

Net Zero Teesside Project

Planning Inspectorate Reference: EN010103

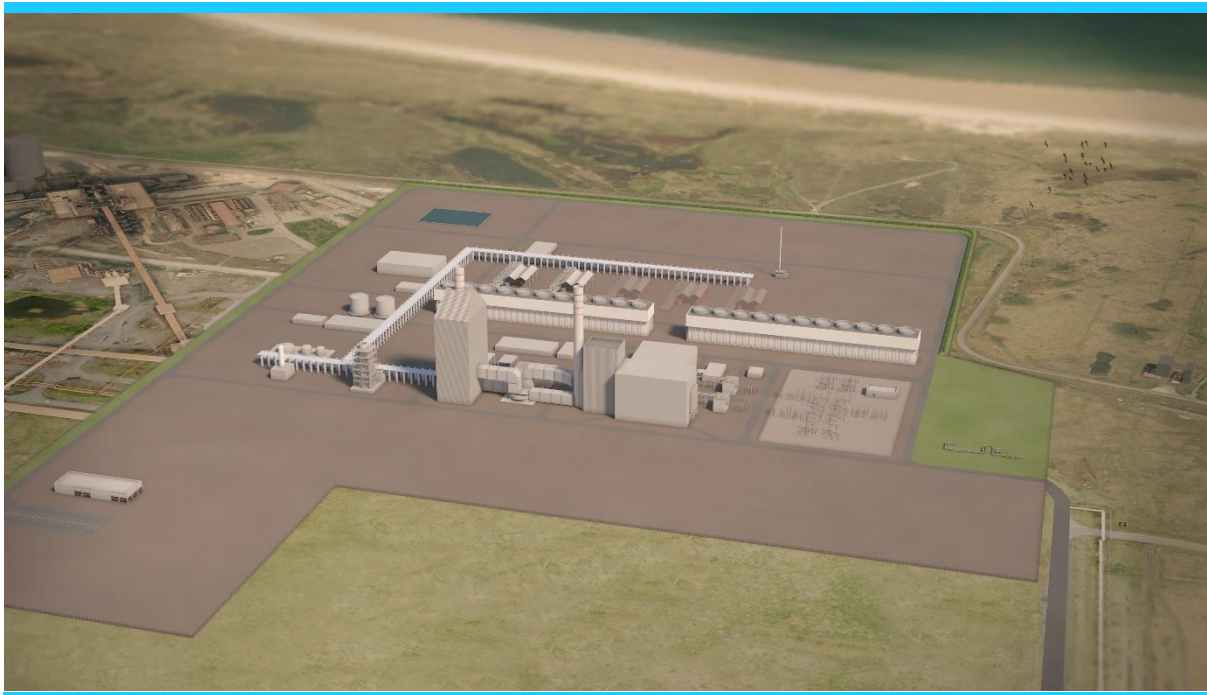
Land at and in the vicinity of the former Redcar Steel Works site, Redcar and in Stockton-on-Tees, Teesside

The Net Zero Teesside Order

Document Reference: 9.45 Written Summary of Oral Submission for Issue Specific Hearing 6

The Planning Act 2008

The Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009



Applicants: Net Zero Teesside Power Limited (NZN Power Ltd) & Net Zero North Sea Storage Limited (NZNS Storage Ltd)

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APPENDICES

Appendix

1.0 INTRODUCTION

1.1 Overview

- 1.1.1 This Written Summary of Oral Submissions for Issue Specific Hearing 6 ('ISH6') (Document Ref. 9.45) has been prepared on behalf of Net Zero Teesside Power Limited and Net Zero North Sea Storage Limited (the 'Applicants'). It relates to the application (the 'Application') for a Development Consent Order (a 'DCO'), that has been submitted to the Secretary of State (the 'SoS') for Business, Energy and Industrial Strategy ('BEIS'), under Section 37 of 'The Planning Act 2008' (the 'PA 2008') for the Net Zero Teesside Project (the 'Proposed Development').
- 1.1.2 The Application was submitted to the SoS on 2 and was accepted for Examination on 16 August 2021. A change request made by the Applicants in respect of the Application was accepted into the Examination by the Examining Authority ('ExA') on 6 May 2022. A further change request has been submitted to the ExA at Deadline 6 on 23 August 2022.

1.2 Description of the Proposed Development

- 1.2.1 The Proposed Development will work by capturing CO₂ from a new the gas-fired power station in addition to a cluster of local industries on Teesside and transporting it via a CO₂ transport pipeline to the Endurance saline aquifer under the North Sea. The Proposed Development will initially capture and transport up to 4Mt of CO₂ per annum, although the CO₂ transport pipeline has the capacity to accommodate up to 10Mt of CO₂ per annum thereby allowing for future expansion.
- 1.2.2 The Proposed Development comprises the following elements:
- **Work Number ('Work No.') 1** – a Combined Cycle Gas Turbine electricity generating station with an electrical output of up to 860 megawatts and post-combustion carbon capture plant (the '**Low Carbon Electricity Generating Station**');
 - **Work No. 2** – a natural gas supply connection and Above Ground Installations ('AGIs') (the '**Gas Connection Corridor**');
 - **Work No. 3** – an electricity grid connection (the '**Electrical Connection**');
 - **Work No. 4** – water supply connections (the '**Water Supply Connection Corridor**');
 - **Work No. 5** – waste water disposal connections (the '**Water Discharge Connection Corridor**');
 - **Work No. 6** – a CO₂ gathering network (including connections under the tidal River Tees) to collect and transport the captured CO₂ from industrial emitters (the industrial emitters using the gathering network will be responsible for consenting their own carbon capture plant and connections to the gathering network) (the '**CO₂ Gathering Network Corridor**');

- **Work No. 7** – a high-pressure CO₂ compressor station to receive and compress the captured CO₂ from the Low Carbon Electricity Generating Station and the CO₂ Gathering Network before it is transported offshore (the '**HP Compressor Station**');
- **Work No. 8** – a dense phase CO₂ export pipeline for the onward transport of the captured and compressed CO₂ to the Endurance saline aquifer under the North Sea (the '**CO₂ Export Pipeline**');
- **Work No. 9** – temporary construction and laydown areas, including contractor compounds, construction staff welfare and vehicle parking for use during the construction phase of the Proposed Development (the '**Laydown Areas**'); and
- **Work No. 10** – access and highway improvement works (the '**Access and Highway Works**').

1.2.3 The electricity generating station, its post-combustion carbon capture plant and the CO₂ compressor station will be located on part of the South Tees Development Corporation (STDC) Teesworks area (on part of the former Redcar Steel Works Site). The CO₂ export pipeline will also start in this location before heading offshore. The generating station connections and the CO₂ gathering network will require corridors of land within the administrative areas of both Redcar and Cleveland and Stockton-on-Tees Borough Councils, including crossings beneath the River Tees.

1.3 The Purpose and Structure of this document

1.3.1 The purpose of this document is to provide a Written Summary of the submissions made orally by the Applicants at ISH6 held on Wednesday 19 October 2022 at 1:30pm. Table 2-1 in Section 2 of this document contains the Applicants' summary and is structured so that the summary of each agenda item is on a separate row. Table 2-1 document also contains the Applicants' response to the action points arising from CAH3 [EV10-005] published on the Planning Inspectorate's website on 21 October 2022 following completion of the hearings.

2.0 WRITTEN SUMMARY OF ORAL SUBMISSIONS

Table 2-1 Summary of Oral Submission at ISH6

	AGENDA	SUMMARY OF ORAL CASE
	Item 1 Welcome, Introductions, and address housekeeping matters.	N/A
	Item 2 Purpose of the Hearing	N/A
	Item 3 Water Environment <ul style="list-style-type: none"> • Updates on discussions related to raw water supply and discharge with NWL; • Issues related to the design/alignment for the outfall options to Tees Bay; • Issues of nutrient neutrality and the modelling of dissolved organic nitrogen with reference to the Nutrient Nitrate Briefing Paper [REP9-016]; • WFD assessment including proposed update discussions with the EA; • The potential effect of rock armouring / scour protection associated with the proposed new outfall head to the Teesmouth and Cleveland Coast Special Protection Area (SPA) and Ramsar site in the Habitats Regulations Assessment (HRA). 	<p>First agenda item</p> <p>Jack Bottomley (“JB”) for the Applicants advises that they continue to work with NWL on technical and commercial matters associated with the supply of raw and potable water, and for the treatment of effluent at Bran Sands Waste Water Treatment Plant (WwTP). The Applicants are progressing through a formal process with NWL, as a regulated operator, to establish a commercial agreement. NWL are developing a detailed project programme that addresses all activities completed to date and the schedule of activities required for conclusion of agreements and commissioning of services. NWL are preparing heads of terms for the effluent treatment, to be shared with the Applicants shortly.</p> <p>The Applicants have shared conservative water volume demands with NWL. NWL has completed a preliminary assessment of these volumes, including a network analysis. As stated in the SoCG submitted at Deadline 5 [REP5-019] the conservative volumes provided by the Applicants are within NWL’s available capacity.</p> <p>The Applicants will continue to engage with NWL during design development and provide updated demand data. To date, NWL has not raised any matters of principle that would prevent it supporting the Proposed Development and we will capture this in the finalised SoCG submitted at Deadline 12.</p> <p>Second agenda item:</p> <p><i>[Matters relating to outfall options were discussed at ISH5 and CAH3 and were not discussed at ISH6].</i></p> <p>Third agenda item:</p> <p>Dr Richard Lowe (“RL”) for the Applicants states that they have undertaken close liaison with Natural England and the Environment Agency to assess and address the requirements of the Nutrient Neutrality guidance once that issue was raised by Natural England during examination.</p> <p>This work includes detailed modelling of effluent discharges to the Tees estuary and Tees Bay and evaluation of design approaches that could be used to prevent exacerbation of the existing nutrient nitrogen levels on the qualifying features of the SPA [REP9-017]. It has been agreed with Natural England that their area of concern relating to nitrogen levels is the Seal Sands mudflats as that is the main area of feeding for the terns.</p> <p>All potential sources of nitrogen in effluent from the Proposed Development have been considered and the Applicants have worked with NWL to understand the level of treatment achievable at Bran Sands WwTW.</p>

		<p>Through this work the Applicants identified that the ‘base case’ of discharging treated effluent through the existing consented Bran Sands Wastewater Treatment Works (WwTW) discharge would lead to nitrogen containing effluent being discharged into the Tees estuary. The Applicants therefore have changed approach from the ‘base case’ to instead, with the agreement of NWL, take a return of treated effluent, containing an equivalent load of nitrogen to that sent for treatment, back from Bran Sands and discharge it via the proposed replacement outfall (which is also encompassed within the DCO).</p> <p>Plume modelling of the outfall discharge has been undertaken and this has demonstrated that the discharged nitrogen does not impact on the mudflats at Seal Sands. In addition, the Proposed Development will abstract water from the River Tees for cooling purposes and discharge it into the Tees Bay after use. This abstracted water already contains a baseline of elevated nitrogen concentrations that is currently passing into the estuary and past the Seal Sands mudflats so by abstracting this water and discharging it to the Bay the Proposed Development could achieve nutrient neutrality in relation to nitrogen levels impacting on the Seal Sands mudflats.</p> <p>This assessment has been discussed with Natural England and the following position has been agreed:</p> <ul style="list-style-type: none">- Subject to the addition of a draft requirement to secure the use of the mitigation measures outlined (or equivalent), the Applicants and Natural England agree that the Proposed Development achieves nutrient neutrality at the Seal Sands mudflats, which is Natural England’s area of potential concern.- Subject to the HRA being updated to take the proposed mitigation secured by the draft requirement into Stage 2 of the assessment, the Applicants and Natural England agree that there is no adverse effect on the integrity of the Teesmouth and Cleveland Coast SPA. <p>The Applicants have also explained to Natural England the predicted impacts and conclusion of no effect on the integrity of the designated site in the context of the limitations and uncertainty of the modelling results. Reassurance is provided in that the Applicants’ position is not overly reliant on the exact model result due to the offsetting from the abstraction of water containing nitrogen from the river Tees. The Applicants have also looked at dispersion patterns at different depths in the water body in order to consider potential effects on the mud flats in particular.</p> <p>Separately, the Applicants have offered to support Natural England’s and the Environment Agency’s understanding of nutrient concentrations in the Tees Estuary in the area around Seal Sands mudflats through an agreed monitoring programme.</p> <p>HPKC addressed the Examining Authority on the proposed mitigation to address potential nutrient impacts on Seal Sands mudflats. The nutrient neutrality briefing paper [REP9-017] explains at section 3.5 that there are a number of options for handling effluent containing nitrogen. The dDCO makes provision for a number of options through Work Nos. 1 and 5. The dDCO in Schedule 1 is drafted in such a way as to allow for different options for the handling of effluent, all of which could be constructed and operated without any change to the dDCO.</p> <p>Paragraph 7.2.9 of the briefing paper explains the nature and status of “Option A”. Option A is one potential means by which nutrient neutrality could be achieved. The briefing paper demonstrates that nutrient neutrality is achievable within the scope of the dDCO albeit there may be other ways of achieving that end. It would not be appropriate to require the Applicants to deliver Option A as there may be other, potentially better means of achieving nutrient neutrality. However, Option A demonstrates that nutrient neutrality can be achieved within the scope of the dDCO as applied for. The proposed requirement discussed with Natural England was read out by HPKC:</p>
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		<p>Nutrient neutrality safeguarding scheme</p> <ol style="list-style-type: none">1. No part of the authorised development other than the permitted preliminary works may commence until an effluent nutrient nitrogen safeguarding scheme has been submitted to and, after consultation with Natural England, approved by the relevant planning authority.2. The undertaker must implement the effluent nutrient nitrogen safeguarding scheme as approved, unless otherwise agreed with the relevant planning authority following consultation with Natural England.3. The effluent nutrient nitrogen safeguarding scheme submitted pursuant to paragraph (1) must demonstrate that wastewater from operation of the authorised development is controlled and discharged so that it will not cause a net increase in total nitrogen concentrations in water within the Tees Estuary at Seal Sands mud flats. <p><i>[Post hearing note: Action 1: Provide a note in the Written Summary of Oral Submissions describing the proposed Requirement relating to a scheme to achieve nutrient neutrality. The Applicants have updated the Requirement as set out below. The revised wording of the Requirement provides further detail of what the effluent nutrient nitrogen safeguarding scheme must include and demonstrate. Natural England confirmed on 26 October 2022. that the revised Requirement was agreed.</i></p> <p><i>Updated draft requirement: Effluent nutrient nitrogen safeguarding scheme</i></p> <p><i>(1) No part of the authorised development other than the permitted preliminary works may commence until an effluent nutrient nitrogen safeguarding scheme has been submitted to and, after consultation with Natural England and the Environment Agency, approved by the relevant planning authority.</i></p> <p><i>(2) The effluent nutrient nitrogen safeguarding scheme submitted pursuant to paragraph (1) must include the following details-</i></p> <ol style="list-style-type: none"><i>a) Details of the selected design and discharge location of the infrastructure that will treat and discharge effluent containing nitrogen produced by the operation of the authorised development;</i><i>b) Discharge modelling of the design selected pursuant to sub-paragraph (a) and which (unless otherwise agreed with the relevant planning authority after consultation with Natural England and the Environment Agency) is based on the modelling methodology in Appendix B of the nutrient nitrogen briefing paper; and</i><i>c) information on the wastewater discharge monitoring methods, frequency and locations that will be undertaken pursuant to any environmental permits required for the authorised development.</i> <p><i>3) The effluent nutrient nitrogen safeguarding scheme submitted pursuant to paragraph (1) must demonstrate that nitrogen in effluent from operation of the authorised development is controlled and discharged in order that it will:</i></p> <ol style="list-style-type: none"><i>a) not cause a net increase in total nitrogen concentrations in water within the Tees Estuary at the Seal Sands mud flats; and</i><i>b) not impact on the Water Framework Directive status of the Tees Coastal Water, Tees Transitional Waterbody or Tees Estuary;</i>
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		<p>armour to ensure it is clean and increase the likelihood of colonisation by native species. These paragraphs also demonstrate the rock armour will have no material effect on coastal processes due to a combination of its small size and circular footprint and detailed design measures such as ensuring an elevation no more than 1m above the seabed.</p>
	<p>Item 4 Tees Dock Road Access</p> <ul style="list-style-type: none"> The ExA will ask the Applicants to provide an update on the proposed change associated with the access to Tees Dock Road. 	<p><i>Matters relating to Tees Dock Road were discussed at ISH5 and CAH3 and were not addressed in ISH6.</i></p>
	<p>Item 5 Statements of Common Ground relevant to Environmental Matters</p> <ul style="list-style-type: none"> The ExA will ask the Applicants to provide an update on Statements of Common Ground relevant to the Environmental Matters. 	<p>HPKC for the Applicants provides an overview of the Statements of Common Ground relating to Environmental matters:</p> <p>Historic England: this SoCG is agreed and signed [REP8-045]</p> <p>National Highways: this SoCG is agreed and signed [REP4-021]</p> <p>MMO: the SoCG is at an advanced stage, with the most recent version submitted at Deadline 8 [REP8-039]. The matters left to resolve with the MMO relate to the wording of the DMLs at Schedules 10 and 11 of the DCO [REP8-003]. The MMO has provided comments on some of the wording, the majority of which have been incorporated already within that version of the DCO. A copy of the updated SOCG which sought to address all matters was sent to the MMO for their approval on 12 October 2022. The Applicants have also suggested that a meeting is held to seek to finalise any outstanding matters. The Applicants are not aware of any residual significant areas of disagreement and consider that all matters can be agreed.</p> <p>Natural England: the most recent version was submitted at Deadline 8 [REP8-044]. Through ongoing discussions it has been confirmed that, subject to the inclusion of the proposed draft requirement for an effluent nutrient nitrogen safeguarding scheme, nutrient neutrality on Seal Sands mudflats is agreed and it is also agreed that there is no adverse effect on the integrity of the Teesmouth and Cleveland Coast SPA. The Applicants are updating the SoCG to close out these matters and to include the proposed approach to monitoring nutrients within the Tees Bay via a Deed of Undertaking. The Applicants propose to submit a further iteration of the SoCG at Deadline 12.</p> <p>Environment Agency: the most recent version was submitted at Deadline 8 [REP8-042]. The only outstanding matter left to resolve with the Environment Agency is to agree that WFD compliance can be demonstrated for the Proposed Development, as discussed earlier in this hearing. In advance of the detailed review of the WFD assessment report (and subject to validation of that report), the Applicants are seeking confirmation from the Environment Agency that the conclusions of no effect on WFD compliance are accepted. The Applicants propose to submit a further iteration of the SoCG at Deadline 13, following a meeting with the Environment Agency on 4th November.</p> <p>Northumbrian Water: The draft SoCG was submitted at D5 [REP5-019]. The Applicants have updated the SoCG and will issue this to NWL shortly. The update will capture the in-principle acceptability and deliverability of what is proposed for NWL's role in the Proposed Development. It will then explain the nature of the subsequent detailed phase for commercial agreements and detailed design.</p>
	<p>Item 6</p>	

	<p>Review of issues and actions arising</p>	<p><i>[Post-hearing note, Action 7, Consider producing a final consolidated version of the Environmental Statement (ES), or a navigational guide to the ES together with all addendums. The Applicants confirm that they will submit a navigational guide to the ES at Deadline 12, including taking account of the ES Addendum which will be submitted as part of the change request to be submitted at Deadline 12.]</i></p>
	<p>Item 10</p> <p>Any other business</p>	<p>In response to a request from the Examining Authority asking for an update on the potential effects of the offshore transport and storage works, Ross Nickson (“RN”) for the Applicants provides an update.</p> <p>RN states that the draft offshore Environmental Statement has been through a scoping process with the regulator OPRED that also included public consultation to allow stakeholders to raise any matters with OPRED for inclusion in the offshore ES. The Matters that were agreed to be covered in the Environmental Statement. . The matters agreed to be included were:</p> <ol style="list-style-type: none"> 1. Disturbance impacts, direct and indirect, on seabed, ornithology and coastal processes. 2. Underwater sound. 3. Planned discharges to sea associated with offshore development, marine benthos, plankton and formation water displacement at the outcrops. 4. Physical presence of infrastructure when constructed and vessels during construction, and impacts on offshore seabirds and marine mammals. 5. Potential hydrocarbon releases from vessels, primarily comprising potential effects on birds. 6. Potential for CO₂ releases and displaced fluid from the formation associated with the offshore transport of CO₂ and injection into the store, and the potential for any impacts from unplanned release. 7. Atmospheric emissions, primarily from construction but also the offshore Northern Endurance Partnership including effects on air quality. <p>The Applicants confirm there is no potential for combined or in-combination effects with the NZT DCO Proposed Development and which are not already considered in ES Chapter 24 (Cumulative and Combined Effects, APP-106) and Appendix 24C (Statement of Combined Effects, APP-346).</p>
	<p>Item 11</p> <p>Closure of the Hearing</p>	<p>N/A</p>