Consent for the H2Teesside Project (the Proposed Development)

LOCATION: LAND WITHIN THE BOROUGH OF REDCAR AND CLEVELAND AND STOCKTON ON TEES AND HARTLEPOOL

I refer to the above noted application.

I can confirm that Hartlepool Borough Council have no comments to make on the Scoping Opinion submitted in respect of an Application by H2 Teesside Ltd (the Applicant) for an Order granting Development Consent for the H2Teesside Project (the Proposed Development), at land within the boroughs of Redcar and Cleveland and Stockton on Tees and Hartlepool.

I have sought the view of internal colleagues and can confirm that Tees Archaeology agree with the proposed scoping methodology for cultural heritage, namely that cultural heritage will be scoped into the Environmental Statement and that a cultural heritage DBA will be produced. The Council's Economic Growth team Economic Growth are aware of this project and support the proposal. The development would bring local supply chain opportunities for local businesses and job opportunities for local people.

If you would like any further information about the Council's decision please contact your case officer Stephanie Bell quoting the reference number given above.

Hartlepool Borough Council will collect and process personal information in line with our legal obligations, details of which can be found on our web site www.hartlepool.gov.uk/GDPR or by telephoning 01429 266522. Personal

Information will be handled in accordance with the General Data Protection Regulation.

Yours faithfully

Stephanie Bell
Senior Planning Officer



Historic England

Ms Laura Feekins-Bate
The Planning Inspectorate
by email

Direct Dial: [REDACTED]

Our ref: PL00792835

Your ref: **EN070009**

9 May 2023

Dear Ms Feekins-Bate

Re: Planning Act 2008 (as amended) and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) - Regulations 10 and 11

REQUEST FOR SCOPING OPINION: EN070009 - Application by H2 Teesside Ltd for an Order granting Development Consent for the H2Teesside Project, Land at and in the vicinity of the former Redcar Steel Works site, Redcar and in Stockton-on-Tees, Teesside

Thank you for your letter of 11 April 2023 consulting Historic England about the above EIA Scoping Report.

The proposed development is for the construction, operation (including maintenance where relevant) and decommissioning of a 1.2 Gigawatt Thermal (GWth) Hydrogen Production Facility with associated Carbon Capture and hydrogen transport pipeline network on the former Steelworks land in Redcar and Cleveland. This development could potentially have an impact upon numerous designated and undesignated heritage assets and their settings.

In line with the advice in the National Planning Policy Framework (NPPF 2021) and the relevant National Policy Statements (NPS), we would expect the Environmental Statement to contain a thorough assessment of the likely effects the proposed development might have upon those elements which contribute to the significance of these assets.

We would like to draw attention to the specific NPS documents and their policies in relation to the historic environment. We would expect to see these referred to in the cultural heritage section of the ES to show how the application complies with them.

Our initial assessment broadly tallies with the baseline conditions set out in the scoping report section 6.11 (the discrepancy is likely due to slight differences in mapping of the site area polygon):



BESSIE SURTEES HOUSE 41-44 SANDHILL NEWCASTLE-UPON-TYNE NE1 3JF

Telephone 0191 269 1255
HistoricEngland.org.uk



- 54 Grade I and II* listed structures;
- 463 Gr. IIs;
- 27 Scheduled Monuments;
- 1 Gr.II* Registered Park and Garden;
- 1 Gr. II Registered Park and Garden, and
- 23 Conservation Areas.

We concur that there are no highly designated heritage assets within the red-line boundary. However, we note that there are circa 700 non-designated heritage assets both within the boundary and the defined 1km study area.

The scoping report proposes that maritime cultural heritage issues are scoped out. The proposed pipeline across the Tees will be bored and therefore will not impact any maritime heritage assets in this area. We concur that it is unlikely that there will be any significant impacts on marine cultural heritage by this proposal as noted in 6.11.18 and consequently that marine heritage can be scoped out.

However, it is clear that the terrestrial cultural heritage must be scoped into the EIA as there could be impacts to known heritage assets. At present the potential for currently unrecorded heritage assets is not known and should also be included in the assessment.

We would also expect the Environmental Statement to consider the potential impacts on non-designated features of historic, architectural, archaeological or artistic interest, since these can also be of national importance and make an important contribution to the character and local distinctiveness of an area and its sense of place. This information is available via the Redcar and Cleveland Historic Environment Record and relevant local authority staff as they are best placed to advise on:

- the local historic environment issues and priorities;
- how the proposal can be tailored to avoid and minimise potential adverse impacts on the historic environment;
- the nature and design of any required mitigation measures; and
- opportunities for securing wider benefits for the future conservation and management of heritage assets.

We would expect the assessment to clearly demonstrate that the extent of the proposed study area is of the appropriate size to ensure that all heritage assets likely to be affected by this development have been included and can be properly assessed.

It is important that the assessment is designed to ensure that all impacts are fully understood. Pre-determination archaeological evaluation such as geophysical surveys and other evaluation techniques may assist with determination of archaeological potential and ground truthing of desk-based data.



BESSIE SURTEES HOUSE 41-44 SANDHILL NEWCASTLE-UPON-TYNE NE1 3JF

Telephone 0191 269 1255
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The assessment should also take account of the potential impact associated activities (such as construction, servicing and maintenance, and associated traffic) might have upon perceptions, understanding and appreciation of the heritage assets in the area. The assessment should also consider, where appropriate, the likelihood of alterations to drainage patterns that might lead to in situ decomposition or destruction of below ground archaeological remains and deposits and can also lead to subsidence of buildings and monuments.

Position

On the basis of the information in the Scoping Report, the proposal is unlikely to have significant impacts on highly designated cultural heritage assets. We suggest that the applicant should seek advice from and liaise closely with the Local Planning Authority's Heritage / Archaeology Advisors for this application.

We anticipate, subject to seeing the assessment of impacts set out in the ES, that our involvement in this Nationally Important Infrastructure Project may be limited in nature.

Yours sincerely,

Lee McFarlane
Inspector of Ancient Monuments
[REDACTED]@HistoricEngland.org.uk

cc: Tim Brown, Conservation Advisor, Redcar & Cleveland Borough Council

Feekins-Bate, Laura

From: Peter Wilson [REDACTED]@middlesbrough.gov.uk>
Sent: 18 April 2023 15:22
To: H2Teesside
Cc: H2Teesside
Subject: FW: EN070009 - H2Teesside - EIA Scoping Notification and Consultation
Attachments: H2TE - Statutory consultation letter.pdf

Good afternoon Laura

Thank you for the email consulting Middlesbrough on the proposed H2Teesside Project.

Having thoroughly considered the detailed report, there are no objections or other comments at this stage from Middlesbrough.

Regards

Peter Wilson

Principal Planning Officer

Address: Development Control | Middlesbrough Council | Fountain Court, 119 Grange Road | Middlesbrough | TS1 2DT

Email: [REDACTED]@middlesbrough.gov.uk

Telephone: [REDACTED]

www.middlesbrough.gov.uk

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Integrity

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Focus

We are clear about what we will deliver to meet the needs of the town

From: H2Teesside <H2Teesside@planninginspectorate.gov.uk>

Sent: Tuesday, 11 April 2023 10:19

To: Development Control <developmentcontrol@middlesbrough.gov.uk>

Cc: H2Teesside <H2Teesside@planninginspectorate.gov.uk>

Subject: EN070009 - H2Teesside - EIA Scoping Notification and Consultation

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FAO Head of Planning

Dear Sir / Madam

Please see attached correspondence on the proposed H2Teesside project.

Please note that the deadline for consultation responses is **9 May 2023**, and is a statutory requirement that cannot be extended.

Kind regards
Laura



The Planning Inspectorate

Laura Feekins-Bate
EIA Advisor
The Planning Inspectorate



@PINSgov



The Planning Inspectorate



planninginspectorate.gov.uk

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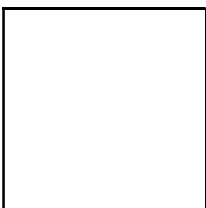
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DPC:76616c646f72



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Complex Land Rights

Ellie Laycock

Development Liaison Officer

UK Land and Property

██████████@nationalgrid.com

Tel: ██████████

www.nationalgrid.com

SUBMITTED ELECTRONICALLY:
h2teesside@planninginspectorate.gov.uk

02 May 2023

Dear Sir/Madam

APPLICATION BY H2 TEESIDE LTD (THE APPLICANT) FOR AN ORDER GRANTING DEVELOPMENT CONSENT FOR THE H2TEESIDE PROJECT (THE PROPOSED DEVELOPMENT)

SCOPING CONSULTATION RESPONSE

I refer to your letter dated 11th April 2023 in relation to the above proposed application. This is a response on behalf of National Grid Electricity Transmission PLC (NGET). Having reviewed the scoping report, I would like to make the following comments regarding NGET infrastructure within or in close proximity to the current red line boundary.

NGET has high voltage electricity overhead transmission lines, underground cables and a high voltage substation within the scoping area. The overhead lines and substation form an essential part of the electricity transmission network in England and Wales.

Substation

- Saltholme 275kV Substation
- Tod Point 275kV Substation
- Associated overhead and underground apparatus including cables

Overhead Lines

4TH 275kV OHL	Hartlepool – Saltholme Hartlepool – Tod Point
4TG 275kV OHL	Hartlepool – West Boldon Hartlepool – Hartmoor
ZZA 400kV OHL	Hartlepool – West Boldon Hartlepool – Hartmoor Hartlepool – Saltholme Hartlepool – Tod Point Lackenby – Norton Hartlepool – Tod Point

YYJ 400kV OHL Lackenby – Norton 1
 Norton – Saltholme
YYQ 275kV OHL Hartlepool – Tod Point
 Lackenby – Tod Point
Associated underground apparatus including cables

Cable Apparatus

- Grangetown - Lackenby 275kV underground cable

I enclose a plan showing the location of NGET's apparatus in the scoping area.

Specific Comments – Electricity Infrastructure:

- NGET's Overhead Line/s is protected by a Deed of Easement/Wayleave Agreement which provides full right of access to retain, maintain, repair and inspect our asset
- Statutory electrical safety clearances must be maintained at all times. Any proposed buildings must not be closer than 5.3m to the lowest conductor. NGET recommends that no permanent structures are built directly beneath overhead lines. These distances are set out in EN 43 – 8 Technical Specification for “overhead line clearances Issue 3 (2004)”.
- If any changes in ground levels are proposed either beneath or in close proximity to our existing overhead lines then this would serve to reduce the safety clearances for such overhead lines. Safe clearances for existing overhead lines must be maintained in all circumstances.
- The relevant guidance in relation to working safely near to existing overhead lines is contained within the Health and Safety Executive's (www.hse.gov.uk) Guidance Note GS 6 “Avoidance of Danger from Overhead Electric Lines” and all relevant site staff should make sure that they are both aware of and understand this guidance.
- Plant, machinery, equipment, buildings or scaffolding should not encroach within 5.3 metres of any of our high voltage conductors when those conductors are under their worse conditions of maximum “sag” and “swing” and overhead line profile (maximum “sag” and “swing”) drawings should be obtained using the contact details above.
- If a landscaping scheme is proposed as part of the proposal, we request that only slow and low growing species of trees and shrubs are planted beneath and adjacent to the existing overhead line to reduce the risk of growth to a height which compromises statutory safety clearances.
- Drilling or excavation works should not be undertaken if they have the potential to disturb or adversely affect the foundations or “pillars of support” of any existing tower. These foundations always extend beyond the base area of the existing tower and foundation (“pillar of support”) drawings can be obtained using the contact details above.
- NGET high voltage underground cables are protected by a Deed of Grant; Easement; Wayleave Agreement or the provisions of the New Roads and Street Works Act. These provisions provide NGET full right of access to retain, maintain, repair and inspect our assets. Hence we require that no permanent / temporary structures are to be built over our cables or within the easement strip. Any such proposals should be discussed and agreed with NGET prior to any works taking place.
- Ground levels above our cables must not be altered in any way. Any alterations to the depth of our cables will subsequently alter the rating of the circuit and can compromise the reliability, efficiency and safety of our electricity network and requires consultation with National Grid prior to any such changes in both level and construction being implemented.

To download a copy of the HSE Guidance HS(G)47, please use the following link:
<http://www.hse.gov.uk/pubns/books/hsg47.htm>

Further Advice

We would request that the potential impact of the proposed scheme on NGET's existing assets as set out above and including any proposed diversions is considered in any subsequent reports, including in the Environmental Statement, and as part of any subsequent application.

Where any diversion of apparatus may be required to facilitate a scheme, NGET is unable to give any certainty with the regard to diversions until such time as adequate conceptual design studies have been undertaken by NGET. Further information relating to this can be obtained by contacting the email address below.

Where the promoter intends to acquire land, extinguish rights, or interfere with any of NGET apparatus, protective provisions will be required in a form acceptable to it to be included within the DCO.

NGET requests to be consulted at the earliest stages to ensure that the most appropriate protective provisions are included within the DCO application to safeguard the integrity of our apparatus and to remove the requirement for objection. All consultations should be sent to the following email address: box.landandacquisitions@nationalgrid.com

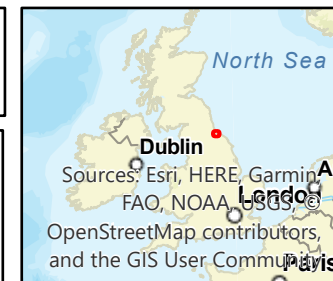
I hope the above information is useful. If you require any further information, please do not hesitate to contact me.

The information in this letter is provided notwithstanding any discussions taking place in relation to connections with electricity customer services.

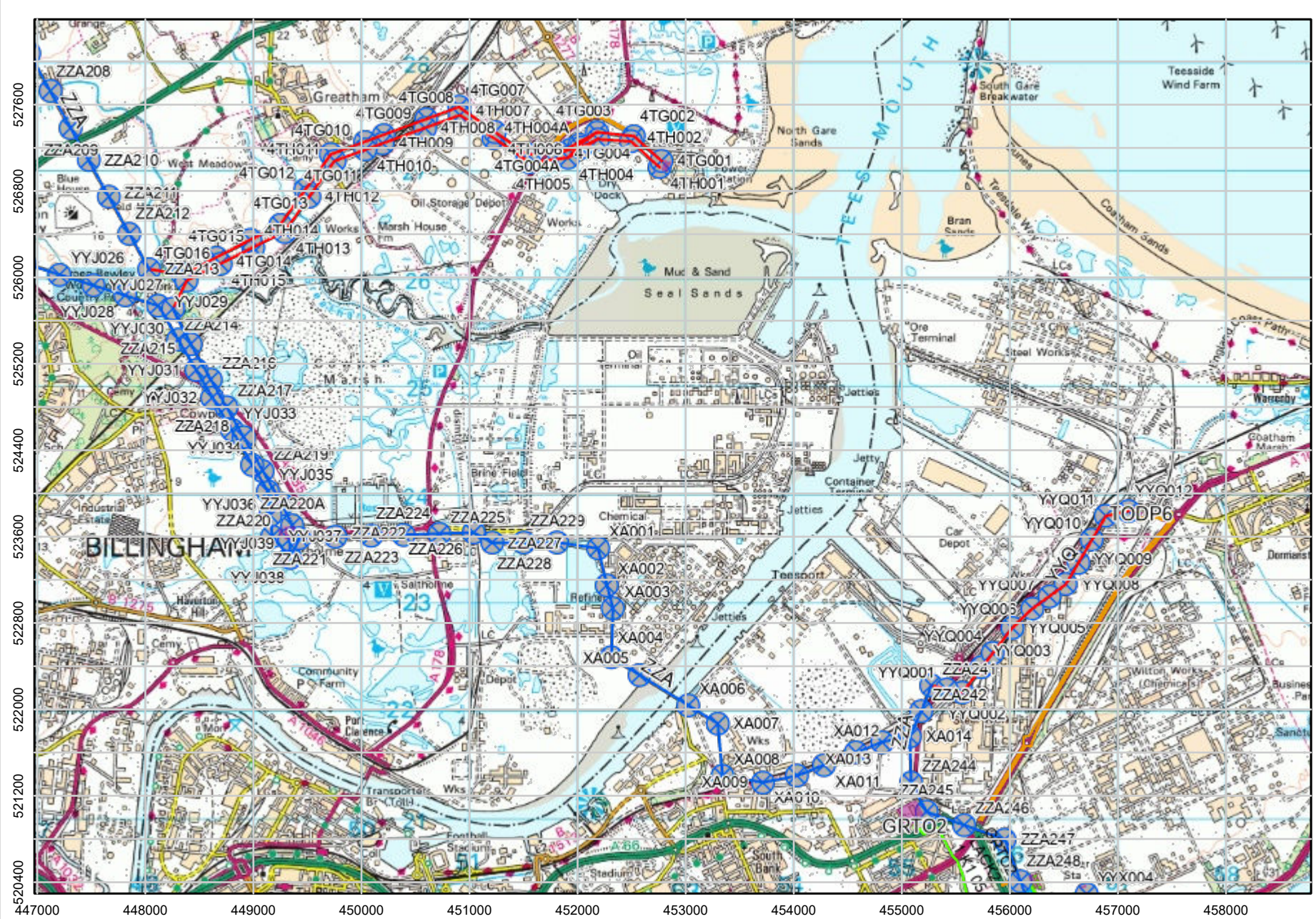
Yours faithfully

E Laycock

**Ellie Laycock
Development Liaison Officer, Complex Land Rights**



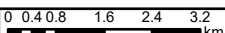
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Legend

- Cable
- Accessories
- Pilot Cable
- Fibre Cable
- Fibre Cable
- Commissioned
- Buried Cable
- Buried Cable
- Commissioned
- Towers
- ⊗ Towers
- ⊗ Commissioned
- OHL 275Kv
- OHL 275Kv
- Commissioned
- OHL 400Kv
- OHL 400Kv
- Commissioned
- Substations
- Substations
- Commissioned

Notes



Date: 4/25/2023 Page size: A4 Landscape
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 Scale: 1:50,000



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Woodger-Bassford, Jade

From: NATS Safeguarding <NATSSafeguarding@nats.co.uk>
Sent: 18 April 2023 08:14
To: H2Teesside
Subject: RE: EN070009 - H2Teesside - EIA Scoping Notification and Consultation [SG35165]

Our Ref: SG35165

Dear Sir/ Madam

NATS anticipates no impact from the proposal and has no comments to make on the Scoping notification.

Yours faithfully

NATS

NATS Safeguarding

E: natssafeguarding@nats.co.uk

4000 Parkway, Whiteley,
Fareham, Hants PO15 7FL
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NATS Public

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Sent: 11 April 2023 09:13
To: H2Teesside <H2Teesside@planninginspectorate.gov.uk>
Subject: EN070009 - H2Teesside - EIA Scoping Notification and Consultation

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Dear Sir/ Madam

Please see attached correspondence on the proposed H2Teesside project.

Please note that the deadline for consultation responses is **9 May 2023**, and is a statutory requirement that cannot be extended.

Kind regards
Laura



The Planning
Inspectorate

Laura Feekins-Bate
EIA Advisor
The Planning Inspectorate



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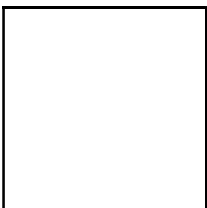
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Date: 09 May 2023
Our ref: 429363
Your ref: **EN070009**



Environmental Services
Operations Group 3
Temple Quay House
2 The Square Bristol,
BS1 6PN
For the attention of Laura Feekins-Bate

Consultations
Hornbeam House
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CW1 6GJ

BY EMAIL ONLY

T 0300 060 900

Dear Laura,

Environmental Impact Assessment Scoping consultation under Regulation 10 of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) – Regulation 11

Proposal: Application by H2 Teesside Ltd (the Applicant) for an Order granting Development Consent for the H2Teesside Project (the Proposed Development)

Thank you for seeking our advice on the scope of the Environmental Statement (ES) in the consultation dated 11 April 2023, which we received on the same day.

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

A robust assessment of environmental impacts and opportunities, based on relevant and up to date environmental information, should be undertaken prior to an application for a Development Consent Order. Annex A to this letter provides Natural England's advice on the scope of the Environmental Impact Assessment (EIA) for the proposed development.

Natural England is engaged in ongoing pre-application dialogue with the applicant's consultant team ('the applicant'). Section 7.4¹ of the EIA scoping report refers. Our dialogue to date has been high level and focused primarily on ecological survey requirements for the scheme's current red line boundary. We acknowledge and welcome the applicant's clear reference to the preliminary status of the red line boundary and reference to the 'Rochdale envelope' principle accordingly. In view of the high level and geographically focused nature of dialogue so far we are unable to provide detailed comments on direct and indirect impact pathways relating to the designated sites listed in section 6.6² of the scoping report.

Detailed advice on scoping the Environmental Statement is available in the attached Annex.

¹ 7.4 - Consultation on the EIA

² 6.6 - Ecology and nature conservation - including aquatic ecology

For any further advice on this consultation please contact me using email –
[REDACTED]@naturalengland.org.uk - and copy to consultations@naturalengland.org.uk.

Yours sincerely

Antony Muller
Senior Adviser – Northumbria Area Team

Annex A – Natural England Advice on EIA Scoping

1. General Principles

Based on the content of the EIA Scoping report and our dialogue with the applicant so far Natural England is satisfied that the general principles laid out within Regulation 11 of the Infrastructure Planning Regulations 2017 - (The EIA Regulations) are being addressed.

We note that significant elements of the proposal have yet to be confirmed (Selection of main site location and hydrogen pipeline route corridors). We welcome the applicant's clear reference to the preliminary status of the red line boundary and reference to the 'Rochdale envelope' principle accordingly.

2. Cumulative and in-combination effects

Natural England acknowledges the applicant's description of projects³ needing to be assessed for cumulative and in combination effects alongside the proposal. We are not aware of additional projects needing assessment.

We draw the examining authority's attention to the need for and benefits of an early consideration of the proposal's relationship with wider environmental issues in the Tees estuary e.g. the nutrient neutrality theme and the wider need to restore water quality in the Tees catchment to achieve favourable condition of relevant water dependent designated sites such as the Teesmouth & Cleveland Coast Special Protection Area (SPA). For further information please see our comments under Section 9 Water Quality. Further relevant references are made within section 4 (Biodiversity & Geodiversity), with respect to ecological impact pathways for designated sites and Section 10 Climate Change – delivering mitigation and building resilience.

3. Environmental data

At the time of writing Natural England is arranging to provide the applicant with wild bird survey data for the 'Seal Sands' part of the Teesmouth & Cleveland Coast Special Protection Area (SPA).

Similarly we are checking the scope for use of the Great Crested Newt District Level Licensing scheme in relation to land within (or up to 250m from) the red line boundary lying north of the River Tees.

4. Biodiversity and Geodiversity

The assessment will need to include potential impacts of the proposal upon sites and features of nature conservation interest. We welcome the applicant's approach to gathering relevant data so far and for their reference to including opportunities for nature recovery through biodiversity net gain (BNG)⁴.

³ Figure 15 'Other Developments to be Considered in the Cumulative Impact Assessment (Indicative)' and supporting paragraphs)

⁴ EIA Scoping Report - paragraph 6.6.32

4.1 Designated nature conservation sites

4.1.1 International and European sites

The development site is within or may impact on the **European/internationally designated nature conservation sites set out in the table below.**

Aside from the Teesmouth & Cleveland Coast SPA and Ramsar Site the proposal would not appear likely to cause direct impacts upon Habitats Sites within 15km of the application site. Nevertheless, based on the information available so far uncertainty exists over the scope for impacts on sites within this distance threshold. The Habitats Sites listed below fall within 15km of the proposal and have been listed accordingly to allow consideration of indirect effects from the proposal. We welcome inclusion of the listed Habitats Sites within paragraph 6.6.6 accordingly. Figure 13 of EIA scoping report shows these sites' geographical distribution.

The ES should thoroughly assess the potential for the proposal to affect internationally designated sites of nature conservation importance / European sites, including marine sites where relevant. This includes Special Protection Areas (SPA), Special Areas of Conservation (SAC), listed Ramsar sites, candidate SAC and proposed SPA.

Article 6 (3) of the Habitats Directive requires an appropriate assessment where a plan or project is likely to have a significant effect upon a European Site, either individually or in combination with other plans or projects.

Table 1: Potential risk to International designated sites: the development is within or may impact on the following European/Internationally designated site(s)

Site name with link to conservation objective	Features which the ES will need to consider	Potential impact pathways where further information/assessment is required.
Teesmouth & Cleveland Coast SPA Link - https://publications.naturalengland.org.uk/publication/6619918699069440	Over-wintering/passage waterbirds and breeding sea birds – including named spp. Little Tern (Sterna albifrons), Sandwich Tern (Sterna sandvicensis), Knot (Calidris canutus islandica),	Uncertain pending confirmation of main site and route corridor selection – Example impact pathways likely to include water quality (construction phase pathways and operational discharges), air quality (pending confirmation of types of emissions to air) and wild bird disturbance (noise and vibration, movement, lighting)

	<p>Redshank (Tringa totanus totanus)</p> <p>Plus overwintering waterbird assemblage</p>	
<p>North Yorkshire Moors SPA Link - https://publications.naturalengland.org.uk/publication/6207512114102272</p>	<p>Supporting habitats for Merlin (Falco columbarius) and Golden Plover (Pluvialis apricaria)</p> <p>Blanket bog, wet and dry heath.</p>	<p>Uncertain pending confirmation of emissions to air – potential indirect air quality impacts (see comments under North Yorkshire Moors SAC)</p>
<p>Northumbria Coast SPA Link - https://publications.naturalengland.org.uk/publication/6372874327687168</p>	<p>Supporting habitats for Arctic tern (Sterna paradisaea), Little tern , (Sterna albifrons), Purple sandpiper , (Calidris maritima maritima), Ruddy turnstone , (Arenaria interpres interpres)</p> <p>rocky shore (with associated boulder and cobble beaches)</p>	<p>Uncertain pending confirmation of emissions to air – potential indirect air quality impacts</p>

	intertidal mudflats and sand flats	
North Yorkshire Moors SAC Link - https://publications.naturalengland.org.uk/publication/6048216608931840	Blanket bog, wet and dry heath	Uncertain pending confirmation of emissions to air – potential indirect air quality impacts
Durham Coast SAC Link – https://publications.naturalengland.org.uk/publication/4949450761961472	Magnesian limestone grasslands, tall-herb fen, seepage flushes and wind-pruned scrub	Uncertain pending confirmation of emissions to air – potential indirect air quality impacts
Castle Eden Dene SAC Link – https://publications.naturalengland.org.uk/publication/5362023844020224	Yew (<i>Taxus baccata</i>) dominated woodland	Uncertain pending confirmation of emissions to air – potential indirect air quality impacts
Teesmouth & Cleveland Coast Ramsar site Ramsar site info sheet - https://jncc.gov.uk/jncc-assets/RIS/UK11068.pdf	Sand and mudflats, saltmarsh, freshwater marsh and sand dune habitats Common redshank (<i>Tringa totanus</i>), Red knot (<i>Calidris canutus islandica</i>)	Uncertain pending confirmation of main site and route corridor selection – Example impact pathways likely to include water quality (surface water run off related, operational discharges), air quality (pending confirmation of types of emissions) and wild bird disturbance (noise and vibration, movement, lighting)
Northumbria Coast Ramsar site Ramsar site info sheet – Link - https://jncc.gov.uk/jncc-assets/RIS/UK11049.pdf	Rocky foreshore and sandy beach habitats Little tern , (<i>Sterna albifrons albifrons</i>), Purple sandpiper ,	Uncertain pending confirmation of emissions to air – potential indirect air quality impacts

	(Calidris maritima maritima), Ruddy turnstone , (Arenaria interpres interpres)	
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4.1.2 Marine ecology (ref Section 6.8)

In relation to the proposal's potential impacts on the marine environment we have the following preliminary comments:

Trenchless technologies:

- Horizontal Directional Drilling (HDD) – we note that this is the most likely option that the applicant proposes to use. We agree it has less impacts compared with trenching.
- With all HDD there is a risk of 'frac-out' i.e. where the fracking fluid breaks through the surface and settles on the substrate (in this case intertidal/ subtidal mud and saltmarsh)
- Frac-out poses a risk to benthos habitats as it can cause smothering. In addition however, the clean-up operation can cause more damage. Examples include vehicles driving on the habitat and efforts to dig up the frac-out liquid removing or damaging the habitat underneath.
- We recommend that the Construction and Environmental Management Plan (CEMP) or equivalent should include a frac-out contingency plan and a pollution incident response plan. These should detail the clean-up operation. We would expect to be consulted on the CEMP later in the DCO process

Unexploded ordnance (UXO):

- The EIA scoping report is contradictory. Paragraph 6.8.27 suggests that UXO clearance measures are unlikely but Table B1 includes relevant screening measures. We would recommend that such measures are included. If not an explanation of the reasoning for omitting these measures should be provided.

Fish:

- Entrapment and entrainment within the water cooling system poses a risk to fish. Uptake of water for the water cooling system should consider all life stages of fish species and reduce fish entrainment.

Water cooling system:

- An assessment for fish is needed when assessing this element of the proposal.
- We welcome the proposal to assess the water that will be discharged and that the applicant will follow current guidelines and process. A criterion focusing on water temperature will need to be included.

Invasive non-native species (INNS)

- We note the applicant's reference to INNS and would advise a biosecurity plan, making sure everything brought to site (material/ gear/ water) has been assessed for INNS.

Hard structures

- Hard structures (pipe outflow, rock armouring or equivalent) need to be assessed in the context not only of loss of habitat, but also potential changes in coastal processes and introduction of INNS.

4.2 Nationally designated sites

4.2.1 Sites of Special Scientific Interest

Natural England welcomes the applicant's approach to scoping whereby the hierarchy of designated and local wildlife sites has been considered holistically using a 15Km area of search.

Aside from the Teesmouth & Cleveland Coast SSSI the proposal would not appear likely to cause direct impacts upon SSSIs within 15km of the application site. Nevertheless, based on the information available so far uncertainty exists over the scope for impacts on sites within this distance threshold. The SSSIs listed below fall within 15km of the proposal and have been listed accordingly to allow consideration of indirect effects from the proposal. Typical ecological impact pathways for consideration include air quality impacts arising from road transport (construction phase) and aerial emissions during the operational phase.

We welcome the scoping report's reference to these designated sites at paragraph 6.6.6. Figure 13 shows these sites' geographical distribution.

The Environmental Statement should include a full assessment of the direct and indirect effects of the development on the features of special interest within the SSSIs and identify appropriate mitigation measures to avoid, minimise or reduce any adverse significant effects. We welcome the applicant's proposal to include consideration of these effects within the Ecological impact assessment (EclA).

Natural England's SSSI Impact Risk Zones can be used to help identify the potential for the development to impact on a SSSI. The dataset and user guidance can be accessed from the [Natural England Open Data Geoportal](#)

SSSI site names with link to citation
Teesmouth and Cleveland Coast SSSI (Inc Teesmouth National Nature Reserve NNR) https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1000255&SiteName=Durham%20Coast&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=
Lovell Hill Pools SSSI https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S2000387&SiteName=Lovell%20Hill%20Pools&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=
Briarcroft pasture SSSI https://designatedsites.naturalengland.org.uk/SiteList.aspx?siteName=Briarcroft%20pasture&countyCode=&responsiblePerson=&DesignationType=SSSI
Roseberry Topping SSSI https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1000120&SiteName=Roseberry%20topping&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=

North York Moors SSSI https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S2000356&SiteName=North%20York%20Moors&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=
Saltburn Gill SSSI https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1000289&SiteName=Saltburn%20Gill&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=
Whitton Bridge Pasture SSSI https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S2000474&SiteName=Whitton%20Bridge%20pasture&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=
Langbaurgh Ridge SSSI https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1000256&SiteName=Langbaurgh%20&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=
Cliff Ridge SSSI https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1003961&SiteName=Cliff%20Ridge%20&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=
Durham Coast SSSI (Inc Durham Coast NNR) https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1000255&SiteName=Durham%20Coast&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=
Hart Bog SSSI https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1000052&SiteName=Hart%20bog&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=
Pike Whin Bog SSSI https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1000785&SiteName=Pike%20Whin%20bog&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=
Kildale Hall SSSI https://designatedsites.naturalengland.org.uk/SiteList.aspx?siteName=Kildale%20Hall&countyCode=&responsiblePerson=&DesignationType=SSSI
Hulam Fen SSSI https://designatedsites.naturalengland.org.uk/SiteList.aspx?siteName=Kildale%20Hall&countyCode=&responsiblePerson=&DesignationType=SSSI
Castle Eden Dene SSSI (inc Castle Eden Dene NNR) https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1000738&SiteName=Castle%20Eden%20Dene&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=
Pinkney and Gerrick Woods SSSI https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1000085&SiteName=Pinkey%20and%20Gerrick&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=
Fishburn Grassland SSSI https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1006457&SiteName=Fishburn%20grassland&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=

Charity Land SSSI

<https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S2000338&SiteName=Charity%20Land&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=>

Newton Ketton Meadow SSSI

<https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1005078&SiteName=Newton%20Ketton&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=>

Boulby Quarries SSSI

<https://designatedsites.naturalengland.org.uk/SiteDetail.aspx?SiteCode=S1000219&SiteName=Boulby%20Quarries&countyCode=&responsiblePerson=&SeaArea=&IFCAArea=>

4.3 Regionally and Locally Important Sites

Natural England notes and welcomes the EIA scoping report's reference to Local Sites at paragraph 6.6.8. Local Sites are identified by the local wildlife trust, geoconservation group or other local group. The Tees Valley Wildlife Trust and Tees Valley Nature Partnership may be able to provide relevant information:

TVWT – email: info@teeswildlife.org Tel 01287 636382

TV LNP – Website - <https://teesvalleynaturepartnership.org.uk/> - Email – Rachel Murtagh Nature Partnership Manager [\[REDACTED\]@teeswildlife.org](mailto: [REDACTED]@teeswildlife.org)

4.4 Protected Species

The ES should assess the impact of all phases of the proposal on protected species (including, for example, great crested newt, reptiles, birds, otter, water vole, badger and bats - paragraph 6.6.14 refers). Natural England does not hold comprehensive information regarding the locations of species protected by law. Records of protected species should be obtained from appropriate local biological record centres, nature conservation organisations and local groups. The applicant should consider the wider context of the site, for example in terms of habitat linkages and protected species populations in the wider area.

The area likely to be affected by the development should be thoroughly surveyed by competent ecologists at appropriate times of year for relevant species and the survey results, impact assessments and appropriate accompanying mitigation strategies included as part of the ES. Surveys should always be carried out in optimal survey time periods and to current guidance by suitably qualified and, where necessary, licensed, consultants.

We note and welcome the information presented in Table 6.3 accordingly.

Natural England has adopted [standing advice](#) for protected species, which includes guidance on survey and mitigation measures. A separate protected species licence from Natural England or Defra may also be required (For example for European Protected Species and badgers – Link - [NE wildlife licences](#)).

Applicants can also make use of Natural England's (NE) charged service [Pre Submission Screening Service](#) for a review of a draft wildlife licence application. NE then reviews a full draft licence application to issue a Letter of No Impediment (LONI) which explains that based on the information reviewed to date, that it sees no impediment to a licence being granted in the future should the DCO be issued.

NB - Please see our advice below regarding district level licensing for great crested newts.

The ES will need to consider the following **Protected Species**:

- great crested newt,
- reptiles,
- birds,
- otter,
- water vole,
- badger
- bats

4.5 District Level Licensing for Great Crested Newts

Natural England is aware that the applicant is interested in district level licensing for relevant land (within the red line boundary or relevant distance threshold for gt crested newt waterbodies). We will continue in dialogue with the applicant accordingly.

For reference, where strategic approaches such as district level licensing (DLL) for great crested newts (GCN) are used, a letter of no impediment (LONI) will not be required. Instead, the developer will need to provide evidence to the Examining Authority (ExA) on how and where this approach has been used in relation to the proposal, which must include a counter-signed Impact Assessment and Conservation Payment Certificate (IACPC) from Natural England.

The DLL approach is underpinned by a strategic area assessment which includes the identification of risk zones, strategic opportunity area maps and a mechanism to ensure adequate compensation is provided regardless of the level of impact. In addition, Natural England will undertake an impact assessment, the outcome of which will be documented in the IACPC.

If no GCN surveys have been undertaken, Natural England's risk zone modelling may be relied upon. During the impact assessment, Natural England will inform the Applicant whether their scheme is within one of the amber risk zones and therefore whether the Proposed Development is likely to have a significant effect on GCN. The IACPC will also provide additional detail including information on the Proposed Development's impact on GCN and the appropriate compensation required.

4.6 Priority Habitats and Species

Priority Habitats and Species are of particular importance for nature conservation and included in the England Biodiversity List published under section 41 of the Natural Environment and Rural Communities Act 2006. Consideration should also be given to the potential environmental value of brownfield sites, often found in urban areas and former industrial land. This is of special relevance to the application site, whose red line boundary contains a significant resource of '**open mosaic habitat**' associated with the area's industrial land use. We therefore welcome the clear presentation of such information in Figure 12 – 'Ecological Constraints within 1 km of the Proposed Development Site Boundary'.

The Environmental Statement should include details of:

- Any historical data for the site affected by the proposal (e.g. from previous surveys)
- Additional surveys carried out as part of this proposal
- The habitats and species present
- The status of these habitats and species (e.g. whether priority species or habitat)
- The direct and indirect effects of the development upon those habitats and species
- Full details of any mitigation or compensation measures
- Opportunities for biodiversity net gain or other environmental enhancement

4.7 Biodiversity net gain

The ES should use an appropriate biodiversity metric such as Biodiversity Metric 4.0 together with ecological advice to calculate the change in biodiversity resulting from proposed development and demonstrate how proposals can achieve a net gain.

Link to Biodiversity Metric 4.0 information - <https://publications.naturalengland.org.uk/publication/6049804846366720>

The metric should be used to:

- assess or audit the biodiversity unit value of land within the application area
- calculate the losses and gains in biodiversity unit value resulting from proposed development
- demonstrate that the required percentage biodiversity net gain will be achieved

Biodiversity Net Gain outcomes can be achieved on-site, off-site or through a combination of both. On-site provision should be considered first. Delivery should create or enhance habitats of equal or higher value. When delivering net gain, opportunities should be sought to link delivery to relevant plans or strategies e.g. Green Infrastructure Strategies or Local Nature Recovery Strategies. These are prepared by local planning authorities.

Natural England is engaged in ongoing dialogue with the applicant over BNG.

5 Landscape

5.1 Landscape and visual impacts

The proposal lies approximately 9Km north of the **North York Moors National Park**. The associated **Cleveland Way national trail** (please see also 'Connecting People with Nature', below) traverses the northern edge of the park and offers elevated views northwards towards the Tees estuary from viewpoints such as Roseberry Topping. We note that the proposed stacks at the chosen main site are expected to reach approximately 100m in height and so careful consideration of design will help to avoid significant environmental effects.

Consideration should be given to the direct and indirect effects on this designated landscape and in particular the effect upon its purpose for designation. The management plan for the designated landscape may also have relevant information that should be considered in the EIA.

We welcome the EIA scoping report's reference to the relevant [National Character Areas](#). These character area profiles set out descriptions of each landscape area and statements of environmental opportunity.

The EIA should include a full assessment of the potential impacts of the development on local landscape character using [landscape assessment methodologies](#). We encourage the use of Landscape Character Assessment (LCA), based on the good practice guidelines produced jointly by the Landscape Institute and Institute of Environmental Assessment in 2013. LCA provides a sound basis for guiding, informing, and understanding the ability of any location to accommodate change and to make positive proposals for conserving, enhancing or regenerating character.

A landscape and visual impact assessment should also be carried out for the proposed development and surrounding area. Natural England recommends use of the methodology set out in *Guidelines for Landscape and Visual Impact Assessment 2013* ((3rd edition) produced by the Landscape Institute and the Institute of Environmental Assessment and Management. For National Parks and AONBs, we advise that the assessment also includes effects on the 'special qualities' of the designated landscape, as set out in the statutory management plan for the area. These identify the particular landscape and related characteristics which underpin the natural beauty of the area and its designation status.

The assessment should also include the cumulative effect of the development with other relevant existing or proposed developments in the area. This should include an assessment of the impacts of other proposals currently at scoping stage.

To ensure high quality development that responds to and enhances local landscape character and distinctiveness, the siting and design of the proposed development should reflect local characteristics and, wherever possible, use local materials. Account should be taken of local design policies, design codes and guides as well as guidance in the [National Design Guide](#) and [National Model Design Code](#). The ES should set out the measures to be taken to ensure the development will deliver high standards of design and green infrastructure. It should also set out detail of layout alternatives, where appropriate, with a justification of the selected option in terms of landscape impact and benefit.

The National Infrastructure Commission has also produced Design Principles [Design Principles for National Infrastructure - NIC](#) endorsed by Government in the National Infrastructure Strategy.

6 Connecting People with nature

The ES should consider the potential impacts on the **Cleveland Way National Trail** and the **England Coast Path**. We welcome the inclusion of the coast path and local rights of way in Figure 10 – 'Environmental Constraints within 1 km of the Proposed Development Site Boundary'. The National Trails website www.nationaltrail.co.uk provides further information.

The ES should consider potential impacts on access land, common land, public rights of way, the England Coast Path and coastal access routes and coastal margin in the vicinity of the development, in line with NPPF paragraph 100. It should assess the scope to mitigate for any adverse impacts. Rights of Way Improvement Plans (ROWIP) can be used to identify public rights of way within or adjacent to the proposed site that should be maintained or enhanced. Links to other green networks and, where appropriate, urban fringe areas should also be explored to help promote the creation of wider green infrastructure.

7 Soils and Agricultural Land Quality

Soils are a valuable, finite natural resource and should also be considered for the ecosystem services they provide, including for food production, water storage and flood mitigation, as a carbon store, reservoir of biodiversity and buffer against pollution. It is therefore important that the soil resources are protected and sustainably managed. Guidance is set out in the Natural England [Guide to assessing development proposals on agricultural land](#).

With regard to best and most versatile land⁵ we note the EIA scoping report's proposal that due to the temporary impacts associated with the hydrogen pipeline corridor's development no impact assessment is required. Natural England would draw the Examining Authority's attention to National Policy Statement EN4⁶ paragraph 2.23.7 setting out the need for a suitable approach to mitigation of impacts on soil resources.

The following information sources are relevant:

Link - [Defra Construction Code of Practice for the Sustainable Use of Soil on Development Sites and](#)

The British Society of Soil Science Guidance Note [Benefitting from Soil Management in Development and Construction](#).

8 Air Quality

Air quality in the UK has improved over recent decades but air pollution remains a significant issue. For example, approximately 85% of protected nature conservation sites are currently in exceedance of nitrogen levels where harm is expected (critical load) and approximately 87% of sites exceed the level of ammonia where harm is expected for lower plants (critical level of 1µg) ^[1]. A priority action in the England Biodiversity Strategy is to reduce air pollution impacts on biodiversity. The Government's Clean Air Strategy also has a number of targets to reduce emissions including to reduce damaging deposition of reactive forms of nitrogen by 17% over England's protected priority sensitive habitats by 2030, to reduce emissions of ammonia against the 2005 baseline by 16% by 2030 and to reduce emissions of NOx and SO₂ against a 2005 baseline of 73% and 88% respectively by 2030. Shared Nitrogen Action Plans (SNAPs) have also been identified as a tool to reduce environmental damage from air pollution.

Construction phase

We welcome detailed assessment of [road traffic emissions](#) and refer the applicant to our guidance for public bodies to help assess the impacts of road traffic emissions to air quality capable of affecting European Sites:

Link - [Natural England's approach to advising competent authorities on the assessment of road traffic emissions under the Habitats Regulations - NEA001](#).

Please note that the methodological approach set out in our guidance applies similarly to Sites of Special Scientific Interest despite the differing legislative regimes for Habitats Sites and SSSIs.

⁵ Paragraphs 6.12.13-14 and 6.12.22

⁶ 'Gas supply infrastructure and gas and oil supply pipelines'

[1] [Report: Trends Report 2020: Trends in critical load and critical level exceedances in the UK - Defra, UK](#)

Operational phase

Natural England notes that the applicant's EIA scoping report screens out the proposal's pipelines and connections from the Environmental Statement (paragraph 6.2.25).

We welcome screening in of the operational process at paragraph 6.2.24.

We refer the applicant to the Air Pollution Information System at www.apis.ac.uk for information on baseline levels and loads at specific designated sites for a range of pollutants recorded nationally.

The Environment Agency Screening Tool for industrial emissions can be found at: <https://www.gov.uk/guidance/air-emissions-risk-assessment-for-your-environmental-permit>

9 Water Quality and Nutrient Neutrality

In March 2022 Natural England advised local planning authorities that the Teesmouth & Cleveland Coast Special Protection Area (SPA) and Ramsar site was considered to be in an unfavourable condition due to nutrient enrichment, specifically nitrogen.

The Teesmouth & Cleveland Coast SPA and Ramsar site includes areas of the River Tees channel, the Tees Estuary, and the Tees Bay. Natural England's advice is that qualifying bird species are being negatively affected by the growth of algal mats on their key foraging habitats within the Tees Estuary, particularly at Seal Sands.

As such, Natural England's Nutrient Neutrality advice is that new developments should not result in additional nitrogen entering the catchment of the River Tees upstream of the SPA and Ramsar site (i.e. they are nutrient neutral). Further information is available at the following link: [Strategic Solutions: Nutrient Neutrality \(naturalengland.org.uk\)](http://naturalengland.org.uk/Strategic%20Solutions%3A%20Nutrient%20Neutrality)

This advice applies primarily to development involving overnight accommodation i.e. it focuses on additional volumes of treated wastewater arising as a result of new house building. However in order to restore the SPA to favourable condition the wider effects of nutrient inputs into the Tees hydrological catchment are also relevant. The link below provides further context: <https://www.gov.uk/government/publications/nutrient-pollution-reducing-the-impact-on-protected-sites/nutrient-pollution-reducing-the-impact-on-protected-sites>

As a result we note and welcome the applicant's recognition of the nutrient pollution theme (paragraphs 6.3.35-37). The Habitats Regulations Assessment (HRA) process provides the means to assess the proposal and we acknowledge paragraphs 6.6.27-31 accordingly. Natural England looks forward to continued dialogue with the applicant to progress this element of the proposal.

10 Climate Change

Natural England notes and acknowledges the proposal's primary purpose i.e. to produce low carbon hydrogen and capture and store carbon. Paragraph 1.1.2 (Introduction) refers.

In terms of climate change mitigation over and above the scheme's primary purpose the proposal also offers scope to:

- (i) Deliver nature recovery/enhancement
- (ii) Build ecosystem resilience through careful planning and implementation e.g. with reference to consideration of ongoing wider efforts to restore water quality in the Tees estuary. These include but are not restricted to the provisions of the Levelling up and Regeneration Bill which requires relevant water companies to upgrade the performance of wastewater treatment works to 'technically achievable limits' by 2030.

The applicant should explore opportunities to achieve a design solution that optimises the scope to deliver relevant technological advances and land management in the local area over the development's lifetime



H2 Teeside Limited
Building E
Chertsey Road
Sunbury On Thames
Middlesex
W16 7BP

Planning Services (Scarborough Area)
North Yorkshire Council
Town Hall
St Nicholas Street
Scarborough
North Yorkshire
YO11 2HG
Tel: 0300 131 2 131
Email: planning.services.sca@northyorks.gov.uk
Web: www.northyorks.gov.uk

Our Ref ZF23/00692/OA
Date 24 April 2023

Proposal EIA Scoping Notification and Consultation - EN070009
Site Address H2 Teeside

I refer to the above consultation which was received at this office on 14 April 2023.

NYC as a Local Planning Authority makes no comment

If you require any further assistance please contact me at the above address.

Yours faithfully

Planning Services

Woodger-Bassford, Jade

From: Before You Dig <BeforeYouDig@northerngas.co.uk>
Sent: 12 April 2023 09:58
To: H2Teesside
Subject: RE: EXT:EN070009 - H2Teesside - EIA Scoping Notification and Consultation

Follow Up Flag: Follow up
Flag Status: Completed

Good Morning,

NGN has a number of gas assets in the vicinity of some of the identified "site development" locations. It is a possibility that some of these sites could be recorded as Major Accident Hazard Pipelines(MAHP), whilst other sites could contain High Pressure gas and as such there are Industry recognised restrictions associated to these installations which would effectively preclude close and certain types of development. The regulations now include "Population Density Restrictions" or limits within certain distances of some of our "HP" assets.

The gas assets mentioned above form part of the Northern Gas Networks "bulk supply" High Pressure Gas Transmission" system and are registered with the HSE as Major Accident Hazard Pipelines.

Any damage or disruption to these assets is likely to give rise to grave safety, environmental and security of supply issues.

NGN would expect you or anyone involved with the site (or any future developer) to take these restrictions into account and apply them as necessary in consultation with ourselves. We would be happy to discuss specific sites further or provide more details at your locations as necessary.

If you give specific site locations, we would be happy to provide gas maps of the area which include the locations of our assets.

(In terms of High Pressure gas pipelines, the routes of our MAHP's have already been lodged with members of the local Council's Planning Department)

Kind regards,

Lucy McMahon

**Administration Assistant
Before You Dig
Northern Gas Networks
1st Floor, 1 Emperor Way
Doxford Park
Sunderland
SR3 3XR**

Before You Dig: 0800 040 7766 (option 5)

www.northerngasnetworks.co.uk

facebook.com/northerngasnetworks

twitter.com/ngngas

Alternative contact:

beforeyoudig@northerngas.co.uk



Get involved! Have your say in the future of your gas network and win great prizes, by taking part in our BIG customer survey at together.northerngasnetworks.co.uk Keep posted to take part in a range of activities from workshops to roadshows. Together, we are the network.

Northern Gas Networks Limited (05167070) | Northern Gas Networks Operations Limited (03528783) | Northern Gas Networks Holdings Limited (05213525) | Northern Gas Networks Pensions Trustee Limited (05424249) | Northern Gas Networks Finance Plc (05575923). **Registered address:** 1100 Century Way, Thorpe Park Business Park, Colton, Leeds LS15 8TU. Northern Gas Networks Pension Funding Limited Partnership (SL032251). **Registered address:** 1st Floor Citypoint, 65 Haymarket Terrace, Edinburgh, Scotland, EH12 5HD. **For information on how we use your details please read our [Personal Data Privacy Notice](#)**

From: H2Teesside <H2Teesside@planninginspectorate.gov.uk>
Sent: 11 April 2023 09:13
To: H2Teesside <H2Teesside@planninginspectorate.gov.uk>
Subject: EXT:EN070009 - H2Teesside - EIA Scoping Notification and Consultation

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External email! - Think before you click

Dear Sir/ Madam

Please see attached correspondence on the proposed H2Teesside project.

Please note that the deadline for consultation responses is **9 May 2023**, and is a statutory requirement that cannot be extended.

Kind regards
Laura



The Planning
Inspectorate

Laura Feekins-Bate
EIA Advisor
The Planning Inspectorate



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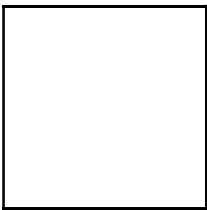
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DPC:76616c646f72





Redcar & Cleveland Borough Council
Corporate Directorate of Growth, Enterprise and Environment
Redcar and Cleveland House
Kirkleatham Street
Redcar
TS10 1RT
01642 774774
[REDACTED]@redcar-cleveland.gov.uk
www.redcar-cleveland.gov.uk

Environmental Services
Operations Group 3
Temple Quay House
2 The Square
Bristol, BS1 6P

Our Ref: R/2023/0300/DCO
Your Ref: EN070009
Contact: Adrian Miller
Direct Line: [REDACTED]
Mob: [REDACTED]

Date: 4 May 2023

Dear Mr Sir / Madam,

Planning Act 2008 (as amended) and The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations) – Regulations 10 and 11

Application by H2 Teesside Ltd (the Applicant) for an Order granting Development Consent for the H2Teesside Project (the Proposed Development)

General Approach (Application for an Environmental Impact Assessment Scoping Opinion)

The Scoping document submitted is considered to be an appropriate approach to the preparation of an ES. The general structure and format is considered acceptable setting out;

- A background to the development
- Description of the existing environment
- The proposed Development
- Consideration of Alternatives
- Planning Policy and Need

- Potentially Significant Environmental Effects

- EIA process and
- Summary

The overall approach to the ES is considered acceptable as are the range of topic areas to be assessed under section 6 (Potentially Significant Environmental Effects) subject to the detailed comments received and set out below from consultees to the process. The Scoping report sets out in detail, the approach to be taken to the preparation of the ES and is considered to be a robust and comprehensive assessment of that process. The LPA at this stage does not see the need to materially alter or add to the approach taken in the Scoping Report in terms of the matters to be covered or the methodology.

Detailed comments from consultees

(1) Redcar and Cleveland Council service teams

Environmental Protection (Nuisance)

With reference to the above planning application, I would confirm that I have assessed the following environmental impacts which are relevant to the development and would comment as follows:

Chapter 6.5 of H2 Teesside Ltd Environmental Impact Assessment Scoping Report concerns Noise and Vibration.

The report states that baseline noise data is available from the results of surveys which were undertaken in 2019 and 2020 for the NZT Project (immediately east of the Proposed Development Sites). From a review of the available data, the existing dominant sound in the area is from industrial and road traffic noise sources, however further project specific baseline noise monitoring will be carried out to inform the noise and vibration assessment for the Proposed Development.

I have no objections to the methodology and scope for further assessment stated in the report.

Environmental Protection (Air Quality)

Chapter 6.2 of H2 Teesside Ltd Environmental Impact Assessment Scoping

Report concerns Air Quality.

I have no objections to the methodology and scope for further assessment stated in the report.

Environmental Protection (Contamination)

With reference to the above planning application, I would confirm that I have assessed the following environmental impacts which are relevant to the development and would comment as follows:

Chapter 6.4 H2 Teesside Ltd Environmental Impact Assessment Scoping Report concerns contaminated land.

The chapter describes the baseline geology together with historic contaminative use along the main sites and pipe corridors and potential impacts to human health and controlled waters from the proposed development.

A Phase 1 desk-based assessment (DBA) has been completed for Main Site A and a similar DBA is being prepared for Main site B.

In order to minimise the environmental impact and fully characterise the site I would recommend the inclusion of the full Standard Contaminated Land condition onto any planning permission which may be granted:

REASON: To ensure that risks from land contamination to the future users of the land and neighbouring land are minimised, together with those to controlled waters, property and ecological systems, and to ensure that the development can be carried out safely without unacceptable risks to workers, neighbours and other offsite receptors.

Natural Heritage Manager

No comments

(2) External Stakeholder responses

SABIC Pipeline Operator

Many thanks for your notification of request dated 13 April 2023 for planning reference, R/2023/0300/DCO, at the above address.

The proposed development appears to be located in the inner, middle and outer zone of the above Major Accident Hazard Pipeline as defined by the HSE development control guidelines (PADHI – HSE’s Land Use Planning Methodology document).

In terms of the safety and engineering integrity of the pipeline I would advise you that SABIC is consulted should any work within 50 metres (notification zone as required by operators of Major Accident Hazard Pipelines) is to be carried out, as this would need approval from ourselves before any work is commenced.

Should planning consent be granted, we would require to consult fully with the developer prior to construction commencing on the site to agree a method statement and ensure that our standard conditions for work in close proximity to the pipeline are met.

Northern Gas Networks

There are high pressure mains within the area so we would object to this. The link you have provided is to a document with 249 pages so can you please pinpoint the areas and provide grids for each one? – please see below:

NGN has a number of gas assets in the vicinity of some of the identified “site development” locations. It is a possibility that some of these sites could be recorded as Major Accident Hazard Pipelines(MAHP), whilst other sites could contain High Pressure gas and as such there are Industry recognised restrictions associated to these installations which would effectively preclude close and certain types of development. The regulations now include “Population Density Restrictions” or limits within certain distances of some of our “HP” assets.

The gas assets mentioned above form part of the Northern Gas Networks “bulk supply” High Pressure Gas Transmission” system and are registered with the HSE as Major Accident Hazard Pipelines.

Any damage or disruption to these assets is likely to give rise to grave safety, environmental and security of supply issues.

NGN would expect you or anyone involved with the site (or any future developer) to take these restrictions into account and apply them as necessary in consultation with ourselves. We would be happy to discuss specific sites further or provide more details at your locations as necessary. If you give specific site locations, we would be happy to provide gas maps of the area which include the locations of our assets.

(In terms of High-Pressure gas pipelines, the routes of our MAHP's have already been lodged with members of the local Council's Planning Department)

Highways England

See attached technical note

CATS North Sea

Thank you for your notification request dated 13 April 2023 in respect of planning reference R/2023/0300/DCO, at the above noted address.

The proposed development is located in proximity to the CATS terminal and pipeline (the "CATS Infrastructure"). CATS North Sea Limited ("CNSL") should be consulted in respect of any work or activities within 50 metres of the CATS Infrastructure and no such work should be commenced without the prior approval of CNSL. The safety and engineering considerations, so far as relevant to the Environmental Statement, should take account of the CATS Pipeline and any restriction zones. The application for development consent will need to ensure any risks to, or associated with, the CATS Infrastructure are suitably mitigated. CNSL will engage further in the planning process in this regard.

CNSL has no additional comments at this stage on the proposed scope of the Environmental Statement but will continue to engage with the planning process and the make comments and representations at relevant stages.

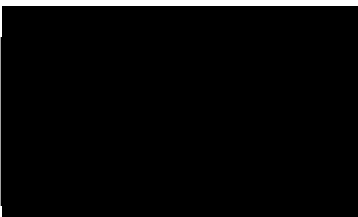
Natural England

We have since been consulted separately by the Planning Inspectorate and will submit our advice letter direct to them on 9.5.23.

Cleveland Police ALO

With regards to this application, I recommend applicant/agent contact me at earliest opportunity for any advice/guidance I can offer and to liaise with any other departments within Cleveland Police that should be aware of proposal.

Yours sincerely



Adrian Miller BA (Hons) Dip TP MRTPI
Head of Planning and Development

Lynne Aspery

From: Planning Admin
Subject: FW: DCO Scoping Response - R/2023/0300/DCO - H2 Teesside Project
Attachments: DevTV0162 TM001 - Final.pdf

From: Christopher Bell (NO, North East) [REDACTED] <[\[REDACTED\]@nationalhighways.co.uk](mailto:[REDACTED]@nationalhighways.co.uk)>
Sent: 28 April 2023 11:15
To: Adrian Miller [REDACTED] <[\[REDACTED\]@redcar-cleveland.gov.uk](mailto:[REDACTED]@redcar-cleveland.gov.uk)>
Cc: Subject: FW: DCO Scoping Response - R/2023/0300/DCO - H2 Teesside Project

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Adrian,

Please find a technical note from JSJV, National Highways consultants, to advise at this pre-application / scoping stage on this proposed development in order to assist the developer in defining an appropriate assessment of the Strategic Road Network.

Regards



Chris Bell, Planning Manager
National Highways (formerly Highways England) | 2 City Walk | Leeds | LS11 9AT
Tel: [REDACTED]
Web: <http://www.highways.gov.uk>
GTN: 0300 470 2339

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H2 Teesside Project – DCO Scoping

Prepared for:	Chris Bell
Prepared by:	Jack Fawdington
Date:	28 th April 2023
Case Reference:	DevTV0162
Document Reference:	TM001
Reviewed/approved by:	Gavin Nicholson

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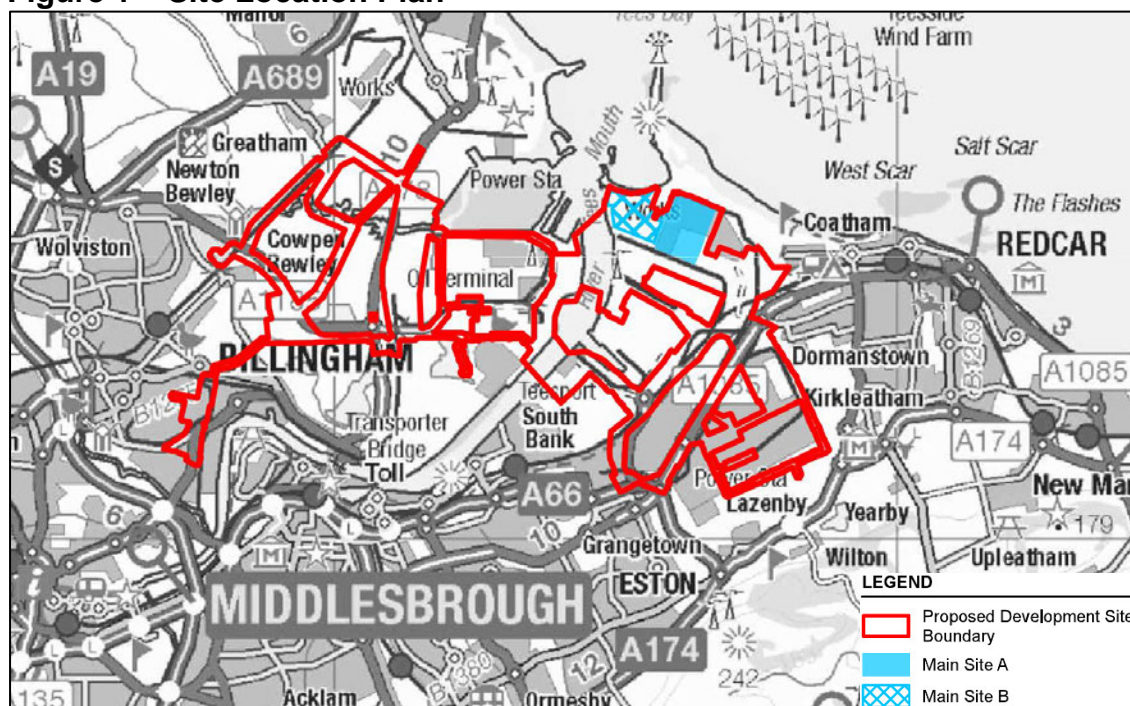
Overview

Jacobs Systra Joint Venture [JSJV] (on behalf of National Highways) has undertaken a review of an Environmental Impact Assessment [EIA] Scoping document (dated April 2023) submitted by H2 Teesside Limited [the Applicant] in reference to the proposed H2 Teesside Project at the former Redcar Steelworks site, Teesside. The H2 Teesside Project application has been classified as a Development Consent Order [DCO] (ref: R/2023/0300/DCO) due to the development being recognised by the Planning Inspectorate as a Nationally Significant Infrastructure Project.

This JSJV Technical Memorandum [TM] comments on the suitability of the EIA Scoping document with discussion provided in relation to whether the document suitably considers the impact of the development proposals upon the Strategic Road Network [SRN] across both the operational and construction phases of the development.

Site Location

The development site, located at the former Redcar Steelworks site, is composed of two proposed main sites, sites A and B, as detailed on Figure 1 below.

Figure 1 – Site Location Plan

(Source: EIA Scoping Submission Drawing – ‘Figure 1’)

Description of Existing Development

Proposed Development Site

The proposed development site is located primarily within the administrative boundaries of Redcar and Cleveland Borough Council [RCBC] and Stockton on Tees Borough Council [STBC]. The hydrogen pipeline corridor extends further north-west to include land within the administrative boundary of Hartlepool Borough Council [HBC] also. The proposed development site is split into distinct areas as summarised below:

- The Main Site (whether Site A or Site B) will be the location of the Production Facility together with the associated carbon capture and compression facilities and ancillary infrastructure.
- CO₂ Export Corridor: CO₂ captured from the process will be compressed at the Main Site and exported off shore for geological storage in the Southern North Sea.
- Hydrogen Pipeline Corridor: The pipeline network will connect to potential off-takers at various industrial installations across the Tees Valley.
- Natural Gases Connection Corridor: Pipelines required for the transportation of compressed gas from local sources for use in the hydrogen production process.
- Electrical Connection Corridor: To provide electrical power for the Production Facility via a connection to the National Grid Network.
- Water Connections Corridor: Required for water supply and discharge to / from the Production Facility.

Proposed Development

The proposed development comprises the construction, operation and maintenance of a 1.2 GWth Lower Heating Valve Carbon Capture and Storage [CSS] enabled Hydrogen Production Facility located in the Teesside industrial cluster area.

The Production Facility and associated infrastructure which form part of the proposed development will be located on the 'Main Site'. There are currently two Main Site options – Main Sites A and B. Main Site A would be located within land owned by Teesworks known as 'The Foundry'. Main Site B would be located to the west of Main Site A within land owned by Redcar Bulk Terminal, known as 'RBT'. Both Main Sites are located within the Redcar and Cleveland Borough, with the connection corridors extending further into Stockton-on-Tees and Hartlepool, all within Teesside.

At this stage in the design of the proposed development, there are still options being considered for various components. The design of the proposed development incorporates a necessary degree of flexibility to allow for the future selection of the preferred layout at the Main Site, as well as routing of the hydrogen pipeline and other connections.

Development Access

Access to the Main Sites during the construction phase for HGV construction traffic is likely to be via the existing access road from the A1085 (local highway network) via the former Redcar Steelworks entrance. This route will also be used during operation for staff and other site traffic. This applies to both Main Site A and Main Site B options.

Construction access routes for the hydrogen pipeline and connection corridors are yet to be defined by the Applicant. However, it is proposed that laydown areas will likely be identified at suitable locations along the pipeline routes located north of the River Tees to reduce potential disturbance. Moving forward, JSJV note that the location of both the construction laydown areas and the routing of HGV construction routes will need to be confirmed with National Highways, however, it is acknowledged that the proposed A1085 access point is unlikely to directly interact with the operation of the SRN.

Abnormal Indivisible Loads

Options for transportation of Abnormal Indivisible Loads [AIL]s during construction using the local ports are still being considered by the Applicant. The nearest commercial port to the proposed development site is Teesport which could be used for the import of containerised equipment or modular plant. The use of the existing wharf at RBT for transportation of abnormal loads is also proposed to be considered for modular plant. Consideration is also to be given to the appropriate port and any required AIL routes during the design process.

JSJV understands that the standard procedure for [AIL]s will be followed by the Applicant, however, it is noted that potential carriageway width, height and weight restrictions for the movement of such vehicles will need to be discussed and agreed with National Highways.

As such, JSJV would advise that the Applicant directly discusses any matters pertaining to AIL movements with the National Highways Abnormal Indivisible Loads team (AbnormalIndivisibleLoadsTeam@highwaysengland.co.uk).

Construction Programme & Management

As the development advances through the planning process, a detailed Environmental Statement [ES] will be submitted alongside a detailed Construction Environmental Management Plan [CEMP], which will describe the specific mitigation measures to be followed to reduce impacts from construction related activities.

The Construction of Phase 1 is likely to last approximately two years. Phase 2 works would commence thereafter (approximately late 2027/ early 2028) and last a further two to three years, with overall construction expected to be completed by late 2029 or early 2030. The potential impact of the construction of the proposed development at the SRN will also be discussed subsequently within this JSJV TM.

Staffing

Based on an initial estimate, it is proposed that the construction workforce peak numbers will be approximately 3,100 people per day across two distinct development phases. This includes workers associated with both the Main Site and pipeline connections.

Operational workforce peak numbers are proposed to be a maximum of 85 persons, working dedicated shifts over 24 hour periods. Typical staff numbers are expected to be 40 to 50 during the week, however, during 28 day maintenance periods (occurring every four years), around 400 staff may be on site.

With regards to on-site operational and construction staff, National Highways will require the expected two-way daily arrival / departure profile of staff trips to be confirmed by the Applicant. This is to ensure that the impact of the site at the SRN during the operational and construction phase can be assessed, quantified and managed if necessary.

With regards to the 28 day maintenance periods highlighted by the Applicant, JSJV recognise that these specific periods may likely incur an impact at the SRN as a result of greatly increased staff numbers. Consequently, JSJV would advise that a suitable control mechanism is agreed with National Highways through a form of Operational Traffic Management Plan [OTMP] for implementation during these periods to ensure staff trip generation can be managed and mitigated.

HGV Movements & Traffic

While the volume of construction vehicles associated with the delivery of plant and the labour force has not been fully determined at this stage, it is proposed that approximately 2,660 two-way vehicle movements will be generated per day during the peak construction period, based on an average car occupancy for workers of 2.33.

In terms of construction HGV and LGV movements, approximately 15,320 deliveries are expected to the Main Site over the full period of construction. In addition, there are also approximately 4,330 HGV movements expected to be associated with the construction of the development pipelines throughout the construction period, which equates to around 50 two-way movements per day during the peak month of construction.

National Highways will require confirmation of the expected 'peak' arrival / departure profile of construction vehicles, including construction staff, deliveries and associated movements during an identified 'peak' construction period, and how long this period may continue for, opposed to the generation of average movements or total daily / monthly movements. This is to ensure that any potential trip generation impact at the

SRN can be accurately quantified as the development advances through the construction phase.

Further detail will also need to be provided by the Applicant in relation to how it will be ensured that an average car occupancy rate of 2.33 will be achieved. This detail and the associated control mechanisms that will be required to control and mitigate the impact of the construction traffic at the SRN will need to be detailed in the Final Construction Traffic Management Plan [CTMP] submitted in support of the DCO.

In addition, the Applicant will need to confirm and evidence the anticipated routings and proportions that construction vehicles (including construction staff trips) will take to / from the site. Confirmation of the distribution of these trips is required by National Highways in order to understand which specific SRN junctions may be materially impacted by construction traffic.

Planning Policy

While not identified by the Applicant within the scoping document, National Highways will require any planning assessment to engage with and adhere to guidance contained within DfT Circular 01/2022: The Strategic Road Network and the Delivery of Sustainable Development. Circular 01/2022 sets out the way in which National Highways will engage with the development industry, public bodies and communities to assist the delivery of sustainable development. The circular is applicable to the whole of the SRN, comprising the trunk motorways and all-purpose trunk roads in England, including those roads managed by the design, build, finance and operate companies.

Environmental Impact Assessment Process

Traffic & Transportation

The scoping document identifies that in order to fully address the impacts of the construction phase on the highway network, a Transport Assessment [TA] will be produced by the Applicant following the confirmation of the specific number of construction movements associated with the proposed development. The scoping note identifies that appropriate liaison with the necessary local authorities and National Highways will be undertaken prior to TA submission.

The scope of the TA is proposed to cover the following areas:

- Review of appropriate transport policy.
- Description of baseline and future baseline conditions, including link and junction flows, a review of highway safety issues and consideration of accessibility by all modes.
- Calculation of construction traffic flows.
- Distribution and assignment of construction traffic flows to the highway network, including the identification of any AIL routes.
- Highway network impact analysis, with the identification of key junctions that may require detailed capacity analysis.
- Consideration of local PRow network and the potential impact of the site on existing routes.

- Where the construction of the development may directly interact with existing road and / or rail links.
- The formulation of mitigation measures through both a Construction Worker Travel Plan [CWTP] and CTMP.

With reference to the preparation of the development TA, JSJV note that:

- The impact of the proposed development at the SRN over both the operational and construction phase must be understood in terms of absolute two-way flows over both morning / evening network peak hours. This is opposed to either total daily flows or proportional flows (percentage increase) in relation to baseline flows at any specific junction.
- National Highways will need to understand the trip distribution of site vehicles at the SRN associated with both the construction and operational phases of the proposed development. The study area should extend to any SRN junction where a potential impact needs to be considered (to aid discussions we suggest 30 two-way trips being a starting point for consideration).
- JSJV acknowledge that where the development (construction and / or operation) is evidenced to potentially incur a material impact at an SRN junction, appropriate collision analysis may be required.
- Where the development (construction and / operation) is evidenced to potentially incur a material impact at an SRN junction, an appropriate consideration of operational impacts and, if required, mitigation strategy, will need to be agreed with National Highways.
- National Highways will require confirmation as to where any sections of pipeline construction may interact with the SRN, i.e., where tunnelling or infrastructure works are undertaken either underneath or adjacent to the SRN. Further discussions will then be required with National Highways as to how such construction can be safely undertaken without compromising the operation or structural integrity of the SRN.
- While the production of a CWTP is welcomed by National Highways, JSJV note that a Travel Plan [TP] will also need to be prepared in relation to the operational aspect of the proposed development. Both CWTP and operational TP must outline a package of measures that will be utilised to promote and incentivise sustainable travel to / from the site, while committing to vehicle trip generation targets and a trip monitoring strategy. Detail should also be provided as to what remedial measures will be implemented should vehicular trip targets not be achieved.

In supplement, JSJV also note that the following measures will need to be taken into account by the Applicant in relation to the preparation of a CTMP for the proposed development:

- Identification of the approved haul routes to site and identification of measures to prevent the use of any unauthorised routes.
- Identification of the site access strategy.
- Identification of the proposed works programme by construction task.
- Identification of workforce numbers for the site and details of workforce travel arrangements (specifically with a view to achieving the 2.33 average car occupancy for workers that has been assumed within the initial provision of information).

- Details of site working hours and details of any exceptions (concrete pours etc).
- Measures to minimise wherever possible the use of public roads at peak periods whenever practicable (Morning and Evening Peak Hours and school start / finish times).
- Details of measures to reduce the number of delivery trips to site such as a combination of consolidated ordering, rationalising suppliers and consolidated deliveries.
- Details of measures to reduce on-site waste such as recycling and re-use of materials to minimise the number of collections from site.
- Vehicles carrying soil and other dusty materials to be fully sheeted when travelling to or leaving site.
- Use of an approved mechanical road sweeper to clean the surrounding road network of any mud or debris deposited by site vehicles. The road sweeper should be available whenever needed.
- Measures to safely manage pedestrians.
- Details for any temporary traffic management and warning signs.
- Details of a site liaison officer who will act as point of contact for the CTMP.
- Details regarding the monitoring the success of the CTMP and remedial measures which may be implemented should the CTMP not be achieving stated outcomes.

Relationship with other Planning Applications

Finally, JSJV recommends that National Highways should seek to ensure that the consideration, and subsequent delivery, of the proposals (if the DCO application is successful) is done so in a manner that is aligned with the approaches adopted and outcomes envisaged when other significant applications in the area have been considered. Clearly the aspirations outlined could have cumulative implications during both the construction and operational stages with other approved development proposals.

With a view to this, the following information is provided in relation to those permissions that are directly relatable to the proposals for this site:

- **R/2020/0821/ESM - Foundry Outline Application**

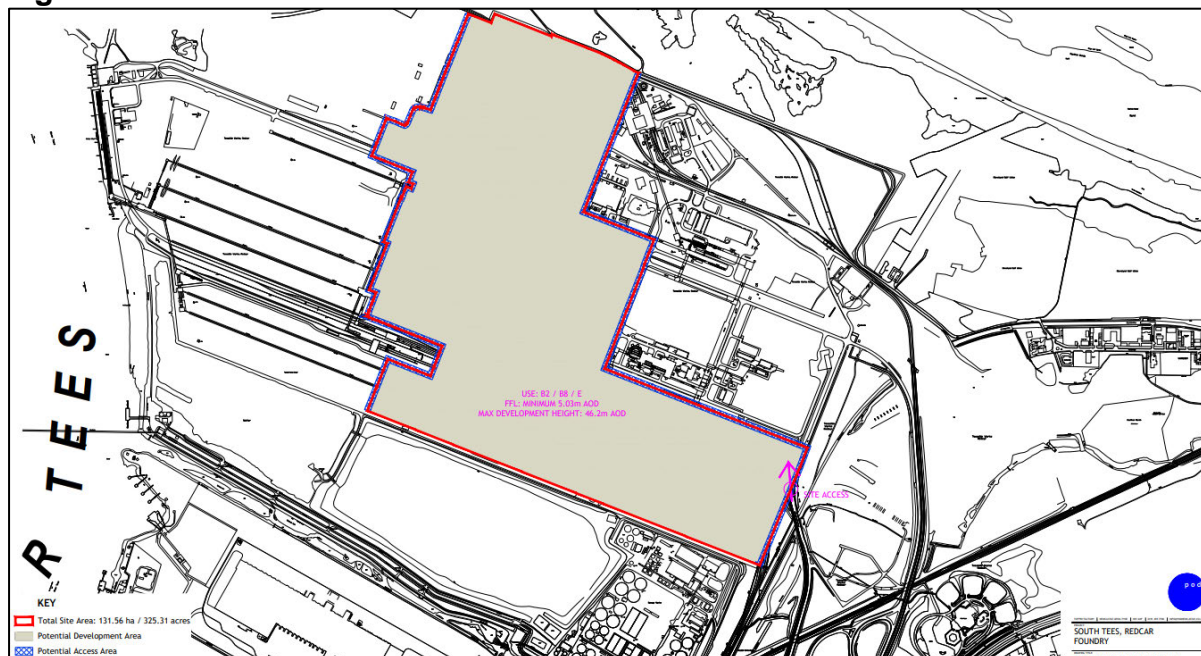
Alongside four other significant applications made by the South Tees Development Corporation [STDC], this application has been granted with some requirements for SRN assessment and mitigation measures being the subject of a set of planning conditions.

With a view to the site parameters plan for the Foundry application, which can be seen in Figure 2 below, it can be seen that the development boundaries contain areas that are subject to this DCO application (mainly related to the Main Site A component). National Highways would therefore request that information be provided that clarifies the relationship of the applications and developments proposed.

Furthermore, with a view to the approach that has been established for the Foundry Outline permission (as controlled by the associated planning conditions), discussions should take place to confirm how the planning outcomes contained within the planning conditions associated with that Foundry Outline permission can

be achieved with regard to this proposal. It is recommended that discussions are held with the DCO applicant, the Local Planning Authority and STDC (as necessary - as the applicant to the outline Foundry permission) to understand the relationship between the development proposals and with a view to ensuring a holistic and consistent consideration of their outcomes.

Figure 2 – R/2020/0821/ESM – Site Parameters Plan

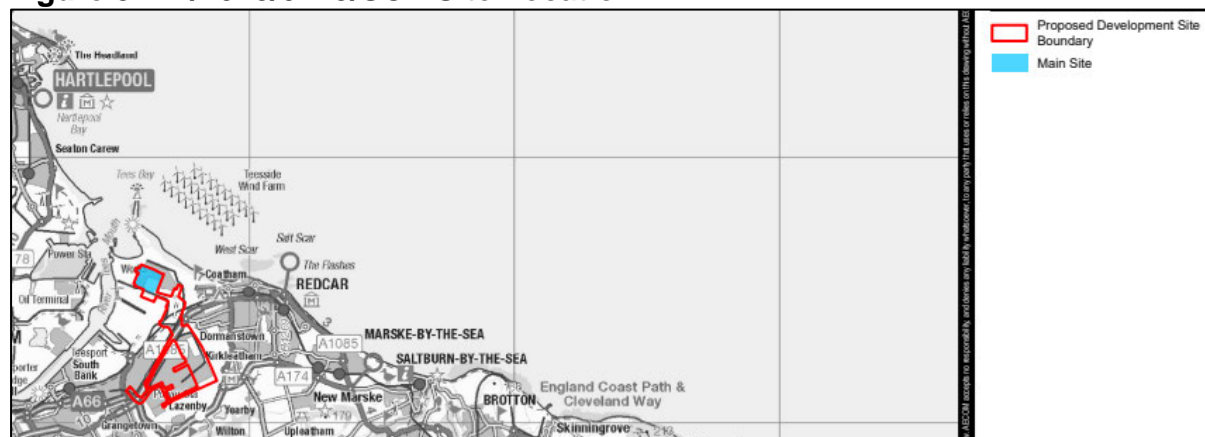


(Source: Planning Application R/2020/0821/ESM – Site Parameters Plan)

- **R/2023/0179/SCP – Hygreen Hydrogen Project**

National Highways were consulted on the scoping opinion for the Hygreen Hydrogen Project to which initial headline comments were provided in early March 2023 (available on the Redcar and Cleveland Planning Portal for this application). With a view to the proposals form and boundary which can be seen in Figure 3 below, it can be seen that there are similarities in terms of the main site location and components of the development site boundary and that of the development being proposed in the DCO application (for the southern elements of the site boundary specifically). National Highways would therefore request that information be provided that clarifies the relationship of the applications and developments proposed.

Figure 3 – R/2023/0179/SCP Site Location



(Source: Planning Application R/2023/0179/SCP – Site Location Plan (AECOM))

Summary and Conclusions

On the basis of this review, the recommendation to National Highways in relation to this development proposals is:

Pre-application / Scoping Response – comments are made on the pre-application / scoping in order to assist defining an appropriate assessment of the Strategic Road Network.

This review has highlighted the following:

- 1) JSJV would advise that the Applicant directly discusses any matters pertaining to AIL movements with the National Highways Abnormal Indivisible Loads team (AbnormalIndivisibleLoadsTeam@highwaysengland.co.uk).
- 2) National Highways will require any planning assessment to engage with and adhere to guidance contained within DfT Circular 01/2022: The Strategic Road Network and the Delivery of Sustainable Development.
- 3) JSJV would advise that a suitable control mechanism is agreed with National Highways through a form of Operational Traffic Management Plan [OTMP] for implementation during the 28 day maintenance periods to ensure staff trip generation can be managed and mitigated.
- 4) National Highways will require confirmation of the expected 'peak' arrival / departure profile of construction vehicles, including construction staff, deliveries and associated movements during an identified 'peak' construction period, and how long this period may continue for, opposed to the generation of average movements or total daily / monthly movements.
- 5) The Applicant will need to confirm how it will be ensured that an average car occupancy rate of 2.33 will be achieved with regards to construction staff.
- 6) The Applicant will need to confirm and evidence the anticipated routings and proportions that construction vehicles (including construction staff trips) will take to / from the site. Confirmation of the distribution of these trips is required by National Highways in order to understand which specific SRN junctions may be materially impacted by construction traffic.

- 7) With reference to the preparation of the development TA, JSJV note that:
- a) The impact of the proposed development at the SRN over both the operational and construction phase must be understood in terms of absolute two-way flows over both morning / evening network peak hours. This is opposed to either total daily flows or proportional flows (percentage increase) in relation to baseline flows at any specific junction.
 - b) National Highways will need to understand the trip distribution of site vehicles at the SRN associated with both the construction and operational phases of the proposed development. The study area should extend to any SRN junction where a potential impact needs to be considered (to aid discussions we suggest 30 two-way trips being a starting point for consideration).
 - c) JSJV acknowledge that where the development (construction and / or operation) is evidenced to potentially incur a material impact at an SRN junction, appropriate collision analysis may be required.
 - d) Where the development (construction and / operation) is evidenced to potentially incur a material impact at an SRN junction, an appropriate consideration of operational impacts and, if required, mitigation strategy, will need to be agreed with National Highways.
 - e) National Highways will require confirmation as to where any sections of pipeline construction may interact with the SRN, i.e., where tunnelling or infrastructure works are undertaken either underneath or adjacent to the SRN. Further discussions will then be required with National Highways as to how such construction can be safely undertaken without compromising the operation or structural integrity of the SRN.
 - f) While the production of a CWTP is welcomed by National Highways, JSJV note that a Travel Plan [TP] will also need to be prepared in relation to the operational aspect of the proposed development. Both CWTP and operational TP must outline a package of measures that will be utilised to promote and incentivise sustainable travel to / from the site, while committing to vehicle trip generation targets and a trip monitoring strategy. Detail should also be provided as to what remedial measures will be implemented should vehicular trip targets not be achieved.
- 8) The following measures will need to be taken into account by the Applicant in relation to the preparation of a CTMP for the proposed development:
- a) Identification of the approved haul routes to site and identification of measures to prevent the use of any unauthorised routes.
 - b) Identification of the site access strategy.
 - c) Identification of the proposed works programme by construction task.
 - d) Identification of workforce numbers for the site and details of workforce travel arrangements (specifically with a view to achieving the 2.33 average car occupancy for workers that has been assumed within the initial provision of information).
 - e) Details of site working hours and details of any exceptions (concrete pours etc).

- f) Measures to minimise wherever possible the use of public roads at peak periods whenever practicable (Morning and Evening Peak Hours and school start / finish times).
 - g) Details of measures to reduce the number of delivery trips to site such as a combination of consolidated ordering, rationalising suppliers and consolidated deliveries.
 - h) Details of measures to reduce on-site waste such as recycling and re-use of materials to minimise the number of collections from site.
 - i) Vehicles carrying soil and other dusty materials to be fully sheeted when travelling to or leaving site.
 - j) Use of on approved mechanical road sweeper to clean the surrounding road network of any mud or debris deposited by site vehicles. The road sweeper should be available whenever needed.
 - k) Measures to safely manage pedestrians.
 - l) Details for any temporary traffic management and warning signs.
 - m) Details of a site liaison officer who will act as point of contact for the CTMP.
 - n) Details regarding the monitoring the success of the CTMP and remedial measures which may be implemented should the CTMP not be achieving stated outcomes.
- 9) JSJV recommends that National Highways should seek to ensure that the consideration, and subsequent delivery, of the proposals (if the DCO application is successful) is done so in a manner that is aligned with the approaches adopted and outcomes envisaged when other significant applications in the area have been considered. Clearly the aspirations outlined could have cumulative implications during both the construction and operational stages with a view to the following approved development proposals:
- a. R/2020/0821/ESM – Foundry Outline Application.
 - b. R/2023/0179/SCP – Hygreen Hydrogen Project.

Laura Feekins-Bate
Planning Inspectorate
Environmental Services
Operations Group 3
Temple Quay House
2 The Square
Bristol
BS1 6PN

Date: 9 May 2023

Our ref: 63262/01/AGR/GB/26519535v1

Your ref: EN070009

Dear Laura

Response by Teesworks to EIA Scoping Report for H2Teesside Project

We write on behalf of our client, the South Tees Development Corporation (STDC) and South Tees Developments Limited (STDL). We write in reference to your letter dated 11 April 2023 inviting STDC, hereafter referred to as "Teesworks", to comment on the Environmental Impact Assessment ('EIA') Scoping Report in respect of the Development Consent Order (DCO) being prepared for the H2Teesside project. This letter comprises Teesworks' formal response to your request for comments on the EIA Scoping Report of the H2Teesside project.

As freehold owner, STDC has an interest in the land which is located within Main Site A ('also known as The Foundry') and, alongside STDL, areas within the Connection Corridors in the Proposed Development Site, shown within Figure 1 Site Location Plan which forms an Appendix to the EIA Scoping Report.

We have reviewed the EIA Scoping Report and wish to offer the following comments:

- 1 We agree with the topics proposed to be scoped into the ES set out in Section 6 'Potentially Significant Environmental Effects' and Section 8 'Summary and Matters to be Scoped Out' of the EIA Scoping Report.
- 2 We note the acknowledgement in para 5.6.5 which states that parts of the Proposed Development Site lie within the boundary of the South Tees Development Corporation area.
- 3 The commitment to consult stakeholders on final site selection as set out in para 2.1.4 of the EIA Scoping Report is crucial to the success of the project and our clients want to participate proactively and positively in this process. We therefore formally request that H2Teesside Ltd invites us to provide input into the appraisal and decision-making process on the Proposed DCO Boundary given this closely relates to on-going commercial discussions over land arrangements at Teesworks.
- 4 Paragraph 6.17.17 states:

STDC have recently submitted a number of planning applications in the vicinity of the Proposed Development Site, primarily for demolition works and engineering operations associated with ground remediation and preparation for regeneration and development. They are also in the process of preparing a number of planning applications for development of general industry (Use Class B2) and storage or distribution facilities (Use Class B8) with office accommodation (Use Class E), HGV and car parking, works to watercourse including realignment and associated infrastructure works.

The above reference to there being ‘a number of planning applications in the process of preparation’ is incorrect. In 2022, four applications for industrial development (Use Classes B2 and B8) were granted outline planning permission (under references R/2020/0820/ESM, R/2020/0819/ESM, R/2020/0821/ESM and R/2020/0822/ESM) for over 880,000sqm of floorspace across areas of Teesworks, including land that is identified as ‘Main Site A’ for the H2Teesside Project (an area that Teesworks refers to as “The Foundry”). In total, over 1.3million sqm of floorspace for Class B2 or B8 uses across the Teesworks estate has been granted outline planning permission.

It would appear that the ‘recently submitted’ applications referred to above are likely to be those for the remediation of land to facilitate the development of the Net Zero Teesside project (reference R/2021/1048/FFM) and the Prior Approval of demolition works of the former Redcar Steelworks buildings (reference R/2021/0608/PND). Both applications were, however, approved in August 2022 and August 2021 respectively.

Figure 15 identifies the location of each of the STDC Projects within and adjacent to the Proposed Development Site. We can confirm that the projects identified in respect of Teesworks land are correct at the time of writing, though the commentary in respect of these applications / permissions is not. We do, therefore, wish to engage further with H2Teesside Ltd on this matter to ensure that the full list of cumulative schemes is kept up to date, that the scope of any cumulative assessment is appropriate, and to ensure that the development proposed on Teesworks is assessed accurately within any subsequent Environmental Assessment.

- 5 We have undertaken a high-level review of the methodologies for each of the technical assessments provided within section 6 of the EIA Scoping Report and have no specific comments to make except in respect of ‘Cumulative and Combined Effects’ which are set out above.

We acknowledge that the H2Teesside project is in the early stages of development and that the detail provided in the EIA Scoping Report requires further refinement and clarity prior to consultation on the Preliminary Environmental Impact (PEI) Report which is expected in summer 2023. It is crucial that Teesworks participates in discussions with the applicant and its advisors, regarding the refinement of the red line boundary and the extent of land required for constructing and operating the H2Teesside project, particularly its pipeline routes and infrastructure corridors. As with the Net Zero Teesside scheme / DCO, it is imperative that H2Teesside Ltd reduces the red line boundary to cover only the areas of land which are absolutely necessary for the delivery of the project.

We, therefore, consider it necessary for H2Teesside Ltd to hold urgent targeted consultation with Teesworks over land availability, interaction with the wider Teesworks site plans and commercial arrangements and to allow an appropriate period for responding prior to the submission of the draft DCO documentation to PINS.

It is expected that the finalisation of the pipeline routes / infrastructure corridors and corresponding reduction in the red line boundary will give sufficient clarity to enable Teesworks to fully understand and assess the impacts of the development and to be satisfied that there would be no unacceptable implications on the overall comprehensive regeneration of the Teesworks area.

Many thanks again for consulting Teesworks at this stage and we look forward to working with you to resolve our concerns.

Yours sincerely

A solid black rectangular box redacting the signature of Anthony Greally.

Anthony Greally
Senior Director

Woodger-Bassford, Jade

From: ONR Land Use Planning <ONR-Land.Use-Planning@onr.gov.uk>
Sent: 04 May 2023 13:09
To: H2Teesside
Subject: ONR Land Use Planning - Application EN070009
Attachments: image009.png; image008.png; H2TE - Statutory consultation letter.pdf; image002.png; image001.png; image010.png; image011.png

Dear Sir / Madam,

ONR have no objection to the proposed development at this stage subject to the developer liaising with EDF Energy Nuclear Generation Limited in relation to the potential external hazards the proposed development poses to Hartlepool and vice versa. Depending on future siting and layout decisions, the proposed development could pose an external hazard to Hartlepool during construction, operation and potentially decommissioning.

Further information on ONR's role in providing advice on proposed developments on and around nuclear sites is available on ONR's website: <https://www.onr.org.uk/land-use-planning.htm>. The developer should familiarise itself with this information including ONR's consultation zones, consultation advice and the consultation process.

Kind regards

Vicki Enston
Land Use Planning
Office for Nuclear Regulation
ONR-Land.Use-planning@onr.gov.uk

-----Original Message-----

From: H2Teesside <H2Teesside@planninginspectorate.gov.uk >
To: H2Teesside@planninginspectorate.gov.uk;
Cc:
Sent: 12/04/2023 13:56
Subject: EN070009 - H2Teesside - EIA Scoping Notification and Consultation

Dear Sir/ Madam

Please see attached correspondence on the proposed H2Teesside project.

Please note that the deadline for consultation responses is **9 May 2023**, and is a statutory requirement that cannot be extended.

Kind regards

Laura



The Planning Inspectorate

Laura Feekins-Bate

EIA Advisor

The Planning Inspectorate



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[The Planning Inspectorate](https://www.theplanninginspectorate.gov.uk)



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DPC:76616c646f72



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Feekins-Bate, Laura

From: H2Teesside
Subject: FW: EN070009 - H2Teesside - EIA Scoping Notification and Consultation

From: Stephen Vanstone [REDACTED]@trinityhouse.co.uk>
Sent: 09 May 2023 09:30
To: H2Teesside <H2Teesside@planninginspectorate.gov.uk>
Cc: Trevor Harris [REDACTED]@trinityhouse.co.uk>
Subject: RE: EN070009 - H2Teesside - EIA Scoping Notification and Consultation

Good morning Laura,

I note that the proposed development area includes areas within the River Tees which lie within the jurisdiction of PD Teesport Ltd.. Therefore, Trinity House advise that any marine works proposed below mean high water springs should be fully assessed in consultation with PD Teesport Ltd.

Kind regards,

Stephen Vanstone

Navigation Services Manager | Navigation Directorate | Trinity House

[REDACTED]@trinityhouse.co.uk | [REDACTED]

www.trinityhouse.co.uk



TRINITY HOUSE

From: H2Teesside <H2Teesside@planninginspectorate.gov.uk>
Sent: 11 April 2023 10:36
To: Navigation <navigation@trinityhouse.co.uk>
Cc: H2Teesside <H2Teesside@planninginspectorate.gov.uk>; Thomas Arculus [REDACTED]@trinityhouse.co.uk>
Subject: EN070009 - H2Teesside - EIA Scoping Notification and Consultation

FAO Steve Vanstone- Navigation Services Officer

Dear Mr Vanstone

Please see attached correspondence on the proposed H2Teesside project.

Please note that the deadline for consultation responses is **9 May 2023**, and is a statutory requirement that cannot be extended.

Kind regards
Laura



The Planning
Inspectorate

Laura Feekins-Bate
EIA Advisor
The Planning Inspectorate



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UK Health
Security
Agency

Environmental Hazards and Emergencies Department
Seaton House, City Link
London Road
Nottingham, NG2 4LA

nsipconsultations@ukhsa.gov.uk
www.gov.uk/ukhsa

Your Ref: EN070009
Our Ref: 63300CIRIS

Ms Laura Feekins-Bate,
EIA Advisor,
The Planning Inspectorate
Temple Quay House,
2 The Square,
Bristol, BS1 6PN

5th May 2023

Dear Ms Feekins-Bate,

**Nationally Significant Infrastructure Project
H2Teesside Project EN070009
Scoping Consultation Stage**

Thank you for including the UK Health Security Agency (UKHSA) in the scoping consultation phase of the above application. ***Please note that we request views from the Office for Health Improvement and Disparities (OHID) and the response provided below is sent on behalf of both UKHSA and OHID.*** The response is impartial and independent.

The health of an individual or a population is the result of a complex interaction of a wide range of different determinants of health, from an individual's genetic make-up to lifestyles and behaviours, and the communities, local economy, built and natural environments to global ecosystem trends. All developments will have some effect on the determinants of health, which in turn will influence the health and wellbeing of the general population, vulnerable groups and individual people. Although assessing impacts on health beyond direct effects from for example emissions to air or road traffic incidents is complex, there is a need to ensure a proportionate assessment focused on an application's significant effects.

Having considered the submitted scoping report we wish to make the following specific comments and recommendations:

Environmental Public Health

We recognise the promoter's proposal to include a health section. We believe the summation of relevant issues into a specific section of the report provides a focus which ensures that public health is given adequate consideration. The section should summarise key information, risk assessments, proposed mitigation measures, conclusions, and residual impacts, relating to human health. Compliance with the requirements of National Policy Statements and relevant guidance and standards should also be highlighted.

In terms of the level of detail to be included in an Environmental Statement (ES), we recognise that the differing nature of projects is such that their impacts will vary. UKHSA and OHID's predecessor organisation Public Health England produced an advice document *Advice on the content of Environmental Statements accompanying an application under the NSIP Regime*¹, setting out aspects to be addressed within the Environmental Statement¹. This advice document and its recommendations are still valid and should be considered when preparing an ES. Please note that where impacts relating to health and/or further assessments are scoped out, promoters should fully explain and justify this within the submitted documentation.

Recommendation

Our position is that pollutants associated with road traffic or combustion, particularly particulate matter, and oxides of nitrogen, are non-threshold; i.e. an exposed population is likely to be subject to potential harm at any level and that reducing public exposure to non-threshold pollutants (such as particulate matter and nitrogen dioxide) below air quality standards will have potential public health benefits. We support approaches which minimise or mitigate public exposure to non-threshold air pollutants, address inequalities (in exposure) and maximise co-benefits (such as physical exercise). We encourage their consideration during development design, environmental and health impact assessment, and development consent.

Human Health and Wellbeing - OHID

This section of OHID's response, identifies the wider determinants of health and wellbeing we expect the ES to address, to demonstrate whether they are likely to give rise to significant effects. OHID has focused its approach on scoping determinants of health and wellbeing under four themes, which have been derived from an analysis of the wider determinants of health mentioned in the National Policy Statements. The four themes are:

- Access
- Traffic and Transport

1

<https://khub.net/documents/135939561/390856715/Advice+on+the+content+of+environmental+statements+accompanying+an+application+under+the+Nationally+Significant+Infrastructure+Planning+Regime.pdf/a86b5521-46cc-98e4-4cad-f81a6c58f2e2?t=1615998516658>

- Socioeconomic
- Land Use

Having considered the submitted Scoping Report, OHID wish to make the following specific comments and recommendations.

Hydrogen gas manufacture, storage and distribution network – Community risk perception / understanding of risk.

The broad definition of health used by the World Health Organisation (WHO), includes reference to mental health. Mental well-being is fundamental to achieving a healthy, resilient and thriving population. It underpins healthy lifestyles, physical health, educational attainment, employment and productivity, relationships, community safety and cohesion and quality of life. A scheme of this scale and nature has impacts on the over-arching protective factors, which are:

- Enhancing control
- Increasing resilience and community assets
- Facilitating participation and promoting inclusion.

The scoping report does not make reference to the potential for local public concern through understanding of risk / risk perception. Previous hydrogen distribution schemes have scoped-in community concern over hydrogen safety, due to this being a relatively new industry and the potential for major incidents.

Communities in the vicinity of the scheme will receive targeted communications as part of the normal consultation process. Communication programmes should provide a source of clear and objective information to increase knowledge and awareness. Consultations should also use the opportunity to assess levels of local concern, which can then be used to assess significance of effects and inform community consultation and the provision of information.

Recommendation

The ES should consider potential effects on mental health through risk perception / understanding of risk posed by the manufacture, storage and transportation of hydrogen and other hazardous substances.

When estimating community anxiety and stress in particular, a qualitative assessment may be most appropriate. Robust and meaningful consultation with the local community will be an important mitigation measure, in addition to informing the assessment and subsequent mitigation measures. This may involve conducting resident surveys but also information received through public consultations, including community engagement exercises. The Mental Well-being Impact Assessment Toolkit (MWIA) contains key principles that should be demonstrated in a project's community engagement and impact assessment. We would also

encourage consultation with the local authority's public health team, who are likely to have Health Intelligence specialists who will have knowledge about the availability of local data. The Mental Well-being Impact Assessment Toolkit (MWIA)², could be used as a methodology. The assessment should identify vulnerable populations and provide clear mitigation strategies that are adequately linked to any local services or assets. Baseline indicators the assessment would benefit from including social cohesion/connectedness, satisfaction with local area and quality of life indicators owing to their established links to mental health and wellbeing.

In terms of sources, we would draw your attention to the following:

- [PHE Fingertips – Mental Health and Wellbeing JSNA](#)
 - Area profiles with various indicators on common mental disorders (including anxiety) and severe mental illness which can be benchmarked with other local areas as well as regional and national data
- [Office for National Statistics - Wellbeing Indicators](#)
 - Range of datasets related to wellbeing available including young people's wellbeing measures, personal wellbeing estimates and loneliness rates by local authority

Socio-economics - Housing affordability and availability

The report (Para 3.14.1) recognised the potential for significant numbers of construction workers, where workforce peak numbers will be approximately 3,100 people per day. The numbers of non-home-based workers was not stated.

The report does not recognise a requirement for temporary living accommodation within reasonable commuting distance of the project such as rented housing, hotels, guest houses, bed and breakfast establishments/lodgings and official caravan parks.

Significant number of non-home-based construction workers could foreseeably have an impact on the local availability of affordable housing. Those residents looking for low cost affordable homes will have the least capacity to respond to change (for example, where there may be an overlap between construction workers seeking accommodation in the private rented sector, and people in receipt of housing benefit seeking the same lower-cost accommodation). This impact could also be compounded by the cumulative accommodation demands from a number of large developments.

² [Mental Wellbeing Impact Assessment Toolkit](#), (National MWIA Collaborative (England), 2011) - A toolkit with an evidence-based framework for improving well-being through projects.

Recommendation

The peak numbers of construction workers and non-home-based workers should be established, and a proportionate assessment undertaken on the impacts for housing availability or affordability and impacts on any local services.

Any cumulative effect assessment should consider the impact on demand for housing by construction workers and the likely numbers of non-home based workers required across all schemes.

Yours sincerely

On behalf of UK Health Security Agency
nsipconsultations@ukhsa.gov.uk

Please mark any correspondence for the attention of National Infrastructure Planning Administration.