Net Zero Teesside Project

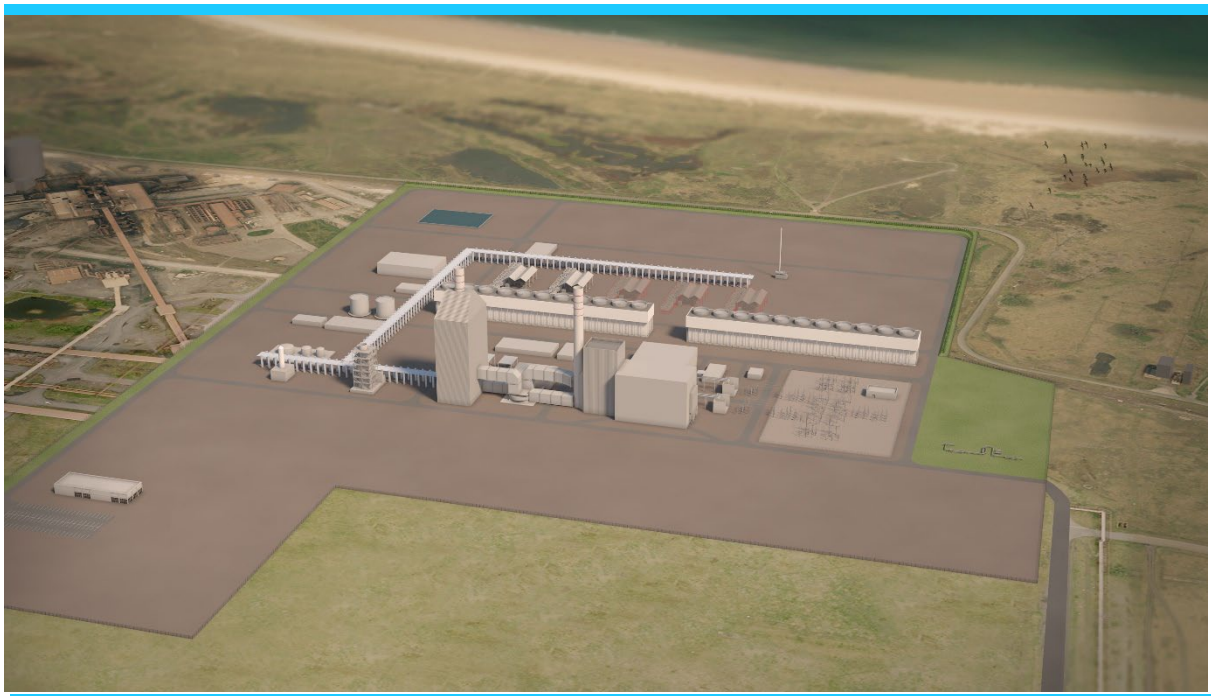
Planning Inspectorate Reference: EN010103

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: 8.4 – Statement of Common Ground with the Marine Management Organisation

The Planning Act 2008



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

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GLOSSARY

Abbreviation	Description
AD Guidance	Guidance on associated development applications for major infrastructure projects' (April 2013)
AGI	Above Ground Installation
Applicants	Together NZT Power and NZNS Storage
Application (or DCO Application)	The application for a DCO made to the SoS under Section 37 of PA 2008 in respect of the Proposed Development, required pursuant to Section 31 of the PA 2008 because the Proposed Development is a NSIP under Section 14(1)(a) and Section 15 of PA 2008 by virtue of being an onshore generating station in England or Wales of electrical capacity of more than 50 megawatts, and which does not generate electricity from wind, and by the Section 35 Direction
Associated Development	Defined under S.115(2) of PA 2008 as development which is associated with the principal development and that has a direct relationship with it. Associated development should either support the construction or operation of the principal development or help address its impacts. It should not be an aim in itself but should be subordinate to the principal development
BEIS	Department for Business, Energy, and Industrial Strategy
CCP	Carbon capture plant
CCGT	Combined cycle gas turbine
CCUS	Carbon capture usage and storage

Abbreviation	Description
CEMP	Construction and Environmental Management Plan
DCO	A Development Consent Order made by the relevant Secretary of State pursuant to the PA 2008 to authorise a NSIP. A DCO can incorporate or remove the need for a range of consents which would otherwise be required for a development. A DCO can also include powers of compulsory acquisition
DML	Deemed Marine Licence
EIA	Environmental Impact Assessment - the assessment of the likely significant environmental effects of a development, undertaken in accordance with the EIA Regulations
EIA Regulations	Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended) setting out how the environmental assessment of NSIPs must be carried out and the procedures that must be followed
Electricity Generating Station (or CCGT / Low Carbon Electricity Generating Station)	A new electricity generating station fuelled by natural gas and with a gross output capacity of up to 860 megawatts
EPC Contractor	Engineering, Procurement and Construction contractor who will undertake the detailed engineering design, procurement and deliver the construction of the Proposed Development
ES	Environmental Statement, documenting the findings of the EIA
ExA	Examining Authority
Land Plans	The plans showing the land that is required for the Proposed Development, and the land over which interests or rights in land are sought as part of the Order
Limits of Deviation	The limits shown on the Works Plans within which the Proposed Development may be built
MMO	Marine Management Organisation (referred to within the text as the MMO)
NSIP	Nationally Significant Infrastructure Project that must be authorised by the making of a DCO under PA 2008
NZT Power	Net Zero Teesside Power Limited
NZNS Storage	Net Zero North Sea Storage Limited
NZT	Net Zero Teesside - the name of the Proposed Development.

Abbreviation	Description
Open Space Land	The parts of the Order Land which are considered to be open space for the purposes of section 132 of the PA 2008 and as shown hatched blue on the Land Plans
Order	The Net Zero Teesside Order, being the DCO that would be made by the Secretary of State authorising the Proposed Development, a draft of which has been submitted as part of the Application
Order Land	The land which is required for, or is required to facilitate, or is incidental to, or is affected by, the Proposed Development and over which powers of compulsory acquisition are sought in the Order
Order Limits	The limits of the land to which the Application relates and shown on the Land Plans and Works Plans within which the Proposed Development must be carried out and which is required for its construction and operation
PA 2008	The Planning Act 2008 which is the legislation in relation to applications for NSIPs, including preapplication consultation and publicity, the examination of applications and decision making by the Secretary of State
PCC Site	Power, Capture and Compression Site - the part of the Site that will accommodate the Electricity Generating Station, along with the CCP and high-pressure compressor station
Project A	The elements of the Proposed Development for which a Deemed Marine Licence would be granted for NZT Power, which would include licensable marine activities associated with Work No. 5A (repair and upgrade of the existing water discharge infrastructure to the Tees Bay), Work No. 5B (new water discharge pipeline to the Tees Bay) and any localised dredging required to support the specific components above.
Project B	The elements of the Proposed Development for which a Deemed Marine Licence would be granted for NZNS Storage, which would include licensable marine activities associated with Work No. 5A (repair and upgrade of the existing water discharge infrastructure to the Tees Bay) Work No. 5B (new water discharge pipeline to the Tees Bay); Work No. 6 (CO_2 gathering network where

Abbreviation	Description
	it crosses the marine area) and Work No. 8 (high pressure CO2 export pipeline corridor down to Mean Low Water Springs (MLWS)).
Proposed Development (or Project)	The development to which the Application relates and which requires a DCO, and as set out in Schedule 1 to the Order
Site (or Proposed Development Site)	The land corresponding to the Order Limits which is required for the construction and operation of the Proposed Development
SoCG	Statement of Common Ground
Requirements	The 'requirements' at Schedule 2 to the Order that, amongst other matters, are intended to control the final details of the Proposed Development as to be constructed and to control its operation, amongst other matters to ensure that it accords with the EIA and does not result in unacceptable impacts
Section 35 Direction	The direction under section 35 of the PA 2008 dated 17 January 2020 from the SoS that the Specified Elements together with any matters/development associated with them should be treated as development for which development consent under the PA 2008 is required
SoS	The Secretary of State - the decision maker for DCO applications and head of Government department. In this case the SoS for the Department for Business, Energy, and Industrial Strategy
Specified Elements	Those elements of the Proposed Development that, by virtue of the Section 35 Direction, are to be treated as development for which development consent under the PA 2008 is required being: the CO2 gathering network, including the CO2 pipeline connections from the proposed CCGT Electricity Generating Station and industrial facilities on Teesside to transport the captured CO2 (including the connections under the tidal River Tees), a high-pressure carbon dioxide compressor station to receive captured CO2 from the CO2 gathering network, and a

Abbreviation	Description
	section of the CO2 transport pipeline for the onward transport of the captured CO2 to a suitable offshore geological storage site
STDC	South Tees Development Corporation
Work No.	Work number, a component of the Proposed Development, described at Schedule 1 to the Order
Works Plans	Plans showing the numbered works referred to at Schedule 1 to the Order and which together make up the Proposed Development

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TABLES

APPENDICES

1.0 INTRODUCTION

1.1 Overview

1.1.1 This Statement of Common Ground (Document Ref. 8.22) has been prepared by Net Zero Teesside Power Limited and Net Zero North Sea Storage Limited (the 'Applicants') in conjunction with Marine Management Organisation (herein referred to as "the MMO") in respect of the Net Zero Teesside Project (the 'Proposed Development').

1.1.2 The SoCG relates to the application (the 'Application') that has been submitted to the Secretary of State ('SoS') for Business, Energy and Industrial Strategy, under Section 37 of 'The Planning Act 2008' (the 'PA 2008'), seeking development consent for the Proposed Development. The Application was accepted for Examination by the SoS on 16th August 2021.

1.1.3 In addition to the seeking development consent, as the Proposed Development involves works below Mean High Water Springs (MHWS), the Applicants are also seeking a deemed marine licence (DML) under Section 65 of the Marine and Coastal Access Act 2009 (MCAA 2009) from the MMO. If the DCO Application is successful, then a DML would be granted as part of the resulting DCO.

1.1.4 The SoCG sets out the matters of agreement between the Applicants and the MMO and also explains those matters which, at the time of writing, remain unresolved between the parties.

1.1.5 The agreements to date have been reached through consultation and continuing discussions between the parties, including interface meetings and regular face to face discussions.

1.2 Description of Proposed Development

1.2.1 The Proposed Development will work by capturing CO_2 from a new the gas-fired power station in addition to a cluster of local industries on Teesside and transporting it via a CO_2 transport pipeline to the Endurance saline aquifer under the North Sea. The Proposed Development will initially capture and transport up to 4Mt of CO_2 per annum, although the CO_2 transport pipeline has the capacity to accommodate up to 10Mt of CO_2 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** – natural gas supply connections and Above Ground Installations ('AGIs') (the **'Gas Connection'**);
- **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 CO_2 gathering network (including connections under the tidal River Tees) to collect and transport the captured CO_2 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 **'CO_2 Gathering Network Corridor'**);
- **Work No. 7** – a high-pressure CO_2 compressor station to receive and compress the captured CO_2 from the Low Carbon Electricity Generating Station and the CO_2 Gathering Network before it is transported offshore (the **'HP Compressor Station'**);
- **Work No. 8** – a dense phase CO_2 export pipeline for the onward transport of the captured and compressed CO_2 to the Endurance saline aquifer under the North Sea (the **'CO_2 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 ('CCP') and the CO_2 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 CO_2 export pipeline will also start in this location before heading offshore. The Electricity Generating Station connections and the CO_2 gathering network will require corridors of land within both Redcar and Stockton-on-Tees, including crossings beneath the River Tees.

1.3 The Deemed Marine Licence

1.3.1 In the draft DCO, the DML has been split in respect of the power and storage elements. This would involve two separate DMLs being granted, one in favour of NZT Power for 'Project A' (Schedule 10 of the Order) and NZNS Storage for 'Project B' (Schedule 11 of the Order).

1.3.2 Schedule 10 of the DCO sets out the marine licence referred to in Article 37, which would be deemed to be granted to NZT Power for Project A, comprising licensable marine activities associated with Work No. 5A (repair and upgrade of the existing water discharge infrastructure to the Tees Bay), Work No. 5B (new water discharge pipeline to the Tees Bay) and any localised dredging required to support the specific components above.

1.3.3 Schedule 11 of the DCO sets out the marine licence referred to in Article 37, which would be deemed to be granted to NZNS Storage for Project B, comprising licensable marine activities associated with: Work No. 5A (repair and upgrade of the existing water discharge infrastructure to the Tees Bay) Work No. 5B (new water discharge pipeline to the Tees Bay); Work No. 6 (CO2 gathering network where it crosses the

marine area) and Work No. 8 (high pressure CO2 export pipeline corridor down to Mean Low Water Springs (MLWS)).

1.3.4 Should consent be granted for the Proposed Development, the MMO will be responsible for monitoring compliance and enforcement of the DML conditions.

1.4 The Role of the MMO

1.4.1 The MMO is an executive non-departmental public body sponsored by the Department for Environment, Food and Rural Affairs (Defra) whose purpose is to protect and enhance the UK marine environment and support economic growth by enabling sustainable marine development. The MMO is an interested party for the examination of Development Consent Order applications for Nationally Significant Infrastructure Projects in the marine area.

1.4.2 In more general terms the MMO is responsible for;

- managing and monitoring fishing fleet sizes and quotas for catches;
- ensuring compliance with fisheries regulations, such as fishing vessel licences, time at sea and quotas for fish and seafood;
- managing funding programmes for fisheries activities;
- planning and licensing for marine construction, deposits and dredging that may have an environmental, economic or social impact;
- making marine nature conservation byelaws;
- dealing with marine pollution emergencies, including oil spills;
- helping to prevent illegal, unregulated and unreported fishing worldwide; and
- producing marine plans to include all marine activities, including those we don't directly regulate.

1.4.3 Annex B to Planning Inspectorate Advice Note 11: Working with Public Bodies in the infrastructure planning process (PINS, 2013) provides a summary of the MMO's role as a consenting body alongside the PA 2008; an extract from this guidance is included below:

> […] *The 2008 Act enables DCOs for projects which affect the marine environment to include provisions which deem marine licences* […] *Where developers choose to have a marine licence deemed by a DCO, it is envisaged that developers will seek to agree the draft marine licence with the MMO prior to submitting their DCO application to the Planning Inspectorate. The conditions included in a marine licence should be enforceable, clear and sufficiently detailed to allow for monitoring and enforcement. The MMO will seek to ensure wherever possible that any deemed licence is generally consistent with those issued independently by the MMO. The MMO is responsible for enforcing marine licences regardless of whether these are 'deemed' by DCOs or are consented independently by the MMO. The MMO may vary, suspend or revoke a marine licence if it appears that any of its provisions have been breached. The circumstances in which the MMO may take*

enforcement action are set out under s.72 of the MCAA. The MMO is also responsible for ensuring the discharge of conditions under independently consented and deemed marine licences […].

1.4.4 The MMO is not a competent authority with regards to Appropriate Assessment within the DCO process, but remains as Regulator of its outcomes via the implementation of any Deemed Marine Licence arising from the DCO application (should this be granted).

1.5 The Purpose and Structure of this Document

1.5.1 The purpose of this document is to summarise the agreements reached between the parties on matters relevant to the Examination of the Application and to assist the Examining Authority ('ExA'). It also explains the matters which remain unresolved at the time of writing, but which both parties are working positively toward resolving. As such, it is expected that further iterations of the SoCG will be submitted to the ExA throughout the Examination and prior to the making of any Development Consent Order ('DCO') for the Proposed Development.

1.5.2 The SoCG has been prepared with regard to the guidance in 'Planning Act 2008: examination of application for development consent' (Department for Communities and Local Government, March 2015).

1.5.3 The SoCG is structured as follows:

- Section 2 – sets out consultation and related discussions held between the Applicants and the MMO.
- Section 3 – sets out the matters discussed and agreed to date.
- Section 4 – sets out matters to be agreed and the proposed way forward.

2.0 SUMMARY OF CONSULTATION AND DISCUSSIONS

2.1 Overview

2.1.1 This section provides a summary of how the Applicants have consulted the MMO on the Proposed Development and also sets out the discussions that have taken place between the parties. This is summarised in **Table 2.1**.

Table 2.1: Summary of Consultation

Date	MMO Response
February 2019 (Formal consultation on a Scoping Report prepared by the applicants)	The MMO were consulted on the Scoping Report prepared by the Applicant in February 2019. Responding to this formal consultation, under response reference 'DCO/2019/00003', the MMO provided a range of technical feedback to help inform the DCO Application. This included advice in relation to marine ecology, fisheries, operational effects from cooling water and the use of a DML.
September 2019 (Technical engagement meeting)	A technical engagement meeting was held with the MMO where a comprehensive introduction to the Proposed Development was provided. In addition to a discussion around the MMO's scoping response, an update on the Proposed Development was provided, the scope, approach and extent of planned intertidal and subtidal sampling was presented to and agreed with the MMO. Also discussed was marine stakeholder engagement and the marine consenting process.
February 2020 (Technical engagement meeting)	A technical engagement meeting was held with the MMO where a range of Proposed Development refinements, following scoping, were presented. The approach to the characterisation of baseline sedimentology was presented to and agreed with the MMO. During the meeting, the Applicants confirmed the intention to pursue a DML embedded within the body of the DCO. The approach to thermal modelling of cooling water discharges to Tees Bay was discussed with the MMO and it was also agreed that this would be led by the Environment Agency (notwithstanding, the MMO were provided with a signposting to this forthcoming report in the PEI Report). The approach to Habitat Regulations Assessment (HRA) was discussed with the MMO and it was subsequently agreed that this topic would be led by Natural England.
May 2020 (Formal consultation with the MMO fisheries and enforcement team)	A formal consultation was made with the local MMO fisheries and enforcement team based in North Shields. A range of different data sources were presented to the MMO fisheries and enforcement team for review and feedback, as encouraged by the MMO licensing team in February 2020. A response from the local MMO team was requested on two further occasions directly between May 2020 and July 2020;

	no response was received. The lack of response and suggested actions to refine the baseline to an appropriate level for the EIA was discussed at a later date with the MMO, as noted below.
July 2020 (Stage 2 consultation – Preliminary Environmental Information (PEI) Report)	The MMO were consulted in accordance with Section 42 of the PA 2008 and provided with a copy of the PEI Report prepared by the applicants. Responding to this formal consultation, under response reference 'DCO/2019/00003', the MMO provided a range of technical feedback to help inform the finalisation of the EIA and the overall DCO Application. Detailed comments were provided on the PEI Report and this included suggested refinements to assessments undertaken for fisheries and marine ecology.
August 2020 (Technical engagement meeting)	A technical engagement meeting was held with the MMO where the feedback provided during Stage 2 consultation was reviewed. The Applicants discussed and agreed the planned next-steps with the MMO.
December 2020 (Technical engagement meeting, including presentation of the replacement treated water outfall and associated environmental considerations)	A technical engagement meeting was held with the MMO where the potential replacement outfall option was presented and discussed in detail. The Applicants presented the rationale for this flexibility and the anticipated environmental effects associated with the option. The headline differences between the replacement outfall and the existing outfall were discussed in terms of EIA. The characterisation of the Tees Bay was discussed in terms of benthic subtidal sampling.
December 2020 / January 2021 (Formal consultation with the MMO on sampling)	A technical note was shared with the MMO summarising the extent of sampling undertaken to inform the EIA. Consultation with MMO's specialist advisers at the Centre for Fisheries, Environment and Aquaculture Science (Cefas) was undertaken.
February 2021 (Technical engagement meeting)	A meeting was held with the MMO and their advisers at Cefas to clarify the potential outfall option and to provide a more detailed account of sampling coverage and the presence of (two) key biotopes in the Tees Bay. Additional top-up sampling undertaken by marine specialists in winter 2020/21 was also discussed; preliminary outputs were presented. The MMO, as informed by their technical advisers within Cefas, subsequently confirmed agreement to the design refinement in writing (see Appendix 1).
March 2021 (Formal consultation with the MMO on the scope and content of the draft DMLs)	Informed by previous technical engagement, the MMO was provided with a draft DML for review and feedback.

June 2021 (Further consultation on the DMLs for the Proposed Development inclusive of a summary of responses to feedback from the MMO)	Following the original MMO feedback received in March 2021, the Applicants provided updated DMLs for MMO review.
December 2021 (Publication of MMO's Relevant Representation at start of pre-examination phase)	Following submission of the DCO Application in 19th July 2021 and being accepted for examination on 16th August 2021, the Relevant Representations of all Interested Parties including the MMO were published on 22nd December 2021.
February 2022	A meeting to discuss the MMO's Relevant Representation was held on 16th February 2022.
May 2022	Email correspondence regarding the content of the first draft of the SOCG.

3.0 MATTERS AGREED

3.1.1 The below **Table 3.1** contains a list of "matters agreed" along with a concise commentary of what the item refers to and how it can be agreed between the two parties.

Table 3.1: List of Matters Agreed between the Applicant and MMO

Matter Agreed	MMO Response
Consultation	A summary of pre-application consultation is contained in the Consultation Report (Application Document Ref. 5.1 [**APP-068**]) and also in Chapter 14: Marine Ecology and Nature Conservation (Document Ref. 6.2.14 [**APP-096**]). It is agreed that the consultation summary in Section 2 of this SoCG provides an accurate record of consultation with the MMO on matters to date.
Adequacy of the Environmental Statement (including adequacy of surveys, modelling and assessment) and other relevant documents associated with the DCO application	It is agreed that the MMO have been involved throughout the pre-application period to help inform the scope of the EIA. It is agreed that the methods used to inform the assessment of effects upon marine environment and associated topics of regulatory interest to the MMO are appropriate and in line with current best practice and guidance.
The scope, content and drafting of the Deemed Marine Licence	In line with the Planning Inspectorate Advice Note 11, the Applicants will apply for two Marine Licences which are 'deemed' within the body of the draft DCO. As advised by PINS, the MMO has been invited to comment on the working draft DMLs. Pre-application engagement meetings have been carried out with the MMO as summarised in Section 2 above; this has included periodic discussion on the scope of the DML. It is agreed that the MMO has been provided with an appropriate opportunity to review and provide feedback upon the initial draft DMLs. It is agreed that based on current understanding at the start of examination the suite of conditions provided within the draft DML are appropriate to the scale and nature of the Proposed Development. The MMO agree that with the approach of splitting the DMLs in respect of the power and storage elements of the project in order to confer the rights on the relevant undertakers for each and agree that this approach is based on the approach adopted on other DCO projects (including offshore wind farms) where there is more than one undertaker with separate responsibility for elements of a project with marine licensable activities.
Confirmation of a single 'lead' Defra body concerned with the operation of the Proposed	Following discussions with the MMO during the pre-application period as summarised in Section 2 above, it is agreed that the Environment Agency will act as the technical lead with respect

Development, including Cooling Water System (CWS) operation	to operational considerations for the Proposed Development (including the operation of the Cooling Water System).
Marine Ecology and Nature Conservation	Chapter 14: Marine Ecology of the ES (ES Volume I, Document Ref. 6.2.14 [**APP-096**]) includes assessments of the potential effects of the Proposed Development on marine ecology and is supported by Technical Appendices 14 A-E of the ES (ES Volume III, Document Refs 6.4.29-6.4.33 [**APP-315 to APP-321**) and accompanying Figure 14-1 (ES Volume II, Document Ref. 6.3.59 [**APP-167**]). It is agreed between the Parties that the relevant ecological (nature conservation) aspects of the Proposed Development that fall within the remit of the MMO have been adequately addressed subject to the points raised by the MMO in their Relevant Representation which are now being addressed. The Parties agree that the Proposed Development design and impact avoidance measures outlined as embedded mitigation in Chapter 14: Marine Ecology (ES Volume I, Document Ref. 6.2.14 [**APP-096**]) are appropriate based on current understanding at the start of examination and that all mitigation measures that would be necessary to ensure compliance with legislation relating to those protected species that fall within the remit of the MMO, as well as good practice measures to safeguard animal welfare, are included based on current understanding. It is further agreed that the specified control measures within the Framework Construction Environmental Management Plan (CEMP) (Appendix 5A, ES Volume III, Document Ref, 6.4.5 [**APP-246**]), including protected species surveys secured via Requirement 15 of the draft DCO (Document Ref. 2.1 [**APP-005**]), are appropriate for the control of potential effects on protected species that fall within the remit of the MMO during construction of the Proposed Development. As is standard best practice, ecological surveys will identify locations within the potential zone of influence of the Proposed Development that support conditions potentially suitable for marine mammals. It is agreed that mitigation measures are included across both of the two draft marine licences within the DCO, as required based on current understanding at the start of examination. This includes inter alia: Draft DML Condition 10 (Sediment Sampling) Draft DML Condition 11 (CEMP) Draft DML Condition 12 (Marine Method Statement) Draft DML Condition 15 (Archaeological Investigation)

	Draft DML Condition 19 (Piling) Draft DML Condition 21 (Provenance of Rock) Draft DML Condition 24 (UXO Clearance) Draft DML Condition 26 (Disposals)
Water Resources and Water Quality	Chapter 9: Surface Water, Flood Risk and Water Resources (ES Volume I, Document Ref. 6.2.9 [**APP-091**]) includes assessments of the potential effects of the Proposed Development in terms of water quality and is supported by Technical Appendices 9B and 9C A-E (ES Volume III, Document Refs 6.4.10 and 6.4.11 [**APP-253 to APP-254**]) and accompanying Figures 9-1 and 9-2 (ES Volume II, Document Refs. 6.3.22 and 6.3.24 [**APP-130 to APP-132**]). It is agreed that the assessments of effects of the Proposed Development in terms of Water Quality are appropriate subject to any changes required by the Environment Agency for the scale, nature and location of the Proposed Development and make appropriate recommendations for mitigation. It is agreed that mitigation measures are included in the draft DCO Requirements including draft DCO Requirement 11 (Surface and Foul Water Drainage) and Draft DCO Requirement 12 (Flood Risk Mitigation). It is agreed that the inclusion of these requirements in the draft DCO (Document Ref. 2.1 [**APP-005**]) are appropriate to ensure that appropriate mitigation is included in the Proposed Development and subsequently maintained throughout the lifetime of the Proposed Development. Mitigation of adverse impacts on the water environment during the construction phase will be achieved principally through embedded measures identified in the ES, notably the adoption of a CEMP and a Water Management Plan (WMP). It is agreed that draft Requirement 16 (Construction Environmental Management Plan) of the draft DCO (Document Ref. 2.1 [**APP-005**]) is appropriate for controlling the environmental effects of construction.
Characterisation of fisheries and associated assessment	Chapter 14: Marine Ecology (ES Volume I, Document Ref. 6.2.14 [**APP-096**]) includes assessments of the potential effects of the Proposed Development in terms of fisheries and is supported by Technical Appendix 14B (ES Volume III, Document Ref. 6.4.30 [**APP-316 to APP-318**]).
Habitats Regulations Assessment and Effects on Internationally and Nationally Designated Sites	It is agreed with the MMO that Natural England, as the statutory nature conservation body, will take the 'lead' role in providing comments on the evidence in the HRA, building upon the prior engagement and levels of agreement reached during the pre-application period.

Management of construction effects	It is agreed that the Framework CEMP (Document Reference 6.4.5 [**APP-246**]) includes the necessary principal controls to effectively manage environmental risks associated with the construction of the Proposed Development based on current understanding at the start of examination. It is also agreed that draft Requirement 16 (Construction Environmental Management Plan) of the draft DCO (Document Ref. 2.1 [**APP-005**]) is appropriate for controlling the environmental effects of construction.
Shipping and Navigational Risk	It is agreed that the MMO have been offered the opportunity to be involved with the preparation of a Navigational Risk Assessment (NRA) for the Proposed Development (Appendix 20B (ES Volume III, Document Ref. 6.4.45 [**APP-341 to APP-343**]). It is agreed that the scope of and approach to the NRA was presented to the MMO during pre-application engagement; this included the identification of 'lead' navigational stakeholders, including the Maritime and Coastguard Agency (MCA), PD Ports and Trinity House. Pursuant to discussions with the MMO, it is agreed that the navigational stakeholders identified above will take the 'lead' role in the agreement of the NRA, building upon the prior engagement and levels of agreement reached during the pre-application period.
Protective Provisions	It is agreed that no protective provisions are required for the MMO.
Impact on fish from trenchless technologies	It is agreed that where 'no dig' trenchless techniques will be used, that these methods remove potential impacts on fish receptors as works will be undertaken underground.
Good practice and design mitigation for piling	It is agreed that for piling works, the good practice and design mitigation measures proposed in Chapter 14 Marine Ecology and Nature Conservation [**APP-096**] are in accordance with industry best-practice and Joint Nature Conservation Commission (JNCC) guidance. The MMO note that percussive/impact piling might be necessary to drive the pile to its design depth. It is stated in the Framework Construction Environmental Management Plan [**APP-246**] that standard JNCC mitigation measures for piling shall be adopted during construction of the Proposed Development. Under this mitigation standard, the MMO are a consultee for this activity.
Fish impingement or marine organism entrainment in abstraction	It is agreed that since there is no requirement to abstract water from the River Tees as cooling water (which will instead be supplied by Northumbrian Water), there are no potential impacts resulting from fish impingement and/or entrainment of marine organisms within the Cooling Water System.
Relevant policies of the North East Marine Plan	It is agreed that in the context of the North East Marine Plan, the policies the Proposed Development has been assessed against are correct at the time of the production and consultation of the Application.

Landscape and Seascape Visual Effects	Chapter 17: Landscape and Visual Amenity Chapter [**APP-099**] includes assessments of the potential effects of the Proposed Development in terms of effects on landscape and seascape. It is agreed that the assessments of effects of the Proposed Development in terms of Landscape and Seascape are appropriate for the scale, nature and location of the Proposed Development.

4.0 MATTERS TO BE AGREED

4.1 Overview

4.1.1 This section sets out matters to be agreed between the parties and the proposed way forward. This SoCG sets out the agreements that have been reached between the Parties to date in respect of the matters relating to the Proposed Development requested by the ExA outlined in Section 1.5 of this SoCG.

4.1.2 Following the MMO's Relevant Representation dated 17th December 2021, the MMO have requested further clarification regarding the following matters:

- The MMO consider that the DML's currently lack detail, specifically in relation to the relevant Work Nos. The MMO have suggested more detail is included so that it is clear as to what each of the Work Nos. entailed. There will be further discussions between the MMO and the Applicants on the drafting of the DML.
- The MMO note that there is a lack of consistency in the licence conditions. The MMO have recommended that each condition is drafted in a similar style and have provided a suggested template.
- The MMO have suggested various other technical changes to the wording of the DML. There will be further discussions between the MMO and the Applicants on the specific wording of the DML.
- The MMO note that consent for the detonation of unexploded ordinance (UXOs) should be managed within a separate Marine Licence given it is a high risk activity. In addition, the MMO note that a Wildlife Licence may be required to protect species covered under the Wildlife and Countryside Act 1981. There will be further discussions between the MMO and the Applicants on the consenting for the detonation of UXOs.
- The MMO are concerned regarding the potential impacts to local sediment transport in the context of erosion and scour.
- The MMO have made comments in relation to a) the underwater sound impacts (noise and vibration) and the modelling approach used, b) Proposed Development design, including piling, dredging and the Tees crossing, and c) cumulative effects. These comments were discussed in a meeting with the MMO on 16th February 2022. Responses to each comment will be provided in the Responses to the Relevant Representations, which will be submitted at Deadline 1

4.1.3 The Parties are both committed to taking forward discussions on the matters above as necessary, so whilst they are not yet agreed, both Parties hope to reach agreement in the near future.

APPENDIX 1: RECORDS OF CONSULTATION AND ENGAGEMENT WITH THE MMO

February 2020 meeting minutes

August 2020 meeting minutes

December 2020 meeting minutes

February 2021 meeting minutes

February 2022 meeting minutes

5.0 APPENDIX 1: RECORDS OF CONSULTATION AND ENGAGEMENT WITH THE MMO

February 2020 meeting minutes

August 2020 meeting minutes

December 2020 meeting minutes

February 2021 meeting minutes

February 2022 meeting minutes

Meeting Minutes [DRAFT]

Meeting name Net Zero Teesside (NZT)	**Subject** Marine Management Organisation - Stakeholder Update Meeting	**Attendees** Ed Walker (EW), Senior Environmental Consultant, AECOM James Gibson (JG), Associate, Pinsent Masons LLP Sarah Errington, Case Manager, MMO Laura Calvert, Case Officer, MMO
Meeting date 13th February 2020	**Time** 13:30 to 15:30	
AECOM project number 60559231	**Additional information** MMO Case Reference: DCO/2019/00003	

Meeting Minutes

No.	Agenda Item	Notes
1.	Introductions	EW opened the meeting. EW attending on behalf of AECOM who are representing OGCI and leading the DCO/EIA consenting process; LC is the case officer for the project at the MMO; JG is an associate with Pinsent Masons LLP; SE is the case manager for the project at the MMO.
2.	Summary of the Net Zero Teesside Project Technical Introduction GIS Demo	EW provided a high-level summary of the NZT project and the supporting concept drawing (noting that as discussed before, the project is seeking consent for a three-train CCGT as opposed to the five detailed in the current concept drawing). EW provided a re-fresh of the key project details and CCUS technology to be employed at Teesside. EW provided a demonstration of the project GIS to introduce and explain the key features of the project: • CO2 gathering network which would seek to connect with a range of industrial / process plants etc. around Teesside to gather CO2; the location of the confirmed River Tees crossing is to be confirmed but an indicative / likely crossing point was provided • Water connection corridor (intake) which would abstract water from the River Tees for cooling water and other site purposes (Inc. to support a possible hybrid cooling approach) • Water connection corridor (discharge) which would support the discharge of treated effluent back into the North Sea at the Tees Bay • Natural gas connection corridor which would provide gas connectivity for the CCGT • Electricity connection corridor which would provide a point of export to the grid and import as required for site usage not otherwise provided by the plant itself EW noted the associated dredging and disposal works which may, as a worst-case, be required. EW noted with the support of the GIS that the two disposal sites – Teesside A and Teesside C – were now included on the GIS and would be incorporated into figures/plans, as required. EW reiterated that to-date, no project-specific sampling has been obtained from the MMO. SE noted that this had been discussed back in September briefly. EW noted that there was a very large volume of sedimentology data in the River Tees from other projects and regular Teesport dredging. EW explained that individual sampling results had been incorporated into the GIS to help better understand contaminant in the river. LC suggested that this was a really useful tool and the visualisation is helpful. EW thanked the MMO for the use of the public register to help support this. EW noted that the area around the water corridor (discharge) is less well-covered in terms of sediment data but the area is expected to comprise sand / silt. For the purposes of the EIA, existing data is being used at this time; do the MMO have a view on this? SE confirmed that there is good data there already and it is recent – this

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		is very useful. SE reiterated that recent sampling data would however be required in the future; EW agreed and suggested that a DML condition would include provision for these 'returns' if required. EW noted that several options are being considered for the proposed development within the red line boundary and whilst the indicative locations are useful to visualise the key features, there is likely to be movement around the RLB. EW asked if there were any thoughts on the indicative locations and the project features in general? LC commented that the GIS is useful to view the key site features; this was less clear at EIA scoping last year and this is now a lot clearer – the GIS is particularly good. SE agreed that this helps the MMO to understand the project in much more detail, especially regarding the potential intake and discharge works.
3.	MMO Engagement to-date EIA Scoping (March 2019) Update meeting (September 2019)	EW summarised recent engagement with the MMO and noted several comments raised by the MMO at EIA Scoping in March 2019. EW explained how AECOM has been working to respond to these key areas of regulatory interest (specifically: marine planning; cooling water; thermal modelling; use of the DML; coastal processes and; fisheries). EW confirmed that these were all good points to raise and that they were being considered and actioned as appropriate. EW summarised the meeting with the MMO in September 2019 where the MMO raised several suggestions regarding next steps; SE welcomed this and noted the specific reference made to thermal modelling and the DML back in September.
4.	Project Update PEI drafting (including marine baseline effort) and approach to PEI The 'Rochdale Envelope' for NZT (Intake, Outfall, Marine Crossings, Dredging & Disposal) Cooling Water update Thermal Modelling Underwater Noise Modelling	EW confirmed that since EIA Scoping, effort has been made to further refine the worst-case being considered as part of the project. EW explained that it is the expectation that only minimal marine works would potentially be required. This is due to various factors, including the existing intake and outfall which is already present and, for example, may be reused with only minimal works. However, in order to provide maximum flexibility for the client and the project, the worst-case currently being considered includes a scenario where works in the marine environment need to be replaced. EW provided high-level, indicative likely works at the intake which may involve marine plant, a potential cofferdam to create a safe/dry working area and possibly preparatory dredge. Does the MMO have any key concerns, interests or thoughts around this? SE noted that the area is particularly sensitive in terms of Ecology; EW agreed that there are several areas of primary interest locally, especially Seal Sands (to the West), Bran Sands / Paddy's Hole (to the North) and Coatham Sands / Dune Complex (to the East). The closest of these is Bran Sands; EW noted the presence of an existing O&G terminal jetty which may help to provide a level of visual screening between Bran Sands and the intake; it may also help minimise noise effects on ornithological features of interest. EW noted that an underwater noise modelling exercise is underway to better understand this topic at the intake location, and elsewhere. LC and SE welcomed this and suggested this was a good idea to investigate further. EW provided a similar summary for the discharge pipeline and head; EW clarified again that it is unlikely that a full refurbishment scenario is needed but that for flexibility, that is the worst-case being assessed currently for EIA purposes. EW noted the potential plant and construction works associated with the worst-case (i.e. dredging, HDD, open-cut trenching etc.). EW asked if the MMO had any immediate concerns or thoughts on this? SE confirmed that the dune areas around Coatham Sands may be sensitive and of ecological interest (they may be part of the local designated sites and there are several in this area). EW confirmed that the dune crossing is being carefully considered and there are indeed key sensitivities; EW explained that a number of other projects have crossed the Dune Complex at Coatham Sands. This includes the Central Area Transmission System (CATS) pipeline which, we understand, used open-cut trenching; Natural England were involved with a successful habitat management and translocation plan for this activity. EW noted that the recovery rates for the CATS install were used to support the Breagh install approach which also used open-cut combined with HDD; again, in this instance, a habitat translocation plan was used with Natural England closely involved. This proved to be very successful, including for the removal and re-emplacement of

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		coastal grasses (marram etc.); EW noted that where crossings are needed, a similar approach may be taken and 'lessons learned' from these successful projects would be applied. LC clarified that there had therefore actually been two crossings at that location; EW confirmed that there have been existing successful crossings here for gas and also, more recently, electricity assets (i.e. for the windfarm). EW confirmed the extent of AECOM's involvement in taking the CO_2 pipeline to a landfall point just above mean low water; EW clarified that this does include a portion of working within the MMO's jurisdiction. EW noted that works to facilitate the crossing would be similar to those described earlier. EW asked it the MMO had any further thoughts or interests regarding these working areas? SE and LC commented that it seems that the key sensitives are being considered in detail which is really good. Knowing that the dunes have been crossed before is useful and working with Natural England to benefit from this experience is encouraged. SE commented that with working so closely to several areas of ecological interest (including designated sites), the Habitats Regulations Assessment (HRA) process is likely to be key and engagement with Natural England is recommended. EW agreed that HRA will be a key process and engagement with NE is ongoing (an engagement meeting is planned for the 24th at Lancaster House). EW provided additional information on indicative volumes of water for a potential CWS (noting they are very small in the context of UK power) and provided assurance that thermal modelling exercises were underway, as per the MMO's recommendation at EIA scoping. Given the relatively low volumes and the heavily mixed area of the inshore Tees Bay, EW noted the preliminary prediction that any "plume" would quickly dissipate and is likely to be ecological negligible. EW confirmed that this is pending detailed modelling which is underway. EW noted that engagement with the EA is ongoing regarding the thermal modelling work; EW noted that the modelling is underway and that due to timescales and availability, the scope and preliminary outputs will be discussed with the EA in ~March. This will provide an opportunity for EA comments and model tweaks, if needed. SE commented that this was good to hear; the intake and outfall are mainly EA-led themes but the MMO does have a wider interest. EW reiterated earlier comments regarding the intake and explained that an underwater noise modelling exercise was underway. EW asked if the MMO had any concerns, thoughts or interests in these topics? SE and LC reiterated the ecological interests in the area but noted that engagement with the EA/NE is underway which is positive.
5.	Marine Stakeholder Engagement (Ongoing)	EW provided a summary of ongoing engagement with marine stakeholders, in line with the recommendations made at EIA scoping. EW summarised the stakeholders being engaged on the topic of Ecology, Ornithology, Marine Mammals and Fisheries (NE, Canal and Rivers Trust, RSPB, NEIFCA and the EA). Does the MMO have any others to recommend? LC suggested that this was thorough and the MMO had no further recommendations. EW noted his expectation that NE would likely be a lead competent authority for HRA although noted that this is to be confirmed, pending progression of the DCO. EW noted that NE are taking the lead role on HRA engagement but that the MMO could be involved if needed? SE noted that the MMO should be kept up to date but that NE is an appropriate lead. EW confirmed that since EIA scoping, engagement has been ongoing on the topic of Thermal Modelling, Discharges and Water Quality (EA, NE, MMO). EW noted that this is mainly an area of interest for the EA (as the body responsible for licensing abstraction / discharge) but that it is also of some interest to the MMO and NE. SE agreed that engagement with EA is definitely recommended on this topic.

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		EW introduced the topic of navigational risk and outlined that it had been raised by the MMO and other stakeholders at EIA scoping. EW noted that at this early stage, a preliminary Navigational Risk Assessment (NRA) was being undertaken but that this was qualitative in nature; this is due to the relatively low-risk operations (even with the worst-case) and the good volume of existing data available around the Tees. SE agreed that this seems logical. EW summarised stakeholders being engaged on this topic (RYA, MMO, MCA, Trinity House, PD Ports and EDF Energy – as the local windfarm asset owner and operator). EW noted that there is a particular gap in terms of vessel movement data where VTS/AIS datasets do not provide details of small vessels which don't carry transponders. SE agreed that this is a key omission, especially for small-scale commercial fishers and under 10's. EW agreed and asked if the MMO's local officers could help characterise the area around the Tees Bay? SE and LC agreed that they could look into confirming which MMO local office should be engaged. EW noted his understanding of the local wreck / reef environment; EW explained that due to higher bioaccumulations around some of these features, potting and trapping may take place within the Tees Bay (whilst noting that ICES rectangle for the area is very large – i.e. 30 nautical miles by 30 nautical miles).
6.	Marine Consenting Deemed Marine Licence – drafting	EW explained that as part of the DCO process, the project is likely to seek a deemed marine licence from the MMO which is in line with what the Planning Inspectorate encourage and what the support typically requests. LC agreed that this was definitely a good approach and that the DML in the DCO will keep the process of licensing as efficient as possible. EW explained that the draft DML was likely to follow a typical 3-part structure comprising introduction / terms of reference, the licenced activities and conditions. EW explained that the current DML was set up to cater for the worst-case extent of works and that in reality, this may well be phased-down based on real requirements as the project progresses. SE agreed that this seems logical. EW explained that the DML was in early draft format but had been informed to-date by other DCO precedent (including Eggborough CCGT, which Laura worked on, as well as Norfolk Boreas, EA One and other DCOs). EW asked if the MMO had any queries on the DML? SE confirmed that the process sounds logical and it is good to hear that it is underway.
7.	Forward Look, Next Steps and Timescales	EW confirmed that an initial DML draft had been prepared but was still going through internal review and consideration. SE confirmed that the MMO were likely to be particularly challenged for capacity over coming weeks; EW noted that engagement with the MMO on the DML is still to be confirmed. JG suggested that a logical timeframe for DML review could be alongside or even after Preliminary Environmental Information so that the MMO had the best understanding of the predicted worst-case environmental effects etc. from works? SE and LC agreed that this sounds logical. EW confirmed that we will consider this further and give some advance warning ahead of engagement. EW noted that PEI will likely be released for consultation ~April/May 2019 although this is subject to some change, pending programme. SE welcomed the early awareness of this. EW noted other engagement with the EA and NE planned in coming weeks.
8.	Open Discussion, Questions and Any Other Business	SE asked if consideration had been given to wrecks within the marine area? EW clarified that marine heritage is considered within the PEI at present; there is a wealth of data available around the Tees Bay approaches (near the windfarm) and in the area of the River Tees although there is a data gap in the inner area of the Tees Bay. UK Hydrographic Office records have been explored and known wreck locations have been assessed but there may be other unknown features. Engagement with Historic England is ongoing regarding heritage; the potential for any requirement to investigate the discharge corridor any further is unknown and very much pending further consultation/ the final extent of works. No further AOB items. EW thanked the MMO for facilitating the meeting; meeting closed 15:30.

Meeting Minutes

Meeting name
Net Zero Teesside (NZT) – MMO Update Meeting

Meeting date
26 August 2020

AECOM project number
60559231

Subject
Marine Management Organisation - Stakeholder Update Meeting

Time
15:15 - 17:15

Additional information
MMO Case Reference: DCO/2019/00003

Attendees
Ed Walker (EW), AECOM
Richard Lowe (RL), AECOM
Ian Campbell (IC), AECOM
Gordon McCreath (GM), Pinsent Masons
Imogen Dewar (ID), Pinsent Masons
Sarah Errington, Case Manager, MMO
Nicola Wilkinson, Case Officer, MMO

MMO Engagement Meeting Minutes – 26th August 2020

No.	Agenda Item	Minutes	Actions
1.	Introductions	**EW** welcomed attendees to the meeting and confirmed the purpose of the meeting which was to have a general catch up on the project, provide an introduction / re-fresh of the key details, especially for new members of the team, and to provide an opportunity for discussion around the MMO's responses to PEI. **EW** confirmed the meeting would also give an opportunity for a programme update and a discussion on outstanding MMO queries, comments and concerns. Introductions: • Ed Walker (EW), AECOM – supporting IC and RL on the EIA and Marine Consenting for the project; • Ian Campbell (IC), AECOM – PM for the DCO EIA; • Gordon McCreath (GM), Pinsent Masons – providing legal / consenting support to the project on behalf of Pinsent Masons LLP; • Imogen Dewar (ID), Pinsent Masons – supporting Gordon and the wider Pinsent Masons LLP team; • Sarah Errington, Case Manager, MMO – Case Manager for the NZT project within the MMO licensing team; and • Nicola Wilkinson, Case Officer, MMO – Case Officer for the NZT project. **EW** provided a summary of the agenda: **1.** Introductions / Meeting Objectives **2.** Brief overview of the Net Zero Teesside (NZT) Project / Refresh **3.** Summary of MMO Engagement to-date **4.** High-level progress update since last engagement meeting (February 2020) **5.** MMO PEI Consultation Response – Salient Points and Updates **6.** Forthcoming engagement and Next Steps **7.** Open Discussion, Questions and Any Other Business	
2.	Overview of NZT / Project Re-Fresh	**EW** confirmed that whilst many are largely familiar with the NZT project, it would be useful to have a summary of the key details to re-fresh. **EW** also welcomed Nicola to the team and confirmed that AECOM were keen to help provide introductory materials / briefing as required to help welcome her. **EW** discussed the key project drivers and technical objectives. **EW** noted the overriding objective which is to deliver a large-scale "full chain" Combined Cycle Gas Turbine (CCGT) Carbon Capture, Utilisation and Storage (CCUS) plant in UK. **EW** noted that this is a world-first in commercial CCUS of this nature and at this scale; it also	

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		represents the UK's first decarbonized industrial cluster. EW noted that this is set to be a new build project (not retrofit to an existing plant); EW commented that there is much historical industry around Teesside and the project location although as above, this will be new infrastructure. **EW** confirmed that the project is set to provide up to 3 GWe output (to help put this into context, it is enough to power around five and a half million homes). The CCGT Generator station is a highly efficient turbine with minimal thermal losses; it is also fitted with an amine-based post-combustion CCS which has been proven elsewhere in the world (i.e. it is not a first of a kind in this respect). **EW** clarified that the ultimate fate of the CO_2 is an offshore geological carbon store; EW however clarified that these offshore works are not currently in AECOM scope. **EW** confirmed awareness of the MMO's comments on the individual aspects of the project and confirmed this would be discussed later. In terms of the financial drivers for the project, **EW** confirmed that as there is no current subsidy mechanism in place for CCUS, the CCGT element of the project will be developed to operate under a long-term CfD. As well as being highly efficient, **EW** also confirmed that the CCGT is a particularly flexible technology and one which can complement new nuclear, intermittent renewables and other emerging storage technologies. **EW** asked if **IC** had anything further to add to this? N.A **EW** used **Slide 5 (Annex A)** to provide a visualisation of the key features of the project.	
3.	Summary of MMO engagement to-date	**EW** provided a summary of MMO engagement to-date: EIA Scoping (March 2019) where the MMO raised comments on Marine Planning and also initiated Technical discussions on Cooling Water, Thermal Modelling, Coastal Processes & Fisheries. The MMO also flagged the use of a DML which we agree will be useful in support of the project. **EW** noted a further meeting (September 2019) where various items were discussed, including the need to progress DML drafting. This meeting was also used to discuss the scope of Benthic / Intertidal Sampling locations where the MMO were given opportunity for discussion of approach / spec. for this work. **EW** confirmed that the last meeting which was held with the MMO was back in February 2020 and this was a general update on key aspects of the project. This also allowed a little more detail to be provided on the principal areas of likely MMO interest (i.e. licensable activities).	
4.	High-Level update on progress	**EW** provided a summary of recent progress. **Completion of Thermal Modelling** The thermal modelling exercise was completed earlier in the year. **EW** confirmed that the specification and early results of the modelling had been discussed with the MMO in February 2020 and soon after that meeting but the full report (in final form) formed part of the PEI for consultation. **EW** confirmed that this modelling exercise was highly precautionary and assessed very much a worst-case in terms of the treated effluent returning into the Tees Bay. The results, as originally suspected, are that the effluent dissipates rapidly and that there is not a significant effect on neighbouring receptors. **EW** confirmed that some information was not available at the time that the modelling was completed and therefore, precautionary assumptions were set. For example, the outfall condition / exact configuration was unknown and therefore, a poorly-performing [in terms of hydrodynamics] outfall head	

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		was assumed. Even with this, the results indicate no significant effect. We welcome the MMO's thoughts on this report. **NRA Finalisation** As discussed back in February, a qualitative NRA [Navigational Risk Assessment] was produced and appended to the PEI. **Environment Agency / Natural England engagement** Alongside engagement with the MMO, **EW** confirmed that NZT have been engaging with the Environment Agency and Natural England on a number of technical themes. In particular, engagement of-late with the EA has included a number of marine discussions on flood risk, modelling work (thermal), discharges and also air quality. As we discussed at our last meeting in February, there have also been discussions with NE on the scope of the HRA and known areas of particular sensitivity (such as the Coatham Crossings). As before, we will provide details to update the MMO to keep you aware of how this engagement is progressing. **Stage II Consultation** Underway and thanks to the MMO for the comments so far. **EW** confirmed that the consultation is due to conclude Mid-September.	
5.	MMO Stage II Consultation Response – Salient Points	**EW** confirmed that a key purpose of the meeting was to discuss and explore some of the key MMO comments which had been raised so far in PEI response. **EW** confirmed that not every single comment has been addressed in the slides or is intended to be covered today; however, a selection of key comments from the MMO which represent some element of disagreement or comments which may benefit from a discussion have been included. **PEI Review Coverage (Slide 8, Annex A)** **EW** summarised the first observation that a number of chapters seem to have (potentially) been omitted from the MMO review. **EW** commented that there are some specific chapters and appendices which we were particularly interested to receive MMO comments on (i.e. the NRA and Thermal Modelling report, as well as other technical appendices which have been discussed previously in Feb 2020). **EW** asked if **SE** was aware of any known intentional / unintentional omissions? **SE** unsure but will check and look back through; it may be the case that some elements were not reviewed or simply there is no MMO comment on the reports. **Marine Planning (Slide 9, Annex A)** **EW** thanked the MMO for comments on the marine plan checklist. **EW** noted that the PEI does recognise the current Marine Policy Statement (MPS) and draft North East Inshore Marine Plan; **EW** suggested that the ES be developed to consider the "appropriate policy document" at the time, which we suspect will be the north east inshore plan; it may also be appropriate to consider the high-level objectives of the MPS in order to ensure that the plan checklist is robust (should, for instance, there be a delay to the release of the final local plan). SE said that this seemed like a good approach. **EW** asked if there would be opportunity for review of a draft checklist? **SE** confirmed that yes, there would be and please can **EW** confirm when this may be required after the meeting. **EIA (Slide 10, Annex A)** **EW** introduced the next slide which relates to EIA; **EW** confirmed that this is quite an important point to discuss and try to reach agreement on. **EW** summarised the MMO's comments [see annex A] and confirmed that there are a couple of items to clarify. Firstly, **EW** summarised that there may be a misunderstanding regarding the gathering network – this does form part of the DCO which this EIA is	1. **MMO (SE/NW)** to review what has and has not been reviewed to confirm all relevant material within the PEI has been seen 2. **AECOM (EW)** to confirm timeframes for Marine Plan Compliance Checklist after meeting 3. **MMO (SE)** to review and respond to Marine Plan Compliance Checklist request. 4. **AECOM (EW)** to discuss future marine UW noise modelling with MMO (SE) if required 5. **AECOM (EW)** to discuss PEI comment signposting support with MMO (SE) 6. **AECOM (EW)** to confirm latest correspondence with local MMO enforcement / fisheries team 7. **MMO (SE)** to discuss fisheries data review with local office; SE to share details of Catch Recording App and output if available

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supporting. **IC** clarified that whilst the gathering network (i.e. pipeline etc.) is included within the DCO, we should clarify that the infrastructure at each industrial emitter associated with private Carbon Capture Plants is not included – this will be subject to future development and consenting as and where required. **EW** thanked **IC** for the clarification.

EW explained that the second key clarification is on the CO_2 export pipeline; the initial section of this pipeline down to Mean Low Water Springs is included within the DCO. However, the subsequent section of the pipeline to take the CO_2 in compressed liquid effluent form distant offshore is not, neither is any offshore infrastructure associated with injection etc. **EW** confirmed that these offshore elements are to be dealt with via a separate consenting regime and most likely EIA (this is as-per the discussions with MMO back in March 2019). **EW** confirmed that we understand the MMO's comments and potential concern from a 'Project as a Whole' perspective however, the EIAs for each project will consider each other as appropriate as part of cumulative and in-combination assessment. **EW** surmised that this is not a new or unusual approach and is similar to other large-scale projects which, at a strategic level, need to progress through different consenting regimes. **EW** asked if the MMO had any further thoughts on this topic? **SE** said that this explanation of approach was very useful and made things a little clearer; no further comments and this makes sense.

Sedimentology (Slide 11, Annex A)

EW summarised the MMO's comments on sedimentology [see extract in Annex A]. **EW** surmised that we appreciate that there are some limitations to the usage of existing data on sediment and contaminant and that these had been openly acknowledged within the PEI. However, for the purposes of EIA, as there is so much information within the locality of the project, it makes sense to draw on this and it provides an appropriate – early – baseline characterisation tool. **EW** confirmed that we understand that should dredging or works capable of disturbing contaminant be required (which is unlikely), we would further engage with the MMO to agree sampling etc. We see this more as a post-consent matter however, with existing sampling being appropriate for EIA. **EW** asked if **SE**/**NW** had any thoughts? **SE** agreed that this seems appropriate and that there is a lot of dredging which is taking place in the Tees. **SE** agreed that there is definitely a balance to strike between obtaining new data, cost and the likelihood that works will actually go ahead.

Fisheries (Slide 12, Annex A)

EW welcomed feedback from the MMO on this. **EW** confirmed that migratory fish species are considered fully, in terms of underwater noise and other effects, within both Chapter 14 (Marine Ecology) and Chapter 13 (Aquatic Ecology). As Ch13 not included in MMO's review summary, we suspect the section(s) on migratory species may not have been seen? **SE** said she will check. Notwithstanding, the PEI was based on information available at that early stage (as the actual level of required marine works was unknown, it was seen as precautionary to include activities such as piling etc). **EW** confirmed that we will expand on the level of detail provided within the ES. In particular, **EW** clarified the method of underwater noise modelling undertaken for PEI which does have some limitations; should it be required, we would like to discuss further modelling effort with the MMO in dur course. Is this something that MMO can support? **SE** very happy to organise if required – please can we let her know early for resourcing considerations?

Rock Armour / Information on 'Works' (Slide 13, Annex A)

EW summarised the MMO's comments on the need for more information on some areas of works. **EW** outlined that there is information provided on rock armouring (the focus of one specific Cefas [Centre for Environment, Fisheries and Aquaculture Science] / MMO

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comment and that we would be happy to signpost this – see Chapter 14. More widely, **EW** confirmed that we will refine the level of detail provided and expand in the ES as required. **SE** thanked AECOM for the clarification and suggested that a signposting document would be useful. **EW** agreed that this sounds useful and we can help direct MMO's review after the meeting.

Benthic / Intertidal Sampling (Slide 14, Annex A)

EW summarised the MMO / Cefas comments on single vs duplicate sampling; **EW** suspected that MMO/Cefas in agreement but not entirely clear? **SE** confirmed approach seems robust and that this is fine; if any further comments to make, MMO will flag after meeting. [Note figure supporting the benthic sample regime within Annex A].

IFCA / Fisheries Engagement (Slide 15, Annex A)

EW thanked MMO for the feedback and confirmed that we have and will continue to engage with fisheries representatives, Inc. within the IFCA. **SE** confirmed nothing further to add on this one.

Limitations of Landings Data (Slide 16, Annex A)

EW confirmed that landings data acknowledged as having limitations (this is openly addressed in the PEI). In the PEI and supporting appendices, we use c13 different sources of data to support Fisheries assessments. Between February and May 2020, **EW** confirmed that we engaged with the local MMO office to discuss this baseline and to try and gather further information on local potting etc. To-date, we have not received a reply. Suggest a discussion after meeting would be useful? SE agreed that this would be useful and that she will chase the local (North Shields) fisheries office. **SE** asked if **EW** could forward on the latest correspondence with the local office? **EW** confirmed that he would attach after the meeting when we send out the notes [see Annex B]. **EW** also asked for MMO to confirm that Appendix 14B (Commercial Fisheries and Fish Ecology Baseline) was reviewed? This contains substantial detail on local fisheries – we would welcome confirmation? **SE** going to check. **SE** also mentioned that the local MMO office now operated a local Catch **Recording** Application which may provide some useful data? **EW** thanked SE for the suggestion and agreed that it sounded useful; can **SE** please share details? SE going to review after meeting.

Noise and Inverts. (Slide 17, Annex A)

EW summarised the MMOs comments on noise impacts being understood on invertebrates [see Slide 17]. **EW** asked if there are any particular published peer-reviewed papers which Cefas/MMO would recommend? At the assessment phase supporting the PEI, there was no real available evidence regarding noise criteria for inverts. We suspect this is still the case but welcome discussion with MMO/Cefas. **SE** suggested that this is probably best answered by a Cefas specialist; she can check in with them after meeting.

Cumulative and In-Combination (Slide 18, Annex A)

EW thanked MMO for flagging an additional marine licence to consider. **SE** confirmed that the MCMS data is constantly changing so expected that some things can be missed when the PEI is published. **EW** agreed and confirmed that we will undertake a contemporaneous review ahead of ES / DCO submission.

RYA Engagement (Slide 19, Annex A)

EW confirmed that some engagement had taken place with RYA and IFCA but not with MCT. This is a good suggestion and one we will action; can **SE** provide details / is Rachel still there? **SE** happy to provide contact details after the meeting and yes, Rachel is still there is a direct contact preferred. **SE** agreed to share after meeting.

No.	Agenda Item	Minutes	Actions
		EW confirmed that these were they key points that we were looking to discuss following PEI response but that there was now an opportunity to have a general discussion on any further aspect, either based on the topics above or more widely? **SE** confirmed that it seems like good progress is being made and the information / level of information since PEI has obviously evolved; the project is moving in the right direction. **SE** in agreement that there are no major showstopper issues here but some areas where further work would benefit the ES. **SE** suggested that with these applications, there is a balance to strike between level of detail contained within the EIA and the actual likelihood that works are required. **SE** confirmed the MMO's position that they always recommend being cautious and including all elements which may be licensable to help try and avoid the need to go back in the future and vary licences etc. **EW** thanked **SE** / **NW** for the feedback.	
6.	Forthcoming engagement and Next Steps	**EW** provided a summary of the forward look: Stage II Consultation is ongoing and due to conclude mid-September As discussed before, we are in the process of drafting a DML and plan to circulate for review shortly. **EW** confirmed that part of the reason for the delay is as we are trying to strike a balance, exactly as **SE** identifies, between an overly precautionary /unrealistic application and one which has the required flexibility. **EW** confirmed that we have various other ongoing Stakeholder Engagement activity and that as before, we will keep MMO updated where appropriate (especially in terms of the other Defra colleagues). AECOM will look to engage further with the MMO regarding the DML, and other topics, ultimately looking to SoCG toward the end of the year / ahead of DCO submission. **SE** thanked AECOM for the advance warning and asked for as much warning as possible on any other workload as resourcing is a little tight. **SE** confirmed that the MMO now have a new allocation process in place whereby cases are given a priority rating (this is largely due to sheer volume of casework). **SE** explained that casework is categorised as high priority if it is, for example, a national infrastructure project focused on energy generation / renewables or is strategically critical for another reason; if it is lower priority and focused on some form of recreational activity for instance, it may be pushed down the priority list a little. **SE** suggested that it is most likely that NZT would form a Tier 1 form of project, being a Power DCO.	**9. AECOM (EW/IC/RL)** to provide as much advance warning to **SE**/**NW** on programme and review tasks to aid with resourcing at MMO
7.	Open Discussion, Questions and Any Other Business	**EW** confirmed that we do have plenty of time left and that there is ample opportunity for discussion – would MMO like to raise anything for discussion? **SE** confirmed no further comments or AOBs; **NW** confirmed no further comments or AOBs. No additional comments from all attendees. **EW** thanked all for attending and reiterated the offer of further briefing with MMO team should it be useful (including a Project GIS demo, as we did back in February, if that would be helpful). **NW** suggested that this may be helpful down the line and we could discuss further after the meeting. **EW** thanked all for attending; meeting closed.	

Annex A – Meeting Slide Pack

Net Zero Teesside (NZT) – MMO Meeting

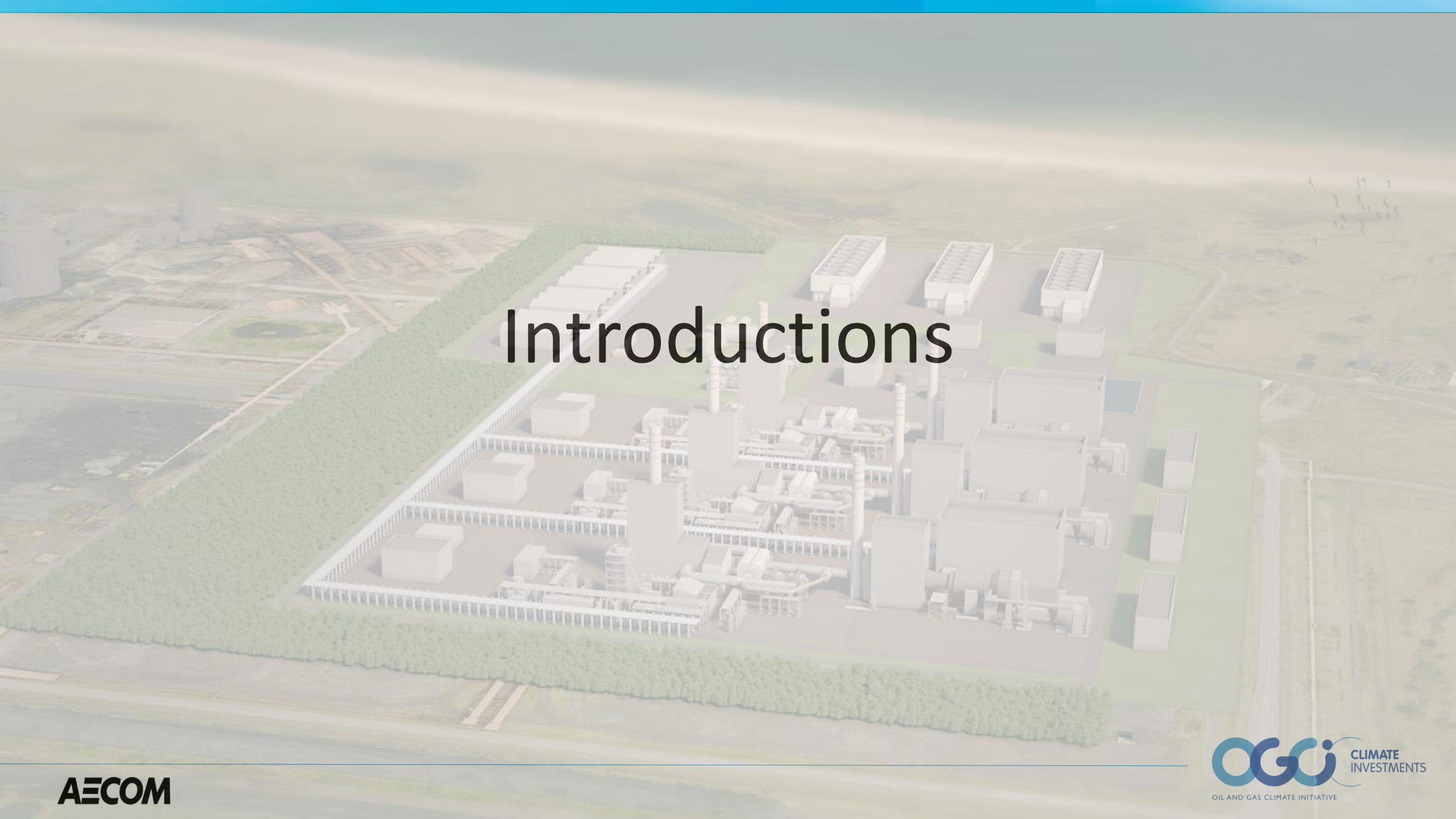
26th August 2020

AECOM

OGCI CLIMATE INVESTMENTS

OIL AND GAS CLIMATE INITIATIVE

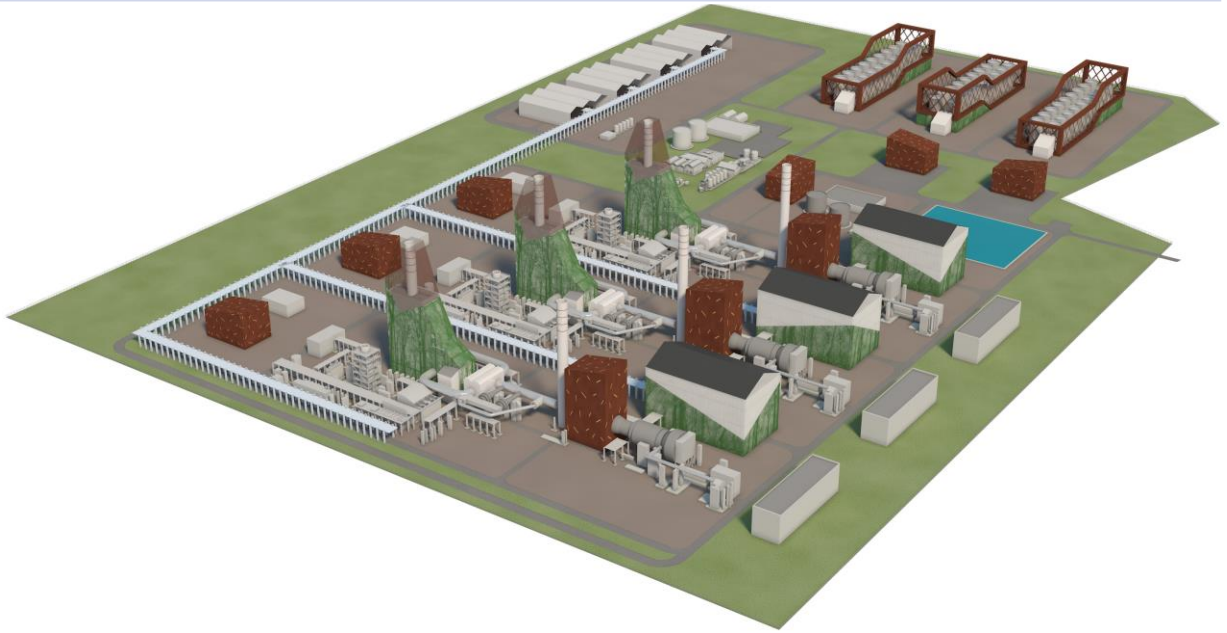
Introductions



AECOM

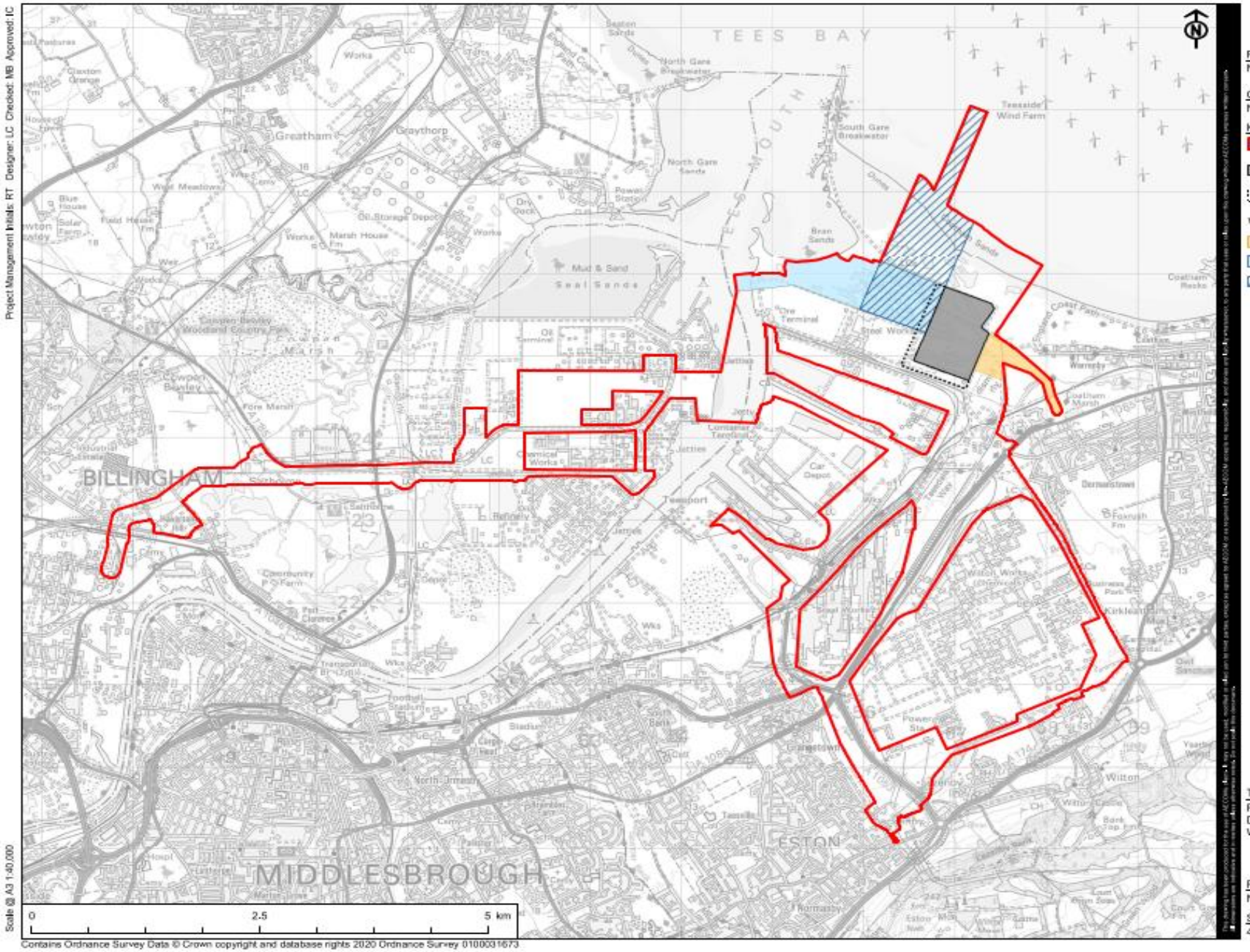
OIL AND GAS CLIMATE INITIATIVE CLIMATE INVESTMENTS

No.	Agenda Item
1.	Introductions / Meeting Objectives
2.	Brief overview of the Net Zero Teesside (NZT) Project / Refresh
3.	Summary of MMO Engagement to-date
4.	High-level progress update since last engagement meeting (February 2020) • Thermal Modelling (Completion) • Environment Agency engagement • Natural England engagement (Inc. consultation on the HRA)
5.	MMO PEI Consultation Response – Salient Points and Updates
6.	Forthcoming engagement and Next Steps • Progression toward Statement of Common Ground (SoCG) and submission of DCO • DML Review
7.	Open Discussion, Questions and Any Other Business



Net Zero Teesside (NZT) – Project Refresh

- Deliver a large-scale “full chain” Combined Cycle Gas Turbine (CCGT) Carbon Capture, Utilisation and Storage (CCUS) plant in UK
- A ‘world-first’ in commercial CCUS and the UK’s first decarbonized industrial cluster
- New build (not retrofit to an existing plant)
- Up to 3 GWe output (to help put this into context, it is enough to power around five and a half million homes)
- Generator station is a highly-efficient turbine with minimal thermal losses
- Fitted with proven amine-based post-combustion CCS
- Offshore geological carbon store (although these “offshore” works not in current AECOM scope)
- Long-term cost-competitive Contract for Difference (CfD)
- Complements new nuclear, intermittent renewables and emerging storage technologies



AECOM

PROJECT
NET ZERO TEESSIDE

CLIENT
NZT POWER AND NZNS STORAGE

KEY
- Site Boundary
- Power, Capture and Compressor Site
- Sterile Area

Water Connection Corridors
- Freshwater Connection Corridor
- Water Abstraction Corridor
- Water Discharge Corridor

TITLE
FIGURE 3-2D
DEVELOPMENT AREAS
WATER CONNECTION CORRIDORS

REFERENCE
NZT_200618_PEI_S_3-2D_v6

SHEET NUMBER
4 of 5

DATE
18/06/2020

Project Management Initials: RT Designer: LC Checked: MB Approved: IC

MMO engagement to-date

EIA Scoping (March 2019)

- Marine Planning
- Technical discussions on Cooling Water, Thermal Modelling, Coastal Processes & Fisheries
- Use of a DML

Update Meeting (September 2019)

- Various items discussed, including the need to progress DML drafting

Update Meeting (February 2020)

- Update on key aspects of the project / principle areas of Marine interest
- Update on maritime stakeholder engagement
- Summary of key “licensable activities” as part of the project

NZT – High-Level Update

Marine Modelling

- Thermal Modelling was finalised in February 2020 (preliminary results shared with MMO in February and detailed report included as part of the ongoing Stage II Consultation)

Engagement

- Ongoing engagement with the Environment Agency (Inc. Cooling Water) and Natural England (Inc. HRA)

Stage II Consultation – PEI Report

- The NZT Stage II consultation is underway (late June – mid September)

Technical Assessment

- Ongoing studies underway to inform the final Environmental Statement

MMO PEI Consultation – Salient Points

MMO Comment	Notes
The MMO has reviewed the consultation documents received on 13 July 2020 in consultation with our scientific advisors at Cefas and sets out our initial comments below. The MMO has focused on the following chapters of the Preliminary Environmental Information Report (PEIR): • *Chapter 5. Construction* • *Chapter 9. Surface Water* • *Chapter 11. Noise and Vibration* • *Chapter 14. Marine Environment* • *Chapter 20. Socio-economics and Tourism* • *Chapter 24. Cumulative Effects* • *Chapter 25. Summary of Effects*	We welcome the MMO's feedback on these chapters. There remains opportunity to review supporting appendices also (i.e. do MMO have any thoughts on the Cooling Water Modelling Report or preliminary Navigational Risk Assessment?).

MMO PEI Consultation – Salient Points

MMO Comment	Notes
3.1.2 The MMO has attached an example template to use when considering the Marine Plans (See Appendix A). We would advise using something similar when you submit future documents in support of your application to demonstrate how you have considered the relevant marine plans and policies. These can be found using the Marine Information System (MIS) and policy information on the following website: *http://mis.marinemanagement.org.uk/*	We welcome the recommended Marine Plan checklist – thankyou. We will complete as required and use in support of the final ES. Is there opportunity to consult the MMO on the Marine Plan checklist down the line (i.e. during or following our Stage II consultation but prior to ES?).

MMO PEI Consultation – Salient Points

MMO Comment	Notes
3.1.3 As previously noted and referenced in Chapter 4 (4.1.2), the capture and compression of third-party CO2 emissions does not form part of this DCO application. Instead the applicant seeks a separate marine licence which will be accompanied by a separate Environmental Impact Assessment (EIA) (paragraph 4.3.45). The MMO disagree with this approach and recommend the capture and compression of third-party CO2 emissions to be included under the Deemed Marine Licence (DML) with the impacts being assessed under just one Environmental Statement. It is important that the Environment Statement considers the impacts of the project as a whole and we would remind the applicant that by not including these works within the DML, the applicant runs the risk of not being granted a marine licence for subsequent works.	Thank you for the feedback. The Gathering Network *does* form part of the DCO application. The CO2 Export Pipeline is not included within this DCO application as it is dealt with via a separate consenting regime. However, we remain in agreement with the MMO regarding the principles of 'Project as a Whole'. As noted in the PEI, this future workstream (i.e. for the offshore project) is also expected to be subject to EIA.

MMO PEI Consultation – Salient Points

MMO Comment	Notes
5.1.3 Paragraph 9.4.51. The MMO consider further consideration is required into polycyclic aromatic hydrocarbons (PAHs) in the Tees. The applicant notes that PAH's and polychlorinated biphenyls (PCBs) have been observed at elevated levels in the past but have not preluded sediment from disposal at sea. The MMO believe that this assertation lacks nuance, in that, it does not consider the differences between the action levels of PCBs and PAH's when compared to trace metals. This is particularly noticeable with PAHs, where no upper action level exists.	Thanks for the feedback and comments noted. We are in agreement with the comments from the MMO that the current data available does not provide a complete and project-specific insight into neighbouring contaminant risk (especially in terms of PAHs). The limitations of this data are openly addressed in the PEI. Our use of the data was intended to provide an early indicative characterisation of the area and key known risks. We understand that should dredging be required (unlikely), further sediment sampling will be required. We will engage with the MMO in a timely manner should this be needed.

MMO PEI Consultation – Salient Points

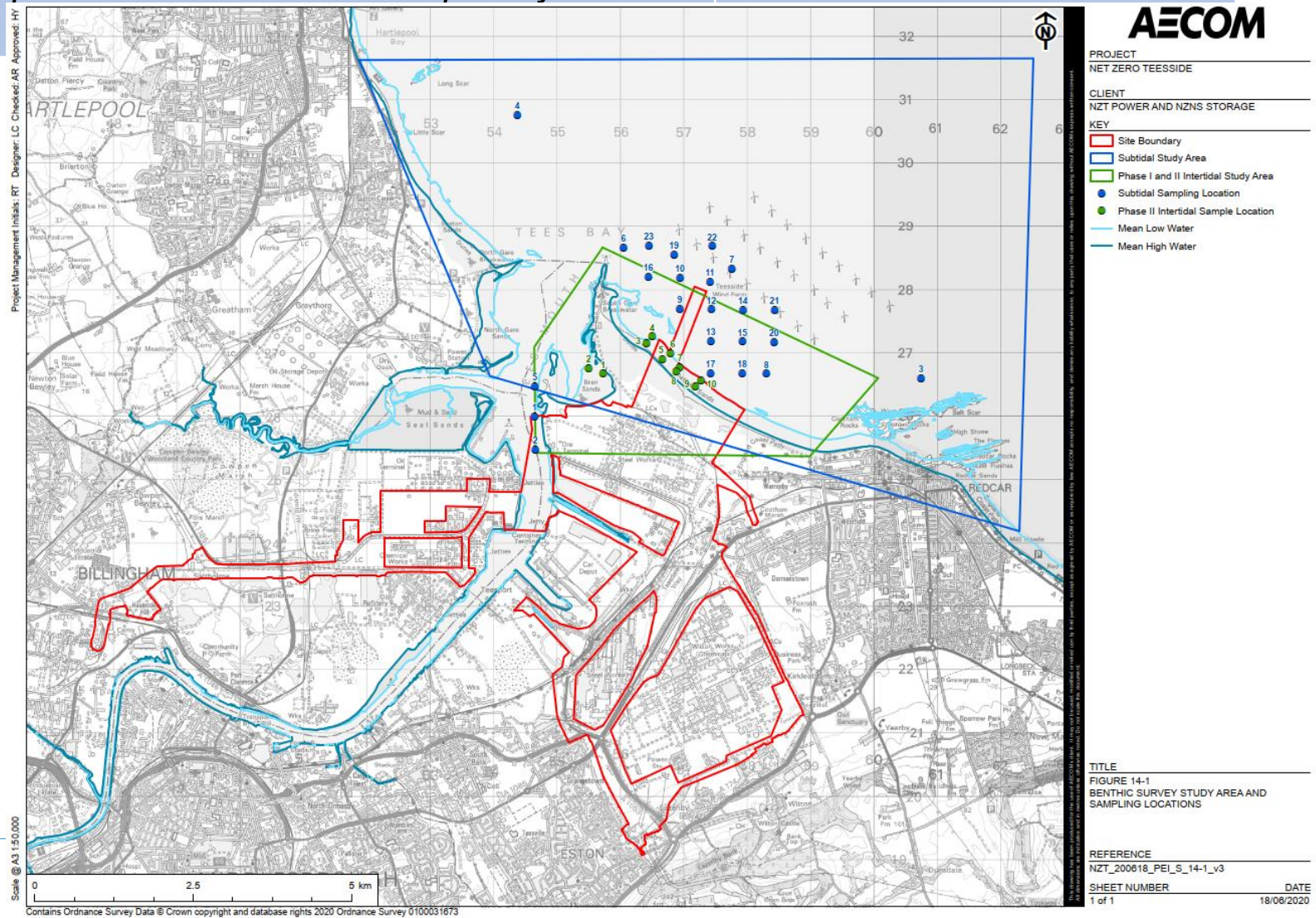
MMO Comment	Notes
6.1.3 The ES will need to consider the implications of the proposed activities on migratory fish species in terms of underwater noise. Paragraph 14.6.67 appropriately identifies that "behavioural effects are also of significant concern, particularly during fish migratory periods when underwater sound may form a barrier to movement". However, MMO believe, this hasn't been fully explored in the PEIR.	Noted and thanks for the feedback. Note that migratory fish species are considered fully, in terms of underwater noise and other effects, within both Chapter 14 (Marine Ecology) and Chapter 13 (Aquatic Ecology). As Ch13 not included in MMO's review summary, we suspect the section(s) on migratory species have not been seen? The PEI was based on information available at that early stage (as the actual level of required marine works was unknown, it was seen as precautionary to include activities such as piling etc). We will expand on the level of detail provided within the ES.

MMO PEI Consultation – Salient Points

MMO Comment	Notes
7.1.1 The MMO would expect to see further detail in subsequent ES documentation on impacts to the marine environment and its associated receptors, as the information provided is considered to be too minimal. While some information is given, such as the need to cross the intertidal zone for CO2 export pipeline, little detail was given on other potential impacts, such as the proposed positioning and impacts of rock armour and scour protection. The MMO suggest a dedicated section would be beneficial to assist in future consultations.	Noted and thanks for the feedback. Note that information is provided regarding a range of marine activities (including rock armour and scour protection; using a Rochdale Envelope approach, 250m3 was assumed). Whilst much of this activity is unlikely and included on a precautionary basis, it will be supported with further detail for ES. Interestingly, based on the observed communities in the Tees Bay, we predict any such placement may provide a long-term benefit (initially being colonised with barnacles, tube worms, sea squirts and soft corals). We will be happy to provide signposting to relevant sections to respond to any specific queries.

MMO PEI Consultation – Salient Points

MMO Comment	Notes
This single-sample approach results in a greater chance of sampling the full range of habitats/features within an area: station replicates are not needed as part of a baseline assessment.	Noted and thanks for the feedback.



MMO PEI Consultation – Salient Points

MMO Comment	Notes
7.1.10 Limited information and data has been provided in relation to commercial shell fishing within the area, and the MMO would expect to see further consideration and consultation with local shell fish workers and Inshore Fisheries and Conservation Authority (IFCA).	Noted and thanks for the feedback. We have engaged with the local IFCA and will continue to do so ahead of the final ES.

MMO PEI Consultation – Salient Points

MMO Comment	Notes
7.1.11 Landings data sources used in the PIER documentation are known to not provide an accurate representation of landings from boats under 10m, this is a concern considering the number of potting boats in the area in this category. The MMO would require further information to qualify the results seen on the landings data.	Noted and thanks for the feedback. Landings data acknowledged as having limitations (this is openly addressed in the PEI). In the PEI and supporting appendices, we use c13 different sources of data to support Fisheries assessments. Between February and May 2020, we engaged with the local MMO office to discuss this baseline and to try and gather further information on local potting etc. To-date, we have not received a reply. Suggest a discussion after meeting would be useful? Can we confirm with the MMO that Appendix 14B (Commercial Fisheries and Fish Ecology Baseline) was reviewed?

MMO PEI Consultation – Salient Points

MMO Comment	Notes
The report is correct and there is currently insufficient data to establish noise criteria for marine invertebrates (Popper et al., 2014). However, studies conducted thus far have revealed a range of negative effects from noise, and assessments should draw on the peer-reviewed literature where relevant, to support conclusions.	Noted and thanks for the feedback. Are there are any particular published peer-reviewed papers which Cefas/MMO would recommend? At the assessment phase supporting the PEI, there was no real available evidence regarding noise criteria for inverts. We suspect this is still the case but welcome discussion with MMO/Cefas. We will re-review and update in the ES where new literature is available.

MMO PEI Consultation – Salient Points

MMO Comment	Notes
8.1.1 Paragraph 20.4.33 references active marine licences held on the Marine Management Organisations 'Marine Case Management System' (MCMS). Whilst licences within the vicinity of the works have been correctly identified, L/2019/00220/1 is an active dredge and disposal licence just outside the proposed footprint within the River Tees, which appears not to have been identified and considered within the ES.	Noted and thanks for the feedback. We will review and update based on MCMS information available ahead of ES finalisation.

MMO PEI Consultation – Salient Points

MMO Comment	Notes
8.1.2 Paragraph 20.4.34 correctly identify the proposed works taking place 1km from South Gare Marine Sail Club. If not already considered, the MMO recommend the applicant liaise directly with the Royal Yachting Association RYA, as well as the local MMO office, IFCA and the Marine Conservation Team (MCT) to ensure impacts to recreational users are fully considered. The MCT email address has been provided below for any queries: conservation@marinemanagement.org.uk	Noted and thanks for the feedback. We engaged with the RYA in February 2020 and discussed the key elements of the project. Chapter 20 (Socioeconomics) and supporting Appendix 20B (NRA) does include RYA data derived from the General Boating Atlas – i.e. basic data on broad vessel usage. As the actual extent of marine works is unknown (and in reality, likely to be highly limited), we see this as appropriate for PEI. We will continue stakeholder engagement ahead of the final ES

NZT – Forward Look

Stage II Consultation

- Due to conclude mid-September

DML Review

- Planned for circulation to MMO after meeting

Ongoing Stakeholder Engagement

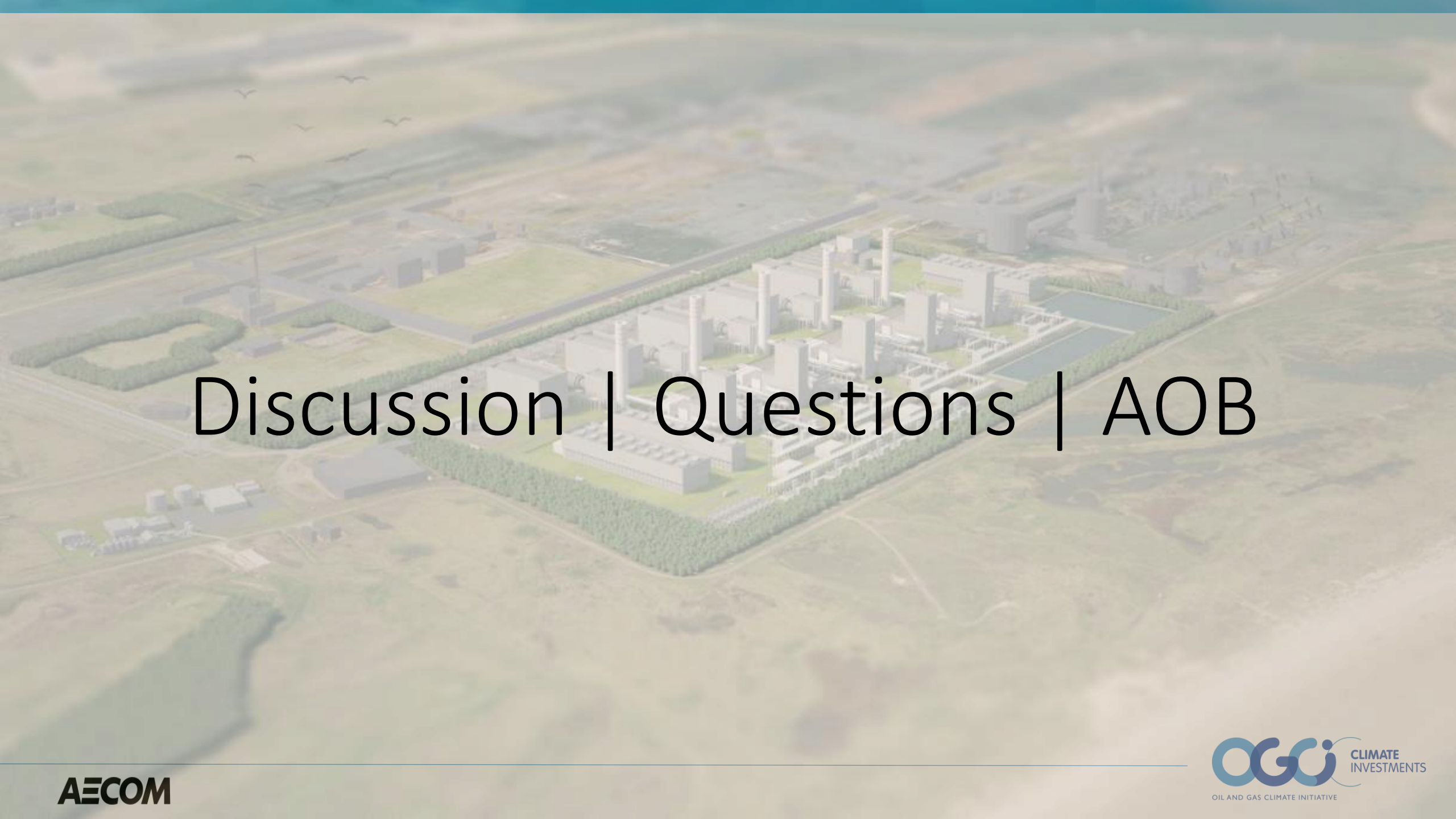
- EA / NE and others (including those flagged by MMO in PEI response – thankyou)

Further MMO Engagement, as required

- Signposting Memo following PEI Comments
- Statement of Common Ground (SoCG) toward end of year

DCO Submission

- Q4 2020/Q1 2021



Discussion | Questions | AOB

Annex B – Local MMO Office Fisheries Engagement

Reply | Reply All | Forward

Wed 13/05/2020 11:48

Walker, Ed
To Errington, Sarah
Cc Calvert, Laura; Dixon, Tim

RE: DCO/2019/00003 - NZT Fisheries Data
Outlook item

Hi Sarah,

DCO/2019/00003

Hope you're keeping well?

Just a quick one to see if you had time for an update call this week or next regarding Net Zero Teesside (NZT)? As I am sure you can imagine, the COVID-19 situation has impacted on our plans for 'topping up' baseline this year. We have discussed this with Natural England and confirmed our approach but would like to bring you / the MMO up to speed.

Last but not least, we did chase the local office again regarding fisheries baseline sources; we have yet to receive a response so assume there are no comments from them on the sources used to-date or planned for ES. If they do have any comments or suggestions, we can try and address before ES but the opportunity to do this is reducing.

Many Thanks,

Ed

Edward Walker MEI MIEMA CEnv MIMarEST CMarTech MCIWEM C.WEM
Senior Environmental Consultant, Environment and Planning

DCO_2019_00003 - Brief Ecol_ Update.ms

Reply | Reply All | Forward

Thu 07/05/2020 15:12

Walker, Ed
To northshields@marinemanagement.org.uk
Cc Calvert, Laura; Errington, Sarah

Afternoon,

Hope all is well.

Just a brief email to see if the Local MMO office had any thoughts on the below? We will shortly be going to consultation on Preliminary Environment Information (PEI) so will struggle to incorporate additions at this stage but can consider any inputs for our Environmental Statement to accompany DCO.

Many Thanks,

Ed

Edward Walker MEI MIEMA CEnv MIMarEST CMarTech MCIWEM C.WEM
Senior Environmental Consultant, Environment and Planning

Reply | Reply All | Forward

Thu 07/05/2020 15:12

Walker, Ed
To northshields@marinemanagement.org.uk
Cc Calvert, Laura; Errington, Sarah

Afternoon,

DCO/2019/00003

AECOM is progressing the EIA for the Net Zero Teesside (NZT) project and as part of the Proposed Development, there are some works within the marine environment. Further to discussions with the Marine Licensing case team (CC'd) which are ongoing, I would like to discuss local fisheries activity with the local MMO team. You can find background to the project including the 2019 scoping report here, if required.

We currently have a well-developed commercial fisheries baseline report informed by some of the sources below:

- FishBase (www.fishbase.org) for general fish ecology, distribution and biological information;
- The Humber and East Coast Regional Environmental Characterisation (Tappin et al., 2011 and Limpenny et al., 2011, respectively) for a summary of the distribution and ecology of fish in the North Sea;
- Environment Agency (2009) River Tees Salmon Action Plan which sets out stock assessments and management actions for this species;
- Centre for Environment, Fisheries and Aquaculture (CEFAS) Sensitivity Maps (Coull et al., 1998; Ellis et al., 2012) which provide spatial data highlighting spawning and nursery grounds in UK waters;
- The International Convention for the Conservation of Nature (IUCN) Red List of Threatened Species (https://www.iucnredlist.org/); and
- Published Environmental Statements and survey reports produced for large infrastructure projects in the vicinity of the Proposed Development, including Dogger Bank Teesside A & B Offshore Wind (Brown and May Marine, 2014; Precision Marine Survey Ltd, 2014) and Teesside Offshore Wind Farm (Lancaster et al., 2011).
- Environment Agency (2019a) National Fish Populations Database Transitional and Coastal (TraC) fish counts for all species within the Tees Estuary;
- Environment Agency (2013, 2019b) fish count data recorded from the Tees Barrage;
- Environment Agency (2019c) National Fish Populations Database freshwater fish counts for species within the River Tees
- Marine Mammal Organisation (MMO) 2013 – 2014 annual landings statistics (https://www.gov.uk/government/collections/uk-sea-fisheries-annual-statistics);
- Environment Agency (2017). Salmonid and Freshwater Fisheries Statistics for England and Wales 2017;
- CEFAS (2019) assessment of salmon stock and fisheries in England and Wales; and
- International Council for the Exploration of the Seas (ICES) data (https://www.ices.dk/Pages/default.aspx).

For purposes of ecological assessment, this provides a very thorough baseline. However, in order to support a (preliminary) Navigational Risk Assessment, there are some challenges in interpreting individual vessel movements at a localised scale (i.e. within an ICES rectangle, for example). With this in mind, I was hoping to have a brief discussion with yourselves to gather further information on this topic (particularly with respect to any potting or trapping activities around the Tees Bay).

Please feel to contact me on my direct dial below if you would like to discuss. Alternatively, if there is a point of contact I can approach, please do let me know who that is.

Many Thanks,

Ed

Edward Walker MEI MIEMA CEnv MIMarEST CMarTech MCIWEM C.WEM
Senior Environmental Consultant, Environment and Planning

RE DCO201900003 - NZT Fisheries Data.ms

Meeting Minutes

Meeting name
Net Zero Teesside (NZT) – MMO Update Meeting

Meeting date
14 December 2020

AECOM project number
60559231

Subject
Marine Management Organisation - Stakeholder Update Meeting

Time
09:00 – 11:00

Additional information
MMO Case Reference: DCO/2019/00003
Appendix A – Slide Pack
Appendix B – Zero Carbon Humber summary
Appendix C – Technical Memo (Subtidal / Benthic Sampling)

Attendees
Ed Walker (EW), AECOM
Sarah Wilford (SW), BP/NZT
Richard Lowe (RL), AECOM
Ian Campbell (IC), AECOM
Jackie Hill (JH), AECOM
Richard Gibbs (RG), AECOM
Sarah Errington (SE), Case Manager, MMO
Nicola Wilkinson (NW), Case Officer, MMO

MMO Engagement Meeting Minutes – 14 December 2020

Agenda Item	Notes	Key Actions and Timeframe
Introductions	EW opened the meeting and thanked MMO for making time to meet before Christmas; EW summarised the focus of the meeting [see Agenda within **Appendix A**, **Slide 2**]. • Sarah Wilford - BP / Net Zero Teesside and the NEP (Northern Endurance Partnership) • Richard Lowe – AECOM, leading the EIA/DCO • Ian Campbell – AECOM, coordinating the EIA/DCO • Ed Walker – AECOM, supporting Ian and Richard on the DCO/EIA • James Riley – AECOM, leading the HRA for NZT • Helen Watson – AECOM, Air Quality specialist working alongside Richard and Rachel to undertake the AQ modelling for NZT • Rachel Huxham – AECOM, Air Quality specialist • Sarah Errington – MMO, Case Manager for the project • Nicola Wilkinson – MMO, Case Officer for the project	
Project Update	SW thanked the MMO for offering to meet with NZT today and offered to provide a short update on the progress of the project over the last 6 months. SW explained that Stage II consultation has recently been completed and that various comments and responses have been received which are in the process of being considered. SW noted that there is a lot of activity going on behind the scenes to refine the project and prepare the Environmental Statement to support the DCO application. SW explained that the DCO submission is still targeted for March next year; SW explained that this will be the onshore scope of work, which is broadly down to mean low water. SW explained that there have been a couple of key changes or updates over recent months; one key update is	**1.** AECOM to share ZCH summary for MMO (see **Appendix B**)

Agenda Item	Notes	Key Actions and Timeframe
	a reduction in the red line boundary for the project which has been informed by ongoing engagement with stakeholders; the project has also refined down from 3 trains which we included within the Preliminary Environmental Information Report assessment to a single train. SW noted the broader context surrounding the project and how it is strategically developing its vision. SW explained that it has recently been formally announced that Net Zero Teesside will collaborate with Zero Carbon Humber (ZCH) helping to form the Northern Endurance Partnership (NEP). SW noted that in terms of NZTs role in this, NZT is looking to capture CO_2 from a number of industrial sources and then export the CO_2 captured to Endurance store (this is similar to the work that ZCH are doing on Humberside). SW explained that this is the collaboration where NZT are looking to work together taking CO_2 from both Humber and Teesside for storage in Endurance field. SW explained that this is the future vision of the eastern side of the country. SE thanked SW for the summary and strategic update; SE asked if ZCH is a new part of the NZT project as the MMO were not aware of it before; when will they be looking to get consent? SW clarified that ZCH is a separate project to NZT although NZT is looking to collaborate with ZCH to align offshore transport of CO_2. SE thanked SW for the clarity – that makes sense; lots of different acronyms! EW confirmed we would clarify the relationship between ZCH and NZT when we come back with meeting minutes.	
Summary of MMO engagement to-date and Status of Actions • Programme Awareness • Modelling • Marine Plan Checklist • UW Noise Modelling Approach • Fisheries Data	EW confirmed that engagement with the MMO had been ongoing for the last ~2 years; EW provided a summary of key recent touch points: • EIA Scoping (March 2019) • Update Meeting (September 2019) where various items were discussed with the MMO, including the approach to Marine Ecological assessment and the agreement of forthcoming planned samples throughout the Tees Bay; • Update Meeting (February 2020) where further technical progress on the approach to marine ecological assessment was discussed and agreed; this meeting also included ongoing discussions and around the scope and agreement of content for the DML; the meeting also included a discussion of potential sources of data to support fisheries assessment in the EIA process. EW noted that this meeting also included specific details of the thermal modelling approach and preliminary results; and • Update Meeting (August 2020), our most recent meeting, where we reviewed the MMO's PEI responses,	**2.** MMO to satisfy themselves internally that they have no comments to make on documentation not reviewed/commented upon at Stage II consultation (**By 08/01/2021**) **3.** MMO to share Marine Plan checklist with AECOM (**By 15/01/2021**) **4.** MMO to provide feedback to AECOM as soon as possible

Agenda Item	Notes	Key Actions and Timeframe
	open actions and agreement of key actions ahead of ES. EW provided an overview of recent actions, noting that this is the last pre-application opportunity for engagement with the MMO ahead of DCO submission so agreement of these actions, and bottoming out open actions specifically, is really important. **PEI Report** EW noted that as discussed with the MMO in August, when AECOM clarified to the MMO that no comments had been received on items such as the thermal modelling report, AECOM have not received any comments on the thermal modelling so far. EW explained that as this has been requested multiple times and as the scope, preliminary results and conclusions from a marine ecology perspective have been discussed throughout pre-application, suggest we close this out? SE noted this and will re-review and discuss with Cefas; EW noted this but reiterated that there is now limited time available ahead of DCO submission; in the event that Cefas/MMO do have any comments, we definitely need these imminently. SE understands this position and agrees that AECOM have attempted to engage on this. **Marine Plan Compliance Checklist** EW noted that at the discussion in August, we discussed the likelihood of the North East Marine Plan being 'adopted' by DCO submission; this plan is still in draft and as we don't know for sure that it will be 'adopted' by March 2021, suggest that we prepare our checklist for NZT to cater for both the MPS and north east (draft) marine plan? SE agrees that this is robust; EW asked if MMO can share the excel-based tool that they prefer assessment to be contained within? SE yes sure, can look into this after the meeting. **Underwater Noise Modelling** EW explained that at PEI, we had used a preliminary geometric spreading technique but suggested that as and when more information becomes available, we would update this. EW explained that for a number of technical reasons, and as the detailed information required for a more detailed underwater noise modelling exercise is not available, it is not possible to do a further more 'refined' model. EW explained however that for the purposes of the ES, we will revisit the conclusions from the modelling undertaken before; in addition, the geometric spreading technique is actually a precautionary / conservative approach as it tends to overpredict potential Zones of Influence. EW explained that in addition to these factors, the project would seek to apply best-practice and mitigation; by way of example, for the piling at the intake – which is the key sensitivity we're interested in discussing - we would adopt lower-impact methods, such as vibratory, with impact piling only being used to achieve design depth.	regarding approach to underwater noise modelling (**By 15/01/2021**) **5.** MMO to contact local MMO Officers regarding engagement on local fishing activity (**By 15/01/2021**) **6.** MMO to look into viability of data outputs from the Catch Recording App (**By 15/01/2021**)

Agenda Item	Notes	Key Actions and Timeframe
	EW confirmed that we will provide further details within the ES. EW noted that in addition to these factors, we would like to discuss the potential adoption of a seasonal restriction to help provide comfort to the MMO; specifically, we are aware of a key interest in Salmon and would be interested in the MMO's thoughts on a seasonal restriction between, for example, March and November. IC clarified that this is something subject to ongoing consideration and discussion. EW asked what the MMO's opinion was regarding this and specifically, considering our proposed approach to the intake cofferdam piling and mitigation, are the MMO content that the PEIR modelling be reviewed for ES but not fundamentally changed? SE said that this seems like a totally reasonable position, especially considering you seem happy to consider adopting the seasonal restriction which takes out a lot of the issue. SE suggested that she could go back to Cefas and discuss this further to check with them? EW explained that due to the timescales involved, there is limited availability for further technical discussions; we will provide more detail on approach and justification in the ES but would be very helpful if MMO could provide any further feedback today or imminently for the reasons mentioned? SE ok will do. **MMO Local Office Engagement** EW confirmed that AECOM have engaged with the local MMO officers multiple times and provided this correspondence to Marine Licensing (SE and the previous case officer, Laura Calvert) multiple times to investigate. EW confirmed that no detailed comments have been provided on the local fishing activity in the Tees Bay; EW explained that this is somewhat challenging because at Stage II consultation, MMO raised some questions around the use of landings data etc to support the marine ecology (fisheries) assessment. EW explained that there is now limited opportunity to consider local insights further as we are progressing with ES but that if SE could chase the local office, there may be an opportunity to consider; EW emphasised that this will need to be swift. SE confirmed she appreciated AECOM's position and aware that you have attempted to get feedback / fisheries insights multiple times; SE confirmed she will try once more to engage with the local officers. EW thanks. **MMO Fisheries Data** EW confirmed that when we last met, AECOM had requested MMO outputs from the catch recording app; EW asked if this was still possible as the action has not been addressed by MMO? SE said that she will need to look into this; this will need to be discussed with an S [Senior Manager at MMO]. EW thanked SE and asked for confirmation of this as soon as possible so that if can be factored into the ES, if at all possible. EW explained that in the meantime, the data which was presented at PEI remains our base-case for fisheries assessment; the ~13 sources discussed previously and offered to the local MMO office for comment remain unchanged. EW confirmed awareness that there are clear limitations with landings	

Agenda Item	Notes	Key Actions and Timeframe
	data and for this reason, we have attempted engagement with both MMO and IFCA. EW explained the baseline low levels of fishing activity in the Tees Bay and that this assessment had been discussed with the IFCA, who were confirmed that fishing activity in this area is minimal. EW confirmed that AECOM plan to re-engage with the IFCA and confirm their thoughts before ES; EW explained that we contacted IFCA last week but could not get a response. EW summarised that overall, our position at PEI remains valid and that we have received no additional information or evidence to challenge this; SE confirmed her appreciation of this and agreed that NZT can only use the best available evidence which is available and sounds like that has been obtained. EW confirmed that the feedback on fisheries assessment and where this 'sits' in the EIA was welcome at Stage II; we have taken this on board and are in the process of preparing a dedicated Commercial Fisheries section which will likely sit within Chapter 14 (as opposed to our previous consideration of some of the topic within Chapter 14 but also Chapter 20 – Socioeconomics). SE thanked EW – that would be useful as a single section. EW noted the open action regarding communication and forward planning; think engagement has been running well between NZT and MMO? SE yes thankyou – any advance warning of programme etc. is useful. EW provided an update on programme [see **Appendix A**, **Slide 7**]: • Stage II consultation completed (Summer 2020) • Ongoing technical stakeholder engagement throughout winter 2020 • Statements of Common Ground • Submission planned for ~March 2021	
High-Level Update, Design and Refinement • Programme • Abstraction • Discharge (including Proposed Alternative Outfall Location)	EW explained that since we last met, there has been some refinement of the project; specifically, since PEIR, we have removed the need for a preparatory dredge as we think that this is highly unlikely / not required and in any event, the Tees Estuary water supply may not end up being pursued. EW noted that the option for a full-scale replacement of the outfall at the location of the existing discharge route has also been removed; were the existing outfall pursued, works would be largely inspection and maintenance activities / potentially insertion of new reamer etc. SE thanked EW for the update – that is really useful. EW also explained that taking this requirement out addresses a number of the MMO / Cefas' comments on sediment. EW explained that for a number of reasons, the project is considering the optionality for a new outfall slightly further south of the existing route. RL explained that one of the key reasons for considering this option was that if a replacement outfall is needed, it makes sense to align this with the CO_2 discharge corridor. RL explained that in the event a new outfall is needed, this	

Agenda Item	Notes	Key Actions and Timeframe

could be developed within the same broad corridor as this existing planned crossing; this would reduce the potential for two crossings through the Coatham area down to a single main crossing; RL explained that this is environmentally beneficial so is seen as something good to pursue further. SE thanked RL for the explanation, this makes sense and seems like a good strategy.

EW noted that the works associated with this secondary outfall option would likely be similar/identical to those presented at PEIR for the replacement option for the existing route; EW explained that this type of replacement activity has therefore been assessed but will of course need to be updated and considered at the new location.

EW presented a visualisation of the potential second outfall option [see **Appendix A**, **Slide 10**]; EW confirmed that this would be 'either / or' with relation to the two outfall locations – both would not be progressed together.

EW explained that there are a number of key considerations related to this option which are discussed in the next slide [see **Appendix A**, **Slide 11**].

Item	Commentary
Cooling Water Modelling	EW explained that conditions predicted to be nearly identical at Outfall II. EW explained that when we originally modelled, we undertook sensitivity analysis for original cooling water modelling; this considered some changes to location of outfall head – did not alter conclusions.
Benthic / Intertidal	EW explained that overall, existing NZT sampling provides good characterisation of the inshore Tees Bay; a sensitivity has been undertaken using additional data – discussed in more detail later today.
Fisheries	EW explained that the PEIR conclusions predicted to be valid for Outfall II but will be re-examined for ES
Marine Ecology Assessment	EW explained that the PEIR conclusions predicted to be valid for Outfall II but will be re-examined for ES
Marine Licensing	EW explained that a key item is a minor addition to the draft DML before circulation to MMO

EW asked if the MMO had any thoughts on these key conclusions / findings so far? SE said that this seems entirely reasonable and seems like everything has been

Agenda Item	Notes	Key Actions and Timeframe
	considered well; potential sensitivities around Coatham Rocks may need to be considered? EW agreed and confirmed that this will be addressed in the updated HRA and ES.	
Potential Alternative Outfall Location: Intertidal / Benthic Characterisation of the Tees Bay • Presentation of Sampling Data to-date • Sensitivity testing through third-party data	EW handed over to JH and RG to provide further technical detail on intertidal/subtidal and benthic. RG explained that as part of the potential outfall II option, we have considered the intertidal benthic characterisation of the area. RG explained that for the outfall II option, the red line boundary falls within the existing intertidal phase I and phase II survey area; RG explained that phase I surveys identified the area as 'littoral sand and muddy sand' and that there is no requirement for additional data on the basis of existing coverage and understanding. RG explained that for the subtidal benthic, the new boundary and potential Zone of Influence is located a little further to the east. RG explained that the 2019 subtidal benthic samples do not encompass this area; however, RG explained that the area has been very well characterised by 2010 Teesside Offshore Wind Farm benthic grab data. RG noted that with this in mind, we have undertaken a sensitivity against the 2010 data RG presented an overview of samples from 2010 and 2019 visually [see **Appendix A**, **Slide 13**]. RG noted that we have summarised this data and our key conclusions in a memo which we will circulate to you after the meeting [see **Appendix C**]; RG summarised that 16 grab stations have been considered from the 2010 data and across all of these sites, 2 key biotopes have been identified; these are *Nephtys cirrosa* and *Bathyporeia spp*. in infralittoral sand' or '*Fabulina fabula* and *Magelona mirabilis* with venerid bivalves and amphipods in infralittoral compacted fine muddy sand'. RG explained that biotope distribution dependent on water depth gradient and mud content and that there is a consistent distribution across Tees Bay; RG summarised that the benthic communities in the 2010 survey are directly comparable to the 2019 survey. RG went on to explain that for 3 sample sites specifically, when they were chosen in 2019, they were selected to overlap with the 2010 sampling stations; this means that there is an opportunity to understand any changes over time, of which there are none. RG confirmed that on this basis, we are not seeking to obtain additional samples and do not think they are required; we will be happy to discuss further with the MMO today and/or answer any questions? SE thanked AECOM for the presentation of this and having the finer detail is really helpful; SE confirmed that in principle, this seems completely reasonable and it looks like the project has covered all considerations for the southern outfall however she would need to discuss with an S [Senior Manager at MMO] before providing further	**7.** MMO to provide response to NZTs position on benthic sampling (**As soon as possible and before 15/01/2021**)

Agenda Item	Notes	Key Actions and Timeframe
	confirmatory position. EW noted this but reiterated that due to the timescales involved ahead of DCO submission, there is limited time available and we would very much appreciate a clear steer from the MMO imminently; EW explained that all the evidence which they have reviewed clearly indicates the two biotopes which RG has talked through and we have uncovered no data which would challenge this finding. EW reiterated RGs comments regarding the very widespread study from 2010 and noted specifically that 3 of the sample stations from 2019 do overlap with the 2010 sites – EW clarified that this can help to indicate that as well as helping to sensitivity test our 2019 data, the same conclusions from 2010 to 2019 indicate that there are minimal-no changes over recent years. EW asked that with this in mind, would MMO be able to give any further more immediate steer? SE confirmed she would go away and reconsider but would need input from technical colleagues. EW thanked SE for this and confirmed that we will share the technical note after the meeting but that as timeframes are tight, we would very much appreciate a clear response from the MMO imminently.	
Potential Alternative Outfall Location: Commercial Fisheries	EW explained that the PEIR Conclusions set out that there were no significant effects predicted on local fishing activities / fisheries; EW explained that this was underpinned by prior engagement with the IFCA and a range of different data sources. EW explained that ~13 different sources presented at PEIR and that for some of these, such as landings, some limitations openly acknowledged. EW noted that the PEIR was supported by engagement with the MMO/IFCA although to-date, only the IFCA team have responded with feedback. EW explained that the IFCA feedback had been positive and supportive of the projects' findings regarding minimal fishing activity in the Tees Bay that could be potentially affected by the project. EW explained that nonetheless, we plan to hold ongoing engagement with the IFCA to confirm this; we will set this out in the ES. EW explained that in terms of next steps, conclusions to be clearly reported in ES, with dedicated commercial fisheries section in ES; EW explained that this will be supported by most-recent IFCA commentary on local fisheries. EW asked if SE had any further comments on commercial fisheries, any suggestions or any concerns regarding this approach and scope? SE said that this seems positive and that engaging with the IFCA is a good idea; apologies that the local MMO office have not responded so far. EW thanked SE for this feedback. EW confirmed finally that during Stage II consultation, we did have some limited feedback from a local fisherman regarding shellfisheries (scallop fishing specifically); EW explained that we considered this further and confirmed that the scallop areas of interest to the respondent were much further offshore.	

Agenda Item	Notes	Key Actions and Timeframe
	SE asked if these were the Dogger Bank areas? EW explained that yes they are and that they were currently the focus of much attention partly due to a temporary closure associated with ongoing Cefas investigations into spawning behaviour; SE confirmed that yes this is proving to be challenging. EW confirmed that the small Zone of Influence of NZT and the extensive distances between the project and these scallop areas means that there is no potential impact and this was confirmed through discussions with the IFCA.	
DML Review	EW explained that the DML content had been updated to reflect the latest amendments discussed earlier; EW confirmed that this will be ready for MMO review following meeting (to be included in output email from meeting). SE thanked EW for the advance notice; we will be ready to review the DML in the New Year.	**8.** AECOM to share DML with MMO (**W/C 11/01/2021**)
Statement of Common Ground	EW confirmed that we plan to circulate a draft SoCG in New Year. EW explained that we have had multiple engagement meetings and consultation opportunities between March 2019 and now – we're hopeful that this has been useful to MMO. EW confirmed that the Statement of Common Ground is an iterative "live" document which we will manage from now onward up to and including during examination. EW noted that in line with PINS guidance, we hope to reach a robust SoCG with MMO underpinned by engagement over the last two years. SE thanked EW for the advance warning; it has been helpful to meet regarding the project over the last couple of years especially as it is quite a large project. EW confirmed that we will engage with the MMO on the Statement of Common Ground in the new year and would be keen to underpin this with as much agreement as possible which we hope is achievable given good levels of engagement of late.	**9.** AECOM to share draft Statement of Common Ground with the MMO (**W/C 01/02/2021**)
Open Discussion, Questions and Any Other Business	EW opened up the open discussion and clarified that as this will be the last key opportunity for technical discussion with the MMO ahead of DCO submission, we are really keen to get the MMO's thoughts, opinions and indeed challenges – any questions or opening thoughts? RL reiterated this and confirmed that there has been good engagement so far, which is great, but that it is critical for us to obtain any additional concerns or queries at this stage so that they can be addressed? SW said that it would be good to understand any seasonal restrictions; EW explained that we will be considering this further and detailing information within the ES. RL asked if this was something that would be applied across the marine aspects of the project, such as the Tees Bay, or is it just the Estuary? SE confirmed that it is likely to just be the estuary but that she would need to check; EW confirmed his understanding that a key receptor was Salmon for the	

Agenda Item	Notes	Key Actions and Timeframe
	Tees and that this was likely to drive seasonal restrictions. SE confirmed that she would like to take this away and discuss with the Environment Agency who supply advice to the MMO on this topic. EW confirmed his understanding from neighbouring licence applications / DCOs / DMLs that it is not uncommon for a seasonal restriction to be applied by the MMO but alongside an opportunity to 'remove' this with a post-consent return. EW explained that for example, this could capture updated modelling or changes to the approach for piling, providing MMO an opportunity to remove the restriction if appropriate? SE yes this is something which happens quite a lot and is something which we are familiar with. SE asked how impacts were being considered in terms of the new potential outfall location; Coatham Rocks for example might provide some additional habitat or feature of interest? EW clarified that yes, this new option would be considered fully; we have focused a good deal of discussion today on the sampling aspect as it is crucial to agree but the wider appraisal of the option will be presented in the ES. SE asked how cumulative effects were being considered? SE noted for example that the ZCH pipeline discussed at the start may be of interest and similarly the offshore aspects of NZT? EW explained that the ZCH infrastructure is very distant to the NZT project being discussed today; EW explained that a cumulative approach was provided in the PEIR and this would be expanded for the ES with more detail. EW explained that regarding the offshore aspects of NZT (i.e. the CO_2 pipeline and offshore store), this is being progressed under a separate consenting regime but we did touch on this activity from a cumulative perspective in the PEIR. EW noted that in the ES, we will provide further detail on the potential interface between the NZT DCO being discussed today and CO_2 pipeline works. SE asked if NZT could provide details of the Environment Agency staff who are providing engagement for the project? EW confirmed that Lucy Mo is the main point of contact, there are other specialists involved also though; RL confirmed that Lucy Mo is the main planning contact so likely to be best for MMO to approach her; RL noted that Chloe Harvey-Walker also involved although this is mainly from an air quality perspective. SE asked if more details could be provided regarding ZCH as she was a little unclear on this; SW offered to provide some further information after the meeting which may help with this and that we will be happy to respond to any further queries to help the MMO if needed [see **Appendix B**]. SE thanked SW for this.	

Agenda Item	Notes	Key Actions and Timeframe
	EW reiterated that on the sampling point, we really want to agree this with the MMO as soon as possible given programme; SE asked when AECOM need a response by? EW confirmed as soon as possible, early in the New Year would be good? RL suggested 15th January? SE said yes, they will aim for that and try and get something back to NZT ahead of that; SE explained that timeframes for turnaround at this time of year challenging partly due to S availability. EW thanked MMO for the questions so far and reiterated that there is still more time for Q&A / open discussion; do MMO have any more queries? SE confirmed no; NW confirmed no. EW thanked MMO for making the time to meet and closed the meeting. [Meeting Closed: 10:32]	

Appendix A – Slide Pack

Net Zero Teesside

MMO Update Meeting

14 December 2020

Net Zero Teesside

Introductions and Agenda

Net Zero Teesside

- Introductions
- Project Update
- Summary of MMO engagement to-date / Action Review
- High-level Project Update, Design and Refinement
- Intertidal / Benthic Characterisation
- Commercial Fisheries
- Deemed Marine Licence (DML) Review
- Statement of Common Ground (SoCG)
- Open Discussion and Any Other Business

Introductions

Net Zero Teesside

Project Update

Net Zero Teesside

Engagement to-date

Net Zero Teesside

EIA Scoping (March 2019)

- Marine Planning / DML
- Technical discussions on Cooling Water, Thermal Modelling, Coastal Processes & Fisheries

Update Meeting (September 2019)

- Various items discussed, including the need to progress DML drafting

Update Meeting (February 2020)

- Technical and Stakeholder Update; DML

Update Meeting (August 2020)

- Review of MMO PEIR Response
- Key Actions ahead of ES

Action Review

Net Zero Teesside

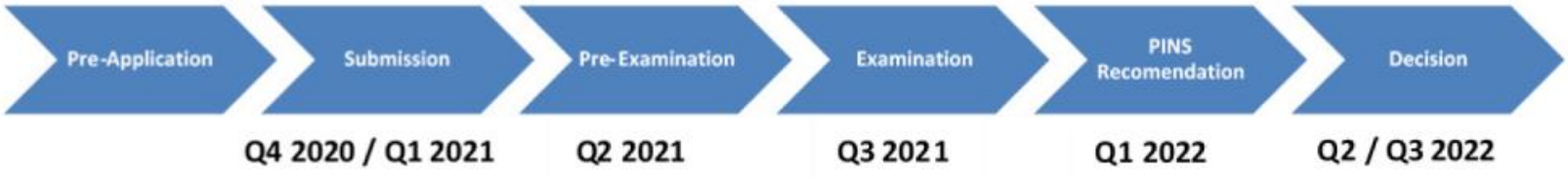
Action	Owner	Status	Suggested Next-Steps
PEIR Review	MMO (SE/NW)	No response on documentation (Inc. modelling report) since PEIR	Thermal Modelling report scope, specification and results discussed extensively; MMO confirmed satisfactory throughout; suggest close-out?
Marine Plan Compliance Checklist	AECOM (EW)	Marine Plan Checklist to be circulated after meeting today	Circulate checklist, await MMO comments and close-out
UW Noise Modelling Review	AECOM (EW)	Ongoing review of modelling and approach	Discuss today and AECOM to provide update as progress made toward ES
MMO Local Office Engagement	AECOM (EW)	Records of engagement with local MMO and Marine Licensing team supplied August 2020	Close-out
MMO Fisheries Data	MMO (SE/NW)	No response to-date	MMO to respond with any additional data (including catch recording app outputs), if available, or confirm no further data to provide
Provide advance warning for review tasks / programme updates	AECOM (EW)	Ongoing updates being provided to MMO, including through meeting today	Keep open until submission

High-Level Update, Design and Refinement

Net Zero Teesside

Programme

- Stage II consultation completed (Summer 2020)
- Ongoing technical stakeholder engagement throughout winter 2020
- Statements of Common Ground
- Submission planned for ~March 2021



High-Level Update, Design and Refinement

Net Zero Teesside

Design and Refinement – Intake

Item	PEIR	ES
Refurbishment and/or replacement	✓	✓
Preparatory Dredge	✓	✗
Cofferdam	✓	✓

Design and Refinement – Outfall

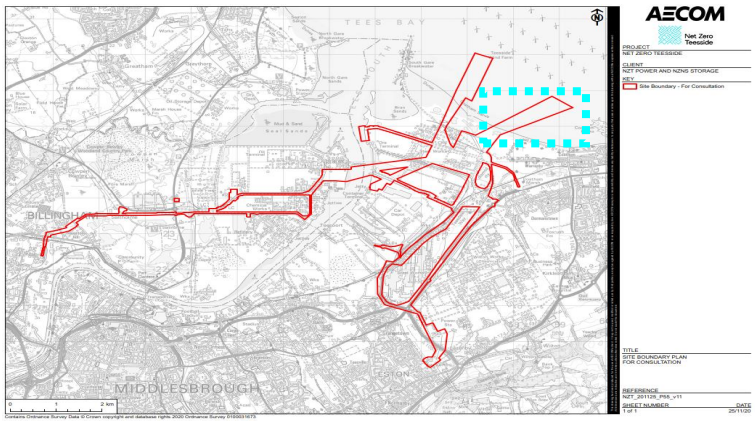
Item	PEIR	ES
Refurbishment and/or replacement	✓	✓ (although extent of refurbishment reduced)
Wholesale Replacement along route of existing outfall	✓	✗

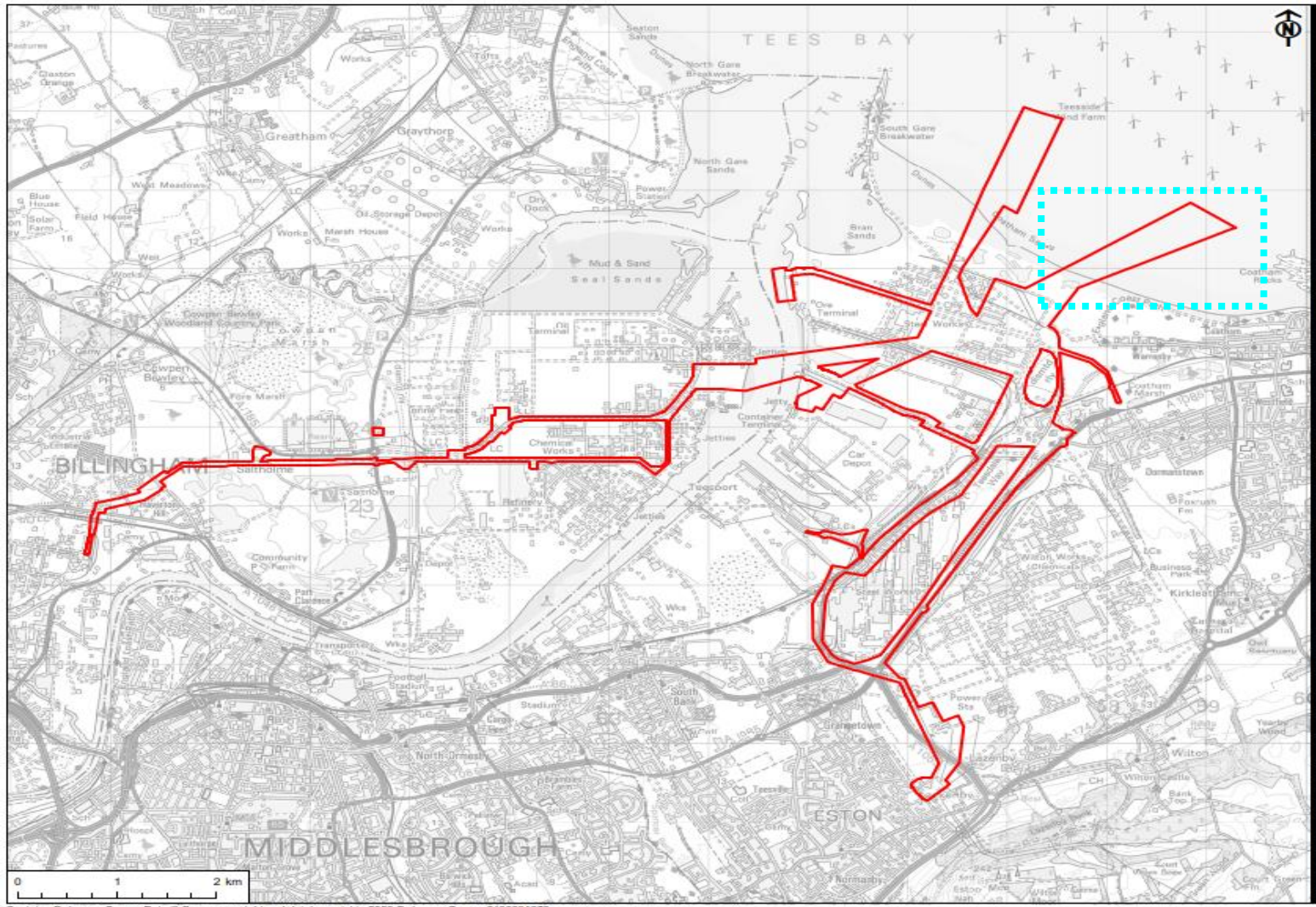
High-Level Update, Design and Refinement

Net Zero Teesside

Design and Refinement – Outfall (II)

- Potential for alternative outfall solution highlighted
- This is as a result of various ongoing technical, economic and planning assessment
- New potential outfall – “Outfall II” – located alongside existing CO_2 corridor
- The works associated with Outfall II are expected to be identical to those assessed under a full replacement scenario in PEIR
- Key considerations related to this potential addition are considered in the next slide and supplemented with specific technical considerations later today





AECOM

Net Zero Teesside

PROJECT
NET ZERO TEESSIDE

CLIENT
NZT POWER AND NZNS STORAGE

KEY
Site Boundary - For Consultation

TITLE
SITE BOUNDARY PLAN
FOR CONSULTATION

REFERENCE
NZT_201125_P55_v11

SHEET NUMBER
1 of 1

DATE
25/11/20

Design and Refinement – Outfall (II)

- Key considerations related to this potential addition summarised below

Item	Commentary
Cooling Water Modelling	• Conditions predicted to be nearly identical at Outfall II • Sensitivity analysis undertaken for original cooling water modelling considered some changes to location of outfall head – did not alter conclusions
Benthic / Intertidal	• Overall, existing NZT sampling provides good characterisation of the inshore Tees Bay • A sensitivity has been undertaken using additional data – discussed in more detail later today
Fisheries	• PEIR conclusions predicted to be valid for Outfall II but will be re-examined for ES
Marine Ecology Assessment	• PEIR conclusions predicted to be valid for Outfall II but will be re-examined for ES
Marine Licensing	• Key item is a minor addition to the draft DML before circulation to MMO

Intertidal / Benthic Characterisation of the Tees Bay

Net Zero Teesside

Intertidal Benthic Characterisation

- Outfall II red line boundary falls within existing intertidal phase I and II survey area
- Phase I surveys identified this area as ‘littoral sand and muddy sand’
- No requirement for additional data

Subtidal Benthic Characterisation

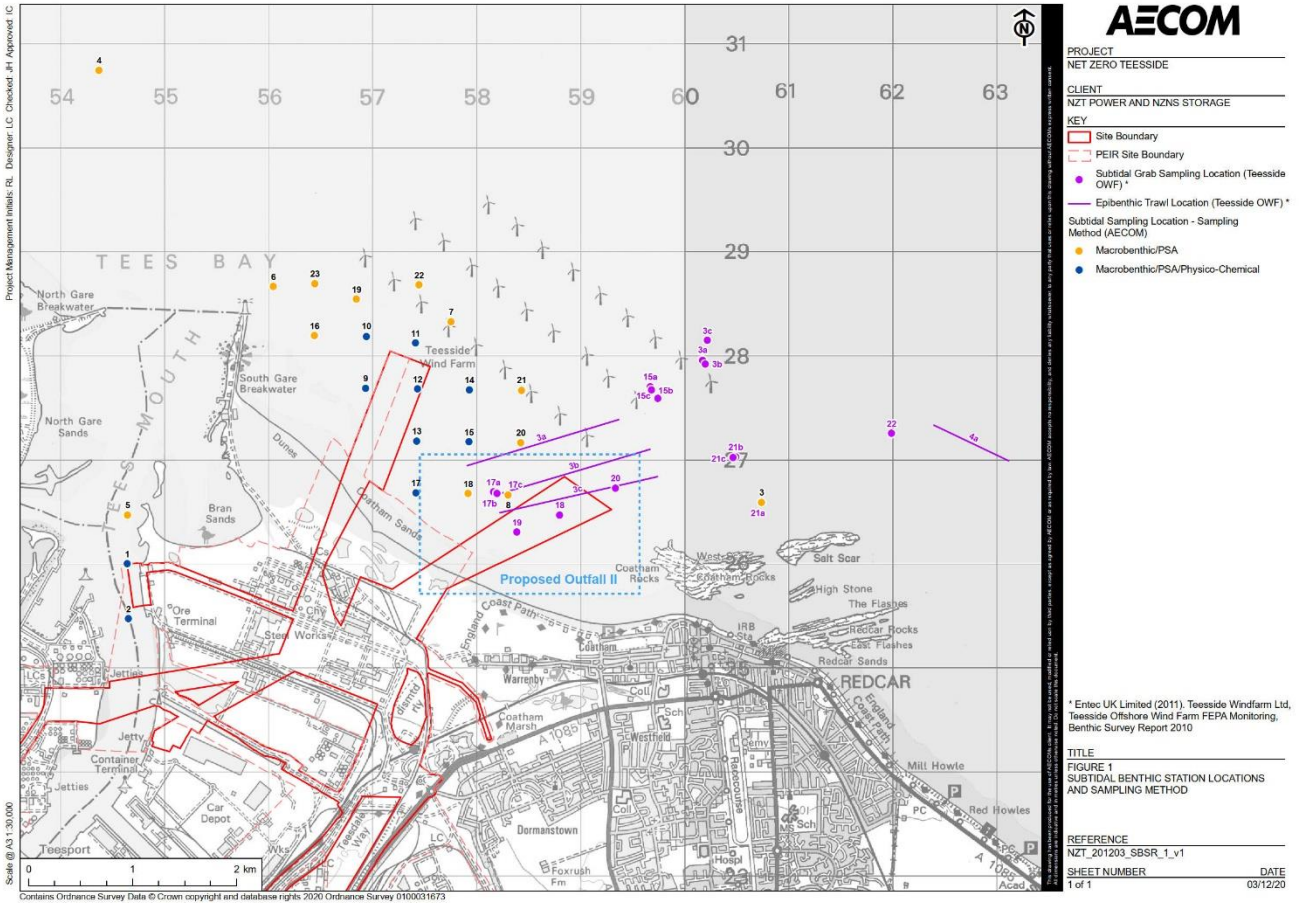
- Outfall II – new red line boundary / Zone of Influence (ZoI) located further east
- 2019 subtidal benthic sampling stations do not encompass new area
- This area is characterised by 2010 Teesside OWF Benthic Grab Survey (Entex UK Ltd, 2011)

Reference:

Entec UK Limited (2011). Teesside Windfarm Ltd, Teesside Offshore Wind Farm FEPA Monitoring, Benthic Survey Report 2010.

Teesside OWF Sampling Stations

Net Zero Teesside



Teesside OWF Survey Results

Net Zero Teesside

OWF Subtidal Benthic Survey

- 16 grab sampling stations considered relevant for NZT ES
- Two biotopes identified at these stations:

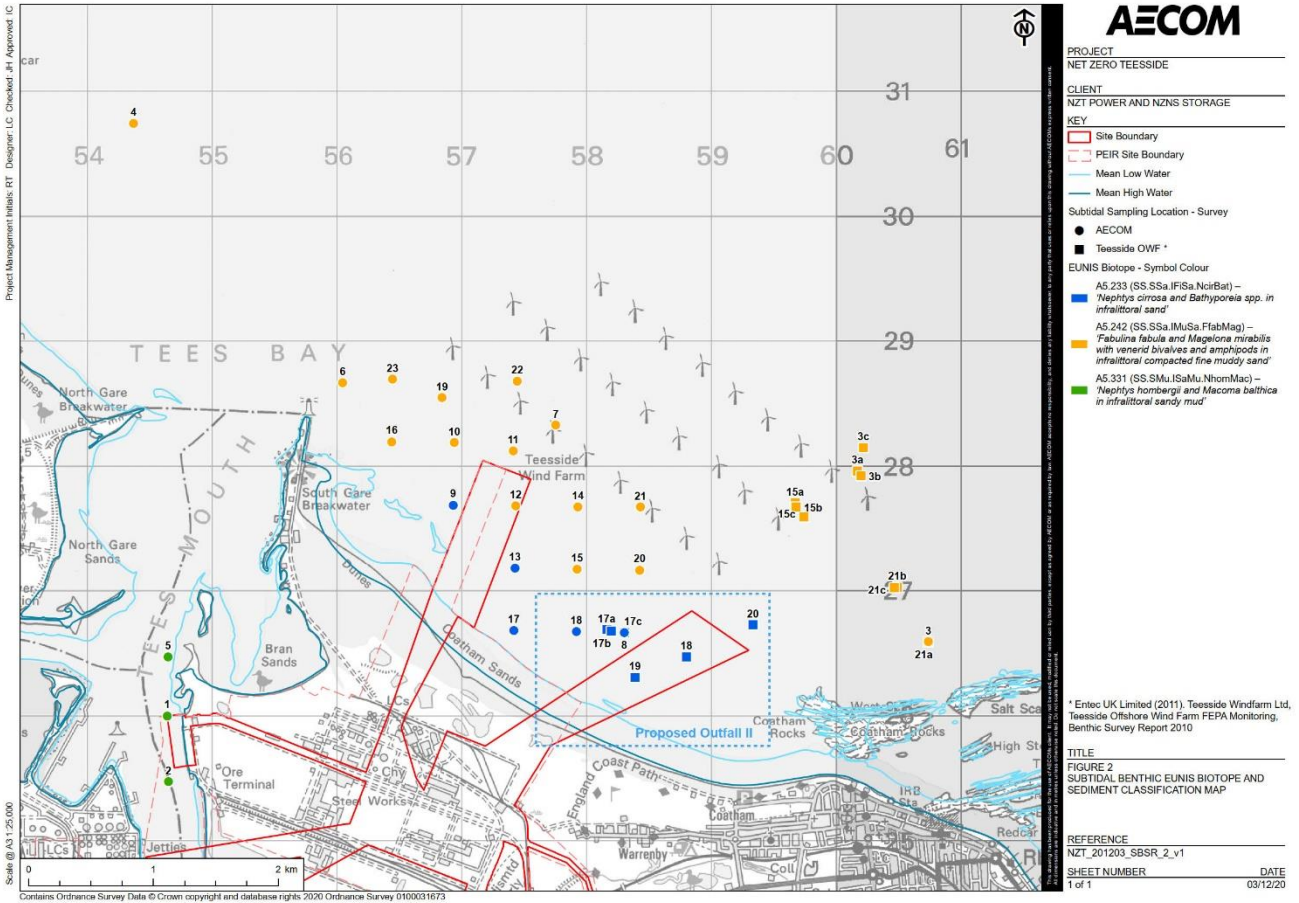
‘*Nephtys cirrosa* and *Bathyporeia* spp. in infralittoral sand’ (A5.233; SS.SSa.IFiSa.NcirBat)

‘*Fabulina fabula* and *Magelona mirabilis* with venerid bivalves and amphipods in infralittoral compacted fine muddy sand’ (A5.242; SS.SSa.IMuSa.FfabMag)

- Biotope distribution dependent on water depth gradient and mud content
- Consistent distribution across Tees Bay
- Benthic communities in 2010 comparable to 2019 survey

NZT and Teesside OWF Biotope Map

Net Zero Teesside



Commercial Fisheries

Net Zero Teesside

PEIR Conclusions

- No significant effects on local fishing activities / fisheries

Data Sources

- ~13 different sources presented at PEIR, although some limitations openly acknowledged
- Data supplemented with MMO/IFCA engagement

Refinement

- Ongoing engagement with local IFCA; requests to MMO local office / licensing team for further data

Next Steps

- Conclusions to be clearly reported in ES, with dedicated commercial fisheries section in ES
- This will be supported by most-recent IFCA commentary on local fisheries

DML Review

Net Zero Teesside

Content

- Updated to reflect the latest amendments discussed earlier
- Ready for MMO review following meeting (to be included in output email from meeting)

Statement of Common Ground

Net Zero Teesside

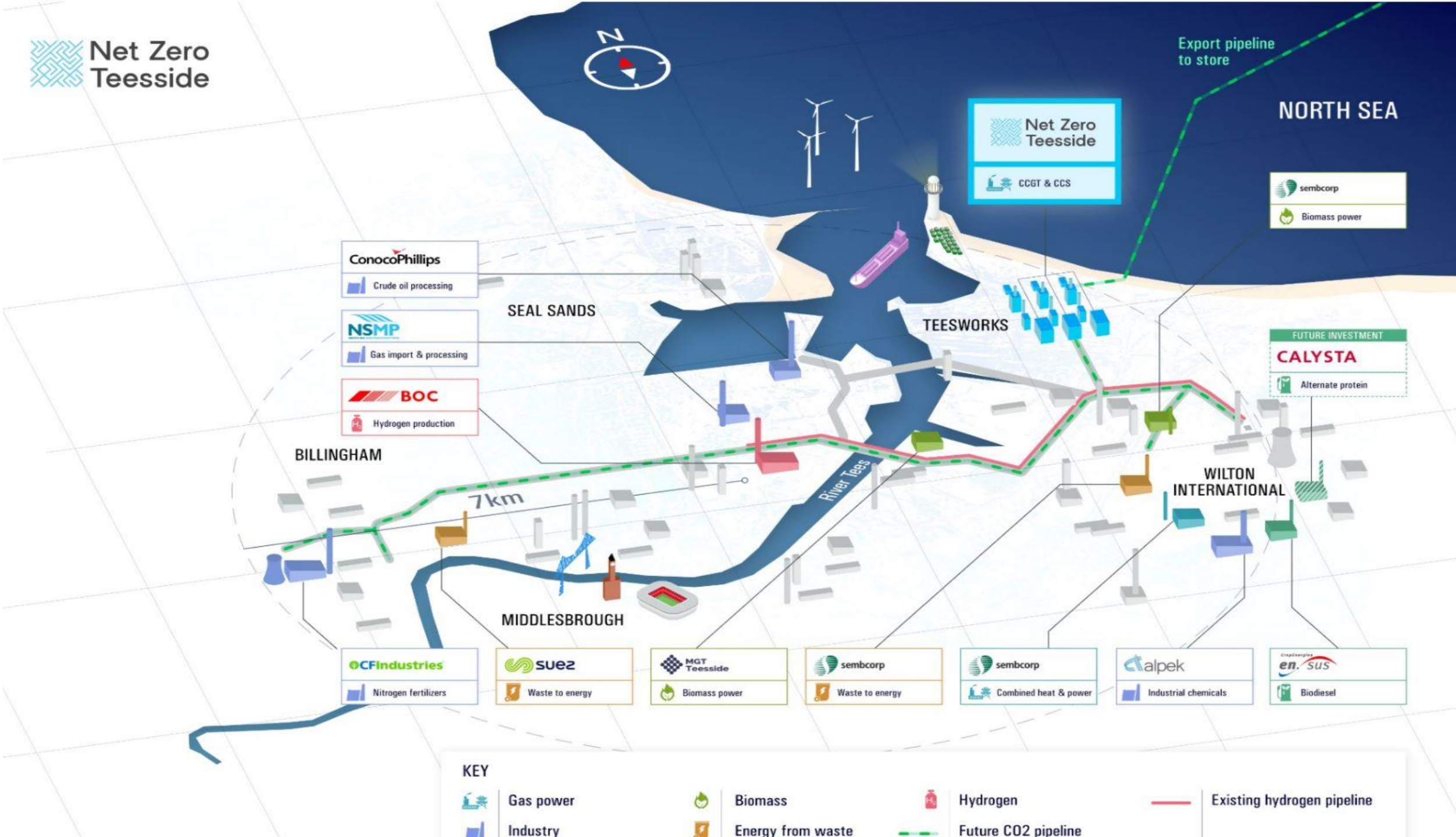
SoCG

- Plan to circulate a draft SoCG in New Year
- Multiple engagement meetings and consultation opportunities between March 2019 and now – we're hopeful that this has been useful to MMO
- SoCG an iterative "live" document which we will manage from now onward up to and including during examination
- In line with PINS guidance, we hope to reach a robust SoCG with MMO underpinned by engagement over the last two years

Open Discussion | Questions | AOB

Thank You

Appendix B – Zero Carbon Humber Summary


Net Zero Teesside
N
Export pipeline to store
NORTH SEA
Net Zero Teesside
CCGT & CCS
sembcorp
Biomass power
ConocoPhillips
Crude oil processing
NSMP
Gas import & processing
BOC
Hydrogen production
SEAL SANDS
TEESWORKS
FUTURE INVESTMENT
CALYSTA
Alternate protein
BILLINGHAM
7km
River Tees
WILTON INTERNATIONAL
MIDDLESBROUGH
CF Industries
Nitrogen fertilizers
suez
Waste to energy
MGT Teesside
Biomass power
sembcorp
Waste to energy
sembcorp
Combined heat & power
alpek
Industrial chemicals
en. sus
Biodiesel
KEY
Gas power
Industry
Biomass
Energy from waste
Hydrogen
Future CO2 pipeline
Existing hydrogen pipeline


Net Zero Teesside
&
ZEROCARBON HUMBER
Northern Endurance Partnership
TEESSIDE
HUMBER
N
POTENTIAL FUTURE EXPANSION
POTENTIAL FUTURE EXPANSION
NORTH SEA
ENDURANCE
145km
85km
TEESSIDE
MIDDLESBROUGH
SCARBOROUGH
HUMBER
HULL
GRIMSBY
YORK
SCUNTHORPE

Appendix C - Technical Memo (Subtidal / Benthic Sampling)

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Portwall Lane
Bristol BS1 6NA
United Kingdom

[redacted]
aecom.com

Project name: 60669231
Project ref: Teesside Net Zero

To:
Sarah Errington, Marine Management Organisation

Date:
17th December 2020

CC: Ian Campbell, AECOM

Memo

In July 2020 a Preliminary Environmental Information (PEI) Report, in support of the DCO planning application process for the Net Zero Teesside (NZT) project, was submitted to the Planning Inspectorate. The PEI Report formed part of the basis of a second (Stage II) consultation for the project during the pre-application phase of the DCO application process. Prior to this Stage II consultation, technical engagement has taken place with a range of consultees and interested parties, including engagement with the MMO in March 2019, September 2019, February 2020 and August 2020.

Formal responses to the Stage II consultation have now been received and will be addressed in the Environmental Statement. However, since the submission of the PEI Report, a potential design change related to the Water Connection Corridor has been identified; specifically, this includes the potential to relocate the Water Discharge Corridor into the eastern end of Coatham Sands bay in a location to the south east of the current proposal.

The new potential location for the outfall, referred to as 'Outfall II' may present benefits to the wider environmental performance of the NZT project. Outfall II would allow for the easy replacement of the existing steelwork if it is in poor condition. Additionally, by selecting a Water Discharge Corridor within proximity to the proposed CO_2 export pipeline, there are opportunities to streamline works, minimising potential disturbance to the area.

The works associated with Outfall II are expected to be comparable to those which have already been assessed under the full replacement scenario for the current Water Discharge Corridor in the PEI Report. However, the new location would have the added benefit of requiring only corridor of activity through the designated dunes and foreshore of the Teesmouth and Cleveland Coast SPA/Ramsar site. The potential extension to the existing red line boundary is shown in Figure 1.

It is evident that the Zone of Influence (ZoI) is likely shift to the east and therefore consideration to this new area should be addressed; key topics of potential interest are intertidal and subtidal benthic baseline surveys, thermal modelling and fisheries assessment(s).This technical note is primarily focused on the topic of subtidal benthic ecology with the remaining considerations forming part of a planned engagement meeting with the MMO in December 2020.

Subtidal benthic ecology surveys were undertaken in December 2019 in order to outline the key benthic receptors as part of the NZT project benthic ecological baseline characterisation study (see Appendix 14D submitted with the PEI Report). The study area and grab station locations were defined on the basis of the proposed location of the Water Discharge Corridor (Outfall I, at the time) and the predicted ZoI of potential effects arising from the development. The survey area encompassed an area from Long Scar (7 km to the north) to Redcar Sands (7 km to the south) and up to 7.5 km offshore to the northeast (Figure 1). Within this area a total of 23 sampling stations were included within the subtidal benthic survey design from which triplicate grab samples were collected. The majority of the sampling stations were located in the Tees Bay within the vicinity of the original Water Discharge Corridor (Outfall I). The PEI report study also included data from the 2010 Teesside Offshore Wind Farm (OWF) survey (Entec UK Ltd, 2011) as three stations (6, 7, and 8) fell directly within the study area.

The 2019 survey sampling stations did not extend into the newly proposed and amended red line boundary encompassing Outfall II. There are, however, several stations from the 2010 Teesside OWF benthic grab survey that do encompass this area (see Figure 1 below); in line with the recommendations of the International Maritime

Organisation (IMO) Sampling Guidelines (IMO, 2005) and wider high-level positions from the MMO regarding marine baseline development, historical data on physical, chemical and ecological properties of material can be used to help inform the consenting process for future development. The data from 16 OWF grab samples (Figure 1) show that the biotopes at these stations are consistent with those found in the 2019 survey - either '*Nephtys cirrosa* and *Bathyporeia* spp. in infralittoral sand' (A5.233; SS.SSa.IFiSa.NcirBat) or '*Fabulina fabula* and *Magelona mirabilis* with venerid bivalves and amphipods in infralittoral compacted fine muddy sand' (A5.242; SS.SSa.IMuSa.FfabMag), distributed depending on water depth gradients and mud content.

Thus, the data show these two biotopes are consistently distributed across the bay and that the benthic communities observed in 2019 are comparable to those observed in 2010 (details of the analysis undertaken are provided below). Therefore, we recommend that no further primary data collection would be required and that the currently available benthic data are suitable for the completion of an impact assessment for the proposed Outfall II location.

We would welcome a discussion regarding this topic at the earliest opportunity; to help with forward planning for this meeting, please find attached a draft agenda alongside this technical note.

Yours Sincerely,

Ed

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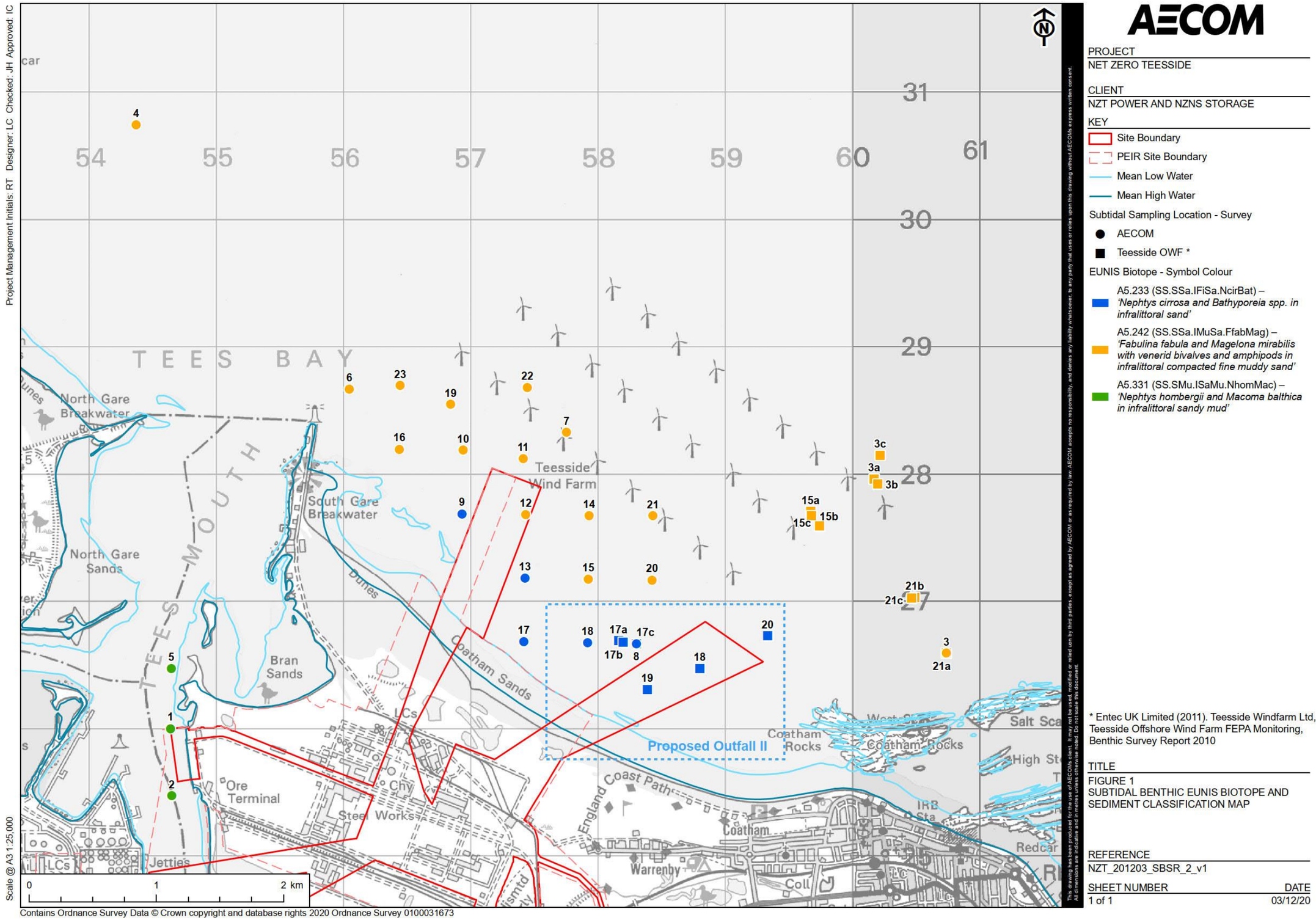
Figure 1. Teesside OWF and Teesside Net Zero subtidal benthic sampling stations and EUNIS biotope classifications



* Entec UK Limited (2011). Teesside Windfarm Ltd, Teesside Offshore Wind Farm FEPA Monitoring, Benthic Survey Report 2010

TITLE
FIGURE 1
SUBTIDAL BENTHIC EUNIS BIOTOPE AND SEDIMENT CLASSIFICATION MAP

REFERENCE
NZT_201203_SBSR_2_v1

SHEET NUMBER
1 of 1

DATE
03/12/20

Analysis of additional Teesside OWF data

Sediment Composition

The major sediment fractions at each OWF benthic grab station are presented in Figure 2. The particle size analysis (PSA) data has been summarised and classified as per the Folk (1954) classification system (as described in Table 1). There was little variation between the OWF stations, all being dominated by a high content of sandy sediments (63 µm - 2 mm), with a generally low mud content (sediment <63 µm). Only station 21C had a sediment composition containing gravel (sediment ≥2 mm), representing 11.2% of the total sediment fraction. Overall, sand represented the highest sediment fraction across all stations (>90%), excluding station 21C (sand = 75.8%). The classification of most stations was 'sand', whilst station 21C was classified as 'gravelly muddy sand'.

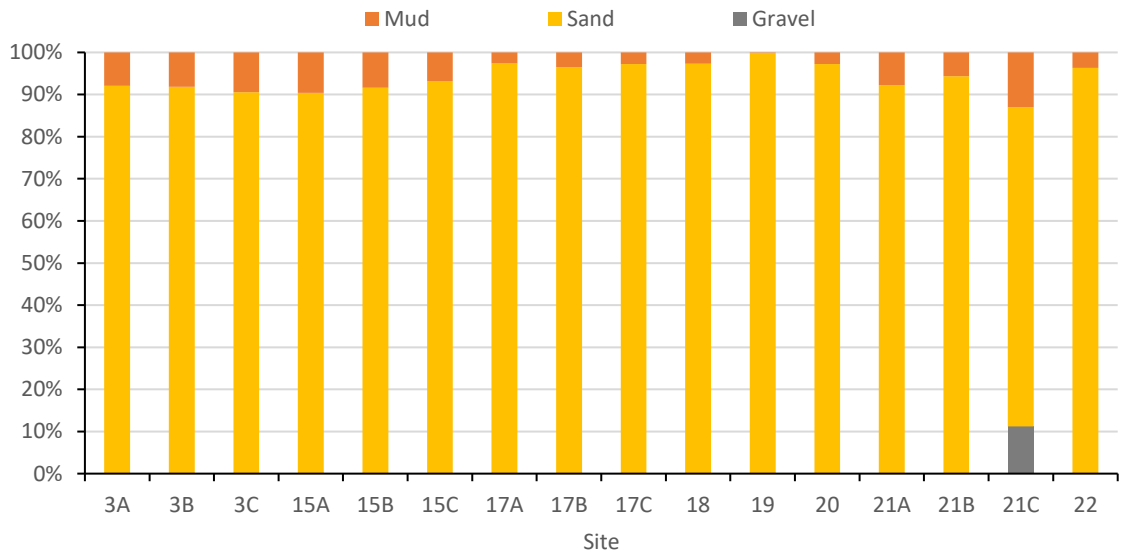


Figure 2. Major sediment fractions (%) at each OWF grab sampling station considered

Table 1. Summarised OWF PSA data as classified by Folk (1954)

Station no.	Folk and Ward Description	Folk and Ward Sorting	Mean µm	Mean phi	Sediment Classification	Modified Folk
3A	Very Fine Sand	Poorly Sorted	105.2	3.765	Sand	S
3B	Very Fine Sand	Poorly Sorted	106.2	3.767	Sand	S
3C	Very Fine Sand	Poorly Sorted	114.7	3.785	Sand	S
15A	Fine Sand	Poorly Sorted	149.8	3.435	Sand	S
15B	Very Fine Sand	Poorly Sorted	139.4	3.429	Sand	S
15C	Very Fine Sand	Poorly Sorted	127.7	3.475	Sand	S
17A	Fine Sand	Well Sorted	186.4	2.682	Sand	S
17B	Fine Sand	Well Sorted	183.1	2.753	Sand	S
17C	Fine Sand	Moderately Well Sorted	171.1	2.832	Sand	S

Station no.	Folk and Ward Description	Folk and Ward Sorting	Mean µm	Mean phi	Sediment Classification	Modified Folk
18	Fine Sand	Well Sorted	178.0	2.769	Sand	S
19	Fine Sand	Well Sorted	189.6	2.534	Sand	S
20	Fine Sand	Well Sorted	189.2	2.685	Sand	S
21A	Very Fine Sand	Poorly Sorted	134.9	3.471	Sand	S
21B	Very Fine Sand	Moderately Sorted	132.7	3.366	Sand	S
21C	Fine Sand	Very Poorly Sorted	327.6	3.120	Gravelly Muddy Sand	gmS
22	Fine Sand	Well Sorted	177.8	2.809	Sand	S

Macrobenthic communities

Across all OWF benthic grab stations, a total of 114 species were recorded, with *Chaetozone* cf. *christiei* and *Magelona johnsti* being the most commonly encountered species recorded. For the OWF benthic grab stations considered within this memo, the average abundance recorded was 517.5 individuals/m^2. The key species characterising each of these stations and contributing to similarity in infaunal multivariate cluster groups is outlined below.

The species richness (total number of species, S) and diversity (Shannon diversity index, H') at each OWF benthic grab station is presented in Figure 3. Species richness ranged from 4 to 34 species, whilst species diversity ranged from H' = 1.034 to H' = 2.945. This was comparable to the range of species richness and diversity recorded during the Teesside Net Zero subtidal benthic surveys (S = 8 to S = 37; H' = 1.275 to H' = 2.854). Species richness and diversity was highest at the OWF benthic grab station 3C, but was lowest at station 19.

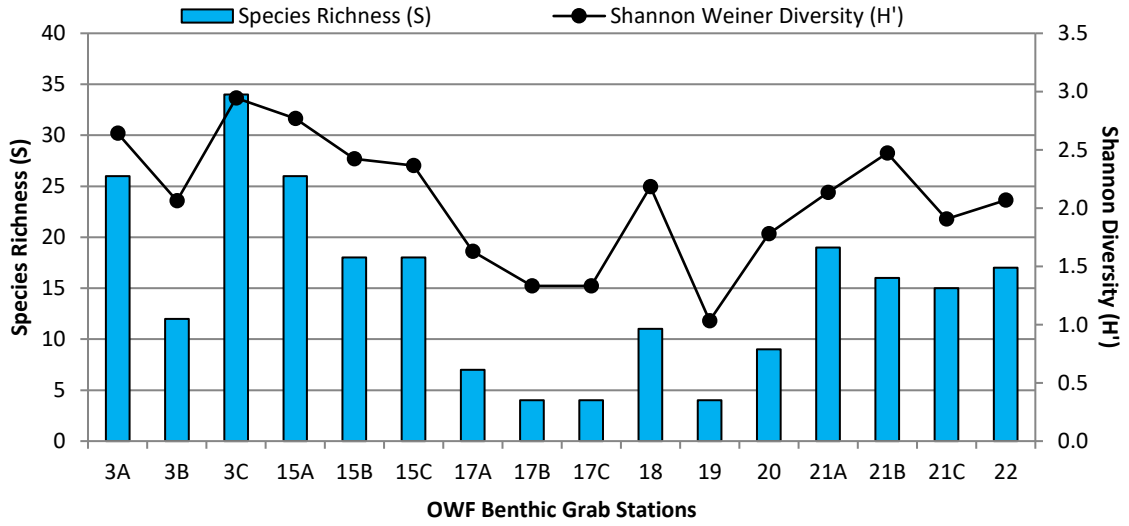


Figure 3. Species richness (S) and Shannon diversity index (H') recorded at each OWF benthic grab station considered within this memo

Priority Species and INNS

The OWF benthic grab surveys recorded a number of individuals and colonies of *Sabellaria spinulosa.* This species forms biogenic reefs which is an Annex 1 habitat under the Habitats Directive, as well as being a priority UK BAP habitat. Of the OWF benthic grab stations considered within this memo, *Sabellaria spinulosa* was recorded at station 21C only, with a total of 25 individuals. Overall, the results of the OWF benthic surveys concluded that the abundance of *Sabellaria spinulosa* was not great enough to represent biogenic reef. No other species of conservation importance were found during the OWF benthic survey, all species were considered common to the Teesside area and in UK waters.

Biotope Classifications

Multivariate analysis of the OWF benthic grab stations, was undertaken by Entec UK Ltd to determine the clustering of stations with a similar community composition, and to assign different biotope classifications.

Five discrete groups (A – E) were identified using cluster analysis and a SIMPROF test. Of these, groups A and B were considered as two distinct clusters, representing the majority of the grab samples. Groups C, D, and E correspond to three grab samples and do not include the stations considered within this memo. SIMPER analysis was used to identify the species which contribute to within group similarity, and how these characterise each group. The results of this analysis[1], including which stations (considered in this memo) comprise each group, is presented in Table 2. *Nephtys cirrosa* contributed the highest to the within group similarity of Group A, representing 47.04%. In Group B, both *Chaetozone* cf. *christiei* and *Magelona johnsti* accounted for the highest within group similarity, representing 13.00% and 11.80%, respectively.

Table 2. OWF infaunal multivariate cluster groups and the results of the SIMPER analysis*

Group	Stations	Species	Contribution to Similarity (%)
A	17 (A, B, C), 18, 19, 20	*Nephtys cirrosa*	47.04
		Bathyporeia elegans	16.56
		Echinocardium cordatum	6.29
		Nemertea indet.	5.18
B	3 (A, B, C), 15 (A, B, C), 21 (A, B, C), 22	*Chaetozone* cf. *christiei*	13.00
		Magelona johnsti	11.80
		Bathyporeia elegans	7.11
		Echinocardium cordatum	6.32

*top four species contributing to similarity presented

Each OWF infaunal multivariate cluster group was assigned a biotope classification, based on the composition of the species assemblage at each station and abiotic factors, such as the composition of substrate. Each biotope is based on codes outlined within the EUNIS habitat classification system (EEA, 2012). A description of each biotope is provided in the 'Biotope Descriptions' section, whilst a habitat classification map of each station is presented in Figure 1.

Group A was classified as '*Nephtys cirrosa* and *Bathyporeia* spp. in infralittoral sand' (A5.233; SS.SSa.IFiSa.NcirBat), which is synonymous with sediment that has a high content of sand, with little to no fractions of mud ('infralittoral fine sand'). The stations comprising group A (such as 18 and 19) were found in the shallow inshore area which is characterised by moderate to high exposure and sediments possessing a low clay/silt content, characteristic of this biotope. The amphipod *Bathyporeia* sp. and polychaete *Nephtys cirrosa* are typical of this biotope and dominated the abundance of these stations.

In contrast, group B was classified as '*Fabulina fabula* and *Magelona mirabilis* with venerid bivalves and amphipods in infralittoral compacted fine muddy sand' (A5.242; SS.SSa.IMuSa.FfabMag). This biotope is typically found in less exposed areas compared to the biotope A5.233, 'extending from the extreme lower shore down to more stable circalittoral zone at about 15-20 m' (EEA, 2019). The stations of group B were located in most cases, in slightly deeper waters and were less exposed, exhibiting a higher percentage of silt/clay. Due to the higher content of mud for this biotope, a greater dominance of venerid bivalves is expected.

The two biotopes identified (A5.233 and A5.242) qualify as habitats of principal importance being listed under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 and belong to the UK BAP priority habitat type, 'subtidal sands and gravels'. These are also representative of the Annex I habitat 'sandbanks slightly covered by sea water all the time'. However, these habitats are not a qualifying feature of any nearby designated site.

Biotope Descriptions

A5.233 - Nephtys cirrosa and Bathyporeia spp. in infralittoral sand

MHCBI: SS.SSa.IFiSa.NcirBat

[1] The SIMPER analysis was undertaken for all OWF grab sampling stations, not just those considered within this memo.

Stations: 17 (A, B, C), 18, 19, 20. Depth Range: 0 – 30 m

Descriptions: Characterised by *Nephtys cirrosa* and *Bathyporeia* spp. (and sometimes *Pontocrates* spp.), found from the shallow sublittoral to at least 30 m depth. This biotope occurs within well-sorted medium and fine sands which are subject to physical disturbance, such as wave action. Compared to less disturbed biotopes, the faunal diversity is reduced, consisting of more actively-swimming amphipods.

A5.242 - Fabulina fabula and Magelona mirabilis with venerid bivalves and amphipods in infralittoral compacted fine muddy sand

MHCBI: SS.SSa.IMuSa.FfabMag

Stations: 3 (A, B, C), 15 (A, B, C), 21 (A, B, C), 22. Depth Range: 0 – 20 m

Descriptions: Communities are dominated by venerid bivalves such as *Chamelea gallina* and may be characterised by a prevalence of *Fabulina fabula* and *Magelona mirabilis* or other species of *Magelona (e.g. M. filiformis).* Other taxa which are commonly recorced include: the amphipod *Bathyporeia spp.* and polychaetes such as *Chaetozone setosa, Spiophanes bombyx* and *Nephtys spp..* This biotope is typically found in stable, fine, compacted sands and slightly muddy sands in the infralittoral and littoral fringe.

Discussion

The sediment content of the 2019 Teesside Net Zero subtidal benthic stations in Tees Bay, consisted of predominantly sand, with a generally low mud and gravel content. The classification of these stations was ‘slightly gravelly sand’, ‘slightly gravelly muddy sand’, and ‘sand’. This conforms with the high content of sand recorded in the additional 16 OWF benthic grab samples considered within this memo.

The Teesside Net Zero stations in Tees Bay were classified as either the biotope ‘*Nephtys cirrosa* and *Bathyporeia* spp. in infralittoral sand’ (A5.233; SS.SSa.IFiSa.NcirBat) or ‘*Fabulina fabula* and *Magelona mirabilis* with venerid bivalves and amphipods in infralittoral compacted fine muddy sand’ (A5.242; SS.SSa.IMuSa.FfabMag). In general, the stations in the shallow inshore area, where the level of exposure is considered to be greater (apparent from the lower sediment content of mud), were determined to be the biotope A5.223. The stations located in slightly deeper waters, where the sediment content of mud was higher and as such the number of venerid bivalves were also, were classified as A5.242. These two biotopes were also recorded at the OWF benthic grab stations considered within this memo, demonstrating the same association between water depth gradients and mud gradients from the shore and the biotope assigned (see Figure 1). It was noted in the OWF benthic survey report that, although small scale spatial variations between grabs were recorded, ‘in terms of the specific macro-faunal assemblage’, these variations were not sufficient to change the biotope classifications (Entec UK Ltd, 2011).

References

Entec UK Limited (2011). Teesside Windfarm Ltd, Teesside Offshore Wind Farm FEPA Monitoring, Benthic Survey Report 2010.

European Environment Agency (EEA). (2012). EUNIS habitat classification. [Online]. Available from: [redacted][Accessed: 01/12/2020].

European Environment Agency (EEA). (2019). Infralittoral muddy sand. [Online]. Available from: [redacted]Accessed: 01/12/2020].

International Maritime Organisation (IMO). Sampling of Dredged Material – Guidelines for the Sampling and Analysis of Dredged Material Intended for Disposal at Sea 2005.

Meeting Minutes

Meeting name
Net Zero Teesside (NZT) – MMO/Cefas Update Meeting

Meeting date
11 February 2021

AECOM project number
60559231

Subject
Marine Management Organisation/Cefas - Stakeholder Update Meeting

Time
10:00 – 11:30

Additional information
MMO Case Reference: DCO/2019/00003
Appendix A: Site Location Plan
Appendix B: Meeting Slide Pack

Attendees
Ed Walker (EW), AECOM
Jackie Hill (JH), AECOM
Sarah Wilford (SW), BP
Sarah Errington (SE), Case Manager, MMO
Nicola Wilkinson (NW), Case Officer, MMO
Stefan Bolam (SB), CEFAS

Apologies
Richard Lowe (RL), AECOM
Richard Gibbs (RG), AECOM

MMO/Cefas Meeting Agenda – 11 February 2021

Agenda Item	Notes	Key Actions
Introductions and Objectives of the meeting	EW welcomed attendees and introductions completed EW confirmed the purpose of the meeting which is to: • Ensure Cefas/MMO understand and are satisfied with characterisation of the Tees Bay; and • Cefas/MMO understand and have confidence in thermal modelling approach	
Project Refresh	SW provided a summary of the NZT project and an introduction for new members of the group. SW confirmed that the Red Line Boundary which is displayed has been refined since the MMO were last consulted; this was in response to a number of different areas of feedback and a keenness to rationalise the RLB to ensure we are only seeking consent for what we believe we will need. SW confirmed that a targeted consultation on the updated RLB was undertaken over Christmas SW noted that an additional change is regarding the PCC; SW explained that there has been a reduction in Power and Capture (3 trains to 1); SW confirmed that the single unit for this DCO is c750MW with CCS. SW provided a summary of the recent project alliance with the Northern Endurance Partnership [see Appendix B, Slide 12 and 13].	
Project Update	EW introduced the topic of design refinement; EW confirmed that within the RLB, there have been various refinements, this includes a potential replacement outfall to the south; EW confirmed that whilst 'design change' was the language used in the MMO's response letter in January, it is important to note that detailed design details for the project are evolving and there may be tweaks to the project; as a result, worst-case parameters have been used which is normal for this process.	

Agenda Item	Notes	Key Actions
	EW provided a summary of the key areas of refinement: • **Intake:** EW confirmed that the need for a preparatory dredge has been removed from envelope; IC confirmed that minor refurbishment works at this location would be focused on installing screening in order to ensure compliance with the Eels Regulations; EW noted that volumes involved with Hybrid cooling are very low (predicted to be ~2m3/2) • **Existing Outfall:** EW confirmed that at Stage II consultation, the flexibility for a full replacement along the route of the existing outfall was included. EW explained that this has been refined down so that only minor refurbishment / upgrade works would be carried out • **Replacement Outfall:** EW noted that the flexibility for a replacement outfall is retained in the DCO and supporting EIA. EW explained that this is now planned to route alongside the CO2 export corridor so as to reduce the worst-case number of crossings through Coatham from 2 to 1	
Technical Discussion (Intertidal and Subtidal Characterisation)	JH summarised chronology of recent MMO engagement on this topic: • Alternative outfall (replacement outfall) solution presented to MMO on 13 December 2020 • MMO reviewed supporting documentation and consulted with Cefas • MMO provided comments on design change on 15 January 2020 JH summarised MMO/CEFAS' key comments: • Sampling within 'Outfall I' dashed red line is insufficient • Blue dashed line as 'proposed Outfall II' is not aligned with site boundary • Teesside OWF data and 2019 subtidal seabed sampling limited in coverage • Sampling does not encompass area of interest • Limited sampling in shallow subtidal region (where a different biotope could be encountered) • MMO recommend further sampling in shallow subtidal regions JH provided a response to these comments [see Appendix B, Slide 15 to Slide 28]. **Sampling within 'Outfall I' dashed red line is insufficient** JH explained that regarding the existing RLB and boundary for the existing outfall to the north, the dashed red line represents the site boundary at PEIR. JH explained that the existing outfall location falls within the DCO site boundary. JH reiterated that the existing outfall is still the preferred option (dependent on the condition of the existing outfall). JH also explained that replacement no longer proposed at this location and works will be minor, consisting of outfall refurbishment (inspection and hand-based maintenance etc). **Blue dashed line as 'proposed Outfall II' is not aligned with site boundary** JH explained that the blue dashed line does not delineate the area of potential effects; the replacement outfall will fall within the site boundary and will run alongside the CO_2 export pipe.	1. **AECOM** to provide meeting minutes to MMO confirming the discussion and outcomes today 2. **MMO** to respond to this and confirm position regarding characterisation of the Tees Bay

Agenda Item	Notes	Key Actions
	Teesside OWF data and 2019 subtidal seabed sampling limited in coverage; Sampling does not encompass area of interest; Limited sampling in shallow subtidal region (where a different biotope could be encountered) JH explained that there is extensive coverage provided by both Intertidal phase I and phase II sampling; and Subtidal sediment grab sampling. JH explained that both surveys highlighted the homogenous nature of both Coatham Sands and the Tees Bay; JH reiterated that previous historical engagement with the MMO had confirmed this approach to be acceptable (see Appendix B, Slide 23). JH explained that AECOM disagree that a different biotope would be observed in the shallow subtidal region; JH noted that the biotope '*Nephtys cirrosa* and *Bathyporeia* spp. in infralittoral sand' (A5.233) is characteristic of shallow exposed coastal waters. JH noted that Intertidal Phase I surveys cover a significant proportion of Coatham Sands – this highlights that the beach is all infralittoral sand, and other biotopes are not expected. JH explained that as well as providing a good spatial coverage, both NZT surveys and Teesside Offshore Wind Farm surveys can be helpful to identify and consider any temporal trends; JH confirmed that there has been no change between the 2010 and 2019 survey finding. JH concluded that therefore, the Bay is Spatially and temporally homogenous. JH clarified that as well as this clarification, we have recently undertaken some additional Intertidal Phase II faunal core sampling: • Additional sampling was undertaken based on MMO recommendations • 6 core samples were taken at very low spring tide (to get as close to shallow subtidal as possible) • The samples were taken on 03rd February 2021 JH explained that the sample locations and preliminary findings support the existing findings from all of the other survey work in the Bay (see Appendix B, Slide 28) JH we welcome MMO/Cefas' thoughts on this? SB thanked JH and AECOM for additional information; SB clarified that advice to a project/case can be one way so better to discuss and we welcome that – thank you. SB explained that JH has clarified several issues which Cefas have raised so thank you, useful to put it into context. SB clarified that the explanation of the northern (existing) outfall is useful and that query has been suitably clarified. SB explained that he supports the use of Teesside (previous) data and the data does show to a good degree of confidence that the biotopes are consistent and are driven by a sandy system. SB agreed that there are 2 subtle biotopes based on the evidence as JH has pointed out; the main points which I have raised before are around questioning if there is a sufficient number of samples for you to have confidence that	

Agenda Item	Notes	Key Actions
	these biotopes which have been identified are present throughout the areas of the RLB within the Tees Bay. SB explained that what you have presented suggests you most likely do and that here can be a higher degree of confidence in the presence of these biotopes throughout the Bay; the intertidal survey which has been presented supports this (nature of intertidal was a little unclear before but is much clearer now, especially at the more seaward extent). SB explained that what you have presented quashes concerns – you have provided greater confidence that the 2 subtle biotope types are more representative of the Bay. SB explained that taking a precautionary approach, you could question if there may be other more diverse areas of rocky outcrops etc. elsewhere which have not been surveyed but this is agreed to be extremely unlikely. SB asked if there was additional information available outside of this sampling, perhaps geotechnical in focus? EW explained that data presented and discussed today is ecological (benthic/intertidal) in focus but there is a good range of geological, geomorphological and other supporting data in the area; EW explained that there have been multiple crossings / pipelines and cables in this area and we have benefited from this knowledge. IC explained that the timescales for this campaign mean that outputs may not be ready for ES; SW explained that this is an interesting point and although data may not be available for submission, it may be used throughout the consenting process/examination etc., as necessary. SB asked if MMO wanted to pass additional comment on this; are the MMO content with how the discussion has progressed? SE confirmed that yes, this seems completely reasonable and it is good to discuss this together. SE confirmed that MMO is entirely in agreement with SBs comments/findings and the additional data gathered is appreciated; will there be a written confirmation of this? EW confirmed that AECOM will provide a meeting minute and a written confirmation back to the MMO after today. SE thanked EW for this; SE will await this and then formulate a confirmatory response to confirm this discussion and agreement so you have it on record. EW thanks – much appreciated.	
Technical Discussion (Thermal Modelling)	EW explained that discussions around the scope and specification of thermal modelling have been ongoing with the MMO and the Environment Agency for some time; EW explained that whilst this is principally an area of interest for the EA as the relevant regulatory body for the discharge permit / environmental permit, the MMO do maintain an interest. EW explained that CORMIX (near field) modelling had been undertaken previously to assess the extent of the treated cooling water	

Agenda Item	Notes	Key Actions
	from the project; EW explained that as can be seen, there is a very minimal Zone of Influence (see Appendix B, Slide 30 and Slide 31). EW explained that during discussions with the MMO in December 2020, it was suggested that because the conditions at the replacement outfall location(s) to the south are predicted to be very similar to the existing outfall (in terms of wave behaviour, bathymetry, wind effects etc), the results from the existing outfall were proposed to be carried over to the replacement location. EW confirmed that the MMO were happy with this approach. EW explained that subsequent discussions with the Environment Agency have led to an update on this; although the EA are comfortable that conditions may well be similar, in addition to providing a summary of the conditions at each outfall, we will also update the CORMIX (near field) modelling. EW explained that the timescales for this update mean the outputs will be available for DCO submission. EW explained that an additional (new) activity is far field modelling; this is a new activity to consider how – if at all – the ZoI behaves in the far field. EW noted that this is considered to be negligible, if it is possible to model at all because of the very minimal ZoI (i.e. even in near field). EW explained that the timescales for this are longer and that it may not be available for DCO submission but shortly after. EW asked if MMO/Cefas have any thoughts? SE explained that this seems entirely reasonable and appropriate/robust; good that discussions are taking place with the Environment Agency and we would always seek to defer to them on this topic. EW thanks – the reason for the query is that we want to ensure we have given MMO opportunity to be involved and don't want to have multiple (separate) additional feedback after submission. EW asked that for this reason, can we agree and confirm that the MMO will defer to the Environment Agency's lead on this topic? SE yes; do Cefas have any comments? SB no, this is also outside of my area of expertise and understand it is typically led by Environment Agency. EW confirmed that we will keep MMO appraised of discussions with the EA down the line as needed.	
Next Steps	EW provided a summary of key next steps which are DCO submission (remains targeted for late March 2021); ahead of this, AECOM will be engaging with MMO shortly for DML review and Statement of Common Ground drafting processes.	**3. AECOM** to share DML / SoCG with MMO
Open Discussion, Questions and Any Other Business	EW confirmed that the 2 core areas for discussion today are possibly the most important / major areas of feedback from Stage II consultation. EW explained that there are other areas of miscellaneous feedback from the MMO which we are in the process of acting upon / responding to; this will be reported in the ES. SE thanks, that sounds good. EW thanked SE for chasing the MMO local fisheries office but confirmed that no response has been received so far; EW explained that the timescales mean that this will not be possible to consider in	

Agenda Item	Notes	Key Actions
	the EIA now but thanks for trying. SE confirmed that no response has been received, sorry; if the best data / sources have been used for the EIA then that sounds appropriate. EW explained that we do have a range of data and source material which we have used for PEI and will use for the ES however in some cases, there are limitations (landings for example); in these areas, the local insights from organisations such as the local MMO office are very useful but unfortunately that has not been available. EW confirmed that we have been having useful discussions with the local IFCA and are in the process of formalising agreement on our findings which have been, and maintain, that there is fairly limited fishing activity within the tees bay and that this is largely potting, trapping and recreational in nature. SE thanks for the update on the IFCA – that sounds very useful. EW asked if there was any further business? [No further AOBs, meeting closed 10:58]	

Appendix A: Site Location Plan (Indicative)


Business Park
Graythorp Industrial Estate
Zinc Works Road
Tees Road
Tees Mouth
Cowpen Bewley Woodland Park
A178
A1185
Seaton Carew Road
Seal Sands Industrial
River Tees
Cleveland Golf Links
Warrenby Industrial Estate
A1042
Dormansto
Teesport/Queen Elizabeth II Jetty
Teesport Estate
Cowpen Bewley Road
Huntsman Drive
Haverton Hill Industrial Estate
Trunk Road
A1085
Kirkleatham Business Park
Kirkleatham Lane
Port Clarence
Riverside Business Park
Teesport Commerce Park
South Tees Freight Park
Wilton International
South Bank
A66

Appendix B: Meeting Slide Pack

Net Zero Teesside

MMO and Cefas Clarification Meeting

11 February 2021

Net Zero Teesside

Introductions and Agenda

Net Zero Teesside

- Purpose of Meeting & Introductions
- Refresh on NZT
- Project Update
- Technical Discussion
  - Intertidal and Subtidal Characterisation
  - Thermal Modelling
- Next Steps
- Open Discussion, Questions and Any Other Business

Purpose of Meeting

- Ensure Cefas/MMO understand and are satisfied with characterisation of the Tees Bay -

- Ensure Cefas/MMO understand and have confidence in thermal modelling approach -

Net Zero Teesside

Introductions

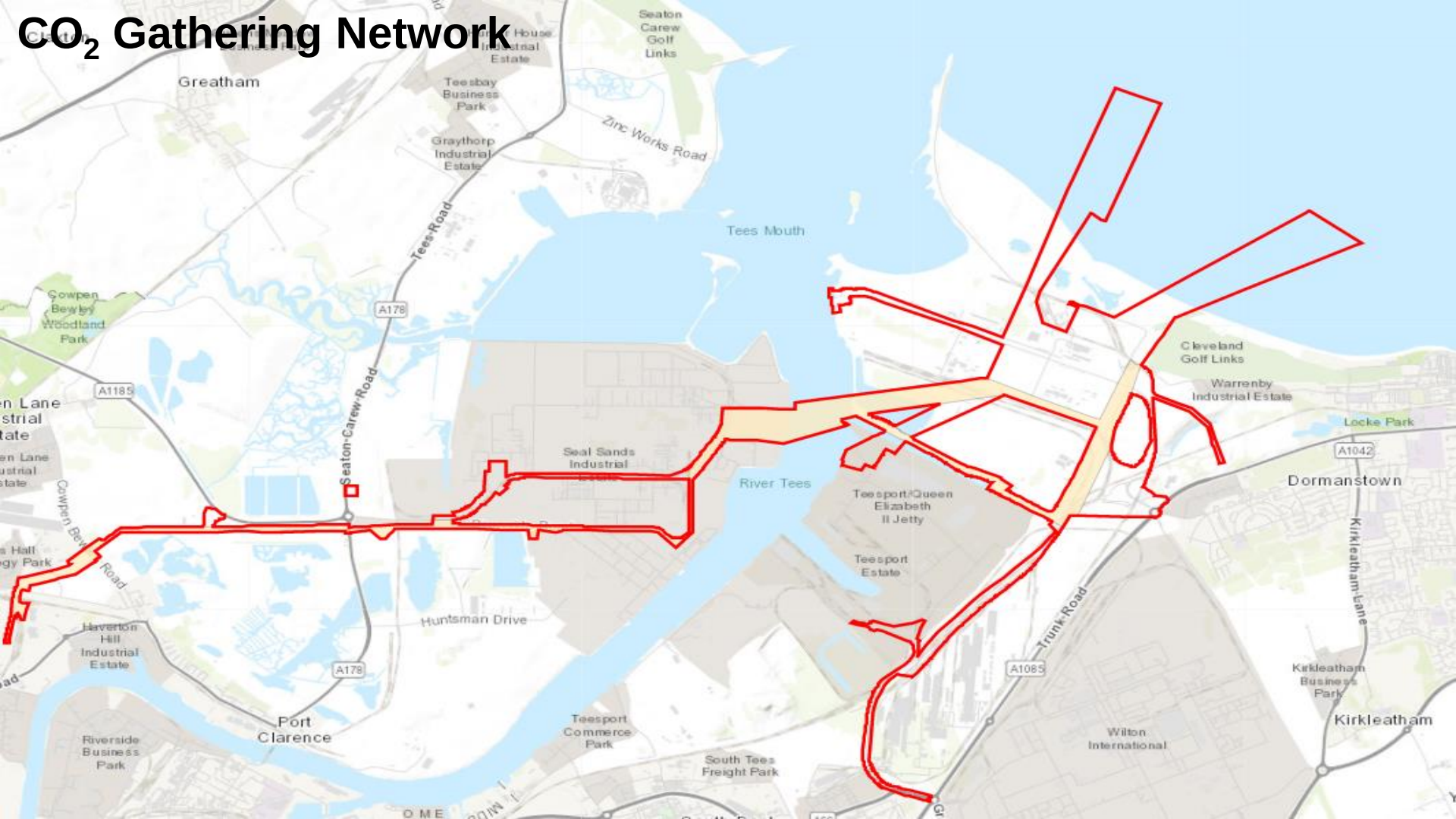
Net Zero Teesside

Project Refresh

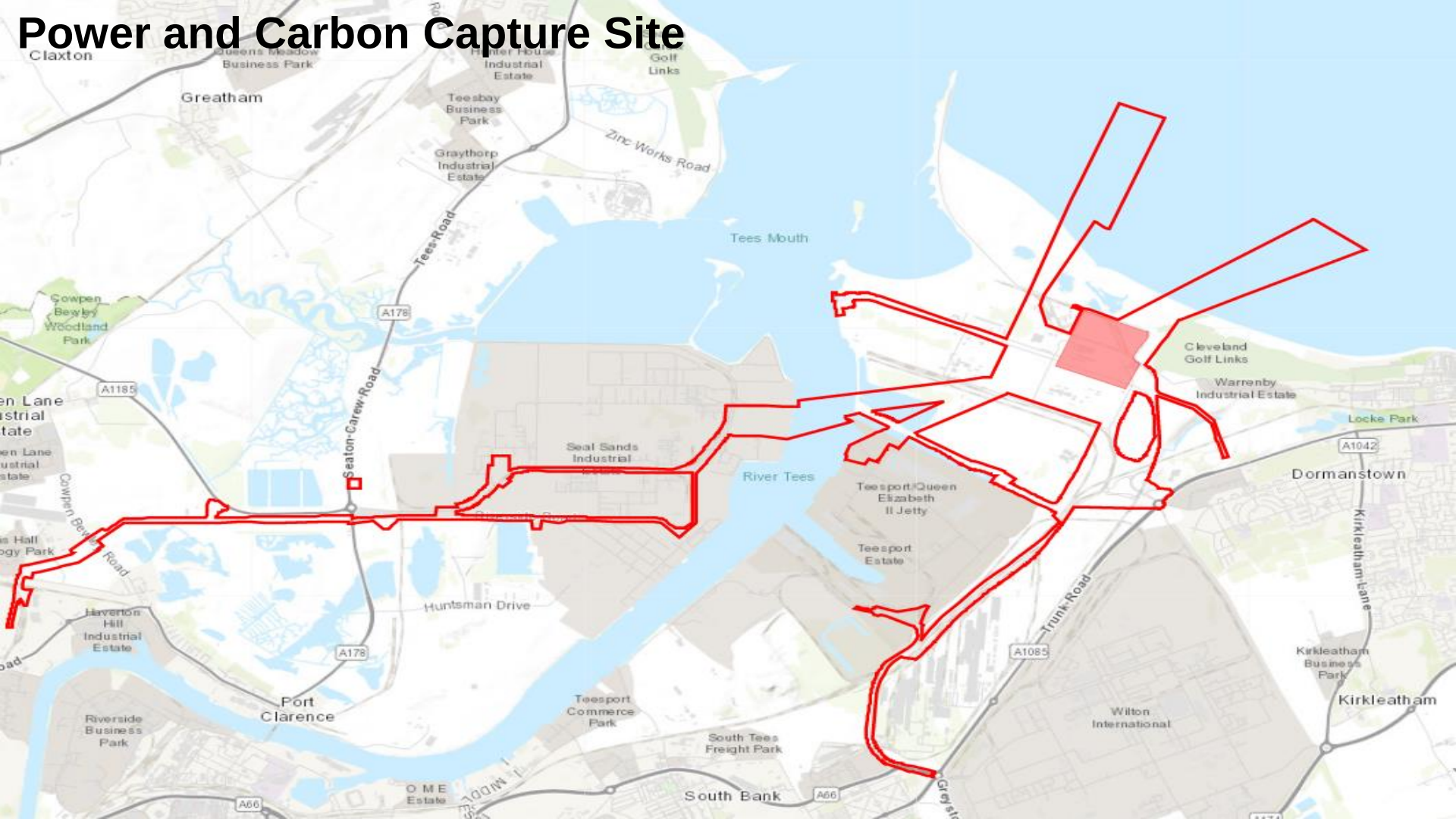
- NZT GIS -

Net Zero Teesside

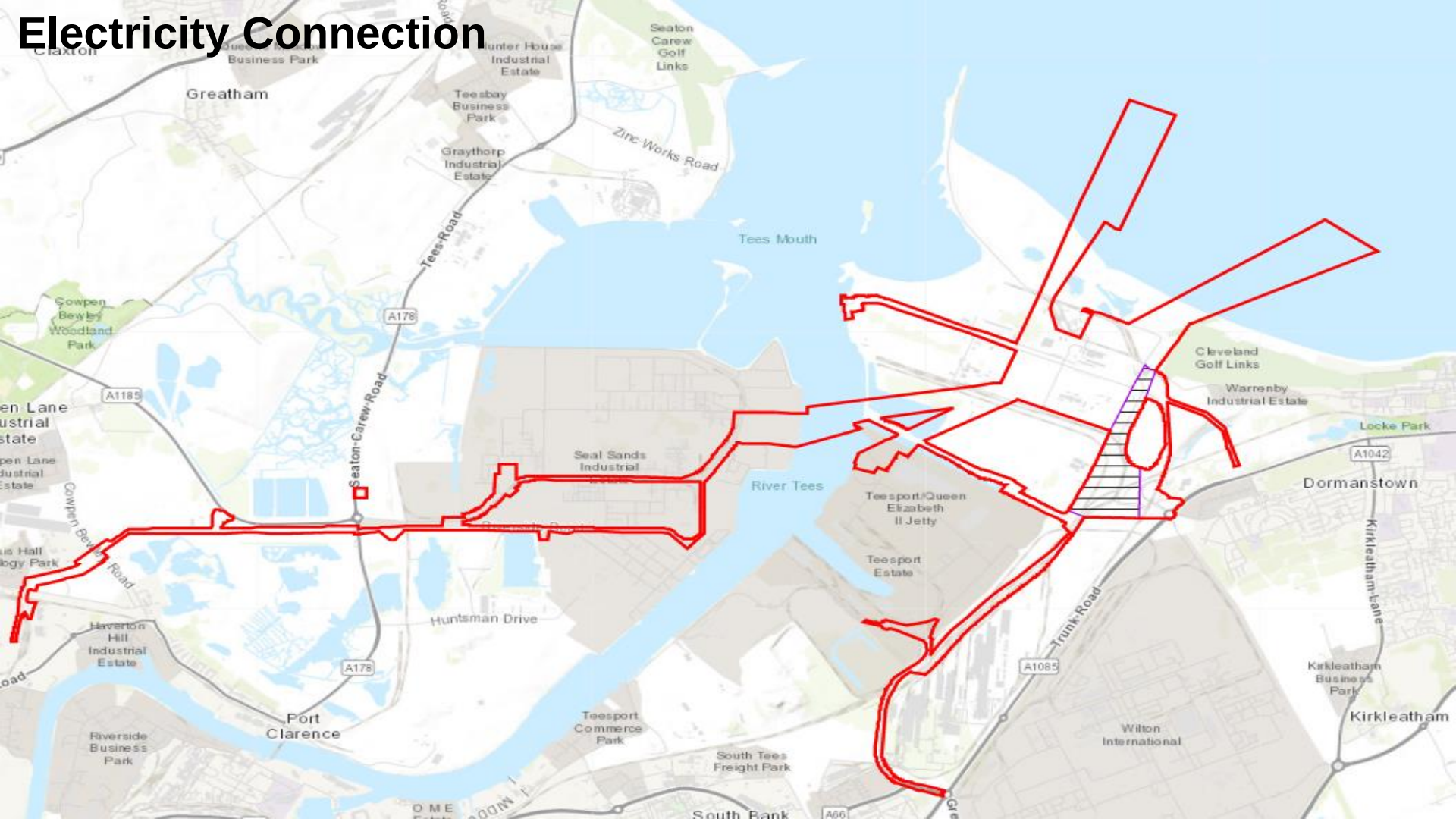
CO_2 Gathering Network



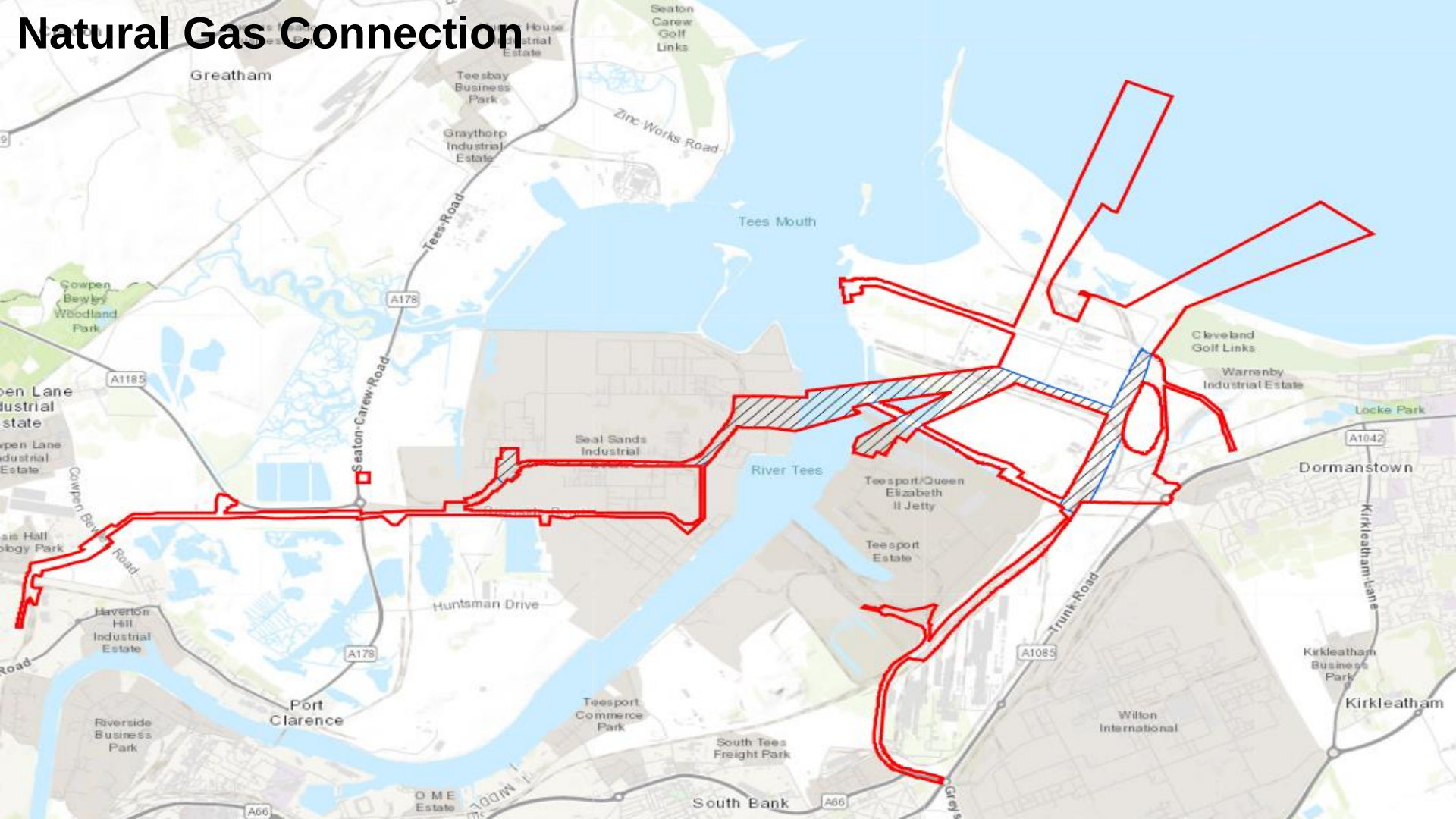
Power and Carbon Capture Site



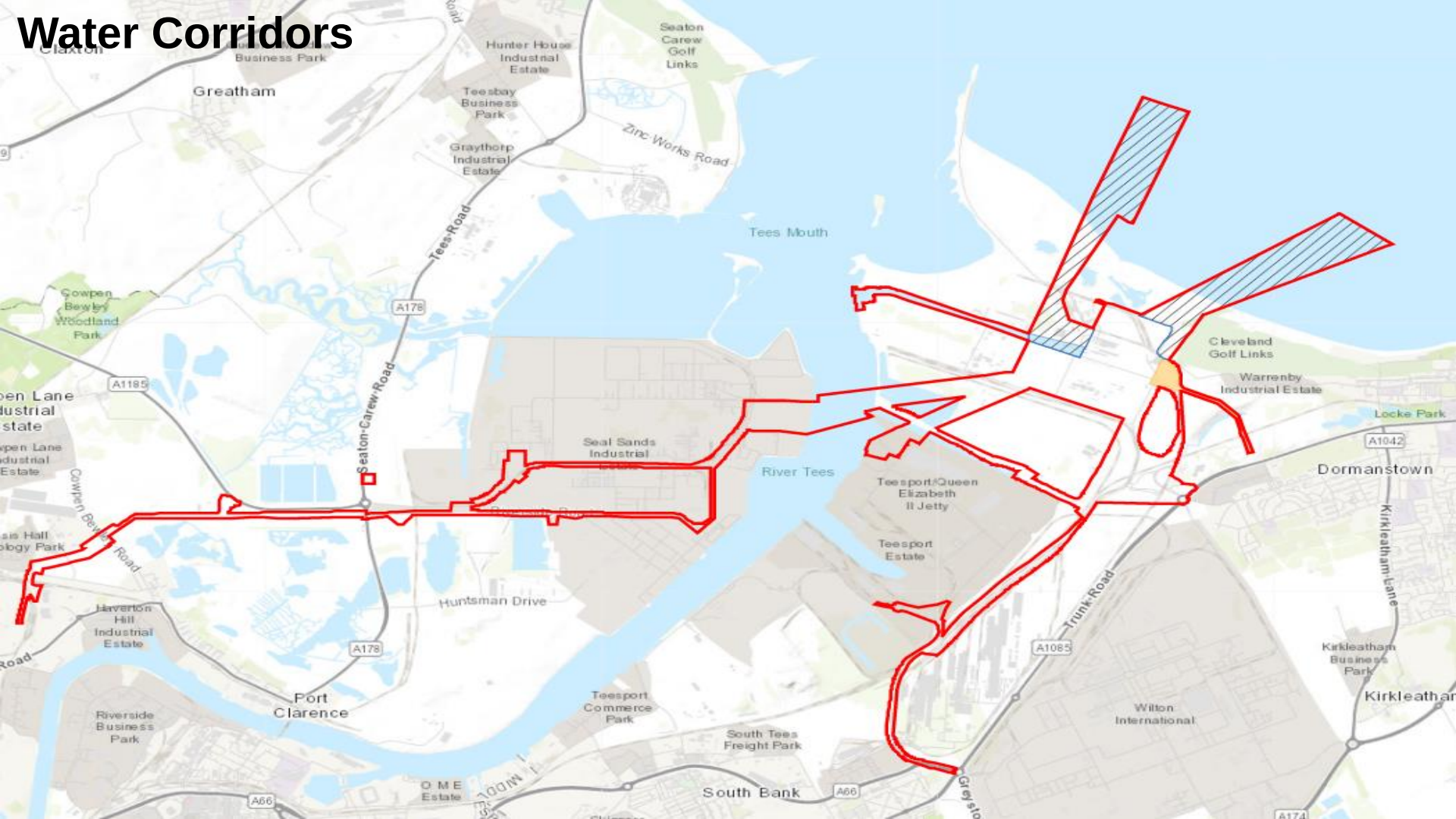
Electricity Connection



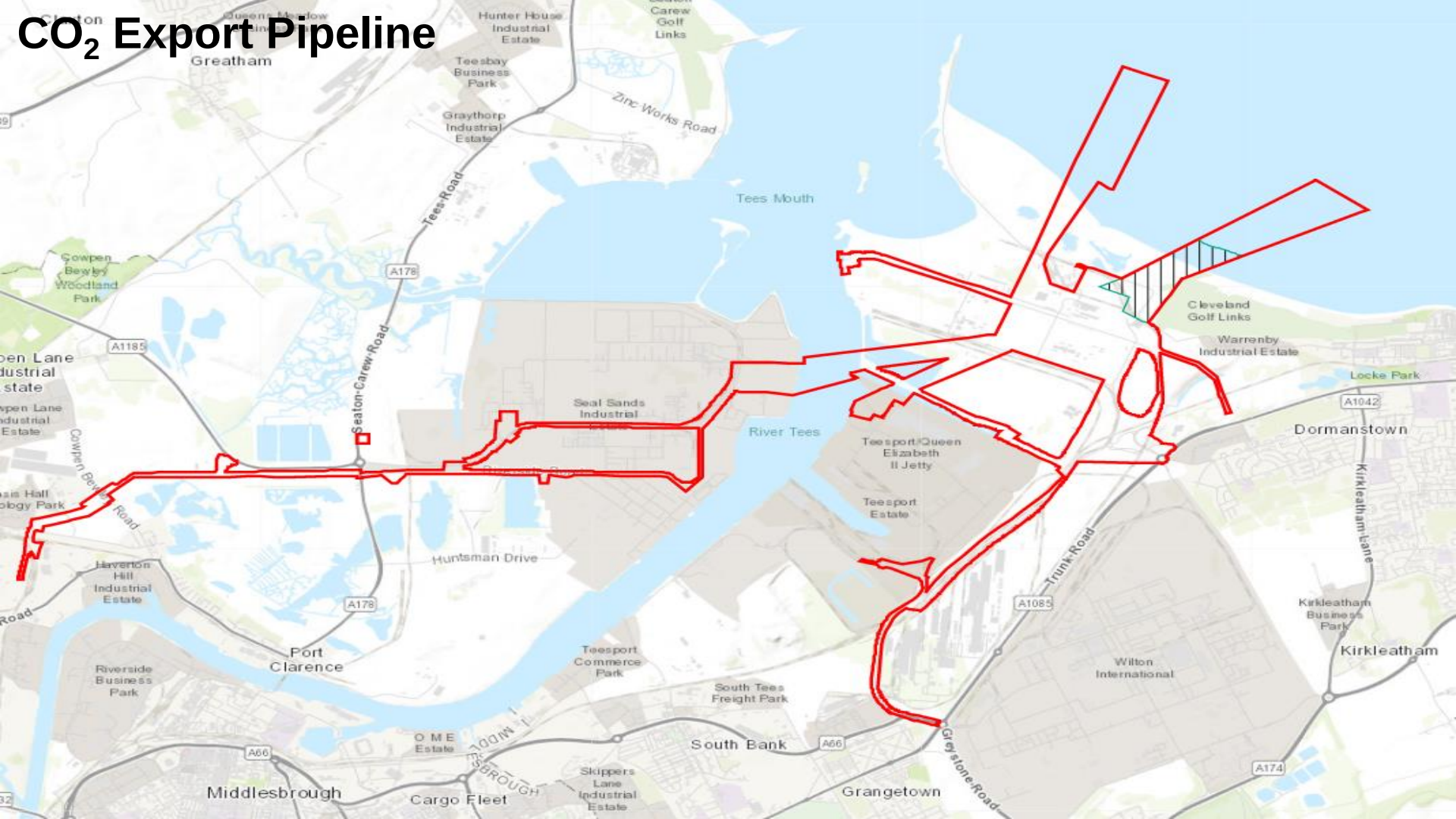
Natural Gas Connection



Water Corridors



CO_2 Export Pipeline



Net Zero Teesside

KEY

Gas power	Biomass	Hydrogen	Existing hydrogen pipeline
Industry	Energy from waste	Future CO2 pipeline	


Net Zero Teesside
&
ZEROCARBON HUMBER
Northern Endurance Partnership
TEESSIDE
HUMBER
NORTH SEA
POTENTIAL FUTURE EXPANSION
POTENTIAL FUTURE EXPANSION
ENDURANCE
145km
85km
TEESSIDE
MIDDLESBROUGH
SCARBOROUGH
HUMBER
HULL
GRIMSBY
YORK
SCUNTHORPE

Design Change Clarification

Net Zero Teesside

MMO's Comments on Design Change

Net Zero Teesside

MMO Engagement

- Alternative outfall (replacement outfall) solution presented to MMO on 13 December 2020
- MMO reviewed supporting documentation and consulted with Cefas
- MMO provided comments on design change on 15 January 2020

MMO Key Comments on Design Change

- Sampling within 'Outfall I' dashed red line is insufficient
- Blue dashed line as 'proposed Outfall II' is not aligned with site boundary
- Teesside OWF data and 2019 subtidal seabed sampling limited in coverage
- Sampling does not encompass area of interest
- Limited sampling in shallow subtidal region (where a different biotope could be encountered)
- MMO recommend further sampling in shallow subtidal regions

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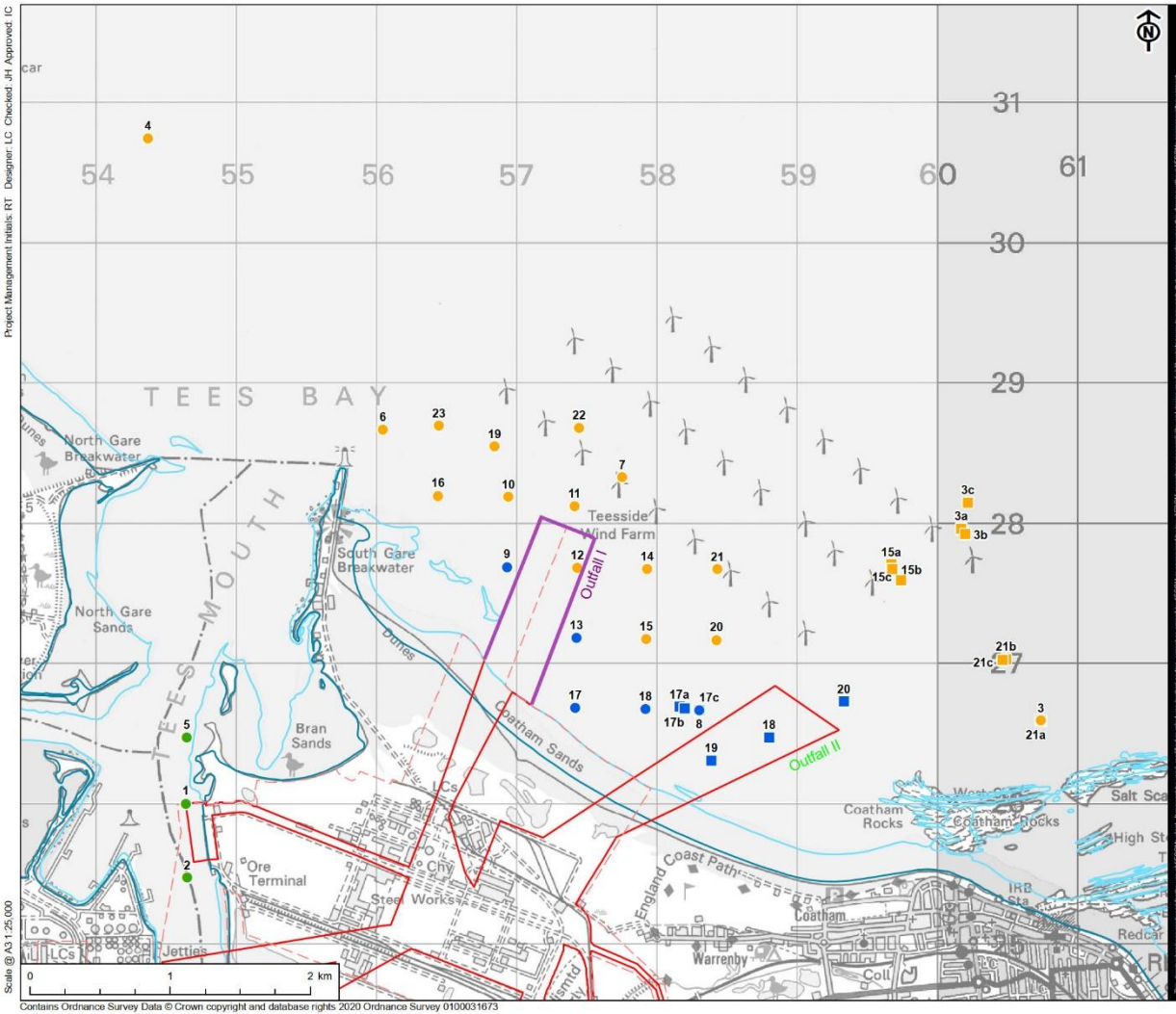
- MMO recommend further sampling in shallow subtidal regions

Clarification of Site Boundary

Net Zero Teesside

Outfall I Site Boundary

- The dashed red line represents the site boundary at PEIR
- The current Outfall I location falls within the new DCO site boundary
- Outfall I is still the preferred option (dependent on the condition of the existing outfall)
- Works will be minor, consisting of outfall refurbishment (inspection and hand-based maintenance)



Project Management Initials: RT Designer: LC Checked: JH Approved: IC

Scale @ A3 1:25 000

AECOM

PROJECT
NET ZERO TEESSIDE

CLIENT
NZT POWER AND NZNS STORAGE

KEY

- Site Boundary
- PEIR Site Boundary
- Mean Low Water
- Mean High Water

Subtidal Sampling Location - Survey

- AECOM
- Teesside OWF *

EUNIS Biotope - Symbol Colour

- A5.233 (SS.SSa.IFiSa.NcirBat) – *'Nephtys cirrosa and Bathyporeia spp. in infralittoral sand'*
- A5.242 (SS.SSa.IMuSa.FfabMag) – *'Fabulina fabula and Magelona mirabilis with venerid bivalves and amphipods in infralittoral compacted fine muddy sand'*
- A5.331 (SS.SMu.ISaMu.NhomMac) – *'Nephtys hombergii and Macoma balthica in infralittoral sandy mud'*

* Entec UK Limited (2011). Teesside Windfarm Ltd, Teesside Offshore Wind Farm FEPA Monitoring, Benthic Survey Report 2010

TITLE
FIGURE 2
SUBTIDAL BENTHIC EUNIS BIOTOPE AND SEDIMENT CLASSIFICATION MAP

REFERENCE
NZT_201203_SBSR_2_v1

SHEET NUMBER
1 of 1

DATE
03/12/20

MMO's Comments on Design Change

Net Zero Teesside

MMO Engagement

- Alternative outfall (replacement outfall) solution presented to MMO on 13 December 2020
- MMO reviewed supporting documentation and consulted with Cefas
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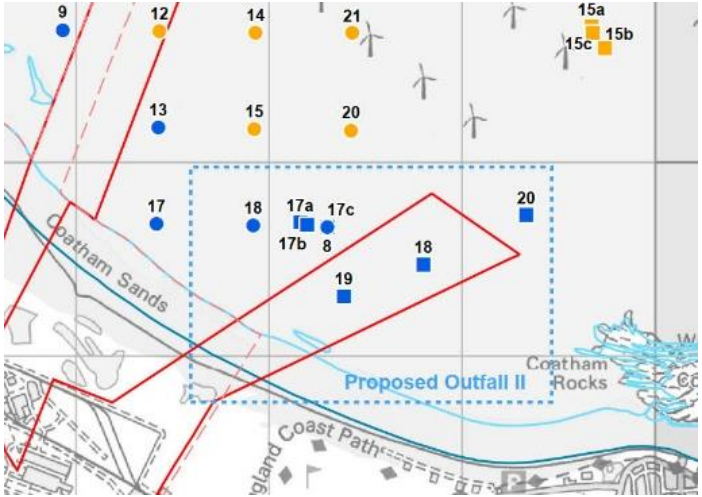
Clarification of Site Boundary

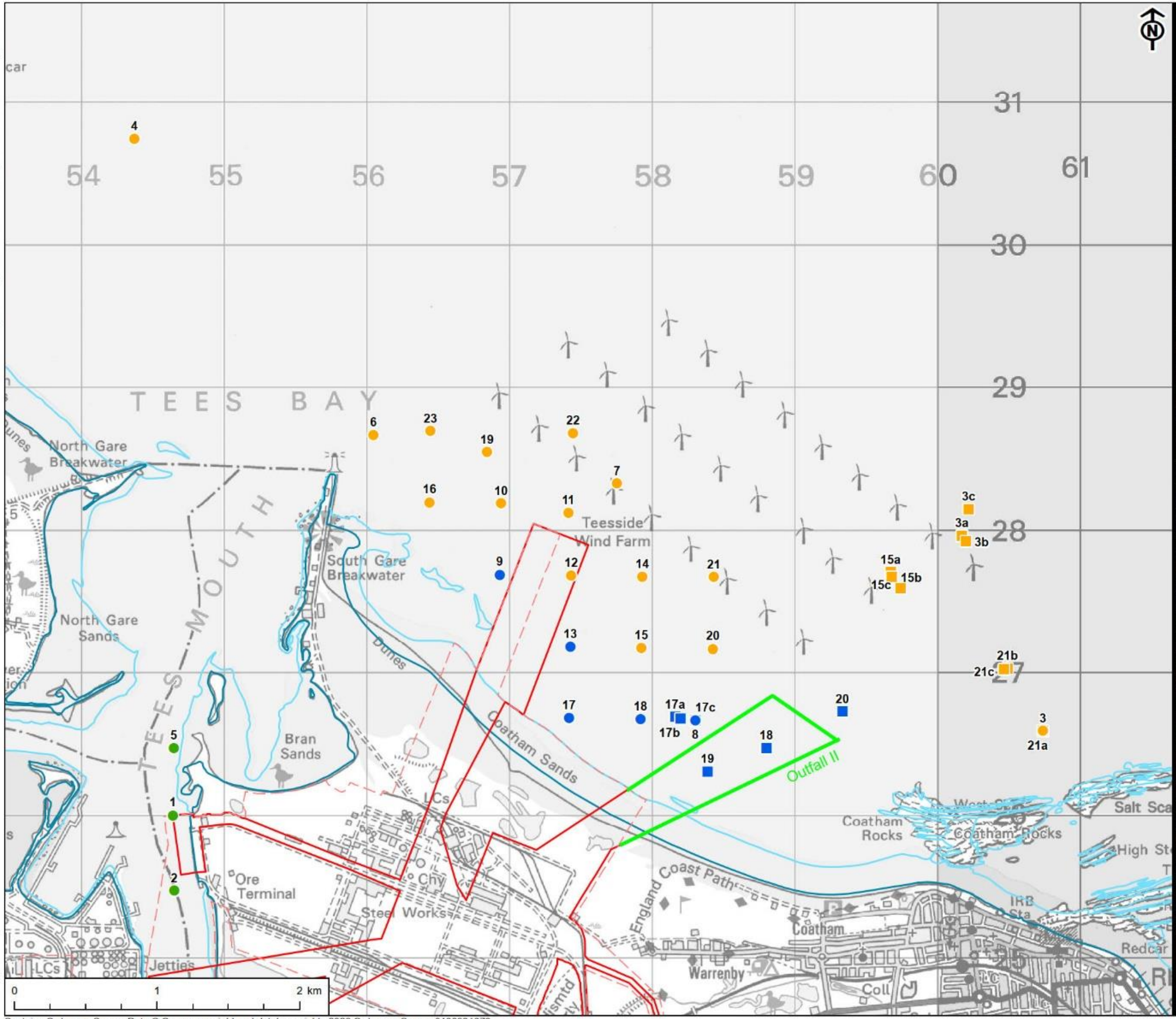
Net Zero Teesside

Outfall II Site Boundary

- The blue dashed line does not delineate the area of potential effects
- Outfall II will fall within the site boundary
- Outfall II will run alongside the CO_2 export pipe



Project Management Initials: RT Designer: LC Checked: JH Approved: IC



Scale @ A3 1:25,000

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AECOM

PROJECT
NET ZERO TEESSIDE

CLIENT
NZT POWER AND NZNS STORAGE

KEY
Site Boundary
PEIR Site Boundary
Mean Low Water
Mean High Water
Subtidal Sampling Location - Survey
AECOM
Teesside OWF *
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Clarification of Existing Benthic Data

Net Zero Teesside

2019 Intertidal and Subtidal Benthic Sampling

- Extensive coverage provided by:

  Intertidal phase I and phase II sampling; and

  Subtidal sediment grab sampling

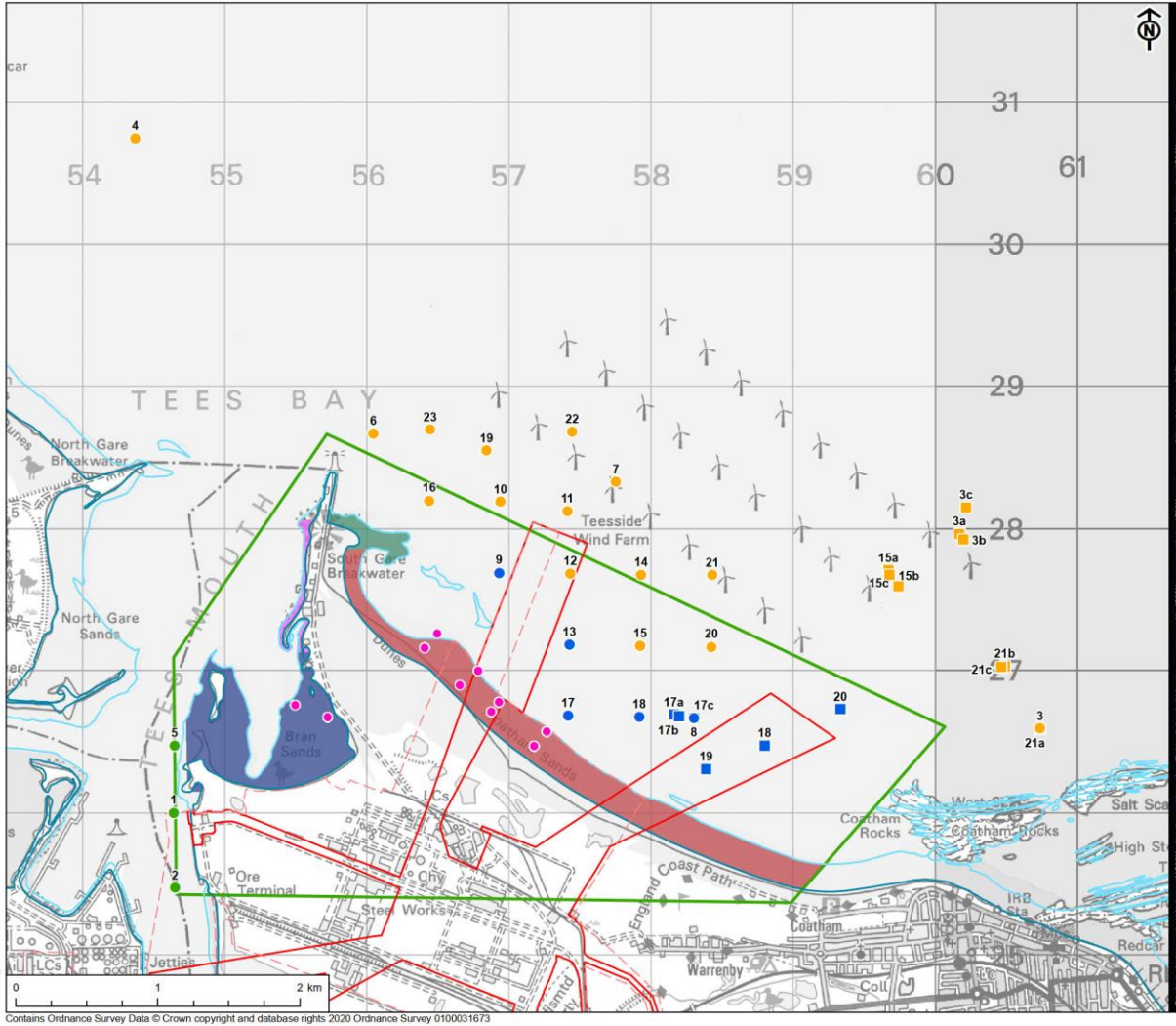
- Both surveys highlighted the homogenous nature of both Coatham Sands and the Tees Bay
- Previous MMO comments stated that:

  '*Approach seems robust and this seems fine*' (in PEIR consultation meeting – 26/08/2020); and

  '*The intertidal Phase I and II surveys provide basic but suitable information upon which the baseline ecology can be assessed*' (MMO PEIR Consultation Document – 10/08/2020)

Sampling in Shallow Subtidal

- AECOM disagree that a different biotope would be observed in the shallow subtidal region
- The biotope '*Nephtys cirrosa* and *Bathyporeia* spp. in infralittoral sand' (A5.233) is characteristic of shallow exposed coastal waters
- Intertidal Phase I surveys cover a significant proportion of Coatham Sands – this highlights that the beach is all infralittoral sand, and other biotopes are not expected



Project Management Initials: RT Designer: LC Checked: JH Approved: IC

Scale @ A3 1:25 000

AECOM

PROJECT
NET ZERO TEESSIDE

CLIENT
NZT POWER AND NZNS STORAGE

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- Site Boundary
- PEIR Site Boundary
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- Mean High Water
- Phase II Intertidal Sample Location

Subtidal Sampling Location - Survey

- AECOM
- Teesside OWF *

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- Phase I Intertidal Study Area

Intertidal Phase I Broad Scale EUNIS Biotope

- A1.113, [Semibalanus balanoides] on exposed to moderately exposed or vertical sheltered eulittoral rock
- A1.323, [Fucus vesiculosus] on variable salinity mid eulittoral boulders and stable mixed substrata
- A2.2, Littoral sand and muddy sand
- A2.242, [Cerastoderma edule] and polychaetes in littoral muddy sand

* Entec UK Limited (2011). Teesside Windfarm Ltd, Teesside Offshore Wind Farm FEPA Monitoring, Benthic Survey Report 2010

TITLE
FIGURE 2
SUBTIDAL BENTHIC EUNIS BIOTOPE AND SEDIMENT CLASSIFICATION MAP

REFERENCE
NZT_210120_SBSR_2_v2

SHEET NUMBER
1 of 1

DATE
20/01/21

MMO's Comments on Design Change

Net Zero Teesside

MMO Engagement

- Alternative outfall (replacement outfall) solution presented to MMO on 13 December 2020
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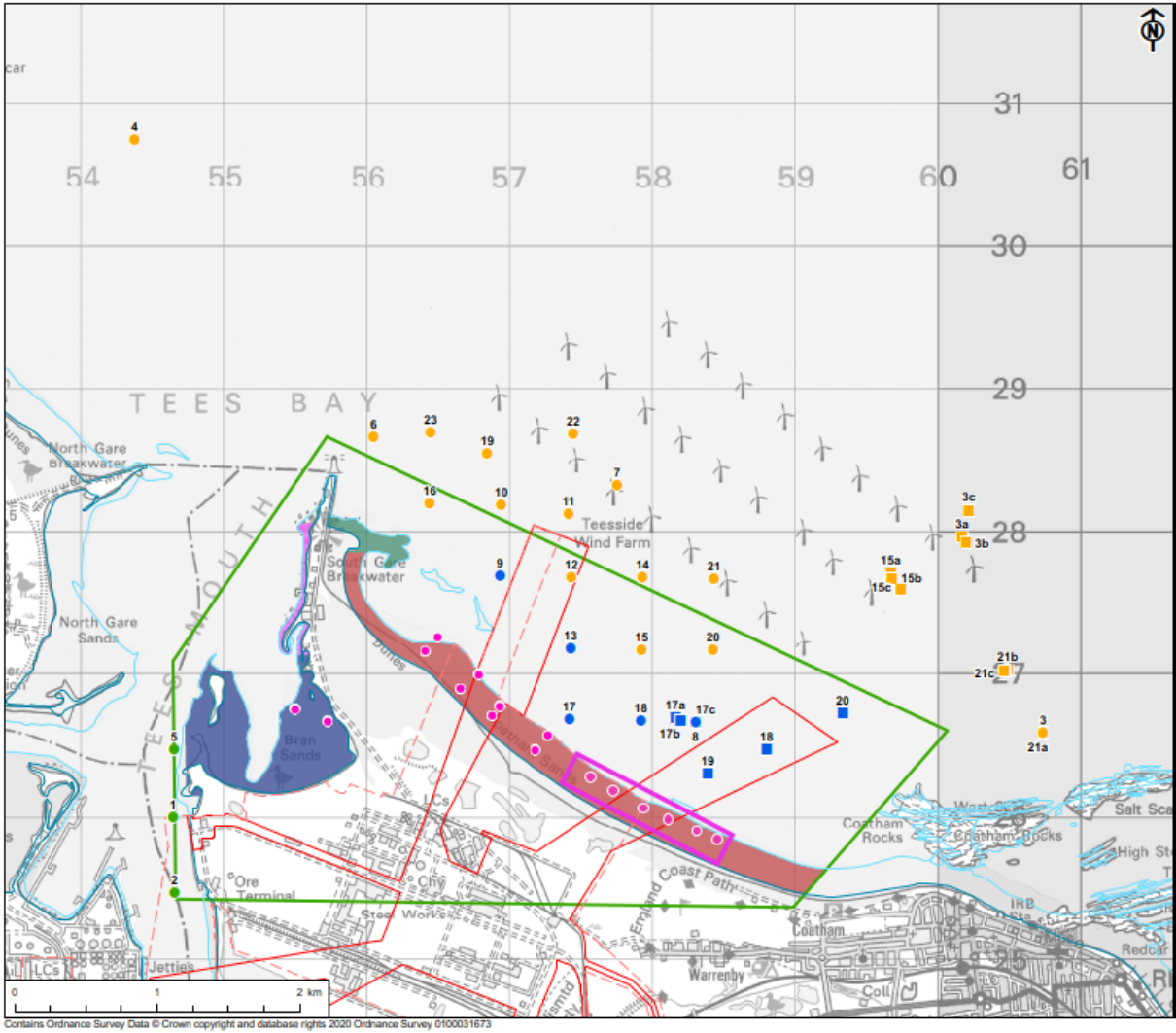
Additional Benthic Sampling

Net Zero Teesside

Intertidal Phase II faunal core sampling:

- Additional sampling was undertaken based on MMO recommendations
- 6 core samples were taken at very low spring tide (to get as close to shallow subtidal as possible)
- The samples were taken on 03rd February 2021
- The sample locations are shown on the coming slides



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Scale @ A3 1:25,000

AECOM

PROJECT
NET ZERO TEESSIDE

CLIENT
NZT POWER AND NZNS STORAGE

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* Entec UK Limited (2011). Teesside Windfarm Ltd. Teesside Offshore Wind Farm FEPA Monitoring, Benthic Survey Report 2010

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FIGURE 2
SUBTIDAL BENTHIC EUNIS BIOTOPE AND SEDIMENT CLASSIFICATION MAP

REFERENCE
NZT_210120_SBSR_2_v2

SHEET NUMBER
1 of 1

DATE
20/01/21

Additional Benthic Sampling

Net Zero Teesside

- The samples have been sent to the laboratory for macrofaunal and PSA analysis
- Initial notes described all samples as:

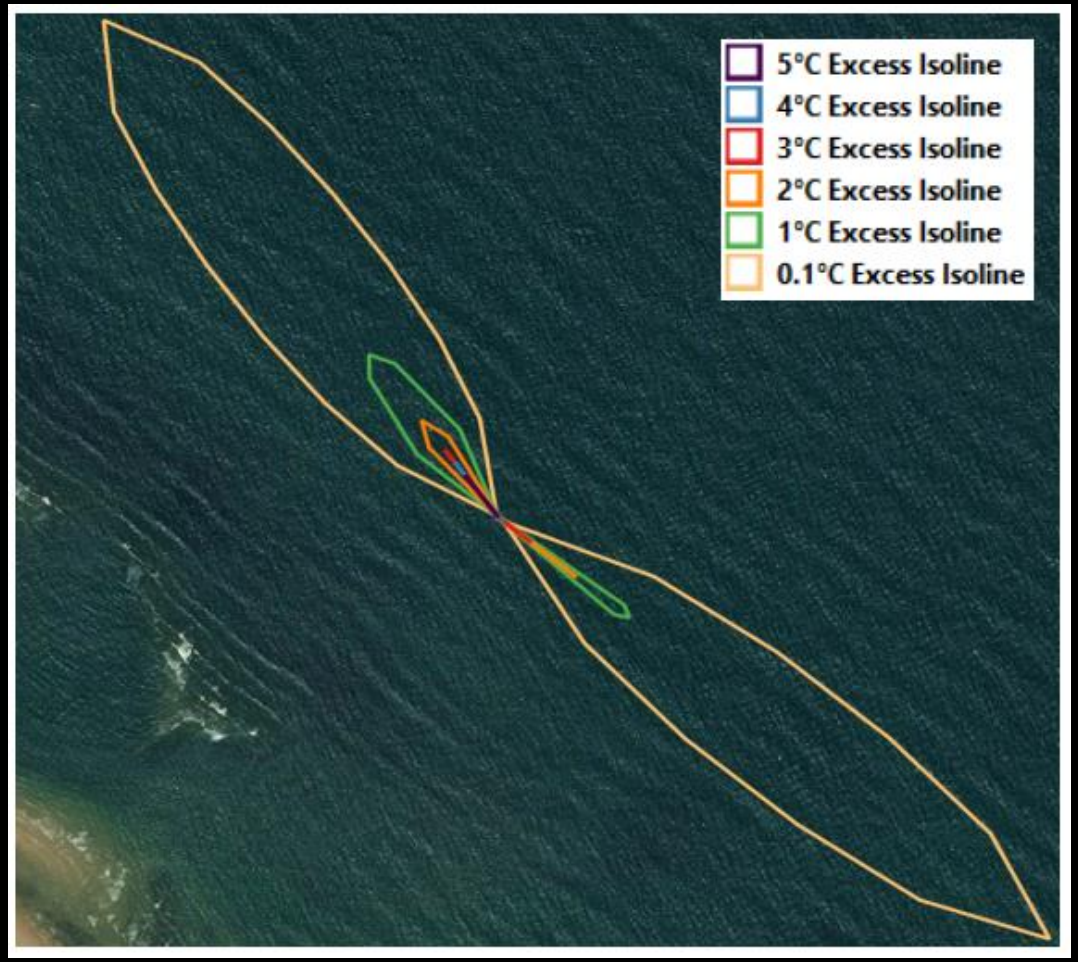
‘Barren coarse sandy substrate, no visible evidence of life (no casts etc.)’

Thermal Modelling

- Open Discussion -

Net Zero Teesside

Net Zero Teesside



Net Zero Teesside

Open Discussion | Questions | AOB

Thank You

Minutes

Meeting name
Net Zero Teesside (NZT)

Meeting date
16/02/2022

Additional information
Appendix A - Meeting Slide Pack

Subject
MMO Relevant Representations

Time
10:00 - 12:00

Attendees
Richard Gibbs (RG), AECOM
Ian Campbell (IC), AECOM
Matthew Coe (MC), AECOM
Lauren O'Connell (LO), MMO
Nicola Wilkinson (NW), MMO

MMO Relevant Representations Meeting

Ref	Agenda Item	Notes	Key Actions
01	Introduction	RG opened the meeting and outlined the agenda IC started the introductions	
02	Project update	IC provided an overview of project updates, including timeline of submissions and next steps. IC highlighted that the request to delay the examination had been made in January 2022 and is assumed to start in May 2022	
Response to relevant representations			
03	Underwater sound impacts	RG gave further information on the methods used for the geometric spreading calculations, re-iterating that this is a precautionary approach. RG then provided responses to comments 6.2.1, 6.3.1, 6.3.2, 6.3.3, 6.3.11. LO stated that this information would have to be relayed back to the UWS technical team at the MMO. LO asked if the information could be provided as a formal response which they could respond to in writing.	NZT to provide formal responses to MMO
04	Dredging	RG discussed the location of preparatory dredging, stating that, as set out in the ES, it will not be required in the Tees Estuary (as an abstraction from the Tees no longer forms part of the development. Dredging would only occur at the existing outfall head in the Tees Bay, where a pocket would be created (approximately 100 m^2). This would use backfill/side cast methods and sediment testing will be carried out in consultation with the MMO. LO noted this information and appreciates the clarification. IC stated that a sample plan and more information would be provided by the applicant once the design of the outfall had been finalised.	
05	Piling	RG showed a figure with the location of potential pin drilling / piling. If piling is required, it will consist of non-impact piling methods and will occur in Tees Bay and not the river and would not present a barrier to fish migration. IC stated that the requirement for pin piling will be decided as part of the front-end engineering phase. LO noted this information.	
06	Tees Crossing	RG stated that the Tees Crossing for the CO_2 gathering network would be at depths where there is no pathway for impact to marine ecology. IC added that the works would be through bedrock and not marine sediment except at the launch and exit points (which would be on land).	
07	Cumulative Effects	RG provided clarification regarding the York Potash, South Bank, and Anglo American projects (comments 6.2.2, 6.4.1, 6.4.2, 6.4.3). IC asked if the MMO were referring to the PD Teesport project, rather than the South Bank project as there would be no capital dredging as part of this project. LO – the MMO will check if they are referring to the PD Teesport Project and the associated activities of this project.	MMO to check South Bank and PD Teesport Project activities in the marine environment
08	Cumulative Effects	RG reiterated that project activities such as piling and dredging were small in scale/temporary and would occur in the Tees Bay away from other projects where activities would take place in the Tees River. RG asked if the MMO can clarify how the timings of projects should be coordinated and how this should be managed and secured. LO – the MMO have experience of this for other projects and will review the methods that were applied in these instances.	MMO to review methods for managing multiple project activities so they do not occur concurrently

Ref	Agenda Item	Notes	Key Actions
		IC added that a lot of the projects would be screened out from potential cumulative effects on the basis that they would occur before the NZT project would start.	
09	Other comments	RG stated that NZT would consider the North East Marine Plan within the formal response to be provided at Deadline 1 of the Examination. This will also include further detail on sandeel adaptability to increased SSC, including references. RG wanted to reiterate that the dredging will be small in extent and temporary and therefore effects to sandeel would be limited, given that the numbers of this species in the bay is thought to be limited. LO – the MMO would require a reference for the statement referred to in comment 6.3.10.	NZT to provide a reference for sandeel adaptability statement within formal response document
10	Other comments	RG – referring to comment 6.3.17, the design measure which states that activities which create impulsive underwater sound shall not be undertaken at night, is captured within the framework CEMP and will be included in the final CEMP LO – the MMO would push for this wording to be within the DML. However, the MMO will check that this is the case.	MMO to check if avoidance measure wording (referred to in comment 6.3.17) is to be included within DML
11	Agreement in approach	RG – NZT note the MMO's comments (6.3.14 and 6.3.16) which are in agreement with our approach. LO asked if we have had agreement from Northumbria Water that NZT can use their raw water as a nearby steel works was informed that Northumbria Water could not provide sufficient water. IC – this has not yet been agreed, but given the limited flow required for the project, this is not considered a problem.	
Final discussions			
12	SOCG	IC provided an update on the Statement of Common Ground, stating that a draft would be circulated to the MMO for comment early March 2022	NZT to provide draft SOCG to MMO for review once drafted
13	Questions/Final Discussion	Actions discussed	

Actions

Ref	Action	Responsible	Due by	Initial
03	NZT to provide formal responses to MMO	NZT	DCO Deadline 2 (anticipated May 2022)	**RG**
07	MMO to check South Bank and PD Teesport Project activities in the marine environment	MMO	March 2022	**LO**/NW
08	MMO to review methods for managing multiple project activities so they do not occur concurrently	MMO	March 2022	LO/NW
09	NZT to provide a reference for sandeel adaptability statement within formal response document	NZT	DCO Deadline 2 (anticipated May 2022)	RG
10	MMO to check if avoidance measure wording (referred to in comment 6.3.17) is to be included within DML	MMO	March 2022	LO/NW
12	NZT to provide draft SOCG to MMO for comment	NZT	March 2022	IC