

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: [9.7 Applicants' Response to the Examining Authority's Written Questions](#)

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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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
CTMP	Construction Traffic Management Plan
CO ₂	Carbon dioxide
CPO	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
Ha	Hectares
HDD	Horizontal Directional Drilling
HIA	Hydrogeological Impact Appraisal
HoT	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 This document, the 'Applicants' response to the Examining Authority's Written Questions' (Document Ref. 9.7) 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 19 July 2021 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 on 6 May 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 This document sets out the Applicants' response to the Examining Authority's First Written Questions (ExQ1), which were issued on 19 May 2022.

1.3.2 The Applicants' response to each Written Question is provided in the following sections of the document. The ordering corresponds to the order in which the topics appear on the document published on the Planning Inspectorate's web page. This document does not contain a section for Combined and Cumulative Effects, Development Consent Order and Population and Human Health because no questions were asked.

- Section 2 - General and Cross-Topic Questions
- Section 3 - Air Quality and Emissions
- Section 4 - Biodiversity and Habitats Regulations Assessment
- Section 5 - Climate Change
- Section 6 - Compulsory Acquisition and Temporary Possession
- Section 7 - Design Landscape and Visual
- Section 8 - Geology, Hydrogeology and Land Contamination
- Section 9 - Historic Environment
- Section 10 - Major Accidents and Natural Disasters
- Section 11 - Noise and Vibration
- Section 12 - Planning Policy and Legislation

- Section 13 - Socio Economics and Tourism including Marine Users
- Section 14 - Traffic and Transport
- Section 15 - Water Environment

1.3.3 Each section contains a table which includes the reference number for each relevant question, the ExA's comments and questions and the applicant's response to each of those questions

2.0 GENERAL AND CROSS-TOPIC QUESTIONS

ExQ1	Question to:	Question:	Response
GEN.1.1	Applicants	<p>Requirement (R)31 of the draft Development Consent Order (dDCO) [AS-004] provides a mechanism to prevent commencement (other than permitted preliminary work) until the undertaker provides evidence that the necessary consent required to enable the construction and operation of a site for the storage of CO₂ has been granted.</p> <p>Should the DCO provide for the storage facility to be constructed and operational prior to the Proposed Development becoming operational?</p>	<p>The Applicants consider that it is unnecessary for the DCO to require the storage facility to be constructed and operational prior to the Proposed Development becoming operational. The ExA is directed to pages 13 to 16 of the Applicants' Deadline 1 Submission - <i>Written Summary of Oral Submission for Issue Specific Hearing 2 (ISH2)</i> [REP1-036], which sets out how a separate regime governs and controls the bringing forward of the transport and storage network, and which will encompass the onshore gathering network (Work No. 6).</p> <p>Specifically in relation to the generating station (Work No. 1A), the Applicants have also proposed amendments to Requirement 31 so that there is certainty in terms of the ability of the CO₂ from the CCGT to be captured and stored. This drafting has been included in the draft DCO submitted at Deadline 2. Together the Applicants consider that there are robust arrangements that ensure that the Proposed Development would not become operational until the storage facility has been constructed and is operational, and do not therefore consider it is necessary for a specific provision to be inserted in the draft DCO that imposes that requirement.</p>
GEN.1.2	Applicants	<p>The Proposed Development would connect into a future export pipeline and storage facility that would be subject to separate consents. The Hornsea Project Four Offshore Wind Farm DCO Application, which is in the Examination stage of the process, proposes wind turbines being located partly above the 'Endurance' saline aquifer which is proposed as the CO₂ storage destination.</p> <p>Consider and provide further details on the potential for these projects to conflict with each other and how any conflicts could be resolved.</p>	<p>BP Exploration Operating Company Limited (BPEOC), as operator of the Northern Endurance Partnership (NEP) project, and Orsted have engaged each other since 4Q 2019 (ahead of BPEOC taking over as operator of the CS001 licence from Carbon Sentinel Limited, a National Grid company) on the use of the Overlap Zone (being the overlapping area of seabed within which the offshore carbon storage facility (the Endurance Store) and Hornsea Project Four Offshore Wind Farm (Hornsea Project 4) are proposed and over which BPEOC and Orsted have separate, corresponding agreements for lease (Afls) with the Crown Estate). Both parties have participated in regular meetings and workshops over the past three years, to try to progress towards a resolution on whether co-existence of the development of the Endurance Store and Hornsea Project 4 is possible.</p> <p>In December 2021, BPEOC, on behalf of NEP, shared a technical assessment report with Orsted, TCE, BEIS and the NSTA which summarised NEP's position on the feasibility and limitations of co-development between NEP and Hornsea Project 4 in the Overlap Zone. The report, which followed over 2 years of collaboration with Orsted, concluded that locating wind turbines on top of and near to the Endurance Store would not be feasible (this area referred to as the 'Exclusion Area', representing a sub-part of the Overlap Zone). BPEOC submitted a copy of the technical assessment report into the Hornsea Project 4 DCO examination to support the technical submissions being made in that examination (Hornsea Project 4 examination library reference REP1-057, Annex 1, electronic page number 147), included as Appendix GEN.1.2 in Document ref 9.8.</p>

ExQ1	Question to:	Question:	Response
			<p>BPEOC, as operator of NEP, have made a number of detailed submissions into the Hornsea Project 4 examination regarding the competing technical and legal arguments as to whether co-existence of the Endurance Store and Hornsea Project 4 is possible within the Overlap Zone.</p> <p>The Applicants have previously explained that re-litigating these issues during the examination for this Application is not considered necessary or appropriate, as the Recommendation to be made by the relevant Examining Authority in the Hornsea Project 4 DCO will ultimately be provided to the same decision maker (the Secretary of State for Business Energy and Industrial Strategy, 'SoS') prior to that decision maker receiving a Recommendation in respect of this Application.</p> <p>The Applicants have provided additional submissions in this respect at this Deadline in response to Orsted's Deadline 1 submission (Document Ref 9.10).</p>
GEN.1.3	Applicants	<p>In paragraph 2.2.6 of the Planning Statement [APP-070] and other parts of the application documentation it states that Net Zero North Sea Storage will be responsible for the offshore elements of Net Zero Teesside (NZT) comprising the offshore section of the CO₂ export pipeline (to a suitable offshore geological CO₂ storage site under the North Sea, CO₂ injection wells and associated infrastructure. Paragraph 1.1.4 of the Carbon Capture Readiness (CCR) Assessment indicates that consent for the routing, construction and operation of the offshore pipeline is being progressed by Northern Endurance Partnership. Please clarify the responsibilities for obtaining the different consents.</p>	<p>The structure and relationship of Net Zero Teesside Power Limited and Net Zero North Sea Storage Limited is described in the Funding Statement [APP-009]. As set out in the Funding Statement, the Applicants are currently 100% bp owned companies. bp is leading the development of the Proposed Development as operator on behalf of the Project Partners pursuant to an agreement known as the Cooperation Agreement (COOPA). bp will continue to lead as operator by providing services to the Applicants for the development and operation of the Proposed Development.</p> <p>The offshore aspects of consenting will be undertaken by bp as operator on behalf of the relevant Project Partners and Net Zero North Sea Storage Limited. As part of the offshore consenting process bp will apply to the North Sea Transition Authority (or NSTA) for the store permit under CS001. bp is also the company that is progressing the offshore environmental and social impact assessment and subsequent environmental statement that will be submitted to the Offshore Petroleum Regulator for Environment and Decommissioning (or OPRED) under the Offshore Oil and Gas Exploration, Production, Unloading and Storage (Environmental Impact Assessment) Regulations 2020.</p>
GEN.1.4	National Grid Ventures	<p>National Grid Ventures [RR-007] refers to the Humber Low Carbon Pipelines project. National Grid Ventures is asked to provide an update on the Humber Low Carbon Pipelines project and include the anticipated timescale for submission of the DCO application.</p>	N/A
GEN.1.5	Applicants	<p>National Grid Carbon is a National Grid Ventures company [RR-007]. National Grid Carbon is also part of NZT Storage (Funding Statement section 2.)</p>	<p>National Grid Ventures (NGV) is a separate limited company, part of National Grid plc, and which operates outside of National Grid's regulated businesses in the UK and US. NGV develops, operates and invests in energy projects,</p>

ExQ1	Question to:	Question:	Response
	National Grid Ventures	The Applicants and National Grid Ventures are asked to explain the relationship between the two entities. Additionally, explain the relationship with National Grid Electricity Transmission PLC [RR-012] and National Grid Gas PLC [RR-013].	<p>technologies and partnerships to accelerate the development of our clean energy future. NGV has no direct connection to NGET or NGG, and is an unregulated part of National Grid.</p> <p>The Applicants are independent companies which have no direct relationship with National Grid Electricity Transmission PLC [RR-012] or National Grid Gas PLC [RR-013]. The Applicants have established and executed, or are in the process of establishing, all the necessary contracts for connection and/or supplies for gas and power with the national gas and electricity infrastructure systems (as detailed in the Gas Connection Statement [AS-192] and the Electricity Grid Connection Statement [APP-072] respectively).</p> <p>National Grid Electricity Transmission PLC (NGET) [RR-012] owns and maintains the high-voltage electricity transmission network in England and Wales. NGET receives electricity generated from projects such as CCGT power stations (such as forms part of the Proposed Development), windfarms and other power stations and transports it through its national network, which comprises more than 4300 miles of overhead line, over 1700 miles of underground cable and approximately 330 substations. The contracts entered into by NGET with respect to major projects (including the Proposed Development) follow the Connection and Use of System Code (CUSC) which is the established framework for connecting to and using the National Electricity Transmission System (NETS), which can only be changed subject to CUSC modifications panel or OFGEM review and approval. NGET is an established monopoly and is therefore regulated by the energy regulator, Ofgem.</p> <p>National Grid Gas PLC (NGG) [RR-013]: NGG's licence was established under the Gas Act 1986 which required NGG to develop, maintain, and operate economic and efficient gas supply networks in Great Britain (GB). The UK gas transmission business operates under price controls, covering NGG's role as transmission owner (TO) and system operator (SO). NGG's regulatory framework is called RIIO (revenue = incentives + innovation + outputs). As the owner of the national gas transmission network in Great Britain, NGG is a natural monopoly and is therefore also regulated by the energy regulator, Ofgem. Ofgem simulates the effects of competition by setting price controls – a ceiling on the amount NGG can earn from charges to use their network.</p>
GEN.1.6	Applicants	No maximum height for the heat recovery steam generator (HRSG) stack is specified in Environmental Statement (ES) Chapter 4, Table 4-1. An anticipated maximum height of 110m Above Ordnance Datum (AOD) is annotated on the Power Capture and Compression (PCC) Site Elevation Plan but this is not identified as a document to be certified in Schedule 14 of the dDCO. No parameters are stated in ES Chapter 14. The EA [RR-024] stated that the Applicant should provide a worst-case prediction of the height, width and location of the HRSG stack with regard to the air quality assessment. Minimum	<p>A maximum height of 85 m (<98 mAOD) and an inner diameter of 6.5 m is provided for the HRSG stack in Environmental Statement (ES) Chapter 4 [AS-019], Table 4-1. A stack height of 85 m was modelled to compare with the predicted impacts of emissions from the absorber stack. This is based on the maximum height of the HRSG building.</p> <p>No minimum stack height is secured by Schedule 15 (design parameters) in the dDCO, for the reason that if the project is able to utilise a lower absorber tower</p>

ExQ1	Question to:	Question:	Response
		<p>and maximum parameters of the stack for the auxiliary boiler (if required) have not been stated and the stack is not annotated on the PCC Site Elevation Plan. No maximum width is stated for either stack. Their final locations are not fixed but are shown indicatively on ES Figure 4-1 and siting would be restricted to development areas shown for Work No. 1A and 1C on the Works' Plans.</p> <p>Can the Applicants confirm the minimum and maximum parameters (height and width) that have been used in the ES assessments for the heat recovery steam generator stack and auxiliary boiler stack?</p>	<p>height, a lower stack height could also be used. The reason for this is that the size and shape of the absorber tower is such that this leads to some downwash effects that affect the dispersion of the plume from the stack on top of the absorber tower. This has been used to ensure an appropriate stack height is set such that emissions are adequately dispersed so as to not give rise to significant effects.</p> <p>At this stage worst case emission levels have been assessed so as to present a conservative assessment. Following detailed design of the plant it may be possible to reduce the height, width and/ or length of the absorber tower. Depending on the licensor selection it may also be possible to reduce the emission concentrations of pollutants from the absorber. Therefore the final design of the plant could allow a lower stack height to be used whilst still achieving the same – or lower - effects on air quality to those presented in the ES. Setting a minimum stack height at this stage could therefore mean that the height thus specified ends up being higher than necessary to achieve the same environmental outcomes. Therefore the use of a minimum stack height is not considered appropriate. The Applicants will in any case be required to satisfy the Environment Agency in order to obtain the required environmental permit.</p> <p>Regarding the auxiliary boiler, it is now considered likely that the auxiliary boiler will be an electrically powered stand-by reboiler, which would not have a stack. However if a gas fired boiler were required it would be around 3.5MW in output capacity and would operate around 100 hours per year and typically for only 20-30 minutes at a time. The final selection of stack height has not yet been made (if required) but based on the capacity and limited hours of operation, air quality effects beyond the site boundary are expected to be not significant.</p>
GEN.1.7	Applicants	<p>Can the Applicants confirm what the maximum width (inner diameter) of the main (absorber) stack is, as Schedule 15 of the dDCO states it is 6.5m but ES Chapter 8 describes the assessment using a parameter of 6.6m? If it is the former, does this have implications for the assessment of effects?</p> <p>Can the Applicants confirm the minimum width parameter for the main (absorber) stack that has been used in assessment in the ES and whether any sensitivity testing has been undertaken to understand the likely effects arising from the range of diameters?</p>	<p>Dispersion modelling of the main absorber stack was carried out with an internal diameter of 6.6m. With the modelled airflow the efflux velocity of the stack with a 6.6m diameter is 24.8m/s. An absorber stack with an internal diameter of 6.5m would increase the efflux velocity to 25.6m/s. This would have the effect of further increasing the momentum of the plume on exit from the stack and therefore further improving dispersion from that assessed in the ES. The ES assessment therefore remains conservative since it was based on a 6.6m diameter with corresponding lower efflux velocity. Accordingly, Schedule 15 of the Draft DCO has been updated at Deadline 2 to state up to 6.6 m maximum width (inner diameter) of the main (absorber) stack.</p> <p>It is confirmed that sensitivity modelling was carried out during the development of the Environmental Statement – this indicated that the efflux velocity had very little impact on the dispersion from the absorber stack, and that the height and temperature of the emissions were of greater importance in providing adequate dispersion.</p>

ExQ1	Question to:	Question:	Response
GEN.1.8	Applicants	<p>At various places within the application documents (including paragraph 5.2.3 of the ES [APP-087]) it is stated that the offshore works below Mean Low Water Springs (MLWS) are being progressed under separate consent.</p> <p>Should a new discharge pipeline need to be installed will the works extend below MLWS? If so, where has this been assessed in the ES?</p>	<p>The Applicants confirm that the replacement outfall works would extend below MLWS and have included powers to carry out licensable marine activities to construct, operate and maintain the replacement outfall (Work No. 5B) within the deemed marine licences in Schedules 10 and 11 of the Draft DCO. The corridor for the replacement outfall (Work No. 5B) extending below MLWS is included within the Order limits as shown on the Work Plans [AS-148] Sheets 10 and 11 and by reference to the grid coordinates in Table 9 of Schedule 10 and Table 11 of Schedule 11 of the Draft DCO.</p> <p>The construction of a replacement outfall pipeline is described in 5.3.36-37 of the ES Chapter 5 [APP-087] and has been assessed in the relevant ES chapters, notably in ES Chapter 11 Noise and Vibration [APP-093], ES Chapter 12 Terrestrial Ecology (Table 12-4) [APP-094], ES Chapter 14 Marine Ecology (para. 4.6.13) [APP-096] and ES Chapter 15 Ornithology (paragraph 15.5.7) [APP-097]. Noise and disturbance impacts during construction of the outfall are also assessed in the Habitats Regulations Assessment Report (Section 6.1) [AS-194].</p>
GEN.1.9	Applicants	<p>Chapter 5 of the ES [APP-087] provides an estimate of spoil from drilling, boring and tunnelling activities (paragraph 5.3.80) and refers to the spoil generated from enabling works and construction (paragraph 5.3.73), suggesting that the bulk of spoil generated will be used beneficially within the site.</p> <p>The Applicants are asked:</p> <ul style="list-style-type: none"> i) To provide an estimate of the spoil generated during preparation and construction of the Proposed Development, broken down by the PCC Site and the wide Order land. ii) What volume of material required to build the PCC platform? Is it anticipated that material would need to be imported for this purpose? iii) How would any remaining spoil be used? iv) How much material is it anticipated will need to be removed from the site? What are the implications of this for the assessment of traffic and transport, and local capacity for treatment or re-use? v) Where have the visual effects of stockpiles been accounted for? vi) Given the industrial history of the site and the potential for contamination of the underlying ground, has the potential suitability of the spoil for re-use within the site been taken into consideration? 	<ul style="list-style-type: none"> i) Spoil generation from drilling, boring and tunnelling activities has been estimated in Chapter 5 Construction Programme and Management [APP-087]. This was based on the scheme at the point of DCO application submission. Following the change request submitted into examination and accepted by the ExA, the waste arisings will be lower than those presented in the waste assessment of the submitted ES since the largest waste volume generated and assessed in the ES was from the construction of a micro-bored tunnel from North Tees to the Teesworks site and that option has now been removed from the Proposed Development. ii) South Tees Development Corporation (STDC) indicate that the PCC platform construction will be neutral in terms of cut and fill and no additional import of material would be required. iii) The spoil arising from trenchless crossings would be beneficially used on site where possible – for landscaping purposes – or, depending on its geotechnical properties risk based soil re-use criteria would be made available to STDC or other developers in the area for beneficial use on other development sites, in accordance with General Assessment Criteria suitability for commercial / end use and if required the waste hierarchy. Failing that, the spoil would be disposed of to a suitably permitted landfill or used in waste recovery operations. iv) It is anticipated that minimal volumes will require disposal from site. The ES assumed that a maximum of 48,500 m³ of spoil would need to be disposed of from the site. Point i) above shows that the actual waste arisings are anticipated to be lower than those presented in the waste assessment of the submitted ES now that the construction of a new micro-bored tunnel across the Tees is not part of the Proposed

ExQ1	Question to:	Question:	Response
			<p>Development. The worst-case volumes of materials requiring off-site transport have therefore been assessed in the assessment of traffic and transport effects.</p> <p>v) No formal assessment of landscape and visual effects has been undertaken because any stockpiles would be temporary and because they are not considered to have any effect on the assessment of effects associated with the Proposed Development due to their height – if spoil cannot beneficially be used on site it would progressively be removed from site at a rate that is likely to be comparable to the rate of generation from the construction activities.</p> <p>vi) Yes. Any waste material generated would be appropriately tested prior to determining its suitability for reuse or disposal. The material to be generated is predominantly from the deeper excavations and therefore expected to not be contaminated.</p>
GEN.1.10	Applicants	<p>Paragraph 6.3.5 of the Design and Access Statement (DAS) [APP-070] explains that early in the design process a five Combined Cycle Gas Turbine (CCGT) Train concept was developed for the Proposed Development and that following further discussions with the Department for Business Energy and Industrial Strategy (BEIS), the decision was taken to proceed with a three CCGT Train concept with a greater emphasis on industrial decarbonisation through the inclusion of a CO₂ gathering network.</p> <p>The Applicants are asked to further explain the reasoning for adopting a three CCGT Train concept rather than a five CCGT Train concept. Would it be possible to develop a five CCGT Train concept in the future?</p>	<p>The initial five (5) train CCGT concept referenced in paragraph 6.3.5 of the Design and Access Statement (DAS) [APP-071] was optimised on a cost per tonne metric, which favours a larger development and power output. When the Applicants took over operatorship of the project in 2019, there were discussions with the Department for Business Energy and Industrial Strategy (BEIS) to recognise the First-Of-A-Kind (FOAK) nature of the development. This identified the importance of an oversized Transportation and Storage system to enable industrial decarbonisation, starting with one (1) CCGT train but retaining potential future expansion to three (3) trains.</p> <p>As referenced in paragraph 6.3.6 of the Design and Access Statement (DAS) [APP-071], <i>“Following the Stage 2 consultation the decision was taken to reduce the number of CCGT Trains further from three to one and also to reduce the number of HP compressors, while still providing the scope for future expansion. This decision was linked to cost optimisation to enable the deployment of a single CCGT Train (including carbon capture plant) and an industrial CO₂ gathering network to demonstrate the technology at scale prior to making a decision on future expansion.</i></p> <p>The one (1) train concept with potential expansion to three (3) trains is on the basis that:</p> <ul style="list-style-type: none"> • The Endurance reservoir would require staged ramp up (dynamic appraisal) to ensure confidence in the storage capacity. A one (1) train concept would enable other industrial decarbonisation projects to proceed, whilst demonstrating the Gas with CCS technology at scale. • The Teesside pipeline concept is currently oversized, with pre-investment enabling up to 10mtpa from Teesside. This may come from future decarbonised CCGTs or other CO₂ sources. • As a First Of A Kind project, initial Government funding will focus on demonstrating that a dispatchable gas-fired power station with CCS can

ExQ1	Question to:	Question:	Response
			<p>be successfully developed and operated on a single unit, since the units are modular and repeatable.</p> <p>Whilst not planned at this stage, some key pre-work has been completed, to ensure there remains the potential for future expansion up to three (3) trains:</p> <ul style="list-style-type: none"> • There is plentiful gas supply with the CATS pipeline (1,700MMcf/d) and Teesside Gas Processing Plant (675MMcf/d) located close-by. • NZT could provide additional services such as provision of spinning reserve, frequency response, voltage support and black-start capability to National Grid, should system requirements mandate over time (as renewables generation expands and thermal generation declines). Local industries could potentially secure direct and/or standby power from future NZT units, through local power purchase agreements alongside or via STDC's existing electrical system. <p>Expansion to five (5) trains has not been considered at this stage.</p>
GEN.1.11	Applicants South Tees Development Corporation (STDC)	<p>The PCC Site and proposed laydown area currently contains residual large-scale plant and buildings associated with the former Redcar steelworks. Paragraph 5.2.6 of the ES [APP-087] identifies some above and below ground structures and redundant services associated with the former steelworks and earlier development on the site which are envisaged to be removed before the construction of the Proposed Development can commence. Paragraph 12.6.20 of the ES indicates that demolition and site clearance works would be subject to a separate planning application.</p> <p>Site clearance and remediation forms part of the authorised development set out in Schedule 1 of the dDCO. However, paragraph 4.2.7 of the ES [AS-019] states that existing infrastructure associated with the former Redcar Steelworks is expected to be removed by the landowner as part of the site preparation and remediation prior to the commencement of the Proposed Development.</p> <ol style="list-style-type: none"> i) Have these works been included in the ES baseline? ii) When would demolition of the plant and structures take place? iii) What is the extent of the clearance and remediation? iv) Under what powers would they be removed? v) Provide an aerial view of structures currently in place / due to be demolished overlaid with the Order Limits and layout plan of the PCC Site. vi) The Applicants and STDC are asked to clarify proposals for, including timing of, site preparation. vii) The Applicants and STDC are asked to comment on progress with regard to the handover of the site following clearance. <p>Parties may wish to respond to this question together with question HE.1.5 in relation to heritage assets.</p>	<ol style="list-style-type: none"> i) Site clearance (including demolition), remediation, addressing any voids and removal of minor infrastructure and services have been assessed in the ES. ii) The demolition of the plant and structures is executed by STDC and their demolition contractor(s). Demolition activities of plant and structures within the Order Limits was started under local planning consent by STDC in 3Q 2021, and is anticipated to be completed in 1Q 2023. The demolition activity is progressing as part of the demolition works of the wider site development. iii) It is being agreed between the Applicants and STDC that STDC would be responsible for the clearance and remediation of the PCC site (Work Nos. 1 & 7) and to some extent the Temporary Construction and Laydown Area (Work No. 9A). If a voluntary agreement is not reached with STDC then the extent of clearance and remediation undertaken by the Applicants would be the same. iv) STDC have commenced demolition of their plant and structures following notification to RCBC set out in Planning Application R/2021/0608/PND. STDC have submitted a planning application (R/2021/1048/FFM) to RCBC for the clearance and remediation of the site, to the extent described in GEN.1.11 iii. v) The requested drawing is included as Appendix GEN.1.11. vi) Subject to reaching a voluntary agreement with STDC and appropriate consent the clearance and remediation of the site by STDC is expected to commence in 2022 and complete in 2023. Following completion of remediation and project commencement the Applicants would exercise the site lease option agreement and commence site preparation. Site preparation will be the responsibility of the Applicants

ExQ1	Question to:	Question:	Response
			<p>and their nominated contractor(s). This is anticipated to be from Q3 2023.</p> <p>vii) The Applicants and STDC have entered into discussions regards handover of the site to the Applicants post-clearance and remediation. The Applicants will take possession of the cleared and remediated land once all aspects required under the specification have been demonstrated to have been achieved by STDC, through draw down of the lease under the option agreement which is being negotiated between the parties.</p>
GEN.1.12	Applicants STDC	<p>There are references to the site investigation and remediation being undertaken by the landowner in Chapter 10 (for example, in Tables 10-5 and Table 10-15 of the ES) [APP 092]. However, in its Relevant Representation [RR-035], STDC states that there is no agreement between the parties to carry out such works.</p> <p>i) Can both parties confirm the status of these discussions? ii) Can both parties confirm who would be responsible for liaising with the regulators and obtaining any necessary permits and licences? iii) Can both parties confirm who would be responsible for the risk assessment and any long term monitoring of the efficacy of any remedial works?</p>	<p>i) The Applicants and STDC have had extensive discussions in relation to the relevant works and the terms of a voluntary agreement, which includes remediation of the land required by the Applicants; the status of these discussions can be found in the updated Compulsory Acquisition Schedule (Document Ref 9.5) submitted at Deadline 2.</p> <p>ii) STDC are undertaking these enabling works and have applied for planning permission to undertake the demolition, site clearance and remediation of the PCC Site as set out in Planning Application R/2021/1048/FFM for the site remediation works.</p> <p>iii) The risk assessment required to support the site enabling works and remediation of the PCC site has been undertaken by the STDC as per the remediation strategy submitted in support of the Planning Application R/2021/1048/FFM. The requirement for the monitoring to assess the efficiency of the remediation works is subject to the conditions that might be imposed on the anticipated planning permission to be granted to STDC. The Applicants will undertake post remediation groundwater monitoring survey to establish a baseline condition. In addition, the Applicants will implement a long-term groundwater monitoring programme for the site to demonstrate betterment of groundwater quality arising from the remediation works.</p> <p>Please also refer to the Applicants' response to GEN.1.11 above.</p>
GEN.1.13	Applicants	<p>Box 5.1 within Chapter 5 of the ES [APP-087] explains that Micro-Bored Tunnels (MBT) would be used for the Tees crossing for the gas connection and the outfall while Horizontal Directional Drilling (HDD) would be used for the CO₂ gathering network crossing of the Tees.</p> <p>Why are different techniques proposed for the crossing of the Tees?</p>	<p>The option of using a micro-bored tunnel was included to allow both the Underground High Pressure Gas Pipeline (Work No. 2 "Option 1A & Option 1B") and the CO₂ Gathering Network (Work No. 6 "Option 1") to pass beneath the Tees in a shared tunnel directly from North Tees to the PCC site. With the removal of the option to install a new Underground High Pressure Gas Pipeline, and the adoption of the gas connection to the existing SembCorp pipeline (Work No. 2, "Option 2"), pursuant to the procedural decision dated 6th May 2022, a micro-bored tunnel is no longer required as it is both more cost-effective and beneficial from an environmental perspective for the construction of the CO₂ Gathering Network pipeline on its own, to simply cross the Tees using an HDD drilled bore from North Tees to the Dabholm Gut.</p>

ExQ1	Question to:	Question:	Response
			<p>Notwithstanding the above, the Applicants preferred option for the CO2 Gathering Network crossing the River Tees is the construction of the pipeline within the existing Sembcorp No. 2 Tunnel from Navigator Terminals to the northern bank of the mouth of Dabholm Gut (Work No. 6 "Option 3"). If this option is selected, the HDD option will not be constructed.</p>
GEN.1.14	Applicants	<p>Paragraph 7.3.14 of the DAS [APP-070] states that typical construction working widths for the pipelines and cables will vary from 5m to 35m dependent on the constraints present. Similarly, paragraph 5.3.24 of the ES [APP-087] states that the working width required for open cut pipeline construction is generally around 35 m which is the typical working width required to facilitate ease of construction but can be narrowed in places where other constraints exist.</p> <p>The Applicants are asked to provide further explanation for the variation from 5m to 35m and why 35m is seen as a generally appropriate width.</p>	<p>The 35m width of working corridor for open-cut pipeline construction is generally sufficient to allow efficient excavation of an individual pipeline, stockpiling of excavated soil and storage, handling and stringing of the individual sections of pipe whilst allowing sufficient working area for safe movement of construction staff and equipment. It also reduces the number of access points to the pipeline construction corridor as it allows for the safe movement of installation equipment along the route. A narrower corridor would require additional access points. The working area could be narrower (down to 5 m in width) where pipelines are to be installed on existing pipe racking, or where specialist construction methods are required to recognise specific – typically physical – constraints, but such an approach can only be applied in sections since working areas are still needed to stockpile materials and lay and string the pipes. Use of up to 35m working widths for construction of underground pipelines has been an approach adopted on many other DCOs.</p>
GEN.1.15	Applicants	<p>Paragraph 5.8.1 of the Framework Construction Environmental Management Plan (CEMP) [APP-246] indicates that in addition to the Final CEMP, a suite of complementary environmental plans and procedures for the construction phase will be developed in accordance with draft DCO requirements, including a Site Waste Management Plan and a Waste Management Plan.'</p> <p>Should the list of complementary plans and procedures be specified within the Framework CEMP? If not, why not?</p>	<p>The Applicants have committed to updating Requirement 24 in the draft DCO so that the construction site waste management plan must be in accordance with Framework Site Waste Management Plan included as Annex A to the Framework CEMP. Requirement 16(2) of the draft DCO already lists various supplementary plans that need to be incorporated into the Final CEMP. A waste management plan must be approved by the RPA prior to the commencement of development (except permitted preliminary works). The Final CEMP will be supported by a Water Management Plan (WMP) that would be included as a technical appendix. The WMP will provide greater detail regarding the control measures to be implemented to protect the water environment from potential adverse effects during construction.</p> <p>Based on the revised wording for the requirement 24, the list of documents outlined in requirement 16 that must be included within the Final CEMP, and the framework CEMP itself, it is considered that all the complementary environmental plans have been identified to provide confidence that the included design and impact avoidance measures can be satisfactorily discharged at the required stage and these are secured through the Draft DCO.</p>

ExQ1	Question to:	Question:	Response
GEN.1.16	Interested Parties (IPs)	<p>Section 5.10 of the Framework CEMP [APP-246] describes how various tasks will be undertaken by the Environmental Site Officer and Environmental Manager / Project Manager.</p> <p>Are the local authorities and other regulatory bodies such as the EA content that the roles of different personnel with regard to checking and corrective action are appropriately defined?</p>	N/A
GEN.1.17	Applicants	<p>Some potential environmental impacts would rely on a series of management plans such as those referred to in R23 to 28 and R30. These would be approved, post-consent, by the RPA.</p> <p>The Applicants are asked to provide framework plans for the following documents which are referenced in requirements as well as any other management plans on which they will be reliant.</p> <ul style="list-style-type: none"> i) Site security written scheme; ii) Fire prevention method statement; iii) Piling and penetrative foundation design method statement; and iv) Employment, skills and training plan. <p>Alternatively, the Applicants are asked to explain where controls are provided elsewhere within the dDCO or why they are not required.</p>	<p>The Applicants do not consider that it is necessary to prepare framework plans for the documents listed, for the reasons set out below.</p> <p>With respect to i) the site security written scheme; ii) the fire prevention method statement, and iv) employment skills and training plan, none of these documents are relied upon to mitigate likely significant adverse environmental effects of the Proposed Development.</p> <p>In the absence of relying on these schemes to mitigate likely significant environmental effects, no framework plan has been prepared as part of the ES, Volume III (Applicants) as it has not been necessary to set out measures now for the purposes of assessing residual environmental effects and that must in turn be incorporated in the final scheme (to be submitted to the relevant planning authority for approval under Schedule 2 of the DCO). The Applicants consider that each of these schemes are capable of being considered by the relevant planning authority at the time of discharging the Requirement. If the relevant planning authority is not satisfied with the measures contained therein, it has discretion to refuse the scheme; albeit the Applicant intends to actively engage with the relevant authorities in preparing relevant plans so this eventuality (refusal) is not considered likely.</p> <p>In accordance with Requirement 9 (Site security) no part of Work Nos. 1 or 7 could be brought into use without the site security written scheme being approved by the relevant planning authority. In accordance with Requirement 10 (Fire prevention) the undertaker would not be permitted to commence Work No. 1 or Work No. 7 (except for permitted preliminary works) until the Fire prevention method statement had been approved by the relevant planning authority. Similarly, in accordance with Requirement 30 (Employment, skills and training plan) the undertaker would not be permitted to commence any part of the authorised development (except the permitted preliminary works) until the Employment, skills and training plan had been approved by the relevant planning authority.</p> <p>With respect to iii) piling and penetrative foundation design method statement, the proposed measures are set out in Section 10.8 of Chapter 10 (Geology, Hydrogeology and Contaminated Land) of the ES [APP-092]. The Applicants have amended Requirement 23 (Piling and penetrative foundation design) to require that the method statement must incorporate those measures. This has been included in the Draft DCO submitted at Deadline 2. The wording of</p>

ExQ1	Question to:	Question:	Response
			<p>Requirement 23 specifies already that the method statement must also be approved by the relevant planning authority subject to consultation with the Environment Agency. If the relevant planning authority, having consulted the EA, is not satisfied that the measures contained therein are sufficient to mitigate the environmental effects of piling and penetrative foundation works, it has discretion to refuse the scheme. In accordance with Requirement 23, the undertaker would not be permitted to commence Work No. 1 or Work No. 7 (except for permitted preliminary works) until the method statement had been approved by the relevant planning authority.</p>
GEN.1.18	Applicants	<p>Paragraph 5.3.118 of the ES [APP-087] states that construction works will be undertaken in accordance with the environmental commitments identified in Chapters 8 to 24 of the ES and having regard to relevant legislation as set out in the Commitments Register (Appendix 25A) [AS-033].</p> <p>How would the Commitments Register be secured through the dDCO?</p>	<p>The Applicants do not propose to specifically secure the commitments register through the Draft DCO. The commitments register summarises the mitigation and control measures that are to be employed. Some of these are primary mitigation (i.e. identified through the iterative EIA process and incorporated into the design and construction planning of the Proposed Development) and some are tertiary mitigation measures (i.e. legal requirements or standard practices that would be implemented as part of the Proposed Development). Neither of these therefore need securing through the Draft DCO as this would duplicate controls over the Proposed Development that are already secured.</p> <p>The Draft DCO will secure secondary mitigation and control measures needed to minimise or control likely significant adverse effects. The mechanism for that is through Schedule 2 (Requirements) where a range of mitigation schemes must be submitted to and approved by the relevant planning authority before the stage of development commences where corresponding environmental effects may occur. Many of the mitigation schemes (e.g. Construction Environmental Management Plan and construction and operational noise assessments) must be in accordance with the principles of the relevant ES assessment and the framework mitigation schemes that form part of the ES, Volume III (Appendices). As the relevant planning authority is responsible for the discharge of the Requirements, it has the authority to refuse the mitigation schemes until it is satisfied that the proposals are in accordance with the principles of the ES chapters and the framework mitigation schemes.</p> <p>In addition, it is noted that the Commitments Register is part of the Environmental Statement and which is a certified document (Schedule 14 to the Draft DCO [AS-135]). Requirement 34(1) requires that details submitted pursuant to requirements must reflect the principles of certified documents.</p>
GEN.1.19	Applicants	<p>Document 5.10 'Other Consents and Licences' [APP-077] refers to a number of other consents, licences and permits that would be required for the Proposed Development.</p> <p>The Applicants are asked to:</p>	<p>i) The Applicants note the Examining Authority's requirement and will be providing the first update of the Other Consents and Licences document at Deadline 2 with subsequent updates to follow during Examination where required. The ExA's attention is also drawn to the Applicants' written summary of oral submissions for ISH2 in which the</p>

ExQ1	Question to:	Question:	Response
		i) Provide updates on progress with obtaining these consents, licences and permits throughout the Examination; and ii) Include a section providing an update on these consents, licences and permits in any emerging Statements of Common Ground (SoCG) that are being drafted with the relevant consenting authorities.	pertinent updates to the Other Consents and Licences document at this stage are reported. ii) Future iterations of the SoCGs with consenting authorities submitted will also include updates of the status of the relevant consents and licences applicable to those authorities.
GEN.1.20	Applicants	<p>The Other Consents and Licences [APP-077] document indicates that an application for a bespoke environmental permit for operation of the Proposed Development was in progress and scheduled to be submitted to the Environment Agency (EA) in mid-2021 and that discussions were on-going with the Health and Safety Executive about whether a control of major accidents and hazards (COMAH) licence would be required.</p> <p>Can the Applicants provide an update on the progress of these matters and any concerns identified by the relevant bodies?</p>	<p>The environmental permit application was submitted to the EA in October 2021 and discussions have been ongoing since then. The application is being evaluated for being Duly Made and some clarifications have been requested of the Applicants by the EA relating to emissions to water and use of auxiliary boilers. A response to these questions has been submitted to the EA in April 2022 and that information is being considered by the assigned permitting officer.</p> <p>The EA has requested a separate permit application for the High Pressure Compressor (a directly associated activity) as the HP Compressor will be operated by a different entity (Net Zero North Sea Storage Limited) to the proposed power station installation. This application was submitted to the Environment Agency at the end of May 2022.</p> <p>A COMAH licence will be applied for once the detailed design of the PCC has been completed.</p> <p>An updated Other Consents and Licences (Document Ref 5.10) document has been submitted at Deadline 2.</p>
GEN.1.21	Applicants All IPs	<p>Paragraphs 4.2.11-4.2.20 of the Planning Statement [APP-070] discuss whether the DCO Application should be determined under s104 of the Planning Act 2008 (PA2008), s105 of PA2008 or both. It concludes at paragraph 4.2.20 that the Proposed Development should be determined under s104 for a number of reasons.</p> <p>Reference is made to the Secretary of State's (SoS's) decision in respect of the Wheelabrator Kemsley K3 Generating Station ('WK3') and Wheelabrator Kemsley North Waste-to-Energy Facility ('WKN') Order (PINS Ref. EN010083). The case was subsequently considered by the High Court under the reference: EFW Group Ltd v Secretary of State for Business, Energy and Industrial Strategy [2021] EWHC 2697 (Admin).</p> <p>i) The Applicants are asked to comment on the High Court judgment and whether or not it changes their position in respect of the current application.</p> <p>ii) With reference to any other documents which may have relevance to this matter since submission of the application (including consultation drafts of the National Policy Statements (NPSs), do the Applicants consider that their comments in section 4.2 continue to apply to the Specified Elements of the Proposed Development, notably the CO₂</p>	<p>The Applicants submitted an updated Planning Statement [REP1-003] at Deadline 1, which at Section 4.2 (paragraphs 4.2.11 to 4.2.15), considers the EFW Group Ltd case. A copy of the High Court judgement is provided at Appendix 2 of the updated Planning Statement.</p> <p>NPS EN-1 and EN-2 have effect in relation to the Low Carbon Electricity Generating Station (Work No. 1), which falls within the definition and thresholds under Sections 14 and 15 of the PA 2008, together with its associated development, and is within the scope of the NPSs. The application for development consent for those elements must therefore be assessed and determined pursuant to Section 104, and benefit from the presumption in favour of approval set out in the NPSs.</p> <p>With regard to the Specified Elements of the Proposed Development listed in the Section 35 Direction, notably the CO₂ gathering network (Work No. 6), EN-1 could only 'have effect' in relation to those elements of the application for development consent for the purposes of Section 104 of the PA 2008 insofar as the legal effect of the Section 35 Direction is to bring them within the scope of the NPSs. In the EFW Group Limited case, the High Court decided that the</p>

ExQ1	Question to:	Question:	Response
		<p>gathering network (Work no. 6), or is any there any change the ExA needs to be aware of? IPs are also invited to comment.</p>	<p>Section 35 direction in question could not have the effect of bringing the development within the scope of EN-1, which has been drafted specifically to apply only to those projects that are within the definition of an NSIP (see paragraph 60 of the Judgment). The relevant Direction in that case did not include an equivalent provision in relation to the NPS to that which has been made here, and therefore the implications of such a provision are not considered in the Judgment.</p> <p>If following the EFW Group Limited case the SoS decides that the Section 35 Direction does not have that intended legal effect, those parts of the Application will need to be determined pursuant to Section 105. Accordingly, the Applicants consider that it would be prudent for the ExA to consider what its recommendation would be on both bases (both Section 104 and Section 105 of the PA 2008), so as to enable the SoS to determine the Application with the benefit of that advice, whichever statutory route he ultimately determines to be appropriate.</p> <p>The Applicants do not consider that the procedural route by which a decision is reached should affect the outcome of the Application. Whether the Application is determined in accordance with the relevant NPSs or they are treated as important and relevant considerations will not have a material impact on the decision given the established need for and significant public interest benefits of the Proposed Development, the limited adverse impacts and the overall consistency with relevant policy.</p> <p>The Applicants would refer the ExA to the answers provided to Questions PPL 1.5 and PPL 1.6 in respect of the current NPSs and the draft revised NPSs.</p>
GEN.1.22	Applicants	<p>Paragraph 6.7.2 of the ES [APP-088] notes that aspects of design that have been fixed in the dDCO include:</p> <ul style="list-style-type: none"> i) The use of post combustion carbon capture technology; and ii) The inclusion of a high efficiency gas-fired generating station. <p>The Applicants are asked to confirm where the dDCO confirms that both of these elements would be secured.</p>	<p>The construction of a gas-fired generating station is specified in the Draft DCO under schedule 1: "Work No. 1A – a combined cycle gas turbine plant" and associated works plans and indicative layouts. No specific inclusion is made in relation to high efficiency however this would be controlled via a justification of the use of Best Available Techniques (BAT) in the environmental permit application.</p> <p>The use of post combustion carbon capture technology is specified in the DCO under schedule 1: "Work No. 1C – carbon capture plant", which subsequently describes the components of that plant in clauses (i) to (v), as well as in the associated works plans and indicative layouts. The description relates to post combustion carbon capture technology. As above, the environmental permit will secure matters relating to the use of carbon capture technology.</p>
GEN.1.23	Applicants	<p>The ES (paragraph 4.3.4 [APP-086] states that minimum carbon capture efficiency is 90%.</p>	<p>The minimum capture efficiency relates to plant operating within its regular operating conditions, but the rates may vary outside of these conditions, like</p>

ExQ1	Question to:	Question:	Response
		<p>How would the dDCO control this to ensure that the generating station is not operated at an efficiency of below 90%?</p>	<p>start up or in response to events outside of the Applicants' control. It is expected the permitted capture efficiency will be based on the Dispatchable Power Agreement (DPA) contract and rules to be agreed with Government on how this is to be delivered. The DPA will incentivise higher capture rates. In addition, the capture rate will be specified in the Environmental Permit required from the Environment Agency for the plant's operation and it must be demonstrated that the plant will operate in accordance with the use of Best Available Techniques (BAT), including the carbon capture rate.</p> <p>Reporting of carbon capture efficiency will be controlled through the Emissions Trading Scheme (ETS). There will therefore be separate regulatory controls applied through the different consenting regimes for the control of carbon capture rates and as such there is therefore no need to insert Requirements regarding capture efficiency into the draft DCO without overlapping with the obligations set through the Environmental Permit and DPA. The Applicants have updated Requirement 31 (at Deadline 2) to also require that an environmental permit is in place for the CCGT and its associated capture facility (parts of Work No. 1), prior to works, except preliminary works, on the Proposed Development commencing.</p>
GEN.1.24	Applicants	<p>Paragraph 4.1.4 of the CHP Assessment [APP-075] states that 'Due to the dispatchable nature of the facility, any heat available for a potential CHP design is likely to be intermittent, which would affect the viability of the CHP scheme.'</p> <p>Explain how the dispatchable nature of the facility would affect viability.</p>	<p>The Electricity Generating Station is expected to operate in dispatchable mode. It is therefore not expected to operate as a baseload plant but only when there is a gap in electricity demand that cannot be met by intermittent renewable sources such as wind or solar. It is therefore different to an energy from waste plant for example which typically operates all day every day apart from maintenance periods. As a result of this intermittent operation, any waste heat load supplied to a third party via a CHP system cannot be guaranteed as a regular and stable supply of heat.</p> <p>Any third-party user of such heat therefore would need to also install a back-up provision to supply the heat they require when the Electricity Generating Station is not operational. This adds cost and complexity to the delivery of CHP and therefore affects viability.</p>
GEN.1.25	Applicants	<p>The ES (paragraph 4.3.4) [APP-086] confirms that Low Carbon Electricity Generating Station can be run in unabated mode. In this situation CO₂ would be emitted to the atmosphere rather than captured.</p> <p>How often would this happen in normal, planned operation? How was this assessed? How does the dDCO control this to ensure that unabated operation does not happen more frequently or for longer periods than assessed?</p>	<p>The ES (paragraph 4.3.3) [APP-086] confirms that Low Carbon Electricity Generating Station can be run in unabated mode.</p> <p>The ability for the Low Carbon Electricity Generating Station to run unabated is an important element of design, particularly to support testing and maintenance.</p> <p>During the commissioning phase of the project, the Gas and Steam turbines require dynamic testing in isolation of the capture plant to confirm function as per design. This testing will also be used to underline some of the key long term maintenance requirements which are specific to this equipment. This will require</p>

ExQ1	Question to:	Question:	Response
			<p>a short period of unabated operation during testing prior to long term operations, and potentially for short periods during the facility's lifetime.</p> <p>There is no plan for the facility to 'normally' operate unabated. The Dispatchable Power Agreement (DPA) under development by the government has a direct linkage between project revenue and Achieved Capture Rate, and therefore there would be significant financial penalties to the plant if it were to operate with no capture plant (outside of limited exemptions such as national emergencies). For example, in the latest guidance provided by BEIS, prolonged operation of three (3) consecutive months with an Achieved Capture Rate below 70% carries provision for DPA termination.</p> <p>It is considered that the worst-case assessment for annual carbon emissions is for the plant running 'as designed' i.e. in abated mode, all year round with an average capture rate of 90% which is the reference case 1 that has been presented in Chapter 21: Climate Change. Unabated emissions (i.e. without carbon capture) would be substantially higher but would be for considerably shorter periods of operation and therefore would not constitute the worst-case.</p> <p>The Draft DCO does not control the frequency or duration of the Low Carbon Electricity Generating Station operating in unabated mode. The ExA is directed to the Applicants' response to GEN.1.23 that sets out how a minimum 90% carbon capture rate will be secured pursuant to the Environmental Permit. A Draft DCO requirement to the same effect would be unnecessary on that basis and risks conflicting with the operational controls under the Environmental Permit.</p>
GEN.1.26	Applicants	<p>According to paragraph 6.1.2 of the CCR Assessment [APP-074] initial power Carbon Capture and Storage (CCS) projects will be selected as part of the proposed CCUS Cluster Sequencing process from October 2021, with bilateral negotiations to agree a Dispatchable Power Agreement.</p> <p>The Applicants are asked to provide an update on this process.</p>	<p>An update on the CCUS Cluster Sequencing process was included in Item 4 of the Applicants' Written Summary of their Oral Submissions at Issue Specific Hearing 1 (ISH1) [REP1-035]. This was submitted by the Applicants at Deadline 1.</p>
GEN.1.27	Applicants	<p>Paragraph 5.10.6 of the Planning Statement [APP-070] references the Carbon Capture Usage and Storage (CCUS) Cluster Sequencing Consultation (February 2021). This sets out a potential two-phase process. The first phase would determine which cluster locations would be prioritised; the second phase would allocate CCUS programme support, including the CCS Infrastructure Fund and revenue support, to individual projects within the clusters. The Industrialisation Decarbonisation Strategy confirms that this approach will be refined in response to consultation feedback.</p> <p>Has there been there any progress on this matter since the application was submitted?</p>	<p>An update on the CCUS Cluster Sequencing process was included in Item 4 of the Applicants' Written Summary of their Oral Submissions at Issue Specific Hearing 1 (ISH1) [REP1-035]. This was submitted by the Applicants at Deadline 1.</p>
GEN.1.28	Applicants	<p>The Planning Statement [APP-070] (paragraph 6.2.81) states that "it is considered that there is future potential to provide Teesworks with available</p>	<p>Notwithstanding the answer to GEN.1.24, and the intention to optimise heat use within the CCGT and carbon capture plant in accordance with the use of BAT, it</p>

ExQ1	Question to:	Question:	Response
		<p>waste heat as the peak heat demand lies within the Combined Heat and Power (CHP) envelope of the Proposed Development and the Teesworks area is adjacent to the PCC Site".</p> <p>How would NZT provide Teesworks with available waste heat?</p>	<p>is recognised that there is the potential for some waste heat to be available from the Electricity Generating Station when it is operating. While this is unlikely to be viable to supply a single third party CHP user for the reasons outlined in that response, such waste heat may theoretically be able to supplement other heat provisions within the Teesworks site. For example the Teesworks site could potentially decide to develop a steam or heat main around the site into which the Proposed Development waste heat could be fed when it is available.</p> <p>At this stage any such proposals are unclear and no heat users have been identified in the Applicants' Combined Heat and Power Assessment (Doc 5.8) and therefore the Electricity Generating Station has been designed as CHP Ready, until there is greater certainty through the detailed design on the level of waste heat from the plant and until any opportunities to use such heat have been identified. This is considered to be in line with the requirements of NPS EN-1 and EN-2 and the CHP-R Guidance (Environment Agency 2013) and is considered to meet BAT requirements for the Proposed Development.</p> <p>Separately, the ExA is directed to Requirement 26 in Schedule 2 of the Draft DCO which sets out arrangements for the provision of space within space within the design of the authorised development for the later provision of heat pass-outs for off-site users of process or space heating and its later connection to such systems, should they be identified and commercially viable.</p>
GEN.1.29	Applicants	<p>Paragraph 6.2.99 of the Planning Statement [APP-070] notes that Table 21-13 compares the carbon intensity of the Proposed Development (both with and without carbon capture) with other forms of generation.</p> <p>Explain what is meant by carbon intensity and why it is important in this context.</p>	<p>The term carbon intensity is used when referring to the quantity of carbon dioxide (CO₂) emitted to generate a unit of electricity. In the case of the Proposed Development carbon intensity is reported as tonnes of carbon dioxide emitted for each Gigawatt hour of electricity produced.</p> <p>The Government's Net Zero Strategy¹ published in October 2021 made a commitment to decarbonise emissions from grid electricity by 2035, acknowledging that some allowance for residual emissions from CCUS plant would be required.</p> <p>Carbon intensity of the electricity grid is used as a key metric when determining progress on decarbonisation. Electricity using fossil fuels (gas, oil, coal) is generally more carbon intensive to generate than from low carbon energy,</p>

¹ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1033990/net-zero-strategy-beis.pdf

ExQ1	Question to:	Question:	Response
			<p>renewable energy or nuclear. Understanding the carbon intensity of electricity generation sources is therefore a necessary part of the decision-making process when selecting an approach for grid electricity generation that aligns with Government's Net Zero Strategy.</p> <p>With a carbon intensity of approximately 41.2 tCO₂ per GWh for the Proposed Development (net abated - with 90% carbon capture) and 20.7 tCO₂ per GWh Proposed Development (net abated - with 95% carbon capture), the carbon intensity of electricity generation from the Proposed Development compares favourably against the data presented in table 21-13 [APP-103] for gas fired electricity generation (371 tCO₂ per GWh) and the current grid average intensity (198 tCO₂ per GWh). Through projects like the Proposed Development and renewable energy projects, the UK grid average carbon intensity is progressively dropping and will continue to do so on a path to net zero.</p>
GEN.1.30	Applicants	<p>ES, paragraph 4.4.10 [APP-086] describes the chemicals likely to be used during operation of the Proposed Development, including amine based solvent, urea or ammonia solution, water treatment chemicals, nitrogen, lubricating oils, hydrogen for generator cooling and deoxygenation of product CO₂ stream and distillate fuel. It does not provide an estimation of the volume of chemicals that is likely to be required.</p> <p>The Applicants are asked to provide an estimate of the volumes of chemicals which are likely to be required.</p>	<p>The volume of chemicals required to operate the Electricity Generating Station will be developed during the FEED phase as the specific design components are selected and evaluated.</p> <p>In the absence of detailed design data, an approximation has been developed below of the volume and usage of each chemical requested:</p> <ul style="list-style-type: none"> • <i>Amine based solvent</i>: This is expected to have a first fill volume of approximately 2500m³. The solvent will be reclaimed during use, with replacements at a rate to be defined during FEED. • <i>Urea or ammonia solution</i>: It is expected that this will be an Ammonium Hydroxide solution used to remove NO_x from the CCGT flue gas using Selective Catalytic Reduction. The usage is expected to be between 5 to 20m³ per day (of dilute solution) but this shall be confirmed during FEED. • <i>Water treatment chemicals</i>: Likely to include (but not limited to) Sodium Hydroxide solution (approximately 30 m³ per year) and Sulphuric acid solution (approximately 10m³ per year). This shall be confirmed during FEED. • <i>Nitrogen</i>: Minimal usage for vessel blanketing and compressor seals. The quantities shall be confirmed during FEED recognising that nitrogen is an inert gas. • <i>Lubricating oils</i>: This will include first fill of compressors / motors and then top up and change outs regularly due to maintenance. This shall be confirmed during FEED but is envisaged to be less than 5m³ per year. • <i>Hydrogen</i>: Hydrogen usage is around 5kg/h while the capture plant is operating, for the de-oxygenation process. This is likely to be supplied in road tanker trailers which can hold ~1 tonne of hydrogen . The power station hydrogen cooling loop is closed and only requires regular top up

ExQ1	Question to:	Question:	Response
			<p>due to losses so will be fed from a supply of 50kg cylinders. Exact quantities shall be confirmed during FEED.</p> <ul style="list-style-type: none"> <i>Distillate fuel:</i> There will be no continuous usage of distillate fuel (Diesel). Usage will be based on any regular testing of emergency generators, which is subject to completion during FEED. Less than 10m³ per year of usage is envisaged.
GEN.1.31	Applicants	<p>HP Compressor Plans Sheets 2 & 3 [APP-048 and APP-049] include as Item 20 – Future Expansion HP CO₂ Compressor Equipment.</p> <p>Explain how expansion would be secured. Has this element been assessed as part of the ES?</p>	<p>Expansion does not form part of the DCO Application and has not therefore been assessed in the ES. Future expansion, if required, would be subject to separate consenting requirements and environmental assessment at that time.</p>
GEN.1.32	Applicants	<p>Paragraph 6.2.30 of the Planning Statement [APP-070] comments on the criteria for the consideration of alternative locations. These include sufficient space for future expansion.</p> <p>The Applicants are asked to explain their approach to expansion and whether it would be covered by the dDCO.</p>	<p>The site was selected to allow for potential expansion at a future time if deemed appropriate but expansion does not form part of the DCO Application and has not therefore been assessed in the ES. Future expansion if required would be subject to separate consenting requirements and environmental assessment at that time.</p>
GEN.1.33	Applicants	<p>According to paragraph 5.3.1 of the CCR Assessment [APP-074] the volume of CO₂ anticipated to be captured during the lifetime of the Proposed Development is 50.7 million tonnes (2.0 million tonnes per annum (TPA) for a 25-year period for the power station).</p> <p>How does this figure relate to the capacity of the export pipeline which is up to 10Mt of CO₂ per annum with an initial intention to capture 4M TPA?</p>	<p>The CCR assessment is required to fulfil regulatory requirements for the consenting of new generating stations fired on certain fuels such as natural gas. It needs to show that adequate space has been allocated for the retrofit of carbon capture technology and is therefore conservative since it is more of a theoretical appraisal than a detailed design. The CO₂ capture estimate of 2.0MTPA is therefore conservative and calculated on the basis of full time operation of the plant at maximum output, which is not the design case for the dispatchable generating station. Nevertheless this demonstrates that even at full load all year round there remains sufficient capacity in the export pipeline to accommodate the entire CO₂ output from the generating station as well as CO₂ collected from other industrial emitters in the Teesside area.</p>
GEN.1.34	Applicants	<p>At various points in the Application including the Applicants' covering letter [APP-001], the ES [APP-086] (paragraph 4.3.54) and the DAS [APP-071] reference is made to the Proposed Development initially capturing and transporting up to 4 million TPA of CO₂, although the CO₂ export pipeline has the capacity to accommodate up to 10 million TPA of CO₂ thereby allowing for future expansion.</p> <p>Will there be any changes to the CO₂ gathering network to accommodate this increase? Demonstrate where the capacity increase/ future expansion has been assessed in the ES. Should the amount of exported CO₂ be controlled through the DCO?</p>	<p>The High Pressure Carbon Dioxide Export Pipeline is sized to accommodate up to 10MTPA and this was assessed in the ES. No changes are required to the CO₂ Gathering Network or export pipeline to accommodate the increase in capacity, only the operating pressure of the pipeline would increase. The appropriately sized pipelines will therefore be installed during construction and will not need replacing with larger diameter pipes to meet the potential 10MTPA capacity.</p> <p>It is not considered that the amount of CO₂ being exported needs to be controlled through the DCO since none of the environmental effects or assessments are reliant on that capacity being specified. The climate change and greenhouse gas assessment presented as part of the ES [APP-086] for example calculates the conservative carbon emissions associated with operation of the generating station and does not account for the additional beneficial effects of capturing CO₂ from industrial emitters connected to the</p>

ExQ1	Question to:	Question:	Response
			<p>gathering network. It is considered appropriate for the Draft DCO to control the maximum diameter of the CO₂ gathering network pipeline, since a larger diameter pipeline could have a greater environmental effect than those assessed in the ES, and this is why a 550 millimetres nominal bore diameter is specified for the pipeline in Work No. 6.</p> <p>The determining aspect of the amount of CO₂ that can be exported, and so injected into the store, should be the capacity of the store to safely inject and contain the CO₂ permanently. The store permit defines this capacity, the North Sea Transition Authority (NSTA) is the competent regulator for the store permit. The NSTA should therefore determine the storage (and therefore export) capacity. The NSTA have the suitably competent and capable personnel to understand the subsurface aspects of the store and determine the safe storage injection rate and storage capacity.</p> <p>The initial export rate for NZT power and the Teesside industrial emitters, 4Mte / annum, is to prove the concept of CCS and, if successful, the range of emitters on Teesside could be expanded to include a greater volume of CO₂, up to the pipeline capacity of 10MTe. These additional emitters will secure their own permissions (TCPA or DCO) to tie-in to the NZT "backbone" pipeline system. As such the export rate of CO₂ is regulated by NSTA, and does not need to be regulated in the NZT DCO.</p>
GEN.1.35	Applicants	<p>Paragraph 5.4.1 of the CCR Assessment [APP-074] states that there are various options available for transporting CO₂ from point of capture to final geological storage, including on and offshore transportation by pipeline and offshore transportation by pipeline or shipping.</p> <p>The Applicants are asked to explain why offshore transportation by shipping was not taken forward for this project.</p>	<p>Carbon dioxide can be transported by pipeline or by ship. The most effective and viable transport method depends on a number of factors but in particular the volumes of carbon dioxide requiring storage and the distance to the storage site. As the Proposed Development is seeking to transport and store up to 10M t/y of CO₂, and as the distance to the storage site is around 150km, it is currently not economically or technically viable to use shipping to achieve storage at that scale and distance. Ships are only now being developed to transport CO₂. It may be that as shipping technology develops – through the Northern Lights project for example – that shipping is also employed in the future as part of the Northern Endurance Partnership but initially the use of pipeline is the lowest technology risk option available. Use of pipeline also avoids the need to use buffer storage of CO₂ at the shipping terminal with its associated hazards and land take requirements.</p>
GEN.1.36	Applicants	<p>According to paragraph 12.4.15 of the ES [APP-094] decommissioning may proceed to different timeframes within different parts of the Site, and in particular the compressor and CO₂ Gathering Network is likely to remain in operation after the PCC Site is decommissioned.</p> <p>How would the compressor and CO₂ Gathering Network operate in isolation from the generating station?</p>	<p>The decommissioning timelines are linked to the length of the business model agreements across the two parts of site. The Low Carbon Electricity Generating Station (Work No. 1) will agree a Dispatchable Power Agreement (DPA) with a duration of 15 years, but the T&S Regulatory Investment (TRI) model that applies to Work No. 6, 7 & 8 may have a longer duration.. It is likely that the Low Carbon Electricity Generating Station will operate on a merchant basis after the DPA time period, and as such the integrated facility design life is 25 years.</p>

ExQ1	Question to:	Question:	Response
			<p>The elements of the projects to be operated by Net Zero Teesside Power Limited and Net Zero North Sea Storage Limited were developed as a single project until being divided in October 2020 to reflect the development of separate business models, and the expansion of NEP to serve both Teesside and the Humber. The two entities were separated commercially, although all parts of the Proposed Development continue to progress technically as an integrated, co-located development, benefiting from multiple design integration synergies and cost and schedule efficiencies.</p> <p>The High Pressure Carbon Dioxide Compression Station (Work No. 7) and High Pressure Carbon Dioxide Export Pipeline (Work No. 8) are co-located with the Low Carbon Electricity Generating Station (Work No. 1) at Teesworks, offering synergies through shared utilities and efficient contractual integration which is the basis for the schedule development. Packaging the scopes brings cost and execution advantages, and the technical benefits of simplified FEED and EPCC interfaces with standardized design and specifications, integration of common systems, e.g. utilities, ICSS, telecoms, civils, and a single EPCC contractor across the Teesworks site.</p> <p>If the Low Carbon Electricity Generating Station (Work No. 1) is decommissioned prior to the High Pressure Carbon Dioxide Compression Station (Work No. 7) and CO2 Gathering Network (Work No. 6), the latter facilities would still be able to operate. Net Zero North Sea Storage Limited would continue to operate the full suite of common utilities and facilities which enable the HP Compressor operation (including, but not limited to Air, Nitrogen, Drains, Fence and Cooling).</p> <p>The Draft DCO is specifically structured to enable development and operation of Project A and Project B (together the Proposed Development). Net Zero North Sea Storage Limited has the benefit of Project B, which comprises all of the Work Nos in Schedule 1 except the generating station (Work No. 1)) the gas connection (Work No. 2) and the water supply connection (Work No. 4). Accordingly, in addition to the technical arrangements for separate operations set out above, Net Zero North Sea Storage Limited would have the benefit of all of the powers under the DCO to continue to operate the compressor (Work No. 7) and CO₂ Gathering Network (Work No. 6) independently of the generating station (Work No. 1).</p>
GEN.1.37	Applicants Redcar and Cleveland Borough Council (RCBC)	Table 3.1 of the Planning Statement [APP-070] and the Long and Short Lists of Developments Table 24-5 and Figures 24-2 and 24-3 [APP-106, APP-235 and APP-236] include a number of relevant development proposals in the vicinity of the Order Limits which were known as of March 2021. The Applicants are asked to:	The Applicants are preparing the updates requested by the ExA under GEN. 1.37 and intend to provide these at Deadline 4.

ExQ1	Question to:	Question:	Response
	Stockton-on-Tees Borough Council (STBC)	<p>i) Update the tables and figures to include decisions made and relevant planning applications submitted since production of the Planning Statement;</p> <p>ii) Present the relevant proposals on an Ordnance Survey map base;</p> <p>iii) Confirm whether any such updates would affect the conclusions reached in the ES in particular with regard to in-combination effects.</p> <p>The Relevant Planning Authorities (RPAs) are asked to:</p> <p>i) Provide an update to the status of the referenced planning applications including whether a decision has been made and development timescales, in particular whether development has commenced;</p> <p>ii) List details of any additional relevant planning applications and Development Consent Orders (DCOs) which have been submitted since production of the Planning Statement (March 2021); and</p> <p>iii) Provide details of development at Teesworks (No's 3 and 5 to 10 inclusive of Table 3.1 and any others submitted since), including site location and layout plans, and (if available) officer reports and decision notices.</p>	
GEN.1.38	Sembcorp Utilities (UK) Ltd	<p>Sembcorp Utilities (UK) Ltd [RR-034] refers to a number of proposed projects at Wilton International.</p> <p>i) Provide details of the proposed battery storage including its location and timescales for an application (DCO or Planning Application?) and construction; and</p> <p>ii) Provide further information as to how the proposed battery storage and other projects and existing business at Wilton International could be affected by the Proposed Development.</p>	N/A
GEN.1.39	Anglo American Woodsmith Limited	<p>The Proposed Development includes land within the Order Limits of the York Potash Harbour Facilities Order 2016. Table 3.1 of the Planning Statement [APP-070] and ES Chapter 24 [APP-106] Tables 24-5 to 24-16 list the York Potash Project as a relevant proposal.</p> <p>i) Confirm how you wish Anglo American Woodsmith Limited to be addressed in the Examination and draft Development Consent Order (dDCO).</p> <p>ii) Provide a brief summary of the current stage of construction of the Woodsmith Project (formerly the York Potash Project) and timescales for completion, in particular the site which overlaps the Order Limits of the Proposed Development;</p> <p>iii) Provide comment on the cumulative assessments in Tables 24-6 to 24-16 which specifically relate to the Woodsmith Project, in particular whether it has been scoped in or out appropriately; and</p> <p>iv) The ExA are aware of a Non-Material Change application to the York Potash Harbour Facilities Order 2016; please provide details and indicate if the Proposed Development would be affected in any way.</p> <p>You may wish to combine your answer with Question CA.1.9.</p>	N/A

ExQ1	Question to:	Question:	Response
GEN.1.40	Applicants	<p>The energy NPSs are currently under review by UK Government. Consultation on the revised drafts closed in November 2021. As yet there is no confirmed date for publication and designation of the updated energy NPSs.</p> <p>Can the Applicants comment on whether the draft NPSs for Energy (EN-1), Fossil Fuel Electricity Generating Infrastructure (EN-2), Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4) and Electricity Networks Infrastructure (EN-5) introduce any environmental requirements that have not previously been considered in the ES?</p>	<p>The updated Planning Statement [REP01-003] submitted at Deadline 1 considers the draft revised energy NPSs at Section 4.4.</p> <p>An assessment of the Proposed Development's compliance with the assessment principles and generic and technology specific impacts of the relevant draft revised energy NPSs, against any material changes to relevant assessment principles/impacts from the current NPSs or any relevant new assessment principles/impacts within the draft revised NPSs is provided at Appendix 3 of the Planning Statement. This assessment does not alter the overall assessment of the Proposed Development against the current NPS policy and other relevant policy.</p> <p>The Applicants would refer the ExA to the answer provided to Question PPL. 1.6 in respect of the draft revised NPSs.</p> <p>With the exception of Sulphur Hexafluoride (draft EN-5, 2.14), it is not considered that the draft revised NPSs introduce any environmental requirements that are relevant to the Proposed Development and have not previously been considered in the ES. With regard to Sulphur Hexafluoride (SF6), the Applicants will during the detailed design phase of the Proposed Development endeavour to minimise its use in switchgear in systems up to 66kV. It is anticipated that some SF6 switchgear will be used on the NZT Project's main extra high voltage (EHV) connection systems (which is at 275kV), and where air insulated switchgear is unsuitable or impractical, due to the fact that there is at present no technically proven and commercially available alternative on the market. Any EHV system which, following design assessments, utilises SF6 will include gas monitoring and controls meeting all applicable design standards and regulations. The Applicants would refer the ExA to Appendix 3 of the updated Planning Statement.</p>
GEN.1.41	Applicants STDC	<p>The Applicants' covering letter [APP-001] notes that the site partly lies within the boundary of the Teesworks area that is controlled by STDC.</p> <p>The Applicants and STDC are asked to provide an overview of the powers of the STDC beyond its land ownership.</p>	<p>The South Tees Development Corporation (STDC) is a Mayoral Development Corporation responsible for approximately 4,500 acres (1,820 hectares) of land to the south of the River Tees, in the Borough of Redcar and Cleveland, now known as Teesworks.</p> <p>The STDC was established pursuant to the powers devolved to the Tees Valley Mayor under 'The Tees Valley Combined Authority (Functions) Order 2017' and through 'The South Tees Development Corporation (Establishment) Order 2017'. Copies of the Order are provided as part of Appendix GEN.1.41 Document ref 9.8 submitted at Deadline 2.</p> <p>Pages 7 and 8 of the South Tees Development Corporation Constitution Version 8.0 July 2021 (Appendix GEN.1.41 in Document ref. 9.8) set out the powers of the STDC. The precise area covered by the Corporation is shown at Appendix A of the document.</p>

ExQ1	Question to:	Question:	Response
			<p>Paragraph 27 (page 7) states that subject to legislation, the Constitution and any other directions made by the Tees Valley Combined Authority (TVCA), the STDC may do anything it considers appropriate for the purposes of securing the regeneration of its areas, or for the purposes incidental to that objective.</p> <p>Paragraph 28 summarises the STDC's powers as:</p> <p>Powers in relation to infrastructure:</p> <ul style="list-style-type: none"> • This includes the power to provide, or facilitate the provision of infrastructure. <p>Powers in relation to land:</p> <ul style="list-style-type: none"> • The power to regenerate or develop land • To bring about the more effective use of land. • To provide buildings or other land. • To acquire, hold, improve, manage, reclaim, repair or dispose of land, buildings, plant, machinery, equipment or other property. • To carry out building or other operations, including demolishing buildings. <p>Powers to acquire land:</p> <ul style="list-style-type: none"> • To acquire land in its area or elsewhere, in accordance with the provisions of the Localism Act 2011. <p>Powers in relation to acquired land:</p> <ul style="list-style-type: none"> • To override easements. • To extinguish public rights of way (with the consent of the Secretary of State). <p>Powers in relation to businesses and companies:</p> <ul style="list-style-type: none"> • To carry on any business. • To form or acquire interests in any business or company. <p>Financial assistance powers:</p> <ul style="list-style-type: none"> • To provide financial assistance to any person.

ExQ1	Question to:	Question:	Response
			<ul style="list-style-type: none"> • This may be given in any form, including grants, loans, guarantees, investments, or the incurring of expenditure for the benefit of the person assisted. <p>Powers in relation to discretionary relief from non-domestic rates:</p> <ul style="list-style-type: none"> • To determine the amount of discretionary rate relief from non-domestic rates (i.e. business rates). <p>Paragraph 29 states that Redcar and Cleveland Borough Council (RCBC) shall continue to be the billing and collecting authority for non-domestic rates for existing operations, except in respect of areas of the Corporation's area which are designated as Enterprise Zones where the revenue is received by the TVCA.</p> <p>RCBC continues as the local planning authority for the area to having functions with regard to the preparation of local development plan documents and supplementary planning documents and development control and management.</p>

3.0 AIR QUALITY AND EMISSIONS

ExQ1	Question to:	Question:	Response
AQ.1.1	Applicants Natural England (NE)	<p>Paragraph 8.2.7 of the ES [APP-090] references the critical load criteria in Table 8B-13 of Appendix 8B [APP-248]. However, Table 8B-13 presents background deposition information.</p> <p>Confirm if Table 8B-19 of the ES [APP-248] is the correct list for these critical load criteria?</p> <p>NE, please confirm that you remain content with the source of critical load data described in paragraph 8.2.7 of the ES [APP-090] and the values identified for protected sites in Table 8B-19 of the ES [APP-248].</p>	<p>The reference to Table 8B-13 in Paragraph 8.2.7 of the Chapter 8: Air Quality of the ES [APP-090], should reference Table 8B-19 of the ES [APP-248]. Table 8B-19 of the ES [APP-248] is considered to contain the correct list of critical load classes for the ecological receptors assessed.</p>
AQ.1.2	Applicants EA	<p>Paragraph 8.2.10 of the ES [APP-090] states that the EA are preparing Best Available Techniques (BAT) guidance for post-combustion carbon dioxide capture plants using amine-based technologies, due to be published in mid-2021.</p> <p>Provide an update on the development of BAT guidance and BAT-Associated Emission Levels (AELs), and an assessment of the implications of this, if any, for the air quality assessment.</p>	<p>The Environment Agency published the post-combustion carbon dioxide capture: best available techniques (BAT) guidance on their website on 2 July 2021.</p> <p>The guidance states that compliance with the Industrial Emissions Directive (IED) Chapter III Emission Limit Values (ELVs) and the Large Combustion Plant (LCP) Best Available Techniques (BAT) Reference Document (BRef) on BAT Associated Emissions Limits (BAT-AELs) must be demonstrated, which was the assumption made to the assessment of combustion emissions from the absorber stack in the ES (para 8.2.8 – 8.2.10 [APP-090]). No further BAT-AELs are detailed in the guidance for ammonia, volatile components of the capture solvent or their potential degradation products, since the AELs will be established through deployment of CCS technology in early projects. Instead, the BAT guidance states that these emissions will need to be monitored. As such, it is considered that there are no implications arising from the Environment Agency's BAT guidance for the air quality assessment presented in the ES.</p>
AQ.1.3	Applicants EA	<p>Environmental Assessment Levels are referred to in paragraphs 8.2.14 and 8.2.15 of the ES [APP-090] for mono-ethanolamine (MEA) and N-nitrosodimethylamine (NDMA).</p> <p>Have these now been formally adopted?</p>	<p>Yes the EALs, as already used in the air quality assessment, have now been formally adopted (refer to AQ1.2).</p>
AQ.1.4	EA	<ul style="list-style-type: none"> i) Is the EA satisfied with the approach taken to the modelling of amines described in Chapter 8 of the ES [APP-090] and Appendix 8C [APP-249]? ii) Is the EA content that the approach to modelling stack height and location described in paragraphs 8.2.40 and 8.2.43 of the ES [APP-090] is a reasonable 'worst case' scenario? iii) Is the EA content that the emissions from the plant can be satisfactorily controlled via the environmental permitting regimes? 	N/A
AQ.1.5	EA/ NE RCBC STBC	<p>It is stated that the construction phase is anticipated to last around 4 years (paragraph 8.13.17 of the ES) [APP-090] and emissions of nitrogen dioxide (NO₂) and particulate matter less than 10 micrometres in diameter (PM₁₀) will be</p>	N/A

ExQ1	Question to:	Question:	Response
		<p>generated during this period from on-site construction plant. The assessment encompasses a distance of 200 m from roads.</p> <p>Are EA/ NE content that 200 m is an appropriate distance for this assessment in the context of nearby protected sites? Do you have any other observations to make on Appendix 8A [APP-247]?</p> <p>RCBC and STBC are asked to confirm whether this is an appropriate distance for protection of ecological and human health receptors? Are there any other observations which RCBC and STBC wish to make on Appendix 8A [APP-247]?</p>	
AQ.1.6	Applicants	<p>Baseline air quality monitoring was interrupted by the national lockdown caused by the pandemic according to ES paragraph 8.2.44 [APP-090].</p> <p>In this context, please explain how data collected over the winter period between December 2019 and March 2020 are representative of a baseline level.</p>	<p>The air quality monitoring data collected by the Applicants has not been used to be representative of the existing baseline for either the construction or the operational assessments carried out. Rather it was used in the construction assessment to enable validation of the traffic model, as detailed in ES para 8.5.27 – 8.5.28 [APP-247]. As the monitoring was carried out for less than 12 months, it was annualised in accordance with the methodology described in LAQM.TG(16) prior to use, as shown in Appendix 8A Table 8A-16 [APP-247]. Background or baseline air quality levels that were used for the purpose of the construction and operational assessments were instead derived from published data sources including local authority and Defra data gathered pre-pandemic.</p>
AQ.1.7	Applicants	<p>Paragraph 8.3.36 of the ES [APP-090] states that emissions during start up and shut down would be higher than those assessed for the annual average.</p> <ul style="list-style-type: none"> i) Please confirm if this is all emissions or just those relating to amines? ii) How do predicted emissions during these times compare to the proposed daily maximums? iii) The same paragraph also states that the gas flow rate will be lower and emissions therefore 'likely to be reasonably comparable' to the annual rate. Please provide further evidence to support this conclusion. 	<ul style="list-style-type: none"> i) Emissions concentrations of all pollutant species assessed could be higher during start-up and shut-down events; this is often the case for combustion or process emissions before operations reach steady conditions. However, at the same time, emission flow rates are usually lower than during normal stable operating conditions. ii) Until the Front-End Engineering and Design (FEED) process is completed, it is unclear what the emission concentrations during these periods will be, however it is expected (and typical) that the higher emissions will be limited to short periods, and more than likely be for periods of less than one hour. As short-term Air Quality Assessment Levels are set for either daily or hourly averaging periods, it is not considered that elevated emissions during the short start-up/ shut-down periods would affect the attainment of these levels. iii) For example, a likely possible scenario would be that the start-up emission concentration was double the concentration which occurred during normal operation for a specific pollutant, but the gas flow rate up the stack was half of that during normal operation (as is likely during start-up/ shut down), the grams per second release rate of pollutant would be the same for both start-up and normal operation (since the mass release (in g/s) is a product of the concentration (in g/m³) and the gas flow rate (in m³/s)). The only difference would be that the efflux velocity of the start-up emission from the stack would be reduced.

ExQ1	Question to:	Question:	Response
AQ.1.8	Applicants	<p>A 'number' of auxiliary boilers are referred to in ES paragraph 8.3.37 [APP-090]. It is stated that best practice would be followed and their use limited.</p> <ul style="list-style-type: none"> i) Further evidence, including the number of boilers, their locations, predicted usage and likely emissions, should be provided to substantiate the position that they will not give rise to significant impacts in combination with other sources of air emissions from the site. ii) Please also include the locations of the emergency diesel generators and any 'point of use' generators. 	<ul style="list-style-type: none"> i) The auxiliary boiler referred to in ES paragraph 8.3.37 [APP-090] will provide fuel gas heating and potentially heating in the infrequent event that the Carbon Capture Plant starts before the CCGT and there is no steam in the system to provide this heating. After CCGT shut down, the auxiliary boiler may also be required to provide heating to continue regenerating the amine, until complete. Run times for the auxiliary boiler are likely to be 20 – 30 mins per start, of which there could be between 80 – 200 starts per year. This would therefore equate to up to 100 hours of operation in total for the auxiliary boiler per year. <p>Whilst it cannot be confirmed until late in the FEED process, it is now considered likely that the auxiliary boiler will be an electrically powered stand-by reboiler, with no emissions to air. If this is not possible, a gas-fired unit of approximately 3.5MW thermal output will be required instead.</p> <p>If a gas-fired unit was employed, due to its small size it would be classed as Medium Combustion Plant under the Environmental Permitting Regulations (England and Wales) 2016 (as amended). However due to the limited number of operational hours it would be exempt from the emission limits required by the regulations. This is because such plant is considered a low risk to air quality based on the low annual running hours and the small capacity of the boiler. In addition, the release rate of NOx from such a small boiler unit would be in the region of 0.3g/s compared to the absorber stack NOx emission of 34g/s (i.e. <1% of the NOx emission already assessed). The small stack height that would be associated with such a boiler unit (estimated to be <10m), compared to the 90m absorber stack would also mean that the peak impacts associated with the boiler would be likely to occur within the PPC plant area, and would be highly unlikely to reach off-site receptors. For these reasons, the air quality impacts of an auxiliary boiler were scoped out of assessment in the ES.</p> <ul style="list-style-type: none"> ii) Emergency power to the PCC Site would be required in the event of an electrical power cut for; Heating, Ventilation and Air Conditioning (HVAC), telecoms, emergency lighting and plant control systems and for recharging the Uninterruptible Power Supply (UPS) battery. <p>Electrical power will be provided to the PCC Site via the hierarchy of:</p> <ol style="list-style-type: none"> 1. The Proposed Development's CCGT; 2. National Grid electrical connection through Tod Point; 3. South Tees Development Corporation (STDC) site power (subject to agreement); 4. Proposed Development's emergency diesel generators.

ExQ1	Question to:	Question:	Response
			<p>The emergency diesel generators are therefore the last resort in the event of a power loss at the PCC site, and subsequently are very unlikely to be required for their intended purpose.</p> <p>If required, the emergency diesel generators will comprise two or three generators of <6 MW thermal input each (i.e. 12 – 18 MWth in total, which equates to an output of around 6-8 MW in total). In order to ensure that the emergency generators remain fit for purpose, they will undergo routine testing, likely to comprise less than one hour of operation per month, per generator. A total maximum of 36 hours of testing operation per year would therefore be required if three generators are installed. The air quality impacts of emergency diesel generators were scoped out of assessment in the ES for similar reasons as for the gas-fired auxiliary boiler in i) above, i.e. low annual running hours, small capacity and small stack height (and associated localised impact)..</p> <p>The locations of the emergency diesel generators will not be confirmed until the EPC contractor has been selected. As they are emergency generators with annual operations of less than 50 hours per year, they would be exempt from Emission Limit Values imposed through the Environmental Permitting (England and Wales) Regulations 2016 (as amended) Medium Combustion Plant (MCP) or Specified Generator requirements.</p> <p>The type of generator is yet to be confirmed, however an indicative quantitative risk assessment of emissions to air from appropriate diesel generator plant has been carried out for the emergency diesel generators, and is provided within the information provided to the Environment Agency as part of the duly made process for the Environmental Permit.</p>
AQ.1.9	Applicants	<p>Paragraph 8.5.8 of the ES [APP-090] states that emissions from the CCGT stack when the plant is run in unabated mode have not been assessed because they would have a lower impact than emission from the carbon capture absorber. In the same section it is stated that the unabated emission would be at a higher temperature than from the absorber, resulting in greater dispersion.</p> <ul style="list-style-type: none"> i) Please explain why emissions of nitrogen oxides (NO_x), carbon monoxide (CO) and ammonia (NH₃) would be higher from the carbon capture absorber than those from the CCGT running in unabated mode? ii) What consequences would this have for the visibility of the plume? 	<ul style="list-style-type: none"> i) Emission concentrations of nitrogen oxides (NO_x), carbon monoxide (CO) and ammonia (NH₃) would be similar for the unabated (HRSG stack) and abated (absorber stack) modes of operation. Impact of emissions is related to both concentration and temperature of exhaust. The emission temperature from the absorber stack will be lower than the HRSG stack, as the flue gas is cooled prior to treatment in the absorber. The higher temperature of the emission from the HRSG stack during unabated operation will mean that the plume has improved thermal buoyancy compared to the plume from the absorber stack in abated mode and therefore, will result in greater dispersion and lower ground level impacts.

ExQ1	Question to:	Question:	Response
			ii) The HRSG stack releasing at a higher temperature and having less entrained water during unabated operation will have a lower visible plume than the absorber stack operating in abated mode. A plume visibility assessment for the absorber stack at release temperatures of 35°C and 60°C was presented in ES Appendix 8B Annex B [APP-248].
AQ.1.10	Applicants	<p>Paragraph 8.6.22 of the ES [APP-090] states that the annual average NO_x levels at the Teesmouth and Cleveland Coast Ramsar, Special Protection Area (SPA) and Site of Special Scientific Interest (SSSI) are 67.3% and therefore close to the 70% critical level threshold.</p> <ul style="list-style-type: none"> i) What is the likely margin of error associated with the model? How much confidence is there that the threshold would not be exceeded? ii) The sensitivity testing in Annex A of Appendix 8B [APP-248] is noted. This suggests that the model is sensitive to surface roughness and meteorological data. How much confidence is there in the chosen input parameters? Table 8B-1 of Appendix 8B [APP-248] states that meteorological data are for 2015-2019 at Durham Tees. Please provide an assessment of how representative this location is likely to be given that it is described as a flat airfield in an agricultural area approximately 22 km southwest of the site and inland. This should include consideration of the validity of use of the wind roses for the airport presented in Diagram 8B-1 [APP-248]. iii) It is also stated in ES paragraph 8.7.3 of Appendix B [APP-248] that 'additional' regional data indicate the wind speeds at the site could be higher and the direction 'less scattered' leading to a narrower zone of emission of contaminants. What is the origin of these data? Where are these data presented and how are they incorporated in the assessments? iv) Please clearly list the other potential sources of NO_x both on the site and in the area and confirm whether or not this could cause the critical level threshold to be exceeded if assessed cumulatively. This should include all process emissions, traffic emissions and any other emissions from the site, such as from the auxiliary boilers. v) The daily NO_x concentration is above the 10% screening criteria. Although described in paragraph 8.6.24 of the ES [APP-090] as 'unlikely' to be exceeded, as a precautionary approach should be applied to a site protected under the Habitat Regulations, the error associated with this modelling should be presented to demonstrate (or not) that there is no likelihood of significant effects. 	<ul style="list-style-type: none"> i) The Predicted Environmental Concentration (PEC) (i.e. the Process Contribution in addition to the Background Concentration) of 67.3% is predicted at the worst-case location of the habitat site, and therefore at all other locations, the Process Contribution will be less than this. The area where this level of impact occurs is very small compared with the area covered by the Teesmouth and Cleveland Coast Ramsar, SPA and SSSI, as shown in ES Figure 8-7 [APP-127]. For the 70% threshold to be exceeded as a result of the Proposed Development, the maximum Process Contribution predicted at the site would need to increase more than two-fold. The assessment has considered an annual emission at the BAT-AEL for NO_x occurring for 8,760 hours per year. This is a conservative assessment as the plant will not operate continuously and NO_x emissions concentrations will be below the BAT-AEL as this is the upper limit of the annual emission that will be allowed by the Environmental Permit. It is therefore considered that actual impacts will be less than those presented in the assessment, and therefore it is unlikely that the 70% threshold would be exceeded as a result of the operation of the Proposed Development. ii) The surface roughness and meteorological data used in the assessment are consistent with surface roughness and meteorological data used on air quality assessments submitted with Planning Applications for numerous developments in the Teesside area and therefore are considered to be appropriate. The use of five years of meteorological data for the assessment and reporting of the worst-case result from those five years of data is recommended by the Environment Agency, and is considered to take into account inter-annual variability and increase confidence that different meteorological conditions have been considered. With the exception of wind directions, general meteorological conditions tend to gradually vary over regional scales (50 to 100km) rather than local scales (10-40km). iii) The wind rose for Redcar referred to in ES paragraph 8.7.3 of Appendix 8B [APP-248] was data for South Gare provided by the meteoblue website (https://www.meteoblue.com/en/weather/archive/windrose/redcar_unit-ed-kingdom_2639563) and was not included in the ES reported results as the data was not independently verified. However, based

ExQ1	Question to:	Question:	Response
			<p>on that local wind rose, the text was added into paragraph 8.7.3 to provide additional local context. It is not considered that the change in local wind directions and speed would have a material effect on the assessment presented in the ES, especially as that was based on the worst case results from 5 years of hourly meteorological data.</p> <p>iv) The cumulative assessment presented in Annex C of Appendix 8B [APP-248] details other large potential sources of NO_x in the area. The results presented in Table C5 of Annex C show a predicted annual average predicted environmental concentration representing 72% of the critical level at the Teesmouth and Cleveland Coast Ramsar, Special Protection Area (SPA) and Site of Special Scientific Interest (SSSI) and therefore it is considered that the cumulative impacts are still well below the critical level.</p> <p>In terms of other emissions from the Proposed Development, such as auxiliary boilers, the response provided for AQ.1.8 details that these may not be required and if they are they will only operate for short periods, having minimal impact. Due to the limited number of operational hours. As they would only operate for short periods, their contribution to annual average concentrations (for evaluation against critical loads) would be negligible.</p> <p>Traffic emissions from the Proposed Development will be minimal and are considered to have a limited impact on the attainment of the critical level or effect on critical loads. For example, the assessment of construction traffic impacts presented in Appendix 8A [APP-247] indicated that NO_x concentrations would increase by 0.3µg/m³ at the Teesmouth and Cleveland Coast SPA, or 1% of the critical level as a result of traffic effects. Traffic on site during the operation of the Proposed Development will be considerably less than the construction traffic volumes and therefore the associated impacts would also be considerably less.</p> <p>v) The daily NO_x process contribution was predicted to be 20.8% of the daily critical level and in combination with the background concentration represented 60% of the daily critical level. The sensitivity analysis presented in Table A1 of Annex A of Appendix 8B [APP-248] showed that only variation of the surface roughness resulted in predicted concentrations that were higher than those presented in the assessment, with results at the worst-case receptor being up to 106% of those presented in the main assessment. This would result in a process contribution representing 21.9% of the critical level and in combination with the background concentration represented 60.8% of the critical level. This still remains well below the critical level and therefore an exceedance is considered unlikely.</p>

ExQ1	Question to:	Question:	Response
AQ.1.11	Applicants	<p>Table 8A-21 of Appendix 8A [APP-247] presents the results of the Construction Traffic Impact Assessment for Coatham Marsh.</p> <p>Please explain how the change in NO_x from construction traffic has been assessed cumulatively with other sources of NO_x during construction and the significance of these results on the SSSI.</p>	<p>Table 8A-21 of Appendix 8A [APP-247] shows that the NO_x increase at Coatham Marsh due to construction traffic is 0.5µg/m³ or 1.7% of the annual critical level. Background NO_x at this location is 26.9µg/m³, therefore represents 89% of the critical level. Together with the construction traffic impacts the predicted environmental concentration is 27.4µg/m³ representing 91.3% of the critical level and therefore no exceedance of the critical level is predicted.</p> <p>The study area for Non-Road Mobile Machinery (NRMM) used during construction is 50m from the site boundary for ecological receptors, in line with the requirements of IAQM 2014 (detailed in para 8.3.3 Chapter 8 [APP-090]). Coatham Marsh is located over 500m from the main PCC part of the Proposed Development Site, and therefore given the distance from construction activities and traffic on the main site, it is considered that there is a high level of confidence that NRMM would have a negligible impact.</p>
AQ.1.12	Applicants	<p>Cumulative impacts of emissions from other developments in the area are not considered significant 'given the distance' of a number of these (paragraph 8.2.13 of Appendix 8B of the ES [APP-248]).</p> <p>Please provide a map of the sites considered and a full explanation of how they have been scoped out based on distance. This should include consideration of potential emissions from proposed future development in the area.</p>	<p>Further detail on the cumulative assessment is provided in Annex C of Appendix 8B of the ES [APP-248] which states that the assessment considered the future developments of Redcar Energy Centre, Grangetown Prairie, Land at Teesport (MGT Teesside Ltd) and Teesside CCPP. All these sites are within 4km of the Proposed Development PCC Site and are located to the southwest, therefore the prevailing wind direction (from the southwest) would mean that emissions from these sites would travel towards the Proposed Development, resulting in potential cumulative impacts.</p> <p>Land to the South of Tofts Road West, Graythorp was not included as this site is located 5.4km northwest of the Proposed Development, and therefore the prevailing wind direction would mean that the plume would travel away from the Proposed Development, meaning that cumulative impacts would not occur.</p> <p>The Port Clarence development site is 6.5km to the southwest of the Proposed Development and therefore further than the other sites included in the cumulative assessment. The peak impacts from such a site are considered to occur within 2km of the stack and therefore would not occur within the vicinity of the Proposed Development.</p> <p>Furthermore, the cumulative impacts with those sites assessed were considered to be either negligible adverse or insignificant at the receptor locations assessed for human health impacts and did not result in exceedances of the critical levels at ecological receptors. It is therefore considered that an additional NO_x source at greater distance from those already assessed would have negligible effect on the results presented.</p>

ExQ1	Question to:	Question:	Response
			<p>The locations of the sites considered are shown in Figure 24-3 [APP-236] with further details in [APP-344].</p>
AQ.1.13	Applicants EA/ NE RCBC STBC	<p>The assessment of cumulative effects described in Annex B of Appendix 8B [APP-248] suggests that the predicted environmental concentration (PEC) would increase to 72% of the critical load and would therefore exceed the threshold for significance for NO_x at Teesmouth and Cleveland Coast SPA, SSSI and Ramsar.</p> <p>Paragraph 8.6.17 of Appendix 8B [APP-248] states that emissions would be regarded as insignificant if less than 70% of the critical level. The Applicants are asked how can this be resolved with the conclusion that 72% is not significant in Annex B?</p> <p>EA/ NE/ RCBC/ STBC are asked to comment on the Applicants' conclusion that because the predicted NO_x concentration remains below the critical level it is not significant.</p>	<p>In relation to NO_x, the Air Pollution Information System (APIS) specifies a critical NO_x concentration (critical level threshold) for the protection of vegetation of 30µgm-3.</p> <p>Although the cumulative impacts are over the 70% threshold to determine insignificance, they only represent 72% of the critical level and therefore remain well below the critical level, indicating that an exceedance is unlikely. Impacts over the 70% threshold do not indicate that the impact is significant, only that further consideration of the potential impact is required. This is provided in the Habitat Regulations Assessment Report [APP-080], Para 4.3.7 of which states that, as the Teesmouth and Cleveland Coast SPA, SSSI and Ramsar is designated for breeding tern and avocet species rather than for the vegetation present (which the critical level is designed to protect), that the effects of airborne pollutants are less important than the depositional impacts. Therefore, it is considered that the predicted impact of atmospheric NO_x being slightly over the 70% threshold is not significant.</p> <p>In addition, as per the response provided in AQ.1.10, these worst-case impacts occur over a very small area of the Teesmouth and Cleveland Coast SPA, SSSI and Ramsar with the majority of the site experiencing much lower impacts. These reported results are also highly conservative, being based on the worst-case meteorological conditions and assuming that the Proposed Development will operate all year round instead of in dispatchable mode as is expected, therefore actual impacts are likely to be lower than those predicted by the assessment. Para .1.37 of the Habitats Regulations Assessment Report [AS-194] states "Given that the known nesting sites for avocets and terns would be subject to a nitrogen dose far lower than 1% of the Critical Load, it is unlikely that atmospheric pollution from the Proposed Development would have significant impacts on the SPA's / Ramsar's breeding bird interest 'alone'. Moreover, in practice the suitability of an area for nesting terns will be less tied to the specific Critical Load (which is only a rough proxy for tern nesting habitat) and precise botanical effects, and more to do with coarse habitat structure i.e. they nest on the beach just above the high tide line, which is very sparsely vegetated". Along with further assessments presented in the Habitats Regulations Assessment Report [AS-194], it is identified that the integrity of the Teesmouth Cleveland Coast SPA/Ramsar will not be significantly affected as a result of the Proposed Development.</p>

ExQ1	Question to:	Question:	Response
			<p>Para 12.9.3 of Chapter 12 [APP-094] confirms that the air quality assessment demonstrates no significant cumulative effect from emissions of NOx.</p>
AQ.1.14	EA/ NE RCBC STBC	<p>Paragraph 8.6.18 of Appendix 8B [APP-248] states that the impact of stack emissions can be regarded as insignificant at sites of local importance if the long and short term Process Contribution is less than 100% of the critical level.</p> <p>Do the named parties have any comments to make on this threshold?</p>	<p>For reference this is based on EA Risk Assessment Guidance available only online.</p>
AQ.1.15	Applicants	<p>Paragraph 8.3.13 of ES Appendix 8C [APP-249] states that temperature is key to reducing amine emissions.</p> <ul style="list-style-type: none"> i) How has the likely range of temperatures and implications for the dispersion of amines been taken into account? ii) How is it ensured that the maximum operating temperature is kept as low as possible? 	<ul style="list-style-type: none"> i) The operating temperature of the re-boiler and stripper in the carbon capture plant will be carefully controlled within a set range (defined by the characteristics of the chosen solvent) to ensure that degradation of the solvent within the process is minimised. Reducing this degradation in process, will therefore lead to lower emissions from the absorber stack. <p>The air quality assessment has assumed that the process controls in place to minimise amine degradation will ensure the emission limits used in the assessment are achieved. These are the emission levels that will likely be set within the Environmental Permit.</p> <ul style="list-style-type: none"> ii) As stated in paragraph 8.3.13 of ES Appendix 8C [APP-249], "The main cause of degradation of the amine solvent is understood to be thermal degradation and therefore this can be reduced by ensuring that the maximum operating temperature of the re-boiler and stripper in the carbon capture plant is carefully controlled to reduce this." <p>This section specifically relates to n-amines which are Nitrosamines i.e. degradation products from the amine rather than the amine itself. These are formed due to degradation over time of the amine, high temperatures >150degC, and contact with contaminants, such as NOx, SO₂ etc. The temperature of the re-boiler is set to ensure the amine is boiling (i.e. it is carefully controlled to release CO₂) and is limited by the low pressure steam supply from the CCGT. This temperature is low enough that the degradation from high temperature of the amine is avoided.</p> <p>Amine emissions to atmosphere from the absorber are controlled and minimised through multiple water wash sections which will capture entrained amines, as well as potentially an acid wash section at the top of the tower which will do the same. There are also de-mister beds</p>

ExQ1	Question to:	Question:	Response
			<p>and a low gas velocity to prevent entrained liquids flowing out the tower, only gas phase emissions will be able to escape the process.</p> <p>The Nitrosamine concentrations are minimised through the amine regeneration system which removes degradation products which are then sent as a hazardous waste stream for treatment or disposal offsite.</p> <p>The flue gas temperature entering the absorber is kept low for efficient absorption via the use of the Direct Contact Cooler. Dispersion of amines is affected by the temperature of the flue gas exiting the absorber. This is reheated to help the dispersion, and the minimum temperature / height and flow rates have been determined by the Applicants to ensure the environmental limits of deposition on surrounding areas are within the acceptable limits.</p>
AQ.1.16	EA/NE RCBC STBC UK Health Security Agency	<p>Appendix 8B [APP-248] describes the approach taken to the assessment of the effects of the development on air quality during the operational phase.</p> <p>Do the named parties you have any additional comments that you would like to bring to the ExA's attention regarding the overall approach?</p>	N/A

4.0 BIODIVERSITY AND HABITATS REGULATIONS ASSESSMENT

ExQ1	Question to:	Question:	Response
BIO.1.1	Applicants	<p>Sections 12.2, 13.2, 14.2 and 15.2 of the ES [APP-094 to APP-097] set out the legislation and planning policy context relating to the scope of terrestrial ecology, aquatic ecology, and nature conservation, marine ecology and nature conservation and ornithology respectively.</p> <p>The Applicants are asked to provide details of any relevant legislation and/ or policy context relating to ecology matters which has emerged since the application was submitted.</p>	<p>The Environment Act 2021 is the only new legislation of potential relevance. The Environment Act 2021 received Royal Assent on 9 November 2021. Please see the Applicants' response to PPL.1.8 on the Environment Act 2021.</p> <p>Standing Advice is kept under regular review by the Applicants, for example it is noted that the statement on ancient woodlands was subject to minor amendment in January 2022. No amendments have been identified that have relevance to this application given the identified ecological features of relevance.</p> <p>No other legislation or policy pertinent to the identified ecological features of relevance has been brought into effect since submission.</p>
BIO.1.2	Applicants IPs	<p>Table 12.3 of the ES [APP-094] summarises the ecological field surveys completed, with further detail provided in Appendix 12 C [APP-301 to APP-304]. Are the Applicants and IPs content that all terrestrial ecology surveys remain valid given their age?</p>	<p>The Applicants remain content, given the specifics of the Proposed Development and the conclusions and underpinning rationale of the impact assessment, that the terrestrial ecological surveys covered by [APP-094] and its supporting appendices remain valid and sufficient for determination. The exception to this is water vole and otter, for which updated confirmatory surveys are currently being gathered in accordance with advice received from the Environment Agency. The reporting associated with the water vole and otter surveys is expected to be submitted into the examination at Deadline 5.</p>
BIO.1.3	Applicants	<p>Paragraph 12.5.9 of the ES [APP-094] states that precautionary working methods will be adopted to manage any residual risk of protected and invasive species being encountered in order to address residual issues associated with great crested newt and common lizard.</p> <p>On that basis, why was great crested newt scoped out from further assessment as described in Table 12.5?</p>	<p>The detailed precautionary assessment that was undertaken permitted this species to be scoped out as a relevant constraint, given the absence of past records in the area for a species that is nationally relatively well recorded given its relevance to the planning system and its legal protection, as per constraints provided in Appendix 12J GCN Report [APP-313]. This appendix identifies only two waterbodies of potential relevance and these are located in Stockton on Tees.</p> <p>There is no reasonable likelihood of an impact on the nature conservation status of this species from temporary habitat disturbance and loss associated with the Proposed Development. However, when dealing with protected species it is generally appropriate to reconsider potential constraints during detailed design and in the lead in to construction, as, for example, habitats can become more or less suitable for species over time. Further, even where it is unlikely that the species will be encountered, but absence cannot be completely discounted (ecology surveys can never claim 100% certainty of absence, only likely absence), it is generally considered good practice to employ Ecological Clerk of Works as a final check prior to construction works.</p>
BIO.1.4	Applicants	<p>It is stated in paragraph 12.5.5 of the ES [APP-094] that as far as possible, the routes of connection corridors utilise existing infrastructure, including the extensive existing network of pipeline racks available to accommodate the CO₂</p>	<p>The only connections which do not follow existing pipe racking or utilities corridors are the CO₂ Export pipeline and the replacement outfall (if required). Given the nature of these works, it is a requirement that they start at the PCC Site and end in the Tees Bay, and therefore consideration was given to</p>

ExQ1	Question to:	Question:	Response
		<p>Gathering Network. This approach minimises the excavations and construction activities required and therefore the potential for disturbance of species and habitats.</p> <p>Explain how the connection corridors been configured to avoid sensitive terrestrial habitats where they do not follow the existing network of pipeline racks.</p>	<p>mitigating impacts that may arise within the required routing. Construction of both minimises impacts on the sensitive terrestrial habitats within Teesside and Cleveland Coast SSSI, SPA and Ramsar site by being installed using trenchless technologies from within the PCC site to Tees Bay and includes the use of noise barriers and visual screens, where HDD excavations are proposed in or near the Teesside and Cleveland Coast SSSI, SPA and Ramsar site. Once installed the works will be underground and will not have any impact on sensitive terrestrial habitats during operations.</p>
BIO.1.5	Applicants IPs	<p>Paragraph 13.3.29 of the ES [APP-094] states that for some waterbodies scoped into the assessment no detailed surveys could be undertaken as access was not available, but assessments were undertaken based on habitats and comparable waterbodies and the potential for works to affect the ponds.</p> <p>The Applicants are asked to explain why this alternative approach was acceptable. IPs are asked to comment on this alternative approach.</p>	<p>This limitation on baseline data gathering was not relevant to the subsequent impact assessment - survey data is not needed for the identified waterbodies. While the named waterbodies are in close proximity, there would be no impacts to aquatic habitats as at the relevant locations, the existing pipeline racks and existing watercourse crossings will be utilised. Development design and impact avoidance measures are committed to as part of the construction approach and are considered sufficient to address and negate the potential for indirect impacts on water quality during construction. Therefore, after consideration of these points, no pathways are identified in Chapter 12 Terrestrial Ecology [APP-094] for a likely impact on the aquatic ecology of the relevant waterbodies.</p>
BIO.1.6	Applicants	<p>Within Chapter 14 of the ES [APP-096] (paragraph 14.2.12) it is stated that the Environment Bill, expected to be passed into law in 2021, sets out to achieve the commitments outlined in the Governments' 25-Year Environment Plan, and mandates biodiversity net gain for development (housing and commercial), although this does not currently apply to Nationally Significant Infrastructure Projects (NSIPs).</p> <p>The Applicants are asked to provide an update on the effect of the Environment Act and its implications across all areas of ecology including in relation to the issue of biodiversity net gain.</p>	<p>Refer to the answer to BIO.1.1 and PPL.1.8. In addition, the Environment Act 2021 was given Royal Assent on 9 November 2021 and section 99 and schedule 15 of the Environment Act 2021 contain provisions relating to Biodiversity Net Gain (BNG). These BNG requirements are not yet in force as secondary legislation will require to be enacted to provide the detail of the BNG requirements applicable to Nationally Significant Infrastructure Projects (NSIPs).. The Government consulted on detailed proposals for implementing BNG, in a consultation running from January to April 2022. The Government has indicated that BNG is not likely to be mandatory for Town and Country Planning Act applications until late 2023, and it is not planned to be enacted for NSIPs before November 2025. Notwithstanding this point, the Applicants have committed to providing BNG within the Site as outlined in the Indicative Landscape and Biodiversity Strategy [APP-079].</p> <p>Under this Act the duties in general rest with the Government, some public bodies and other organisations, such as the Office for Environmental Protection. They largely rely on implementation via regulations and plans or strategies which are not yet in place. Therefore, in relation to ecology, the wider requirements of the Act do not have direct relevance to the Application.</p>
BIO.1.7	Applicants	<p>Table 14.1 of the ES [APP-096] describes the water discharge connection in terms of either utilising the existing outfall or replacing it.</p> <p>What is the timescale for a decision on whether to maintain or replace the outfall?</p>	<p>The Applicants are assessing the technical feasibility of using the existing outfall and continue to progress discussions with STDC on a voluntary agreement for use. The Applicants' use of the existing outfall is dependent on being satisfied that the outfall is fit for purpose and securing a voluntary agreement with STDC. If this is not achieved the Applicants would proceed with Work No. 5B and this decision will be made prior to the end of Examination.</p>

ExQ1	Question to:	Question:	Response
			The Applicants will continue to provide an update on the use of the existing outfall in the SoCG with STDC, TVCA and Teesworks Limited [REP1-007].
BIO.1.8	Applicants	According to paragraph 14.5.3 of the ES [APP-096], activities that generate impulsive underwater sound within the marine environment (i.e. geophysical survey works and unexploded ordnance detonation) shall not be undertaken at night. How would this be secured through the DCO?	This requirement is set out in Table 5A-8 in the Framework CEMP [APP-246] and would be secured under Requirement 16 of Schedule 2 of the draft DCO [AS-135].
BIO.1.9	Applicants	According to paragraphs 14.9.18 and 14.9.21 of the ES [APP-096] it is considered unlikely that dredging operations associated with cumulative developments would occur concurrently while piling activities associated with the construction of cumulative developments are also unlikely to occur simultaneously. On what basis have the Applicants considered that for each of these activities there would be no simultaneous occurrence?	Dredging in the Tees Bay prior to installation of the new outfall head (if required) can be timed by the Applicants to avoid other dredging activities in the River Tees. However, due to the location of the outfall head preparatory dredging (approximately 1.4 km offshore in the Tees Bay) and the small size of the area to be dredged, this activity is considered highly unlikely to increase suspended solids concentrations within the Tees Estuary. Therefore, even if it is necessary to undertake dredging at the outfall head concurrently with dredging at other developments in the River Tees, there is considered to be no risk of a cumulative impact. As stated in paragraph 14.9.21 even if piling activities at potential cumulative developments within the Tees Estuary were to overlap with pin piling and dredging as part of the Proposed Development in the Tees Bay, due to the separation distance there is not considered to be the potential for these activities to result in a temporary acoustic barrier in the River Tees that would impede migratory fish movements. Also, while cumulative project activities producing underwater sound are possible, should this occur the likely impact zones will not overlap with the Proposed Development based on the separation distance between the respective activities.
BIO.1.10	Applicants	The Landscaping and Biodiversity Plan [APP-067] appears to cover issues described as being within Figure 1 of the Landscape and Biodiversity Strategy [APP-079]. Confirm the status of the Landscaping and Biodiversity Plan and indicate how it would be secured through the DCO.	It is confirmed that the plan provided [APP-067] was intended to be appended to the Landscape and Biodiversity Strategy [APP-079] as the figure identified as Figure 1. The Landscaping and Biodiversity Plan [APP-067] shows the locations where ecological enhancements can be provided to achieve the commitments given in the Landscape and Biodiversity Strategy [APP-079]. An updated version of the Landscaping and Biodiversity Plan [AS-189] was submitted as part of the Applicants change request. Requirement 4 of the dDCO (Landscaping and biodiversity protection management and enhancement) specifies that a landscaping and biodiversity protection plan must be developed, submitted and approved by the planning authority and clause (7) of this Requirement stipulates that "The plan submitted and approved ... must be in accordance with the principles of the indicative landscaping and biodiversity strategy". The Applicants are updating the

ExQ1	Question to:	Question:	Response
			definition of 'indicative landscaping and biodiversity strategy' at Deadline 2 to refer to both the strategy and plan documents submitted.
BIO.1.11	Applicants NE	Paragraph 4.3.1 of the Landscape and Biodiversity Strategy [APP-079] recognises that at the time of the application's submission there was no requirement for protected species licences. Is this still the position?	Yes this is still the position, subject to the findings of the confirmatory ongoing water vole and otter surveys. If necessary, following completion of those surveys, an updated Landscape and Biodiversity Strategy including protected species licensing requirements will be provided into examination at Deadline 5.
BIO.1.12	Applicants	Paragraph 4.4.3 of the Landscape and Biodiversity Strategy [APP-079] indicates that 'pre-construction surveys would be undertaken in accordance with the relevant DCO Requirements'. Which dDCO Requirement covers this matter? If it is R15 (which covers protected species) what about other habitats eg invasive species?	The requirement for pre-construction surveys is set out in Table 5A-6 in the Framework CEMP [APP-246] and would be secured under Requirement 4 of Schedule 2 of the draft DCO [AS-135].
BIO.1.13	Applicants	The Landscape and Biodiversity Strategy [APP-079] (paragraph 4.5.9) refers to an Invasive Species Management Plan indicating that its submission and approval will be secured by a Requirement of the dDCO. Where is this secured?	Table 5A-6 in the Framework CEMP requires that the CEMP to be discharged under Requirement 4 in Schedule 2 of the DCO [AS-135] must be accompanied by an Invasive Species Management Plan (ISMP) which would specify the measures and supervision necessary during construction to prevent the spread of the controlled weed species to new locations and must include biosecurity measures that will be put in place to reduce the spread of invasive non-native species.
BIO.1.14	Applicants	Section 4.6 of the Landscape and Biodiversity Strategy [APP-079] addresses tree works. Demonstrate where all of these controls including the preparation of an Arboricultural Method Statement are secured through the dDCO.	Section 4.6 of the indicative landscaping and biodiversity strategy [APP-079] sets out the arrangements for an arboricultural survey and arboricultural method statement. Requirement 4 in Schedule 2 of the dDCO [AS-135] specifies that the landscaping and biodiversity enhancement plan to be approved under limb 4) of the Requirement must be in accordance with the indicative landscaping and biodiversity strategy that contains the arboricultural measures. The dDCO submitted at Deadline 2 has been amended to specify that the landscaping and biodiversity protection plan under limb 4) of the Requirement must also be in accordance with the indicative landscaping and biodiversity strategy that contains the arboricultural measures.
BIO.1.15	Applicants	Paragraph 4.6.3 of the Landscape and Biodiversity Strategy [APP-079] refers to 'this Landscaping and Biodiversity Management and Enhancement Plan'. Please clarify the title of the document.	The document title should read Landscape and Biodiversity Strategy [APP-079]
BIO.1.16	Applicants IPs	It is stated in the Landscape and Biodiversity Strategy [APP-079] (paragraph 4.8.1) that habitats that would be temporarily lost or damaged during construction would be reinstated on a like-for-like basis in accordance with the requirements of the relevant landowner.	This refers to areas that may be required during installation of pipelines and utility connections, and for use as temporary construction laydown. Pending detailed design (e.g. final selection/micro-siting of pipeline routes/alignment) the precise requirements cannot be defined, but all are habitats that it is considered feasible to reinstate to their original condition within a period of less than 2 years

ExQ1	Question to:	Question:	Response
		Should this be secured through the dDCO? Does specifying the need to do this through the final CEMP address it adequately? IPs are also invited to respond to this question.	<p>(e.g. species poor grasslands). It is also considered that the specific land take needs to be confirmed before meaningful engagement can be undertaken on landowner specific requirements. Therefore, it is considered that this is best agreed prior to construction and that the mechanism for securing this via the Final CEMP is appropriate.</p> <p>The ExA is directed to the response to BIO.1.13. The measures set out in the Landscape and Biodiversity Strategy [APP-079] including the reinstatement of habitat lost or damaged during construction are already secured under Requirement 4 of Schedule 2 of the draft DCO [AS-135]. The landscaping and biodiversity protection plan must be submitted to and approved by the relevant planning authority prior to the commencement of each part of the authorised development (except for permitted preliminary works). Therefore this is a robust mechanism for ensuring habitat reinstatement associated with any construction stage loss or damage to habitats.</p>
BIO.1.17	Applicants	<p>Section 5 of the Landscape and Biodiversity Strategy [APP-079] addresses biodiversity no net loss and net gain.</p> <p>Bearing in mind that the Landscape and Biodiversity Strategy is to be a certified document, in the light of the enactment of the Environment Act please update section 5 (including footnote 1).</p>	The requested amendment will be provided at Deadline 5, and noting the comments above that the BNG requirements of the Environment Act will not apply directly to the Application.
BIO.1.18	Applicants	<p>Paragraph 5.1.6 of the Landscape and Biodiversity Strategy [APP-079] states that 'the indicative locations where the proposed enhancement measures will be provided are shown on Figure 1 (Areas 1 to 8)'.</p> <p>The Applicants are asked to provide Figure 1 within the Landscape and Biodiversity Strategy; (this appears to be provided as Landscaping and Biodiversity Plan [APP-067]).</p>	The Applicants confirm that Figure 1 within the Landscape and Biodiversity Strategy is the Landscaping and Biodiversity Plan [APP-067]. The requested amendment will be provided at Deadline 5.
BIO.1.19	Applicants	<p>It is stated that the indicative site layout includes an indicative location for a storm water attenuation pond with the intention being that the design of the pond will be agreed later as a Requirement of the DCO (paragraph 5.5.1. of the Landscape and Biodiversity Strategy [APP-079]).</p> <p>Demonstrate where and how this is secured in the dDCO.</p>	Requirement 3 of Schedule 2 of the dDCO [AS-135] specifies that the detailed design for each of the Work Nos (which encompasses any further development associated with the Work Nos as described in Schedule 1) must be submitted to and approved by the relevant planning authority. Requirement 3 further specifies that any approved development must be carried out in accordance with the approved details unless otherwise agreed with the relevant planning authority.
BIO.1.20	RCBC STDC/ Teesworks Estate Management Company	<p>A brief monitoring report will be prepared in each year and provided to RCBC and the Teesworks Estate Management Company as a record of compliance (paragraph 6.1.4 of the Landscape and Biodiversity Strategy [APP-079]).</p> <p>Are relevant parties content with this approach?</p>	N/A
BIO.1.21	Applicants	The assessment methodology for marine ecology follows standard guidelines from the Chartered Institute of Ecology and Environmental Management	The update of the CIEEM guidelines in 2022 relates to: "Additional wording highlighting the need for appropriate mitigation and compensation measures in

ExQ1	Question to:	Question:	Response
		<p>(CIEEM): Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater and Coastal and Marine (2019). A detailed methodology is presented in ES Appendix 12B: Ecological Impact Assessment Methods. It is noted the CIEEM guidelines were updated in 2022.</p> <p>Can the Applicants explain whether the updates introduced by the 2022 CIEEM guidelines would (if followed) result in any difference to the conclusions reached in the assessments undertaken for marine ecology based on the 2019 guidance?</p>	<p>accordance with the precautionary principle if a significant effect cannot be ruled out." The ecological impact assessment was prepared in accordance with the precautionary principle i.e. it was worst case. The minor amendment to the guidance does not affect the conclusions reached or the mitigation strategy. The mitigation strategy allows, for example, for top-up ecology surveys and inspections to address uncertainties (e.g. confirming species status at the time of construction).</p>
BIO.1.22	Applicants	<p>A combined Phase I and II intertidal benthic survey was undertaken in October 2019 in order to characterise the intertidal habitats and species present within the vicinity of the Proposed Development. Sampling consisted of a number of core and grab samples from intertidal, and subtidal areas. Following consultation with the Marine Management Organisation (MMO) and Cefas, a further six core samples were taken in February 2021 in the intertidal zone of Coatham Sands during low tide.</p> <p>Can the Applicants explain if the locations of the six further core samples taken in February 2021 for benthic ecology were agreed with MMO and Cefas?</p>	<p>Within the MMO advice, stating that an additional benthic survey should be undertaken, a very specific area was outlined within which the shallow subtidal samples should be taken (i.e. in the shallow subtidal zone in proximity to the proposed replacement outfall within the Water Discharge Connection Corridor).</p> <p>It was agreed with the MMO and Cefas, that a further six samples would be collected, which were taken on the 5th of February 2021. A follow-up consultation meeting was then held with the MMO and Cefas on the 11th of February 2021 where the NZT Project presented the location of the six samples and the initial results of the survey. Both the MMO and Cefas were satisfied with the location of the samples and results and no additional sampling was requested.</p>
BIO.1.23	Applicants	<p>The methodology for assessment of benthic ecology is detailed in ES Appendix 14D Subtidal Benthic Ecology [APP-320]. The subtidal benthic ecology surveys were undertaken in December 2019. The sampling stations were shown to the MMO prior to the surveys being undertaken. The locations of the surveys are shown on Figure 14D-1 of Appendix 14A. They are also shown together with the study area for benthic ecology on Figure 14-1: Benthic Survey Study Area and Sampling Locations [APP-167].</p> <p>Can the Applicants explain why sampling for benthic ecology was not undertaken in the vicinity of where the HDD is proposed to commence?</p>	<p>The use of HDD and the potential for the addition of a new outfall option represented a change in design after the completion of the benthic surveys. However, this design change was discussed with the MMO (who consulted with Cefas) on the 12th of December 2020.</p> <p>It was agreed with the MMO and Cefas that given the homogenous nature of the benthic habitat within Tees Bay and the addition of the Offshore Wind Farm data (Entec UK Limited, 2011), that there was sufficient information to characterise the habitat at this location. However, it was outlined that an additional six samples would be taken in the shallow subtidal, which were collected on 5th February 2021 (see BIO.1.22 response). Further analysis of the OWF benthic data is provided in Appendix 14D: Subtidal Benthic Ecology (Appendix F: OWF Data Analysis and Discussion).</p>
BIO.1.24	Applicants	<p>Section 14.2 of ES Chapter 14 [APP-096] describes the legislative and policy framework used to guide assessment work. It references the NPSs and the National Planning Policy Framework (NPPF). Paragraph 14.2.4 refers to NPS for Energy (EN-1) and summarises requirements from the NPS of relevance to the assessment. It is highlighted that paragraph 5.15 of the NPS relates specifically to water quality and resources and it therefore relevant to assessments on marine ecology. The UK MPS is also relevant to this project, as discussed in paragraph 14.2.45 of ES.</p>	<p>A draft version of the North East Marine Plan was published at the time of writing the DCO chapter 14 [APP-096]. The plan has now been formally approved and published and there are no changes in the adopted plan that are relevant to water quality and marine ecology. Therefore, the impact assessment is compliant and does not need to be reviewed or updated.</p>

ExQ1	Question to:	Question:	Response
		<p>Can the Applicants explain whether the formal adoption of The North East Marine Plan has any implications for the assessment of effects and where necessary provide updates to the assessments for marine ecology and nature conservation?</p> <p>Also see Question PPL.1.10.</p>	
BIO.1.25	Applicants	<p>The marine ecology assessment covers impacts during construction, operation and decommissioning. Section 14.5 of the ES [APP-096] states that a Surface Water Maintenance and Management Plan will be developed which will provide information relating to access and maintenance of Sustainable Drainage Systems and surface water features proposed.</p> <p>Can the Applicants explain the type of maintenance activities which are anticipated in the marine ecology study area and the impacts that could arise as a result?</p>	<p>Maintenance as part of the Surface Water Maintenance and Management Plan, would be focussed on the main drainage assets, which would be located on the main site. There is considered to be no routine maintenance works within the intertidal or subtidal zone, although there is potential for some routine visual inspection of the outfall.</p> <p>Any outfall inspections and maintenance activities are likely to be highly localised, short in duration, and temporary. Although a vessel may be required as part of these activities it would not represent a significant increase in vessel traffic considering that the navigational channel of the River Tees is nearby. Therefore, any disturbance effects as a result of NZT maintenance is considered to be negligible and not significant.</p>
BIO.1.26	Applicants	<p>ES Chapter 14 [APP-096] states that an Indicative Lighting Strategy [APP-078] has been prepared which demonstrates how lighting impacts ecological features. However, the Indicative Lighting Strategy only identifies designated sites and cross references are made to terrestrial ecology and ornithology, no reference is made to marine ecology. The Indicative Lighting Strategy does not contain any information regarding effects from lighting on plankton, marine mammals, fish or shellfish.</p> <p>Can the Applicants provide information regarding the impacts from lighting on marine ecology that are anticipated during construction, operation and maintenance on marine ecology?</p>	<p>The impact of visual disturbance, including artificial light, on fish and shellfish and marine mammals has been covered in 14.6.145 – 14.6.155 [APP-096].</p> <p>Construction working hours will generally be Monday to Friday 07:00 to 19:00 and Saturday 07:00 to 13:00 thereby offering marine ecological receptors respite from any disturbance. The construction of the outfall and CO₂ pipeline, both via trenchless crossings, may require working outside the above times. These crossings are likely to require the placement of an offshore jack-up barge (JUB) and support vessels in Tees Bay. Should night-time working be required deck lighting will be required, which is likely to result in some light spill into the marine environment. Such lighting can attract zooplankton, which may in turn attract planktivorous fish. However, the area of impact will be very small, limited to a few metres around each of the JUB and support vessels, and so the spatial disturbance would be minimal. The duration of the drilling works which may require night-time working is also short-term (days/weeks) and so the magnitude of the impact is considered to be negligible. Thus, the effect of artificial lighting on plankton is predicted to be not significant.</p>
BIO.1.27	Applicants	<p>ES Chapter 14 [APP-096] refers to Chapter 11: Noise and Vibration for impacts from vibration. However, no reference is made in ES Chapter 11 [APP-093] to impacts on fish or marine mammals from vibration created during construction, with the text referring back to Chapter 14.</p> <p>Can the Applicants outline the construction activities, such as use of HDD and pin piles which may create vibration and explain the impacts on marine ecology, including any potentially significant impacts.</p>	<p>ES Chapter 14 Marine Ecology and Nature Conservation [APP-096] relates to air-borne noise and vibration, for which there is no impact pathway to in-water receptors of fish and marine mammals, with the exception of seals that spend a significant period of time out of the water where air-borne sound and vibration can cause disturbance. The impact of air-borne sound and vibration on seals has been assessed in Chapter 14 [APP-096] (paragraph 14.6.133).</p>

ExQ1	Question to:	Question:	Response
			<p>The impact of underwater sound, and by implication vibration, from construction activities, such as pin piling and drilling on fish and marine mammals (cetaceans and seals) has been assessed in Chapter 14 [APP-096] (paragraph 14.6.64). Whilst some receptors, particularly fish, are known to be sensitive to particle movement (i.e. vibration), as well as sound pressure, there are no thresholds or means of monitoring vibration levels in the marine environment. Thus, the impact of underwater sound, which also includes particle movement, also applies to the effects of vibration. There may be some localised disturbance in fish, but the drilling activities will be temporary, short-term and intermittent and thus the effect is considered to be not significant.</p>
BIO.1.28	Applicants	<p>Paragraphs 14.6.43 to 14.6.46 of ES Chapter 14 [APP-096] discuss impacts from sediment deposition on subtidal habitats and communities. It is stated that water-based mud may be released but would not be expected to occur wider than 250 metres from the point source.</p> <p>Can the Applicants clarify the nature of the habitat which exists within 250 metres of the source of drilling from the micro boring machine in Tees Bay? What impacts would water based mud have on these habitats?</p>	<p>The subtidal habitat within the area consists of homogenous sand over a wide area including the area around the potential source of inert water based drilling mud (WBM). Any release of inert WBM (as part of the replacement outfall option - approximately 3 km south-east of Tees Mouth) would settle on the subtidal sand habitat. The exact volume of WBM to be released is unknown, but it is considered to be small. Any effects from the release of inert WBM would be highly localised and temporary and would not significantly alter the subtidal benthic community structure of the wider area.</p>
BIO.1.29	Applicants	<p>With regard to non-impulsive sound sources, paragraph 14.6.95 of the ES [APP-096] states that 'It is also likely that South Gare Breakwater may act as an acoustic shield to underwater sound which propagates from these construction activities'. No information is provided to explain this statement.</p> <p>Can the Applicants justify their assumptions regarding the statement of paragraph 14.6.95 of ES Chapter 14 [APP-096] that 'It is also likely that South Gare Breakwater may act as an acoustic shield to underwater sound which propagates from these construction activities'?</p>	<p>The underwater sound from non-impulsive sound sources in Tees Bay will propagate, radiating outwards in all directions of the water column from the sound source. Transmission loss, or decreasing energy, as the sound energy spreads out results in a reduction in sound intensity with increasing distance away from the source.</p> <p>The population of harbour seal resides in the Tees haul-out at Seal Sands, which is located approximately 2.5 km away and within the Tees River. Thus, seal movements will be concentrated around this area and routes out to sea where seals will travel for foraging expeditions, passing through the mouth of the estuary into coastal waters and beyond.</p> <p>The non-impulsive sounds taking place in Tees Bay are approximately 1 km away from the estuary mouth. Thus, the sound source will have been subjected to significant loss of energy at the point where seals may be emerging from the river and any individuals transiting into the river are likely to avoid any areas where construction is taking place and avoid entering the Tees Bay. The underwater sound modelling indicates that injury (Permanent Threshold Shift) (PTS) is only possible at very close proximity to the source and temporary hearing shift (TTS) would only occur if a seal stayed within the Bay for several hours (i.e. see 14.6.148).</p> <p>Where sound waves meet a hard surface such as the seabed, a sandbank, seawall, or similar, the sound will either be absorbed (for example where the seabed is composed of soft sediment) or will be reflected back from hard</p>

ExQ1	Question to:	Question:	Response
			<p>surfaces. The South Gare breakwater, a man-made feature at the northern end of Tees Bay, at the entrance to the river, is such a hard structure that will reflect sound waves back into the Bay, thereby reducing the sound propagation towards the mouth of the Estuary, where seals may be transiting between foraging grounds and their haul out site at Seal Sands.</p>
BIO.1.30	Applicants	<p>ES Chapter 14 [APP-096] states that the volume of marine traffic is not yet known. No specific information appears to be provided in Chapter 14 regarding vessel movements, including those required specifically for the offshore construction activities.</p> <p>Can the Applicants outline the number and type of vessel movements which will be required during construction?</p>	<p>The CO2 export pipeline and landfall construction will be trenchless down to mean low water springs. Therefore, there is not expected to be any marine traffic related to offshore activities within the boundary limits of this DCO. Specific to the landfall scope of work, it is currently anticipated that there will be a need for 4 vessels; Jack Up Barge, Support Vessel, Pipelay Vessel and Dive Support Vessel. This will be further defined as the detailed engineering design is progressed, but is likely to remain as a small number of vessels.</p> <p>At this stage of the Proposed Development it is too early to determine the volume of marine traffic for delivery of materials and equipment both in terms of number and vessel type. The project plans to utilise Redcar Bulk Terminal for the offloading of larger equipment, packages and modules. Vessels will be selected based on the berthing limitations of this facility and the cargo being transported. Port facilities and cargo/vessel volume for smaller road transportable items will be determined as the project progresses.</p> <p>The number of vessel movements required during construction will be low relative to the normal amount of vessel activity in the Tees and Tees Bay.</p>
BIO.1.31	Applicants	<p>Section 14.3 of ES Chapter 14 [APP-096] discusses the approach of the assessment methodology for marine ecology and how the significance criteria have been determined. It states that "A robust yet reasonable worst-case assessment of the impact pathways of the Proposed Development on marine ecology, using the 'Rochdale Envelope' approach"</p> <p>Paragraph 14.3.5 of ES Chapter 14 [APP-096] explains that the preferred direction of HDD is offshore to onshore and that a worst-case scenario would be HDD in an onshore to offshore direction. Can the Applicants explain why HDD in an onshore to offshore direction is considered worst case?</p>	<p>A key physical constraint for HDDs is consideration for the pre-welded pipeline string. The ES Chapter 14 [APP-096] considered an onshore to offshore HDD as the worst case as it would require additional vessels to support the pipeline string offshore prior to pulling it through the HDD bore. However, no additional spoil would be generated from an onshore to offshore HDD direction.</p>
BIO.1.32	Applicants	<p>A limitation has been identified regarding the assessment of effects of changes in the airborne soundscape on seals during the construction, commissioning and operational phases. It is stated that worst-case activities have been included within the assessments.</p> <p>Can the Applicants respond to comments raised in the RR from the MMO [RR-037] regarding the potential for effects from noise on migratory fish such as salmon.</p>	<p>As part of the response to the Relevant Representations (Deadline 1 Submission – 9.6 Applicants' Comment on Relevant Representation [REP1-045]), the response to section 6.3 Chapter 14 Marine Ecology and Nature Conservation Table 34.1: Marine Management Organisation RR and Applicants' response, "A precautionary approach has been taken when making the geometric spreading calculations, which can only give a rough approximation to actual spreading loss, particularly in a shallow coastal environment where the spreading model cannot account for the manner in which underwater sound interacts with a topographically complex seafloor. Environmental factors such as sediment conditions and seasonal stratification is not considered. The Sound</p>

ExQ1	Question to:	Question:	Response
			<p><i>Source Level (178 rms) used to calculate the potential Zones of Influence for dredging (TTS, for 12 hrs = 74 m) has been taken from literature sources (Greene, 1987; in Genesis, 2011). The distance within which TTS may occur requires an individual to remain in proximity to the sound source for 12 hrs, whilst for recoverable injury this time is 48 hrs. The fish with the highest hearing sensitivity are members of the herring family (Clupeidae) and are generally pelagic species that are highly mobile and wide-ranging and are expected to move away from the sound source. For behavioural disturbance, there is a lack of scientific information to provide quantitative thresholds and instead reference has been made to those provided by Popper et al. (2014), where qualitative impact criteria are provided in terms of relative risk (high, moderate, low) given for fish at three distances (near (N), intermediate (I), and far (F)) from the source. However, it is important to note that preparatory dredging in the Tees Estuary is no longer required. Dredging is only required to create a pocket around the existing outfall head in Tees Bay. This is in a worst-case scenario where the outfall head is replaced and fitted with a diffuser. These works will be away from the mouth of the River Tees and will be very short in duration and temporary."</i></p> <p>Although the above response refers to members of the herring family (Clupeidae) (which are considered to have the highest hearing sensitivity), this would be applicable to other species such as Atlantic salmon, which are a medium hearing sensitivity fish (as defined by Popper <i>et al.</i>, 2014). Any behavioural disturbance to these species would be expected to occur over shorter distances and therefore the above conclusions would still be considered relevant.</p>
BIO.1.33	IPs	<p>The ExA notes that the MMO has queried why the Tees South Bank Quarry has not been included in Table 24-12 of ES Chapter 24: Cumulative and Combined Effects</p> <p>Do IPs consider that any other developments should be considered in the marine ecology assessment of cumulative and combined effects and if so why?</p>	N/A
BIO.1.34	Applicants	<p>The EA has requested that if any dredging is to take place, that it should avoid the peak migration times for fish species, 1 July – 1 September.</p> <p>Can the Applicants comment on the implications of this working restriction for the Proposed Development?</p>	<p>Dredging may be required to create a pocket around the outfall head options in the Tees Bay, away from activities within the river. The extent of dredging will be temporary and small in extent. The sediment within the bay is sand and gravel and will resettle quickly (within hundreds of metres). Migrating fish, such as salmonids (which can show avoidance behaviour), would be travelling further north into the River Tees, away from the area of dredging and potential Zone of Influence.</p> <p>Therefore, it is considered that these activities would not result in a barrier to diadromous fish, based on the location of the outfall head options. Based on</p>

ExQ1	Question to:	Question:	Response
			<p>this, the Applicants do not agree that a seasonal restriction is required, or that dissolved oxygen should be monitored prior to and during the activities.</p> <p>The location and timings of any dredging will be included in a Marine Method Statement, which is to be prepared by the appointed contractor, and is secured in the Deemed Marine Licence by Condition 12 (1) of Schedules 10 and 11 of the Draft DCO [AS-135]. In addition, the Applicants agreed in a meeting with the Environment Agency on the 1 April 2022 that the Framework CEMP and Condition 12 (1) of Schedules 10 and 11 of the Draft DCO [AS-135] will be updated stating that the Environment Agency will be consulted on the sample plan and subsequent sample analysis.</p>
BIO.1.35	Applicants	Can the Applicants explain why there is no reference to a Marine Method Statement (as set out in Section 12 of the Deemed Marine Licence) within ES Chapter 14: Marine Ecology and Nature Conservation?	<p>A Marine Method Statement is not referenced within ES Chapter 14 [APP-096] because all of the mitigation proposed in Chapter 14 is documented in the Framework CEMP [APP-246].</p> <p>Once the exact nature of the work required to be known (for example, details of the job to be completed, sequence of operations, permit requirements and known hazards), a Marine Method Statement will be prepared in line with Condition 12 of the Deemed Marine Licences, with the contractor drawing on the information in the Framework CEMP [APP-246].</p>
BIO.1.36	Applicants	Can the Applicants explain whether effects from HDD use outside of standard working hours or for continuous use have been assessed in relation to effects on marine ecology?	<p>The HDD bores will be drilled typically 10m below the seabed, meaning that underwater sound effects are only expected at the start of the drilling in the preferred scenario (i.e. the HDD is to be drilled from approximately 3 km offshore). Continuous drilling has been assumed in the assessment in ES Chapter 14 [APP-096]. For the worst-case scenario, where the HDD is to be drilled from onshore to offshore, underwater sound effects will occur as the HDD emerges in the subtidal zone. This means that for the HDD bores, the source of sound will be very short-term and temporary. Furthermore, as the HDD drilling will be in soft sediment, the sound source levels as a result of this activity are expected to be low compared to other construction activities associated with the Proposed Development (such as the drilling of pin piles).</p> <p>Sound measurements made during a generic HDD operation, in shallow riverine water recorded a maximum unweighted Sound Pressure Level (SPL_{RMS}), of 129.5 dB re. 1µPa (Nedwell <i>et al.</i>, 2012²). The Proposed Development HDD breakout points will also be in shallow water where sound rapidly attenuates.</p>

² Nedwell, J.R., Brooker, A.G. and Barham, R.J., 2012. Assessment of underwater noise during the installation of export power cables at the Beatrice Offshore Wind Farm. Subacoustech Environmental Report, (E318R0106).

ExQ1	Question to:	Question:	Response
			<p>Thus, underwater sound generated by HDD will be very low, and does not pose a risk of injury or significant disturbance to marine mammals.</p> <p>Considering the short-term and temporary nature of the impact, any effects to marine ecology receptors (including marine mammals and fish and shellfish) from changes in underwater sound during construction (including outside of standard working hours) of the CO₂ Export Pipeline are predicted to be negligible.</p> <p>Refer also to the response to BIO.1.26</p>
BIO.1.37	Applicants	<p>Table 5A-8 of ES Appendix 5A: Framework CEMP [APP-246] contains details of mitigation measures which are required. With regard to monitoring, it is stated that this will be confirmed in the Final CEMP.</p> <p>Can the Applicants outline the kind of monitoring that is proposed to be included in the Final CEMP, with regards to marine ecology?</p>	<p>During construction, as outlined in Section 14.5: Development Design and Impact Avoidance of ES Chapter 14, Marine Ecology [APP-096], the standard JNCC Guidelines for geophysical surveys (JNCC, 2017) shall be adopted for the Proposed Development as good practice and design mitigation. This would include measures such as a marine mammal observation zone for visual monitoring, passive acoustic monitoring and a soft-start approach which would increase sound levels gradually, allowing any marine mammals, including seals, in the area opportunity to move away.</p> <p>All discharges to the marine environment will be compliant with relevant environmental quality standards (EQS). During construction, the monitoring set out in the Marine Pollution Contingency Plan, as described in the Final CEMP, will be implemented. Discharges during operations will comply with the Environmental Permit. Compliance during both construction and operation will be ensured through routine water quality monitoring.</p>
BIO.1.38	Applicants	<p>Detailed information regarding vessel movements is not yet known, including those which will be required during construction. It is possible that after vessel movements have been established, monitoring may need to take place to ensure there are no adverse effects to marine mammals.</p> <p>Can the Applicants explain if it will conduct vessel monitoring when carrying out the offshore works?</p>	<p>The works are primarily onshore and marine vessel movements will be required only for ALL movements, the works in Tees Bay for the trenchless crossings of Work No. 5B & 8 in the nearshore environment and the potential pin-pile drilling for the installation of a outfall head for Work No. 5A or 5B. However, these works are temporary and short term and are not predicted to require significant vessel movements. There will be some transiting of vessels to Tees Bay but this will represent a small number of vessels, expected to comprise a jack-up barge (JUB) and no more than a few support vessels. The JUB is likely to remain in one or two places during HDD operations, which are expected to last weeks to months. There will be movement of the JUB as it moves between pin pile drilling locations, but the area is very small, restricted to Tees Bay which is not a key area for marine mammals, and so construction movements will be restricted.</p> <p>In addition, all marine mammals in the Tees region are likely to be habituated to vessel traffic. The Port of Tees provides a clear navigational corridor of vessel activity with high numbers of vessels coming into and out of the estuary as demonstrated in section 20.4 of Part 1 of the Navigation Risk Assessment [APP-341]. The small increase in vessel movements associated with the marine works</p>

ExQ1	Question to:	Question:	Response
			is not expected to be distinguishable above background levels and monitoring is not necessary.
BIO.1.39	Applicants	Could the Applicants provide a draft or outline of the marine pollution contingency plan, which is identified in Condition 11(1)(a) of Schedules 10 and 11 Deemed Marine Licence (Project A and B) of the dDCO [AS-004]?	<p>Condition 11 of Schedules 10 and 11 (Deemed Marine Licences) of the draft DCO- [AS-135] requires that the construction environmental management plan must incorporate a marine pollution contingency plan to address the risks, methods and procedures to deal with any spills and collision incidents of the authorised development in relation to all activities to be carried out. Production of a draft/outline marine pollution contingency plan would be the responsibility of the contractor undertaking the works specific to the particular activities and potentially polluting materials/chemicals used. This is considered adequate protection and to ensure risks are managed / impacts avoided, and that there is no need for a draft or outline plan to be prepared at this stage.</p> <p>An example of a marine pollution contingency plan is included in Appendix BIO.1.39 in Document Ref 9.8. The example provided is the Temporary Operations Oil Pollution Emergency Plan (TOOPEP) for the drilling rig that is drilling a borehole for NEP in June 2022. The TOOPEP is created to meet regulatory requirements and bp's internal standards for marine pollution management. Plans similar to this TOOPEP will be developed for the vessels that require them for the Proposed Development.</p>
BIO.1.40	Applicants	<p>It is noted that the HRA report [AS-194/195] (notably Table 7.1) concludes that in-combination effects would not arise in relation to the York Potash Harbour Facilities and Dogger Bank Teesside A/ Sofia Offshore Wind Farm as the mitigation measures for the Proposed Development would fully address all effects on European sites.</p> <p>The Applicants are requested to identify the evidence which has been relied on to reach the conclusion there would be no residual effects which could lead to in-combination effects.</p>	<p>The evidence relied upon regarding the conclusion of no 'in combination' effect is contained within the Habitats Regulations Assessment (HRA) [AS-018] and [AS-194/195] for the Proposed Development:</p> <p>York Potash</p> <p>In Table 7.1 of the HRA [AS-194/195] the relevant impact pathways arising from the York Potash development given the nature of the works are identified to be:</p> <ul style="list-style-type: none"> • water quality impacts during construction / operation; • visual / noise disturbance to SPA / Ramsar birds and SAC mammals during construction/decommissioning / operation; • direct temporary habitats on designated habitats. <p>These are therefore the potential pathways for in combination effects. The following evidence informs the Applicant's conclusion that there will be no residual impacts of the Proposed Development:</p> <ul style="list-style-type: none"> • Water quality impacts – Paragraphs 6.1.47 – 6.1.49 of the HRA [AS-194/195] list the water quality measures that will be implemented to reduce the potential for adverse effects on water quality arising from the Proposed Development and these are expanded upon in Section 9.5 of the Surface Water, Flood Risk and Water Resources chapter of the ES [APP-091]. All are routinely deployed measures and are presented in good practice guidance as cited in paragraphs 9.5.8 to 9.5.15 of [APP-

ExQ1	Question to:	Question:	Response
			<p>091]. Irrespective of European site considerations, it is an offence under the Environmental Damage (Prevention and Remediation) (England) Regulations 2015 and the Environmental Permitting (England and Wales) Regulations 2016 to pollute waterbodies. Therefore, the measures to be deployed will prevent pollution from occurring, removing the potential for an in combination effect.</p> <ul style="list-style-type: none"> Disturbance during construction/decommissioning/operation – The noise modelling and associated mitigation for the Proposed Development as reported in paragraphs 6.1.1 to 6.1.21 of the HRA [AS-194/195] documents the evidence that noise from the construction or decommissioning of the Proposed Development would fall below the disturbance threshold of 70 dB agreed with Natural England. If that threshold is not exceeded there will be no disturbance. The only potential for an in combination effect with York Potash would be if the construction of the York Potash harbour facilities or the conveyor occurred at the same time as the works (particularly the CO2 Gathering Network, Work No. 6) for the Proposed Development and the noise footprint of the two projects overlapped, which could result in cumulative noise exceeding 70 dB. However, as cited in Table 7.1 of the HRA [AS-194/195], construction of York Potash is expected to occur 1-2 years before the Proposed Development and therefore no temporal overlap would arise and thus no in combination effect would arise. The Applicants for the Proposed Development are in regular discussion with the developer for York Potash and this will enable both developers to avoid any potential for in combination effects from construction taking place in the same location simultaneously. With regard to marine mammals associated with the Southern North Sea SAC, paragraphs 6.3.2 and 6.3.3 of the HRA [AS-194/195] document the standard measures that will be deployed to reduce the potential for significant noise disturbance of marine mammals due to the Proposed Development. Since the marine works for the Proposed Development are more than 3km from the works for the York Potash harbour there is no potential for any combined effect. Paragraph 4.3.3 of the HRA [AS-194/195] sets out the operational noise modelling for the Proposed Development which illustrates that noise levels will fall well below the 70dB threshold for disturbance. There is no potential for effects in combination with operation of York Potash Harbour as the SPA birds will not be disturbed by the Proposed Development and can reasonably be expected to be habituated to active harbours in the areas in which they congregate. Direct habitat loss - While some minor dredging for the outfall head (Work No. 5a) for the Proposed Development may be required, this will be very small in extent (less than 100m² according to paragraph 14.6.249 of [APP-096]) and physically widely separated from the dredging for the HFO berths, being approximately 1km off-shore. The impact on benthic habitat, while significant locally to the outfall head, would not be expected to be significant in the context of the wider availability of these habitats in

ExQ1	Question to:	Question:	Response
			<p>the area, and would not appreciably contribute to any 'in combination' loss of subtidal mudflat or sandflat.</p> <p>Dogger Bank Teesside A</p> <p>A potential for in combination effects (i.e. two schemes to affect the same European site) only arises if there is physical and temporal overlap between their impact risk zones. As identified in Table 7.1 of the HRA [AS-194/195], no residual, but individually insignificant, effects of the Proposed Development on European sites have been identified that would affect the same area as Dogger Bank Teesside A given the spatial and temporal separation between the schemes. The principal impact pathway from construction of Dogger Bank Teesside A will be associated with bird-strike or displacement of SPA birds using the marine environment due to the turbines both during construction and operation; a risk which does not exist for the Proposed Development where the only potential for disturbance is that relating to birds using inland habitats during construction. The construction windows for the two developments will not overlap. As noted in paragraph 14.9.5 of the Marine Ecology chapter of the ES [APP-096] 'the marine construction phase of the Dogger Bank Teesside A / Sofia Offshore Wind Farm (ID 4) is due to commence around March 2022 with commissioning and completion before the end of 2024'.</p>
BIO.1.41	NE	NE is requested to confirm if they agree with the conclusions of the in-combination assessment presented in section 7 of the Applicants' revised HRA Report [AS-194].	N/A
BIO.1.42	Applicants	<p>The ExA notes that NE has identified the potential for likely significant effects on the Teesmouth and Cleveland Coast SPA/ Ramsar site as a result of rock armouring around the proposed outfall [RR-026].</p> <p>The Applicants are requested to provide an updated version of the HRA Report which addresses this point</p>	<p>The next update of the HRA to be submitted at Deadline 3 will include a section on rock armour. This will conclude that although approximately 100 m² of subtidal sandflat would be lost due to the rock armour and outfall head, the introduction of rock armouring / scour protection will provide artificial reef habitat that will itself be colonised by flora and fauna. As such, there is not expected to be any net change in habitat for the prey species of the birds for which the Teesmouth and Cleveland Coast SPA and Ramsar site are designated. Therefore, the Teesmouth and Cleveland Coast SPA and Ramsar site are screened out from Appropriate Assessment regarding permanent habitat loss due to rock armour.</p>
BIO.1.43	Applicants	<p>The revised HRA Report [AS-194/195] states that likely significant effects from temporary habitat loss within the Teesmouth and Cleveland Coast SPA/ Ramsar site will be avoided through the use of HDD.</p> <p>The Applicants are requested to explain whether these measures constitute mitigation for the effects on the SPA/ Ramsar site and if so, why this matter has</p>	<p>Horizontal Direct Drilling is not being considered purely as mitigation that helps to avoid habitat loss of the SPA/Ramsar site, but also because it was the overall best environmental option in terms of protected species, other protected sites (notably the Teesmouth and Cleveland Coast SSSI which is designated for a range of habitats and species beyond those for which the SPA/Ramsar is designated, including sand dunes) and also amenity for users of the dunes and foreshore. It is, accordingly, an intrinsic part of the project (i.e. it is integral to the</p>

ExQ1	Question to:	Question:	Response
		not been considered in relation to potential adverse effects on the integrity of the SPA/ Ramsar site?	<p>design, delivery and operation of the project) and therefore can be considered at the screening stage of the HRA.</p> <p>NatureScot (formerly Scottish Natural Heritage) has published advice on this matter³ identifying that elements intrinsic to the project can be considered at the screening stage. Although NatureScot is not the statutory nature conservation advisor in England, the legislative requirements around HRA are identical in England and Scotland.</p>
BIO.1.44	Applicants	<p>The revised HRA Report [AS-194/195] does not identify any likely significant effects from visual disturbance for the Teesmouth and Cleveland Coast SPA/ Ramsar site. However, paragraph 6.1.18 of the report refers to mitigation for visual disturbance from the effects of the HDD bore under the Tees for the CO₂ gathering network.</p> <p>Could the Applicants confirm if they consider that likely significant effects would arise from visual disturbance to the bird populations of the SPA/ Ramsar site in the event that an HDD bore is required to cross the Tees?</p>	<p>The Applicants can confirm that this is an error in paragraph 4.2.9 of the HRA [AS-194/195] which erroneously states: '<i>no likely significant effect will arise due to visual disturbance</i>'. In fact the potential for likely significant effects through visual disturbance during construction in the absence of mitigation is identified to occur and is referenced elsewhere in Section 4.2 (Likely Significant Effects) and in section 6.1 of the Appropriate Assessment:</p> <ul style="list-style-type: none"> • Paragraph 4.2.6 of the HRA [AS-195/195] states '<i>Given that that the SPA / Ramsar is directly adjacent to the Teesworks Site, the water discharge area and the CO₂ Gathering Network, it is possible that construction/ decommissioning activities in any of these site areas could result in visual disturbance of the SPA's / Ramsar's waterfowl if it takes place during the passage or winter period (i.e. October to March inclusive), or to the nesting tern and avocet for which the SPA/Ramsar is designated if it takes place during the breeding period (i.e. March to June), depending on location</i>'. • Visual disturbance during construction is then <u>not</u> listed in section 5.2 '<i>impact pathways screened out</i>' • Mitigation for construction period visual disturbance is then referenced in paragraph 6.1.19, as noted by the ExA, and is specifically presented in the bullet list in 6.1.22 ('<i>Using visual screens (particularly when working in or near SPA / Ramsar pools and lagoons and / or Dabholm Gut, which forms part of the designation) for works associated with the CO₂ export pipeline and the CO₂ gathering network</i>'). • Paragraph 6.1.23 then states '<i>it is concluded that the construction phase of the Proposed Development will not result in adverse effects on the Teesmouth and Cleveland Coast SPA / Ramsar regarding visual and noise disturbance</i>'. <p>The amendment to paragraph 4.2.9, to bring it in line with the rest of the HRA, will be included in the updated HRA to be submitted at Deadline 3.</p>

³ Guidance Note - The handling of mitigation in Habitats Regulations Appraisal – the People Over Wind CJEU judgement | NatureScot (as Scottish Natural Heritage) (2019)

ExQ1	Question to:	Question:	Response
BIO.1.45	NE	NE is requested to confirm if they agree with the Applicants' conclusions regarding the effects of the proposed changes on European sites from all phases of the development, as presented in the revised HRA Report [AS-194/195].	N/A
BIO.1.46	NE	<p>The ExA notes the concerns expressed by NE in relation to potential adverse effects on the integrity of Teesmouth and Cleveland Coast SPA/ Ramsar site from increased nutrient and pollutant loading as a result of water discharges from the Proposed Development. Discharges from the Proposed Development could not proceed unless an environmental permit (which would also be subject to HRA) is issued by the EA.</p> <p>Given this additional control, NE is requested to explain why it considers it necessary for the DCO examination to also address this point?</p>	N/A
BIO.1.47	Applicants	Given that an assessment of the effects of discharging water into the Tees Bay during operation has not been undertaken, could the Applicants explain why they are confident that the discharges from the Proposed Development would not affect the qualifying features of the Teesmouth and Cleveland Coast SPA/ Ramsar site?	<p><u>Process/Cooling Water Discharges</u></p> <p>The Applicants have assessed the potential effects of thermal effluent discharge from the cooling water system on water quality in the Tees Bay. The Applicants are currently assessing the potential impacts on water quality (i.e. dissolved inorganic nitrogen concentrations) in both Tees Bay and the Tees Estuary of discharges of process water via either the existing or replacement outfall. The discharge modelling report will be submitted at Deadline 4. The HRA will then be updated to include reference to this assessment.</p> <p>Any process effluent treatment and disposal will also be regulated by the Environment Agency through the environmental permit in accordance with the use of BAT. Through the permit, the operator will need to demonstrate to the Environment Agency that any discharged water into the receiving waterbody is appropriately treated, tested and managed so as to not give rise to unacceptable pollutant levels in the receiving environment.</p> <p><u>Foul Discharge</u></p> <p>The Applicants assume that BIO.1.47 is a reference to paragraph 4.3.15 of the revised HRA which states that '<i>In contrast to the construction /decommissioning phase, once operational the Proposed Development would provide staff with toilets that are connected to the mains. It is anticipated that wastewater will discharge into the local sewerage system for treatment at Marske by the Sea WwTW. Therefore, the Proposed Development is likely to increase the volume of treated wastewater discharged into local waterbodies that are sensitive to changes in water quality. Typically, wastewater effluent is considered not to negatively impact European sites if it can be accommodated within the consented headroom of WwTWs, which is regulated by the Environment Agency's Review of Consents process. This is because the headroom is</i></p>

ExQ1	Question to:	Question:	Response
			<p><i>apportioned considering the qualifying features of the relevant European sites, ensuring that there are no adverse effects'.</i></p> <p>The statement that the nutrient status of European sites would be protected provided effluent was within the headroom of the consent for the relevant WwTW was present in the draft versions of the HRA shared with Natural England. However, post the Applicants' submission, Natural England have identified a new concern over nutrient levels in the SPA/Ramsar site. and therefore nutrient neutrality was not specifically addressed in the submitted HRAs [AS-018/194/195].</p> <p>The Applicant has submitted an initial Statement of Common Ground with Natural England at Deadline 1 [REP1-010] and is actively working with Natural England to agree the approach to the assessment of impacts of relevant nutrients via the SoCG process.</p>
BIO.1.48	NE	<p>NE is requested to clarify the correct qualifying features of the Northumbria Coast SPA. The SPA citation lists the Arctic tern (<i>Sterna paradisea</i>) as a qualifying feature, but the conservation objectives do not.</p> <p>Could NE advise on this point and confirm if the applicant has identified the correct features in their HRA Report?</p>	N/A
BIO.1.49	NE	<p>Could NE confirm if it is appropriate to use the conservation objectives for the Teesmouth and Cleveland Coast and Northumbria Coast SPAs in the assessment of the Ramsar sites which share the same qualifying features and boundaries?</p>	N/A
BIO.1.50	Applicants	<p>In the event that the vantage point monitoring referred to in para 6.1.12 of the revised HRA report [AS-194/195] shows that birds are being disturbed, what action would then be taken to address the effects of the disturbance?</p>	<p>The Applicants believe the reference to paragraph 6.1.12 is actually a reference to paragraph 6.1.13 of the revised HRA [AS-194/195] which states <i>'Notwithstanding the fact that noise levels will be well below 70dB, in addition to the installation of a noise barrier, simultaneous vantage point bird monitoring will be undertaken if HDD is due to occur during November to March in order to confirm the absence of disturbance events'.</i></p> <p>HDD is a low impact methodology and disturbance will be as low as reasonably practicable, however, as a precautionary approach monitoring will be carried out from one or more locations (as required and to be determined by the ecological clerk of works (ECoW) in consultation with an ornithological expert if necessary) simultaneously to detect bird responses and to determine the level of such responses to artificial stimuli resulting from construction activities occurring within 250m of birds for which the Teesmouth and Cleveland Coast Ramsar, SPA and SSSI are notified.</p>

ExQ1	Question to:	Question:	Response
			<p>There is no specific guidance or thresholds on what constitutes disturbance, therefore this would be based on the professional judgement of the ECoW and/or specialist ornithologist. In the unlikely event that a disturbance event was considered to have occurred, there would first be a judgment taken as to whether such disturbance was significant and was triggered by any aspect of the works. This is because a single disturbance event would not constitute an adverse effect on the integrity of the SPA/Ramsar site; it would require a pattern such as:</p> <ul style="list-style-type: none"> • Repeated temporary cessation of feeding • Complete cessation of feeding (one off or occasional temporary short-lived cessation of feeding accompanied by a “heads up” response would be acceptable) • Birds abandoning a feeding area or being flushed in any way from a feeding area • Birds abandoning a roost • Birds showing alarm or distress behaviours (including but not restricted to alarm calling, anti-predator display or physically moving away from the source of the stimulus) <p>If necessary, consideration would be given to changing the plant used as necessary (e.g. for quieter plant), further enhancing the mitigation such as through additional shielding to reduce noise and visual impact or temporary cessation of the noisiest work activity. The appropriate course of action would be decided in consultation between the client, the contractor(s) and the appointed ECoW.</p>
BIO.1.51	Applicants	<p>The ExA notes that the drainage system for the operational phase of the Proposed Development would be designed at the DCO post-consent stage.</p> <p>The Applicants are requested to explain why it is confident that an adequate drainage system can be designed with reference to appropriate supporting evidence.</p>	<p>It is normal practice that a Drainage Basis of Design (BOD) will be developed during the FEED. The Drainage BOD will be developed in accordance with the preliminary requirements for the Proposed Development which are set out in 6.29 ES Vol I Chapter 9 Surface Water, Flood Risk and Water Risks [APP-091] and Surface Water Drainage Plan [AS-186].</p> <p>The Drainage BOD will detail:</p> <ul style="list-style-type: none"> • Water volumes for all stream types (process, contaminated and clean water), expected pollutants and treatment • Discharge flows • Storage requirements (volumes and types) • Proposed SuDS for runoff water • Conveyance requirements (pumping, gravity) • Spent fire water management • Event management (for instance 100 year event) <p>Discharge rates will be agreed with Local Lead Flood Authorities and water quality agreed with the Environment Agency. The FEED design will then be</p>

ExQ1	Question to:	Question:	Response
			<p>further developed during Detailed Design when specific technology and manufacturers will be selected and the design refined specific to the equipment to be installed.</p> <p>Assurance is further provided by Requirement 11 in Schedule 2 of the Draft DCO [AS-136] which prevents any part of the authorised development commencing until details of the temporary surface and foul water drainage systems, including means of pollution control in accordance with the construction environmental management plan and a management and maintenance plan to ensure that the systems remain fully operational throughout the construction of the relevant part of the authorised development have, for that part, been submitted to, and after consultation with the Environment Agency, lead local flood authority and relevant internal drainage board, approved by the relevant planning authority.</p> <p>Any process effluent treatment and disposal and site drainage will also be regulated by the Environment Agency through the environmental permit in accordance with the use of BAT set out in the relevant BAT guidance document (Large Combustion Plant BReF). The operator will need to demonstrate to the Environment Agency that no loss of containment could occur that could give rise to pollution entering controlled waters, either through the drainage system or via the ground and groundwater.</p>
BIO.1.52	Applicants	<p>Para 6.1.47 of the HRA Report [AS-194] identifies the mitigation measures for water quality effects that would protect the integrity of the Teesmouth and Cleveland Coast SPA/ Ramsar site. One of these measures is the minimisation of surface water or groundwater into the ponds on Coatham Dunes during construction and decommissioning.</p> <p>The Applicants are requested to explain how delivery of this measure has been secured in the dDCO.</p>	<p>Pond 14 was the only open water identified during surveys in the dunes, with all other areas that may have been ponds having become heavily vegetated. Given that they were dry during autumn and winter when groundwater recharge should be occurring, then it would seem likely that they are dry all year round. Furthermore, the walkover indicated that the ponds are found within historic slag deposits which are likely to be relatively impermeable and allow little groundwater interaction. Therefore, the only pond that is considered to be potentially impacted would be Pond 14.</p> <p>Delivery of mitigation measures to protect water quality of all waterbodies is secured under Requirement 16 of Schedule 2 of the draft DCO [AS-135] which requires that the construction environmental management plan (CEMP) must be in accordance with the Framework CEMP [APP-246]. The Framework CEMP specifies measures presented in Table 5A-3: Surface Water, Water Recourses and Flood Risk that must be incorporated in the CEMP discharged under Requirement 16. These are standard measures during construction to manage runoff and dewatering. Water quality monitoring is also being proposed within the Water Management Plan which is referenced in the Framework CEMP and that must be appended to the CEMP discharged under Requirement 16.</p>
BIO.1.53	Applicants	The air quality assessment in ES Chapter 8 [APP-090] has identified a potential air quality impact on coastal habitats including sand dune and saltmarsh habitat	Teesmouth and Cleveland Coast Ramsar site is not designated for any habitats (such as sand dune and saltmarsh) but rather for its bird interest. The air quality

ExQ1	Question to:	Question:	Response
		<p>for which the Teesmouth and Cleveland Coast Ramsar and SSSI and the Teesmouth National Nature Reserve are designated, and which support the interest features of the SPA. However, paragraph 9.7.143 of Appendix 9C [APP-254] and 6.1.28 of the HRA report [AS-018] states that frequent tidal washing would rapidly disperse nitrogen deposits rendering any potential effects negligible.</p> <p>What is the extent of the tidal washing compared to the protected area? If some of the area is not regularly inundated, what are the implications for the extent of the effects on the protected sites?</p>	<p>ES Chapter [APP-090] presents the calculations as to whether the critical loads for a given habitat are likely to be exceeded and notes that any exceedance means the potential for an effect to exist. It is then for the ecological assessment to interpret the air quality data within the context of the distribution of SPA and Ramsar birds and their use of that habitat to determine if an actual adverse effect on integrity is likely to arise. Paragraph 8.8.3 of Air Quality Appendix 8B (Operational Assessment) [APP-248] reflects this stating that '<i>depositional impacts of nutrient nitrogen are above the insignificance threshold at the Teesmouth and Cleveland Coast SPA. Further interpretation and discussion of these impacts is provided in the Habitats Regulations Assessment Report</i>'.</p> <p>Paragraph 6.1.35 of the HRA [AS-194] states that '<i>The area of peak nitrogen deposition comprises intertidal mud- and sandflats in the Coatham Dunes/Sands. However, parts of this area are subject to frequent tidal washing, rendering them less sensitive to the impacts of nitrogen. Most notably from the point of view of Appropriate Assessment, the area to the north of the PCC Site is not used by nesting terns or avocets (the two species groups for which the SPA is designated that are potentially sensitive to nitrogen deposition on their habitats)</i>'. Therefore, it is important to note that tidal washing is not the sole or main reason for the submitted HRA [AS-194] to conclude no adverse effects on integrity, with the main reason being the patterns of use of the SPA/Ramsar by those qualifying birds that could be sensitive to atmospheric nitrogen deposition and their absence from the area north of the PCC Site (i.e. Coatham Dunes/Sands).</p> <p>Tidal washing occurs up to the line of Mean High Water (and sometimes above) and occurs daily. Therefore, the entire intertidal zone is regularly washed. The main impact of this washing is less that it would remove deposited nitrogen (although that may occur) but that the subjecting of the foreshore to saline inundation will significantly restrict the ability of undesirable vegetation that is responsive to atmospheric nitrogen to establish or thrive. However, irrespective of the extent of tidal washing since the two SPA/Ramsar species which are sensitive to nitrogen deposition on their habitat (terns and avocet) do not use the affected area, no adverse effect on those species (and thus the integrity of the SPA or Ramsar site) will arise.</p>

5.0 CLIMATE CHANGE

ExQ1	Question to:	Question:	Response
CC.1.1	Applicants	<p>Paragraph 5.6.2 of the Planning Statement [APP-070] refers to the latest Climate Change Committee (CCC) progress report in 2020. A further progress report was presented to Parliament on 25 June 2021.</p> <p>What are the implications of the progress report for the Proposed Development?</p>	<p>The Climate Change Committee (CCC) progress report presented to Parliament in June 2021⁴, and the Government's response to it, demonstrate a strong continuing need for and policy support for the Proposed Development, as summarised below. Reference should also be made to the revised Planning Statement submitted at Deadline 1 [REP1-004]</p> <p>The CCC progress report welcomed the adoption of the 6th Carbon Budget, the first to align with the UK's net zero by 2050 target. However, while acknowledging that Government had increased its efforts towards achieving net zero over the previous twelve-month period, it noted there was still a substantial gap between the commitments being made and the policies in place to deliver these commitments.</p> <p>The CCC note the Government's Ten Point Plan and Energy White Paper which included headline commitments to take forward carbon capture utilisation and storage including a commitment to support at least one power CCUS project by 2030. Currently, only new power plants above 300 MW are required to be CCS-ready. The White Paper commits to removing this threshold.</p> <p>A key recommendation to Government being made by the CCC is the unabated gas phase-out. The CCC state:</p> <p><i>"The Government should commit to phasing-out the use of unabated gas for electricity generation by 2035, subject to ensuring security of supply. It should publish a comprehensive long-term strategy in 2021 for achieving this. That should include through developing and deploying CCUS and hydrogen in electricity generation, and by ensuring new gas plant are properly CCUS- and/or hydrogen-ready as soon as possible and by 2025 at the latest."</i></p> <p>In the Government's response to the CCC report⁵, which included the Net Zero Strategy, the Government made a number of further recommendations and commitments to support CCUS including:</p> <ul style="list-style-type: none"> - Design industrial decarbonisation policies to support and create jobs, especially in regions with reliance on industrial jobs, noting that modelling estimates that CCUS and hydrogen could enable 50,000 jobs through the

⁴ <https://www.theccc.org.uk/wp-content/uploads/2021/06/Progress-in-reducing-emissions-2021-Report-to-Parliament.pdf>

⁵ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1026734/government-response-ccc-progress-report.pdf

ExQ1	Question to:	Question:	Response
			<p>Net Zero Strategy: Building Back Greener⁶ across industry, power, and the transport and storage network.</p> <ul style="list-style-type: none"> - Publish a plan for reaching an emissions intensity of 50 gCO₂/kWh by 2030, with a total of around 350 TWh of low carbon generation. There is a commitment to the Dispatchable Power Agreement for power CCUS, and an aim to deploy at least one plant in the mid-2020s through the CCUS Cluster Sequencing process. - A commitment to phasing out unabated gas generation by 2035, subject to ensuring security of supply with CCUS enabled generation playing a role.
CC.1.2	Applicants	<p>Page 181 of the CCC progress report in 2020 states that 'UK industry can be decarbonised to near-zero emissions without offshoring and that government must implement an approach to incentivise industries to reduce emissions through energy and resource efficiency, fuel switching and CCS, amongst other measures.'</p> <p>The Applicants are asked to comment on the statement above in the context of the Proposed Development.</p>	<p>The Project Need Statement [AS-015] identifies the need for fuel switching and CCS and quotes page 181 of the CCC progress report (para 3.5.11). Both of these are enabled by the Proposed Development, which will provide a means for regional industries to decarbonise without offshoring (i.e. without the relocation of industry overseas).</p> <p>The BEIS CCUS Cluster Sequencing process provides an incentive mechanism to regional industrial emitters to reduce emissions. An update on this process was included in Item 4 of the Applicants' Written Summary of their Oral Submissions at Issue Specific Hearing 1 (ISH1) [REP1-035]. This was submitted by the Applicants at Deadline 1.</p> <p>The Proposed Development is therefore consistent with and complementary to the aims of the CCC progress report.</p>
CC.1.3	Applicants	<p>It is stated in paragraph 4.3.21 of the ES [AS-019] that the carbon capture plant will be designed to capture up to approximately 95% of the CO₂ emitted from the CCGT equating to 1.7- 2 million tonnes of CO₂ annually. The minimum capture efficiency will be 90%.</p> <p>What are the constraints on achieving greater efficiency?</p>	<p>The design is aiming to achieve 95% at steady operating conditions but an annual average of 90% is the minimum expectation. The Proposed Development, as a First Of A Kind deployment of CCS technology in a dispatchable gas-fired power station, will help to demonstrate to the industry the technical viability of achieving greater than 90% capture rates. As the climate change assessment in the ES needs to be based on a worst case assumption, 90% has been used as the basis for that assessment. Certain transient operations, such as those encountered during start-up and shut-down, introduce challenges with respect to maintaining the steady state capture rate. The project intends to address these challenges through the detailed design process so as to optimise the capture efficiency of the plant and which will be of wider benefit to future carbon capture projects.</p>

⁶ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1033990/net-zero-strategy-beis.pdf

ExQ1	Question to:	Question:	Response
CC.1.4	Applicants	<p>Paragraph 7.4.32 of the ES [APP-089] states that the Proposed Development would contribute to the achievement of carbon budgets.</p> <p>Explain the extent to which the Proposed Development would contribute to decarbonisation of the industrial sector and meeting national carbon budgets.</p>	<p>The UK Net Zero Strategy³ identified that in 2019, industry was responsible for 15% of CO₂ emissions in the UK. Decarbonising industry is therefore critical if the UK is to transition to a low carbon economy in line with national carbon budgets and meet the 2050 net zero target.</p> <p>The Net Zero Strategy identified that CCUS is one of a number of technologies that will need to be implemented if the UK is to meet its Carbon Budget trajectories. In the BEIS report 'Carbon Capture, Usage and Storage', May 2021, it is stated that <i>"Carbon capture, usage and storage (CCUS) is vital to decarbonising industries, such as the chemicals, refining, and cement sectors."</i></p> <p>The Net Zero Strategy has set out an ambition to reduce emissions from industry by 63-76% by 2035 through resource and energy efficiency, fuel switching, and CCUS deployment, starting with industrial clusters and major emitters, such as the steel sector. The plan further sets out an overall ambition to deliver 6 MtCO₂ per year of industrial CCUS by 2030, and 9 MtCO₂ per year by 2035.</p> <p>To meet these targets The UK Government's Net Zero Strategy has set out commitments to capture between 20-30MtCO₂⁷ by 2030 from four CCUS clusters of which Teesside is one. Overall, CCUS could provide 37% of the total abatement potential in energy-intensive industries (EIIs) by 2050 including iron and steel, cement, chemicals, and oil refining⁸.</p> <p>The Proposed Development will enable decarbonisation of local industry, provide dispatchable low carbon power generation and also facilitate future hydrogen production in the Teesside area. It will help to decarbonise carbon-intensive industries on Teesside and enable their continued operation with significantly reduced carbon footprints.</p>
CC.1.5	Applicants	<p>Is it intended to undertake a cumulative impact assessment of life-cycle carbon emissions for the Proposed Development and NZT project as a whole? If not, please justify why this is not being done.</p>	<p>The Institute of Environmental Management and Assessment (IEMA) guidance for assessing greenhouse gas (GHG) emissions and evaluating their significance⁹ states the approach to cumulative effects assessment for GHGs differs from that undertaken for many other EIA topics where for the latter only projects within a geographically bound are considered.</p>

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⁸ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/759637/beis-ccus-action-plan.pdf

⁹ <https://www.iema.net/resources/blog/2022/02/28/launch-of-the-updated-eia-guidance-on-assessing-ghg-emissions>

ExQ1	Question to:	Question:	Response
			<p>The volume of GHG emissions in the atmosphere and the resulting impact on climate change is affected by all sources of GHG emissions globally. As such GHG emission impacts do not affect a definable localised area.</p> <p>In the context of the climate assessment presented (Chapter 21: Climate Change [APP-103]), the method used to contextualise GHG emissions from the Proposed Development, is inherently cumulative as it considers emissions from the Proposed Development within the boundaries set for the UK carbon budgets.</p> <p>The GHG emissions associated with the offshore infrastructure will arise from the construction and operation of that infrastructure. These emissions will be assessed in the offshore EIA. Operational emissions from the offshore infrastructure are expected to be minimal.</p> <p>The assessment in the ES of the Proposed Development also does not account for the very substantial potential carbon dioxide emissions reduction associated with industrial emitters connecting into and utilising the CO2 gathering network (i.e. facilitated by the Proposed Development).</p> <p>Notwithstanding the above, in order to assist the ExA and Secretary of State, the Applicants will provide information on the carbon emissions of the Proposed Development and the offshore transport and storage works, and anticipate being able to provide this by Deadline 5.</p>

6.0 COMPULSORY ACQUISITION AND TEMPORARY POSSESSION

ExQ1	Question to:	Question:	Response
CA.1.1	Affected Persons (APs)	Are any APs aware of any inaccuracies in the Book of Reference (BoR) [AS-139], Statement of Reasons (SoR) [AS-141] or Land Plans [AS-146]? If so, please set out what these are and provide the correct details.	N/A
CA.1.2	Applicants	<p>Please will the Applicants ensure that the BoR [AS-139], SoR [AS-141] and Land Plans [AS-146] are:</p> <ul style="list-style-type: none"> i) kept fully up to date with any changes and the latest versions submitted at each Deadline, starting from Deadline 2 (with a final version of these documents submitted at Deadline 11), shown in the Examination timetable together with an explanation of the reasons for each change; ii) supplied in two versions at each Deadline, starting at Deadline 2 (with a final version of these documents submitted at Deadline 11), the first being the up-to-date clean copy and the second showing tracked changes from the previous version; and iii) supplied with unique revision numbers that are updated consecutively from the application versions, clearly indicated within the body of each document and included within the electronic filename; and the dDCO, is updated accordingly, including Schedules 9 and 12. 	Where there are changes, to the BoR [AS-139], SoR [AS-141] or Land Plans [AS-146], the Applicants confirm that it will keep the ExA fully updated and provide the information requested.
CA.1.3	Applicants	<p>Part 2 of the BoR [AS-139] lists 'Category 3' persons. The Applicants are asked to:</p> <ul style="list-style-type: none"> i) provide further detail/ justification of how you have identified such Category 3 parties for the purposes of the BoR; ii) clarify if there are there any other persons who might be entitled to make a relevant claim if the DCO were to be made and fully implemented and should therefore be added as Category 3 parties to the BoR? <p>This could include, but not be limited to, those that have provided representations on, or have interests in:</p> <ul style="list-style-type: none"> • noise, vibration, smell, fumes, smoke or artificial lighting; • the effect of construction or operation of the Proposed Development on property values or rental incomes; • concerns about subsidence or settlement; • claims that someone would need to be temporarily or permanently relocated; • impacts on a business; • loss of rights, eg to a parking space or access to a private property; • concerns about project financing; • claims that there are viable alternatives; or • blight. 	<ul style="list-style-type: none"> i) The Applicants identified various parties with interests in land who have potential Category 3 interests, in particular parties who rely on roads which are within the Site boundary (and who do not own land within the Site) and whose access could be affected by the Proposed Development. Examples include parties who use Seal Sands Road to access the Seal Sands area. These parties have been included in relevant plots in the Book of Reference (Document Ref. 3.1) in Parts 1 and 2 (as relevant) as occupiers (in respect of access) or parties benefitting from a right of access. In addition, the Applicants have also included land where South Tees Development Corporation (STDC) can potentially make a claim under Section 10 of the Compulsory Purchase Act 1965 (compensation where satisfaction not made for the taking, or injurious affection, of land subject to compulsory purchase). This land can be defined as plots owned by STDC that contain an access road or track. ii) No potential claimants were identified who could potentially make a 'relevant claim' (such as pursuant to Part 1 of the Land Compensation Act 1973). This was based on the absence of residential properties and businesses in the vicinity of the site. Any potential nuisance effects such as noise, vibration and dust generation during construction and operation of the Proposed Development will not account towards Part 1 claims.

ExQ1	Question to:	Question:	Response
CA.1.4	RCBC STBC	Are the RPAs in their role as the Local Planning Authority and the Highway Authority aware of: i) any reasonable alternatives to CA or TP sought by the Applicant; and ii) any areas of land or rights that the Applicant is seeking the powers to acquire that they consider would not be needed?	N/A
CA.1.5	Applicants	Are any land or rights acquisitions required in addition to those sought through the dDCO before the Proposed Development could become operational?	<p>Access rights are required with CF Fertilisers Limited ("CFL"), Suez Recycling and Recovery UK Limited ("Suez"), and Sembcorp Utilities UK Limited ("Sembcorp").</p> <p>CFL access would be required if they are selected by BEIS as a Phase 2 emitter, this would be to access the end of Work No.6. Following selection by BEIS, a connection agreement would be negotiated between the T&Sco and CFL. As part of this agreement, appropriate access rights would be secured in order to construct, commission and operate Work No. 6 and its connection to CFL's works.</p> <p>Suez access is required to construct, commission and operate Work No. 6 as the Applicants cannot access this land from Belasis Avenue (B1275) which is within the Order Limits. As per the Compulsory Acquisition Schedule [REP1-044] Heads of Terms have been agreed between the Applicants and Suez, including appropriate access rights. In addition, Suez are a potential Phase 2 emitter, in the event they are selected by BEIS the subsequent connection agreement between Suez and the T&Sco would include appropriate access rights.</p> <p>Sembcorp access is required for the Applicants to access the Dabholm Gut / Bran Sands area for the construction, commissioning and operation of Work No. 2A, 2B, 5C & 6. As per the Compulsory Acquisition Schedule [REP1-044] Heads of Terms have been agreed between the Applicants and Sembcorp, including appropriate access rights. The Applicants also have access rights under Work No. 10 in order to develop an access route from Teesworks to Dabholm Gut / Bran Sands area.</p> <p>The dDCO otherwise includes all of the land rights required to construct and operate the Proposed Development.</p>
CA.1.6	Applicants	The Applicants are asked i) To clarify how you have had regard to the Equalities Act 2010 in relation to the powers sought? ii) Have any AP's been identified as having protected characteristics? If so, what regard has been given to them?	<p>i) The primary duty under the Equality Act 2010 is the public sector equality duty (PSED) under section 149 which applies to "public bodies". The term "public bodies" is defined by reference to Schedule 19 of the Equality Act 2010. The Applicants are not a public body under Schedule 19 in order that the PSED applies to it. The Applicants acknowledge however that the ExA is required to have due regard to the PSED. The Applicants confirm that they are not aware of any concerns in relation to</p>

ExQ1	Question to:	Question:	Response
			<p>equalities in relation to the powers sought in the Development Consent Order, or in relation to the conducting of the pre-application consultation or the examination. The Proposed Development would not impact upon community facilities used by people with protected characteristics and is located well away from large population centres. Requirements are proposed in Schedule 2 of the DCO to establish a local liaison committee with secretariat support (Requirement 29) provided by the Applicants, and an employment, skills and training plan (Requirement 30) that will be monitored as part of its implementation. An Environmental Permit and various other third party consents would be needed to construct and operate the Proposed Development and this will ensure that impacts on the environment are acceptable and will not distinguish between human receptors on the basis of protected characteristics. The Applicants are equal opportunities employers and there is potential for any person to benefit from the jobs created by the scheme.</p> <p>ii) The Applicants have not identified any Affected Parties with protected characteristics under the Equality Act 2010. In any event there is no indication that any party with protected characteristics will be impacted differently from others as a result of the Proposed Development. i</p>
CA.1.7	All Affected Persons (APs)	<p>A number of RRs and Additional Submissions (ASs) [including but not limited to RR-001, RR-010, RR-012, RR-013, RR-014, RR-016, RR-017, RR-018, RR-019, RR-021, RR-022, RR-028, RR-030, RR-031, RR-032, RR-033, RR-034, RR-038 and AS-046] set out comments in relation to CA and TP.</p> <p>Over and above what has already been submitted in the RR's, are any APs aware of:</p> <ul style="list-style-type: none"> i) any reasonable alternatives to any CA or TP sought by the Applicant; or ii) any areas of land or rights that the Applicant is seeking the powers to acquire that they consider are not needed? 	N/A
CA.1.8	<p>Air Products (Chemicals) Teesside Ltd</p> <p>Anglo American Woodsmith Limited</p> <p>CATS North Sea Ltd</p>	<p>A number of APs in their RRs and ASs [including but not limited to RR-001, RR-010, RR-012, RR-013, RR-014, RR-016, RR-017, RR-018, RR-019, RR-021, RR-022, RR-028, RR-030, RR-031, RR-032, RR-033, RR-034, RR-038 and AS-046] set out comments in relation to CA and TP however in numerous instances it is unclear where their operations or rights are located.</p> <p>Please could the APs listed and any others who have commented:</p> <ul style="list-style-type: none"> i) supply a plan, overlaid with the NZT Order land, showing the location of their operations and plots affected; and ii) where possible, identify the general use of each affected plot. 	N/A

ExQ1	Question to:	Question:	Response
	CF Fertilisers UK Ltd Exolum Seal Sands Ltd Huntsman Polyurethanes (UK) Ltd Ineos Nitriles (UK) Ltd Ineos UK SNS Ltd North Tees Land Ltd (and North Tees Ltd and North Tees Rail Ltd) National Grid Electricity Transmission plc National Grid Gas plc Northern Powergrid (Northeast) plc Northumbrian Water Limited (NWL)		

ExQ1	Question to:	Question:	Response
	NPL Waste Management Ltd PD Teesport Ltd Redcar Bulk Terminal Ltd SABIC Sembcorp Utilities (UK) Ltd		
CA.1.9	Anglo American Woodsmith Limited	The Proposed Development includes land within the Order Limits of the York Potash DCO and the RR from Anglo American Woodsmith Limited [RR-014] highlights that limited information has so far been made available in order to progress the necessary Protective Provisions. Has the key information referred to now been made available to you, and if so can you provide further comments as necessary. You may wish to combine your answer with Question GEN.1.39. Also see question CA.1.8.	N/A
CA.1.10	CATS North Sea Ltd	RR-017 section 4 refers to plot 112, and section 7 refers to protective provisions in part 5 of Schedule 12 of the dDCO. CATS North Sea Ltd is asked to clarify how the acquisition of this plot could harm its current and future operations. In answering please provide further information to justify your comments regarding protective provisions – in what way are they inadequate and what are the risks? Also see question CA.1.8.	N/A
CA.1.11	INEOS Nitriles (UK) Ltd	RR-019 section 4 refers to protective provisions in part 8 of Schedule 12 of the dDCO, and paragraph 2.6 refers to the proposed temporary construction compound and effects on plots 122 and 123. Paragraph 5.2 acknowledges that discussions are ongoing and the concerns identified should be capable of being addressed through protective provisions and requirements. Can you: <ul style="list-style-type: none"> i) Provide an update on discussions with the Applicants on the above matters; ii) Provide any suggested amendments to the wording of the relevant protective provisions; iii) Provide a further explanation as to how the proposed construction compound would significantly affect your operations, and what alternatives have been offered to the Applicants; and 	N/A

ExQ1	Question to:	Question:	Response
		iv) Provide further comment regarding a time limit for decommissioning and why the matter needs to be within protective provisions. Also see question CA.1.8.	
CA.1.12	INEOS UK SNS Limited	RR-010 refers to the Breagh offshore gas field and onshore pipeline to Teesside Gas Processing Plan. It states that as currently drafted the draft DCO could significantly affect the rights held by INEOS and ONE-Dyas UK Limited. Can you: <ul style="list-style-type: none"> i) Clarify how the proposed creation of new rights for NZT might affect your operations; ii) Confirm if any of the Protective Provisions set out in Part 1 of Schedule 12 of the dDCO are relevant to you as a gas undertaker; iii) If Part 1 of Schedule 12 is insufficient and you require a bespoke Protective Provision please explain the reasons why. Also see question CA.1.8.	N/A
CA.1.13	Redcar Bulk Terminal Limited (RBT)	Section 5 of RBT's RR [RR-001] refers to alternatives to the Applicants' preferred offloading solution at the terminal. Can you: <ul style="list-style-type: none"> i) Provide information on your suggested alternatives and confirm if they have they previously been put to the Applicants; and ii) Provide comments on the Protective Provisions for RBT set out in Part 14 of Schedule 12 of the dDCO. Also see question CA.1.8.	N/A
CA.1.14	CF Fertilisers UK Limited	CF Fertilisers UK Limited [RR-018] refer to a potential new natural gas pipeline to their manufacturing facility at Billingham and the gas processing sites in the vicinity of plot 112, and notes at paragraph 3.3. that the current Protective Provisions for CF Fertilisers set out at Part 6 of Schedule 12 of the draft DCO do not explicitly provide for capacity to be retained within the pipeline corridor for this development or for the developments to be properly coordinated. Can you: <ul style="list-style-type: none"> i) Provide a plan of the route of the potential new natural gas pipeline in relation to the Order Limits; and ii) Provide an update of discussions with the Applicants regarding proposed amendments to Protective Provisions and requirements; and iii) Provide further details of your operations in terms of supply and production of CO₂; is waste CO₂ created; could it use CO₂ generated by the proposed development? Also see question CA.1.8.	N/A
CA.1.15	Air Products (Chemicals) Teesside Limited	Three separate RRs have been received from different divisions of Air Products plc [RR-021, 021a, 021b] setting out objections to the Protective Provisions. Can you: <ul style="list-style-type: none"> i) Clarify the reasons for the submission of three separate RRs and the nature of the different divisions of Air Products, and confirm if 	N/A

ExQ1	Question to:	Question:	Response
	Air Products Renewable Energy Limited Air Products Public Company Limited	Schedule 12 of the draft DCO should refer to all such listed companies or if the title of Part 4 is acceptable; and ii) If you remain unsatisfied with the wording of the Protective Provisions set out in Part 4 of Schedule 12 of the draft DCO please provide a suggested alternative wording. Also see question CA.1.8.	
CA.1.16	Network Rail Infrastructure Limited	RR-027 sets out that Network Rail would like the DCO to include their standard protective provisions. Can Network Rail: i) Confirm if Part 10 of Schedule 12 of the draft DCO meets your requirements in terms of Protective Provisions.	N/A
CA.1.17	National Grid Electricity Transmission plc (NGET) The Applicants	The NGET RR [RR-012] refers to a requirement for Protective Provisions to ensure that NGET's interests are adequately protected and to ensure compliance with relevant safety standards. It is also stated that a number of plots where NGET have fibre cable assets have not been referenced in the BoR [AS-139]. Can NGET: i) Provide comments on the Protective Provisions set out in Part 3 of Schedule 12 of the dDCO. Can the Applicants: i) Include the plots where NGET has fibre cable assets in the updated BoR.	i) Following receipt of asset information from NGET the Applicants have confirmed that plots 540a and 540c in the Book of Reference [AS-139] should include NGET fibre cable assets. These are included in the updated Book of Reference submitted at Deadline 2.
CA.1.18	Northern Powergrid (Northeast) plc	RR-030 indicates that Northern Powergrid require further information to enable them to adequately assess the impact of the Proposed Development on their network. Can you: i) Confirm if you now have the information you need to make a further assessment; and ii) Provide further comments as necessary on whether the Protective Provisions set out in Part 11 of Schedule 12 would be satisfactory.	N/A
CA.1.19	NWL	NWL's RR [RR-031] states that your technical team is assessing the impact on the access routes to their sewage works and discussions are ongoing with the Applicants regarding a number of details. Can NWL: i) Provide an update following your assessment and ongoing discussions; and ii) Provide details of your own set of Protective Provisions and reasoning for why those indicated by the Applicants in the dDCO are unsatisfactory and provide any suggested amendments. Also see question CA.1.8.	N/A

ExQ1	Question to:	Question:	Response
	North Tees Land Limited North Tees Limited North Tees Rail Limited	RR-016 / RR-022 paragraph 1 refers to the site boundary being more than 40 times larger than the project requires, paragraphs 5 and 10 refer to the multi-use service corridor, and paragraphs 2 and 6 suggest that current landholdings would be blighted. Can you: <ul style="list-style-type: none"> i) Clarify how the '40 times' figure was calculated; ii) Indicate the specific plots where you consider the order land is excessive; iii) Provide a summary of your current operations and future development plans and indicate how you consider that they would be blighted by the Proposed Development; and iv) Having regard to the protective provisions set out in Schedule 12 of the dDCO, could you clarify why you consider the rights would give rise to an unregulated pipe with no basis for control and protection? Also see question CA.1.8.	N/A
CA.1.20	PD Teesport Limited The Applicants	RR-033 refers to PD Teesport's status as a harbour authority and statutory undertaker, works to the Northern Gateway Container Terminal and access to South Gare break amongst other matters. Could PD Teesport Limited: <ul style="list-style-type: none"> i) Provide details of the Northern Gateway Container terminal – a location plan and approved layout plans, and an update on commencement of works; ii) Clarify why you consider the acquisition of plot 112 is unnecessary and identify the alternative vacant plot of land, with an explanation of why this would be preferable; iii) Provide reasoning as to why the Protective Provisions for PD Teesport set out in part 13 of Schedule 12 of the dDCO are unsuitable and provide an alternative wording and/or an update of any discussions with the Applicants on this matter; and iv) Confirm if there are any revisions to your comments regarding plots 224-225 following the changes submitted on 28 April. Also see question CA.1.8. Can the Applicants: <ul style="list-style-type: none"> i) Clarify the situation regarding the rights of access to Redcar Bulk Terminal, given that PD Teesport state at paragraph 2.16 that they appear not to have been recorded in the BoR. 	During the Applicants diligent land enquiries PD Teesport Limited, RBT Limited and South Tees Development Corporation did not indicate or provide evidence on the rights of access referred to by PD Teesport in their RR [RR.-033]. As such, they have not been included in the Book of Reference as an occupier (in respect of access).
CA.1.21	Sembcorp Utilities (UK) Ltd	RR-034 refers to concerns relating to Sembcorp's pipeline corridors amongst other matters. Can Sembcorp: <ul style="list-style-type: none"> i) Clarify which of Sembcorp's pipeline corridors affected (indicate them on a plan), and the occupiers which might be affected; ii) Provide further information as to why you consider the Proposed Development's easement corridors for the Order Limits are substantially wider than required; 	N/A

ExQ1	Question to:	Question:	Response
		<ul style="list-style-type: none"> iii) Explain further your comment '<i>Compulsory acquisition of rights by Net Zero Teesside will inevitably disrupt the carefully constructed legal provisions that exist between Sembcorp and its pipeline customers</i>'; iv) Explain further your comments regarding a 'compelling case: <i>given the economic importance of Wilton International, there can be no compelling case for powers of compulsory acquisition over any part of it, whether of land or rights in land. Nor can there be a compelling case for the compulsory acquisition of rights nor a right to extinguish existing easements in pipeline corridors where this will negatively impact Wilton International or limit its future development</i>'; v) Provide an update on your negotiations with the Applicants to acquire easement rights as opposed to powers of commercial acquisition; and vi) Provide comments on Part 16 of Schedule 12 of the dDCO (Protective Provisions). 	
CA.1.22	SABIC UK Petrochemicals Limited	RR-038 refers to SABIC's facilities at Wilton International and North Tees. Can SABIC: <ul style="list-style-type: none"> i) Identify on a plan the location of SABIC's facilities at Wilton International and North Tees together with the quoted Link Line corridors, in relation to the Order Limits and provide a list of plot numbers affected; ii) Explain further how you consider the Proposed Development may affect your operations; and iii) Provide comment on Part 15 of Schedule 12 of the draft DCO (Protective Provisions). 	N/A
CA.1.23	STDC South Tees Development Limited Teesworks Limited	STDC [RR-035] comments on a range of land and CA issues. Could STDC/ South Tees Development Limited / Teesworks Limited provide a response to the following: <ul style="list-style-type: none"> i) Paragraph 4.3 indicates that you do not consider that the Applicants have gone far enough in reducing the extent of utility corridors – can you specify which plots this concern relates to and provide further detail of your objection? ii) Paragraph 4.3 also states that the Applicants has treated the Teesworks area differently to elsewhere within the Order Limits – could you provide further justification for these comments? iii) Paragraph 4.5 relates to a lack of detail and paragraphs 4.19 to 4.23 refer to the Applicants' programme. Could you provide further information as to how this might hinder STDC's future development plans and the full benefits of the Freeport designation from being realised? iv) Have the updated land plans [AS-146] and related documents submitted with the change request dated 28 April addressed any of 	N/A

ExQ1	Question to:	Question:	Response
		<p>your requirements in section 4.10 of your RR? If any of your stated requirements are outstanding, please explain which and why.</p> <p>v) Paragraphs 4.12-4.15 refer to streets and the parking area and alternatives including a park and ride are suggested. Please provide further detail on why this is a specific concern, provide an update on a park and ride location and any discussions with the Applicants on this matter.</p> <p>vi) Paragraph 4.18.1 refers to Plots 274 and 279 – please provide further information regarding the third party dispute and whether this has been resolved.</p> <p>vii) Paragraph 4.18.3 refers to Plots 290 and 291. Please provide further detail as to why you consider these plots should be removed and your suggestion for reasonable alternatives.</p> <p>viii) Paragraphs 4.18.4 to 4.18.7 refer to Plots 540 a/b/c and 393 a/b - please provide an update regarding the working group and modelling which was expected to be completed in January 2022.</p>	
CA.1.24	All APs	Do any APs have any concerns that they have not yet raised about the legitimacy, proportionality or necessity of the CA or TP powers sought by the Applicant that would affect land that they own or have an interest in?	N/A
CA.1.25	Applicants	<p>Paragraph 1.2.1 of the Funding Statement [APP-009] states that “in line with the CCUS business models published by BEIS in December 2020, there will be separate entities who will be responsible for: electricity generation with post-combustion carbon capture (including the gas, water and electricity connections); CO₂ gathering (from industrial emitters), CO₂ compression and CO₂ export and storage; and industrial (including hydrogen production) carbon capture and connections to the CO₂ gathering network.” Paragraph 2.2.1 of the Planning Statement [APP-070] also references the CCUS business models published by BEIS in December 2020.</p> <p>The Applicants are asked to provide an overview of the CCUS business models and an explanation as to why the separate entities were set up as they were.</p>	<p>There are multiple CCUS business models being developed by BEIS which will provide the commercial framework for each distinctive element of a CCUS system. At a high level these are as follows:</p> <ol style="list-style-type: none"> 1. Transport & Storage Regulatory Investment (TRI) business model: this aims to provide a regulatory regime under which a transport and storage company (T&Sco) will be licensed to charge users a regulated fee to transport and store CO₂ from. The users (i.e. CO₂ emitters) will receive support under the below business models to capture CO₂. 2. Dispatchable Power Agreement (DPA): this will provide revenue support to gas fired power plants built with carbon capture facilities which will operate in dispatchable mode to complement the intermittency of renewable energy generation for the national grid. It will have similarities to the Contract for Difference (CfD) used for renewable energy projects. 3. Industrial Carbon Capture (ICC): this will support industrial emitters in building carbon capture facilities through a contract which will cover some of the capital and operational costs associated with building these facilities. Emitters will be expected to give up their existing allowances under the emissions trading scheme (ETS) when entering into an ICC Contract. 4. Low Carbon Hydrogen (LCH): this will provide support to projects intending to generate hydrogen from natural gas with carbon capture (i.e. blue hydrogen). This will also have similarities

ExQ1	Question to:	Question:	Response
			<p>to a CfD model focusing on the production of hydrogen and making the cost of competitive for end users in order to stimulate a hydrogen market.</p> <p>Given the “split-chain” nature of the business models and the range of potential projects, each element of the CCUS value chain will attract potentially different investors depending on their existing operations, technical expertise, and corporate strategies. From a regulatory perspective the T&Sco will also need to be a separate entity to serve all users neutrally.</p> <p>This has underpinned the set up of the two entities which are the Applicant companies. Net Zero North Sea Storage Limited will be a T&Sco operating under the TRI business model, and Net Zero Teesside Power Limited will receive a contract under the DPA model. Both are being led by bp as the operator but have different respective partner companies for the reasons set out above.</p>
CA.1.26	Applicants	<p>Paragraph 4.1.2 of the Funding Statement [APP-009] states that “Innovate UK is part-funding the project up until a Final Investment Decision is taken under the Industrial Strategy Challenge Fund Phase 2: Deployment competition. Innovate UK support covers from March 2021.”</p> <p>Can you provide further clarification to include:</p> <ul style="list-style-type: none"> i) Information on the scope of the Industrial Strategy Challenge Fund Phase 2: Deployment competition; and ii) Timescales for a decision. 	<ul style="list-style-type: none"> i) UK Research and Innovate (UKRI) supports the development of low-carbon technologies. UKRI grant fund provided support for FEED Engineering and associated studies of the Proposed Development. ii) Based on HMG BEIS Phase 1 and 2 of the Cluster Sequencing for CCUS Deployment process, Financial Investment Decision is currently scheduled for mid-2023.

7.0 DESIGN LANDSCAPE AND VISUAL

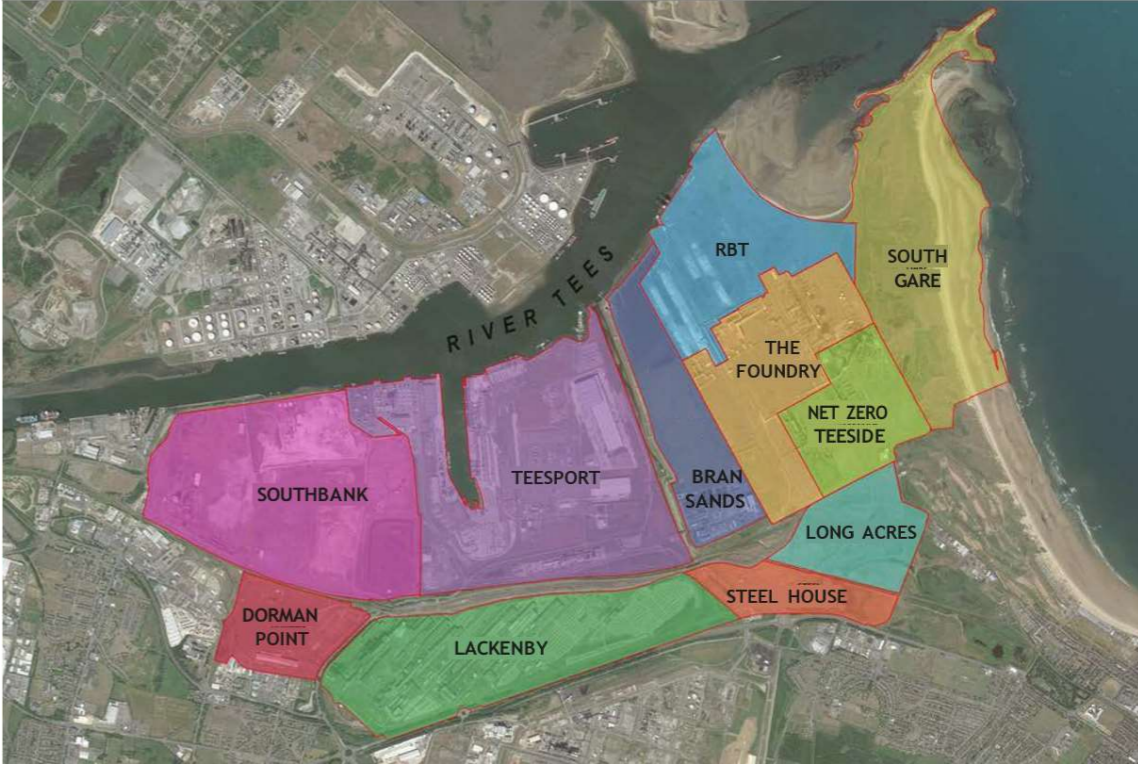
ExQ1	Question to:	Question:	Response
DLV.1.1	The Applicants	<p>Section 4 of the DAS [AS-190] refers to the policy context in terms of design. Have you considered:</p> <ul style="list-style-type: none"> i) the National Model Design Code January 2021; and ii) the National Infrastructure Commission Design Principles for National Infrastructure NIC design <p>The Applicants are asked to:</p> <ul style="list-style-type: none"> iii) confirm the relevance of the documents to the Proposed Development; and iv) demonstrate how these principles have been taken into account in design work to date and how they will be used in future design work with particular reference to the PCC Site. 	<p>1. The National Model Design Code was first published on 20 July 2021. It followed the publication of the National Design Guide in January 2021. The Applicants have not considered these documents as they were introduced late in the pre-application stage and at the time the Application was submitted.</p> <p>The introduction to the National Design Guide states that its purpose (and that of the National Model Design Code) is to illustrate how well-designed places that are beautiful, healthy, greener, enduring and successful can be achieved in practice. They form part of the Government's collection of Planning Practice Guidance and should be read alongside the separate planning practice guidance on design process and tools. The National Design Guide outlines and illustrates the Government's priorities for well-designed places in the form of ten characteristics.</p> <p>The documents focus on the creation of well-designed and well-built places that benefit people and communities. This includes people who use a place for various purposes such as to live, work, shop, for leisure and recreation, and to move around between these activities; and those who visit or pass through. The documents are intended to be used by local planning authorities; councillors who determine planning applications; applicants and their design teams; and local communities. They do not provide guidance on energy infrastructure or nationally significant infrastructure projects. It is therefore considered by the Applicants that the National Design Guide and National Model Design Code are of very limited, if any, relevance to the Proposed Development.</p> <p>2. The National Infrastructure Commission's Design Principles for National Infrastructure Design sets out four guiding design principles to guide the planning and delivery of national infrastructure. These are:</p> <ul style="list-style-type: none"> • Climate: Mitigate greenhouse gas emissions and adapt to climate change. • People: Reflect what society wants and share benefits widely. • Place: Provide a sense of identity and improve our environment. • Value: Achieve multiple benefits and solve problems well.

ExQ1	Question to:	Question:	Response
			<p>The Applicants have responded to each of the four principles with regard to the Proposed Development below:</p> <ul style="list-style-type: none"> • Climate: The Proposed Development, as part of a full chain CCUS project, is designed to capture up to 95% of the emissions from the proposed electricity generating station while also providing the infrastructure to facilitate industrial emitters on Teesside in capturing and storing their CO₂ emissions. Once neighbouring industries are connected to the CO₂ Gathering Network and CO₂ can be captured from these sources, it is envisaged that the Proposed Development as a whole would result in a net reduction in CO₂ emissions from current levels, with a beneficial effect on annual UK carbon emissions. Furthermore, the Proposed Development has been designed to ensure that it is resilient to the future potential effects of climate change and no significant resilience risks have been identified. • People: The Applicants are developing a CO₂ gathering network on Teesside that will underpin the establishment of a decarbonised industrial cluster (part of the East Coast Cluster) by the mid-2020s by providing the necessary infrastructure to capture CO₂ emission from existing heavy industries with the area, helping to secure their long-term future and contribution to the economy. There are numerous economic benefits to the Proposed Development whilst contributing to the decarbonisation of the area. • Place: The Proposed Development will bring back into use previously developed industrial land on Teesside and make a positive contribution to the regeneration of Teesworks in accordance with local development plan policy, the South Tees Supplementary Planning Document (SPD) and the Teesworks Design Guide. • Value: The Proposed Development is considered to have substantial benefits whilst solving important problems. As part of a full chain CCUS project, it is designed to reduce carbon emissions from neighbouring emitters through its proposed gathering network. While playing a role in solving the problem of carbon dioxide emissions reduction, the Proposed Development is considered to have substantial benefits for the local and regional economy in terms of employment (direct and indirect) and supply chain opportunities. The Proposed Development also includes further benefits, such as landscape and biodiversity enhancements, along with achieving biodiversity net gain within the PCC Site. <p>In seeking approval of the detailed design of the Work Nos. (including those at the PCC site) under Schedule 2, Requirement 3, the Applicants will have regard</p>

ExQ1	Question to:	Question:	Response
			(and need to satisfy the relevant planning authority that it has regard) to the guiding design principles.
DLV.1.2	Applicants	<p>Paragraphs 1.1.11 to 1.1.24 and sections 4.5 to 4.6. of the DAS [AS-190] refer to the South Tees Regeneration Master Plan, the South Tees Area Supplementary Planning Document (SPD) and the Teesworks Design Guide.</p> <p>Please explain how the design of the Proposed Development would be consistent with the aims of the Masterplan, SPD and Design Guide and provide reference to the relevant extracts of the documents (you may wish to combine your answer with Question PPL.1.3).</p>	<p>The South Tees Regeneration Master Plan has been produced by the South Tees Development Corporation (STDC) to provide a flexible framework for the regeneration of the South Tees Area. The Master Plan was prepared throughout 2017 as a supporting visioning and development strategy document to inform the preparation of a SPD by Redcar and Cleveland Borough Council (RCBC) for the South Tees Area. The Master Plan was launched alongside the South Tees SPD, which was formally adopted by RCBC in May 2018. A revised Master Plan was published in November 2019. In planning policy terms, the Master Plan has no formal status other than a background study (this is confirmed at page 6 of the revised Master Plan).</p> <p>The South Tees SPD was prepared by RCBC and is intended to support the economic and physical regeneration of the South Tees Area (now referred to as Teesworks), setting out the vision and core objectives for the area and providing greater detail on how adopted planning policies (within the Redcar and Cleveland Local Plan) will be interpreted. The section of the RCBC website for the South Tees Area SPD states that it is supported by the South Tees Regeneration Master Plan, which is a background study to the SPD. The South Tees SPD is a material planning consideration to be taken into account by RCBC in determining applications for planning permission within the South Tees Area.</p> <p>On the basis that the Master Plan has no formal planning policy status, and is a background study that has been used to inform the preparation of the SPD, the Design and Access Statement (DAS) [AS-190] has focussed on how the Proposed Development complies with the vision, objectives and development principles of the SPD.</p> <p>The Teesworks Design Guide for Development (published December 2020) builds upon the Master Plan and provides design guidance in respect of the redevelopment of the South Tees Area/Teesworks, including in respect of specific development zones within the area. The document was produced by Teesworks' consultants with assistance from the Tees Valley Combined Authority and RCBC. As with the Master Plan, the document has no formal planning policy status.</p> <p>The South Tees Area SPD is intended to support the economic and physical regeneration of the South Tees Area, setting out the vision and core objectives for the area and providing greater detail on how adopted planning policies will be interpreted.</p>

ExQ1	Question to:	Question:	Response
			<p>Section 2 of the SPD sets out the 'Vision' for the area, including a number of objectives. Objective 1 is aimed at ensuring strong alignment with the UK Government's Industrial Strategy by shaping regeneration proposals to ensure the Tees Valley can make a contribution to the UK Government's aspirations for the Northern Powerhouse Initiative. Objective 4 (page 10) is to:</p> <p><i>"Promote and support development uses aligned with a low carbon, circular economy, while delivering redevelopment within a framework of reduced energy costs and waste minimisation".</i></p> <p>The Proposed Development clearly aligns with these objectives as it would lead to the development of a decarbonised industrial cluster on Teesside.</p> <p>Both the above objectives are re-iterated in Development Principle 'STDC1: Regeneration Priorities' (page 15 of the SPD). STDC1 states that the local planning authority (RCBC), in partnership with STDC, will seek to achieve the comprehensive redevelopment of the South Tees Area in order to <i>"realise an exemplar world class industrial business park"</i>. It identifies a number of priorities for the area including to prioritise uses connected with advanced manufacturing and advanced new technologies and to promote and support uses and infrastructure connected to a low carbon and circular economy.</p> <p>Again, the Proposed Development is clearly consistent with STDC1, as it would involve the development of new technologies (Carbon Capture, Usage and Storage) that would promote and support uses and infrastructure connected to a low carbon and circular economy.</p> <p>Figure 2 (page 19) of the SPD provides an indicative layout with clusters of key industries and processes. This includes a cluster for manufacturing and energy that broadly corresponds with what is the PCC Site.</p> <p>Development Principle 'STDC6: Energy Innovation' (pages 33 - 34) states that the local planning authority (LPA) will, in partnership with STDC and other partners, promote and support the development of new energy generation within the South Tees Area, including renewable energy development and the promotion of other innovative energy projects. Energy generation which contributes to meeting the Area's assessed energy needs will be supported while all energy development should be appropriately sited and designed so as to avoid unacceptable effects. Paragraph 3.49 goes on to state:</p> <p><i>"... provision will include opportunity for the siting of nationally significant energy generators that connect to the grid as well as supporting the Area through private energy supply. Specific requirements relating to these zones are identified within the Site Specific Development Principles."</i></p> <p>Following on from the above, Development Principle 'STDC10: Utilities' states that the LPA will support the development of new infrastructure relating to</p>

ExQ1	Question to:	Question:	Response
			<p>energy generation, including power generation facilities utilising both conventional and renewable resources and carbon capture and storage.</p> <p>The Proposed Development is consistent with STDC6 and STDC10 as it would involve the development of a low carbon electricity generating station and carbon capture and storage infrastructure, which would support the development of a decarbonised industrial cluster on Teesside. The Proposed Development, notably the PCC facilities, have also been sited and designed to avoid unacceptable effects. The main buildings and structures have been grouped together where feasible from a technical and safety perspective to consolidate the built form, meaning that they are set well back from the PCC Site's boundaries providing a degree of separation from adjoining areas and uses.</p> <p>Section 4 of the SPD sets out 'Site specific development principles' for the five main zones of the South Tees Area. These are the North Industrial Zone; North East Industrial Zone; Central Industrial Zone; South Industrial Zone; and Coastal Community Zone (Figure 6: Development Zones – page 48). The North Industrial Zone (NIZ) encompasses much of the former Redcar Steel Works complex, and includes the PCC Site, and is subject to Development Principle STDC11 (page 49 of the SPD). This states that the LPA, in partnership with STDC, will encourage development proposals in this zone relating to port related industry, major space users/large scale manufacturing, energy innovation, power generation and storage, bulk materials and mineral processing. It goes on to state that in accordance with Policy N4 'Biodiversity and Geological Conservation' of the Local Plan, proposals will need to take account of the need for and definition of a buffer zone to protect existing environmental assets within and adjacent to the NIZ (e.g. South Gare/Coatham Sands and the Teesmouth and Cleveland Coast SPA and Ramsar site).</p> <p>The Proposed Development is consistent with the uses envisaged by STDC11 for the NIZ while as set out above, the PCC Site incorporates appropriate buffers between the PCC facilities and the nearby existing environmental assets in accordance with Policy N4.</p> <p>Table 6.4 of the updated Planning Statement (pages 159 to 67) [REP1-003] sets out how the Proposed Development complies with the relevant Development Principles of the SPD.</p> <p>The Teesworks Design Guide has no formal planning policy status. It contains design principles and parameters that are aimed at accommodating different types of development, although it is accepted that some industrial operations and developments will not fit within these principles and parameters. It is</p>

ExQ1	Question to:	Question:	Response
			<p>intended to supplement and expand on the Development Principles of the South Tees Area SPD.</p> <p>In line with the SPD, the Design Guide divides Teesworks into five principal zones. These include the NIZ comprising the former Steel Works complex and also RBT. Potential uses identified for the NIZ include bulk materials handling, mineral processing, energy innovation and large-scale manufacturing. The NIZ itself is divided into three main development zones within the Design Guide – The Foundry, Net Zero Teesside ('NZT') and RBT. The PCC Site broadly corresponds with the extent of the NZT Zone. Figure 4 from the Design Guide shows the three development zones within the NIZ and is reproduced below.</p>  <p>The Proposed Development in terms of use, location and extent is therefore consistent with what the Design Guide envisages for the NIZ.</p> <p>The Design Guide sets out four key design principles and associated questions, which are intended to be applied across the Teesworks area. The design principles include plot arrangements and access' boundaries and landscape; buildings forms and materials; and colour, lighting and signage.</p>

ExQ1	Question to:	Question:	Response
			<p>The Design Guide is clear that the design principles are to be applied proportionately across Teesworks depending on the building typology and its location. With regard to this, the Design Guide confirms that (page 21):</p> <p><i>“The most visible areas of the site are referred to with the guidance as ‘Gateway plots’. These are plots that will make a significant contribution to the way that the overall development is perceived and will help to create an outward looking and welcoming environment.</i></p> <p><i>For the purposes of this design guide, a Gateway plot is defined as a development plot that has a significant visible frontage onto the infrastructure corridor or other primary route (see illustrative diagram in Figure 4). Gateway plots are not fixed in the masterplan but will be determined by Teesworks in line with the Public Realm strategy and emerging development opportunities.”</i></p> <p>It is relevant to note that the PCC Site (the NZT Zone) is not a Gateway Plot and does not have a frontage onto the infrastructure corridor or any other primary route within Teesworks. It is therefore considered that the PCC Site represents a less sensitive location within Teesworks from a design perspective – as compared to a Gateway Plot or the infrastructure corridor – and is therefore an appropriate zone for the Proposed Development.</p> <p>With regard to the design principles, the main buildings and structures at the PCC Site have been grouped together to consolidate the built form and appropriate landscaping and boundary treatment is proposed. The building form is functional, reflective of the type of development, the industrial character of the area and the fact that the NZT Zone is not a Gateway Plot within Teesworks.</p> <p>Alongside the four key design principles, additional guidance is provided in respect of four major plot typologies. This is intended to aid the designers and developers of specific industrial building types where certain principles may be particularly important.</p> <p>The plot typologies include ‘Large-Scale Industrial Operations’ which cover ‘Major energy generation’. This is the plot typology of most relevance to the Proposed Development and the PCC Site. Specific guidance for the plot typologies is provided at Section C, with that guidance cross-referenced back to the four design principles for ease of application. C.5 (pages 39 to 43 of the Design Guide) deals with Large-Scale Industrial Operations. It is recognised that in design terms these developments will primarily be driven by the functional requirements of the industrial processes.</p> <p>The grouping of the main buildings and structures at the PCC Site to consolidate their built form, and so they are set well back from the Site</p>

ExQ1	Question to:	Question:	Response
			<p>boundaries is consistent with the Design Guide and the Large-Scale Industrial Operations typology. The perimeter areas of the PCC Site will be landscaped and there will be opportunities for planting and biodiversity enhancement.</p> <p>The buildings and structures at the PCC Site will be simple and functional in form and detailing, predominantly comprising steel framed enclosures that will be clad in appropriate materials. While the buildings and structures are functional, reflective of their industrial setting and the fact they do not sit on a prominent Gateway Plot or the infrastructure corridor or a primary route within Teesworks, the decision has been taken to enclose the main items of plant and equipment in line with Design Guide recommendations having regard to the fact these will be visible from South Gare/Coatham Sands.</p> <p>It is envisaged that the external finishes for the buildings and structures will comprise predominantly of metal cladding and concrete. Again, in line with Design Guide, it is proposed that a simple and consistent approach is taken to the materials and colour palette to be employed. There are a number of possible solutions for external finishes, including flat and profiled metal cladding and concrete. Lighter colours such as light greys may be used to soften the appearance of the buildings and structures against the sky and sea. A decision on external finishes will be made at the detailed design stage with the final details being subject to approval by the LPA secured through Requirement 3 'Detailed design' of the DCO [AS-135].</p> <p>The Applicants therefore consider that the Proposed Development is consistent with the South Tees Area SPD and also the Teesworks Design Guide, in so far as the latter is relevant to the Proposed Development.</p>
DLV.1.3	The Applicants	<p>The DAS [AS-190] contains limited information regarding final design of the PCC site (Work no. 1) and options for materiality. It cross refers to relevant design principles in local planning policy that will be considered in developing the detailed design, but it is not listed as document to be certified in the dDCO [AS-004]. Design Review is an independent and impartial process for evaluating the quality of major infrastructure projects. It seeks to ensure the highest possible quality of development and is specifically referenced in the NPPF.</p> <p>Can the Applicants:</p> <ul style="list-style-type: none"> i) Explain how the design quality of the proposed buildings and structures that has been assumed for the purposes of the assessment of landscape and visual effects in ES Chapter 17 [APP-099] will be secured through the dDCO [AS-135]; 	<ul style="list-style-type: none"> i) Schedule 2, Requirement 3(1) of the draft DCO [AS-135] specifies that the detailed design of Work No. 1 must be submitted to and approved by the relevant planning authority. This includes details of the siting, layout, scale and external appearance, including the colour, materials and surface finishes of all new permanent buildings and structures. Schedule 2, Requirement 34 (approved details and amendments to them) specifies that the discharge of all of the Requirements must reflect the principles set out in the documents certified under Article 45 (certification of plans etc.). As set out in Schedule 14, the certified documents include the environmental statement (including Chapter 17 [APP-099]). Accordingly the submission to and approval by the relevant planning authority of the detailed design of Work No. 1 must accord with ES Chapter 17 [APP-099]. If the relevant planning authority were not satisfied that this is achieved then it may refuse to discharge the details submitted pursuant to the discharge of Requirement 3(1).

ExQ1	Question to:	Question:	Response
		<p>ii) Provide an explanation and summary of the design review process undertaken by its design team for the PCC site prior to submission of the application;</p> <p>iii) Should the DAS [AS-190] be listed as a Document to be Certified in Schedule 14 of the dDCO?</p> <p>Can RCBC and STBC provide comment:</p> <p>iv) Does the information in the DAS provide a sufficient basis to guide detailed design development?</p> <p>v) Is R3(1) of the dDCO sufficient to secure the detailed design of the structures within the PCC site (Work no.1)?</p> <p>vi) Do the RPAs have the necessary experience and expertise to take on the design approval post-consent, or would an external design review be necessary? If so, please could the RPAs indicate what additional support you believe would be required and from whom such support should come.</p>	<p>ii) The NPPF does not contain specific policies for nationally significant infrastructure projects (NSIPs) such as the Proposed Development, although it may be considered to be relevant by the Secretary of State in determining applications for NSIPs. The policies set out in the NPPF with regard to design (Chapter 12. Achieving well-designed places) are more focussed upon place-making, large-scale housing and mixed use development and their application is considered to be of limited relevance to the Proposed Development, the design of which is heavily influenced technical and safety considerations, amongst other factors.</p> <p>The Applicants approach to the layout and design of the Proposed Development and the evolution of that is explained at Section 6 of the DAS [AS-190].</p> <p>Section 6.2 (paragraphs 6.2.1 to 6.2.5) provides an overview of the approach taken to design and set out the reasons why the Applicants adopted a functional approach to the design of the Proposed Development, notably the PCC Site. They explain that the design reflects the function and purpose of the Proposed Development and the industrial character of the area, while the approach to design has also been influenced by technical, engineering, environmental and safety considerations. However, that functional design can represent 'good design' and in developing the design of the PCC Site the Applicants have had regard to the South Tees Area SPD and the design principles of the Teesworks Design Guide and sought to minimise impacts upon the surrounding area.</p> <p>Section 6.3 (paragraphs 6.3.1 to 6.3.14) provides a summary of how the design of the Proposed Development has evolved since its inception, during the pre-application stage leading up to the submission of the Application and following its submission. It covers the alternatives and design options that have been considered, which are set out in more detail at Chapter 6 'Alternatives and Design Evolution' of the Environmental Statement [APP-088]. It also sets out what design options were consulted upon during the pre-application stage and what feedback was received.</p> <p>iii) The Design and Access Statement [AS-190] sets out the design approach and also parameters that have been used for the purposes of the Environmental Impact Assessment. As explained at i) above the detailed design of Work No. 1 is already secured by Requirement 3(1) and the parameters of the environmental statement. The Applicants consider that including the DAS as a certified document would duplicate the existing requirements under the DCO.</p>

ExQ1	Question to:	Question:	Response
DLV.1.4	Applicants RCBC STBC	<p>No specific requirement for monitoring of the quality of the materials and finishes during construction is identified in the dDCO [AS-135], DAS [APP-190], ES Chapter 17 [APP-099] or ES Volume 3, Appendix 25A [APP-347].</p> <p>Can the Applicant:</p> <p>i) Explain what process would be in place for monitoring the quality of materials and finishes as the proposed buildings and structures are constructed to ensure that the design quality envisaged in ES Chapter 17 [APP-099] is attained?</p> <p>Can RCBC and STBC:</p> <p>ii) Provide comment on the need to have a mechanism in place for monitoring of materials and finish quality during the construction period?</p>	<p>The ExA is directed to the Applicants' response to DLV.1.3(i). It is also noted that the relevant planning authority has significant information gathering and enforcement powers under the Planning Act 2008, and can use these as required to obtain information on the Proposed Development as it is constructed and to ensure that the details approved pursuant to Requirement 3 are implemented.</p>
DLV.1.5	Applicants RCBC	<p>Paragraph 4.5.2 of the DAS [AS-190] quotes policy STC1 and the intention to "realise an exemplar world class industrial business park".</p> <p>How would the Proposed Development contribute to achieving that objective?</p>	<p>Paragraph 4.58 of the DAS [AS-190] quotes Development Principle STDC1 of the South Tees Area SPD, which states that the LPA, in partnership with STDC, will seek to achieve the comprehensive redevelopment of the South Tees Area (Teesworks) in order to "realise an exemplar world class industrial business park."</p> <p>The Proposed Development would contribute toward achieving that objective as follows:</p> <ul style="list-style-type: none"> • It would bring a derelict brownfield site back into beneficial use. • It aligns with the SPD vision for the South Tees Area/Teesworks, which is to promote and support development uses aligned with a low carbon, circular economy. • It would be located within the NIZ where development proposals relating to port related industry, major space users/large scale manufacturing, energy innovation, power generation and storage, bulk materials and mineral processing are considered appropriate. • The PCC Site broadly corresponds with the NZT Zone identified within the Teesworks Design Guide. The NZT Zone is not a Gateway Plot and is appropriate for large-scale energy and industrial uses. The Proposed Development would therefore leave other zones available to be brought forward for business, industrial and other forms of development. • The approach that has been taken to the layout and design of the PCC Site is consistent with the key design principles within the Design Guide. The built form has been consolidated and appropriate buffers are incorporated around the Site's perimeter. <p>The Applicants would refer the ExA to their response to DLV.1.2.</p>

ExQ1	Question to:	Question:	Response
DLV.1.6	Applicants	<p>The Landscape Institute published TGN 02-21 'Assessing landscape value outside national designations' in May 2021. It provides guidance supplementary to GVLIA3 about how to make judgments on value of a landscape outside of national designations.</p> <p>Can the Applicants comment on any implications for the assessment in ES Chapter 17 [APP-099] from the publication of TGN 02-21.</p>	<p>TGN 02-21: Assessing landscape value outside national designations is intended to be complementary to existing guidance, including GLVIA3 and as such does not alter the overall approach to landscape and visual assessment. Both GLVIA3 and TGN 02-21 include a list of factors which can help inform judgements for landscape value. The lists of factors set out in both documents, which are not intended to be prescriptive or exhaustive, are broadly aligned. The principal differences are in the terminology used to describe some of the factors, although TGN 02-21 also introduces an additional factor related to landscape function.</p> <p>Technical Appendix 17B: Landscape and Visual Impact Assessment Methodology [APP-336] sets out a list of factors which have been considered when determining landscape value for the receptors included within the assessment. These are largely aligned with the list of factors set out in both GLVIA3 (Box 5.1, p84) and TGN 02-21 (Table 1, p7), although don't include specific reference to landscape function.</p> <p>A review of the landscape value judgements made in the assessment has been undertaken with consideration of the additional factor of function defined in TGN 02-21. Much of the landscape of the study area is influenced by industrial and other development such that valuable functions of landscapes are generally limited. The coastal strip and tidal mudflats within parts of the Redcar Flats Landscape Character Tract (LCTr), East Billingham to Teesmouth Landscape Character Area (LCA), Coastal Fringe Landscape Character Type (LCT) and Estuarine LCT have some functional value as part of green infrastructure and natural systems. The woodlands and rising topography of the Eston Hills LCTr also have some functional value as natural resources and as a landmark and backdrops to views from the extensive settlement to the north. Overall, taking account of landscape function as part of a range of factors, in each case the levels of landscape value identified within the assessment would remain unchanged.</p>
DLV.1.7	Applicants RCBC STBC Hartlepool Borough Council (HBC)	<p>ES Chapter 17 [APP-099] section 17.4 and ES Appendix 17A [APP-335] set out the baseline conditions, including an assessment of landscape and seascape character. The baseline is informed by local Landscape Character Assessments (LCAs) prepared by RCBC, STBC and HBC.</p> <p>The Applicants are asked to:</p> <ul style="list-style-type: none"> i) Provide a copy of relevant extracts of the Redcar and Cleveland LCA, the Stockton-on-Tees LCA, the Hartlepool LCA, and the North East Marine Character Areas. ii) Review the baseline since the Landscape and Visual Impact Assessment (LVIA) and viewpoints were produced and provide an update to the description of the landscape character baseline to reflect any changes since the publication of the LCAs to the extent necessary to provide a robust position to undertake the impact 	<ul style="list-style-type: none"> i) Technical Appendix 17A [APP-335] provides extracts from the Redcar and Cleveland Landscape Character Assessment, the Stockton-on-Tees Landscape Character Assessment, the Hartlepool Landscape Character Assessment, and the North East Marine Character Areas, giving details of identified characteristics. Copies of the relevant section of the documents have also been provided as part of this response and which are at Appendix DLV.1.7 in Document Ref 9.8. ii) A review of the landscape and visual baseline will be undertaken and updated descriptions provided where required to capture any important changes that have occurred since the LVIA was prepared and Landscape Character Assessment published. It is anticipated that this will be provided as part of the Deadline 6 submission.

ExQ1	Question to:	Question:	Response
		<p>assessment. For example, it is noted that the description of the East Billingham to Teesmouth landscape character area within STBC's LCA references SSSI at Seal Sands and Cowpen Marsh, which have subsequently been incorporated into the Teesmouth and Cleveland Coast SSSI and/ or been partially de-notified;</p> <p>iii) Has any significant demolition and/ or new buildings or infrastructure taken place since the viewpoint visuals were produced?</p> <p>iv) Confirm whether photography of the night-time baseline taken place?</p> <p>v) If so, are revised and/or additional visuals of the viewpoints required?</p> <p>The RPAs are requested to confirm:</p> <p>i) If they are satisfied with the assessment of the baseline conditions including the description of the site and its setting as set out in paragraphs 17.4.34 to 17.4.41 of Chapter 17 [APP-099]; and</p> <p>ii) Are any amendments needed to reflect changes since it was produced, including demolition and new buildings or infrastructure??</p>	<p>iii) Demolition of a number of the smaller buildings and structures, including an onsite conveyor within the former steelworks has taken place since the viewpoint photography was captured. However, these represent relatively minor changes in the view with the larger, more notable, structures currently still in place. No significant new buildings or infrastructure has been constructed since the viewpoint photography was captured. The assessment acknowledges that a number of the existing structures will be removed prior to construction and operation of the Proposed Development and as such considers a 'modified' baseline where the structures on land adjacent to the PCC are no longer present. The photomontages included as part of the assessment (ES Figures 17-21, 17-24, 17-27 and 17-30 [APP-219 to APP-228]) take a similar approach, removing those existing structures which are planned to be demolished from the view, giving an impression of the Proposed Development within the modified baseline.</p> <p>iv) Night-time baseline photography has not been captured. A review of the night-time baseline was undertaken as part of the assessment and where relevant is included in the baseline descriptions of each representative viewpoint. The baseline appraisal identified existing high levels of lighting within the Site boundary and surrounding area, and it is therefore considered that lighting associated with the Proposed Development would not result in significant effects. A series of potential impact avoidance measures relating to lighting design have been included within the indicative lighting strategy [AS-017] and the approval of the relevant planning authority to the detailed lighting design is secured by Requirement 6 in the Draft Order [AS-136].</p> <p>v) The viewpoints and visualisations included within the ES (Figures 17-7 [APP-181] to 17-30 [APP-228]) provide a representative cross section of receptor types and locations within the study area. It is considered that revised or additional visuals of the viewpoints are not required based on the limited demolition of smaller buildings and structures and the context of the night-time baseline.</p>
DLV.1.8	RCBC STBC HBC MMO	<p>A range of viewpoints are listed at Table 17-1 of ES Chapter 17 [APP-099] and illustrated in Figures 17-7 to 17-30 [APP-181 to APP-228], the locations of which are shown at Figure 17-6 [AS-123].</p> <p>i) Did RCBC, STBC and HBC all agree the viewpoints at pre-application stage?</p> <p>ii) Are the authorities satisfied with the list of viewpoints listed in Table 17-1?</p> <p>iii) Are the authorities satisfied with the quality of the visuals provided?</p>	<p>The Applicants have submitted a number of initial Statements of Common Ground at Deadline 1 and will seek to agree that the assessments undertaken are appropriate with each relevant authority via the SoCG and provide updated documents during examination.</p> <p>The Applicants have submitted an initial Statement of Common Ground with the MMO at Deadline 1 [REP1-008] which confirms the MMO's agreement in relation to the assessments of effects of the Proposed Development in terms of</p>

ExQ1	Question to:	Question:	Response
		<p>iv) Do the authorities consider them to be representative of locations for sensitive receptors including tourists and recreational users?</p> <p>v) Should night-time visuals of certain viewpoints be produced?</p> <p>vi) Further to the above, can you suggest any additional viewpoints (including any outside of the study area) and/ or amendments to the existing viewpoints necessary?</p> <p>MMO:</p> <p>vii) Are any viewpoints of the seascape necessary? If so, from where?</p> <p>Could all RPAs:</p> <p>viii) Provide any comments they have on the conclusions of the assessment of likely significant effects arising landscape and visual impacts as presented in section 17.6 of ES Chapter 17 [APP-099].</p>	<p>Landscape and Seascape being appropriate for the scale, nature and location of the Proposed Development.</p>
DLV.1.9	Applicants	<p>The maximum height parameters for the main components proposed on the PCC Site are described in ES Chapter 4 [AS-019], Table 4-1 and Schedule 15 of the dDCO [AS-135]. The maximum height in metres AOD is consistent in both documents but the dDCO does not state what the final assumed ground level is (identified as 13m AOD in the ES).</p> <p>According to paragraph 4.3.83 of the ES [AS-019] the existing ground levels at the proposed location of the PCC Site are approximately 4m to 8m AOD. Ground elevations post site clearance and remediation are anticipated to be a maximum of 13m AOD for the development platform. Can the Applicants:</p> <p>i) Demonstrate how this increase in levels has been addressed in the LVIA; and</p> <p>ii) Explain what final ground level is assumed at the PCC Site; and</p> <p>iii) Clarify how matters of ground levels would be secured in the dDCO?</p>	<p>i) The assessment of the landscape and visual impact of the Proposed Development used Rochdale Envelope principles and was a worst-case based on the maximum height of the buildings and stacks as set out in Table 4-1 Maximum Design Parameters of ES Chapter 4 [AS-019]</p> <p>ii) The Rochdale Envelope assumed a worst-case final ground level of up to 13 mAOD; this level was used in the LVIA assessment since that gave rise to the tallest structures for the purpose of the assessment.</p> <p>iii) Schedule 15 of the dDCO restricts vertical development and maximum ground levels to 13mAOD however it does not seek to restrict or define the actual ground level below that maximum as no restriction is considered necessary subject to remaining above the level required for flood risk protection (which is the subject of a separate Requirement (12)). Since the DCO was submitted the proposed site ground level has been optimised through the cut and fill balance of the earthworks and will lie between the minimum flood level and the maximum level used for the purposes of the landscape and visual impact assessment. A level of 7.3 mAOD has been adopted in the STDC Reclamation Strategy which minimises the cut and fill balance, meaning that no material needs to be imported or exported from the site to form the development platform.</p>
DLV.1.10	Applicants	<p>ES Figure 17-4 [AS-121] states that the zone of theoretical visibility (ZTV) is based on information and assumptions for the PCC Site, which reflect the maximum development parameters.</p> <p>Can the Applicants clarify whether similar information about the proposed new and extended substation at Tod Point has been used in the ZTV mapping to inform the likely extent of impacts and identification of receptors? Should any other proposed structures be included in the mapping and if not why not?</p>	<p>The ZTV (ES Figure 17-6) [APP-180] is primarily based on the CCP, CCGT Power Plant and other adjacent structures as these represent the tallest and most visible elements of the Proposed Development with greatest potential to contribute to significant effects. The proposed new and extended substation at Tod Point has been reviewed and considered as part of the assessment. However, when the scale of these elements and their maximum dimensions are considered in the context of the larger structures and surrounding industrial installations they would not result in any significant landscape and visual effects. An updated ZTV is appended which shows the ZTV for the new and extended substation (Appendix DLV.1.10 in Document Ref 9.8).</p>

ExQ1	Question to:	Question:	Response
DLV.1.11	Applicants	<p>ES chapter 17 [APP-099] paragraph 17.3.21 states that the assessment is based on the largest possible dimensions for the Proposed Development and stack heights of up to 128m AOD for the absorber stack and up to 110m AOD for the heat recovery steam generator (HRSG) stack. A set of photomontages is also provided at ES Volume 2 Figures 17-21, 17-24, 17-27 and 17-30 [APP-219 to APP-228], which show one delivery scenario, with the absorber and HRSG stacks at maximum height.</p> <p>Can the Applicants explain what consideration has been given to the possibility that absorber and HRSG stacks of reduced height, but increased width, could result in worse visual effects than stacks at the established maximum height and are additional photomontages required?</p>	<p>A number of different design approaches were considered at an early stage of the landscape and visual assessment in order to identify the likely worst-case scenario on which to base the assessment. The design scenario with structures up to the maximum heights was considered to represent the greatest visual envelope and greatest potential for landscape and visual effects, particularly given the context of other large-scale structures. While the increased widths of structures could increase their presence in the view it is considered that this would be counteracted by the reduction in overall height and as such visual impacts would be similar or less than those related to the maximum height delivery scenario. The existing baseline of the Site and surrounding area includes a combination of both broad and narrow large scale industrial buildings and structures of differing heights to which both of the delivery scenarios could relate.</p>
DLV.1.12	Applicants	<p>The baseline for vegetation cover is described in ES Chapter 17, paragraphs 17.4.24 to 17.4.26 [APP-099].</p> <p>Explain how this has been established and confirm whether there are any trees or vegetation within the connection corridors of particular value or importance as a landscape feature.</p>	<p>The existing vegetation cover included as part of the landscape baseline description has been established through desk and field-based analysis and observation. It is intended to give a high-level overview of vegetation as a landscape component, with additional information on land cover and vegetation provided in relation to landscape character types and areas. Vegetation along the connection corridors is largely grassland with occasional scrub in some areas and has no particular importance as a landscape character feature. A small number of larger trees or groups of trees are present in localised areas along the edge or immediately adjacent to the corridors, although these are generally of limited importance as landscape features. The configuration of the Proposed Development avoids the need for the removal of mature trees and although some pruning of mature trees may be required, this is not anticipated to result in any notable landscape change.</p>
DLV.1.13	Applicants	<p>Paragraph 17.3.23 of ES Chapter 17 [APP-099] refers to the removal of vegetation within the electrical connection corridor during construction.</p> <p>Can the Applicants confirm whether the reinstatement of vegetation would be secured through the Landscape and Biodiversity Strategy [APP-079] and, if so, clarify where it is provided for in that document.</p> <p>Should this mitigation measure also be referenced in ES Appendix 25A [APP-347] as a commitment?</p>	<p>This is covered within Section 4.8 of the Landscape and Biodiversity Strategy [APP-079] which relates to temporary land needs/losses. The restoration requirements in the Landscape and Biodiversity Strategy are set out in Table 25-1 in the Commitments Register [APP-347] in relation to Chapters 12 (Terrestrial Ecology, [APP-094]) and 15 (Ornithology, [APP-097]) and secured under Requirement 4 of the draft DCO.</p>
DLV.1.14	Applicants	<p>The Commitments Register at ES Volume 3 Appendix 25A [APP-347] includes commitments to a detailed lighting scheme, and identifies that measures will be secured through R3 and R6 of the dDCO. A requirement to consider and address lighting impacts on sensitive ecological receptors as part of the scheme is identified, but this is not extended to landscape and visual receptors.</p>	<p>The Applicants agree that ES Volume 3 Appendix 25A [APP-347] will be updated in respect of a commitment to submit for approval a detailed external lighting scheme (in accordance with R6 of the dDCO [AS-135]) that includes confirmation that the principles identified in ES Chapter 17 [APP-099] and the Indicative Lighting Strategy [APP-078] have been incorporated in the design to</p>

ExQ1	Question to:	Question:	Response
		<p>Can the Applicants confirm whether ES Volume 3 Appendix 25A should be updated in respect of the commitment to submission and approval of a detailed external lighting scheme (in accordance with R6 of the dDCO [AS-135]) to ensure that includes confirmation that the principles identified in ES Chapter 17 [APP-099] and the Indicative Lighting Strategy [APP-078] have been incorporated to minimise impacts to visual receptors and that the predicted effects are no worse than those identified in ES Chapter 17.</p>	<p>minimise impacts to visual receptors and that the predicted effects are no worse than those identified in ES Chapter 17 [APP-099].</p>
DLV.1.15	Applicants	<p>ES Chapter 17 [APP-099] paragraph 17.7.5 states that no additional mitigation is identified in respect of the moderate adverse visual effects to receptors at viewpoints 5, 7 and 8 due to the proximity to the Proposed Development and the scale of the structures.</p> <p>Reference is made to NPS EN-2 (section 2.65), which states that it is not possible to eliminate visual impacts associated with a fossil fuel generation stations and mitigation is therefore to reduce visual intrusion of the buildings on the landscape and minimise impact on visual amenity as far as reasonably practicable.</p> <p>Can the Applicants explain whether there is potential to further reduce the significant adverse effect concluded in Chapter 17 [APP-099] for visual receptors at viewpoint 7 during operation through the use of landscaping and planting.</p>	<p>The potential for offsite planting adjacent to this location and receptor was considered as part of development of the mitigation strategy. However, this was discounted as woodland planting would largely be out of character with the local landscape and would be difficult to establish due to the exposed coastal location. The viewpoint and surrounding area are also covered by ecological designations (SSSI and Ramsar site) related to coastal habitats and as such landscaping and planting is not considered appropriate in this context.</p> <p>In relation to the England Coastal Path, Viewpoint 7 is representative of views from a short section of the route in close proximity to the PCC Site. Visual effects experienced from other sections of the route within the study area would generally be lower, as evidenced by Viewpoints 1 to 3, 8 and 12.</p>
DLV.1.16	Applicants HBC	<p>Viewpoints 1 and 2 show views from the promenade at Seaton Carew [APP-184 to APP-186 and APP-217 to APP-219].</p> <ul style="list-style-type: none"> i) Are the Applicants and HBC satisfied that the viewpoints are representative of typical views of sensitive receptors along the seafront? ii) Did HBC agree these viewpoints in advance of submission of the Application? iii) Is there a need for any additional viewpoints from the Hartlepool area, and outside of the 5km ZTV? 	<ul style="list-style-type: none"> i) Representative viewpoint locations were identified in consultation with the LPAs and include a series of coastal viewpoints at a range of distances. Viewpoints 1 and 2 are located adjacent to the coast along the edge of The Headland and Seaton Carew areas of Hartlepool and are considered to be representative of a range of receptors, including local residents, visitors to the coast and users of the England Coastal Path. Viewpoint 4 (North Gare Sands) provides an additional viewpoint along the Hartlepool coast representative of recreational receptors in closer proximity to the PCC Site. Two further locations (Viewpoints 3 and 6) are located within or immediately adjacent to the Hartlepool area and are representative of recreational receptors and visitors to Teesmouth National Nature Reserve and Cowpen Bewley Woodland Country Park. These viewpoints are considered to provide a representative cross section of potential viewpoints within Hartlepool, focusing on those locations with the greatest potential for significant effects. As outlined in ES Technical Appendix 17C [APP-337] and shown on ES Figure 17-4 [APP-178] a number of other potential viewpoint locations within the Hartlepool area were initially considered before being discounted due to restricted visibility and/or inclusion of other nearby and more representative locations. ii) A list of potential viewpoint and photomontage locations was provided to HBC for agreement as part of the Section 42 consultation process. No additional viewpoints were requested. iii) The visual assessment has identified that potential significant effects would be limited to one viewpoint location in close proximity to the PCC

ExQ1	Question to:	Question:	Response
			<p>Site, with operational stage effects on the remaining locations assessed as not significant. The assessment has also identified that operational stage effects on each of the viewpoints located greater than 5km from the PCC Site (Viewpoints 1, 2, 6, 10 to 12) would be negligible. It is therefore considered that there is very little or no potential for significant visual effects to occur from locations greater than 5km and as such any further viewpoints outside this distance are unlikely to contribute to the assessment or decision making and as such would not represent a proportionate approach.</p>
DLV.1.17	Applicants RCBC	<p>The ZTV and potential viewpoints plan at Figure 17-4 [AS-121] indicates that views of the PCC would be possible from Saltburn-by-the-Sea and the surrounding high ground, which is on the edge of the landscape study area. The ExA noted on their USI [EV1-001] that there are clear views of the existing steel works structures from the seafront and the pier. No part of this area is indicated on Figure 17-4 as a potential viewpoint location. The Landscape Character Plan at figure 17-3 [AS-120] indicates that this is on the boundary of a number of different national and local LCAs as well as the North Yorkshire Coastal Waters marine character area.</p> <p>Can the Applicants:</p> <ul style="list-style-type: none"> i) Explain why the Saltburn-by-the-Sea area was not considered as a potential viewpoint? <p>Can RCBC:</p> <ul style="list-style-type: none"> ii) Provide comment whether a viewpoint is necessary from this area, and if so, from what location. 	<ul style="list-style-type: none"> i) Although there would be visibility of the PCC Site from Saltburn-by-the-Sea the intervening distance is such that significant effects were considered unlikely. Alternative locations from similar, and less distant, viewpoints were considered and included in the assessment. These include Viewpoint 11 located in a slightly elevated location on the edge of New Marske and Viewpoint 12 located along the coast adjacent to Marske-By-The-Sea. In both cases the assessment has concluded a negligible effect, largely as a result of the intervening distance and existing context. It is considered that potential visual effects experienced from Saltburn-by-the-Sea would be broadly similar to those experienced at Viewpoints 11 and 12, and assessed as not significant.

8.0 GEOLOGY, HYDROGEOLOGY AND LAND CONTAMINATION

SExQ1	Question to:	Question:	Response
GH.1.1	Applicants EA RCBC STBC	<p>Chapter 10 of the ES [APP-092] states that ground investigation will take place in Q2/Q3 of either 2021 or 2022. Annex A of Appendix 10A [APP-292] shows the proposed preliminary exploratory hole locations.</p> <p>i) The Applicants are asked to confirm the scope and timetable for the ground investigations, risk assessments and any remediation required.</p> <p>ii) Requirement 13 of the dDCO does not allow commencement of the development until a scheme to deal with contamination has been approved. How does the timetable in (i) relate to the proposed date for commencement of construction on the site?</p> <p>iii) Should ground investigation results not be available prior to the close of the Examination, what certainty can the ExA have that subsequent assessment would not demonstrate that the site is unsuitable for the Proposed Development?</p> <p>iv) Are the EA and LPAs content with the proposed locations and scope of the preliminary investigation outlined in Annex A of Appendix 10A [APP-292]?</p>	<p>i) The Applicants commissioned a ground investigation (GI) for the PCC site and the route of the CO₂ export pipeline to MLWS. This GI was undertaken between May and July 2021. The fieldwork comprised trial pitting (12 no.) to >4.5 m depth and sonic (18 no.) boreholes (to maximum 20 m depth), most also with rotary continuations (15 no.) up to 38.3 m depth. In-situ testing and associated soil, rock and groundwater laboratory testing (standard penetration tests (SPTs), dilatometer tests in bedrock, photoionisation detector (PID) tests, litmus paper tests and variable head permeability tests) was undertaken. The scope and results of the GI are set out in a GI Factual Report whilst the interpretation of ground conditions is set out in a GI Interpretative Report. The GI Factual Report records the results of three rounds of groundwater level measurements from July – November 2021 and three rounds of water quality results from August to October 2021. In-situ aquifer hydraulic permeability tests were carried out between October and November 2021 with ground gas monitoring on three occasions between August and November 2021. Both the factual and interpretative reports are submitted at Deadline 2 alongside this response (Appendices GH.1.1a and GH.1.1b respectively in Document Ref 9.8).</p> <p>The current ground investigation has identified ground conditions across the PCC Site and the CO₂ Export Pipeline route. A supplementary GI on the PCC Site designed specifically to support Front End Engineering Design (FEED) is due to begin middle-late June 2022 with factual reporting anticipated in November 2022. A further GI will be undertaken in summer of 2022 by the Contractor along the connections corridors for detailed design where underground construction, trenchless crossings and new foundations are proposed.</p> <p>ii) Remedial works for the PCC site will be undertaken by STDC under a separate planning permission under the Town and Country Planning Act. The remediation philosophy is set out in Enabling Earthworks and Remediation Strategy Report submitted to Redcar and Cleveland Borough Council by STDC (R/2021/1048/FFM). STDC, in conjunction with the Applicants, have worked collaboratively to develop a combined remedial specification that will make the site suitable for the proposed Net Zero Teesside development whilst controlling risks to controlled waters and human health. This is based on the GI data gathered to date.</p> <p>Currently it is anticipated that STDC planning permission for the remediation activities will be granted in the summer of 2022 by the planning authority. This is subject to comments on the measures to manage risks to controlled waters by the Environment Agency as a</p>

SExQ1	Question to:	Question:	Response
			<p>statutory consultee. The Applicants understand that currently the remediation works are planned to be completed by STDC by end Q3 2023, with the Applicants' construction activities scheduled to commence in Q4 2023.</p> <p>The GI information already obtained together with the completion of the remedial works under the local planning application will be used to prepare the report to discharge requirement 13 of the Draft DCO. This will be done prior to commencement of construction of the Proposed Development.</p> <p>iii) The GI undertaken to date demonstrates that the site is suitable for the Proposed Development subject to the implementation of STDC's remedial strategy with the agreement of the Environment Agency. The Foundation Options Report (see response question GH.1.2 below) identifies appropriate foundation options for the Proposed Development. The additional GI to be undertaken later in 2022 is to inform the FEED and building foundation design and is also anticipated to confirm the findings of the ground investigation already undertaken.</p> <p>iv) The Applicants will voluntarily consult with the Environment Agency on the scope of the supplementary GI and the GI for the connections corridors. This consultation has started and is ongoing for the supplementary GI.</p>
GH.1.2	Applicants	<p>A decision has not yet been made regarding the construction and foundations of the Proposed Development, and reference is made in paragraph 10.6.1 of the ES [APP-092] to a future Foundation Options Report, including a potential need for piling. These decisions will have implications for <i>inter alia</i> environmental risk assessments, noise, waste management and timing of the project.</p> <p>Please provide an update on the timetable for the publication of the Foundations Options Report and the date by which a final decision on foundations will be made?</p>	<p>The Foundations Options Report is included as Appendix GH.1.2 in Document Ref 9.8. A conservative assessment has been adopted in the ES for consideration of noise, waste management and other environmental effects associated with foundation and piling design such that the Foundations Options Report findings do not alter the conclusions of the ES. The Draft DCO also includes Requirement 23 (Piling and penetrative foundation design) to secure provision of a method statement, informed by a risk assessment, to be approved by the relevant planning authority in consultation with the Environment Agency.</p>
GH1.3	Applicants EA RCBC STBC	<p>Paragraph 10.6.4 [APP-092] states that assessment of the significance of impacts will take into account the principles of assessment in CIRIA Report C552 (2001) and the EA's Guiding Principles for Land Contamination (2010). Appendix 10C [APP-294] and Table 10A-28 of Appendix 10A [APP-293] contain an environmental risk assessment.</p> <p>i) The Applicants are asked to explain how the risk assessments take into account the EA's Guiding Principles for Land Contamination.</p>	<p>i) A comprehensive Preliminary Risk Assessment has been prepared in support of the Proposed Development. The risk assessment follows the principles of the guidance set out in the Environment Agency's Guiding Principles for Land Contamination for a Preliminary Risk Assessment (which recommends completion of a desk top study including a Conceptual Site Model, Qualitative Risk Assessment and recommendations for ground investigation and assessment of the ground investigation data). Table 10A-28 of Appendix 10A [APP-293] should be read in conjunction with Tables 10A-29 to Table 10A-33 of</p>

SExQ1	Question to:	Question:	Response
		<ul style="list-style-type: none"> ii) Please could all parties confirm that these are the most up to date and appropriate approaches for undertaking an assessment of the risks to controlled waters and human health iii) If this is not the case, then the Applicants should justify why it has taken this approach. 	<p>Appendix 10A [APP-293], which detail contamination risk associated with the features of the Proposed Development and includes proposed mitigation measures.</p> <ul style="list-style-type: none"> ii) It is understood that CIRIA Contaminated Land Risk Assessment: A guide to good practice C552 (2001) is a current document, i.e. it has not been superseded or withdrawn, and is included on the CL:AIRE website as an information source for assessing risks to the water environment (INFOR-RA2-3). This document is considered by CL:AIRE to be an appropriate and robust approach. iii) The preliminary risk assessment has been undertaken in full understanding of the principles of risk assessment and the current guidance set out by the Environment Agency in their overarching guidance for managing risks from land contamination (Land Contamination: Risk Management (2021)).
GH1.4	Applicants	<p>Paragraph 10.10.37 of Appendix 10A [APP-293] presents the methodology for the preliminary risk assessment. In addition, Section 10.8.1 of the ES [APP-092] states that only risk classified as moderate or higher will require further investigation and mitigation measures. The requirement in NPS EN-1 is that statutory environmental quality limits are taken into account.</p> <ul style="list-style-type: none"> i) Can the Applicants explain how statutory environmental limits are incorporated in this methodology? As an example, where hazardous substances have previously been found in groundwater above environmental limits, it should be explained how the likelihood of this occurring has been judged as 'low' and the consequence 'minor', and why this should not in principle be further investigated or remediated. ii) Can the Applicants also explain why groundwater and surface water have been considered as potential receptors for some sources of contamination and not others in Appendix 10C [APP-294]? iii) Can the Applicants expand on why the risk to flora and fauna from contamination has been assessed as minimal because there are 'limited pathways for contact with contaminated soil' in Section 10.10.43 of the ES [APP-292]? 	<ul style="list-style-type: none"> i) A qualitative risk assessment is set out in Table 10-15 of ES Chapter 10 [APP-092] which assesses risks of contamination on identified sensitive receptors and sets out mitigation measures. This assessment was necessarily based on desk study information as only limited ground investigation information was available for the PCC site at that time. Since the ES was submitted, a ground investigation has been carried out and a factual and interpretative report prepared (see Appendices GH.1.1a and GH.1.1b in Document Ref 9.8). At the request of the Environment Agency in its Relevant Representation [RR-024], an assessment of impacts on controlled waters based on statutory environmental limits (Water Quality Standards and Drinking Water Standards) will be included in the Hydrogeological Impact Assessment/Controlled Waters Assessment to be provided at Deadline 4. This will be based on the results of the 2021 Ground Investigation. ii) The sensitivity of potential hydrological and hydrogeological receptors considered in the assessment is set out in Table 10-14 of ES Chapter 10 [APP-092]. The Environmental Risk assessment will be reviewed, and if necessary updated, in the Hydrogeological Impact Assessment/Controlled Waters Assessment requested by the Environment Agency in their Relevant Representation [RR-024], which is to be provided at Deadline 4. iii) The Proposed Development will be primarily covered by hardstanding: buildings, roads, pavement etc. Landscaped areas within the PCC Site will be designed in consideration of the findings of ground investigation and associated quantitative risk assessment and may include mitigation

SExQ1	Question to:	Question:	Response
			works where necessary to provide an appropriate depth of growing media. The site remediation will be completed in advance of construction of the Proposed Development and this will address any significant historic contamination at the Site.
GH1.5	Applicants	<ul style="list-style-type: none"> i) Please confirm that a Hydrogeological Impact Assessment will be provided, as requested by the EA in its RR [RR-024]? ii) Provide the information requested by the EA, including cross sections, confirmation that tables and figures in Chapter 12 have been checked for consistency, and confirm that the interaction between groundwater and the River Tees will be considered. iii) A map showing the approximate locations of the previous investigations on or near the site referred to in Section 10.6 of Appendix 10A the ES [APP-292] and an assessment of the likelihood and consequences of introducing pathways between the superficial material and underlying Sherwood Sandstone should also be provided. iv) Please confirm that water in the dune slacks and users of the foreshore in the SSSI/SPA will be accounted for in the assessment of risks or provide justification for not assessing this receptor. 	<ul style="list-style-type: none"> i) Further to the assessment of impacts of controlled waters included in ES Chapter 10 [APP-092], a Hydrogeological Impact Assessment/ Controlled Waters Assessment covering issues relating to the protection of controlled waters raised in the Environment Agency's Relevant Representation (and as discussed with the Environment Agency at a meeting on 22nd April 2022) will be provided at Deadline 4. ii) This information will be included in the HIA/CWA to be provided at Deadline 4. iii) This information will be included in the HIA/CWA to be provided at Deadline 4. iv) This information will be included in the HIA/CWA to be provided at Deadline 4.
GH1.6	Applicants	<p>Paragraph 10.6.70 of ES Appendix 10A [APP-292] states that services are likely to be affected by differential movement and recommends that allowance is made to install flexible connections for water and gas lines to accommodate ground movement.</p> <p>How will this be secured through the DCO to ensure protection of infrastructure, safety and the environment?</p>	<p>Schedule 2, Requirement 3 of the Draft DCO [AS-135] specifies that the detailed design of the Work Nos. must be submitted to and approved by the relevant planning authority. Schedule 2, Requirement 34 (approved details and amendments to them) specifies that the discharge of all of the Requirements must reflect the principles set out in the documents certified under Article 45 (certification of plans etc.). As set out in Schedule 14, the certified documents include the environmental statement (including ES Appendix 10A [APP-292]). Accordingly the submission to and approval by the relevant planning authority of the detailed design must accord with ES Appendix 10A [APP-292]. If the relevant planning authority were not satisfied that this is achieved, then it may refuse to discharge the details submitted pursuant to the discharge of Requirement 3.</p>
GH1.7	Applicants RCBC STBC	<p>Paragraph 10.4.17 of the ES [APP-092] states that 7 nearby mineral sites are 'highly unlikely' to resume extraction and 2 sites may require new planning permission.</p> <ul style="list-style-type: none"> i) Can the Applicants provide the evidence for this conclusion and a map showing the location of all of these sites? ii) Do the local authorities agree with this assessment of the future of these sites? 	<p>Section 4.4 (Dormant Sites and Review of Old Minerals Planning Permissions) in the Tees Valley Joint Minerals and Waste Development Plan Documents Core Strategy DPD (September 2011) states in Paragraph 4.4.2 that:</p> <p><i>Dormant sites [...] are sites where no working had taken place between 22 February 1982 and 6 June 1995 and new conditions now have to be permitted before the site can be re-opened. Ten dormant sites were identified in the Tees Valley, one of which has had new conditions</i></p>

SExQ1	Question to:	Question:	Response
			<p><i>approved for minerals extraction (the anhydrite mines at Billingham). Of the remaining nine it is now considered that seven of these sites are highly unlikely to ever resume extraction due to recent development, designations or proposed allocations for other uses. Land at the remaining sites at Low Middlesfield Farm and Eaglescliffe Brickworks (Stockton-on-Tees) would require new conditions to be approved before they could be reopened.</i></p> <p>Seven former minerals sites are shown on ES Figure 10-5 (Quarrying and Landfill) [AS-082] within 250 m of the Order Limits. These are the following:</p> <p>Superficial clay and sand:</p> <p>123953: Haverton Hill Sandpit – BGS records indicate ceased operations and not shown on aerial photography</p> <p>123958; Haverton Hill Brickworks – BGS records indicate ceased operations and not shown on aerial photography</p> <p>110277: Kinkerdale Brick Field - BGS records indicate ceased operations and not shown on aerial photography</p> <p>110278: Kinkerdale Brick Yard - BGS records indicate ceased operations and not shown on aerial photography</p> <p>110297: Wiley Bridge Plantation Clay Pit - BGS records indicate ceased operations and not shown on aerial photography</p> <p>254998: Redcar Bulk Terminal – Crushed Rock - BGS records indicate currently dormant.</p> <p>Deep mining of Anhydrite:</p> <p>4968: Billingham Anhydrite Mine - BGS records indicate ceased operations</p> <p>In addition, extraction of salt by solution mining of brine is currently being undertaken in Seal Sands outside the draft Order Limits.</p>
GH1.8	Applicants	<p>Paragraph 10.4.19 of ES [APP-092] indicates that there are safeguarded mineral deposits beneath the Site.</p> <ul style="list-style-type: none"> i) Please confirm whether or not the Proposed Development would result in the loss of access to these deposits? ii) Can the Applicants confirm how the Proposed Development meets the requirements of Policy MWC4 of the Tees Valley Joint Minerals and Waste Development Plan Core Strategy DPD (September 2011)? iii) Please provide the map of mineral safeguarding areas referred to as Appendix A in Section 10.4.19 of the ES [APP-092]? 	<ul style="list-style-type: none"> i) Safeguarded mineral is present in the form of a) gypsum (anhydrite) under the whole site and b) salt under the whole site except around Billingham (see Tees Valley Joint Mineral and Waste DPD-CS Safeguarding Plan Deep Resources Policy MWC4 (May 2010)) (see Appendix GH.1.8.1 in Document Ref 9.8). In addition, there are no shallow or surface mineral resources safeguarded under Policy MWC4, however Teesport is safeguarded as a Safeguarded Wharf Area for Marine Dredged Sand and Gravel under Policy MWC11 (see TVJMWDPD-CS Safeguarding Plan Shallow Resources Policy MWC4 (May 2010) (see Appendix GH.1.8a in Document Ref 9.8))

SExQ1	Question to:	Question:	Response
			<p>ii) TVJMW DPD-CS Policy MWC4: Safeguarding of Mineral Resources from Sterilisation states:</p> <div style="border: 1px solid black; padding: 5px;"> <p>Policy MWC4: Safeguarding of Minerals Resources from Sterilisation</p> <p>Within the minerals safeguarding areas, non-minerals development will only be permitted in the following circumstances:</p> <ul style="list-style-type: none"> a) the development would not sterilise or prejudice the future extraction of the mineral resource because there is evidence that the resource occurs at depth and can be extracted in an alternative way or there is evidence that the resource has been sufficiently depleted by previous extraction; or b) the mineral will be extracted prior to development and this will not significantly adversely affect the timing and viability of the non-minerals development; or c) the need for the non-mineral development can be demonstrated to outweigh the need for the mineral resource. </div> <p>The Proposed Development is underlain by deep mineral resources which may be accessed either by:</p> <ul style="list-style-type: none"> • deep mining (anhydrite); or • brine pumping (salt). <p>The Proposed Development uses previously developed industrial land or existing utilities corridors. The Proposed Development would not sterilise or prejudice the future extraction of the mineral resource because the anhydrite and salt resources occur at depth and can either be extracted in an alternative way (mining or brine solution) or there is evidence that the resource may have been sufficiently depleted by previous extraction (anhydrite). The Proposed Development therefore meets the requirements of Policy MWC4.</p> <p>iii) The map of mineral safeguarding areas is included as Appendix GH.1.8a (deep resources) and Appendix GH.1.8b (shallow resources) in Document Ref 9.8.</p>

9.0 HISTORIC ENVIRONMENT

ExQ1	Question to:	Question:	Response
HE.1.1	Applicants	<p>ES Chapter 18 Archaeology and Cultural Heritage [APP-100] paragraph 18.3.13 refers to a number of sources used for the assessment including the results of previous archaeological and geotechnical investigations. Section 18.7 refers to a Written Scheme of Investigation (WSI) which will be approved by the local authority and this is set out in R14 of the dDCO [AS-135].</p> <p>The Applicants are asked to:</p> <ol style="list-style-type: none"> i) Indicate the location of the assessed previous investigations in relation to the Order Limits; and ii) Provide an outline of the WSI for both onshore and marine archaeology. 	<p>The Applicants propose to provide an updated figure at Deadline 3 showing the location of previous investigations in relation to the Order Limits, for completeness.</p> <p>Geotechnical Investigation Report which has been completed for the Proposed Development, particularly in relation to Made Ground, section 7.1 (Identified ground conditions) in Appendix GH.1.1b (Document Ref 9.8), identifies made ground of a thickness between 7.8m and 7.53m below ground level. In situ archaeological remains will not be present within modern made ground deposits and, as the Proposed Development will be constructed wholly within made ground deposits, archaeological remains will not be impacted. The Applicants, will, in consultation with the Archaeology Advisor for Redcar and Cleveland Borough Council, agree that a WSI is not required for the terrestrial elements of the Scheme based on the geotechnical information.</p> <p>Requirement 14 of the Draft DCO [AS-135] will be reviewed once these discussions are underway.</p> <p>During formal Stage 2 consultation on the Preliminary Environmental Information (PEI) Report and finalisation of the ES the Applicants have attempted to contact the Archaeological Advisor for RCBC, including via RCBC Planning Department, to agree the scope of mitigation, but there has been no response from the Archaeology Advisor.</p> <p>The Applicants agree to define the scope of marine archaeological investigation, which will comprise geoarchaeological assessment, in a scope of work document to be submitted at Deadline 4, recognising that the Written Scheme of Investigation for marine geoarchaeological assessment would be prepared by the Geoarchaeological Contractor, when appointed.</p>
HE.1.2	Historic England MMO RCBC HBC	<p>ES Chapter 19 [APP-101] relates to marine heritage. It notes at Table 19-7 that there are two known undesignated heritage assets (shipwrecks) within the site boundary and at paragraphs 19.4.26 to 19.4.32 refers to a range of potential historic environment receptors. Confirmation is sought from Historic England, the MMO, RCBC and HBC (archaeology):</p> <ol style="list-style-type: none"> i) Whether or not the Applicants' assessment is accurate, and whether there are likely to be any additional previously unrecorded heritage assets; ii) If the mitigation and enhancement measures set out in section 19.7 of the ES [APP-101] (including a pre-construction geoarchaeological assessment) would be appropriate; and 	N/A

ExQ1	Question to:	Question:	Response
		iii) Whether R14 of the dDCO could be applicable to marine heritage assets as well as terrestrial archaeology, and any suggested amendments to wording.	
HE.1.3	Historic England RCBC STBC HBC	ES Chapter 18 Archaeology and Cultural Heritage [APP-100] section 18.6 refers to likely impacts and effects on a number of non-designated heritage assets within the Order Limits. ES Figure 18-2 [APP-230] indicates the location of non-designated heritage assets within the 1km study area. ES Appendix 18B [APP-339] at Table 18.5 includes a gazetteer of these non-designated heritage assets. Historic England, RCBC, STBC and HBC (archaeology) are asked to confirm: <ul style="list-style-type: none"> i) Is the 1km study area sufficient? ii) Do Figure 18-2 and ES Appendix 18B provide an accurate and up-to-date record of non-designated heritage assets within the site and 1km study area? Are there any others that should be added? iii) Is the Applicants' assessment of impacts to the non-designated heritage assets within the site boundary at section 18.6 of the ES acceptable? iv) Would R14 of the dDCO be appropriate in safeguarding any known and unknown archaeological features, and if not please suggest amendments to the wording? 	The Applicants have submitted a number of initial Statements of Common Ground at Deadline 1 and will seek to agree that the assessments undertaken are appropriate with each relevant authority via the SoCG and provide updated documents during examination.
HE.1.4	Historic England RCBC STBC HBC	ES Chapter 18 Archaeology and Cultural Heritage [APP-100] paragraph 18.3.11 notes that a 5km study area has been applied for designated heritage assets, and a 1km search area for non-designated assets. These are illustrated in ES Figures 18-1 [APP-229] and 18-2 [APP-230]. ES Appendix 18B [APP-339] includes a gazetteer of the heritage assets. Section 18.6 of APP-100 sets out that there are no designated heritage assets within the Order Limits and refers to likely impacts and effects on a number of non-designated heritage assets within the site. RPAs and Historic England are asked to respond to the following: <ul style="list-style-type: none"> i) Whether the 1km and 5km study areas are sufficient; ii) Whether Figures 18-1, 19-2 and Appendix 18B provide an accurate and up-to-date record of heritage assets within the site and study areas; iii) If not, are there any other heritage assets that should be added?; iv) Whether the Applicants' assessment of impacts to the assets within the site boundary at section 18.6 of the ES is sufficient. In particular, paragraphs 18.6.14 to 18.6.24 relating to setting of nearby designated heritage assets. Has their significance been adequately identified, and has the effect on their setting and significance been adequately assessed?; and 	N/A

ExQ1	Question to:	Question:	Response
		<p>v) Would R14 of the dDCO be appropriate in safeguarding any known and unknown archaeological features? If not, please suggest amendments to the wording.</p>	
HE.1.5	<p>RCBC Historic England Applicants</p>	<p>The Redcar blast furnace is identified on Figure 18-2 [APP-230]. The structure and associated steel works infrastructure is assessed in ES Chapter 18 paragraph 18.6.2 [APP-100].</p> <p>Paragraphs 18.8.3 and 18.8.4 of the Cultural Heritage Baseline Report [APP-338] state that '<i>Standing structures associated with Redcar blast furnace and ancillary buildings are present within the proposed Site boundary. The buildings are indicative of the region's industrial heritage and are of local and possibly regional interest</i>', and that the structures are well-preserved and provide a functional setting to the furnace structure as well as being a well-known landmark of value to the local community through their historical associations and contribution to local identity.</p> <p>The former steel works are noted in the Stage 2 consultation responses from Save our Steel Heritage Group dated 14.09.20 and Historic England dated 15.09.20 [APP-068]. Historic England identify the former steel works as a key heritage issue, and that it would be appropriate for consideration to be given to the retention of its key features as part of the Proposed Development and recording prior to demolition.</p> <p>RCBC's Climate Change group in their pre-application consultation response dated 18.09.20 refers to ensuring the heritage legacy of steel making, as well as the South Tees Area SPD, principle STDC8 – Preserving Heritage Assets.</p> <p>Can the Applicants:</p> <ul style="list-style-type: none"> i) Identify the location of the blast furnace in relation to the Order Limits around the PCC Site; ii) Confirm if the blast furnace and any other associated former steel works infrastructure are considered to be non-designated heritage assets; iii) If considered to be non-designated heritage assets, provide an assessment of their significance or signpost where this can be found in the submitted documents; iv) Provide an update on the timescales for demolition and clearance of the Redcar blast furnace and associated infrastructure; and v) Confirm whether pre-demolition recording has taken place/ will take place as suggested by Historic England in their pre-application consultation response [APP-068]. <p>The Applicants may wish to answer this question together with GEN.1.11.</p> <p>Can Historic England and RCBC:</p>	<ul style="list-style-type: none"> i) The location of the blast furnace is identified on Figure 18-2 in Volume II of the ES [AS-125]. However, the Applicants consider that it may assist the Examining Authority to show the location of the blast furnace on an updated drawing to show the location of the blast furnace in relation to the Order Limits and PCC Site. This information is provided as part of the drawing submitted in response to GEN.1.11 v. ii) The blast furnace and associated infrastructure are not recorded on the local authority Historic Environment Record but are considered as non-designated assets in the Cultural Heritage Baseline Report [APP-338]. The heritage interests of the blast furnace and associated infrastructure are referenced in section 18.8. Paragraph 18.8.3 states the structures are of local and possibly regional interest which aligns with the low to medium value criteria presented in Table 18A-2 [APP-338]. The blast furnace and remaining associated infrastructure will not be physically impacted as a result of the Proposed Development . iii) An assessment of the heritage significance of the blast furnace was included in Chapter 18 of the PEI report provided during the Applicants' Stage 2 consultation. Some ancillary structures associated with the blast furnace have been demolished since the preparation of the ES chapter and therefore the heritage value of the blast furnace structures, including the contribution made by their setting, has changed, and likely reduced. The blast furnace and remaining associated infrastructure is located outside of the Order Limits and will not be physically impacted by the Proposed Development; however, an updated assessment of significance will be carried out and submitted at Deadline 4 which will acknowledge the demolition of buildings which previously formed the functional setting to the blast furnace. iv) The Applicants are not aware of the timescales or proposals on whether to demolish the blast furnace – this would be undertaken as part of a separate development by South Tees Development Corporation. v) The Applicants have not undertaken pre-demolition recording of the blast furnace and anticipate that this would be the responsibility of South Tees Development Corporation since it lies outside the Order Limits.

ExQ1	Question to:	Question:	Response
		vi) Provide comment on whether the blast furnace and/or any other associated former steel works infrastructure are considered to be non-designated heritage assets; vii) If considered to be non-designated heritage assets, provide an assessment of their significance; viii) Provide comment on whether pre-demolition recording has been agreed and carried out (or whether it should take place and on which particular elements of the former steel works); and ix) Provide further detail of any conflict with national and local policy including the South Tees Area SPD.	
HE.1.6	RCBC HBC Applicants	ES Figure 18-1 [APP-229] shows conservation areas at Coatham, Kirkleatham, Yearby, Wilton and Seaton Carew which are proximate to the PCC Site. Could RCBC and HBC: i) provide a map of each of the conservation areas and a copy of any conservation area appraisals and management plans, if available. ii) If no conservation area appraisals are available, provide an assessment of their significance. Could the Applicants: iii) provide an assessment of the effect of the Proposed Development on the setting of each of the conservation areas.	Potential impacts to conservation areas were scoped out following site boundary adjustments and the results of walkover survey. The Applicants propose that the ES Volume III Appendix 18A Cultural Heritage Baseline Report [APP-338] will be updated to include the summary assessment and rationale for scoping out the conservation areas from the ES. This will be submitted by the Applicants at Deadline 4.

10.0 MAJOR ACCIDENTS AND NATURAL DISASTERS

ExQ1	Question to:	Question:	Response
MA.1.1	Applicants	<p>Section 22.3.18 of ES Chapter 22 [APP-104] states that decommissioning has not been included in the assessment because not enough is yet known about it, but 'it is likely' that the hazards would be similar to the construction and operation phase.</p> <p>i) Please provide evidence to support this statement.</p> <p>ii) What certainty can the ExA have that, at least in principle, the inherent features of the design would be sufficient to prevent, control and mitigate major accidents during this phase?</p>	<p>(i) The main hazards associated with the Proposed Development relate to effects that could occur during construction (for example encountering unknown ground conditions), during commissioning (for example during pressure testing of pipelines and vessels) or during operation (for example the storage and handling of hazardous chemicals and materials and the use of high pressure systems). Conversely, at the decommissioning phase, chemical inventories will have been removed, pressurised systems will have been depressurised and site conditions will be known. While care needs to be taken to manage spillages and waste disposal during decommissioning – which would be achieved through the proposed Decommissioning Environmental Management Plan – it is not considered that the same level of major accident risk would occur during this phase of the project relative to the other phases discussed above.</p> <p>(ii) A high degree of certainty can be held that the design would be sufficient to prevent, control and mitigate major accidents during this phase, because there would have been a period of 25 years or more of continuous operation of the systems prior to the decommissioning phase taking place. In that time, continuous process and emissions monitoring will have been undertaken together with the application and maintenance of safety systems. The trained operators will also be highly familiar with the hazards associated with the plant and infrastructure and the Environment Agency and Health and Safety Executive (HSE) would have regulated the operational assets throughout their life. Hazards would therefore be known, understood and prepared for in any decommissioning plan for the infrastructure prior to any works being undertaken. The environmental permit for example will require a site closure plan to be developed and approved by the Environment Agency prior to any decommissioning works being undertaken.</p>
MA.1.2	Applicants	<p>The EA are quoted as requesting that the cumulative effects of minor events is addressed in Table 22-1 of Chapter 22 of the ES [APP-104].</p> <p>Can you signpost where the ES addresses this?</p>	<p>The Environment Agency comment relates to slow leakage of CO₂ from the Export Pipeline affecting terrestrial habitats in the Teesside and Cleveland Coast SPA/Ramsar. The CO₂ Export Pipeline under the SPA / Ramsar site will be designed to industry standards as defined in international pipeline design standards. These standards ensure that the failure modes of the pipeline (such as erosion, corrosion, mechanical and materials) are adequately taken into account for the pipeline and the service it is performing (CO₂ transportation). The pipeline will be fully welded under the SPA / Ramsar sites, welds will be subjected to non-destructive testing (NDT) as they are constructed. The pipeline will be tested for mechanical completion, once construction is completed and then, in line with the requirements of the pipeline design</p>

ExQ1	Question to:	Question:	Response
			<p>standard, strength tested. These tests are the demonstration that the pipeline has been constructed and tested in line with design standards. During the operating phase of the pipeline the pipeline will be subject to ongoing preventative maintenance such as pigging and In-line inspection (ILI) to demonstrate ongoing integrity.</p>
MA.1.3	Applicants	<p>While it is appreciated that detailed design is still to be undertaken, please explain how the following would be secured via the DCO:</p> <ul style="list-style-type: none"> i) the design of the development and emergency action plans to mitigate risks associated with low temperatures referred to in Table 22-1 of Chapter 22 of the ES [APP-104]; ii) the commitment in paragraph 22.7.9 of ES [APP-104] to incorporate embedded mitigation into the CO₂ gathering network; iii) the measures required to mitigate the following construction stage risks listed in Table 22-2 [APP-104] to as low as reasonably practicable' (ALARP) or to a tolerable level: C-4 (security measures), C-5 (ground collapse site investigations), C-8 (vigilance and security measures relating to aircraft-risk), C-9 (staff shortages) 	<ul style="list-style-type: none"> (i) As presented in row O-11 of Table 22-3 of Chapter 22 of the ES [APP-104], the engineering design will take into account the predicted ambient temperatures and wind speeds over the operational lifecycle of the Proposed Development. This includes consideration of suitable materials of construction and the design of utility systems such as cooling water to be able to tolerate abnormal weather conditions. This is standard practice for any new engineering design, recognising that as the location is coastal, it is less at risk of very low temperature events than plants installed far inland in land masses. As this is standard design protocol, no specific control or mitigation is considered necessary to be applied within the DCO. (ii) The pipeline design must meet all safety standards including appropriate British Standards in order to satisfy the requirements of the Pipeline Safety Notification under the Pipeline Safety Regulations 1996. The HSE may also impose specific additional requirements for the CO₂ pipeline. The HSE must be notified a minimum of 6 months prior to commencement of construction of the pipeline and sign off the design accordingly. Consequently, it is considered that the safe design of the pipeline is already secured through alternative approvals and no specific addition is required within the DCO. (iii) Regarding security measures, requirement 9 (Site security) requires security measures to be approved by the relevant planning authority and then implemented. Regarding ground collapse, the permitted preliminary works allow for geotechnical surveys to be undertaken as appropriate prior to commencement of site works and requirement 13 details the ground investigation and remediation required to enable the site to be prepared and suitable for construction of the Proposed Development. Regarding aircraft risks, two requirements are included in the draft DCO – requirement 27 (Aviation warning lighting) and requirement 28 (Air safety) which, while aimed at protecting aircraft, will also protect the Proposed Development from air crashes. Regarding staff shortages, the Environment Agency and HSE will require demonstration of adequate staff resource and training as part of their approval of any environmental permit application and COMAH licence application respectively, so additional controls within the DCO are not considered to be necessary.

ExQ1	Question to:	Question:	Response
MA.1.4	Applicants	<p>It is stated in Table 11-1 of ES Chapter 22 [APP-104] that the design is not sufficiently progressed to allow for provision of a detailed firewater containment system. However, in Table 22-1 of the ES [APP-2014] the EA is quoted as requesting that the EIA contains a worst-case estimation of firewater runoff production, including for remediation following a fire, and demonstrate that a solution to containment, treatment and/ or removal can be met on the site.</p> <p>Can further details be provided to demonstrate that such a solution is at least in principle achievable?</p>	<p>As required for the environmental permit, measures will be taken to prevent accidental emissions such as firewater from entering the surface water drains. Such measures will be confirmed with the Environment Agency as part of the final design approval prior to commencement of proposed operations, and are likely to include isolation valves such as penstocks, or source control measures such as booms or absorbent systems. In the event of a fire, the connection to the surface water drainage system will be closed via isolation valves, and surface run-off (firewater and rainwater) will be contained within the site to prevent contaminated water being released through the surface water drains. The proposed installation will include an area for separate firewater storage in a dedicated fire water run-off collection pond. The sizing of this pond and its location will be determined at the detailed design stage and confirmed with the Environment Agency as part of the permit variation application at that time. This is standard design and operational practice for chemical plants and power stations and there is adequate space within the PCC Site footprint to accommodate such storage using kerbs and isolation valves. The provision of a firewater retention pond is included in paragraph (ix) of Work No. 1B of Schedule 1 of the draft DCO.</p>
MA.1.5	Applicants	<p>Section 22.4.4 of ES Chapter 22 [APP-104] states that the geology underlying the Site is of no to low risk of hazards from ground stability. The Geotechnical Risk Register in Appendix 10D of the ES [APP-295] states that the risks from geological hazards are potentially severe. Scenario O-13 of Table 22-3 [APP-104] records that earthquakes have occurred in the area, including a magnitude 3.1 earthquake on 23 January 2020.</p> <ul style="list-style-type: none"> i) Please explain this apparent contradiction. ii) Section 22.4.5 [APP-104] states that 'according to Chapter 10', the geology underlying the site is of no to very low risk of seismic hazards. Where is information about seismicity contained in Chapter 10? 	<ul style="list-style-type: none"> (i) There is not considered to be any contradiction. The geology is considered to be stable since the site is underlain by slag of several metres in thickness, which is highly stable. The PCC Site has had a steel works installed and safely operated on it for many years without subsidence or ground failure. However, notwithstanding that the risk is very low, the hazard from any ground failure – were it to ever occur – could be severe and that is the point acknowledged in Appendix 10D of the ES [APP-295]. Regarding earthquakes, as with the rest of the UK, on occasion these have been known to occur but they are small, infrequent and very unlikely to cause structural damage. The UK as a whole – and Teesside – is at low risk of earthquake damage. (ii) It is correct that there is no reference to earthquakes or seismic activities in Chapter 10, because the risk of such activities in Teesside - as with the rest of the UK – is very low.
MA.1.6	Applicants	<p>The risks from loss of water supply or the discharge corridors has not been considered because 'there are no specific risks' according to paragraph 22.6.4 of the ES [APP-104].</p> <ul style="list-style-type: none"> i) Please provide more information for the basis of this decision. ii) How likely is it that they could be interrupted? iii) What are the implications for the safe operation of the project if the water supply or discharge are unavailable, including for firefighting? 	<ul style="list-style-type: none"> (i) The point made in paragraph 22.6.4 of the ES [APP-104] was that no major accident hazard or risk had been identified associated with damage to or loss of the water supply line or discharge corridor, in that they transport inert or low hazard liquids under minimal pressures. (ii) There is low risk of interruption to water supply or discharge pipelines – the water supply is from the local water utility (Northumbrian Water Ltd) while the discharge pipeline would either be the existing outfall or the new one to be constructed and operated by the Applicants. In

ExQ1	Question to:	Question:	Response
			<p>each case they would predominantly be buried infrastructure along established utility corridors.</p> <p>(iii) If the water supply was interrupted, the power station could continue to operate for a period by recirculating the water from the cooling tower ponds and could then as appropriate be safely shut down if the water supply interruption continued for some time. Firewater is to be stored on site in firewater tanks (identified in paragraph (vi) of Work No. 1B of Schedule 1 of the draft DCO). This is intended to provide sufficient capacity to deal with most potential fire incidents at the site without relying on mains supply. If the outfall or discharge line was unavailable then as above, the cooling water could be recirculated for a period before the power station could then as appropriate be safely shut down. No major accident risks are therefore considered likely relating to these aspects.</p>
MA.1.7	Applicants	Why has the effect of staff shortages, including those caused by a pandemic, not been considered during the operational phase?	<p>This is primarily because the workforce is smaller and will operate on a shift pattern such that cover would be available if required in an emergency. As noted in the response to MA.1.4 above, in addition the Environment Agency and HSE will require demonstration of adequate staff resource and training as part of their approval of any environmental permit application and COMAH licence application respectively.</p> <p>It is noted that the UK's power stations were safely operated throughout the Covid-19 pandemic. bp also has a large workforce in the UK to draw on for support – for example bp is committed to the North Sea Transition deal that helps current oil and gas workers retrain and reskill for jobs in Net Zero industries.</p>
MA.1.8	Applicants	<p>i) Has the Civil Aviation Authority been consulted as recommended in scenario reference C-8 of Table 22-2 [APP-104]?</p> <p>ii) Please explain where the vigilance and security systems associated with such scenarios are secured</p>	<p>(i) Yes the CAA has been consulted, including during the Applicants' statutory consultation (pursuant to Section 42 PA2008). Regarding aircraft risks, two requirements are included in the draft DCO – requirement 27 (Aviation warning lighting) and requirement 28 (Air safety) which, while aimed at protecting aircraft, will also protect the Proposed Development from air crashes. The CAA will be a consultee to the discharge of requirement 27.</p> <p>(ii) Please see response to MA1.3(iii)</p>
MA.1.9	Applicants	<p>Section 22.7 [APP-104] refers to proposed use of dense phase CO₂ dispersion modelling to understand the potential hazards of a major release, and that the outcomes of this modelling would be incorporated into the design of the Proposed Development.</p> <p>i) Can the Applicants provide further explanation as to what the modelling will comprise?</p> <p>ii) What progress has been made on this modelling?</p>	<p>(i) The modelling will use industry standard software to evaluate the dispersion of dense phase CO₂ from a potential leak scenario. Dense phase CO₂ acts differently to lower pressure CO₂ and therefore requires specialist software to model its behaviour.</p> <p>(ii) A consultant has been contracted by the Applicants to conduct modelling for the dense phase pipeline using proprietary software, FROST, developed as part of the COOLTRANS joint industry programme. Following receipt of a preliminary report the Applicants</p>

ExQ1	Question to:	Question:	Response
		iii) Explain how incorporation of the outcomes of the modelling into the design of the Proposed Development are secured by the DCO? iv) What are the potential implications of the modelling for the conclusions of the assessment in ES Chapter 22?	<p>are in the process of assessing which software to use for modelling dense phase releases (i.e., FROST or standard industry software, PHAST). The decision will likely be made in August 2022.</p> <p>(iii) The outcomes will be used to inform the detailed design of the plant and to inform the various safety studies and design measures to be taken by the Applicants. This is standard practice for the design of pressurised and high hazard systems and as such is not specifically secured within the DCO.</p> <p>(iv) No implications are identified – the detailed modelling will confirm the measures and control systems to be employed within the engineering design to achieve the appropriate standards, proven design methods and control measures necessary to reduce the risks of accidents to an acceptable level, i.e. ALARP, which is the standard expected by the Regulatory Authorities (HSE and the Environment Agency).</p>
MA.1.10	Applicants	Please explain how the effects of loss of containment of other gaseous hazardous substances, including amines, stored at the site during operation have been assessed?	<p>No formal assessment of loss of containment of gaseous hazardous substances has been undertaken at this stage because:</p> <ul style="list-style-type: none"> - The detailed design of the plant is not yet complete - Inventories of substances are not yet known - Failure scenarios, volumes, release conditions and release locations cannot yet be meaningfully identified - The exact chemicals to be stored and used and their hazardous properties are not yet known. <p>Such studies would be undertaken to inform the COMAH licence application to be made prior to construction of the plant. The HSE will be the regulator responsible for reviewing and approving the plant design and the Applicants must demonstrate to the HSE that adequate controls are in place to minimise the risk of any such release and that the consequences of any such release are acceptable. Given this position, specific assessment of these matters is not considered necessary.</p>
MA.1.11	Applicants	<p>In its RR [RR-017], CATS North Sea Limited raised concerns regarding safety issues around its pipeline, Beach Valve Station and associated infrastructure in relation to pipeline and cable crossings, and sterile zones. INEOS Nitriles (UK) Limited [RR-019] have raised concerns regarding access to their infrastructure for inspection and leak detection.</p> <p>What alternatives have been considered in regard to these two sites?</p>	<p>The Applicants have held a number of technical meetings with CNSL on the interface between the Proposed Development and the CATS pipeline. Following the change request submitted by the Applicants and accepted by the ExA [PD-010] the alternative Work No. 2A Option 2 was selected. The interaction between the Proposed Development and CATS pipeline has subsequently been significantly reduced. The remaining interface is where the Proposed Development will need to cross the CATS pipeline adjacent to the NWL WwTP.</p> <p>Considering that the Proposed Development relies on constructing a number of linear pipeline routes from North and South Tees to the PCC site, interactions with existing apparatus (including the CATS pipeline) is unavoidable. During</p>

ExQ1	Question to:	Question:	Response
			<p>design development the Applicants will work with the operators of existing apparatus to minimise and appropriately mitigate any interactions.</p> <p>The Applicants continue to engage with Ineos Nitriles and Sembcorp during design development and selection of the routing for Work No. 6. The CO2 Gathering Network pipeline will be routed within the existing Link Line Corridor. Alternatives were assessed during the concept phase of the development. After discounting crossing the Tees via the Sembcorp #1 tunnel and a new tunnel around Port Clarence the indicative routing for the North Tees was selected based on the existing Link Line Corridor up to Navigator Terminals / Sembcorp #2 Tunnel.</p> <p>Site surveys are being undertaken as part of FEED to determine the final location of the pipeline within the corridor. The selected location will be based on constructability factors and taking account of existing pipeline wayleaves. The Applicants expect that following construction of Work No. 6, Ineos Nitriles will maintain the existing access to their infrastructure for inspection and leak detection. During the construction phase permit to work systems and activity planning will be used to minimise impact on operators of existing apparatus in the Link Line Corridors.</p>
MA.1.12	Applicants	<p>Paragraph 4.4.23 of the ES [AS-019] states that a Major Accident Prevention Document will be produced during the design process and that the HSE will be consulted on this.</p> <p>i) Provide an update on progress and consultation on this document. ii) How is its application secured through the DCO?</p>	<p>(i) The Major Accident Prevention Plan (MAPP) is required as part of the COMAH licence application once there is more certainty in the plant design regarding hazardous chemical inventories, safety control measures and process control and monitoring systems. As such the MAPP has not yet been drafted or consulted upon. As identified in the Other Consents and Licences document [APP-077], the COMAH licence would be applied for prior to the start of construction, once the volumes of hazardous substances to be stored on site are known.</p> <p>(ii) As this MAPP is required for the COMAH licence, it is not secured through the DCO.</p>
MA.1.13	UK Health Security Agency	<p>Can the UK Health Security Agency comment on the Applicants' approach to assessment of major accidents as set out in ES Chapter 22 [APP-104] in the context of the Proposed Development comprising elements of novel technology.</p> <p>Does the UK Health Security Agency consider that the Applicants has identified and assessed the potential risks associated with the carbon capture, transport and storage component?</p>	N/A
MA.1.14	Applicants	<p>ES Chapter 22 [APP-104] (paragraph 22.3.10) states that an assessment of the credible worst case for major accidents and natural disasters has been made, assuming standard industry approaches to managing risk will be used because safety and control systems have not yet been designed.</p>	<p>The Applicants have a defined approach for managing the deployment of novel or new technology – Technology Readiness Level (TRL). This process assesses the level of readiness of any novel technology to be deployed. The assessed level of readiness is then utilised to determine the qualification that needs to be undertaken to deploy the technology in operations. Qualification</p>

ExQ1	Question to:	Question:	Response
		<p>Could the Applicants explain what assumptions have been made in the assessment about the design of, and safety and control systems for, any novel technology and/ or processes used within the Proposed Development, where current industry standards are not yet in place, and the level of confidence in these assumptions for the purpose of reaching a conclusion of no significant effects?</p>	<p>can include: rigorous bench testing of the technology to demonstrate the capability of the technology; field trials to understand the way the technology works; Computational Fluid Dynamic (CFD) modelling of the technology in operation to potentially understand failure mechanisms.</p> <p>Rigorous application of the TRL process has allowed bp – the operator of the Proposed Development - to bring in to use novel technology in the oil and gas industry on numerous occasions in the past. This extensive experience provides a very significant level of confidence in the processes that will be used to determine the suitability of novel technology and the management of risks.</p>
MA.1.15	STDC	<p>In ES Chapter 22 [APP-104] the Applicants explain that there is a former gas pipeline crossing the PCC Site which is subject to a COMAH licence and that the operator of this pipeline, South Tees Site Company (part of STDC) has confirmed its intention to decommission the former steelworks infrastructure and make an application to revoke the COMAH licence.</p> <p>Can STDC comment on the status of the COMAH licence and decommissioning activity, and any implications for the Proposed Development?</p>	N/A

11.0 NOISE AND VIBRATION

ExQ1	Question to:	Question:	Response
NV.1.1	RCBC Applicants	<p>ES Chapter 11 [APP-093] paragraph 11.4.2 states that the baseline data are considered 'conservative' due to Covid-19 restrictions at the time of surveys. Paragraph 11.4.14 refers to the future baseline.</p> <p>Can the Applicants:</p> <ul style="list-style-type: none"> i) Confirm if any further surveys been carried out since restrictions were lifted, or are any planned? ii) Explain what type of activities and sound levels will/would have increased once covid restrictions were lifted and would subsequently affect the baseline data? <p>Can RCBC:</p> <ul style="list-style-type: none"> i) Provide comments on whether the baseline data and monitoring locations are reasonable and representative; and ii) Provide comments on whether further surveys should be undertaken now restrictions have been lifted. 	<ul style="list-style-type: none"> i) Additional surveys have not been carried out and are not currently planned. As during the surveys in November/December 2020 and January 2021 Covid-19 restrictions were in place resulting in lower traffic flows, sound levels are likely to have been lower than is typical for the area. This will have resulted in a conservative assessment. During Stage 2 consultation, engagement with the Environmental Protection Officer at RCBC was undertaken to agree the methodology of the assessment including on the use of data gathered during the Covid-19 restrictions. RCBC agreed with the approach proposed by the Applicant. ii) Typical road, air and rail transport usage will have been reduced by travel restrictions and social distancing measures. Other sound sources may also have been affected – for example, due to changes in operating patterns at industrial and commercial premises and reduced school attendance or closures. These are all likely to have reduced baseline levels and so resulted in a conservative assessment.
NV.1.2	Applicants	<p>ES Chapter 11 [APP-093] Table 11-17 shows the sound survey results carried out in a range of monitoring locations, during Covid-19 restrictions.</p> <p>Can the Applicants comment on whether industrial process/ port/ shipping noises during the pandemic differed from those pre- or post-pandemic? i.e. did such activities continue as normal.</p>	<p>At the residential locations there had been previous surveys in 2019 before the Covid-19 pandemic, observations of the industrial processes were consistent with the November/December 2020 and January 2021 surveys.</p> <p>During the 2020/2021 surveys there were no restrictions on industrial operations so it would be expected these were operating as normal. While information on the operation of all industrial processes in the area is not available, during site visits observations were made of the operation of industrial processes and where possible it was discussed with operatives to determine how typical operations were. Key sources including Redcar Bulk Terminal, businesses on Tod Point Road, and commercial properties identified north of Broadway West were observed to be operating.</p> <p>If any operations were reduced this will have resulted in a conservative assessment.</p>
NV.1.3	RCBC Applicants	<p>Redcar Beach Caravan Park is noted at paragraphs 20.4.25 and 20.6.27 of ES Chapter 20 [APP-102] as a popular tourism destination and is located over 1km from the PCC Site. Cleveland Golf Links is located directly east of the PCC Site.</p> <p>The ExA noted an additional caravan park nearby at York Road in Coatham on their unaccompanied site visit [EV1-001]. This caravan park is close to the PCC</p>	<p>NSR 2 is at 51 York Road which is at the opposite side of York Road to the caravan park. As they are a similar distance to the PCC site and key background noise sources NSR 2 is considered to also be representative of the caravan park. NSR 3 is much closer to the PCC Site and is therefore the key receptor in this assessment.</p>

ExQ1	Question to:	Question:	Response
		<p>Site but does not appear to have been specifically noted in the ES in terms of noise effects.</p> <p>Can RCBC and the Applicants provide comment:</p> <ul style="list-style-type: none"> i) Does the location of NSR2 [AS-103] correspond with the caravan park at Coatham; ii) Is there any residential use of these units and/or any planning conditions limiting them to holiday occupation? Provide a copy of such conditions if available; and iii) Have noise effects on tourists and recreational users been appropriately considered in Chapter 11 of the ES, including those at the nearby caravan parks, golf course, beach and other recreational facilities, and if not should they? 	<p>The Applicant is not aware of the planning conditions regarding residential use of the caravan site, NSR 2 is located nearby and considered representative of this caravan park and other sensitive receptors in this area.</p> <p>Recreational uses such as the golf course, beach and other recreational facilities are considered lower sensitivity than permanent residential premises. RCBC was consulted on the scope of the assessment. The focus of the assessment was on residential receptors due to their greater sensitivity due to being normally used for sleeping and subject to lower night-time noise limits. No likely significant adverse effects on residential receptors during construction or operation were identified in the noise and vibration assessment.</p>
NV.1.4	Applicants	<p>Paragraph 5.3.103 of Chapter 5 of the ES [APP-087] relating to construction management states that “a noise monitor will be installed at the boundary of the Site, with a day-time and night-time noise limit to be used during construction, as agreed with RCBC and STBC”.</p> <p>On what basis is monitoring expected to be required?</p>	<p>Where construction noise has a potential to cause an impact, monitoring can allow the performance of noise control measures to be assessed and confirm requirements in the DCO are being complied with. Noise monitoring is identified as essential by BS 5228-1:2009+A1:2014 where construction noise could be an issue.</p> <p>Paragraph 11.7.3 of Chapter 11: Noise and Vibration [APP-093] explains that the need for monitoring of noise and vibration levels during construction will be determined through the detailed assessment undertaken. Requirement 12 of the draft Development Consent Order sets out the requirements for a scheme of noise monitoring and control during construction of the Proposed Development.</p>
NV.1.5	Applicants	<p>Paragraph 11.3.21 of ES chapter 11 [APP-093] states construction noise at the PCC site and construction activities away from the PCC are assessed separately because the types of plant and activities are likely to be different, and construction will extent over a greater area.</p> <ul style="list-style-type: none"> i) Explain why the types of plant for construction and associated activities are likely to be different between the two areas. ii) Explain why the noise generated during construction of both areas should not be considered cumulatively. 	<p>Construction on the PCC site will require construction of major structures with heights up to 80 m. This will require significant works, including piling and foundation works, over a three-year construction period. Works away from the PCC site are smaller in scale mainly for construction of pipelines which where possible will use existing pipe racks. These works will likely be more transient, occurring for shorter periods of time in proximity to the closest receptors and generally utilising smaller and less equipment.</p> <p>While individual levels for each of the construction activities have been presented, an assessment of the collective effects (multiple activities of the Proposed Development concurrently) of different phases of the project based on current information is also presented in section 11.6.71-11.6.74 [APP-093].</p>
NV.1.6	Applicants	<p>Paragraph 11.3.22 of ES chapter 11 [APP-093] states that the ‘ABC’ method was chosen for residential receptors.</p> <p>Please justify this choice of methodology.</p>	<p>The BS 5228-1:2009+A1:2014 ‘ABC’ method is the most commonly used method for assessing impacts from construction noise. This method has been used by AECOM for other recent environmental impact assessments to support DCO applications for energy projects.</p>

ExQ1	Question to:	Question:	Response
			<p>During Stage 2 consultation, engagement with the Environmental Protection Officer at RCBC was undertaken to agree the methodology of the assessment including on the use of the 'ABC' method for assessing construction noise. RCBC agreed with the approach proposed by the Applicant.</p>
NV.1.7	Applicants	<p>The noise propagation model relies on a digital terrain model (paragraph 11.3.54 of [APP-093]. Given that there is considerable uncertainty regarding the final layout and topography of the site:</p> <ul style="list-style-type: none"> i) How sensitive is the model to the digital terrain model at a site scale? ii) What are the key topographical changes that will affect the noise at receptors? 	<p>The digital terrain model is based on ground height data acquired from the National LIDAR programme.</p> <p>Ground height data can influence the predicted noise levels at receptors including due to the effects of ground absorption and screening. However, the terrain is relatively flat between the PCC site and the key receptor of Marsh House Farm and therefore a minor change in ground height between the site and receptor would have negligible impact on the predicted noise levels.</p>
NV.1.8	Applicants	<p>The noise generated by trenchless technologies and open cut trenches to install the water supply and discharge corridors have been scoped out on the basis of distance to receptors (paragraph 11.6.22 of the ES [APP-093]). Please provide further justification of this given the proximity of Marsh Farm House and the nearby caravan parks.</p>	<p>Paragraph 11.6.22 of the ES confirms that because of the significant distances to receptors and the relatively minor nature of the works in the water supply and discharge corridors compared to works at the PCC site, noise impacts were considered very low and therefore further assessment was not undertaken. This assessment was not purely based upon distance but also considered the likely works to be undertaken.</p>

12.0 PLANNING POLICY AND LEGISLATION

ExQ1	Question to:	Question:	Response
PPL.1.1	RCBC STBC	<p>Table 6.4 at section 6 of the Planning Statement [APP-070] lists the relevant development plan policies.</p> <p>Can RCBC and STBC:</p> <ul style="list-style-type: none"> i) Provide to the Examination full copies of any Development Plan policies that have or will be referred to in any submissions. ii) Confirm whether there been any relevant updates to the statutory Development Plan since the compilation of the application documents? iii) Provide copies of any relevant Supplementary Planning Documents. iv) Confirm whether there are any relevant made or emerging neighbourhood plans that the ExA should be aware of, and if so provide details. v) Confirm whether the Applicants' policy analysis set out in Table 6.4 of the Planning Statement [APP-070] is acceptable? 	<p>The Applicants note that RCBC and STBC have not raised any matters within their respective Local Impact Reports with regard to the Applicants' policy analysis set out in Table 6.4 of the original Planning Statement [APP-070].</p>
PPL.1.2	Applicants	<p>Figures 3.1 and 3.3 of the Planning Statement [APP-070] shows the Policies Maps of the Local Plans for RCBC and STBC.</p> <p>The Applicants are asked to:</p> <ul style="list-style-type: none"> i) Provide the same for HBC; and ii) Reproduce the plans separately and to overlay the Order Limits on each. 	<p>The Applicants have provided the Policies Map for the Hartlepool Local Plan (adopted May 2018) with the Order Limits overlaid as part of their Deadline 2 submission (Appendix PPL.1.2a in Document Ref 9.8).</p> <p>The Applicants have also provided copies of the Policies Maps for the Redcar and Cleveland Local Plan (adopted May 2018) and the Stockton-on-Tees Local Plan (adopted January 2019) with the Order Limits overlain upon each, as part of their Deadline 2 submission (Appendix PPL.1.2b in Document Ref 9.8).</p>
PPL.1.3	Applicants	<p>Paragraphs 1.1.11 to 1.1.24 and sections 4.5 to 4.6. of the DAS [AS-190] refer to the South Tees Regeneration Master Plan, the South Tees Area Supplementary Planning Document and the Teesworks Design Guide.</p> <p>The Applicants are asked to:</p> <ul style="list-style-type: none"> i) Provide a copy of each of these named documents; and ii) Confirm their status and relevance to the Proposed Development as a NSIP. <p>Also see Question DLV.1.2.</p>	<p>The Applicants have provided copies of the South Tees Regeneration Master Plan, the South Tees Area Supplementary Planning Document (SPD), and the Teesworks Design Guide as part of their Deadline 2 submission (Appendix PPL.1.3a to PPL.1.3c in Document Ref 9.8).</p> <p>The South Tees Regeneration Master Plan has been produced by the South Tees Development Corporation (STDC) to provide a flexible framework for the regeneration of the South Tees Area. The Master Plan was prepared throughout 2017 as a supporting visioning and development strategy document to inform the preparation of an SPD by RCBC for the South Tees Area. The Master Plan was launched alongside the South Tees SPD, which was formally adopted by RCBC in May 2018. A revised Master Plan was published in November 2019. In planning policy terms, the Master Plan has no formal status</p>

ExQ1	Question to:	Question:	Response
			<p>other than a background study (this is confirmed at page 6 of the revised Master Plan).</p> <p>The South Tees SPD was prepared by RCBC and is intended to support the economic and physical regeneration of the South Tees Area, setting out the vision and core objectives for the area and providing greater detail on how adopted planning policies (within the Redcar and Cleveland Local Plan) will be interpreted. The section of the RCBC website for the South Tees Area SPD states that it is supported by the South Tees Regeneration Master Plan, which is a background study to the SPD. The South Tees SPD is a material planning consideration to be taken into account by RCBC in determining applications for planning permission within the South Tees Area.</p> <p>The Teesworks Design Guide for Development (published December 2020) builds upon the Master Plan and provides design guidance in respect of the redevelopment of the South Tees Area/Teesworks, including in respect of specific development zones within the area. The document was produced by Teesworks' consultants with assistance from the Tees Valley Combined Authority and RCBC. As with the Master Plan, the Design Guide has no formal planning policy status.</p> <p>Section 104 of the Planning Act 2008 (the PA 2008) states that in determining applications for development consent where a National Policy Statement (NPS) has effect, the Secretary of State (SoS) must have regard to that NPS (and any other relevant NPSs) and a number of other matters, <i>including "any other matters which the Secretary of State thinks are both important and relevant"</i> to the decision. Section 105 of the PA 2008, which relates to decisions where no NPS has effect, also states that the SoS must have regard to any other matters which the SoS thinks are both important and relevant to the decision.</p> <p>NPS EN-1 (paragraph 4.1.5) confirms that other matters that the SoS may consider both important and relevant to its decision-making may include Development Plan Documents or other documents in the Local Development Framework.</p> <p>The South Tees Area SPD forms part of the Local Development Framework for Redcar and Cleveland (but it is not part of the statutory development plan). In view of this and the fact that it sets out development principles for the</p>

ExQ1	Question to:	Question:	Response
			<p>regeneration of the South Tees Area – parts of which lie within the Order Limits – the Applicants consider that the SPD is both important and relevant to the SoS's determination of the Application.</p> <p>The South Tees Regeneration Master Plan and Teesworks Design Guide for Development do not form part of the LDF and have no formal planning policy status. It is therefore considered that their relevance and importance to the Proposed Development is limited.</p> <p>Ultimately, it is for the SoS to decide what matters are both important and relevant to the determination of the Application.</p> <p>The Applicants' assessment of the Proposed Development against policy and other relevant matters is set out in the updated Planning Statement [REP1-003].</p>
PPL.1.4	Applicants RCBC STBC	<p>The current 2021 version of the NPPF has been published since the application documents were produced.</p> <p>Can the Applicants and RPAs confirm whether there would be any implications for the application arising from the July 2021 revision of the NPPF?</p>	<p>The Applicants submitted an updated Planning Statement [REP1-003] at Deadline 1, which at Section 6.5 takes account of the current (July) 2021 version of the National Planning Policy Framework (NPPF).</p> <p>Having taken account of the current NPPF in the updated Planning Statement, the Applicants do not consider that there are any implications for the Application.</p>
PPL.1.5	Applicants	<p>The Planning Statement and the ES refer to the suite of energy NPSs.</p> <p>i) Is there a differentiation between those NPSs which you consider the Proposed Development to be 'in accordance with' and those that may be (in part) 'important and relevant'?</p> <p>ii) And to which elements of the Proposed Development are they applicable? Please provide a summary.</p>	<p>The updated Planning Statement [REP1-003] submitted at Deadline 1, considers the relevance of the current suite of energy NPSs to the Proposed Development at Section 4.2 and the SoS's determination of the Application (pursuant to Section 104 or Section 105).</p> <p>Elements of the Proposed Development fall within the definition of a NSIP under Section 14(1)(a) and Sections 15(1) and (2) of the PA 2008, notably the Low Carbon Electricity Generating Station (Work No. 1) and therefore require development consent. Furthermore, Section 115(1)(b) of the PA 2008 provides that an application for development consent can include 'associated development'. This may be development that supports the construction or operation of the NSIP, which helps to address the impacts of the NSIP or is of a type of development normally brought forward with the particular type of NSIP. The Gas Connection (Work No. 2), Electrical Connection (Work No. 3); Water Supply Connection Corridor (Work No. 4); Water Discharge Connection Corridor (Work No. 5); Laydown Areas (Work No. 9); and Access and Highway Works (Work No. 10); will support the construction and operation of the Low Carbon</p>

ExQ1	Question to:	Question:	Response
			<p>Generating Station (and other elements of the Proposed Development) and are therefore considered to be associated development for the purpose of Section 115(1)(b).</p> <p>The Applicants therefore consider that the following energy NPSs apply to the above elements of the Proposed Development:</p> <ul style="list-style-type: none"> • Overarching NPS for Energy (EN-1). • NPS for Fossil Fuel Electricity Generating Infrastructure (EN-2). • NPS for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4). • NPS for Electricity Networks Infrastructure (EN-5). <p>The other elements of the Proposed Development are the subject of a direction made by the SoS under Sections 35(1) and 35ZA of the PA 2008. The Applicants submitted a request for direction under these sections to the SoS for BEIS on 25 November 2019. The request sought a direction from the SoS to confirm that the following elements (the “<i>Specified Elements</i>”) of the Proposed Development should be treated as development for which development consent is required under the PA 2008 in addition to the Low Carbon Electricity Generating Station (and its associated development). The Specified Elements were defined as follows:</p> <ul style="list-style-type: none"> • The CO₂ gathering network (Work No. 6), including the CO₂ pipeline connections from the Low Carbon Electricity Generating Station and industrial facilities on Teesside to transport the captured CO₂ (including connections under the tidal River Tees); • the CO₂ gathering/booster station (Work No. 7) (also known as the high-pressure compressor station) to receive captured CO₂ from the electricity generating station and gathering network; and • the CO₂ transport pipeline (Work No. 8) for the onward transport of the captured CO₂ to a suitable offshore geological storage site (the onshore element only). <p>While the current energy NPSs (EN-1 and EN-2) consider carbon capture, they do not specifically contain policies on all of the Specified Elements of the Proposed Development, notably the CO₂ Gathering Network (Work No. 6). Those elements therefore do not fall within the scope of the NPSs as designated. However, the SoS’s Section 35(1) and 35ZA Direction (dated 17 January 2020) provides in relation to the Specified Elements that “<i>the Overarching Policy Statement for Energy (EN-1) has effect in relation to an</i></p>

ExQ1	Question to:	Question:	Response
			<p><i>application for development consent under this Direction in a manner appropriately equivalent so far as the considerations and impacts described in EN-1 are relevant to the proposed Development”</i></p> <p>The Applicants therefore consider that EN-1 applies to the Specified Elements in so far as the considerations and impacts described in the NPS are relevant to those elements.</p> <p>The SoS's Section 35 Direction provides in relation to the Specified Elements that <i>“the Overarching Policy Statement for Energy (EN-1) has effect in relation to an application for development consent under this Direction in a manner appropriately equivalent so far as the considerations and impacts described in EN-1 are relevant to the proposed Development”</i>. That Direction was made before the High Court handed down judgment in <i>EFW Group Limited v Secretary of State for Business, Energy and Industrial Strategy</i> [2021] EWHC 2697 (Admin) in which the Court determined that development subject to a Section 35 direction (albeit one that did not specifically direct that the relevant NPS had effect in relation to the proposed development) should be determined pursuant to the decision-making framework in Section 105 of the PA 2008, rather than Section 104. Permission to appeal that judgment was refused by the Court of Appeal in February 2022.</p> <p>The updated Planning Statement submitted at Deadline 1 considers the position in respect of the Specified Elements in the Section 35 Direction in light of the <i>EFW Group Limited</i> case at paragraphs 4.2.13 to 4.2.15. A copy of the judgement is provided at Appendix 2 of the updated Planning Statement. In light of the High Court judgment, the Applicants consider that it would be prudent for the ExA to consider both Sections 104 and 105 of the PA 2008. Notwithstanding that, the Applicants do not consider that the procedural route by which a decision is reached should affect the outcome. Whether the application is determined in accordance with the relevant NPSs or they are treated as important and relevant considerations will not have a material impact on the decision given the established need for and significant public interest benefits of the Proposed Development, the limited adverse impacts and the overall consistency with relevant policy.</p>
PPL.1.6	Applicants RCBC STBC	<p>In September 2021, as part of a review of the energy NPSs, the Government published draft NPSs EN-1 to EN-5 for consultation.</p> <p>i) Do these change the analysis of policy set out in the application documents, particularly the Planning Statement and the relevant sections of the ES? If so, are revised versions required for the Examination?</p>	<p>The updated Planning Statement [REP01-003] submitted at Deadline 1 considers the draft revised energy NPSs at Section 4.4. Appendix 3 to the updated Planning Statement provides an assessment of the Proposed Development's compliance with the assessment principles and generic and technology specific impacts of the relevant draft revised energy NPSs, against any material changes to relevant assessment principles/impacts from the current NPSs or any relevant new assessment principles/impacts within the draft revised NPSs.</p>

ExQ1	Question to:	Question:	Response
		ii) In particular, is there any information within them which is important and relevant to the SoS's decision on applications for Carbon Capture infrastructure?	<p>The Applicants consider that draft revised EN-1 in particular contains information that is important and relevant to the SoS's determination of the Application. A summary of relevant policy within draft EN-1 in respect of carbon capture infrastructure is provided below.</p> <p>Paragraph 3.2.9 of draft EN-1 confirms that where an energy infrastructure project is not covered by Sections 15 to 21 of the PA 2008, but is considered to be nationally significant, there is a power under Section 35 for the SoS, on request, to give a direction that a development should be treated as a nationally significant infrastructure project for which development consent is required. It continues by stating that this could include novel technologies or processes which may emerge during the life of the NPS. In these circumstances any application for development consent would need to be considered in accordance with the NPS. Notably, paragraph 3.2.9 goes into states that:</p> <p><i>"... where the application is for CCS infrastructure not covered by sections 15-21 of the Planning Act, the Secretary of State should give substantial weight to the need established at paragraphs 3.5.1 to 3.5.7 of this NPS."</i></p> <p>In considering 'The need for new electricity generating capacity', draft EN-1 confirms that there is an urgent need for new electricity generating capacity (paragraph 3.3.20). The role of gas-fired plants with CCS in meeting this need is recognised at paragraph 3.3.37:</p> <p><i>"Gas-fired plants with CCS can provide reliable low carbon generation capacity and are intended to reduce emissions compared to unabated gas-fired plants by 90% or more. Plants equipped with post-combustion CCS could provide flexible generation that is able to ramp up or down to meet demand, however, the technology is not currently suited to providing fast-start peaking capacity and has not been deployed in the UK to date. Although the barriers to deployment are commercial rather than technical, deployment of power CCS is reliant on the availability of infrastructure for the transportation and storage of CO₂. Its potential will become clearer by 2030 by which time we expect at least one power CCS plant to be operational."</i></p> <p>Section 3.5 of draft EN-1 deals with 'The need for new nationally significant carbon capture and storage infrastructure'. Paragraph 3.5.1 makes clear that new CCS infrastructure will be needed to ensure the transition to a net zero economy and that as well as its role in reducing emission from gas-fired electricity generation, it will also be needed to capture and store CO₂ emissions from industrial processes, hydrogen production from natural gas and the use of bioenergy. The Proposed Development will capture emissions from both power generation and industry on Teesside and also has the potential to do so from</p>

ExQ1	Question to:	Question:	Response
			<p>future hydrogen productions. It will therefore contribute toward the transition to a Net Zero economy.</p> <p>Paragraph 3.5.3 states that there do not appear to be any realistic alternatives to new CCS infrastructure for delivering Net Zero by 2050. Paragraphs 3.5.4 - 3.5.7 set out why CCS is needed:</p> <ul style="list-style-type: none"> • BEIS analysis suggest that gas-fired electricity generation with CCS is required to deliver an affordable, reliable electricity system that is consistent with climate change targets. • CCS is fundamental to the deep decarbonisation of energy intensive industries such as chemical and cement plants and refineries. Alternative methods of decarbonising industry include improving energy efficiency, electrification of heat, and fuel switching to hydrogen or biomass as fuel or feedstock. However, these alternatives are limited as many of the emissions are process emissions, and as a result, CCS is essential for decarbonising energy intensive industry, either on its own or in combination with other measures. • CCS is needed to enable domestic production of low carbon hydrogen from natural gas ('blue hydrogen') as well as unlocking the potential use of biomass for low carbon hydrogen production with negative emissions. While hydrogen can be produced from water using electrolysis ('green hydrogen' when produced from renewable electricity) without CCS, the Government's view is that both forms of hydrogen are needed to achieve the scale of low carbon hydrogen needed for Net Zero. <p>Paragraphs 3.5.8 and 3.5.9 deal with 'Bringing forward CCS infrastructure projects'. As with electricity infrastructure, these paragraphs make clear that it is not the role of the planning system to deliver or limit specific amounts of CCS infrastructure and it is for industry to propose the specific types of developments that they assess to be viable. The SoS should therefore act in accordance with the policy set out at Section 3.2 of the NPS when assessing proposals for new CCS infrastructure.</p> <p>It is clear that the draft revised energy NPS documents are very strongly supportive of the Proposed Development.</p> <p>As confirmed above, an assessment of the Proposed Development's compliance with the assessment principles and generic and technology specific impacts of the relevant draft revised energy NPSs, against any material changes to relevant assessment principles/impacts from the current NPSs or any relevant new assessment principles/impacts within the draft revised NPSs is provided at Appendix 3 of the Planning Statement. This assessment does not alter the</p>

ExQ1	Question to:	Question:	Response
			overall assessment of the Proposed Development against the current NPS policy and other relevant policy.
PPL.1.7	Applicants RCBC STBC	Are there any other new documents, updates or changes to Government Policy or Guidance relevant to the determination of this application that have occurred since it was submitted? If yes what are these changes and what are the implications, if any, for the application?	<p>Since the submission of the Application in July 2021, the Government has published its 'Net Zero Strategy: Build Back Greener' (October 2021) and the 'British Energy Security Strategy' (April 2022). Both of these documents underline the importance of delivering carbon capture and storage infrastructure to decarbonise power generation and industry in order for the Government to meet its legally binding target of net zero greenhouse gas emissions by 2050.</p> <p>Summaries of the Net Zero Strategy and the British Energy Security Strategy are provided at Sections 5.12 and 5.13 of the updated Planning Statement [REP1-003].</p>
PPL.1.8	Applicants RCBC STBC	The Environment Act passed into law on 9 November 2021. While many of its provisions await detail and implementation, does this have any implications for the application documentation submitted for the Proposed Development?	<p>It is not considered that the Environment Act 2021 has any implications for the Application documentation. Although the amendment to the Environment Bill in June 2021 extended the scope of the provisions relating to biodiversity net gain (BNG) to include applications for NSIPs, those provisions are yet to come into force in respect of applications for development consent.</p> <p>Options to achieve benefits for biodiversity as a direct consequence of the Proposed Development are set out within the Indicative Landscape and Biodiversity Strategy [APP-079]. The proposals are also shown on the Landscaping and Biodiversity Plan [AS-189]. Section 5 of the Strategy sets out the approach to biodiversity enhancement. With regard to biodiversity, the Applicants have used the calculator tool and metric (version 3.1) published by Natural England (April 2022) to establish the position with regard to biodiversity loss/net gain. Habitats created will include wildflower grassland, native scrub and a pond for freshwater and/or wetland flora and fauna, amongst other habitat creation measures. The biodiversity calculations are set out at Appendix 4 of the Strategy, which confirms that a 'net gain' will be achieved. The detailed proposals for biodiversity enhancement relating to the Proposed Development will be set out in the Landscape and Biodiversity Management and Enhancement Plan also secured by Requirement 4 of the draft DCO [AS-135].</p> <p>Whilst other parts of the Environment Act 2021 have come into force, to date these are provisions which for instance provide for regulations to be made or plans to be created (at a national level), relate to the establishment of the Office for Environmental Protection, and/or relate to matters which are not relevant to the Proposed Development and DCO Application.</p>
PPL.1.9	RCBC	Section 3 of the Project Need Statement [APP-069] refers to the UK energy and climate change policy.	N/A

ExQ1	Question to:	Question:	Response
	STBC All IPs	i) Do you have any observations on the Applicants' analysis of energy and climate change policy? ii) Do you have any comments relating to other new documents or updates or changes to relevant Government Policy or Guidance on climate change which is relevant to the determination of this application that has been published since submission?	
PPL.1.10	Applicants	<p>The North East Marine Plan was adopted by the Secretary of State on 23 June 2021, prior to the application being made. The MMO have provided comments in their RR [RR-037]. The marine assessments at section 4.4 of the Planning Statement [APP-070] and within the ES [including APP-096, APP-101], do not acknowledge this and were undertaken in the broader and less specific policy context provided by the UK Marine Policy Statement.</p> <p>Please provide an assessment of the Proposed Development against the North East Marine Plan.</p> <p>You may wish to answer this question in conjunction with question BIO1.1.24.</p>	<p>The updated Planning Statement [REP1-033] submitted at Deadline 1 considers the North East Marine Plan (adopted June 2021) at Section 4.5.</p> <p>The DCO Application covers the works down to Mean Low Water Springs ('MLWS') (other than the Tees crossing and Work No. 5), with the offshore CO2 transport and storage works being the subject of separate consent applications. Deemed Marine Licences are sought as part of the DCO for the works within the Marine Area, including the area between Mean High Water Springs ('MHWS') and MLWS, and parts of Tees Bay and the tidal River Tees.</p> <p>The Site lies within the 'North East Inshore Marine Area', which stretches from Flamborough Head in Yorkshire to the Scottish Border and out from the coast to 12 nautical miles. The Plan Area has three main tidal rivers, including the River Tees.</p> <p>The North East Marine Plan is intended to provide a strategic approach to decision-making, considering future use and providing a clear approach to managing resources, activities and interactions within the area. In referring to Teesside, Tyneside and Wearside (paragraph 14), the Plan identifies that there are future opportunities for CCUS using existing oil and gas infrastructure.</p> <p>The Plan contains a number of policies (Table 2 of the Plan). There are no specific policies on gas-fired generating stations. The key policies of relevance to the Proposed Development are considered below.</p> <p>Policy NE-INF1 supports appropriate land-based infrastructure which facilitates marine activities (including the diversification or regeneration of sustainable marine industries (and vice versa) will be supported. The land-based infrastructure for the Proposed Development forms part of a full chain CCUS project, involving the offshore storage of CO₂ emissions captured on Teesside. The Proposed Development will support the diversification of the oil and gas industries in the North Sea.</p> <p>Policy NE-CCUS-2 supports CCUS proposals incorporating the re-use of existing oil and gas infrastructure. However, the Policy is clear that this does not mean that proposals that do not incorporate the re-use of infrastructure will be</p>

ExQ1	Question to:	Question:	Response
			<p>disadvantaged or rejected and that the re-use of infrastructure may not be a viable or realistic option.</p> <p>Policy NE-CCUS-3 supports proposals associated with the deployment of low carbon infrastructure for industrial clusters such as that being proposed on Teesside as part of the East Coast Cluster being advanced by the Northern Endurance Partnership. The policy states:</p> <p><i>“The government identified potential regional clusters which can be utilised for low carbon development in the Delivering clean growth: CCUS Cost Challenge Taskforce report and the subsequent plan, The UK carbon capture, usage and storage (CCUS) deployment pathway: an action plan. NE-CCUS-3 supports the development of low carbon industrial clusters where low carbon infrastructure, including carbon capture, usage and storage technologies could be deployed. Encouraging developments associated with industrial clusters aims to reduce the capital costs of deploying carbon capture, usage and storage, maximising the economies of scale.</i></p> <p><i>The Energy Technologies Institute Strategic UK CCS Appraisal provides a comprehensive review of likely carbon dioxide storage sites in the UK. Figure 1 - Map of UK offshore infrastructure and potential carbon dioxide storage sites from the Department of Business Energy and Industrial Strategy consultation on Carbon capture, usage and storage (CCUS) projects: re-use of oil and gas assets shows the Teesside and Humberside (Easington / Dimlington) areas of existing industrial infrastructure, and potential storage sites which would support Industrial Clusters in the north east marine plan areas.</i></p> <p><i>Supporting development associated with industrial clusters also aims to enhance connectivity between marine operations and land infrastructure, which will ensure that opportunities for carbon capture, usage and storage are realised. This policy will also benefit employment in coastal communities near industrial clusters, supporting the NE-INF1 and NE-EMP-1 policies. As carbon capture, usage and storage are at the early stages of deployment in the UK, the government guidance may change over the lifetime of the North East Marine Plan. This policy should be considered alongside the most recent government guidance, reflecting the current approach to the deployment of carbon capture, usage and storage.”</i></p> <p>The Applicants consider that the Proposed Development is consistent with policy contained within the North East Marine Plan, notably policies NE-CCUS-2 and NE-CCUS-3 both of which are supportive of the deployment of CCS/CCUS on Teesside and in the UK Marine Area. The Proposed Development also forms part of the wider East Coast Cluster.</p>

ExQ1	Question to:	Question:	Response
			The Applicants will provide further analysis of the North East Marine Plan policies at Deadline 3.

13.0 SOCIO ECONOMICS AND TOURISM INCLUDING MARINE USERS

ExQ1	Question to:	Question:	Response
SET.1.1	RCBC STBC UK Health Security Agency	ES chapter 20 [APP-102] at paragraphs 20.3.10 to 20.3.16 defines a Study Area for the socio-economic assessment. i) Is the extent of the Local Super Output Areas and Travel to Work Areas identified in the document reasonable or does it need to be drawn wider? ii) Is the assessment of socio-economic baseline conditions set out at section 20.4 [APP-102] acceptable or does anything further need to be included?	The Applicants have submitted a number of initial Statements of Common Ground at Deadline 1 and will seek to agree that the assessments undertaken are appropriate with each relevant authority via the SoCG and provide updated documents during examination.
SET.1.2	Applicants	Section 20.6 of ES Chapter 20 [APP-102] and Appendix 20A (Economics Benefits Report) [APP-340] each set out the estimated employment opportunities arising from the Proposed Development. Construction employment summarised in Table 20-6 [APP-1-2] is based on a number of factors including the anticipated construction timescales. These are noted in Table 5.1 of ES Chapter 5 [APP-087] and paragraph 20.6.2 of ES Chapter 20 [APP-102] as between late 2022 and 2026. Section 2.1 of the Economics Benefits Report [APP-340] indicates the construction period to be from 2024 to 2028. Tables 20-6 and 20-7 of APP-102 indicate total net employment during construction to be 2,440 and 130 in operation, whereas paragraph 2.1 of APP-340 specifies 4,500 direct jobs annually during the construction phase and 900 during operation. The Applicants are asked to: i) Provide clarification and an update in terms of construction timescales; and ii) Clarify why there are significant differences in employment figures noted between the two documents, and if necessary, provide an update to the figures.	i) The construction timescale is up to a four year period. ES Chapter 5 [APP-087] contains the construction programme assumptions based on activities commencing late 2022 up to 2026, which the environmental assessment is based on. As noted in Chapter 20 [APP-102], paragraph 20.3.22, the Economic Benefits Report, prepared by others on behalf of the Applicants, has been a source of information used in preparation of the chapter (and is therefore included as an Appendix [APP-340], but Chapter 20 [APP-102] provides the assessment of socio-economic effects for the Proposed Development. ii) The figures do not require an update, the employment figures presented are based on two different sets of assumptions. The employment figures quoted in the Environmental Statement are the net employment as a result of the Proposed Development itself or the number of jobs created to build and operate the Proposed Development. The figures presented in the Economic Benefits Report [APP-340] are the "number of jobs supported by CCUS expenditure". The Economic Benefits Report [APP-340] states "job estimates are the number of full-time equivalents supported directly through CCUS expenditure". This is a different metric which means that in addition to jobs created as a result of the construction and operation of the Proposed Scheme, it also includes supply chain employment and other services around construction and operation which are not directly related.
SET.1.3	RCBC STBC	Further to the question above, section 20.6 of ES Chapter 20 [APP-102] and Appendix 20A (Economics Benefits Report) [APP-340] set out the estimated employment opportunities arising from the Proposed Development. i) Provide comments on the estimated employment figures. Are they reasonable having regard to the assumptions on the TTWA,	N/A

ExQ1	Question to:	Question:	Response
		<p>displacement, and multiplier of 1.85 (paragraph 20.6.10 and footnote 1)?</p> <p>ii) Is the assessment of employment reasonable when compared to other major and infrastructure projects which you are aware of in the area?</p>	
SET.1.4	Applicants RCBC STBC	<p>Appendix 20A (the Economics Benefits Report) [APP-340] at section 5 refers to skills and labour gaps in the Tees Valley labour market, especially during the construction phase. 'Upskilling' is recommended in the report including targeted interventions with the opportunity to partner with local education providers.</p> <p>R30 of the dDCO includes provision for an employment, skills and training plan.</p> <p>Can the Applicants:</p> <p>i) Provide an update on any 'targeted interventions' carried out so far, as recommended in the Economic Benefits Report [APP-340].</p> <p>RCBC and STBC:</p> <p>i) Are the recommendations for upskilling and targeted interventions and the wording of R30 reasonable?</p> <p>ii) What activities are currently being undertaken/ planned by the local authorities in this respect?</p>	<p>Early supply chain and college engagement has been undertaken by the Applicants.</p> <p>A supply chain engagement session was undertaken on May 24th 2022 where 300 companies from the Teesside area participated in a one day engagement event.</p> <p>In April 2022 bp signed a memorandum of understanding with Redcar and Cleveland College to develop a range of programmes to equip people across Teesside with vital new career skills. As part of the arrangement, bp, which has signed a memorandum of understanding (MOU) with the college, will provide £50,000 in funding for the development of the new Clean Energy Education Hub at the College and help develop a careers pathway plan based on skills demand for the proposed projects in the region.</p>
SET.1.5	MMO BSAC 43 Teesside 43 PD Teesport Maritime Coastguard Agency The Corporation of Trinity House of Deptford Strond	<p>Paragraphs 20.4.26 to 20.5.7 and 20.6.29 to 20.6.41 of ES Chapter 20 [APP-102] and the Navigational Risk Assessment at Appendix 20B [APP-341 to APP-343] set out the marine baseline and risk assessments for marine users.</p> <p>Identified parties are asked:</p> <p>i) Whether or not the scope of the assessments is appropriate; and</p> <p>ii) If not, what further assessment is required to address any outstanding concerns regarding marine users?</p>	<p>The Applicants have submitted a number of initial Statements of Common Ground at Deadline 1 and will seek to agree that the assessments undertaken are appropriate with each relevant authority via the SoCG and provided updated documents during examination.</p>
SET.1.6	RCBC STBC	<p>A range of tourism and recreational destinations and activities in the area are set out at paragraphs 20.4.23 to 20.4.25 of ES Chapter 20 [APP-102]. Paragraph</p>	N/A

ExQ1	Question to:	Question:	Response
	HBC	<p>20.6.28 and Table 20-8 summarise potential impacts on tourism to be negligible adverse during the construction phase.</p> <ul style="list-style-type: none"> i) Do paragraphs 20.4.23 to 20.4.25 of the ES adequately describe the baseline so that effects on tourism and recreational users can be fully assessed? Are there other destinations which have been omitted that might be affected, in particular by the PCC Site? ii) Should tourism and recreational destinations north of the Tees be assessed? iii) If any additional tourism and recreational destinations are identified, please provide a plan to show their locations. iv) Is the Applicants' assessment that potential impacts on tourism would be negligible adverse during the construction phase only reasonable? Should any effects during operation be considered? 	
SET.1.7	Applicants	<p>A limited range of tourism and recreational destinations and activities in the area are set out at paragraphs 20.4.23 to 20.4.25 of ES Chapter 20 [APP-102]. Paragraph 20.6.28 and Table 20-8 indicate a negligible adverse effect on tourism during the construction phase only.</p> <p>ES Chapter 24 [APP-106] (paragraphs 24.5.130 to 24.5.140 and paragraphs 24.6.8 to 24.6.20) does not include an assessment of cumulative effects specifically on tourism, aside from reference to marine users.</p> <ul style="list-style-type: none"> i) What is the distinction between tourism amenities and wider locally used amenities as mentioned in paragraph 20.6.26? ii) Is the range of destinations and activities listed at paragraphs 20.4.23 to 20.4.25 exhaustive of those which might be affected by the PCC Site? Does it include users of Public Rights of Way (PRoW) including the England Coast Path and Teesdale Way? iii) If there are others, provide details (including a map to show their location); iv) Would the negligible adverse impact identified in paragraph 20.6.28 be on any particular tourism or recreational destination(s) or all those listed? v) Have the effects on tourism and recreation (including PRoW users) during operation been assessed? If not, why not? vi) Provide an assessment of cumulative effects on the listed destinations. 	<ul style="list-style-type: none"> i. There is no distinction between tourism and local amenities mentioned in paragraph 20.6.26. The Tourism Impacts (Including Local Amenity) section provides an assessment of amenities regardless of their proposed use and further on in the assessment, there is an assessment of employment, based on tourism related industries. ii. The Applicant notes that aside from tourism and recreational destinations and activities in the area that are set out at paragraphs 20.4.23 to 20.4.25 of ES Chapter 20 [APP-102], other receptors including ProW are set out in paragraphs 20.4.21 – 20.4.22 (which identifies the England Coast Path and Teesdale Way); furthermore marine recreational activities including sailing, recreational walkers and other recreational activity is also set out in paragraphs 20.4.36 – 20.4.41. Impacts on PRoWs including England Coast Path and Teesdale Way are considered in detail in the Public Rights Of Way section of the assessment under section 20.6 of ES Chapter 20 [APP-102]. This particular section was focused on impacts as a result of the individual elements of the Proposed Development on the identified baseline in section 20.4 of the ES Chapter 20 [APP-102]. iii. The applicant can confirm there are no further receptors to be added. iv. As stated by the Applicant in response to question (i), no distinction has been made between tourism and recreation receptors and this is reflected in the assessment, where the negligible adverse impact refers to the receptors listed in paragraph 20.6.28. v. Paragraph 20.6.28 of Chapter 20 [APP-102], identifies there are no tourism related businesses within the Order Limits to be affected during operation and as the pipelines proposed as a result of the Proposed Development are in situ for the operation phase, it has been assessed there will not be a significant impact on tourism and recreation amenities. Similarly no impacts on tourism have been identified at or around the PCC Site, for example, users of South Gare Road or Coatham Dunes and Sands. This is the same for PRoW users, who would be able to use PRoWs, including the England Coast Path and Teesdale Way, as usual during operation.

ExQ1	Question to:	Question:	Response																																										
			vi. The impact on tourism and local amenities has been considered in Chapter 24 Cumulative and Combined Effects [APP-106], paragraphs 24.5.130 – 25.5.140 under the sub-heading Socio-Economic and Tourism Cumulative Effects. An assessment of combined effects on listed destinations such as the England Coast Path, including socio-economic effects is also provided in Table 24-16 of [APP-106] and confirms that no combined effects are predicted.																																										
SET.1.8	RCBC STBC	R29 of the dDCO [AS-135] relates to the establishment of a local liaison group. Could the RPAs: i) Provide comment on this requirement in terms of whether it would meet the aims of keeping the community informed of the construction; ii) Confirm whether they would take an active role in such a group; and iii) Provide examples of where such groups have been established successfully for other major developments in the locality.	N/A																																										
SET.1.9	Applicants	The baseline local health profiles are updated annually. Confirm that the most up-to-date profiles have been used in Chapter 23 of the ES [APP-105] and, if not, if use of these would change the outcomes significantly?	<p>The data in the baseline local health profiles has been updated since the ES was originally submitted in July 2021. The latest baseline local health profiles using data on the PHE website have been reviewed (accessed June 2022) and a comparison between this data and that provided in the ES is provided in the following tables. There are no changes that would materially alter the conclusions of the original assessment.</p> <p><i>Table 1. Updated Table 23-4. Updated data shown in red text. Superseded data shown in strikethrough. Unchanged data shown in normal text.</i></p> <table border="1"> <thead> <tr> <th>Location</th> <th>Population</th> <th>Female average (years)</th> <th>Male average (years)</th> <th>Difference in life expectancy between most and least deprived areas (female years)</th> <th>Difference in life expectancy between most and least deprived areas (male years)</th> <th>Average</th> </tr> </thead> <tbody> <tr> <td>England</td> <td>55,977,178 55,977,178 0,138</td> <td>83.2 83.2 83.1</td> <td>79.8 79.8 79.4</td> <td>7.5 7.5 7.6</td> <td>9.5 9.5 9.4</td> <td>8.5</td> </tr> <tr> <td>Redcar and Cleveland</td> <td>136,718 136,718 137,228</td> <td>81.8 81.8 81.5</td> <td>78.8 78.8 77.5</td> <td>7.3 7.3 8.6</td> <td>11.0 11.0 13.6</td> <td>9.1 9.1 11.1</td> </tr> <tr> <td>Stockton-on-Tees</td> <td>197,213 197,213 197,419</td> <td>81.4 81.4 81.3</td> <td>78.1</td> <td>13.8 13.8 13.3</td> <td>15.2 15.2 14.3</td> <td>14.5 14.5 13.8</td> </tr> <tr> <td>Middlesbrough</td> <td>140,545 140,545 141,285</td> <td>80.0 80.0 79.8</td> <td>75.3 75.3 75.4</td> <td>12.0 12.0 11.0</td> <td>12.6 12.6 12.9</td> <td>12.3 12.3 11.95</td> </tr> <tr> <td>Hartlepool</td> <td>93,242 93,242 93,836</td> <td>81.3 81.3 81.1</td> <td>76.8 76.8 76.5</td> <td>10.4</td> <td>12.5 12.5 13.1</td> <td>11.4 11.4 11.75</td> </tr> </tbody> </table> <p><i>Table 2. Updated Table 23-5. Updated data shown in red text. Superseded data shown in strikethrough. Unchanged data shown in normal text.</i></p>	Location	Population	Female average (years)	Male average (years)	Difference in life expectancy between most and least deprived areas (female years)	Difference in life expectancy between most and least deprived areas (male years)	Average	England	55,977,178 55,977,178 0,138	83.2 83.2 83.1	79.8 79.8 79.4	7.5 7.5 7.6	9.5 9.5 9.4	8.5	Redcar and Cleveland	136,718 136,718 137,228	81.8 81.8 81.5	78.8 78.8 77.5	7.3 7.3 8.6	11.0 11.0 13.6	9.1 9.1 11.1	Stockton-on-Tees	197,213 197,213 197,419	81.4 81.4 81.3	78.1	13.8 13.8 13.3	15.2 15.2 14.3	14.5 14.5 13.8	Middlesbrough	140,545 140,545 141,285	80.0 80.0 79.8	75.3 75.3 75.4	12.0 12.0 11.0	12.6 12.6 12.9	12.3 12.3 11.95	Hartlepool	93,242 93,242 93,836	81.3 81.3 81.1	76.8 76.8 76.5	10.4	12.5 12.5 13.1	11.4 11.4 11.75
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			<table border="1"> <thead> <tr> <th>Community</th> <th>Infant Deaths</th> <th>Road Injuries and Deaths</th> <th>Suicide Rate</th> <th>Early Deaths: Cardiovascular</th> <th>Early Deaths: Cancer</th> <th>Excess Winter Death</th> </tr> </thead> <tbody> <tr> <td>England</td> <td>3.9</td> <td>42.6</td> <td>9.610.4</td> <td>71.770.4</td> <td>132.3129.2</td> <td>30.117.4</td> </tr> <tr> <td>Redcar and Cleveland</td> <td>3.33.4</td> <td>25.5</td> <td>10.817.4</td> <td>88.488.0</td> <td>152.3150.8</td> <td>35.911.2</td> </tr> <tr> <td>Stockton-on-Tees</td> <td>3.54.1</td> <td>25.1</td> <td>9.311.0</td> <td>74.473.1</td> <td>157.3146.8</td> <td>39.413.6</td> </tr> <tr> <td>Middlesbrough</td> <td>4.23.5</td> <td>25.4</td> <td>15.615.8</td> <td>118.6100.8</td> <td>184.8175.1</td> <td>25.119.2</td> </tr> <tr> <td>Hartlepool</td> <td>3.62.1</td> <td>30.8</td> <td>11.612.7</td> <td>96.399.1</td> <td>165.5160.1</td> <td>27.217.4</td> </tr> </tbody> </table> <p>Table 3. Updated Table 23-6. Updated data shown in red text. Superseded data shown in strikethrough. Unchanged data shown in normal text.</p> <table border="1"> <thead> <tr> <th>Column heading</th> <th>Socio- economic deprivation overall indices of multiple deprivation Score</th> <th>People estimated to have any common mental health disorder (%)</th> <th>Long term mental health problems among GP survey respondents (%)</th> </tr> </thead> <tbody> <tr> <td>England</td> <td>21.8</td> <td>16.9</td> <td>9.1</td> </tr> <tr> <td>Redcar and Cleveland</td> <td>28.6</td> <td>18.1</td> <td>9.3</td> </tr> <tr> <td>Stockton-on-Tees</td> <td>24.6</td> <td>17.0</td> <td>11.8</td> </tr> <tr> <td>Middlesbrough</td> <td>40.2</td> <td>19.6</td> <td>11.6</td> </tr> <tr> <td>Hartlepool</td> <td>33.2</td> <td>19.3</td> <td>12.5</td> </tr> </tbody> </table>	Community	Infant Deaths	Road Injuries and Deaths	Suicide Rate	Early Deaths: Cardiovascular	Early Deaths: Cancer	Excess Winter Death	England	3.9	42.6	9.6 10.4	71.7 70.4	132.3 129.2	30.1 17.4	Redcar and Cleveland	3.3 3.4	25.5	10.8 17.4	88.4 88.0	152.3 150.8	35.9 11.2	Stockton-on-Tees	3.5 4.1	25.1	9.3 11.0	74.4 73.1	157.3 146.8	39.4 13.6	Middlesbrough	4.2 3.5	25.4	15.6 15.8	118.6 100.8	184.8 175.1	25.1 19.2	Hartlepool	3.6 2.1	30.8	11.6 12.7	96.3 99.1	165.5 160.1	27.2 17.4	Column heading	Socio- economic deprivation overall indices of multiple deprivation Score	People estimated to have any common mental health disorder (%)	Long term mental health problems among GP survey respondents (%)	England	21.8	16.9	9.1	Redcar and Cleveland	28.6	18.1	9.3	Stockton-on-Tees	24.6	17.0	11.8	Middlesbrough	40.2	19.6	11.6	Hartlepool	33.2	19.3	12.5
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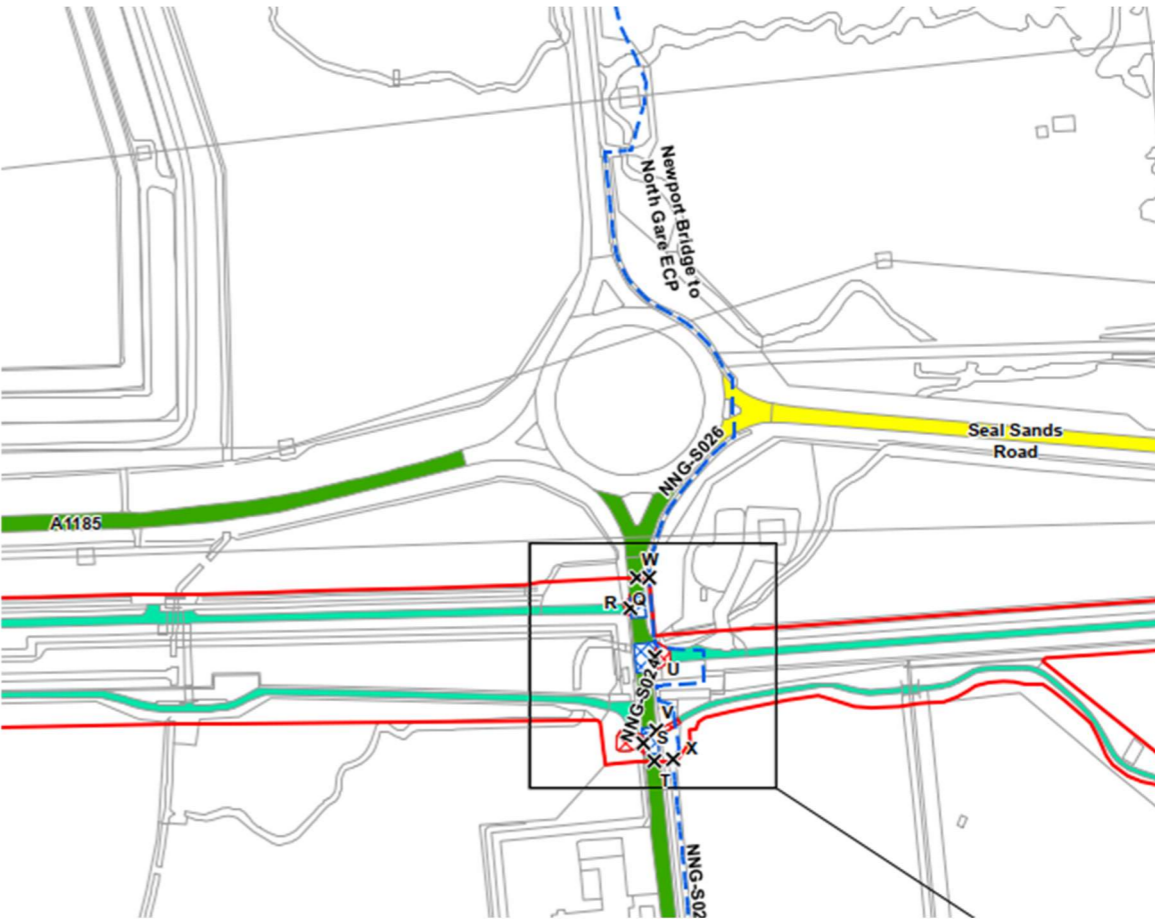
14.0 TRAFFIC AND TRANSPORT


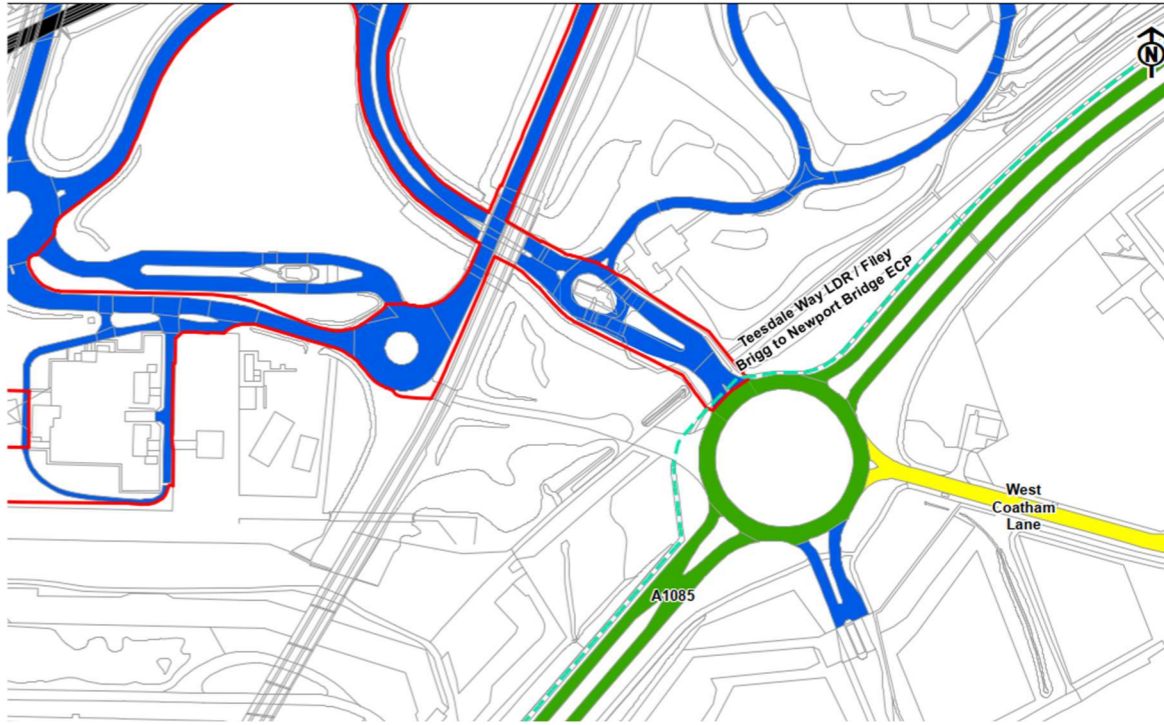
ExQ1	Question to:	Question:	Response
TT.1.1	Applicants Sembcorp Utilities (UK) Ltd Anglo-American Woodsmith Project	It would be necessary to travel through Sembcorp operated routes and Anglo-American managed land to access the Natural Gas Connection and CO ₂ Gathering Network south of the River Tees. Figure 16-2 [APP-173] also shows that this would be the access for HGVs to and from the site. Please could all identified parties provide an update on whether this access is likely to be granted?	Within the Heads of Terms currently agreed in principle between the Applicants and Sembcorp there is an allowance to utilise existing road network for the purposes of access to facilitate the construction and operation of the project. The Applicants are also in negotiation with Anglo American regarding any rights not able to be granted by Sembcorp and these discussions are progressing positively.
TT.1.2	Applicants	<p>STDC do not support HGV and construction traffic access via the A1053 Tees Dock Road because it relies upon the opening of an SDTC owned gated access [RR-035].</p> <p>iii) An assessment of the feasibility of alternative access points for this purpose should be provided.</p> <p>iv) Please explain how any delay caused by this controlled access point has been taken into account in the traffic assessment.</p>	<p>i) A confirmatory traffic impact assessment has been undertaken on the assumption that HGVs access the Site via an alternative access at the Lackenby Steelworks roundabout on the A1085 Trunk Road, located approximately 2 km south of Steel House Gate. This assessment did not change the capacity assessment conclusions as set out within Section 16.10 of ES Chapter 16 Traffic and Transportation [APP-098] as it only required a relatively minor redistribution of traffic to that assessed.</p> <p>A Technical Note setting out this assessment will be provided for submission by Deadline 3. This will set out the changes in distribution as a result of the alternative access as well as the results of the capacity assessments, and will therefore provide an updated assessment of impacts on the highway network, as currently set out in Section 16.10 of the Transport Assessment [APP-098].</p> <p>ii) No capacity analysis of the Tees Dock Road / A1053 / A66 roundabout was required to be undertaken, as set out in the Scoping Note dated January 2020 (Ref Annex 16A.0 of the TA) and agreed by Redcar and Cleveland Borough Council in their response dated 22 January 2022.</p> <p>Therefore, based upon the above, no driver delay assessment was included within the Transport Assessment. However, the impact on Tees Dock Road during the AM and PM peak hours (Ref Annex 16A.7 of the TA) is only a total of 7 HGVs (3 departures and 4 arrivals). This is therefore considered to constitute a negligible highway impact and equates to around one additional HGV every eight minutes, which is not significant.</p>
TT.1.3	Applicants	Confirm that the dates for the assessment scenarios referred to in paragraphs 16.3.14 and 16.4.16 of the ES [APP-098] are still valid and, if not, whether updated assessments will be provided.	Paragraph 16.3.14 of Chapter 16 [APP-098] states: <i>The assessment scenarios considered in chapter are:</i>

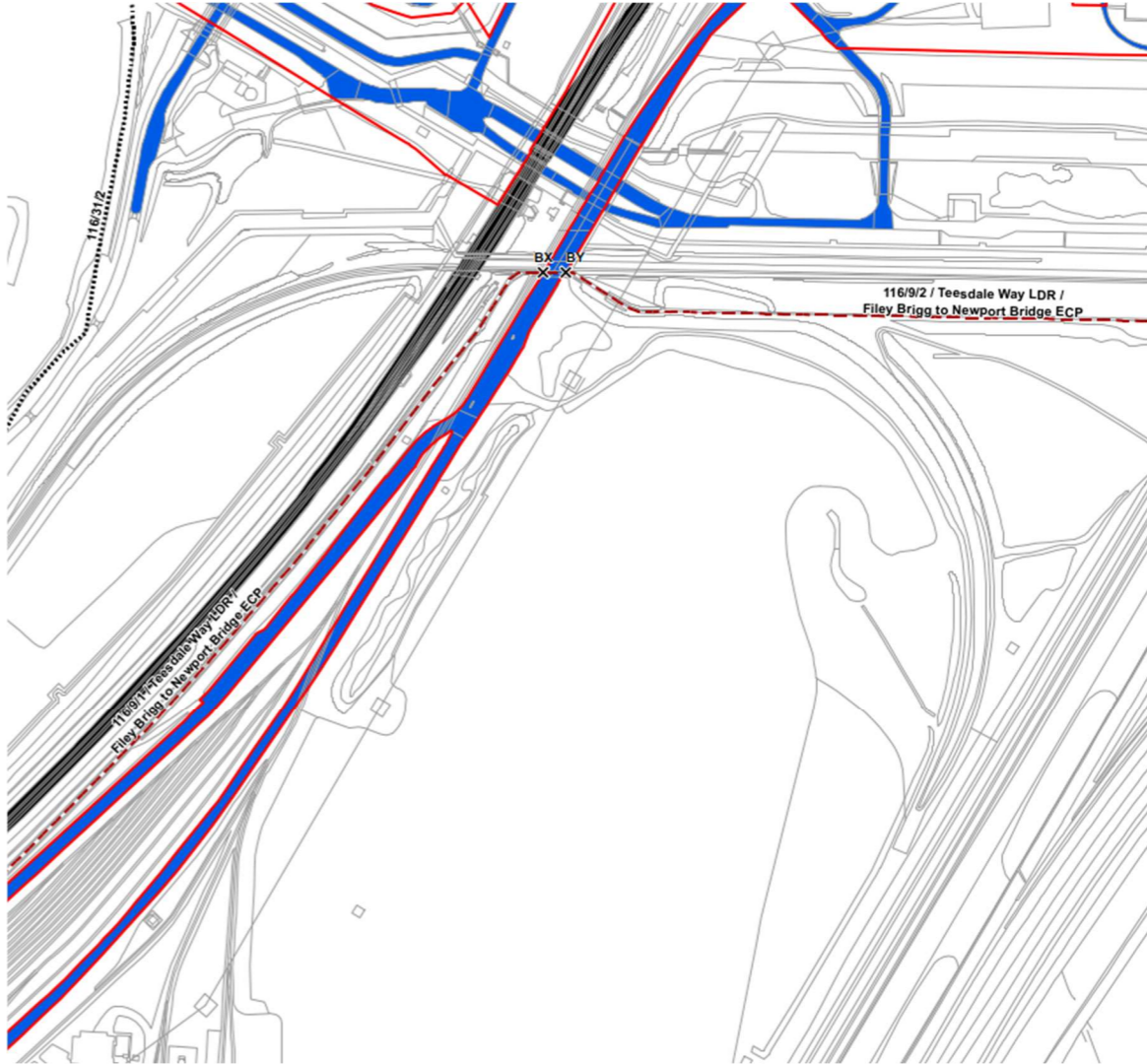
ExQ1	Question to:	Question:	Response
		<p>If peak construction is likely to be after 2024, how does this affect the growth factors for the baseline assessment and the subsequent impact of traffic generated on the local network?</p>	<ul style="list-style-type: none"> • <i>construction phase - assuming a worst case that construction commences in late 2022 with a peak of construction in 2024;</i> • <i>opening year - for the purposes of assessment in this chapter that operation commences in 2026; and</i> • <i>decommissioning of the Low Carbon Electricity Generating Station – 2051-2056.</i> <p>Paragraph 16.4.16 states: <i>It is currently anticipated that (subject to the necessary consents being granted and an investment decision being made), construction would commence around Q4 2022 and would continue for a period of 51 months. The actual peak of construction would occur in 2024 (Months 22 – 26) based on the construction workforce profile and this has been used for the assessment year. During the peak of construction, both construction of the PCC and the Natural Gas Connection (pipeline construction) will be taking place concurrently. Further details of construction staff profiles are provided in Section 16.6.</i></p> <p>The dates as set out in paragraphs 16.3.14 and 16.4.16 are still considered to be broadly applicable based on the expected start date for the Proposed Development. Should the construction be delayed then an additional level of growth would be applied to the base traffic flows based upon TEMPRO, which is the industry standard approach and is currently used within Section 16.7 of the Transport Assessment. However, given the predicted increase in HGV and total construction traffic (Ref tables 16-14 and 16-15 of Chapter 16: Traffic and Transport [APP-098]) is below the thresholds set out in the Guidelines for the General Environmental Assessment of Road Traffic (GEART) as set out in paragraph 16.3.7, then a delay of 1 or 2 years in the start of construction would not be expected to materially change the conclusions of the ES Chapter.</p>
TT.1.4	Highways England Highways Authorities	<p>The methodology, baseline data and assessment of for assessment of the potential effects of the Proposed Development on traffic and transport are set out in Chapter 16 [APP-098]. Highways England and the Highways Authorities are asked:</p> <ul style="list-style-type: none"> • Whether the methodology, baseline data and assessment are acceptable? • Whether junction surveys at MCC1, MCC2, MCC3 over one day are sufficient to provide a reliable measure of baseline conditions? • Is Highways England now satisfied with the junction capacity assessments in the vicinity of the site? • Paragraph 16.4.18 of the ES [APP-098] states that a quantitative assessment of operational traffic, which would include a predicted 	<p>The Applicants have submitted a number of initial Statements of Common Ground at Deadline 1 with the relevant highway authorities and at Deadline 2 with National Highways. Through these SoCG, the Applicant will seek to agree that the assessments undertaken are appropriate.</p>

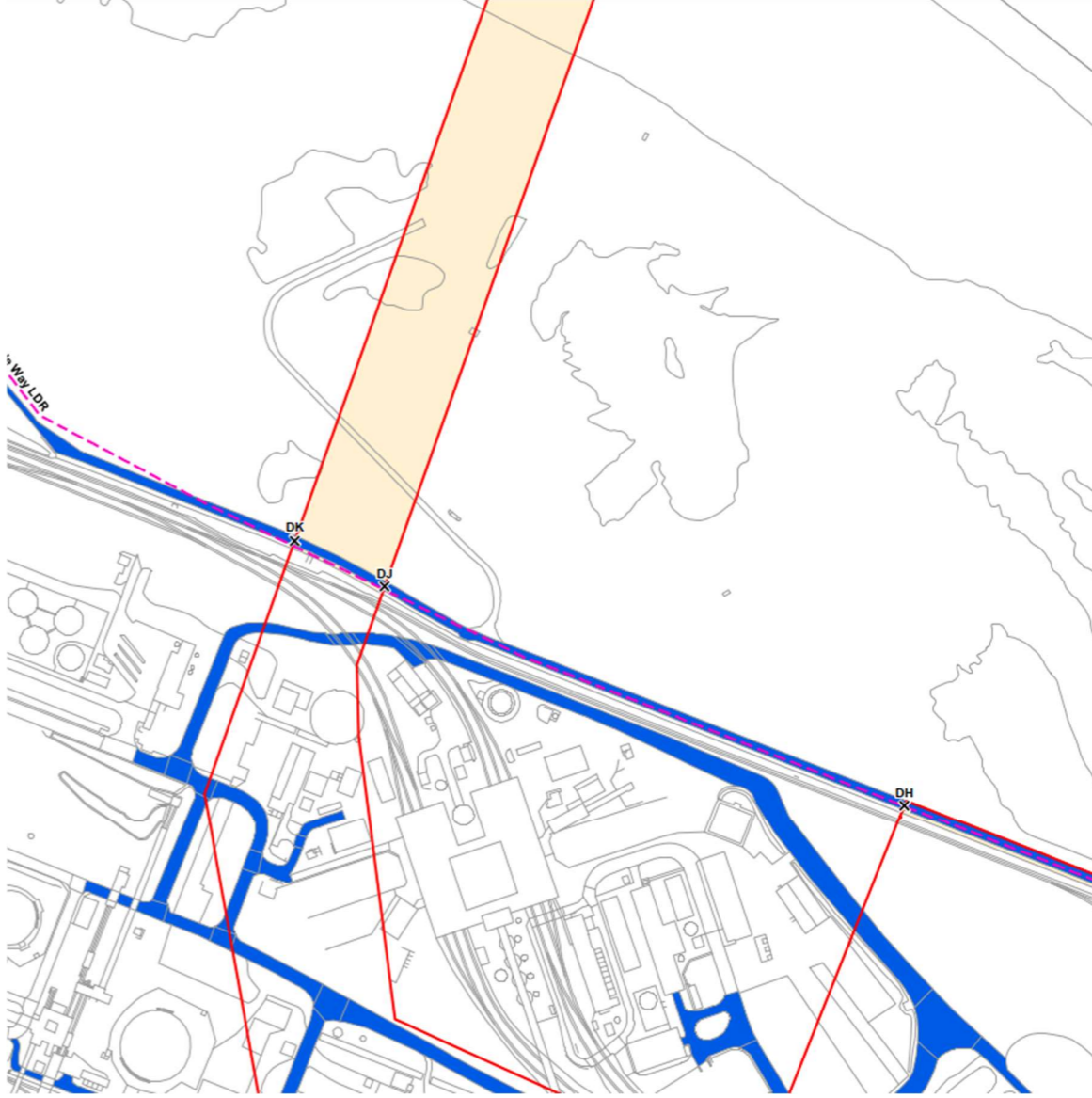
ExQ1	Question to:	Question:	Response
		200 additional staff for approximately 3 months during outages, has not been undertaken. Are Highways England and the Highways Authorities satisfied with this approach?	
TT.1.5	Highways England Highways Authorities	Are Highways England and the Highways Authorities content that Chapter 16 [APP-098] and associated framework plans form an appropriate basis for the 'Construction traffic management plan' and 'Construction workers travel plan' as written? If not, please provide details of your concerns.	N/A
TT.1.6	Applicants	Paragraph 5.3.93 of Chapter 5 [APP-087] states that Abnormal Indivisible Loads will need to be transported along a section of Tees Dock Road. Explain how this has been accounted for in the traffic assessment?	These ALLs are not the same as the oversized modular loads that are proposed to be delivered to Site via the RBT facility; they will weigh less than 100 tonnes and be road transportable using a normal HGV. In ES Chapter 16 [APP-096] these HGV movements were not included in the assessment as this was not necessary - they were assumed to access site via Tees Dock Road and the STDC owned gate only (as provided for as part of the Proposed Development) and not to travel via the highway network. Further context is available in the response to TT.1.2 above.
TT.1.7	Applicants Highways England Highways Authorities	Confirm that the list of other 'committed developments', and additional traffic generated referred to in paragraphs 16.4.23, 16.4.24 and Table 16-10 [APP-098] are up to date and that it is still appropriate to omit the developments in Table 16-A-44 of Appendix 16A.	The list of committed developments is considered to be correct and this was agreed by National Highways in their additional submission dated 14 February 2022 [AS-039].
TT.1.8	Applicants	How is the Decommissioning Traffic Management Plan referred to in paragraph 16.5.4 of the ES [APP-098] secured through the DCO?	Requirement 32(1) of the draft DCO requires that within 12 months of the date that the undertaker decides to decommission any part of the authorised development, the undertaker must submit to the relevant planning authority for its approval a decommissioning environmental management plan in relation to that part. Requirement 32(2) requires that the decommissioning works must not be carried out until the relevant planning authority has approved the decommissioning environmental management plan and Requirement 32(4) specifies that the plan must be implemented as approved unless otherwise agreed with the relevant planning authority. The Applicants have amended Requirement 32(3) at Deadline 2 to specify that the decommissioning environmental management plan to be submitted to and approved by the relevant planning authority must include a decommissioning traffic management plan.
TT.1.9	Applicants	Section 16.10 of the ES [APP-098] concludes that all residual traffic and transportation effects are 'negligible adverse'. However, the effects during construction are described as 'minor adverse' in Section 16.6, including those associated with severance, pedestrian amenity, and fear and intimidation.	Regarding potential Severance, Pedestrian Amenity and Fear and Intimidation effects, from table 16-2 the impact is below 30% and can then be defined as being "very low" with the effect (Ref table 16-3) being minor on the A1042

ExQ1	Question to:	Question:	Response
		How are these statements compatible?	<p>Kirkleatham Lane due to its high sensitivity (Ref table 16-1) and negligible on all other links due to them having either a low or medium sensitivity.</p> <p>Section 16.10 provides an overall conclusion with paragraph 16.3.18 stating that <i>“Only moderate and major effects are considered to be ‘significant’ for the purposes of the EIA Regulations; minor and negligible effects are ‘not significant’.</i></p> <p>The discrepancy between the statements in Section 16.6 and 16.10 solely relates to terminology used in the Applicants' methodology for identifying significant effects rather than an underlying error in the data or assessment. As both “negligible” and “minor-adverse” effects are not significant in EIA terms, the conclusions of the assessment are compliant with the requirement under the Infrastructure Planning (EIA) Regulations 2017 to a) describe any likely significant effects and b) describe any significant effects (or in the present circumstances confirm that no significant effects exist in respect of traffic).</p>
TT.1.10	Applicants	Please provide a clear list of the crossings that would need to be closed and an assessment of the effect of closing these crossings on the flow of traffic and transport. This should include a clear map of the affected locations and an assessment of the effect on PRowS.	<p>The Applicants are not seeking any permanent stopping up powers anywhere across the Order Limits. Accordingly, no crossings or PRowS will be permanently closed.</p> <p>The Order does provide the undertaker with various powers in relation to streets and PRowS. Article 13 allows the undertaker to temporarily stop up, prohibit or restrict the use of, alter or divert any street or PRowS. Article 16 includes powers to manage vehicles, such as through prohibiting stopping or parking, or to make provision for the direction or priority of traffic.</p> <p>These powers will allow the undertaker to be able to manage streets and PRowS when there are works taking place in the vicinity. The Applicants do not anticipate requiring the temporary stopping up of the whole width of any street, and instead anticipate that other measures will be used so that traffic can be safely and adequately managed, alongside the works. Such measures are likely to include traffic control (such as temporary traffic lights or a banksman) to allow minor works (for instance to improve an access) or to allow the safe access and egress of construction traffic between the street and the construction area. Works for the purposes of the Proposed Development will either be constructed within existing culverts underneath streets (Belasis Avenue, Nelson Avenue, Cowpen Bewley Road, Seaton Carew Road), on a pipe rack over a street (side roads off Seal Sands Road), or via trenchless techniques (South Gare Road).</p> <p>Similarly, the Applicants do not anticipate temporarily stopping up any PRowS, although it may be necessary to provide for short sections of diversion, which will be in the immediate vicinity of the existing PRowS. This would be in order to</p>

ExQ1	Question to:	Question:	Response
			<p>ensure the safety of users of the PRoW, by avoiding conflict with the construction works.</p> <p>No impacts on the flow of traffic or on PRoW are therefore expected.</p> <p>PRoWs which interact with the Order limits are briefly described below, along with extracts from the Access and Rights of Way Plans [AS-150]:</p> <p><i>The England Coast Path where it runs along the eastern side of Seaton Carew Road. Temporary localised diversions (running alongside Seaton Carew Road still) may be required to avoid conflict with construction works or access.</i></p>  <p>(ARoW Plans Sheet 6)</p> <p><i>The Teesdale Way and England Coast Path where they run alongside the A1085 Trunk road past Steel House Gate: Temporary localised diversions or management of pedestrians may be required to avoid conflict with construction works or access.</i></p>

ExQ1	Question to:	Question:	Response
			 <p>(ARoW Plans Sheet 3)</p>  <p>(ARoW Plans Sheet 4)</p> <p><i>The Teesdale Way and England Coast Path where they cross the internal road network to be used for HGV access from the Lackenby Steelworks entrance to</i></p>

ExQ1	Question to:	Question:	Response
			<p>the PCC site. These PRow cross the HGV access route by passing beneath the existing road bridge which crosses the Tees Valley Line. The majority of the PRow are outside of the Order Limits and the bridge over the Tees Valley Line railway would remain open throughout.</p>  <p>(ARoW Plans Sheet 4).</p> <p>The Teesdale Way along South Gare Road where it crosses the Order Limits: Temporary localised diversions through Access Land may be required to avoid conflict with construction works or access.</p>

ExQ1	Question to:	Question:	Response
			 <p>(ARoW Plan Sheet 2)</p> <p>Temporary localised diversions at these locations may be required to avoid conflict with construction works, and if so diversions would be managed by the construction contractor, and would not result in closure of the PRoW.</p>
TT.1.11	Applicants	<p>Paragraph 5.3.85 of the ES [APP-087] indicates that 'options for the reopening and re-use of the closed Redcar British Steel railway station will be discussed with both Teesworks and Network Rail but do not form part of the DCO application'.</p> <p>When will a decision on this be taken and why would it not be secured by the dDCO?</p>	<p>The decision to reopen the station is to be taken by STDC as part of the wider regeneration of the Teesworks site. STDC indicated as part of their development plans for their land they may see benefit in re-opening the rail station. However the timing of this decision cannot be confirmed by the Applicants and is therefore not relied upon for any of the assessments of potential effects of the Proposed Development.</p>

ExQ1	Question to:	Question:	Response
			<p>It is the intention of the Applicants to maintain dialogue with STDC in relation to its plans in this regard, given the discussions between the parties regarding personnel movement to/from site. In the absence of any certainty regarding the opening of the rail station and related timings, the Applicants have not sought to rely on the reopening of the train station in its transport proposals and related assessments in the ES. The predicted minor adverse traffic and transport effects from the Proposed Development mean that the development is not reliant on the use of the rail station; if it were to be reopened within the timescales for construction of the Proposed Development, this could have a minor beneficial effect over those assessed and presented in the ES.</p>
TT.1.12	Applicants PD Ports	<p>Paragraph 5.3.94 of the ES [APP-087] states that it is assumed that PD Ports, as the Port Authority could adopt Ships Agency and take responsibility for the transport and delivery of abnormal indivisible loads (including navigational risk) through existing port procedures.</p> <p>Has there been any discussion between the parties on this matter? If agreement is reached, how would this be secured? If agreement is not reached what are the implications?</p>	<p>The Applicants undertook an initial survey of the locally available logistics infrastructure in the Teesside area based on the potential sizes for AILs. They identified that for the AILs in question the only viable solution was to import across the Redcar Bulk Terminal quayside. This option also complies with relevant policy on using water transport for AILs where possible.</p> <p>The Applicant plans to engage with PD Ports in its capacity as the Port Authority once the transport design is further progressed.</p> <p>The EPC contractor selected by the Applicants will be responsible for tendering and awarding a freight contract to a competent party to manage the import of all materials to the appropriate port(s). The import of AILs is common practice for major construction projects, such as the Proposed Development, the contractor selected will be technically assessed based on their experience to ensure that they are competent to execute this scope.</p>
TT.1.13	Applicants	<p>Can the Applicants explain what assumptions have been made in establishing construction and operation phase traffic movements and the expected volumes of waste, imported fill and chemicals that will be transported to and from the Proposed Development, including:</p> <ul style="list-style-type: none"> iv) Waste arising from the demolition of structures and buildings associated with the former steelworks, in the event that this activity is undertaken under the DCO; v) Imported fill required to achieve the development platform (maximum of 13m AOD) at the PCC site and Tod Point substation site; and, vi) Chemicals to be used during operation of the Proposed Development, as described at ES Chapter 4 [AS-019], paragraph 4.4.10. vii) Confirm that this has been taken into account in the assessment of HGV movements and if it has not, provide an assessment of this on traffic and the transport networks. 	<ul style="list-style-type: none"> i) The Applicants have based the ES assessment on the basis that demolition of structures and buildings associated with the former steelworks is being undertaken by STDC who will also be responsible for the management and disposal of waste arisings from these activities. The ExA is also referred to the Applicants' response to GEN.1.11. ii) The STDC Remediation Strategy for the PCC Site confirms that the development platform for the PCC site will be at an elevation of 7.3 mAOD and that the cut and fill balance will be neutral, requiring no import of materials. No material will also need to be imported for works at Tod Point Sub-station. iii) Operational traffic movements, including vehicles delivering chemicals, are detailed in Chapter 16: Traffic and Transport [APP-098] of the ES at Paragraphs 16.6.37 to 16.6.42. iv) The above have all been taken into account in the assessment of HGV movements in the ES.

ExQ1	Question to:	Question:	Response

15.0 WATER ENVIRONMENT

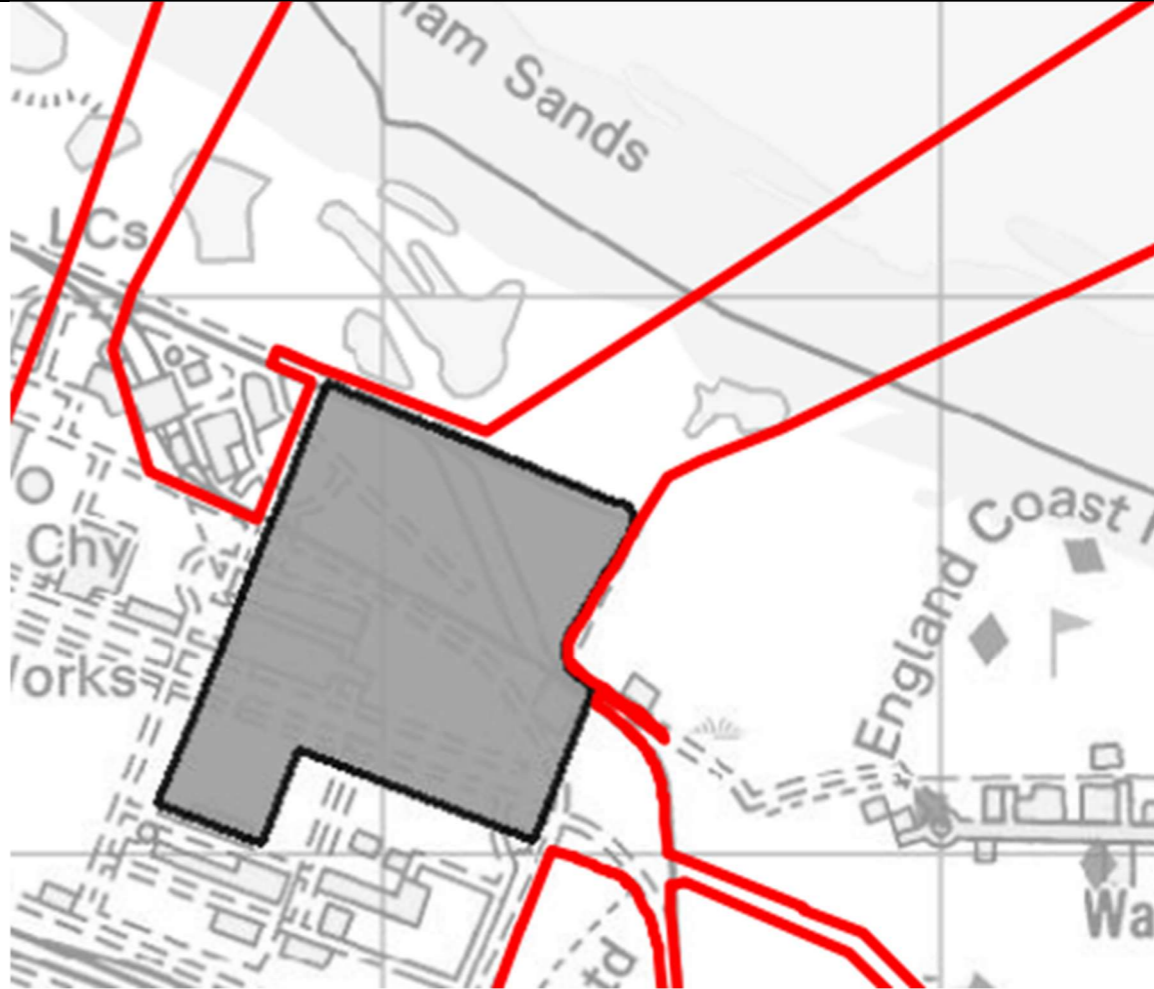
ExQ1	Question to:	Question:	Response
WE.1.1	Applicants NWL	<p>Section 9.5 of the ES [APP-091] outlines that the Proposed Development would have a significant demand for water.</p> <p>i) The Applicants are asked to provide an estimate of the likely water volumes required during construction, operation and decommissioning.</p> <p>ii) Has agreement been reached with NWL to provide this water?</p> <p>iii) Can the Applicants confirm whether there is an alternative proposal for water supply in the event that agreement is not reached with Northumbrian Water Limited and, if so, explain what the alternative is and whether it has been assessed within the ES? It is noted that paragraph 9.6.66 of ES Volume 1, Chapter 9 [APP-091] refers to abstraction from the Tees Estuary but it is unclear whether this has been assessed in full.</p>	<p>i) Paragraph 9.6.64 of Chapter 9 of the ES [APP-091] states that the Proposed Development will have an operational water demand of up to 82M l/d. Detail of construction and decommissioning water requirements are not available at this stage. However, there are not any unusually large water requirements envisaged during these phases of the Proposed Development that would require significant water supply.</p> <p>ii) The Applicants are currently in discussions with STDC for a raw water supply agreement that includes providing a connection to the Teesworks supply up to the PCC site boundary. Northumbrian Water Limited (NWL) would be the supplier of raw water for cooling to STDC.</p> <p>iii) Water supply during operation is to be from the existing NWL raw water feed. If an agreement is not reached with STDC on a raw water supply then the Applicants will open supply discussions directly with NWL. Initial discussions have been held with NWL confirming that the above water demand can be supplied through the existing NWL raw water feed to the former steelworks. Reference to the Tees Estuary abstraction in paragraph 9.6.66 is an error and no abstraction of water from the Tees Estuary is proposed and therefore this has not been assessed within Chapter 9 [APP-091]. This option was discounted after the Preliminary Environmental Information (PEI) Report was issued for formal consultation. No alternative sources of water are under consideration or considered to be necessary.</p>
WE.1.2	Applicants NWL	<p>Information is provided in Section 9.5 of the ES [APP-091] regarding potential discharges from the site.</p> <p>The Applicants are asked to provide an estimate of the likely volume of discharge from the site at all stages and the likely composition of this.</p> <p>Has NWL confirmed that Bran Sands and/or Marske-by-the-Sea Wastewater Treatment Works (WwTW) have capacity to treat the discharges?</p>	<p>Discharge rates for the operational process streams will be approximately 0.07 m³/s. Uncontaminated surface water runoff discharge does not require attenuation given that it is proposed to be discharged to the sea via the outfall. The quality of the effluent from the Proposed Development is currently under assessment as part of the FEED design. Modelling of mixing zones for effluent discharge from the Proposed Development is currently being undertaken by the Applicants using precautionary effluent composition values, and this will be submitted as part of the Applicants' Deadline 4 submission.</p> <p>NWL has confirmed that Bran Sands and/or Marske-by-the-Sea Wastewater Treatment Works (WwTW) have capacity to treat the discharges as noted in paragraph 3.1.5 of the Statement of Common Ground with NWL submitted at Deadline 1 [REP1-015].</p>
WE.1.3	Applicants	<p>Paragraph 9.4.6 of the ES [APP-091] states that the nearest weather station with historical data is located at Stockton on Tees.</p> <p>The Applicants are asked to:</p>	<p>i) The nearest climate station to the Proposed Development on the 'MET office: UK climate averages' website is confirmed as Stockton-on-Tees, which is less than 5km from the DCO Order limits. The next</p>

ExQ1	Question to:	Question:	Response
		i) Confirm whether there are closer weather stations? If so, please justify not including the data from these. ii) Provide an assessment of how representative the data from this weather station are likely to be, given that it is 5 km away from the PCC Site and inland. What difference could this make to the results?	closest is Loftus (SAMOS) climate station at Loftus (over 15km to the southeast). ii) The purpose of this data is to give a high-level impression of the prevailing baseline climate and the assessment of effects on the water environment in Chapter 9 [APP-091] is not reliant on this information in determination of the likelihood of any significant effects. As such, any difference between climate stations would have no impact on the outcome of the assessment. Therefore, the data from Stockton-on-Tees is considered suitable for this purpose. By way of a comparison annual average rainfall at Loftus is 628 mm per year, while it is 574 mm per year at Stockton-on-Tees (for the period 1981-2010) and indicate a similar level of risk from surface water runoff.
WE.1.4	RCBC STBC	Confirm whether the plans and projects used in the assessment of cumulative effects on the water environment, identified in paragraph 9.9.1 of ES Chapter 9 [APP-091] are acceptable.	The Applicants have submitted initial Statements of Common Ground at Deadline 1 with both parties and will seek to agree that the list of committed developments and therefore cumulative assessments undertaken are appropriate with each relevant authority via the SoCG and provide updated documents during examination.
WE.1.5	Applicants	Appendix 9C [ES-254] contains the Water Framework Directive (WFD) Assessment. Please provide a clear plan of the WFD waterbodies.	Surface WFD waterbodies are shown in Figure 9-1 Surface Water Features and their Attributes [AS-073]. Groundwater WFD waterbodies are shown in Figure 9-2 Groundwater Features and their Attributes [AS-074].
WE.1.6	Applicants	The EA [RR-024] identifies that the application documents do not include measures to enhance or restore any waterbodies. i) Explain how this has been taken into consideration ii) Demonstrate that the Proposed Development would not jeopardise the delivery of mitigation measures aiming to attain WFD objectives, including Dissolved Inorganic Nitrogen (DIN) in the Tees estuary transitional waterbody. iii) Section 9.7.141 onwards of ES Appendix 9C [APP-254] considers atmospheric deposition impacts. Explain how these would affect WFD waterbodies and nearby water features, including Pond 14. iv) The EA suggests that waterbody quality could be improved if wastewater destined for Dabholm Gut, including that from beyond the site, was diverted to Tees Bay via the discharge pipeline. What consideration has been given to this concept?	i) The assessment presented in Chapter 9 [APP-091] has taken into account all mitigation and enhancement measures when determining likelihood of potential residual significant effects. No significant residual effects were identified despite watercourse enhancements not being defined within Chapter 9 of the ES [APP-091]. However, in recent consultation with the Environment Agency with regard to their relevant representations (01/04/22), it was agreed that further engagement would take place to future proof potential enhancement initiatives being considered by the Environment Agency (e.g. to move existing effluent discharges to the Tees Coastal waterbody from the Dabholm Gut). Other enhancement options would also be explored (e.g. whether the surface of rock armour around the proposed outfall could be roughened so that marine flora could better attach to it). ii) Mitigation measures were not provided in response to a data request to the Environment Agency for the Tees Estuary transitional waterbody. Instead, it was demonstrated in ES Volume III Appendix 9C WFD Assessment Table 9C-30 [APP-254], that against the 'reasons for not achieving good status' for the Tees transitional

ExQ1	Question to:	Question:	Response
			<p>waterbody that no potential non-compliance with the WFD objective of 'failure to prevent future improvement' is predicted. However, the Applicants note the recent (March 2022) inclusion of the Teesmouth and Cleveland Coast SPA/Ramsar designated site as one of the sites having been identified by Natural England for which excessive nutrients (in this case nitrogen) is contributing to unfavourable status. As such, the Applicants understand that all relevant developments within the catchment of the SPA/Ramsar site should demonstrate nutrient neutrality. Discharge modelling of dissolved inorganic nitrogen (DIN) emissions is currently being undertaken to demonstrate that the Proposed Development will not have any detrimental nutrient impacts to the designated site. This modelling will be submitted at Deadline 4. Please refer also to point (iv) with regard to discharges to Dabholm Gut.</p> <p>iii) The potential effect of atmospheric deposition on designated coastal sites (which overlap with the WFD waterbodies) and Pond 14 was described in ES Volume III Appendix 9C WFD Assessment [APP-254] paragraphs 9.7.141-9.7.149. No deterioration or prevention of future improvement was identified for any waterbody. As an additional precaution, the Applicants have also since considered whether atmospheric deposition of nutrients could have an impact on its own with regards to the concentration of nitrogen in the coastal waters. A simple mass balance water quality appraisal for the Tees Coastal WFD waterbody has been undertaken and this was presented to the Environment Agency on the 1st April 2022. The analysis was based on total nitrogen isopleth mapping from the air quality modelling outputs. This assumed a precautionary closed box system, with the maximum average total nitrogen deposition of 0.45 kg N/ha/yr (sourced from NO₂ and NH₃) applied across the entire waterbody with an assumed precautionary depth of 8m. Based on these assumptions the analysis indicated that the impact on nitrogen concentrations within the WFD waterbody would be insignificant with an increase of 0.009% total nitrogen per year. In practice, total nitrogen would be dispersed outside of the WFD waterbody and the highest nitrogen deposition rate would only apply to a very small area off Coatham Sands. As a simple analysis the results cannot be interpreted in absolute terms, but the predicted increase is so small that there is confidence that atmospheric deposition of nitrogen is an insignificant issue, and no further water quality modelling of this issue is considered necessary. The Environment Agency accepted this at the meeting on the 1st April 2022.</p> <p>iv) The Proposed Development does not accommodate the discharge of effluent from Bran Sands WwTW to Tees Bay which originates from beyond the NZT site. Any change to discharge arrangements from Bran Sands WwTW would need to be the subject of separate discussions between the EA and NWL.</p>

ExQ1	Question to:	Question:	Response
WE.1.7	Applicants	<p>Section 9.4.16 of the ES [APP-091] states that data for Pond 14 were only collected over the winter of 2019/2020.</p> <p>i) Given the short monitoring period, are these data considered a reliable baseline for water quality?</p> <p>ii) How do the data demonstrate that the ponds are predominantly rainwater fed with little influence from tidal variation and groundwater all year round?</p>	<p>i) Monitoring of Pond 14 was undertaken between October 2020 and January 2021, with eight samples collected on a fortnightly basis. Data was reported in Appendix 9A – Annex E [APP-091]. Water quality in waterbodies is invariably dynamic and a balance always has to be struck between sampling effort and desired outcomes of the monitoring. In this case, the eight monitoring visits spanned a range of conditions including dry periods and heavy rainfall, and low to high tides (to determine any tidal groundwater influence). Given the range of conditions encountered during sampling, the baseline is considered robust and sufficient for the analysis undertaken, allowing an understanding of pond functioning and pressures acting upon it.</p> <p>ii) Water level monitoring of Pond 14 has been undertaken and compared to the approximate tidal heights at Tees Bay in Appendix 9A – Annex E [APP-091]. This indicates that there is no correlation between pond water levels and the tide height, based on 8 sampling visits. All other ponds remained dry during this monitoring period, thereby indicating little influence from tidal variability and groundwater all year round. For Pond 14, the water level in the pond gradually rose through the autumn into the winter, indicating that it was being gradually filled by rainwater through the wetter seasons following summer.</p>
WE.1.8	Applicants	<p>All ponds in the dunes have been discounted from the assessment apart from Pond 14 because they are fully vegetated wetlands (paragraph 9.4.16 of ES [APP-091]).</p> <p>What evidence is there that these are not receiving groundwater from the site or that they would not be sensitive to air emissions?</p>	<p>Pond 14 was the only open water identified during surveys in the dunes, with all other areas that may have been ponds having become heavily vegetated. Given that they were dry during autumn and winter when groundwater recharge should be occurring, then it would seem likely that they are dry all year round. Furthermore, the walkover indicated that the ponds are found within historic slag deposits which are likely to be relatively impermeable and allow little groundwater interaction. Given the lack of open water in the 'ponds', sensitivity to atmospheric deposition would not be expected. Details are provided in Appendix 9C – Annex E [APP-254].</p>
WE.1.9	Applicants	<p>It is suggested in paragraph 9.4.155 of the ES [APP-091] that the other ponds in the dunes could be opened up to increase biodiversity net gain.</p> <p>What implications would this have for the assessment of the effects of the project on the water environment?</p>	<p>The assessment of the potential impact to Pond 14 in Chapter 9 of the ES [APP-091] indicates that there would be no significant effect from atmospheric deposition based on background water quality of the pond and modelled deposition rates. Assuming the other ponds were opened up to have a broadly similar surface water area and volume, the effect from atmospheric deposition would be expected to also be insignificant. No other significant adverse effects would be anticipated from these improvement works to the ponds, if they were taken forward.</p>

ExQ1	Question to:	Question:	Response
WE.1.10	Applicants	Explain how statutory environmental limits and the requirements of the WFD are incorporated in the methodology for assessing the significance of effects described in Section 9.3.12 [APP-091]?	<p>The criteria for assessing the significance of effects in environmental impact assessment terms are outlined in paragraphs 9.3.19 to 9.3.25 (and Tables 9-2 to 9-4) of Chapter 9 of the ES [APP-091]. Where a waterbody is WFD designated this increases the importance assigned to a waterbody in Table 9-2, which also shows all other environmental considerations that are incorporated into the decision regarding waterbody importance for the impact assessment.</p> <p>The criteria for determining magnitude of impact (Table 9-3) in Chapter 9 of the ES [APP-091] takes into account any reduction or increase in waterbody WFD classification as part of the assessment of magnitude of an impact.</p> <p>The requirements of the WFD are assessed separately in the WFD Assessment provided in Appendix 9D of the ES [APP-254]. A WFD assessment is distinct from an EIA assessment, and so the requirements of the WFD are only one aspect of the EIA classification of effects methodology (which is based on DMRB LA113). The WFD assessment considers whether the Proposed Development has the potential to cause a deterioration or prevention of future improvement in any WFD classification element.</p>
WE.1.11	Applicants	Section 9.4 of the ES [APP-091] quotes the Strategic Flood Risk Assessment (RCBC, 2016). Provide a clear diagram of the Strategic Flood Risk Assessment mapping, marking the boundary of the site and the access routes.	A map showing the Strategic Flood Risk Assessment (SFRA) mapping with the Order Limits and access routes will be provided at Deadline 3.
WE.1.12	Applicants	Section 9.4 of the ES [APP-091] describes the baseline conditions, including topography. Provide a topography map of the site as existing and as proposed at a resolution sufficient to interpret the findings of the Flood Risk Assessment, such as the reference in paragraph 9.4.133 [APP-091] to ponding.	<p>A surface water flood risk map (ES Figure 9-5 [AS-077]) was provided with the DCO application and indicates the areas where ponding occurs, and can be viewed in conjunction with paragraph 9.4.133 of Chapter 9 of the ES [APP-091]. A plan showing the existing topography of the PCC site is appended as Appendix WE.1.12 (in Document Ref 9.8).</p> <p>The proposed topography within the PCC site is not shown on a plan but is proposed to be a flat development platform at an elevation of 7.3 mAOD in accordance with the specification agreed between the Applicants and landowner (STDC).</p>
WE.1.13	Applicants	Paragraph 9.4.116 of the ES [APP-091] states that there would be 'medium' risk of overtopping flood defences at 0.1% AEP (annual exceedance probability) where site is below 5.74m AOD. The Applicants are asked to provide a map of the location of the proposed construction platform above 7.5m AOD and the areas likely to remain below 5.74m AOD.	As noted in WE.1.12, the proposed topography within the PCC site will be a flat development platform at an elevation of 7.3 mAOD so no part of the PCC Site will be below 5.74 mAOD - see shaded area below:

ExQ1	Question to:	Question:	Response
			 <p>Areas outside the PCC site in the connection corridors and for site access may be at risk of flooding as shown on ES Figure 9-4 [AS-076].</p>
WE.1.14	Applicants EA Lead Local Flood Authorities (LLFAs)	<p>Paragraph 9.4.21 of the ES [APP-091] states that parts of the site are in Flood Zones 2 and 3 and a sequential test has been undertaken, as described in paragraphs 9.6.16 to 9.6.31 of Appendix 9A of the ES [APP-250]. Paragraph 9.6.21 of the ES [APP-250] states that all of the alternative sites listed are entirely in Flood Zone 1. Although reasons are given why the current site is preferable overall, this section does not explain why the other sites were not viable alternatives in the context of the flood risk.</p> <ul style="list-style-type: none"> i) Please provide an update to the flood risk assessment in light of the change request. Do any Above Ground Installations or work areas remain within Flood Zones 2 and 3? ii) Explain why the current site is preferable in the context of the sequential test and how the sequential test is passed. 	<ul style="list-style-type: none"> i) The PCC site is within Flood Zone 1. The connection corridors pass through areas of Flood Zones 1, 2 and 3. The Above Ground Installation for the connection to the Sembcorp gas pipeline is located within Flood Zones 2 and 3. The Above Ground Installation at the National Gas Grid connection in Seal Sands is located in Flood Zone 1. ii) The PCC site and the alternative sites considered are all located in Flood Zone 1 therefore from a flood risk perspective, all the sites considered were equally viable for development. The strategic nature of the existing utilities corridors and the large area covered means that, regardless of the site location, these would pass through areas of Flood Zone 1, Flood Zone 2 and Flood Zone 3. With the exception of the Tees Crossing, the connection corridors are within existing utility corridors on pipe racking or located below ground and therefore flood risk only needs to be considered during the temporary construction phase.

ExQ1	Question to:	Question:	Response																												
		iii) The assessment should clearly separate out the components of the sequential and exception tests. iv) With regard to test 3 of the exception test (project safety), are the EA and LLFAs content that the development has been demonstrated as safe for its lifetime and that the Flood Emergency Response Plan is appropriate?	As all the sites considered were viable in flood risk terms, the choice of site location was then assessed against the additional criteria as listed in Paragraph 9.6.21 of the FRA [APP-250]. iii) Based on the above this is not considered necessary given that all sites were considered equally viable from a flood risk perspective. The Applicant notes that the Environment Agency a Statement of Common Ground with the Environment Agency has been submitted at Deadline 1 [REP1-009] which confirms that the Environment Agency is satisfied in relation to the Applicants' approach in relation to the Flood Risk Assessment.																												
WE.1.15	Applicants	Figure 9-4 of the ES [APP-133] is supposed to show flood defences according to paragraph 9.4.104 of the ES [APP-091]. Please illustrate these more clearly on Figure 9-4.	An updated version of Figure 9-4 showing flood defences is provided as Appendix WE.1.15 (in Document Ref 9.8).																												
WE.1.16	Applicants	Fluvial climate change allowances in Table 9A-11 of Appendix 9A [APP-250] are based on the Northumbria River Basin district. The EA revised the climate change allowances in July 2021. Please confirm whether the revised allowances have implications for the design of the Proposed Development and the assessment of flood risk in Chapter 9 [APP-091].	Fluvial climate change allowances used to inform the assessment were based on the Environment Agency Guidance published in 2020 for the anticipated lifetime of the Proposed Development (approximately 40 years). This guidance provided fluvial peak water flow allowances for the Northumbria River Basin district. The allowances assessed, as presented within Table 9A-11 of Appendix 9A [APP-250] are presented below. <p>Table 9A-11: EA Peak River Flow Climate Change Allowances for the Northumbria River Basin District</p> <table border="1"> <thead> <tr> <th></th> <th>Total potential change anticipated for the '2020s' (2015 to 2039)</th> <th>Total potential change anticipated for the '2050s' (2040 to 2069)</th> <th>Total potential change anticipated for the '2080s' (2070 to 2115)</th> </tr> </thead> <tbody> <tr> <td>H++</td> <td>20%</td> <td>35%</td> <td>65%</td> </tr> <tr> <td>Upper End Allowance</td> <td>20%</td> <td>30%</td> <td>50%</td> </tr> <tr> <td>Higher Central Allowance</td> <td>15%</td> <td>20%</td> <td>25%</td> </tr> <tr> <td>Central Allowance</td> <td>10%</td> <td>15%</td> <td>20%</td> </tr> </tbody> </table> <p>The EA guidance was subsequently updated in 2021 and again in 2022 with fluvial peak water flow climate change allowances calculated at the management catchment level rather than River Basin level.</p> <p>Using the updated guidance, the Order Limits are located entirely within the Tees Management Catchment and the required peak river flow climate change allowances that should be considered as part of an FRA are presented below.</p> <p><i>Peak River Flow Allowances for the Tees Management Catchment</i></p> <table border="1"> <thead> <tr> <th></th> <th>2020s (2015-2039)</th> <th>2050s (2040-2069)</th> <th>2080s (2070 – 2125)</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Total potential change anticipated for the '2020s' (2015 to 2039)	Total potential change anticipated for the '2050s' (2040 to 2069)	Total potential change anticipated for the '2080s' (2070 to 2115)	H++	20%	35%	65%	Upper End Allowance	20%	30%	50%	Higher Central Allowance	15%	20%	25%	Central Allowance	10%	15%	20%		2020s (2015-2039)	2050s (2040-2069)	2080s (2070 – 2125)				
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WE.1.17	Applicants	Data for extreme wave heights and wind events are provided in Section 9.4 of the ES [APP-091]. Where have these been used in the assessment, including as part of a cumulative event?	The data on extreme wave heights presented in Section 9.4 of the ES [APP-091] are for baseline purposes only, to indicate the nature of the hydrodynamic environment. No part of the assessment undertaken within the ES or any modelling associated with the assessment is reliant on this data.																
WE.1.18	Applicants	Paragraph 9.4.112 of the ES [APP-091] states that the EA has modelled tidal peak waters for tidal Tees area for a number of scenarios to inform the FRA. Could the Applicants explain why the updated climate change allowances for sea level rise published by the EA in July 2020 have only been applied at two locations used in the model, and not all seven as described in Table 9A-16 of ES Volume 3, Appendix 9A [APP-250]?	Table 9A-16 of ES Volume 3, Appendix 9A [APP-250] presents the modelled water levels for the tidal River Tees, as provided by the EA and replicated below.																

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			<p>Table 9A-17: Tidal water levels for the Tidal River Tees with climate change allowances (m AOD)</p> <table border="1"> <thead> <tr> <th rowspan="2">Location</th> <th colspan="2">Higher Central (total increase 0.94m to 2125)</th> <th colspan="2">Upper End (total increase 1.32m to 2125)</th> <th colspan="2">H++ (1.9m increase 2100)</th> </tr> <tr> <th>0.5%</th> <th>0.1%</th> <th>0.5%</th> <th>0.1%</th> <th>0.5%</th> <th>0.1%</th> </tr> </thead> <tbody> <tr> <td>NZ 55096 28427 (Teessmouth)</td> <td>5.02</td> <td>5.27</td> <td>5.40</td> <td>5.65</td> <td>5.98</td> <td>6.23</td> </tr> <tr> <td>NZ 47539 19485 (Portrack)</td> <td>5.10</td> <td>5.34</td> <td>5.48</td> <td>5.72</td> <td>6.06</td> <td>6.30</td> </tr> </tbody> </table> <p>When the tidal climate change allowances are applied, the difference in water levels from the model node furthest upstream at Portrack to the model node at Teessmouth remains between 6 cm to 8 cm.</p>	Location	Higher Central (total increase 0.94m to 2125)		Upper End (total increase 1.32m to 2125)		H++ (1.9m increase 2100)		0.5%	0.1%	0.5%	0.1%	0.5%	0.1%	NZ 55096 28427 (Teessmouth)	5.02	5.27	5.40	5.65	5.98	6.23	NZ 47539 19485 (Portrack)	5.10	5.34	5.48	5.72	6.06	6.30
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WE.1.19	Applicants	<p>The ExA remains uncertain regarding the timescales for the development. As an example, at ISH1 it was explained to the ExA that the 25-year life for the CCGT was indicative, but that the lifetime of the plant could be longer.</p> <ol style="list-style-type: none"> Please provide an indication of how long the CCGT and carbon capture facility could potentially be in use. What implications does a longer lifetime have for the assessment of risks from flooding? 	<ol style="list-style-type: none"> The CCGT and carbon capture facility have a design life of approximately 25 years but their operational life could be longer subject to commercial viability. The development platform of the PCC Site will be at a level of 7.3 mAOD (please refer to WE1.12), which is higher than the maximum flood level of 5.74 mAOD (including allowance for freeboard). Chapter 9 [APP-091] Paragraph 9.5.8 notes that it is envisaged that the generating station will have a design life of around 25 years. However, the CO₂ Gathering Network and CO₂ Export Pipeline have been designed to operate independently of the generating station and will have a design life of around 40 years. Chapter 9 [APP-091] therefore assesses flood risk for Proposed Development over the anticipated lifetime of 40 years with relevant climate change uplifts included in the assessment. It is therefore considered that there would be no implications for the assessment of flood risk should the CCGT/PCC remain operational for longer than the indicative 25 years. 																											
WE.1.20	Applicants	<p>Paragraph 9.4.128 [APP-091] states that the EA's 'Areas Susceptible to Groundwater Flooding' map indicates that more than 75% of both Council areas is at risk of groundwater emergence.</p> <ol style="list-style-type: none"> How is it concluded in paragraph 9.4.129 of APP-091 that only the area north of the Tees is susceptible? Has climate change been accounted for when calculating future groundwater levels? What implications does groundwater flooding have for the FRA? 	<ol style="list-style-type: none"> The sentence in paragraph 9.4.130 should state that, "the risk of flooding from groundwater sources is considered to be a medium risk for those parts of the development to the north <u>and south</u> of the Tees". This does change not affect the remainder of the assessment. At a meeting on the 19th of April 2022 to discuss its Relevant Representation [RR-024], the Environment Agency confirmed that the risk of groundwater flooding was principally associated with artesian pressures in the Magnesian Limestone encountered in brine wells in the Seal Sands area, north of the Tees, being transmitted to the ground surface. Development north of the Tees will involve construction of an HDD at 																											

ExQ1	Question to:	Question:	Response
		iv) What implications do groundwater flooding or rising groundwater levels (if any) have for re-mobilisation of contamination beneath the site and mitigation of this?	<p>Navigator Terminals together with installation of pipelines on existing or extended pipe-racking. The HDD will pass through low permeability bedrock and not penetrate the Magnesian Limestone or intercept existing brine wells. Extensions of existing pipe-racking, if required, may involve construction of shallow footings which will also not be affected by artesian groundwater at depth.</p> <p>ii) Climate change has not been specifically accounted for when calculating future groundwater levels. There is no published climate change allowance for assessing climate change effects on groundwater levels.</p> <p>iii) The PCC will not be impacted by groundwater flooding as it is on an elevated platform. Connection corridors consist of buried or above ground pipelines on existing racking and so groundwater flooding should not impact the Proposed Development.</p> <p>iv) The remediation strategy considers potential mobilisation of contaminants and risks to groundwater and surface water and the ground specification being agreed with STDC for the Site prior to construction will remove or remediate identified hotspots of contamination within the PCC development site so as to mitigate risks to groundwater quality irrespective of groundwater flooding taking place. Further details are to be provided in the Hydrogeological Impact Assessment/Controlled Waters Assessment requested by the Environment Agency in its Relevant Representation [RR-024] and to be submitted at Deadline 4.</p>
WE.1.21	Applicants EA LLFAs	<p>Paragraph 9.9.31 of the Flood Risk Assessment [APP-250] concludes that the access to and from the PCC Site would be flooded during higher return period events. It is proposed that members of staff either remain within the PCC Site area or are evacuated via the northern gate onto South Gare Road.</p> <p>i) Are the EA and LLFAs satisfied with this solution?</p> <p>ii) How is access to the north secured?</p> <p>iii) Does this route remain above the worst-case cumulative flood levels?</p>	<p>i) Please refer to WE1.14 above regarding the Statement of Common Ground submitted at Deadline 1 with the Environment Agency in relation to agreement on flood risk matters.</p> <p>ii) The emergency access to South Gare Road will be via an emergency egress gate on the northern boundary fence and then to Warrenby and Redcar via Tod Point Road.</p> <p>iii) The PCC site and South Gare Road are entirely within Flood Zone 1 and are therefore considered at low risk of flooding. The emergency gate and road therefore provide a dry route away from the site falling within Flood Zone 1 therefore is regarded as being of very low risk. Very low risk means that each year this area has a chance of flooding of less than 0.1%</p>
WE.1.22	Applicants	<p>Paragraph 4.3.32 of the Chapter 4 of the ES [AS-019] describes the options for wastewater treatment.</p> <p>When will a decision be taken about which option to adopt?</p>	<p>The Applicants are in discussion with NWL on the option for wastewater treatment at the Bran Sands WwTP. A decision on this option is expected to be made prior to the end of Examination. The Applicants are continuing to work with Natural England and the Environment Agency on this option as it is linked to the consideration of compliance with the Natural England position on nutrient neutrality.</p>

ExQ1	Question to:	Question:	Response
WE.1.23	Applicants	<p>The dDCO [AS-135] Part 4, 17(1) sets out supplemental powers for the use of any watercourse, public sewer or drain for the drainage of water in connection with the carrying out or maintenance of the Proposed Development.</p> <p>Could the Applicants explain how the potential effects to surface water quality arising from these powers have been assessed within ES Chapter 9 [APP-091]?</p>	<p>A specific assessment related to possible discharge of water during the carrying out or maintenance of the Proposed Development has not been undertaken, given that the details of any such activities are not known at this stage. With regards to the water environment it is expected that such activities would include maintenance of the drainage network, SUDS features and infrastructure. However, the Applicants would highlight various protections within the Draft DCO [AS-135], including the following.</p> <p>Article 17(3) requires the consent of the owner of the relevant watercourse, sewer or drain and who may impose conditions on the consent, and 17(4) requires the approval of the stated details for any openings into a public sewer or drain.</p> <p>Article 17(5) specifically requires the water discharged to be as free as reasonably practicable from gravel, soil, other solid matter, oil or matter in suspension.</p> <p>Article 17(6) provides that for any required discharge activity an appropriate environmental permit would be required, the application for which would require demonstration of appropriate working practices and mitigation measures in order to prevent adverse impacts on the affected watercourses.</p> <p>Requirement 11 secures the approval of the relevant planning authority for details of temporary and permanent surface and foul water drainage systems. Given the above provisions and controls within the Draft Order, no significant effects are likely to arise from the undertaker relying on the powers in Article 17.</p>
WE.1.24	Applicants	<p>Table 9-3 [APP-091] does not explain how the magnitude of impact for hydromorphology is ascertained and the guidance used for the assessment (ie DMRB LA 113) does not address this matter.</p> <p>Could the Applicants explain the criteria used in the assessment for hydromorphology and how they have been derived.</p>	<p>The magnitude of impact for hydromorphology is based on the general criteria given in Table 9-3 [APP-091] and professional judgement as to how this is applied. For example, a 'moderate' magnitude impact would '<i>result in effect on integrity of attribute</i> [hydromorphological quality / features], <i>or loss of part of attribute</i>'. There is no more specific magnitude of impact definitions that have been published for hydromorphology that the Applicants are aware of, and assessment relies on the judgment of a professional hydromorphologist to apply these criteria.</p>
WE.1.25	Applicants	<p>Can the Applicants clarify the reference at paragraph 9.4.4 of Appendix 9C [APP-254] to potential indirect effects to more distant receptors through increased demand on potable water supplies and foul water treatment?</p> <p>As part of this, please confirm whether there are any additional receptors of relevance and illustrate their location on a plan as relevant.</p>	<p>Paragraph 9.4.4 of Appendix 9C [APP-254] is acknowledging that there can be potential effects to the water environment relating to third parties which are not within the direct control of the Applicants. For instance, where foul water is discharged from a WwTW to a watercourse, the quality of that water is subject to treatment applied by the water company in line with their environmental permit.</p>

ExQ1	Question to:	Question:	Response
			<p>Similarly, water supplied via a third party is again outside the Applicants' control, and there could be indirect impacts on the waterbodies providing that source water. However, the water industry is heavily regulated and significant effects would not be expected to occur given this regulation, and in addition the Applicants have no control over or knowledge of where water would be sourced from (and which is likely to vary over time).</p> <p>Given that water is to be supplied through an agreement with NWL and that foul water is proposed to be discharged to Marske-by-the-Sea WwTW, there are no additional receptors of relevance that have not already been assessed within the ES [APP-091].</p>
WE.1.26	Applicants NWL	<p>Can the Applicants and NWL provide an update on the status of the agreement for treatment of foul water arising from the construction and operation of the Proposed Development?</p> <p>Can NWL comment on the capacity of the consent limits for additional foul water at Marske-by-the-Sea?</p>	<p>The Applicants are working with the South Tees Development Corporation (STDC) and Teesworks who will provide services relating to the handling of domestic sewage through the use and (where required) upgrade of existing assets on the site. NWL and the Applicants have discussed the capacity of Marske-by-the-Sea WwTW being sufficient to treat the population equivalent expected from the operational Proposed Development based on the relatively low operational workforce relative to that of the former steelworks.</p> <p>Should a foul sewer connection not be available, the Applicants would seek to install an appropriate package treatment plant for operational requirements. Additional traffic movements associated with this would be negligible and would have no impact on the Transportation Assessment.</p>
WE.1.27	Applicants	<p>Could the Applicants explain why data in respect of past pollution incidents has only been obtained for a 250m radius from the Proposed Development, given that the study area for the assessment in ES Chapter 9 [APP-091] has been set at 1km?</p>	<p>The Envirocheck Report was originally ordered based on an earlier iteration of the site boundary covering a much wider area than the proposed Order Limits. The area covered by the search (including the 250 m search radius) is shown in purple on Appendix WE.1.27 (in Document Ref 9.8) together with the current site boundary. As shown on Appendix WE.1.27(in Document Ref 9.8), as a result of subsequent narrowing of the site boundary, the data search area for the Envirocheck is over 1 km from the current boundary over most of the site. The exception to this is some land at Haverton Hill and Billingham, in Saltholme on the northern side of the CO2 Gathering Network Corridor and a small area to the north of Navigator Terminals, where the data search area is around 250 m. For those areas, a 250m search radius is considered suitable for providing information to support the baseline development. Notwithstanding this, Category 1 and 2 pollution incidents (but not Category 3) are now available for England on the UK Government data website and for confirmation purposes these will be reviewed for the 1km study area for land at Billingham, Saltholme and north of Navigator Terminals. This information will be provided at Deadline 4. However, this information while providing additional background context is not considered likely to significantly change the identification of the importance of the waterbodies in the study area or the assessment of significance of effects as reported in the ES.</p>

ExQ1	Question to:	Question:	Response
WE.1.28	Applicants	<p>Can the Applicants explain why it considers there is sufficient information to conclude that effects to surface water quality from mobilisation of contamination in fine sediment during construction are neutral to slight adverse (not significant) noting the requirement for further ground investigation and quantitative risk assessment in paragraph 9.6.3 of ES Chapter 9 [APP-091].</p> <p>Please could the Applicant explain any additional measures that would be in place to manage potential impacts of fine sediment to water quality in the Tees Bay arising from the construction of the new discharge outfall (if required).</p> <p>Can the Applicants comment on the EA's [RR-024] request for a hazardous substance assessment and updates to the water quality model and ES Appendix 14E [APP-321].</p>	<p>Impacts relating to mobilisation of contaminants are outlined in Chapter 10 Geology, Hydrogeology and Contaminated Land [APP-092]. However, the conclusion in Chapter 9 of the ES [APP-091] that effects to surface water quality from mobilisation of fine sediment during construction are neutral to slight adverse (not significant) is based on the range of surface water control mitigation measures that will be implemented. These would be outlined within a Water Management Plan accompanying the CEMP. The contents of the CEMP would be approved by the relevant planning authority (pursuant to Requirement 16 in the Draft Order [AS-135]). Given that the CEMP would be based on best practice as outlined in Section 9.5 of the ES Chapter 9 [APP-091] and approved by regulators, then there is confidence that there would be no residual significant effects. With regard to contaminants, the PCC Site will be remediated to an agreed specification and this is secured by Requirement 13. Based on this remediation and the best practice industry standard mitigation measures, no significant effects would be anticipated.</p> <p>With regard to potential impacts of fine sediment to water quality in the Tees Bay arising from the construction of the new discharge outfall (if required), no additional mitigation measures have been proposed. It will not be possible to eliminate mobilisation of fine sediment during these works, but any mobilised sediment would quickly dissipate in this tidal setting and because the seabed is expected to consist mainly of sand, any sediment will settle readily. All construction works would be undertaken in accordance with best practice mitigation measures already set out in the ES [APP-091] and CEMP. The Environment Agency and other stakeholders will be consulted on the final CEMP during detailed design post DCO consent.</p> <p>Chapter 10 Geology, Hydrogeology and Contaminated Land of the ES [APP-092] indicates in paragraph 10.5.3 that there will be a requirement for adherence to a Hazardous Materials Management Plan (including asbestos), to be produced prior to construction commencing.</p>
WE.1.29	Applicants	<p>Can the Applicants explain why it considers there is sufficient clarity in the available information about operational effluent discharges to conclude a slight adverse (not significant) effect to water quality in Tees Bay during operation, noting the potential requirement for further assessment as Page 19 of 43 described in ES Chapter 9, paragraph 9.6.55 [APP-091]?</p>	<p>The conclusion of slight adverse (not significant) effects to water quality in Tees Bay during operation is based on the fact that i) the thermal plume modelling indicates only very localised impact which would not affect WFD temperature status of the waterbody or disturb migratory routes for fish; ii) it will need to be demonstrated that the discharged effluent from the Proposed Development meets the required standards for a range of water quality indicators in order to obtain a Water Activity Permit or Environmental Permit (i.e. a consent from the Environment Agency to discharge). This permitting process will require an H1 screening assessment to be undertaken together with more detailed assessment, if required. If the required effluent quality standards cannot be achieved, then the discharge would not be permitted. This therefore provides</p>

ExQ1	Question to:	Question:	Response
			<p>confidence that there would be no significant effects despite full details of the effluent quality not having been available at the time of undertaking the assessment for the ES [APP-091].</p> <p>Despite the conclusion of no significant effects, the Applicants are undertaking further water quality modelling of the effluent dispersal from the outfall in Tees Bay. This is in response to relevant representations from the Environment Agency and Natural England. The modelling report will be submitted at Deadline 4 and the significance assessment in Chapter 9 of the ES [APP-091] updated as appropriate.</p>
WE.1.30	Applicants	<p>Changes to WFD status form part of the criteria for establishing magnitude of impact as described in Table 9-3. The EA [RR-024] has identified areas where it considers that documents of relevance to the WFD assessment need to be updated, following which there could also be implications for the conclusions on significant effects to surface water quality during construction and operation in ES Volume 1, Chapter 9. NE [RR-026] has also requested additional modelling. Please undertake the following updates and submit revised documents to the Examination:</p> <ul style="list-style-type: none"> i) an update to ES Appendix 14E [APP-321] to include an assessment of the impacts to WFD water bodies from effluent ii) an update to ES Appendix 9C [APP-254] in respect of impacts to groundwater following completion of the qualitative risk assessment and remediation strategy iii) an update to ES Appendix 24C Statement of Combined Effects [AS-032] that includes a water quality model to assess the combined effects of effluent discharge and atmospheric deposition to the Tees Bay Coastal WFD waterbody iv) modelling of the effects on the Tees Bay Coastal WFD waterbody from effluent waters created during operation of the generating station with post-combustion carbon capture discharge of nutrients and pollutants and confirmation of the implications for the nutrient status of the waterbody v) an update to the description of effect significance in ES Chapter 9 [APP-091] and ES Chapter 24 [APP-106] as necessary. 	<ul style="list-style-type: none"> i) ES Appendix 14E [APP-321] has assessed the thermal impacts to Tees Bay associated with effluent discharge. Additional modelling of the process effluent in terms of physico-chemical impact is being undertaken and will be submitted to the examination at Deadline 4. The Applicants will include commentary of potential impacts on WFD objectives for Tees Bay Coastal waterbody and Tees transitional waterbody. ii) The WFD assessment (ES Appendix 9C [APP-254]) will be reviewed following completion of the qualitative risk assessment and remediation strategy following completion of all ground investigation (GI) works. Updates will be made if necessary on the basis of the findings and submitted to the examination at Deadline 4. iii) ES Appendix 24C Statement of Combined Effects [AS-032] will be reviewed and updated as necessary following completion of the water quality modelling related to process effluent discharge to Tees Bay and submitted at Deadline 4. iv) Additional modelling of the process effluent is being undertaken and will be submitted to the examination at Deadline 4. The impact on nutrient status of the waterbody is also being assessed and we will report the findings to the examination at Deadline 4. v) Following completion of the process effluent discharge modelling, the significance of effects presented in ES Chapter 9 [APP-091] and ES Chapter 24 [APP-106] will be reviewed and updated if required.
WE.1.31	Applicants	<p>Paragraph 9.3.28 of ES Chapter 9 [APP-091] states that the worst-case scenario assumes no change or refurbishment to the existing outfall, but paragraph 9.5.13 states that, although the condition of the existing outfall is unconfirmed, any works would be less than the installation of a new outfall. Could the Applicants explain this apparent discrepancy and the information on which these assumptions are based?</p>	<p>The assessment of morphological impact is based on no refurbishment of the outfall, but possible minor superficial repair works the extent of which would not constitute a larger-scale refurbishment. The latter would not involve disturbance of the sea bed or have any morphological impact. The outfall is scheduled to be surveyed in June 2022, but notwithstanding this, the nature and scale of any anticipated works to the existing outfall, will be less than those used in the assessment of the building of the new outfall, for which no significant effects during construction have been identified.</p>

ExQ1	Question to:	Question:	Response
WE.1.32	Applicants	Can the Applicants confirm how the design parameters for the proposed new outfall and associated scour protection (of no more than 100m ²) used in the assessment of the water environment in ES Chapter 9 [APP-091] would be secured through the draft DCO [AS-004]?	The Applicants have inserted a new condition 27 in the draft DMLs in Schedule 10 and Schedule 11 specifying that Work No. 5B (new water discharge pipeline to the Tees Bay) must be consistent with the maximum parameters in paragraph 9.3.28 of ES Chapter 9 [APP-091].
WE.1.33	Applicants	Could the Applicants explain the proposed approach to mitigation of the potential short term, temporary impact to Redcar Coatham Bathing Water as identified at paragraph 9.6.13 of ES Chapter 9 [APP-091] and how this would be secured in the Development Consent Order. For example, how would the turbidity be identified, what would be the trigger point for no bathing, how would this be agreed with the Environment Agency and communicated to potential bathers?	Redcar Coatham is located at the southern end of Coatham Sands, with the designated sampling point approximately 1.2km east of the DCO Order limits. A localised and temporary increase in turbidity would be expected associated with works to the discharge point from the Proposed Development in Tees Bay, although any disturbance of the bed would be minimised as far as reasonably practicable to reduce this effect. Furthermore, given the large capacity for dispersion and dilution in Tees Bay, this would not be expected to be a significant or prolonged increase in turbidity. Turbidity would be monitored during construction, and monitoring requirements will be secured in the final CEMP. The Applicant will continue to engage with the Environment Agency through the SoCG process to determine any further controls or updates to the Framework CEMP that may be required.
WE.1.34	Applicants	Could the Applicants clarify whether measures outlined in section 9.5 of ES Chapter 9 [APP-091] are considered sufficient to mitigate the potential localised temporary moderate adverse effect to Tees Bay and Belasis Beck arising from accidental chemical spillage during construction to slight adverse (not significant) residual effect, or whether additional mitigation is required (and, if so, what it would comprise)?	The measures outlined in section 9.5 of Chapter 9 [APP-091] are a summary of the more detailed measures for managing spillage risk presented in Table 5A-3 Framework CEMP of the ES. Additional mitigation was also included in Section 9.7 of Chapter 9 [APP-091] in the form of a water quality monitoring programme to be set out within the Water Management Plan, secured within the CEMP. This monitoring would enable effective identification of any pollution event and would enable remedial action to be undertaken if necessary. Based on the measures within the Framework CEMP, and the additional monitoring which would be outlined in the WMP, the significant effect identified for Tees Bay and Belasis Beck relating to accidental chemical spillages would be reduced to non-significant.