



# Marine Management Organisation

## Scoping Opinion

### Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended) (“the Regulations”)

**Title:** South Bank Wharf Development

**Applicant:** Able UK Limited

**MMO Reference:** EIA/2019/00017

## Contents

Contents.....	1
1 Proposal.....	2
1.1 Project Background.....	2
2 Location .....	2
3 Environmental Impact Assessment (EIA).....	3
4 Scoping Opinion.....	4
4.1 Habitats Directive / Wild Birds Directive .....	4
4.1.1 Teesmouth and Cleveland Coast SSSI: .....	4
4.1.2 Teesmouth and Cleveland Coast pSPA and Ramsar site .....	5
4.1.3 Further advice on assessing these sites:.....	6
4.2 Benthic Ecology .....	7
4.3 Coastal Processes .....	7
4.4 Archaeology / Cultural Heritage .....	7
4.5 Navigation / Other Users of the Sea.....	8
4.6 Water Quality .....	9
4.6.1 Water Environment.....	9
4.6.2 Water Framework Directive (WFD).....	9
4.6.3 Dredging and Disposal .....	11
4.6.4 Habitat enhancement/Beneficial Reuse.....	11
4.7 Underwater noise .....	12
4.8 Cumulative Impacts & In-Combination Impacts.....	12
5 Conclusion .....	13

# 1 Proposal

## South Bank Wharf Development

### 1.1 Project Background

The aim of the development is to serve the renewable offshore marine energy sector, which is currently dominated by offshore wind turbines that comprise a number of component parts manufactured at different locations by different suppliers. This project proposes the development of a new quay as a transportation and assembly hub at South Bank Wharf, which is considered strategically positioned to serve their offshore windfarms. The use of the port will include heavy load operations and handling of the various elements that comprise an offshore wind turbine.

The proposed development is comprised of four parts: the construction of new quays; dredging of the River Tees to provide a berthing pocket, deepened approach channel and turning area; the setting out of the operational area; and, the operation of the site.

## 2 Location

The proposed location for the South Bank Wharf Development is on the south bank of the River Tees, which is displayed in Figure 1 and 2 below.

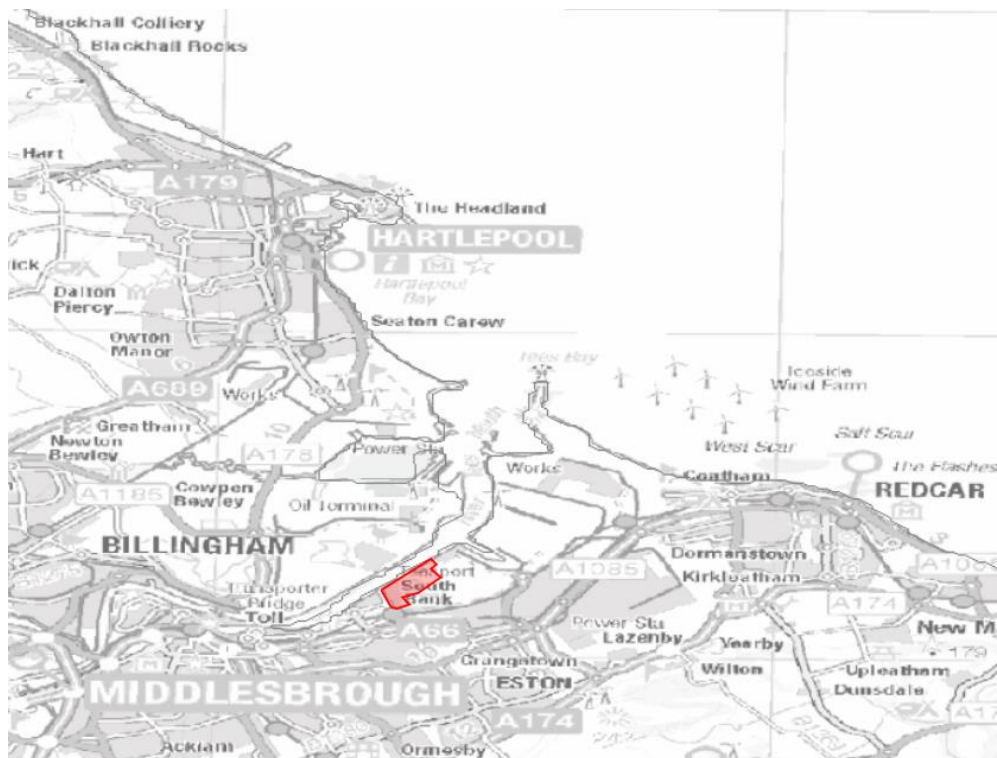


Figure 1: Location showing the proposed South Bank Wharf development, as seen on SPIRIT, on the south bank of the River Tees.

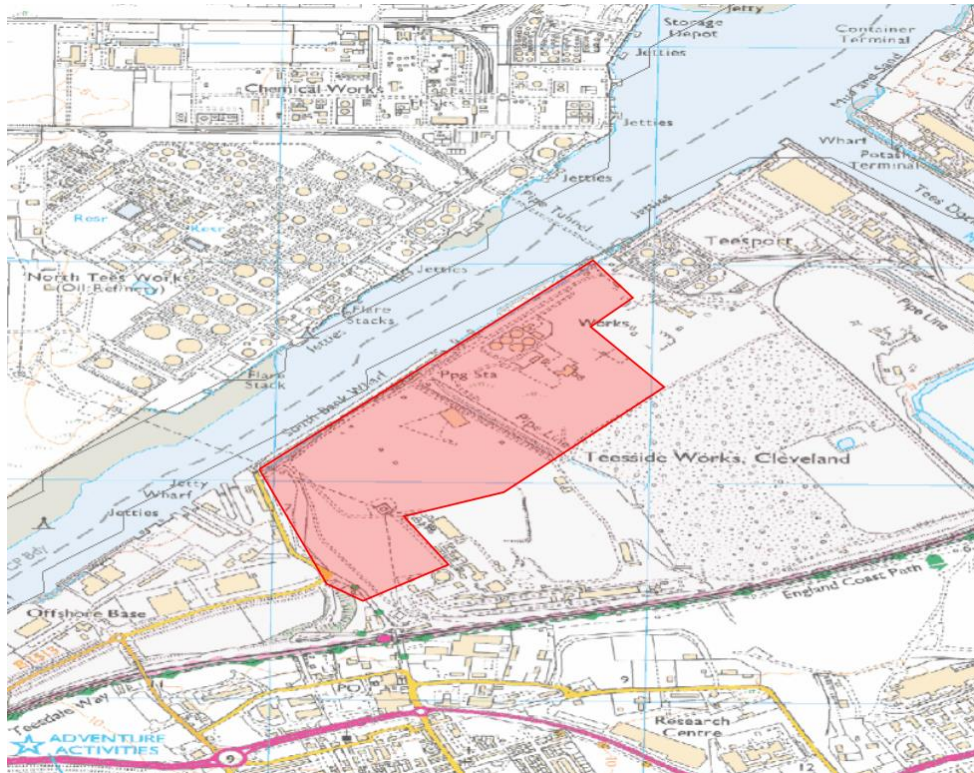


Figure 2: Location of the proposed South Bank Wharf development, as seen on SPIRIT, on the south bank of the River Tees.

### 3 Environmental Impact Assessment (EIA)

Council Directive 2011/92/EU (as amended) on the assessment of the effects of certain public and private projects on the environment (“the EIA Directive”) aims to protect the environment and the quality of life by ensuring that projects which are likely to have significant environmental effects by virtue of their nature, size or location are subject to an EIA before permission is granted.

The Marine Works (Environmental Impact Assessment) Regulations 2007 (as amended) (“the Regulations”) transpose the EIA Directive into UK law for marine licence applications.

Pursuant to Regulation 5 of the Regulations, it was agreed between the MMO and Able UK Limited (Richard Cram, Engineering Director) that the proposed works constitute an EIA development under Schedule A2 (88) of the Regulations, specifically:

*Schedule A2 (88)*

*Any change to or extension of development of a description listed in Schedule A1 (other than a change or extension falling within paragraph 31 of that Schedule) where that development is already authorised, executed or in the process of being executed.*

Therefore, the application required for the proposed works for a marine licence under Part 4 of the Marine and Coastal Access Act 2009 (“the Act”) will be accompanied by an Environmental Statement (“ES”).

## 4 Scoping Opinion

Pursuant of regulation 13 of the Regulations, Able UK Limited have requested a Scoping Opinion from the MMO. In doing so a document entitled “Letter to RCBC 19.05.20 Scoping Request FINAL.pdf” has been submitted to the MMO for review.

The MMO agrees with the topics outlined in the scoping request:

- Landscape and Visual Impact Assessment;
- Traffic & Transportation;
- Ecology, including marine ecology;
- Hydrodynamic and Sedimentary Regime;
- Noise and Vibration;
- Air Quality;
- Hydrology and Hydrogeology;
- Socio-Economic Effects; and
- Cumulative Impacts.

In addition, we outline and advise that the following aspects be considered further during the EIA and must be included in any resulting ES.

- Habitats Directive / Wild Birds Directive
- Other Nature Conservation
- Benthic Ecology
- Coastal Processes
- Seascape / Landscape
- Fish Ecology and Fisheries
- Shellfish
- Archaeology / Cultural Heritage
- Navigation / Other Users of the Sea
- Air Quality & Climate
- Water Quality
- Underwater Noise
- Seabed / Land / Soil Quality
- Population and Human Health
- Cumulative Impacts & In-Combination Impacts
- Risk of Major Accidents and Disasters Relevant to the Project (including those caused by Climate Change)
- Mitigation

Please see below for some specific details for a number of these topics.

### 4.1 Habitats Directive / Wild Birds Directive

#### 4.1.1 Teesmouth and Cleveland Coast SSSI:

The Tees and Hartlepool Foreshore and Wetlands Site of Special Scientific Interest (SSSI) is no longer an extant site, and has been subsumed into the newly designated Teesmouth and Cleveland Coast SSSI. The impact upon this protected

site should be carefully considered within the application.

The Teesmouth and Cleveland Coast SSSI is designated for the following features:

- Jurassic geology,
- Quaternary geology,
- Saltmarsh,
- Sand dunes,
- Harbour seal,
- Breeding birds,
- Non-breeding birds, and
- Invertebrate assemblage.

Please see the link for more information and related documents:

<https://consult.defra.gov.uk/natural-england-marine/teesmouth-and-cleveland-coast-potential-sp/>. Further information on the Teesmouth and Cleveland Coast SSSI and its special interest features can be found at [www.magic.gov.uk](http://www.magic.gov.uk).

The ES should include a full assessment of the direct and indirect effects of the project on the features of special interest and should identify such mitigation measures as may be required in order to avoid, minimise or reduce any adverse significant impacts.

#### 4.1.2 Teesmouth and Cleveland Coast pSPA and Ramsar site

The MMO notes that the proposals to extend the Teesmouth and Cleveland Coast Special Protection Area (SPA) and Ramsar site are currently being considered by the Minister. Until a decision is made, potential SPAs (pSPA) and Ramsar sites are of Material Consideration and should be carefully considered within any application or supporting assessments.

The Teesmouth and Cleveland Coast pSPA is proposed to protect at-sea tern foraging areas, the river channel and additional wetlands, as well as the following features:

- Common tern (breeding),
- Little tern (breeding),
- Sandwich tern (passage),
- Avocet (breeding),
- Ruff (non-breeding),
- Red knot (non-breeding),
- Common redshank (passage), and
- Waterbird assemblage.

For more information and related documents go to

<https://consult.defra.gov.uk/natural-england-marine/teesmouth-and-cleveland-coast-potential-sp/>.

The ES should include a full assessment of the direct and indirect effects of the project on the features of the pSPA and Ramsar site. This should include impacts upon tern prey availability, intertidal foraging habitat loss, barriers to species movement, visual and noise (above and below water) disturbance. The ES should

also consider impacts at both the construction and operational stage. It should also identify mitigation measures as may be required in order to avoid, minimise or reduce any adverse significant impacts upon these protected features.

A shadow Habitat Regulations Assessment (HRA) should be included, which fully assesses the impact upon protected sites. This assessment must consider the project in combination to other planned projects within the planning domain, including: (a) approved but uncompleted projects, (b) ongoing activities, (c) plans or projects for which an application has been made and which are under consideration by the consenting authorities, and (d) plans and projects which are reasonably foreseeable.

#### 4.1.3 Further advice on assessing these sites:

There should be particular interest in the vicinity of the intertidal mudflat opposite the proposal site, as identified in the scoping request as being used by feeding birds when exposed. The birds feeding upon the mudflat are particularly sensitive to noisy activities, especially during the winter months, and consideration should be given to suitable mitigation. In addition, the river channel itself is important for foraging common tern from the colony at Saltholme.

The MMO would support the adoption of a 'soft-start' approach to any marine piling which occurs during construction. The highly audible percussive piling, in particular, has the potential to disturb, displace, injure or kill fish and marine mammals within the area. Please see the Joint Nature Conservation Committee (JNCC) guidance for the 'soft-start' approach to marine piling (<https://consult.defra.gov.uk/natural-england-marine/teesmouth-and-cleveland-coast-potential-sp/>). The Harbour seal is a protected feature of the Teesmouth and Cleveland Coast SSSI, and is sensitive to noise.

The MMO supports the use of drill piles, as set out in the scoping letter, as opposed to percussive piling. Percussive piling is generally the loudest, and has the biggest potential to cause disturbance to pSPA and SSSI bird populations, marine mammals and fish. The MMO supports the consideration of auger, blue-piling or vibro-piling as alternative methods.

The environmental implications of noise generated during construction should be carefully considered, especially in relation to the impact of noise upon birds, fish and marine mammals. Noise modelling at sensitive locations should be included within the ES, for both the construction and operational stage of the project, so that the noise disturbance impact of the project can be fully assessed. The mudflat on the other side of the estuary to the development should be included as one of these areas, as well as additional sensitive receptors in the area.

The visual disturbance caused by the project, on-site staff, vessels and equipment (including cranes) must be considered for sensitive bird species of the Teesmouth and Cleveland Coast pSPA, SSSI and Ramsar site. This should consider the impact of lighting during the operational and construction phase.

## 4.2 Benthic Ecology

It is advised that a habitat survey should occur within the dredge footprint, so to identify any important benthic habitats or species.

## 4.3 Coastal Processes

The ES should include a detailed itinerary of the proposed works. The detail about the construction and timing of the work is crucial in order to assess the potential impact of the works on the surrounding environment.

The ES needs to be based on the physical characteristics of the site, which should include a description of the: proposed works; geography of the site; seabed properties, and; tidal/estuarine dynamics (tidal range and currents). The type of data used, and detail required, will depend on the sensitivity of each receptor (identified by the applicant) to these physical factors and the evidence the applicant requires to present their case. The use of in-situ and/or modelled data may be necessary to demonstrate a point.

The MMO is unable to provide further comment on what should and should not be included in the assessment without further information. The applicant should conduct their own scoping assessment based on the physical characteristics of the site as described above.

## 4.4 Archaeology / Cultural Heritage

The River Tees has been subjected to dredging in the recent past, meaning that the potential for archaeologically significant deposits or features to be impacted upon is likely to be negligible, and therefore not necessary to be assessed.

The development could potentially have an impact upon a number of designated heritage assets and their settings around the site. It will not have a direct impact on any known designated heritage assets but has the potential to have an indirect impact on a number of designated assets and their settings. In line with the National Planning Policy Framework (2018) and the UK Marine Policy Statement (2011), the ES should contain an assessment of the likely effects which the proposed development might have upon those elements which contribute to the significance of these assets.

The designated heritage assets within 3km of the proposed development for which their setting and significance could be impacted upon by the taller elements of the proposal (such as the quay rail cane). The MMO expect that the following designated heritage assets should be assessed in the ES:

- HA 1139267 Transporter Bridge, a Grade II\*;
- HA 1160408 Baptist Church, Grade II\*;
- HA 1139622 Church of St Peter, Grade II;
- HA 1160378 War Memorial Circa 5 Metres South West of Church of St Peter, Grade II;

- HA 1310598 1, Milbank Street Grade II;
- HA 1329634 War Memorial Grade II;
- HA 1329635 Church of St John the Evangelist Grade II

Views of the Grade II\* Transporter Bridge should be assessed in the ‘Landscape and Visual’ impact assessment” to determine the likely impact of the crane and other tall features in the proposal.

The ES should also consider the potential impacts on non-designated features of historic, architectural, archaeological or artistic interest, since these can also be of national importance and make an important contribution to the character and local distinctiveness of an area and its sense of place. The Local Authority’s Historic Environment Record should be consulted for baseline data in this regard.

#### 4.5 Navigation / Other Users of the Sea

The proposed works fall within the Statutory Harbour Authority area for PD Teesport, who have declared compliance with the Port Marine Safety Code for 2019. The MMO would therefore advise that PD Ports are fully consulted with during the consenting process so that impacts on the safety of navigation within their jurisdiction can be considered in line with their Safety Management System (SMS).

It is recommended that the project adheres to the PMSC Guide to Good Practice, available here:

<https://www.gov.uk/government/publications/a-guide-to-good-practice-on-port-marine-operations>

The sections of the Guide that are particularly relevant are as follows:

*From the Guide to Good Practice, section 7 Conservancy, a Harbour Authority has a duty to conserve the harbour so that it is fit for use as a port, and a duty of reasonable care to see that the harbour is in a fit condition for a vessel to be able to use it safely. Section 7.7 Regulating harbour works covers this in more detail and have copied the extract below from the Guide to Good Practice.*

Section 7.7 Regulating harbour works

*Section 7.7.1 Some harbour authorities have the powers to license works where they extend below the high watermark, and are thus liable to have an effect on navigation. Such powers do not, however, usually extend to developments on the foreshore.*

*Section 7.7.2 Some harbour authorities are statutory consultees for planning applications, as a function of owning the seabed, and thus being the adjacent landowner. Where this is not the case, harbour authorities should be alert to developments on shore that could adversely affect the safety of navigation. Where necessary, consideration should be given to requiring the planning applicants to conduct a risk assessment in order to establish that the safety of navigation is not about to be put at risk. Examples of where navigation could be so affected include:*



- *high constructions, which inhibit line of sight of microwave transmissions, or the performance of port radar, or interfere with the line of sight of aids to navigation;*
- *high constructions, which potentially affect wind patterns; and*
- *lighting of a shore development in such a manner that the night vision of mariners is impeded, or that navigation lights, either ashore and onboard vessels are masked, or made less conspicuous.*

There is a British Standards Institution publication on Road Lighting, BS5489. Part 8 relates to a code of practice for lighting which may affect the safe use of aerodromes, railways, harbours and navigable Inland waterways.

The MMO will be able to provide further comment on any marking requirements, and any impact to recreational boating interests once a formal application is made.

## 4.6 Water Quality

The MMO would expect water quality is to be scoped into the ES, as the dredging works could potentially release chemicals within the sediment into the water column. Please refer to the sections 4.6.1, 4.6.2, 4.6.3 and 4.6.4 below for further information.

### 4.6.1 Water Environment

The proposal has the potential to impact on the water environment in respect to:

- Permanent loss of intertidal priority habitat designated as SSSI and pSPA in an already heavily modified waterbody;
- Impact to intertidal priority habitat designated as SSSI and pSPA not directly associated with the development;
- Dredging of the River Tees;
- Construction and operation;
- Accidental releases;
- Drainage within made ground.

The ES should include an assessment of these impacts and specifically:

- The requirements of the Water Framework Directive (WFD) by way of a WFD Assessment,
- The Environment Agency's tidal encroachment policy for use in all estuaries,
- How the development will achieve a biodiversity net gain.

### 4.6.2 Water Framework Directive (WFD)

The WFD is implemented in England and Wales through, 'The Water Environment (Water Framework Directive) (England and Wales) Regulations 2003'. Under WFD, environmental objectives have been set out for each of the protected areas and water bodies in the Northumbria River Basin District Management Plan (RBMP), updated December 2015.

The current status of the Tees estuary (waterbody reference GB510302509900) is 'moderate' ecological potential. The objective for this waterbody is to achieve 'good'

ecological potential. Individual element classifications and objectives are provided below. These environmental objectives are legally binding. All public bodies must have regard to these objectives when making decisions that could affect the quality of the water environment.

The River Tees is important wildlife corridor and should remain as such and be enhanced where possible. As already noted the intertidal Tees estuary adjacent to the site is designated as a SSSI and pSPA. The Tees estuary environment has been significantly improved over recent decades and implementation of future legislation from 2020 will achieve further improvements to the benefit of estuary habitat, with a view to achieving good ecological potential by 2027.

The applicant should identify measures to comply with the requirements of the WFD through carrying out a WFD assessment of the proposal. As part of a WFD assessment, the following must be demonstrated:

- Whether the proposed development will lead to a deterioration in status of any WFD waterbody;
- Whether the proposed development will compromise the achievement of Good Status or Potential in any WFD waterbody;
- Whether the proposed development will contribute towards a cumulative deterioration of WFD status or prevent cumulative enhancement of WFD status in any waterbody;
- Whether the proposed development will support the delivery of measures identified in the Northumbrian RBMP that are required to achieve waterbody objectives.

In respect to the last of these points, the site includes part of the tidal Tees Estuary WFD waterbody (GB510302509900). This waterbody is designated as a heavily modified waterbody, and as such, requires that all practicable mitigation is taken to achieve good ecological potential. The generic mitigation measures deemed applicable to this waterbody include:

- Enhance ecology,
- Bank rehabilitation,
- Remove or soften hard bank,
- Preserve or restore habitats.

The design process for the wharf should look to include an assessment of incorporating bio-engineered designs such as Estuary Edges, to mitigate on site impacts. Where on site design cannot adequately mitigate impacts and achieve a biodiversity net gain, the Tees Estuary Partnership (TEP) has developed a Tees Estuary Habitat Vision that aims to deliver WFD mitigation measure objectives. The Tees Rivers Trust are already leading an IMMERSE project that sets out to enhance the biodiversity of the intertidal zone of the Tees estuary. This project forms a contribution to achieving the TEP habitat vision of establishing coherent ecological networks that are more resilient to current and future pressures at a landscape scale across local authority boundaries. The techniques employed have been drawn from successful Estuary Edges pilots on the Thames estuary where biodiversity benefits have also been shown to enhance the visual and aesthetic value afforded to new developments. Such measures have the potential to also enhance the impact of the

adjacent Teesdale Way / England Coast Path for the benefit of the wider community. Such a scheme would complement the landscaping strategy for the proposal.

There are other opportunities to implement WFD mitigation measures and the applicant should explore these with the TEP to compensate for impacts which cannot be mitigated through best practice design onsite.

#### 4.6.3 Dredging and Disposal

Dredging has the potential to cause negative impacts on the water environment. It can alter flow regimes, release contaminants accrued within the sediment, and create smothering effects/turbidity/sediment plumes, thereby damaging benthic habitats, impacting upon tern foraging and migratory fish populations. Dredging should only be undertaken in a manner that protects the environment.

The applicant should consider the methodology to be used, the disposal of dredged material, and the timing of works. Decisions should be underpinned by the fundamental scientific principles of hydraulics and geomorphology and take account of the multiple functions and services that a channel delivers. More information can be found here: <https://www.gov.uk/guidance/water-framework-directive-assessment-estuarine-and-coastal-waters>.

The disposal site (if there is one) must be specified, ensuring that it has taken capital dredge material before, and can accept the total proposed amount of dredge material. As part of the marine licence application, the applicant will need to provide sediment sample analysis results to ensure the material is suitable for disposal to sea (and to inform the impact assessment). Any material to be dredged and disposed of within licenced disposal areas at-sea must not exceed the Cefas Action Level 2 guidelines for contaminated sediment. This can be determined after sediment samples have been tested. If no disposal site exists, the applicant can apply for a new one to be designated but a disposal site characterisation will need to be carried out and submitted to the MMO.

Due to the quantity of material proposed to be dredged, it is advised that the plan for the beneficial use / disposal of the sediment should be clearly defined within the application.

#### 4.6.4 Habitat enhancement/Beneficial Reuse

The MMO would support the consideration of using the dredged material for beneficial use. This could include recharge of intertidal areas elsewhere in the estuary or the creation of bird islands. Natural England has noted that they would be happy to discuss this further with the applicant. Please find the link provided here for further information:

<https://www.rspb.org.uk/globalassets/downloads/documents/conservation-projects/seabuds-report.pdf>.

The MMO would advise the applicant to explore opportunities for habitat enhancement, in particular for the Quay combi-wall frontage. Ecological enhancement would support environment net gain.

More information and some helpful examples of 'Coastal and Estuarine Integrated Green Grey Infrastructure' see <http://eprints.gla.ac.uk/150672/> - See appendix 4 – Coastal <http://eprints.gla.ac.uk/150672/42/150672Appendix4.pdf>.

## 4.7 Underwater noise

The applicant states that for each topic area, the likely magnitude and significance of impacts on the marine environment would be identified and appropriate mitigation measures will be promulgated together with an appropriate management plan.

In order to assess the potential impacts, detailed knowledge is required of the spatial and temporal distribution of species and their seasonal sensitivities (e.g. known spawning and nursery grounds or migratory routes) in the area/River Tees (e.g. an appropriate baseline assessment).

It will also be necessary to identify significant noise sources from the project (i.e. the noise generating activities) that may cause harm to aquatic fauna. Specific information on the dredging and piling activities will be required, including the duration of works and anticipated working hours, the likely noise levels expected, the number of piles and the installation method.

The MMO would expect key marine invertebrate, fish and marine mammal species to be scoped into the ES. Given that the works will be undertaken within the River Tees, it will be important to consider migratory fish species.

EIAs for other developments in the vicinity have identified that the lower Tees estuary supports many fish species (including estuary dependant and temporary residents). Migratory fish species such as salmon, sea trout, European eel, sea and river lamprey have also been identified as being present within the Tees estuary.

Depending on the outcome of the assessment, and the risk of significant impact, the MMO would expect to see measures in place for minimising the potential impacts of underwater noise should be outlined. Measures may include temporal restrictions to avoid undertaking work during sensitive times of the day or year.

If noise modelling is to be undertaken to support the ES, there is guidance available, such as Farcas *et al.* (2016) and Faulkner *et al.* (2018). Currently, the latest set of widely applied and peer-reviewed noise exposure criteria for fish are those by Popper *et al.* (2014). For marine mammals, assessments should refer to the NOAA (NMFS, 2018) guidance.

## 4.8 Cumulative Impacts & In-Combination Impacts

The proposed works overlap with the Northern Gateway Terminal project. The applicant has estimated that the works will require a capital dredge of 2.5 million cubic metres (m<sup>3</sup>) of material. The applicant has stated that this will be reduced to 1.6 million m<sup>3</sup> of capital dredge material if the works are carried out alongside the Northern Gateway project (capital dredge of 4.5 million m<sup>3</sup>).

The exact details of the Northern Gateway project have not been provided. This information would be required, including any spatial and temporal overlap should the projects be considered together.

## 5 Conclusion

The topics highlighted in this scoping opinion must be assessed during the EIA process and the outcome of these assessments **must** be documented in the ES in support of the marine licence application and any associated planning applications. This statement, however, should not necessarily be seen as a definitive list of all EIA requirements. Given the scale and programme of these planned works other work may prove necessary.

Luella Williamson  
Marine Case Officer



02/08/2019

### References

Farcas, A., Thompson, P.M. and Merchant, N.D. (2016). Underwater noise modelling for environmental impact assessment. *Environmental Impact Assessment Review* 57 (2016) 114–122.

Faulkner, R.C., Farcas, A. and Merchant, N.D. (2018). Guiding principles for assessing the impact of underwater noise. *J Appl Ecol.* 2018;00:1–6.  
<https://doi.org/10.1111/1365-2664.13161>.

National Marine Fisheries Service. (2018). 2018 Revisions to: Technical Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing (Version 2.0): Underwater Thresholds for Onset of Permanent and Temporary Threshold Shifts. U.S. Dept. of Commer., NOAA. NOAA Technical Memorandum NMFS-OPR-59, 167 p.

Popper, A. N., Hawkins, A. D., Fay, R. R., Mann, D. A., Bartol, S., Carlson, T. J., ... Tavalga, W. N. (2014). ASA S3/SC1.4 TR-2014 Sound exposure guidelines for fishes and sea turtles: A technical report prepared by ANSI Accredited Standards Committee S3/SC1 and registered with ANSI. American National Standards Institute.