

Net Zero Teesside Project

Planning Inspectorate Reference: EN010103

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

The Net Zero Teesside Order

Document Reference: 9.21 Notification of Further Proposed Changes and Update on Remaining Optionality

Planning Act 2008



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

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GLOSSARY

Abbreviation	Description
AOD	Above ordnance datum
AS-	Additional Submissions
BAT	Best Available Techniques
BEIS	The Department for Business, Energy and
	Industrial Strategy
CCGT	Combined Cycle Gas Turbine
CCUS	Carbon Capture, Utilisation and Storage
CEMP	Construction and Environmental Management
	Plan
СТМР	Construction Traffic Management Plan
CO ₂	Carbon dioxide
СРО	Compulsory Purchase Order
dB	Decibels
DCO	Development Consent Order
dDCO	Draft Development Consent Order
EIA	Environmental Impact Assessment
EPC	Engineering, Procurement and Construction
ES	Environmental Statement
ETS	Emissions Trading Scheme
ExA	Examining Authority
FEED	Front end engineering and design
FRA	Flood Risk Assessment
На	Hectares
HDD	Horizontal Directional Drilling
HIA	Hydrogeological Impact Appraisal
НоТ	Heads of Terms
kV	Kilovolts
MHWS	Mean High Water Springs
MLWS	Mean Low Water Springs
Mt	Million tonnes



NATS	National Air Traffic Services
NSIP	Nationally Significant Infrastructure Project
NWL	Northumbria Water Lagoon
NZT	The Net Zero Teesside Project
NZT Power	Net Zero Teesside Power Limited
NZNS Storage	Net Zero North Sea Storage Limited
PA 2008	Planning Act 2008
PCC	Power Capture and Compressor Site
PDA-	Procedural Deadline A
PINS	Planning Inspectorate
RCBC	Redcar and Cleveland Borough Council
RR	Relevant Representation
SBC	Stockton Borough Council
SEL	Sound Exposure Level
SPA	Special Protection Areas
SoCG	Statement of Common Ground
SoS	Secretary of State
STDC	South Tees Development Corporation
SuDS	Sustainable urban drainage systems
UXO	Unexploded Ordnance
WFD	Water Framework Directive



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1.0 INTRODUCTION

1.1 Overview

- 1.1.1 The Net Zero Teesside (the 'Project') Development Consent Order Application ('DCO Application') was submitted by the Applicants, Net Zero Teesside Power Limited and Net Zero North Sea Storage Limited, to the Secretary of State on 19 July 2021. The DCO Application was accepted for examination on 16 August 2021.
- 1.1.2 The Project is a technically challenging, and complex 'first-of-a-kind' development. It is a critical part of a Track 1 carbon capture and storage cluster project, which the UK Government has identified as being important for the decarbonisation of the power and industrial sectors both in Teesside and nationally.
- 1.1.3 Since the acceptance of the Applicants' request for proposed changes [PD-010], the Applicants have continued to engage with Interested Parties with a view to addressing their comments and agreeing common ground, while also continuing with project development. This has included progressing further work on the optionality around certain elements of the Project, notably the method of crossing the River Tees with the CO² Gathering Network (Work No. 6). This work has identified changes to the Project. The changes relate to removing optionality included in the DCO Application and a reduction in land take.

1.2 The Purpose and Structure of this Document

- 1.2.1 The purpose of this document is to set out the nature and extent of the proposed changes and provide the ExA with a summary of the next steps the Applicants intend to take. An update on how the Applicants are addressing remaining optionality in the DCO Application is also provided. The remainder of this document is structured as follows:
 - Section 2 Proposed Changes
 - Section 3 Potential Changes to Environmental Assessments
 - Section 4 Potential Changes to Application Documents
 - Section 5 Indicative Timeline & Remaining Optionality



2.0 **PROPOSED CHANGES**

2.1 Introduction

2.1.1 This document introduces changes to the DCO Application which the Applicants intend to seek and which are intended to reduce optionality and address concerns raised by Interested Parties. Their overall effect would therefore be positive in reducing the potential effects of the Project on Interested Parties and reducing the number of issues to be considered for the remainder of Examination.

2.2 Materiality of the Proposed Changes

- 2.2.1 Neither 'The Planning Act 2008' nor 'The Infrastructure Planning (Changes to, and Revocation of, Development Consent Orders) Regulations 2011' define what constitutes a material change to a project.
- 2.2.2 Advice Note 16 clarifies that "whether the change is substantial" will be an appropriate consideration in identifying a material change. The matter is ultimately a question of planning judgement, which Advice Note 16 confirms may be based on criteria including:
 - whether the change would generate new or different likely significant environmental effect(s); and
 - whether (and if so the extent to which) a change request involves an extension to the order land, particularly where this would require additional compulsory acquisition powers, e.g. for new plots of land and / or interests.
- 2.2.3 The changes relate solely to reductions to the Order Limits and removal of optionality for Work No. 6. As set out in section 3, the proposed changes do not generate new or different likely significant environmental effects. As such, and including taking into account the previous changes to the Application, the Applicants consider that the nature of the changes presented are non-material. The Applicants also note that the optionality for Work No. 6 was subject to previous non-statutory consultation, and following acceptance of the Applicants' previous changes, interested parties have had the opportunity to make representations on the Work No. 6 options.

2.3 Description and Rational for the Proposed Changes

- 2.3.1 The proposed changes are:
 - i) Selection of the method of crossing the Tees for the CO₂ Gathering Network (Work No. 6);
 - ii) Selection of the Electrical Connection (Work No. 3A) routeing over the Tees Valley railway line within the Teesworks site;
 - iii) Reduction of temporary possession land following progress made during Front End Engineering Design (FEED) and landowner discussions.

CO2 Gathering Network



- 2.3.2 As part of the DCO Application, two options for the CO₂ Gathering Network crossing the River Tees are included:
 - Option 2 (horizontal directional drilling) installed using a horizontal directional drilled (HDD) bore drilled from a location on land on the north bank of Dabholm Gut to land near to Navigator Terminals on North Tees.
 - Option 3 (Sembcorp Tunnel) construction of the pipeline within the existing Sembcorp No. 2 Tunnel from Navigator Terminals to the northern bank of the mouth of Dabholm Gut.
- 2.3.3 Following acceptance of the Applicants' change request by the ExA on 6th May 2022 [PD-010], the Applicants have continued to technically assess both options with support from their FEED contractor. During this period the Applicants and their FEED contractor have completed further site surveys, stakeholder engagement, engineering modelling and constructability reviews in order to remove the remaining optionality for Work No. 6.
- 2.3.4 Stakeholder engagement has included further technical meetings with the tunnel operator, Sembcorp, and other parties with existing apparatus in the tunnel. During these meetings the Applicant has used 3D modelling to present the proposed routing and construction sequence.
- 2.3.5 The Applicants propose to select Option 3 (Sembcorp Tunnel) and remove Option 2 (horizontal direction drilling) from the draft DCO.
- 2.3.6 The removal of Option 2 will have a beneficial impact of reducing the land requirements for the Proposed Development on both North and South Tees. These areas are shown on the indicative plans at Appendix 1.

Electrical Connection

- 2.3.7 The electrical connection between Work No. 1A and Work No. 3B is subject to final selection of the cable routeing. As described in paragraph 4.3.67 of Chapter 4 Proposed Development of the ES [APP-086], there are two possible routeings for the Electrical Connection (1A and 1B). These two options only relate to routeing of the cables across part of the Teesworks site and crossing the Tees Valley railway line.
- 2.3.8 Through technical discussions with STDC, the Applicants have agreed in principle the Option 1A routeing of Work No. 3A within the Teesworks site. Option 1B continues to have an element of uncertainty and is reliant on installation of future infrastructure. Given the recent progress and supporting design development the Applicants propose to select Option 1A and remove Option 1B from the Order.
- 2.3.9 The removal of Option 1B will have a beneficial impact of reducing land requirements for the Proposed Development on STDC land and reducing the potential interaction between the Proposed Development and Anglo American projects.

Temporary Possession Land Requirements



- 2.3.10 Following continued landowner engagement and design development, the Applicants have identified areas of temporary possession land that can be removed from the Order Limits.
- 2.3.11 These proposed reductions have been assessed by the Applicants to ensure that the Proposed Development could be delivered subject to the use of compulsory acquisition powers.
- 2.3.12 These proposed changes have been shared with the relevant land owners in advance of Deadline 4. These areas are shown on the indicative plans at Appendix 1.

2.4 Summary of the Proposed Changes

2.4.1 The proposed changes set out in Section 2.3 above are described below in terms of changes to the individual Work Number (Nos.) listed at Schedule 1 'Authorised Development' of the draft DCO (Document Ref. 2.1) and shown on the Works Plans (Document Ref. 4.4). The Applicants are proposing 4 changes in total which are summarised in Table 2.1 below. The reductions in the Order limits are shown on the plans at Appendix 1.

Change No.	Description
14	Removal of optionality for the CO_2 Gathering Network by removal of Option 2 (horizontal directional drilling) resulting in a reduction in the Order Limits. (Work Nos. 6 and 9B).
15	Removal of optionality for the Electrical Connection by removal of Option 1B, resulting in a reduction in the Order Limits (Work No. 3A).
16	Removal of parcels of land from North Tees Land Limited land as they are no longer necessary following landowner discussions and technical assessment (Work No. 6).
17	Removal of parcels of land from STDC land as they are no longer necessary following landowner discussions and technical assessment (Work No. 9A).

Table 2.1 – Summary of Proposed Development Changes



3.0 POTENTIAL CHANGES TO ENVIRONMENTAL ASSESSMENTS

3.1 Introduction

3.1.1 The Proposed changes will be beneficial overall and reduce potential environmental effects associated with Work No. 6 (CO₂ Gathering Network), Work No. 9A (Construction Laydown) and Work No. 9B (Construction Laydown).

3.2 Change 14: Removal of Optionality for the CO₂ Gathering Network (Work Nos. 6 and 9B)

- 3.2.1 Removal of optionality for the CO₂ Gathering Network by dropping the Horizontal Directionally Drilled (HDD) crossing of the Tees will be beneficial in terms of environmental effects. The change will mean that there will be no requirement for:
 - an HDD launch point on the north bank of the Dabholm Gut and close to Bran Sands Lagoon;
 - an HDD receiving pit at North Tees; and
 - stringing of the CO₂ Gathering Network pipeline through North Tees, and across and along the northern side of Seal Sands Road.
- 3.2.2 This change will therefore remove the potential for noise generation on the north bank of the Dabholm Gut and the need to manage traffic on Seal Sands Road, both associated with HDD drilling and pipe stringing operations. There is also reduced potential for noise impacts and visual disturbance on bird species on Bran Sands Lagoon located within the Teesside and Cleveland Coast SPA and Ramsar. Consequentially the Habitat Regulations Assessment (HRA) will need updating to remove references to the HDD works, but the overall conclusions of the HRA will not change. The change will not lead to any other factors relevant to the environmental assessment altering.

3.3 Change 15: Removal of optionality for the Electrical Connection (Work No. 3A)

3.3.1 This change will remove the potential for noise generation associated with construction of the connection along the York Potash conveyor crossing of the Tees Valley line. This will be beneficial as it slightly increases the distance between noise generating activities associated with crossing of the railway and residential properties. The change will not lead to any other factors relevant to the environmental assessment altering.

3.4 Change 16: Removal of Parcels of Land from North Tees Land Limited land (Work No. 6)

3.4.1 A number of parcels of North Tees Land Ltd are no longer required for Work No. 6. This minor reduction in land take will not affect the environmental assessments as removal of these parcels will slightly increase the distance to potentially sensitive receptors, thus reducing potential noise impacts and will otherwise not lead to any other factors relevant to the environmental assessment altering.



3.5 Change 17 Removal of Parcels of Land from STDC land (Work No. 9A).

3.5.1 A number of parcels of STDC land are no longer required for construction laydown (Work No. 9A) including areas of construction laydown and areas to facilitate pipeline stringing. Removal of these parcels of land will reduce potential noise generation from construction laydown activities and pipe stringing operations in this area, increasing the distance to potential receptors, and will not otherwise lead to any other factors relevant to the environmental assessment altering.



4.0 POTENTIAL CHANGES TO APPLICATION DOCUMENTS

- 4.1.1 The Applicants have assessed the impacted Application documents for the proposed changes. Upon submission of the proposed changes, the following documents will be updated:
 - i. Application Guide (Document Ref 1.2)
 - ii. Draft DCO (Document Ref 2.1)
 - iii. Explanatory Memorandum (Document Ref 2.2)
 - iv. Book of Reference (Document Ref 3.1)
 - v. Statement of Reasons (Document Ref 3.2)
 - vi. Guide to Land Plan Plots (Document Ref 3.4)
 - vii. Site Location Plan (Document Ref 4.1)
 - viii. Land Plans (Document Ref 4.2)
 - ix. Crown Land Plans (Document Ref 4.3)
 - x. Works Plans (Document Ref 4.4)
 - xi. Access and Rights of Way Plans (Document Ref 4.5)
 - xii. Indicative CO₂ Gathering Network Plans (Document Ref 4.11)
 - xiii. Indicative Electrical Connection Plans (Document Ref 4.8)
 - xiv. Environmental Statement Addendum Volume 1
 - xv. Habitats Regulations Assessment (Document Ref 5.13)



5.0 INDICATIVE TIMELINE & REMAINING OPTIONALITY

5.1 Indicative Timeline

5.1.1 The Applicants will update the relevant Application documents and intend to submit these at Deadline 6, formally requesting at that point that they are accepted by the Examining Authority.

5.2 Remaining Optionality

5.2.1 Subject to the implementation of the above changes, the Applicants' draft DCO would continue to include optionality. The Applicants have set out below the status of these matters and the proposed timeline for reducing optionality where possible.

Work No. 5A & 5B

- 5.2.2 There are two possible water discharge routes to Tees Bay within the draft Order:
 - Work No. 5A potential repair or modification and then use of the existing outfall on Teesworks site.
 - Work No. 5B a new water discharge pipeline to the Tees Bay, installed using trenchless techniques.
- 5.2.3 The Applicants have been in technical and commercial discussions with STDC on the use of the existing outfall. While the eventual use of the existing outfall is dependent on the Applicants securing a voluntary agreement with STDC, to date the Applicants have not completed the technical assessments required to confirm feasibility of connecting to the existing outfall and its continued operation to support the Proposed Development.
- 5.2.4 The Applicants have worked with STDC to identify a potential solution for connecting to the shaft B of the existing outfall, that would not prevent future development of the Foundry plots. The Applicants have developed a scope of work for a feasibility assessment to determine if such a connection is possible. The Applicants have shared this scope of work with STDC for comment and subsequently commenced with the work with their nominated contractor.
- 5.2.5 The study is expected to be concluded in August 2022. On completion the Applicants will assess whether Work No. 5A remains deliverable to support the Proposed Development. If confirmed a further internal inspection of the existing outfall will be required to assess the condition and future operational life.
- 5.2.6 The Applicants will continue to keep STDC and the ExA updated on progress. In parallel, design development is being progressed for Work No. 5B.

Work No. 5C

5.2.7 A wastewater treatment plant is required for treatment of process effluent from the flue gas quencher and generating station prior to discharge to the environment. The draft DCO has two options for the approach to wastewater treatment.



- The first option is to treat the process effluent on site, as part of Work No. 1B, prior to discharging to Tees Bay via the outfall.
- The second option is to direct the effluent flow to NWL's Bran Sands wastewater treatment plant (WwTP) via a new dedicated pipeline for treatment there prior to discharge. The treated effluent could then be returned via a new return pipeline to the PCC site for either discharge to Tees Bay via the outfall or to be reused for cooling the power station.
- Irrespective of the option selected, Work No. 1B will continue to require a wastewater treatment plant to treat other wastewater streams.
- 5.2.8 The Applicants have been in discussions with Interested Parties on the NWL option. This includes NWL, the Environment Agency and Natural England, as well as impacted landowners STDC and Anglo American.
- 5.2.9 The Applicants commissioned NWL to complete treatment trials to determine the feasibility of Bran Sands WwTP treating the process effluent. NWL has since completed the trials and concluded that there are no significant issues posed with processing the process effluent.
- 5.2.10 The Applicants will continue to engage with NWL on technical and commercial matters to support with making the final selection on wastewater treatment. The Applicants will also continue to engage with the Environment Agency on permitting the discharge of treated water from Bran Sands to Tees Bay and with Natural England on the implications for nutrient neutrality of this activity.
- 5.2.11 The Applicants are working towards making a selection within the Examination.



Appendix A1: Plans Showing Order Limits Updates and Location of Changes































