H2Teesside Project

Planning Inspectorate Reference: EN070009

Land within the boroughs of Redcar and Cleveland and Stockton-on-Tees, Teesside and within the borough of Hartlepool, County Durham

The H2 Teesside Order

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Planning Act 2008

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1.0 INTRODUCTION

1.1 Overview

1.1.1 This document has been prepared on behalf of H2 Teesside Limited (the 'Applicant'). It relates to an application (the 'Application') for a Development Consent Order (a 'DCO'), that was submitted to the Secretary of State for Energy Security and Net Zero ('DESNZ') on 25 March 2024, under Section 37 of 'The Planning Act 2008' (the 'PA 2008') in respect of the H2Teesside Project (the 'Proposed Development').

1.1.2 The Application has been accepted for examination. The Examination commenced on 29 August 2024.

1.2 The Purpose and Structure of this document

1.2.1 The purpose of this document is to set out the Applicant's responses to the Examining Authority's ExQ1 Response to ExQ1 General and Cross Topic, which were issued on 4 September 2024 [PD-008]. This document contains a table which includes the reference number for each relevant question, the ExA's comments and questions and the Applicant's responses to each of those questions.

Table 1-1 Applicant's Responses to ExQ1 General and Cross Topic

EXQ1	QUESTION TO:	QUESTION:	APPLICANT'S RESPONSE
Q.1.1.1	Applicants	Clarification/ Explanation. Paragraph 6.1.23 of the Applicant's Statement of Reasons (SoR) [APP-024] details two areas of 'White Land'. These can be seen on the Land Plans [AS-003] Sheets 4 and 15. Please explain why the Order Limits are shown as such and what the need is for this 'White Land'.	The areas of 'White Land' are within Wilton International and close to Cowpen Bewley village (shown on sheet 19 and sheet 4 of the Land Plans [AS-003]) and the Applicant is not seeking any powers over this land. During the statutory consultation these plots had been included as part of the Proposed Development. However, in response to feedback received from the landowners and Cowpen Bewley village, further design work was undertaken and the Applicant was able to determine that it no longer required these plots. This design work was completed immediately prior to the submission of the DCO Application. As stated in 6.1.23 of the Statement of Reasons [APP-024], the Applicant wanted to demonstrate to the landowner at Wilton and the local community at Cowpen Bewley that it did not require this land for works to be undertaken. The Applicant decided that the most efficient way to do this in the circumstances was to show this on the Land Plans as 'White Land' to make it clear that this land is not required. As stated in the Change Notification Report [PDA-019] at paragraphs 2.3.5, 2.4.6 to 2.4.8, the 'White Land' plots will be removed entirely as part of the Applicant's change request.
Q.1.1.2	Applicants	Clarification/ Explanation. Is there an optimum or target width of pipeline corridor proposed to establish the Application Boundary? Where this is exceeded, please explain the need for this additional width.	The typical construction width for the buried pipeline is 17m either side of the pipeline, giving a total corridor width of 34m. For buried sections this width allows space for the trench, working area for the pipeline, vehicle and passing lane, and storage areas of topsoil and subsoil. Reducing the width compromises either the safety or efficiency (speed) of construction, as for example excavated spoil must be transported and stored elsewhere, then later returned. For above ground corridors, the width is primarily dictated by the existing corridor width. Typically, this includes fencelines, existing pipelines and supports, and a service lane. The Order limits include the entire width of the existing corridor rather than 17m either side of the proposed pipeline as the location of the proposed pipeline relative to the existing pipelines may change over the course of the design phase. An example of a change would be to move the proposed pipeline from one side to the other side of the pipeline corridor for space reasons. This would be developed in conjunction with the asset owners, pursuant to their Protective Provisions to ensure the most appropriate construction methodology and design, accounting for their specific safety and operational requirements.

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			Some areas exceed the typical width for location-specific reasons. These are summarised below, and are explained in more detail in the Order Width Limit Explanatory Note submitted at Deadline 2 alongside this document (Document reference 8.13):
			• Installed by HDD:
			  ○ Tees Crossing
			  ○ Greatham Creek Crossing
			• Design uncertainty due to 3rd parties:
			  ○ Cowpen Bewley pipeline corridor
			  ○ Bran Sands Corridor
			  ○ NZT/NEP approach corridor
			• Constructability constraints:
			  ○ Billingham high pipe racks
			  ○ Wilton congested pipeline corridors

Q.1.1.3	Applicants	Clarification/ Explanation. Please explain if it is necessary for agreements to supply hydrogen to all business areas before installing pipelines to those sites. If so, please outline the status of these agreements, accepting that these may be commercially sensitive.	The Applicant is proposing to construct a hydrogen distribution network that connects the major industrial areas across Teesside, providing industrial consumers with access to low carbon hydrogen as an alternative fuel source or process feedstock. Construction of the Applicant's hydrogen network is based on overall anticipated demand, from: • existing industrial consumers; • new organisations looking to develop businesses across Teesside, supporting the Tees Valley Combined Authority ambition "to become the world's first Net Zero industrial cluster by 2040" and create jobs for the ; and • future connections to third party hydrogen transportation and storage developments, including a UK and regional hydrogen transmission system (e.g. 'Project Union') that is being planned to support the UK Government's net zero 2050 target. Prospective consumers will be able to connect to the proposed hydrogen network throughout the life of the Proposed Development. The Proposed Development does not require agreements to supply hydrogen to all business areas before installing pipelines to those sites – it is creating a network to facilitate conversion to hydrogen across a cluster location (i.e.

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			Teesside) identified by Government as being hard to decarbonise. The network has been developed to connect to concentrations of a number of potential customers within Teesside in Greatham, Billingham, North Tees, Wilton and Sea Sands, as well as to the options for connecting to the regional and UK hydrogen transmission system. As such, the Applicant is not reliant on specific customers to develop out the pipeline network. Without a network being built, these concentrations will not be able to decarbonise. Notwithstanding the above, the Applicant is continuing to work with a number of prospective specific customers across Teesside, as they develop their own hydrogen conversion plans, and is negotiating commercial terms for the supply of hydrogen to several prospective customers within those concentrations.
Q.1.1.4	Applicants	Plan/ Information sought. Please provide a version of the Works Plans which show all the indicative works (pipelines, electrical supply, water, gas etc) together on a single set of plans	The Applicant has submitted a set of integrated Works Plans (Document reference: 2.4a) into Examination alongside this document.
Q.1.1.5	National Grid	Clarification. Please confirm that the location of the proposed Above Ground Installation (AGI) next to the pylon and Saltholme Sub Station, as shown on Works Plans [AS-005] Sheet 15 of 44, is acceptable. Please also comment on any other locations where the Order Limits are in close proximity to similar infrastructure.	The Applicant notes that the Order limits for the AGI near Saltholme substation are 15m from the pylon. This is deemed suitable at this early design phase but is subject to electrical interference calculations and constructability reviews for working near overhead lines (noting that best practice is 5-10m). The AGI is expected to be smaller than the area shown on the Land Plans, and is likely to be placed to the western side of the Order Limits, away from the substation. North of the Saltholme Substation, the pipeline route is parallel to overhead lines and pylons and so an offset of 40m has been applied. This offset is based on National Grid Guidance and will be verified by electrical interference calculations in later design phases.
Q.1.1.6	Applicants	Clarification. The Indicative Hydrogen Distribution Network Plan [AS-008], sheet 14 of 16, shows a small part of the indicative pipeline outside of the Order Limits in the lower left side of the plan. Please confirm the status of this.	This is an error in the drawing – the Applicant confirms that the pipeline routing will be within the Order limits.
Q.1.1.7	Applicants/ Environment Agency (EA)	Clarification/ Views sought The Examining Authority (ExA) notes the use of Amine products within the proposed Carbon Capture element of the Proposed Development and would ask:	i) The amines are part of a closed system meaning no amine emissions to air will occur from the operational process. Yes, the Environment Agency will evaluate and regulate the use of amine products as part of

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		By what mechanisms are the use of Amine products controlled (ie do they form part of the Environmental Permit (EP) controls)? Should the control of Amine products be dealt with through the Development Consent Order (DCO)?	their determination of the Environmental Permit application for the Proposed Development. ii) The Applicant do not believe this is required as the use of Amines will be controlled by the Environmental Permit.
Q.1.1.8	Applicants	Clarification/ Information sought. Chapter 5 (Construction Programme and Management) of the Environmental Statement (ES) [APP-057] refers to a range of 'Permitted Preliminary Works' that could be undertaken prior to discharge of any DCO requirements. The Applicant is requested to provide a definitive list of the works that it proposes could be undertaken, particularly regarding the final bullet at paragraph 5.3.8 (ie "any other works agreed by the relevant planning authority…"). In addition to the above, the Applicant is requested to explain what process would be in place to ensure that such activities did not give rise to materially new or different effects from that assessed in the ES, and how any potential adverse effects associated with such activities would be mitigated in the absence of final management plans.	Article 2(1) (Interpretation) of the draft Development Consent Order [AS-013] provides the following definition for Permitted Preliminary Works (PPW) as follows: '*means works consisting of environmental surveys, geotechnical surveys, surveys and protection of existing infrastructure, and other investigations for the purpose of assessing ground conditions, the preparation of facilities for the use of contractors, the provision of temporary means of enclosure and site security for construction, temporary access roads, paving, diversion of existing services and laying of services (but not including the laying of any of Work Nos. 2, 3, 4, 5, 6, 7 and 8), the temporary display of site notices or advertisements and any other works agreed by the relevant planning authority, provided that these will not give rise to any materially new or materially different environmental effects from those assessed in the environmental statement*.' A similar approach to both the structure and wording of the PPW definition has precedent in The Net Zero Teesside Order 2024 and numerous other DCOs. They reflect the desire of the Applicant to ensure that the critical national priority infrastructure that is the Proposed Development can be developed as expeditiously as possible, and are focussed on initial works that facilitate main works construction start. The process in place to ensure that activities did not give rise to materially new or different effects from that assessed in the Environmental Statement is provided in Requirement 15 (Construction environmental management plan) in Schedule 2 to the draft DCO. Requirement 15(1) provides that no part of the PPW may be carried out until a Permitted Preliminary Works Construction Environmental Management Plan (PPW CEMP) for that part has been submitted to and approved by the relevant planning authority. Requirement 15(2) states that the PPW CEMP must be in substantial accordance with the Framework CEMP to the extent that it is relevant to the PPW.

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			Consequently, the activities are mitigated and constrained by the fact that the relevant planning authority has to approve the PPW CEMP before any PPW can start and the PPW must be in accordance with the Framework CEMP [APP-043]. Furthermore, it is noted that where relevant, permitted preliminary works have not been excluded from relevant DCO Requirements.
Q.1.1.9	Applicants	Clarification/ Additional information. Paragraph 4.3.2 of ES Chapter 4 (Proposed Development) [APP-056] states that natural gas will be the feedstock for the hydrogen production process. However, no estimation of the volume/ quantum of natural gas required appears to have been provided in the ES. Can the Applicant provide an estimate of what volume of natural gas feedstock it anticipates will be required in the operation of the Proposed Development? Additionally, the ExA notes the Relevant Representation (RR) from Climate Emergency Planning and Policy [RR-007] and would ask the Applicant for its full and considered response to that RR, especially in regard to the full impacts of the project under different natural gas supply scenarios, including the project running entirely or at least partially on imported Liquid Natural Gas.	A maximum of approximately 60.5 tonnes per hour of natural gas is anticipated to be required by the Proposed Development as detailed in Table 19-7 of Chapter 19 Climate Change [APP-072]. The Applicant has provided a full and considered response to the RR from CEPP in the response to Relevant Representations [REP1-007].
Q.1.1.10	Applicants	Clarification. The Applicant is requested to clarify what is meant by "up to approximately 1.2 Gigawatt Thermal" (GWth) of production capacity as specified in Work No. 1 of the draft DCO [AS-013]. Is it considered that the Proposed Development could generate more than 1.2GWth and, if so, explain how this is reflected in the relevant assessments of the ES, noting that paragraph 4.3.7 of ES Chapter 4 (Proposed Development) [APP-056], states that the production capacity is up to 1.2GWth.	The planned production capacity is 600 MWth lower heating value for each of Work No. 1A.1 and Work No. 1A.2. The combined production capacity from both work numbers is therefore 1.2 GWth lower heating value. As such, the Applicant acknowledges the ambiguity and has updated the word "approximately" to read 'up to' in Schedule 1 to the DCO.
Q.1.1.11	Applicants	Clarification/ Explanation ES Chapter 4 (Proposed Development) [APP-056] explains that the Proposed Development and the Net Zero Teesside (NZT) project share infrastructure, including the connection to the Carbon Dioxide (CO_2) export pipeline. The shared and overlapping infrastructure is shown on the Applicant's H2Teesside and NZT Main Site Shared Area Plan [APP-020]. This was envisaged at scoping stage, but the scoping boundary did not include the main NZT site. The Applicant is requested to explain why the main NZT site has been incorporated into the proposed Order Limits and confirm any implications for the assessment in the ES. In responding to this question, the ExA notes your 'Change Notification Report' [PDA-019] and Change No. 2.C. However, it is conscious that no formal Change Request submission has yet been made and would seek your response in the absence of such a submission	The Proposed Development and Net Zero Teesside and Northern Endurance Partnership will have a number of interconnections between them, including water discharge, CO_2 export, natural gas import pipelines and power import cables. The inclusion of the entirety of the NZT Order Limits was to account for the fact that the Applicant was and is continuing to work with the NZT project team to agree the final termination points and routings for these connections and as the design is still progressing on both the H2Teesside and NZT projects, the entirety of the Main Site of NZT was included to allow these technical interfaces discussions to progress and the extent of the H2Teesside Order Limits on the NZT Main Site to be refined once the final termination points and routings are finalised between the two projects. The forthcoming Change Request reflects the progress that has been made in these discussions to date.

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			The Applicant can confirm that the ES was based on the Order limits set out in the application plans. No change to the scope of the assessments arose from the addition of the NZT Main Site to the Order limits post Scoping Opinion.
Q.1.1.12	Applicants STDC	Clarification/ Explanation. When asked to submit an outline Operational Environmental Management Plan (OEMP) with the DCO application you stated that an outline OEMP has not been submitted as it would be prepared by the contractor when appointed. The ExA notes: the draft DCO [AS-013] does not include a requirement for submission and approval of an OEMP; you have listed operational mitigation in the Applicant's 'Schedule of Operational Mitigation and Monitoring' [APP-042] but this is not listed as a certified document in the draft DCO; and Sections 1.5 and 2 of the Applicant's 'Schedule of Operational Mitigation and Monitoring' [APP-042] indicates how operational mitigation would be secured (ie through other management plans, DCO requirements, EPs or regulatory requirements. Bearing the above in mind, please advise how it is intended to secure the outline OEMP (ie through the DCO or another mechanism)?	The draft DCO [AS-013] does not include a requirement for submission and approval of an Operational Environmental Management Plan (OEMP) because one is not required. This is because the operational mitigation (as set out in Schedule of Operational Mitigation and Monitoring [APP-042]) is either already secured by a DCO Requirement or the mitigation will be provided by a permit or as a result of another regulatory regime sitting outside of the remit of the DCO. The Requirements in Schedule 2 to the draft DCO provides for the operational phase mitigation and related management plans that are to be secured by the DCO, and there is nothing further to be covered by a separate Operational Environmental Management Plan (OEMP). The operation-related mitigation and plans secured by DCO Requirement include: • Landscape and Biodiversity Management Plan for operation (Requirement 4(4)); • Indicative Lighting Strategy (Operation) (Requirement 6(2)); • Site security measures (Requirement 8(2)); • Fire prevention (Requirement 9(2)); • Surface and foul water drainage (Requirement 10(3)) and details must be substantial accordance with the mitigation measures set out in chapter 9 of the ES, the Flood Risk Assessment, Indicative Surface Water Drainage Plan, Nutrient Neutrality Assessment and Water Framework Directive Assessment; • Flood risk mitigation (Requirement 11(3) and (4)) scheme during operation which must be in accordance with the principles in the Flood Risk Assessment; and • Aviation warning light to be installed during operation (Requirement 23). The Schedule of Operational Mitigation and Monitoring [APP-042] sets out the operational mitigation and monitoring, but it is not a certified document in the draft DCO because while it does cover elements that are secured as Requirements it also covers other regulatory requirements and permits that sit outside the draft DCO. As such, it would not be appropriate to be a certified document in the draft

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			DCO but it is included in the DCO Application as a useful aid for the ExA to understand the layers of operational mitigation and monitoring being proposed.
Q.1.1.13	Applicants	Update. The Applicant is requested to provide an updated iteration of the Other Consents and Licences Statement [APP-037], including an update in regard to the status of its EP application submitted to the EA and any progress in relation to the Control of Major Accident Hazards (COMAH) licence. In responding to this question please include the date of the submission of the EP Application/ COMAH Licence submission, whether the EA/ HSE consider the EP Application/ COMAH Licence submission to be valid, the EP/ COMAH Licence Application/ submission reference number allocated by the relevant body (ie EA or HSE) and confirm the status of those applications/ submissions (ie, are they valid, under consideration, determined, etc.).	Environment Permit (EP) Application The Environmental Permit application was submitted to the EA on 14th June 2024. On 7th August 2024 the Applicant received a letter from the EA requesting additional information. This information will be sent back to the EA no later than 11 October 2024. The Applicant has been in discussion with the EA and expect that this supplementary information will enable our application to achieve 'duly made' status and therefore be considered valid by the Environment Agency and taken forward for determination. The EP application reference is EPR/AP3328SQ/A001. Control of Major Accident Hazards (COMAH) Regulations The Applicant is engaging with the HSE as part of discussions on behalf of the East Coast Cluster. At present it is too early to make COMAH submissions to the HSE but the Applicant will work with the HSE to agree a timeline that aligns with the H2 Teesside construction programme. As per HSE guidance COMAH documentation is to be submitted 'within reasonable time before start of construction', normally 3-6 months, and this is typically following detailed design and not at this stage of design development.
Q.1.1.14	Applicants	Clarification/ Update The South Tees Group (STG) at paragraph 5.2 of its RR [RR-003] refer to sensitive receptors as set out in ES Chapter 3 (Description of the Existing Area) [APP-055] relating only to residential properties and ecological designations. However, it notes existing industrial uses within the Teesworks Masterplan area have not been included. Please review and include all sensitive receptors, as appropriate, within the ES or explain why all such sensitive receptors do not need to be considered in the ES.	The intention of the sensitive receptors presented in Chapter 3 [APP-055] is to contextualise the immediate environment surrounding the Proposed Development and is not intended to be a definitive list of sensitive receptors that have been considered in the Environmental Statement. Each technical chapter (Chapters 8 – 22) [APP-060] – [APP-075] identifies the sensitive receptors to be assessed in accordance with discipline specific methodology, this is set out in each technical chapter. Following Statutory Consultation, the Northumbrian Water Bran Sands offices were included as a receptor within the noise assessment, presented in Chapter 11: Noise and Vibration [APP-063] (ES Volume I, EN070009/APP/6.2). Northumbrian Water Bran Sands offices are included as NSR H7. Table 11-34 identified no likely significant effects for this NSR during construction, operation or decommissioning. The Seal Sands Offices are also included in the assessment as NSR H4. Other industrial uses would be classified as low sensitivity, due to typical 8 hour work

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			periods and the premises typically not being frequented by vulnerable members of the population (children and the elderly for example). Even with a high magnitude of impact this would have no bearing on the significance ratings reported in the noise and vibration assessment. As per Table 11-14, a high magnitude of effect on a low sensitivity receptor would result in a Minor Adverse (Not Significant) effect. Notwithstanding this, Table 11-31 reported very low magnitudes of impact for NSR H4 and NSR H7, resulting in Negligible (Not Significant) effects on both Noise Sensitive Receptors. For this reason, other industrial uses were not considered in the noise and vibration assessment. Industrial use receptors are covered by Health and Safety regulations and would not normally be included in an EIA for air quality. The Applicant therefore considers the appropriate sensitive receptors have already been identified and assessed in the Environmental Statement.