

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

Document Reference: 8.25.4 Response to ExQ2.4 Habitat Regulations Assessment, Biodiversity, Ecology and Nature Conservation, including Ornithology and Marine Ecology

Planning Act 2008



Applicant: H2 Teesside Ltd

Date: December 2024

DOCUMENT HISTORY

DOCUMENT REF	8.25.4		
REVISION	0		
AUTHOR	DWD		
SIGNED	NC	DATE	18.12.24
APPROVED BY	DWD		
SIGNED	MS	DATE	18.12.24
DOCUMENT OWNER	DWD		

TABLE OF CONTENTS

1.0	INTRODUCTION	2
1.1	Overview	2
1.2	The Purpose and Structure of this document.....	2

TABLES

	Table 1-1: Applicant’s Responses to ExQ2.4 Habitat Regulations Assessment, Biodiversity, Ecology and Nature Conservation, including Ornithology and Marine Ecology	3
--	--	---

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 ExQ2.4 on Habitat Regulations Assessment (HRA), Biodiversity, Ecology and Nature Conservation, including Ornithology and Marine Ecology, which were issued on 28 November 2024 [PD-015]. 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 ExQ2.4 Habitat Regulations Assessment, Biodiversity, Ecology and Nature Conservation, including Ornithology and Marine Ecology

EXQ2	QUESTION TO:	QUESTION:	RESPONSE
Q2.4.1	NE	NE is requested to provide a response to Q1.4.17 in the ExA’s ExQ1 [PD-008] regarding any outstanding concerns in the Applicant’s approach to the inclusion of Option A for the hydrogen distribution network connection, including how it proposes to secure the detail design and maintenance of the Cowpen Bewley Open Space Replacement Land. In providing its response, the ExA requests NE to have regard to the information submitted by the Applicant in its “Response to ExQ1 (HRA and Ecology) [REP2-022], Q1.4.17.	N/A
Q2.4.2	NE	<p>NE is requested to provide an update on matters raised at NE2 of its Relevant Representation (RR) [RR 026], affecting its advice for impact pathways as detailed in NE3 to NE8 of that RR following the Applicant’s submission of the Supplementary Ornithology Baseline Report [AS-036] and updated Report to Inform HRA [CR1-023].</p> <p>NE is requested to confirm if this information addresses its concerns and, if not, what matters remain outstanding and what information is required to address these. It is requested to advise if it considers there would be a material difference in the assessment conclusions were the Applicant to follow its suggested method for assessing impacts to bird qualifying features of the SPAs.</p>	<p>To address questions NE2–NE8, NE10–NE12, NE14, NE15, NE17, NE28, and NE29, the Applicant has been holding weekly meetings with Natural England to collaboratively resolve each query. These discussions have confirmed that NE4 has been resolved, with the remaining matters anticipated to be addressed by Deadline 6A.</p> <p>Updates on Specific Relevant Representations</p> <p>NE2 – Impact Assessment on Birds</p> <p>A new bird count methodology has been developed in consultation with Natural England and will be used for revised calculations and assessments in the updated HRA submitted at Deadline 6A.</p> <p>The updated HRA will include an appendix detailing the number of birds potentially disturbed and assess visual and noise disturbance impacts on the waterbird assemblage.</p> <p>NE3 – Functionally Linked Land (FLL)</p> <p>This is addressed in the responses document 'H2T DCO 8.26 Applicant's Responses to D4 Submissions and CA Reg RR'. The conclusions of this note are accounted for in the updated HRA submitted at Deadline 5.</p> <p>The Proposed Development Site will not directly impact all areas, and the exact working width will be finalised during detailed design. Based on a worst-case scenario, 21.9 ha of FLL could face temporary loss during construction, divided as follows:</p> <ul style="list-style-type: none"> • Saltholme to Cowpen Bewley: 14.15 ha would be impacted from March to September 2027 (7 months). Construction is scheduled to avoid non-breeding months, minimising effects on non-breeding SPA birds. • Brinefields: 7.75 ha could be affected, but works will avoid non-breeding months to reduce potential effects on SPA birds. <p>No FLL habitat loss is expected north to Greatham Creek, adjacent works between March and November will use acoustic barriers to mitigate noise and disturbance. Actual habitat losses will likely be smaller than the estimated 21.9 ha, as they are confined to the working width, which remains undetermined.</p> <p>The Applicant has added further consideration of effects to functionally linked land to the Deadline 5 version of the HRA:</p>

EXQ2	QUESTION TO:	QUESTION:	RESPONSE
			<ul style="list-style-type: none"> Paragraph 4.2.6-7 and Figure 16 a and b discuss the extent of permanent habitat loss, including specific locations. Paragraphs 6.2.3 to 6.2.13 provide further analysis of these impacts by sector. <p>NE5 – Noise Impact Assessment and NE6 – Visual Screening A Noise Technical Note, including noise contours accounting for proposed barriers, will be submitted by Deadline 6A. This includes an extended noise and visual barrier at Greatham Creek and LAm_{ax} contours from impulsive noise. The revised bird count methodology will be applied alongside these noise contours, demonstrating the attenuation offered by the proposed barriers in the updated HRA to be submitted at Deadline 6A.</p> <p>NE7 – Quantification of Operational Visual Disturbance Sources The Applicant has referenced the NatureScot Research Report 1283 (2022)¹, noting that bird disturbance should be assessed on a site-specific basis. Given the high levels of anthropogenic disturbance around the site, visual disturbance during operation is deemed not to cause Likely Significant Effects (LSE) due to habituation. This point is under ongoing discussion with Natural England.</p> <p>NE8 – Sightlines from the Blast Furnace Pool This is addressed in the Technical Note attached to the responses document 'H2T DCO 8.26 Applicant's Responses to D4 Submissions and CA Reg RR'. The conclusions of this note will be accounted for in the updated HRA submitted at Deadline 6A.</p> <p>NE10, NE11, NE12, NE14, NE15, NE17, NE28, NE29: Air Quality Impacts: Construction-related air quality impacts are covered in Paragraphs 4.2.96–4.2.98 of the Deadline 5 HRA, with additional updates in Sections 6.6 and 6.7.</p> <p>NE19 – In-Combination Assessment</p> <ul style="list-style-type: none"> Paragraph 5.1.4 and Table 5-1 of the Deadline 5 HRA have been updated to assess potential Likely Significant Effects (LSE) alongside other plans/projects. Table 7-1 now provides a comprehensive summary of in-combination effects. <p>Additional Notes</p> <ul style="list-style-type: none"> The Applicant will continue engaging with Natural England to resolve outstanding matters by Deadline 6A.
Q2.4.3	Applicant	The Applicant is requested to confirm what change it would anticipate to the conclusions of the Report to Inform HRA [CR1-023] in respect of impacts to the bird qualifying features of the SPAs if it followed the assessment method suggested by NE for impact pathways covered by NE3 to NE8 [RR 026].	<p>The Applicant would like to confirm that additional responses addressing NE3 and NE8 have been submitted as part of the Deadline 5 submission, with further updates being prepared for Deadline 6A as described above. These responses aim to clarify and expand on the assessment of relevant impact pathways.</p> <p>It is also important to highlight that many of NE’s responses are closely linked to the overall HRA updates. These updates collectively address the relevant representations raised by NE.</p>

¹ Goodship, N. M., Furness, R. W. (2022) NatureScot Research Report 1283 - Disturbance Distances Review: An updated literature review of disturbance distances of selected bird species.

EXQ2	QUESTION TO:	QUESTION:	RESPONSE
			<p>To support NE3 and NE8, additional figures and CAD documents were produced for NE. These materials were shared directly with NE via email for their consideration and feedback.</p> <p>A new bird count methodology has been developed in consultation with Natural England and will be used for revised calculations and assessments in the updated HRA at Deadline 6A. The Applicant considers that with the application of proposed mitigation the revised HRA will continue to report no Adverse Effects on Integrity of the European Designated Sites.</p>
Q2.4.4	Applicant	The Applicant is requested to submit a table detailing the quantum of functionally linked land to the Teesmouth and Cleveland Coast SPA and Ramsar site expected to be lost on both a temporary and permanent basis because of the Proposed Development, together with the function of the land (per NE3 [RR 026]. The ExA expects figures to be provided based on a worst case scenario.	<p>The Applicant would like to confirm that additional responses addressing NE3 have been submitted as part of the updated HRA submitted at Deadline 5 (see paragraphs 4.2.6 and 4.2.7). . This includes the information requested by the ExA in this question.</p> <p>The locations of bird roosts are shown on Figures 13-A-9, 13-A-10 and 13-A-11, and supporting narrative on these locations is provided in Tables 13A-9, 13A-10 and 13A-11 within the Ornithology Baseline Report [APP-208].</p>
Q2.4.5	Applicant	NE’s DL4 submission [REP4-028] clarifies it's outstanding concerns on the HRA matters not agreed. In the light of this submission from NE please provide a full written response to outstanding matters NE7, NE8, NE10, NE12, NE14, NE15, NE17, NE18, and NE26, or otherwise confirm what steps you are taking to progress these matters and when you will be in a position to respond fully to these outstanding matters?	<p>The matters pertaining to NE7, NE8, NE10, NE12, NE14, NE15, NE17, NE18, and NE26 have been discussed in various meetings with NE between Deadline 4 and Deadline 5. The final conclusions, or current position, from these discussions have been documented and included in the responses submitted as part of the Applicant’s Response to Deadline 4 submissions document, also submitted at Deadline 5..</p>
Q2.4.6	Applicant	The Applicant submitted an updated draft Statement of Common Ground (SoCG) with NE [REP4-022], which referred to [APP-064], paragraph 12.6.16 to justify why it concluded no likely significant effect to the European sites underpinned by the Teesmouth and Cleveland Coast SSSI, arising from change in air quality during operation. It stated that in-combination nitrogen deposition was predicted to be lower than historic levels, at 13.89 kgN/ha/yr compared to 14.77 kgN/ha/yr in 2003. [REP4-022] indicated that NE requested further information about cumulative nitrogen sources and confirmation that minor increases would not hinder habitat recovery at the SPA and SSSI (NE17 and NE31 [RR 026]). The Applicant is requested to submit this information, together with a status update of engagement with NE, by DL5 of the Examination.	<p>An updated HRA has been produced for Deadline 5 which clarifies why a conclusion of no adverse effect on the integrity of European sites is reached on this issue. With regard to NE17, discussions with Natural England on 28th November resulted in construction period air quality emissions being screened into appropriate assessment. At the appropriate assessment stage the Applicant has then added further explanation as to why an adverse effect on the integrity of Teesmouth and Cleveland Coast SPA will not arise, particularly regarding why the focus of the assessment is on nesting sites, clarifying the foraging behaviour of relevant SPA birds, how the other parts of the SPA function for the relevant SPA birds, and how historic nesting locations for terns have been considered.</p> <p>With regard to comment NE31 (impacts on the SSSI), the Applicant had meetings with Natural England on 28th November and 4th December 2024. At those meetings the Applicant clarified that the dunes at Teesmouth & Cleveland Coast SSSI are calcareous as demonstrated by the presence of calcareous vegetation on the dunes. As set out in Bobbink et al 2022² surveys have indicated that calcareous, iron-rich dunes exhibit co-limitation of nitrogen and phosphorus and that phosphorus limitation is a factor in calcareous dunes and ‘may lead to fewer botanical responses in calcareous dunes compared with acidic or decalcified dune sites’. There is therefore a justification for considering that the lowest critical load of 5kgN/ha/yr is less appropriate than a</p>

² Bobbink, R., Loran, C., Tomassen, H. Review and revision of empirical critical loads: Final report. German Environment Agency. (Accessed: 16 December 2024).

EXQ2	QUESTION TO:	QUESTION:	RESPONSE
			<p>slightly higher critical load of 10 kgN/ha/yr as was used on APIS for calcareous dune systems before the critical loads reported on APIS were updated in 2023.</p> <p>Notwithstanding any change in the critical load applied, the Applicant’s view remains that the total nitrogen deposition rate will remain lower with the Proposed Development consented (even allowing for other plans and projects) than it has been historically and therefore it cannot be argued that the Proposed Development will harm the interest of the SSSI, even by impeding restoration. That is particularly the case given the contribution of the Proposed Development is at the ‘1% of the upper critical load’ insignificance threshold.</p> <p>In addition, the Applicant held a discussion with Natural England and the Environment Agency on 4th December 2024. At that meeting it was suggested that the closure of the CF Fertilisers Billingham ammonia plant in August 2022, the SSI steel plant and potentially other industrial changes may have recently reduced pollutant emissions and nitrogen deposition onto the SSSI. These recent changes may not yet be visible in the baseline data contained within the Air Pollution Information System (APIS) model. This would further reinforce the argument that there is ‘headroom’ for limited further emissions.</p>
Q2.4.7	NE	Can NE clarify if it’s comments under [RR 026], NE28 and 29, relating to effects to the Teesmouth and Cleveland Coast SSSI from change to emissions to air, are relevant to the HRA (ie is it considered that these impacts could further affect the Teesmouth and Cleveland Coast SPA and Ramsar sites, underpinned by the SSSI) or are solely in the context of the Environmental Impact Assessment, and ES Chapters 8 [APP-060] and 12 [APP-064]. Please confirm if there has been any change in advice since [REP2-072] and, if so, on what basis.	N/A
Q2.4.8	Applicant	If NE’s advice for [RR 026], NE10, NE12, NE28 and NE29 remains unchanged by close of Examination, can the Applicant advise what mitigation would be available to address the identified potential effects from change to emissions to air and what steps it could take to secure this.	<p>The Applicant is confident that with regard to European sites it will be able to resolve issues with Natural England, further to the updates to the HRA submitted at Deadline 5. This is because the SPA and Ramsar are designated for different features to the SSSI and the relevant sensitive locations in the SPA/Ramsar to air quality (the tern and avocet nesting areas) are not significantly affected in combination. In contrast the SSSI is partly designated for its sand dune vegetation which is directly sensitive to air quality and is situated immediately north of the Main Site at Coatham Dunes.</p> <p>It also considers that, given its answers to the SWQs and its response to NE’s Deadline 4 submission, the issues with regards to cumulative air quality impacts to the SSSI should also be able to be resolved.</p> <p>However, in light of the ExA’s question, with regard to cumulative air quality impacts on the Teesmouth and Cleveland Coast SSSI (as there are no significant impacts to the SSSI from the Proposed Development alone), potential mitigation measures, if required, could involve management activities that would increase the resilience of dune grassland to atmospheric pollution and particularly nitrogen deposition. These are</p>

EXQ2	QUESTION TO:	QUESTION:	RESPONSE
			<p>given in the Natural England’s Climate Change Adaptation Manual (Climate Change Adaptation Manual - NE751):</p> <ul style="list-style-type: none"> • Manage recreational use to prevent excessive pressure on vegetation, by rotational exclusion of people, especially from fore-dunes and fixed dunes, and by retaining vegetation that can trap sand. • Minimise large-scale surface sand erosion on fixed dunes through flexible management. For example by adjusting stocking density and the timing of grazing in response to seasonal variation in growing conditions, while maintaining a proportion of bare sand. <p>Specifically, the report references Countryside Stewardship option CT1 Management of coastal sand dunes and vegetated shingle³. This option aims to ensure the appropriate management of existing coastal sand dune and vegetated shingle sites, whether in good condition or needing restoration.</p> <p>Whilst the Applicant is willing to discuss such approaches with Natural England, in the context that, even if it was not agreed by NE that no likely significant effect can be concluded, the contribution of the Proposed Development to a cumulative impact is so small as to be imperceptible, the Applicant considers that it would not be appropriate for one small initiative to be brought forward by the Applicant to deal with its own small contribution to the overall impact</p> <p>It considers that any mitigation approach should form part of a wider strategic approach to the Teesside area, given the number of developments coming forward. As such, and given the time available in Examination, the Applicant does not propose to make any commitment to secure such mitigation.</p> <p>This approach should be seen in the context that, as set out in the Planning Statement (APP-031), the Proposed Development clearly forms infrastructure that is considered to be ‘critical national priority’ infrastructure. With that in mind, the Applicant notes that NPS E.1 paragraph 4.2.17 makes clear that it should be assumed that the benefits of CNP infrastructure should be considered to clearly outweigh impacts to SSSIs.</p> <p>Such policy therefore applies to the ExA’s and Secretary of State’s consideration of this issue, in the absence of certainty of mitigation development, if the position is not agreed with NE.</p> <p>Furthermore, it is noted that the role of the Proposed Development is to decarbonise industry on Teesside, which will ultimately improve the baseline position at the SSSI over time.</p>
Q2.4.9	NE	The ExA notes the comments of the Marine Management Organisation (MMO) in its DL4 submission [REP4-026], where it notes that to reduce the impact to the Teesmouth and Cleveland Coast SPA for Horizontal Directional Drilling (HDD) operations any pipe	N/A

³ Rural payments Agency. CT1: Management of coastal sand dunes and vegetated shingle. (Accessed: 18 December 2024).

EXQ2	QUESTION TO:	QUESTION:	RESPONSE
		<p>stringing area for HDD operations will be established a minimum of 30 metres away from the boundary of the SPA. The MMO defers to NE on whether this is an appropriate distance. As such the ExA would ask NE whether 30 metres is an acceptable distance from the SPA for such operations and if not what distance NE considers is acceptable, together with evidence justifying its position.</p>	