

Water Framework Directive Assessment

**Able Seaton Port- Capital and
Maintenance Dredging**

January 2025

CONTROL SHEET (A01/4)

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	Prepared by	Rebecca Camilleri		16/12/2025
	Checked by	Elizabeth Cowx		18/12/2025
	Approved by	Josh Murphy		19/12/2025

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1.0 INTRODUCTION

- 1.1 This Water Framework Directive (WFD) Assessment has been prepared by Fairhurst on behalf of Able UK Ltd, to support a Marine Licence application which includes capital and maintenance dredging at Able Seaton Port.
- 1.2 The overall Proposed Works consists of capital and maintenance dredging. A maximum of 890,000m³ of material is to be dredged across the licence period, with 250,000m³ comprising capital dredging. The full breakdown is detailed below and submitted in table form alongside this marine licence application.

Capital Dredging

- 1.3 Capital Dredging is proposed across Quays 7-11 to achieve the depths considered under the current dredge licence. To summarise:
- Quays 7, 8 and 9 are to be dredged to a depth of -9.5m CD removing a total volume of 85,000m³ ; and
 - Quays 10 and 11 are to be dredged to a depth of -15m CD removing a total volume of 165,000m³.

Maintenance Dredging

- 1.4 Subsequent maintenance dredging is proposed to be undertaken to maintain the depths achieved under the current dredge licence and proposed under this application. Specific quantities are as follows:
- Maintenance dredging of Seaton Channel, Holding Basin and Quays 10 and 11 up to a total volume of 400,000m³ across the 10 year period;
 - Maintenance dredging of the Terrc Basin up to a total volume of 160,000m³ across the 10 year period;
 - Maintenance dredging of the Ground Bed up to a total volume of 40,000m³ across the 10 year period; and
 - Maintenance dredging of Quays 7, 8 and 9 up to a total volume of 40,000m³ across the 10 year period.
- 1.5 The dredge volumes proposed within this licence are unfulfilled capacity which remains from the previous licence, where consented depths and amounts were not reached. As such, the proposed new marine licence is essentially an extension of the 2017 licence.

Disposal

- 1.6 The material removed from Able Seaton Port under this licence will be disposed of across two licenced disposal sites, Tees Bay C and Tees Bay A.

Proposed Dredging Methodology

- 1.7 The method of dredging will align with the previous license, and will be carried out by a variety of dredging plant. The choice of plant will be governed by the location and depth of material to be removed year on year. The choice of plant will also be affected by ongoing port operations in the basin, as some plant may not prove to be suitable at certain times due to local operational limitations and restrictions.
- 1.8 Within each work area, the dredging shall initially be carried out to dredge level +0.5m. After the whole of the work area has been dredged to dredge level +0.5m the final 0.5m thickness of material may be removed. Due to the historical use and nature of operations, it is possible that unnatural materials and debris will be encountered. Any scrap or debris will be removed ashore. Unnatural materials, including scrap metal, shall be landed in a workman like manner and transported to a skip located within the development area for offsite disposal.
- 1.9 The proposed methods of dredging have a very low risk of placing contaminated sediment into suspension in the water column. The concentrations of contaminants present in the silt are at concentrations which have not fluctuated significantly within the length of the licence. In addition, previous maintenance dredging at this location has been successfully undertaken without causing adverse environmental impact.
- 1.10 This application has been submitted in advance of the receipt of sample results, taken and analysed in line with Sample Plan SAM/2025/00058. These results will be submitted once received.
- 1.11 Additional baseline data will be identified through a Report to Inform a Habitat Regulation Assessment, hereby referred to as a shadow HRA. This has been instructed and will be submitted as part of this application.

Background to the WFD

- 1.12 The Water Framework Directive was passed into UK law in 2003. The overall aim is to protect and improve the water environment by preventing deterioration of the waterbody's Ecological Status or, for Heavily Modified (HMWBs) or Artificial Water Bodies (AWBs), their Ecological Potential.

- 1.13 The Water Framework Directive aims to protect and enhance the quality of the water environment across all European Union (EU) member states. The Water Framework Directive was introduced into UK legislation in 2017 as The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017. It takes a holistic approach to the sustainable management of water by considering the interactions between surface water (including transitional and coastal waters, rivers, streams, and lakes), groundwater, and water-dependent ecosystems.
- 1.14 Under the WFD, 'water bodies' are the basic management units and are defined as all or part of a river system or aquifer. These water bodies form part of larger 'river basin districts' (RBDs), for which 'River Basin Management Plans' (RBMPs) are developed by government in which environmental objectives are set. RBMPs are produced every six years, in accordance with the river basin management planning cycle.
- 1.15 The WFD requires classification of the current condition ('status or potential') of surface and groundwater bodies, and the setting of a series of objectives for maintaining or improving conditions such that water bodies attain or maintain 'good status or potential' during the next RBMP cycle. These must consider factors which may cause a deterioration of a water body, or which may prevent future attainment of good status/potential.
- 1.16 As a result, new developments that have the potential to impact on current or predicted WFD status are required to assess their compliance against the WFD objectives of the potentially affected water bodies.

2.0 WATERBODY BASELINE AND SAMPLING DATA

- 2.1 Prior to completing the WFD assessment process it is necessary to collect baseline information on the current status of the water body in the study area. This involves identifying the waterbodies within the study area and then identifying the elements within and around those watercourses that may be affected by the works.
- 2.2 Baseline information has been collected from the EA Catchment Data Explorer (last updated March 2025) and the WFD Water Body Summary Table (Environment Agency, 2023). The Northumbria River Basin Management Plan (Environment Agency, 2015) has also been consulted but it does not reflect the most up-to-date data for the waterbody. However, it has been consulted as the 2022 management plan provides updates on progress, but is largely based on the original 2015 plan.
- 2.3 The Tees Water Body (Water Body ID: GB510302509900) is classified as a transitional, Heavily Modified Water Body (HMWB) which was most recently assessed (2025) as being of Moderate Ecological status. However, the Tees was classified in 2019 (when last assessed) as failing chemically due to high detected levels of four priority hazardous substances: Benzo(g-h-i)perylene, Mercury and its Compounds, Polybrominated dimethyl ethers (PBDEs), and Tributyltin Compounds. It was also classified from 2013 to 2016 as Good status for Fish, which deteriorated to Moderate in the 2019 Cycle 3 assessment.
- 2.4 However, due to the consistent failure of many water bodies on Chemical grounds, the assessment now considers Specific Pollutants instead, for which the Tees water body is classed overall as High Status on the EA Catchment Data Explorer (2025). It was also classified in Cycle 3 (2022) as High status for Dissolved Oxygen, and Supports Good status for Hydromorphological Supporting Elements.
- 2.5 The Tees Water Body (GB510302509900) flows into the Tees Coastal Water Body HMWB downstream (Water Body ID: GB650301500005). Due to the scale of the works proposals in relation to the very high baseline of activities undertaken within the Tees and the scale of the Tees, and in reference to the consented depths of the previous licence, no proposed change in depth and extent of the berth as a result of these works, potential pressures on the downstream water body are considered insignificant and thus the works are unlikely to affect the potential/status of the Tees Coastal water body. In addition, due to limited anticipated interaction between surface and groundwater in this location which is sub-tidal and within a man-made channel, the WFD Assessment is only required to consider the effects on the Tees Water Body.
- 2.6 **Table 2.1** below summarises the attributes and classifications of the Tees Water Body from Source to Wear Water Body:

Table 2.1: Water Body Attributes and Classifications

Summary of Waterbody Status	Description, notes or more information		
WFD water body name	Tees Water Body		
Water body ID	GB510302509900		
River basin district name	Northumbria River Basin		
Water body type	Transitional Water		
Water body catchment area (ha)	1148.102 ha		
Overall water body status	2019	2022	
	Moderate	Moderate	
Ecological status	2019	2022	
	Moderate	Moderate	
Chemical status	2019	2022	
	Fail	Does not require assessment	
Target water body status and deadline)	Ecological	Good	2015
	Chemical	Good	2063
Hydromorphology status of waterbody	Heavily modified		
Heavily modified water body and for what use	Yes – Flood protection; Navigation, Ports and Harbours		
Higher sensitivity habitats present	Saltmarsh – 46.24 ha Subtidal Kelp beds – 4.13 ha		
Lower sensitivity habitats present	Cobbles, Gravel and Shingle – 0.77 ha Intertidal Soft Sediment – 400.13 ha Rocky Shore – 26.93 ha Subtidal Rocky Reef – 26.28 ha Subtidal Soft Sediments – 610.31 ha		
Phytoplankton status	Good		
History of harmful algae	Not Monitored		
WFD protected areas within 2km	Yes – Teesmouth and Cleveland Coast SSSI, Teesmouth and Cleveland Coast SPA and Teesmouth and Cleveland Coast Ramsar.		

- 2.7 Able UK Ltd have submitted a Sample Plan Request (SAM/2025/00058), where 14 no. evenly spaced surface sample locations have been identified and are currently being analysed.
- 2.8 The sample locations are split as follows:
- Six sample sites across Able Seaton Port Quays 7-11;
 - Five sample sites across the Seaton Channel and Holding Basin; and
 - Three sample sites within the TERRIC Basin.
- 2.9 All samples were taken and are being analysed in accordance with CEFAS and OSPAR guidance. This application has been submitted in advance of receipt of the sample results. These are expected in January and will be submitted to the MMO once received. These results will be accompanied by a covering letter which will detail the results of the samples and compliance with CEFAS Action Levels.

3.0 SCREENING

- 3.1 In order to ascertain whether an impact assessment will be required, screening is undertaken of the project in order to identify the potential risks of the Proposed Works. If the proposed activity is considered to be inherently low risk, then the project can be screened out of the WFD. However, where a potential risk is identified, the project must go through the motions of the assessment and progress to the scoping assessment stage. Please refer to **Table 3.1** below which undertakes this screening exercise.

Table 3.1: WFD Screening Process

Low Risk Activity Types	Project Compliance
A self-service marine licence activity or an accelerated marine licence activity that meets specific conditions	No
Maintaining pumps at pumping stations – if done regularly, avoiding low dissolved oxygen levels during maintenance and minimising silt movement when restarting the pumps	No
Removing blockages or obstacles like litter or debris within 10m of an existing structure to maintain flow	No
Replacing or removing existing pipes, cables or services crossing over a water body – but not including any new structure or supports, or new bed or bank reinforcement	No
'Over water' replacement or repairs to, for example bridge, pier and jetty surfaces – if bank or bed disturbance is minimised	No
Was the activity carried out during 2009 to 2014 (when evidence was collected for the 2015 RBMPs) and already has a WFD assessment?	No
Has the activity carried out during 2009 to 2014 changed method, size or scale, volume, depth, location or timings?	No
Has the activity carried out during 2009 to 2014 changed due to a pollution incident since your activity was last carried out?	No
Screen in/out	In

- 3.2 As illustrated above, the project does not qualify as a Low Risk Activity, and as such must be screened into the WFD Assessment. As identified in the baseline information in **Chapter 2.0**, there are a number of potential considerations, particularly with regard to the chemical status of the Tees Water Body. As there are several WFD Protected areas located within a 2km radius of the Site, the potential impact of the proposed activity on those habitats cannot be screened out at this stage.

4.0 WFD SCOPING

4.1 This stage of the assessment identifies elements within the River Tees waterbody which may be adversely impacted, in the absence of mitigation measures. As a result of the baseline information for the water body, none of the topics could be screened out at the previous stage:

- Hydromorphology;
- Biology – Habitats;
- Biology – Fish and Highly Mobile Species;
- Water Quality;
- WFD Protected Areas; and
- Invasive Non-Native Species (INNS).

4.2 Where a potential risk is identified, these elements will progress to the detailed assessment stage. The tables below present this scoping exercise.

Hydromorphology

Considerations	Hydromorphology risk issue
Could impact on the hydromorphology (for example morphology or tidal patterns) of a waterbody at high ecological status	No – the Tees Water Body is considered to be at Moderate ecological status, so there is no risk to a high status waterbody.
Could significantly impact the hydromorphology of any waterbody	No – given the nature of the activity, it is considered that there is no long-term impact on the structure of the water body and the hydromorphological interactions, particularly with respect to the commonality of dredging in the River Tees.
Is in a waterbody that is heavily modified for the same use as your activity	Yes – the proposal constitutes dredging activity for the purposes of navigation, ports and harbours, which is one of the reasons for the Tees's HMWB status.
Scope in/out	In

4.3 As demonstrated in the table above, the potential hydromorphology impacts, though expected to be very limited, have been scoped in for further assessment due to the fact that the proposed activity is contributing to the same use for which the water body has been classified as HMWB.

Habitats

Higher sensitivity habitats	Lower sensitivity habitats
Chalk reef	Cobbles, gravel and shingle – 0.77 ha
Clam, cockle and oyster beds	Intertidal soft sediments like sand and mud – 400.13 ha
Intertidal seagrass	Rocky shore – 26.93 ha
Mäerl	Subtidal boulder fields
Mussel beds, including blue and horse mussel	Subtidal rocky reef – 4.13 ha
Polychaete reef	Subtidal soft sediments like sand and mud – 610.31 ha
Saltmarsh – 46.24ha	
Subtidal kelp beds – 4.13ha	
Subtidal seagrass	
Consider if the footprint of your activity is:	Biology habitats risk issue(s)
0.5km ² or larger	No- the footprint of the proposed activity is estimated to be 0.35km ² and as such, does not require assessment.
1% or more of the water body's area	No
Within 500m of any higher sensitivity habitat	No – the proposal is not within 500m of, or located within any higher sensitivity habitats.
1% or more of any lower sensitivity habitat	No
Scope in/out	Out

- 4.4 As illustrated in the table above, no has been answered to all matters, and as such no impact assessment of habitats is required, as stipulated by the guidance.

Fish and Highly Mobile Species

Consider if your activity:	Biology fish/highly mobile species risk issue(s)
Is in an estuary and could affect fish in the estuary, outside the estuary but could delay or prevent fish entering it or could affect fish migrating through the estuary	Yes – The River Tees is known to be one of the most important rivers in England, particularly for populations of migratory Salmon as well as being host to Sea Trout and migratory Lamprey populations. Without appropriate mitigation, the dredging activity could pose a risk of disruption to the migratory behaviours of these fish.
Could impact on normal fish/fauna behaviour like movement, migration or spawning (for example creating a physical barrier, noise, chemical change or a change in depth or flow)	Yes – without adequate mitigation in place dredging activity can interfere with movement and migration of fish due to noise and changes to the sediment levels within the water column.
Could cause entrainment or impingement of fish or other highly mobile species	Yes – it is possible that fish are impinged or entrained as a result of any of the proposed methods of dredging.
Scope in/out	In

- 4.5 The table above clearly demonstrates that all matters, with regards to fish and highly mobile species could create potential adverse impacts on the biology of the waterbody, without appropriate mitigation measures in place. As such, an impact assessment is required and all matters are scoped in. With respect to the absence of mitigation measures in place, this scoping assessment has considered the risk without these measures, details of which are described in the subsequent section of this document.

Water Quality

Consideration	Water quality risk issue(s)
Could affect water clarity, temperature, salinity, oxygen levels, nutrients or microbial patterns continuously for longer than a spring neap tidal cycle (about 14 days)	Yes – it is acknowledged that without appropriate mitigation, works which include dredging are likely to cause temporary excess sediment into the water column. These effects also impact on the water oxygenation levels and turbidity of the water during and immediately after the works.
Is in a water body with a phytoplankton status of moderate, poor or bad	No – the status is Good.
Is in a water body with a history of harmful algae	Not monitored in the River Tees.
If your activity uses or releases chemicals (for example through sediment disturbance or building works) consider if:	Water quality risk issue(s)
The chemicals are on the Environmental Quality Standards Directive (EQSD) list	Yes – PBDEs, Mercury and its compounds and others on the EQSD list are compounds for which the River Tees has failed. As such, it is likely that the disturbance of sediments through the proposed dredging activity will re-release these chemicals into the water column.
It disturbs sediment with contaminants above CEFAS Action Level 1	Yes- At present, this assessment has been submitted in advance of receipt of any sampling results and therefore, will be submitted once received. This application will be subsequently accompanied by a covering letter which will detail the results of the samples and the corresponding Action Levels. Across the previous licence period, the sample results suggested that there are some contaminants above Action level 1 present in the sediment to be dredged. If the sampling reveals results which sit out with what have previously been recorded, this WFD will be revisited.
If your activity has a mixing zone (like a discharge pipeline or outfall) consider if:	Water quality risk issue(s)
The chemicals released are on the Environmental Quality Standards Directive (EQSD) list	Yes- At present, this assessment has been submitted in advance of receipt of any sampling results and therefore, will be submitted once received. This application will be subsequently accompanied by a covering letter which will detail the results of the samples and the corresponding Action Levels. Across the previous licence period, the sample results suggested that there are some contaminants above Action level 1 present in the sediment to be dredged. If the

	sampling reveals results which sit out with what have previously been recorded, this WFD will be revisited.
Scope in/out	In

- 4.6 The table above shows that several matters with regard to water quality could potentially adversely impact the water body without appropriate mitigation, as such, water quality matters are scoped into the required impact assessment. In addition, the presence of contaminants above CEFAS Action Level 1 and the chemicals released on the EQSD list cannot be excluded, given the absence of the sampling results, so based on historical results, the assumption is made that there will be samples containing chemicals over Action Level 1, further prompting impact assessment.

WFD Protected Areas

Consider if your activity is:	Protected areas risk issue(s)
Within 2km of any WFD protected area	Yes – the site is located within the boundaries of the Teesmouth and Cleveland Coast Special Protection Area (SPA) and within the Seal Sands, Tees Estuary Eutrophic Coastal Sensitive Area
Scope in/out	In

- 4.7 Due to the protected nature of the application Site, WFD Protected Areas are scoped into the impact assessment.

Invasive non-native species (INNS)

Consider if your activity could:	INNS risk issue(s)
Introduce or spread INNS	Yes – it is understood that there is a low risk of the introduction of the INNS due to the relatively proximate locations of the dredge and disposal site, but any marine works which involve the movement of material must account for the risks of site based cross-contamination.
Scope in/out	In

- 4.8 Works will take place predominantly within the Tees water body, but material removed from the Tees would be transported outside of the water body for disposal at the designated disposal site at sea to Tees Bay A (TY160) and/ or Tees Bay C (TY150). As such, it is unlikely that the equipment or material will have been used in or exposed to any waterbodies which harbour non-native species, but site based cross-contamination cannot be ruled out without the appropriate assessment, so INNS are scoped in.

4.9 As detailed in the summary table below, the scoping exercise has revealed that the following matters require further impact assessment so as to establish appropriate mitigation measures:

- Hydromorphology – the proposed activity is contributing to the same use for which the water body has been classified as HMWB;
- Biology – Fish and Highly Mobile Species – fish migratory routes and behaviours may be disrupted;
- Water Quality – potential impacts to water clarity, oxygen levels and sedimentation; dispersal of chemical contaminants through disruption;
- WFD Protected Areas – The Site is located with and in close proximity to protected areas; and
- INNS – low risk of introduction or spread of INNS.

Summary of the Screening and Scoping exercise

Consideration	Impact Assessment Required?
Hydromorphology	Yes
Biology: habitats	No
Fish and highly mobile species	Yes
Water quality	Yes
WFD Protected areas	Yes
Invasive non-native species	Yes

5.0 IMPACT ASSESSMENT

- 5.1 The impact assessment detailed in this section considers the potential impacts of an activity, identifies mitigation measures that avoid or reduce impacts, and concludes if the activity may cause deterioration or prevent any quality element within any water body from achieving Good status/potential.
- 5.2 The Clearing Waters for All Guidance, alongside the related “Pressures-Activities Matrix”, have been used to complete this assessment (contains JNCC data © copyright and database right 2022). This approach corresponds to that which is applied in WFD Policy and should be the case for the determination of this proposal, utilising the following details as an evidence base:
- Marine Planning Supporting Statement
 - Dredge Method Statement
 - Drawing No: ASC-002-00004
 - Sample Results (anticipated submission January 2026)
- 5.3 As such, it is considered that this assessment has considered the potential impacts proportionately and reasonably for the risks presented.
- 5.4 Professional judgement and experience have been used to weigh the potential changes and resultant pressures which could be caused by the Proposed Works, as there is no published or formalised quantitative guidance to consult for this assessment. These assessments have been made utilising best available data as listed above, in addition to Environment Agency Catchment Data and the River Basin Management Plan.
- 5.5 The impact assessment will therefore be based on sensitivity and degree of change criteria informed by reasoned argument, previous experience, and professional judgment as summarised below.

Sensitivity of Receptor

- 5.6 The assessment has considered the potential impacts of the Proposed Works on a range of receptors, and has split them up into four different levels. Therefore, the sensitivity of the receptors within this assessment were assigned using the following scale:

High: European Designated Site, High waterbody status receptor, WFD Higher Sensitivity Habitat, or Invasive Non-native Species confirmed as present on Site;

Medium: Nationally Designated Sites, Good waterbody status receptor, WFD Lower Sensitivity Habitat, or Unmodified River confirmed as present on Site, or Invasive Non-native Species confirmed as present elsewhere in waterbody;

Low: Locally or Regionally Designated Sites, Moderate or Poor waterbody status receptor, or HMWB/AWB confirmed as present, or Invasive Non-Native Species Confirmed absent;¹ and

Negligible: Designated habitats and/or Protected Species presence considered unlikely or confirmed as absent, or Bad/Fail waterbody status receptor.

Degree of Change

- 5.7 The degree of change has been determined based on baseline ecological, chemical or physical conditions of the watercourse as specified on the EA Catchment Data Explorer, and also accounts for likelihood of the impact occurring according to experience and professional judgement, in accordance with the following scales:

High: likely substantial change;

Medium: likely noticeable change;

Low: unlikely noticeable change, or likely hardly perceptible change; and

Negligible: unlikely hardly perceptible change, or no perceptible change.

Pressure

- 5.8 The overall pressure on receptors, detailed in the matrix below, was determined taking into account of receptor sensitivity and degree of change, as set out above.
- 5.9 Pressures identified within this assessment are considered adverse, unless otherwise stated, as the purpose of a WFD assessment is to identify, and suggest mitigation to prevent, potential deterioration of waterbody status or jeopardy in achievement of Good status. If a predicted effect
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¹ Note: A precautionary approach has been taken to assume that even where INNS are not present there is a low risk of invasion or spread where works are being undertaken on site

falls between two categories e.g. Slight/ Moderate, then professional judgement is applied to assess the expected extent of the pressure.

Sensitivity	Degree of Change				
		High	Medium	Low	Negligible
	High	Substantial	Moderate/ Substantial	Slight/ Moderate	Slight
	Medium	Moderate/ Substantial	Moderate	Slight	Negligible/ Slight
	Low	Moderate	Slight/ Moderate	Negligible/ Slight	Negligible
	Negligible	Slight	Negligible/ Slight	Negligible	Negligible

- 5.10 The assessment on the following pages considers the effect of mitigation measures embedded in the scheme design and/or construction methodology to avoid or reduce the potential for impacts on quality elements scoped into the assessment.

Hydromorphology

Potential Impacts

- 5.11 Changes to the amount and composition of sediment suspended in the water column may impact hydromorphological flows and sediment deposition.
- 5.12 Alteration to the depth of the channel can affect flows within and around the dredged area.

Baseline and Pressure Pathways

- 5.13 With any dredging there is an identified pressure pathway between the proposed activity and the potential impacts.
- 5.14 Any method of dredging, including those proposed, can result in changes to the sediment concentrations entering a water body. This change to sediment and organic matter movement, and thus the turbidity of the waterbody, can lead to altered sedimentation downstream and altering flow rates and directions.
- 5.15 The proposed methods of dredging have a very low risk of placing contaminated sediment into suspension in the water column. The concentrations of contaminants present in the silt are at concentrations which have not fluctuated significantly within the length of the previous licence. In

addition, previous dredging at this location has been successfully undertaken without causing adverse environmental impact.

- 5.16 However, the deepening of the seabed can alter the rate and patterns of water flows through that section of the waterbody and if a harder substratum is revealed, this can further influence the movement of water over that section of seabed. This can lead to differences in the currents and tidal patterns within the estuarine waterbody.
- 5.17 As aforementioned, the Tees water body supports a good hydromorphological status, however, it is also a Highly Modified Water Body for the purposes of Flood Protection and Navigation, Ports and Harbours. Given the nature of the Site and surrounding area, there is an extensive dredging regime across the waterbody as well as number of long-term dredging licences held by individual berth owners along the Tees in order to facilitate the extensive navigation and shipping activities which are required in this highly industrial location (please refer to the Planning History Chapter 4.0 of the Marine Planning Supporting Statement).
- 5.18 Given that the Tees has a supports good hydromorphological status, but is also a HMWB subject to extensive shipping, construction and dredging activities across the waterbody, the receptor will be considered as a Low sensitivity with regard to hydromorphology for the purposes of this assessment.

The Development and Embedded Mitigation:

- 5.19 Dredging activity does have the capacity to temporarily increase the load of suspended sediments within the water column during and immediately after operation. Consequently, this can cause problems which make use of the river habitat as a result of the increased turbidity (see Biology – Fish and Highly Mobile Species section), as well as altering the rate of sedimentation and scour as a result of sediment transport downstream.
- 5.20 As aforementioned, the method of dredging will align with the previous licence, and will be carried out by a variety of dredging plant. It is proposed that the dredged material would be deposited offshore to either Tees Bay A (TY160) or Tees Bay C (TY150), whilst any debris (likely to be unnatural material, including scrap metal) will be removed ashore to a designated area for disposal.
- 5.21 With account of the current marine licence and the previous approval for the proposed methodology, combined with the baseline levels of dredging within the wider Tees water body, it is therefore considered that there will be very limited change to sediment loading of the Tees channel relative to the existing levels. With this in mind, it is considered unlikely that there will be any change to the sedimentation rates or effects of scour on this section of the Tees. In addition, re-instating the proposed depth in this location is unlikely to significantly alter water flow rates and

related sedimentation and tidal patterns, given that the proposed berth depth has already been approved and considered acceptable under a previous licence.

- 5.22 As such it is considered that overall, the flow, sedimentation, and scour patterns in the wider Tees as a result of the proposed dredging activity temporarily mobilising sediment into the water column will experience **no perceptible change**.
- 5.23 The deepest quays at Able Seaton Port are permitted to be dredged to -15mCD and are currently dredged to -13.5mCD. As such, it is considered that the limited removal of sediments in order to create an increased berth depth is very minimal in scale, is unlikely to lead to an alteration to the depth of the channel to such a degree that hydromorphological flows and within and around the dredged area and will be affected outwith the baseline levels of disruption generated through the existing regime within the wider *Tees* water body.
- 5.24 It is considered that the change to the hydromorphological flows and downstream sedimentation patterns in the Tees as a result of the deepening and maintenance of the existing dredge pockets would be **unlikely**, and **hardly perceptible**.
- 5.25 When considering the aforementioned assessment of the likely changes to the baseline conditions of the *Tees* as a result of the proposed methodologies and extent of dredging in this location, it is considered that the degree of change to the hydromorphological regime of the water body will be **Negligible**.

Assessment Outcome:

- 5.26 It is considered that the proposed dredged to the existing berth areas at Able Seaton Port will generate **Negligible** pressure on the waterbody's hydromorphological regime. As such, it is not anticipated that the proposed works will lead to any deterioration in the Tees existing "Supports Good" Hydromorphological status.

Biology: Fish and Highly Mobile Species

Potential Impacts

- 5.27 Potential disruption arising from dredging activities and the disturbance of sediments that may pose a barrier to fish and invertebrate species, including salmonids, which are known to be present in the River Tees.
- 5.28 Disturbance of sediments and resultant deoxygenation which may pose a barrier to fish, including salmonids, which are known to be present within the River Tees.
- 5.29 Potential disruption arising from in-channel operations which may pose a barrier to highly mobile species in the Tees.
- 5.30 The potential disturbance leading to avoidance behaviours and/or causing a barrier to passage of the section of the channel.
- 5.31 Potential harm to existing ecological communities i.e., benthic invertebrate species as a result of disturbance, light smothering, and abrasion of the seabed surface.

Baseline and Pressure Pathways

- 5.32 Any works in close proximity of the watercourse has the potential to create several pressures on biological elements, including visual disruption, light pollution, and noise and vibration. The extent and location of the work can significantly affect these factors. This disruption can particularly impact the behaviours of migratory salmonids, creating a physical barrier to their migration. Additionally, there is a nominal risk of fish being entrained due to the hydraulic suction of some methods of dredging, which can further hinder their migration.
- 5.33 Since dredging works are undertaken within the channel, it is established that dredging can generate an elevated concentration of suspended sediment within the water column during and immediately after work has been completed. As such, this can negatively impact the turbidity of the water as well as reducing the dissolved oxygen levels. Additionally, if the sediment is contaminated, this increases the potential exposure of fish, highly mobile species, invertebrates, and dip-feeding birds which are in and around the watercourse to harmful substances. As a result, this can create a chemical barrier to migration, deterring normal behaviours, and is known to particularly affect smolts which have a high metabolic rate.
- 5.34 Dredging activity within the channel can create underwater noise. In extreme cases, underwater noise and the vibrations this can cause harm or even mortality to fish and highly mobile species which utilise the surrounding areas. Dredging can also lead to avoidance behaviours, changing the normal patterns of feeding and breeding birds, marine mammals, or fish.

- 5.35 Dredging activity is known to cause abrasion and disturbance of the sediments on the seabed which can have an adverse impact on the benthic and aquatic invertebrate species which live and feed in the seabed. The removal of the top layer of sediment generates a temporary loss of habitat and disruption to the ecological colonisation of the dredged location, until the area is recolonised from surrounding sediments which have not been affected. Furthermore, the deposit of dredge arisings at the disposal site will result in light smothering of the seabed sediment, which can have an adverse effect on benthic species which are not able to travel up through the newly deposited sediment to the surface.
- 5.36 As previously discussed, Tees water body is an important salmonid river for the migration of species including Atlantic Salmon, Sea Trout, and European Eel. A review of the EA Catchment Data explorer indicates that the Fish status has been at Good status in the past, but has since 2019 been classified as Moderate status for Fish. The Reason for Deterioration (RFD) of the status is currently under investigation but is labelled as unknown/chemical pressure in the RNAG classification data.
- 5.37 Also, the Tees is classified as Good status for Invertebrates, Macroalgae, and Phytoplankton, although there are also several RNAGS which relate to impacts on Macroalgae as a result of discharge from Trade/Industry and the Water Industry.
- 5.38 The Tees is also known to host populations of highly mobile species such as Common/Harbour Seals and breeding and wintering birds, which are features listed on the citation for the designation of the Teesmouth and Cleveland Coast SSSI and SPA designations.
- 5.39 In 2021, the Tees experienced a period of crustacean die offs, with an Independent Expert Assessment conducted in January 2023 to determine potential causes and to determine the significance of the historical industrial activity undertaken within the Tees in relation to this event.
- 5.40 With account to the above, it must be considered that increased physical, visual and aural disturbance in addition to elevated levels of suspended sediment in the channel could pose a barrier to fish and invertebrate species, as well as potentially affecting birds or other marine mammals feeding on them if the sediment is adsorbed to heavy metal or hydrocarbon compounds.
- 5.41 When considering the ecological status of the Tees, the protected nature of the fish and other highly mobile species that use the river's habitats would typically indicate a medium sensitivity. However, despite the Port's heavily industrial character, these species continue to utilise the estuary, and the Infaunal Quality Index rating of 'Good' for invertebrates suggests they are not particularly sensitive to existing baseline conditions. Taking this into account, alongside the RNAGS findings and the moderate status assigned to fish, the receptor is therefore considered to have **Low** sensitivity for the purposes of this assessment.

The Development and Embedded Mitigation:

- 5.42 Dredging on the River Tees is an established activity and is not considered to generate a high degree of disturbance in comparison to other frequent construction and industrial activities on the river which also generate impulsive noise and the associated vibration. It is considered that the extent and severity of the noise, vibration and visual disturbance to fish and highly mobile species imposed by the frequent construction activities taking place within and in close proximity to the river, as well as the high volume of shipping along the *Tees*, are likely to be greater than those imposed by dredging.
- 5.43 However, dredging does generate a degree of disturbance to proximate species whilst it is being undertaken including a degree of underwater noise and a nominal risk of entrainment through the use of vessels and equipment, and this should be minimised as far as possible so as not to cumulate to a harmful level with the existing baselines.
- 5.44 This would consist of undertaking dredging intermittently, with periods for undisturbed fish migration during disposal, and will be undertaken by an experienced dredging contractor which adheres to best practice measures which will therefore ensure that disturbance to normal fish behaviour is minimised. In addition, the need for the use of artificial light will be minimised as far as practicable and will avoid directing any toward the water, which can also disturb the migratory patterns of fish. Best practice also includes the removal of large items, which will be disposed of on land. Overall, considering the limited effects of dredging activity in the context of the *Tees* baseline levels of noise, vibration and visual disturbance, widespread acceptable dredging using best practice, and the project scale of the proposed works at Seaton Port which is part of the established baseline, there will be a **likely**, but **hardly perceptible change** to the disturbance of fish due to proximate operations.
- 5.45 The disturbance of sediments and resultant turbidity and deoxygenation of the water column can also pose a barrier to the normal migratory behaviours of fish. During the dredging, and immediately after, whilst sediments remain suspended in the channel, this may reduce the ability of fish to pass the area, and may increase the exposure of nearby aquatic and highly mobile species to substances which are harmful to their health.
- 5.46 This will be a temporary effect over the period of the dredge campaign, which will be intermittent dredging (migration will be undisturbed during disposal operations) for a limited project period.
- 5.47 As previously mentioned, the good and moderate statuses for invertebrates and fish as well as the designations which cover the birds and marine mammals in the *Tees* demonstrate that the baseline sediment conditions and industrial activities have not deterred use of the habitats and migratory routes in the *Tees*. Therefore, when considering the temporary nature and off-channel location of the works alongside the aforementioned intermittent nature and limited period of the

proposed capital and maintenance dredging, it is considered that there will be an **unlikely, hardly perceptible change** to the level of disturbance to migratory fish as a result of suspended sediments.

- 5.48 The main species which need to be considered in the Tees water body are seals, and breeding and wintering Subtidal habitats are used only briefly by these highly mobile species, and since dredging mainly disturbs areas below the water's surface, changes to the subtidal seabed are unlikely to significantly affect their behaviour. Most subsurface disturbance can likely be avoided.
- 5.49 The findings of the previously mentioned Independent Expert Assessment (Jan 2023) report which was produced to explore the likely causes of the period of crustacean mortality, concluded that *"No capital dredging was undertaken in the Tees area in the period before or during the unusual mortality event. The last capital dredging before this period was in December 2020, and the new capital dredging at Teesworks did not commence until September 2022. The panel therefore considers it exceptionally unlikely that capital dredging on the Tees caused the unusual crustacean mortality seen in this region between these dates."*
- 5.50 The Report clearly concluded that assertions that dredging was the cause of the recent unusual crustacean mortality events were not credible, specifically concluding that this cause was "exceptionally unlikely" to be the case. The OSPAR Precautionary Principle would not, therefore justify the cessation of dredging activity, as the IEA (Jan 2023) report demonstrates that there are no "reasonable grounds for concern" on these matters.
- 5.51 It also seems prudent to reference NEIDCAs own Annual Report 2022/2023 findings, which cites *"The panel reviewed and assessed all available evidence and published its findings in January 2023 concluding that it was highly unlikely that capital dredging works surrounding the Tees estuary could have caused the mass mortality."*
- 5.52 Due to the fact that the proposed dredging works are being conducted within an area of high historical baseline for industrial and dredging activity and that the proposed scope of works account for part of this existing baseline, it is considered that there will be **no perceptible change** to the disturbance that highly mobile species will experience as a result of the proposed extension to existing dredging operations in this location.
- 5.53 Since this application is essentially an extension of the previously approved licence for the area, the effects of the proposed depths have already been addressed subject to the current licence. Therefore, the effects on highly mobile species do not need to be reassessed because it is established that the previous dredging at this location has been successfully undertaken without causing adverse impact.

- 5.54 The act of dredging the seabed surface causes disturbance and abrasion to the sediments and thus the habitats of benthic invertebrates which live in the seabed itself. This can cause harm, and can lead to a change in the habitat type if a new type of strata is revealed, and thus the area cannot be recolonised by the populations of invertebrate species which were in the undisturbed surrounding sediments.
- 5.55 However, due to the deepest quays at ASP being permitted to be dredged to -15mCD and are currently dredged to -13.5mCD it is considered that there is a relatively small capital increase to the existing dredge level combined with the limited extent of the capital dredge area, it is not considered that these works will have anything more than a temporary period of disturbance and change to any habitat in comparison to what is consented. Furthermore, the extent, depth and frequency of maintenance dredging will not be altered as a result of this proposal, which will ensure that no additional disruption will be caused outwith the absolute need for the operation of the Site.
- 5.56 In addition, disposal of dredged material at sea poses a risk of the smothering of invertebrates which are present in the sediments on the seabed. However, due to the nature of the disposal site as a limited, defined area where dredge arisings are frequently deposited from the *Tees*, it is considered likely that within the area the colonising species will be those which are able to travel upwards through layers of sediment which may be deposited. Therefore, the seabed surface is likely to quickly return to its present habitat condition, being recolonised from the populations of benthic species present in the undisturbed surrounding sediments, and from the sediments covered by the deposit.
- 5.57 Given that the type and quality of sediments deposited at sea are controlled and monitored, it means that there is unlikely to be an adverse effect outwith the baselines for the disposal site for the deposit of the arisings from this dredge campaign, as opposed to any other. There will be **no perceptible change** to the baseline conditions with regards to disturbance and abrasion, or smothering of invertebrates in the seabed.
- 5.58 Overall, it is considered that, to take a precautionary approach, the likely degree of change that will be experienced by Fish and Highly Mobile species as a result of the dredging works at Able Seaton Port will be **Low**.

Assessment Outcome:

- 5.59 As per the findings of the above risk assessment, it is considered that the proposed dredging works will generate a **Slight** pressure on the Biological elements – Fish and Highly Mobile Species.

Water Quality

Potential Impacts

- 5.60 The chemical pollution caused by the disturbance of sediments containing chemicals such as heavy metals or hydrocarbons into the water column, harming existing species/habitats.
- 5.61 Changes to water clarity (turbidity) as a result of changes in load of sediment entering the watercourse, and resultant deoxygenation.

Baseline and Pressure Pathways

- 5.62 There are pressure pathways between construction activity on/near a water body and disruption of sediment such that the clarity and quality of the water may be impacted.
- 5.63 As such, the proposed dredging works, in particular due to the known presence of contamination within the existing seabed sediments within the application site, have the potential to contribute to turbidity, toxicity and deoxygenation of the Tees water body. This can form a chemical barrier to any fish or other fauna using the watercourse (see Biology-fish and highly mobile species), or harm growing macrophytes.
- 5.64 The Tees is a Heavily Modified Water Body classified as having High status for Dissolved Oxygen and all specific pollutants in the 2022 Cycle 3 assessment, and moderate status for dissolved inorganic nitrogen, despite previously having a Fail overall Chemical status in 2019 due to the presence of a number of common contaminants in rivers including heavy metals and hydrocarbons (this is no longer assessed). The Tees has specified Reasons for Not Achieving Good Status (RNAGS) relating to a number of pollutants including Dissolved Inorganic Nitrogen, Tributyltin, Mercury and its Compounds, and Benzo(g-h-i)perylene, in addition to PBDEs.
- 5.65 Overall, the above suggests that the Tees can be considered to have a **Medium** sensitivity to take a precautionary approach; the primary status of interest is the Chemical which was most recently a Fail and there are also chemical RNAGs (Negligible sensitivity) however, the High status of Dissolved Oxygen and all Specific Pollutants are also considered.

The Development and Embedded Mitigation

- 5.66 Able UK Ltd have conducted sampling and analysis in line with sample plan reference SAM/2025/00058, taking samples across 14 no. locations across the berths and analysing results for potential contaminants. The sampling seeks to assess whether some areas exceed the adopted action levels 1 and 2. This application has been submitted in advance of receipt of sample results which will be submitted once received. At present, we will assume the results will align with those taken recently and historically at ASP. If this is not the case, this WFD will be updated.

- 5.67 As such, it is possible that there may be temporary adverse effects when these sediments are dispersed into the water column, both during the point of dredging and at the point of disposal at sea. However, a review of the existing range of publicly accessible data from the MCMS Public register has demonstrated that the observed levels of Trace Metals contamination found within the Application Site is largely in line with the degree of contamination recorded and approved as acceptable for at sea disposal for other dredging marine licences as the results do not exceed the thresholds of Action Level 2.
- 5.68 With account to the above, it is considered that the likely effects of both the dredge disturbance and the resuspension at the point of disposal will be within the accepted baseline generated by the widespread dredging activity undertaken by Able Seaton Port and other private quayside operations across the Tees water body.
- 5.69 Despite this, there will be possible temporary effects of these works, and as such, water quality concerns due to the disbursement of contaminated sediment being re-suspended into the Tees water column have been controlled through the minimisation of the duration of the works, as well as the proposed use of an existing acceptable method and scale, in line with the previous licence. This will ensure that the watercourse is adequately protected in line with the baseline levels of disturbance during the course of the dredging works, with no excessive works or additional disruption caused outwith this scope.
- 5.70 If required, ground conditions may necessitate the use of a backhoe dredger with two split hopper barges, for the removal of unexpectedly stiff clays. This will involve a similar standard methodology of the removal of materials by a hydraulic pontoon-mounted dredger. Due to the stiffer nature of this material, there is expected to be less suspended sediment caused by utilising this approach as opposed to the proposed method, and similarly, use of this methodology will be minimised only to the scale necessary to achieve the dredge depth required in areas which cannot be dredged using other methods.
- 5.71 As with any dredging and deposit works in the marine environment, it is proposed that a frequent sampling regime is undertaken to ensure that the quality of the sediment is suitable for at sea disposal; sampling is proposed to take place every 3 years. As such, the water quality and any dependent species and habitats within the Tees, the downstream Tees Coastal water body, and North East Inshore areas are protected from any significant change as a result of chemical contamination over and above the existing conditions.
- 5.72 When considering this data in addition to the baseline conditions in the Tees and at the licenced disposal sites for Tees-derived dredge arisings, in addition to the established baseline on site, it is considered that there will be a **likely** but **hardly perceptible change** to the water quality and any present species or habitats present at the dredge and disposal sites during the works, due to chemically contaminated sediments.

- 5.73 When sediment is suspended into the water column, this reduces the clarity thus, increasing turbidity of the channel which can create a physical barrier to the progression of migratory fish and the movement of aquatic invertebrates. In addition, the excess sediment concentration also leads to reduced dissolved oxygen levels in the water. This can also make passage of aquatic fauna difficult, and in extreme cases can cause harm and/or morbidity.
- 5.74 The methodology of dredging proposed within this application is to align with the previous licence. The choice of plant will be governed by the location and depth of material to be removed year on year. The choice of plant will also be affected by ongoing port operations in the basin, as some plant may not prove to be suitable at certain times due to local operational limitations and restrictions. Due to the historical use and nature of operations, it is possible that unnatural materials and debris will be encountered. Any scrap or debris will be removed ashore.
- 5.75 The proposed methods of dredging have a very low risk of placing contaminated sediment into suspension in the water column and is widely adopted as a suitable method for berth creation and maintenance in the Tees waterbody and across the UK, where sediments are suitable.
- 5.76 When dredging materials, overtopping can enhance the efficiency of the dredging operation by increasing the solid loads in the hopper. By removing excess water and the soil/water mixture with lower density, we can improve the storage of soil mixtures with higher density. This process ultimately reduces the extent of dredging by increasing efficiency rates. When overtopping, the particle size distribution of the material may differ from the in-situ grading because overflowing tends to remove the finer content. Areas where overtopping occurs can be referred to as a "Mixing Zone",
- 5.77 However, previous hydrodynamic and sedimentation studies have been undertaken in support of similar activities in the Tees Estuary that show whilst instantaneous increases in suspended sediment concentrations may exceed 200 mg/l on occasion, the dredging does not result in an overall increase in average suspended sediment concentrations of more than 10 mg/l anywhere in the estuary. Results show that at suspended sediment concentrations plots, the sediment does not disperse very far, mostly redepositing within the proposed dredged area. It is anticipated that this material would then be re-dredged. As such, whilst in theory the use of overtopping may incur a relatively insignificant threat to water quality, the concentrations of the suspended sediment concentrations are negligible. Overtopping is a standard procedure which is utilised by the vast majority of the dredging activities on the Tees (as the majority of operations share the same dredging contractor, thus methodologies are the same).
- 5.78 It is understood that the main concern is with the use of overtopping fine sediment (silt and clay), as it causes a fine sediment plume. As such, we are happy to propose a condition to ensure that the dredger's overspill material will not consist of light/fine material (anything less than 1.2 tonnes/cubic meters).

5.79 The proposed wording of the condition would read as follows:

“When utilising overspilling whilst dredging, the material collected during this period shall not consist of any light/fine material. Light or fine material is determined as anything less than 1.2 tonnes/cubic meters. The dredger will stop overspilling material immediately if the material passes the fine sediment threshold.

Reason: To avoid negative impacts on water quality during dredging”.

5.80 We have consulted the dredging contractor and they advise that they have an in-line densitometer, which indicates the density of the material they are dredging in real-time. The dredger will stop overspilling material immediately if the material passes the fine sediment threshold. Alternative dredging methods will be implemented using an ‘as needed’ approach however, the chosen methodology is common practice in the industry and on the River Tees and therefore, it is not considered to result in any detrimental impacts,

5.81 On the whole, it is considered that although there is a temporary risk of increased sediment load and associated deoxygenation around the dredging activity, this is not outwith the existing baselines within the Tees which is subject to a high volume of dredging activity undertaken using the same methodologies. It is considered that there will be a likely, but **hardly perceptible change** to water quality as a result of sediment loading and deoxygenation associated with the proposed dredging and disposal works, and due to the temporary nature of this activity these works will not contribute to the deterioration of the High Dissolved Oxygen status of the Tees.

Assessment Outcome:

5.82 As per the above risk assessment, the proposed dredging works will generate a **Slight** pressure on the water quality of the Tees waterbody.

WFD Protected Areas

Potential Impacts:

- 5.83 Dredging has the capacity to alter the structure of the habitat by revealing an alternative substratum surface, and as such creating the loss of habitat within the SSSI and SPA designations which cover the Site, potentially harming the integrity of that European designated site.
- 5.84 Disturbance from proximate construction operations has the capacity to reduce the suitability of protected habitats for their dependent species.

Baseline and Pressure Pathways:

- 5.85 The Application Site is located within the Teesmouth and Cleveland SPA. The SPA is protected for the use of birds including breeding Little Tern passage Sandwich Tern, wintering Knot, Redshank, and an assemblage of over 20,000 wintering waterfowl. Works of any kind within and in close proximity to this area could generate adverse impacts, disturbing the protected features through excessive noise and vibration, or visual disturbance.
- 5.86 The Application Site also lies within the Teesmouth and Cleveland SSSI, which is designated as an area of special interest for a range of nationally important features which occur within and are supported by its “*mosaic of coastal and freshwater habitats*”, including the likes of Harbour seals, a diverse assemblage of breeding and non-breeding birds, saltmarsh, sand dunes and Jurassic and Quaternary geologic features.
- 5.87 As previously mentioned, the Application Site overlaps with the Teesmouth and Cleveland Ramsar Site.
- 5.88 On balance, the Tees water body has a moderate ecological status, and no RNAGS directly associated with protected areas. However, the waterbody objectives table sets out that this is the highest achievable status for the biological elements due to Disproportionate Burdens: the achievement of Good status would generate excessive adverse impacts upon the present industrial uses of the waterbody.
- 5.89 Overall, the sensitivity of the WFD Protected Areas is considered to be **High**, due to the application site being situated partially within a European Protected Area and in accordance with the precautionary principle.

The Development and Embedded Mitigation:

- 5.90 As previously mentioned in the Fish and Highly Mobile Species section above, dredging is known to have the capacity to alter the structure of the subtidal habitat by revealing an alternative substratum surface and/ or by creating a new surface at the point of disposal.
- 5.91 In line with the previous licence, it is considered that both capital and maintenance dredging is already undertaken in the locations proposed within this application, as well as heavily throughout the River Tees and is therefore, not uncommon. However, it is established that there is the potential for capital dredging works to have a slight adverse effect on these protected areas through sedimentation effects. Although, this is anticipated to be considered a very minor, short-term, localised effect (without appropriate mitigation).
- 5.92 The Teesmouth and Cleveland Coast SPA was designated as such for several reasons, the main reason was as a result of the presence of tern species foraging. As the works will take place under water, it is not considered the SPA would be significantly impacted. It is also considered that the application site itself is primarily unsuitable for use by the qualifying species of the SPA, as it comprises limited areas of exposed mud. As a result, the application site is not considered sufficient to be categorised as 'functional land' associated with the SPA.
- 5.93 As mentioned throughout, the only habitat which is likely to experience a temporary change is the subtidal habitat. Furthermore, the dredge to be undertaken as part of this application is to fulfil the intentions of the original licence and the site currently dredged up to -13.5mCD. Therefore, it can be concluded that there will be no substantial loss of existing habitat, and no permanent change to the habitat, as it will be recolonised over time from the surrounding undisturbed areas of sediment, and will be built up again over time due to natural sedimentation of the River Tees, hence the requirement for dredging in this location.
- 5.94 Moreover, subtidal sediment habitats are not accounted for as part of the designated features of either the SSSI or SPA, and thus, it is considered that there is no risk to the integrity of those designations as a result of the temporary disturbance to the sediment habitats where the surface layers have been removed through dredging activity.
- 5.95 In addition, previous maintenance dredging at this location has been successfully undertaken without causing adverse environmental impact. As such, there will be **no perceptible change** to the SSSI, Ramsar or SPA habitats, as a result of the proposed works.
- 5.96 As discussed previously, the primary zone of influence to be affected by dredging activity is the subtidal environment, meaning that the disruption of surface habitats is already very limited. However, the Fish and Highly Mobile Species section above notes that there is a possibility that disturbance from dredging activity could have an adverse effect on close by receptors. In regards to WFD Protected Areas, this means that the available habitats as part of the SPA and SSSI, and potentially the Ramsar site may become unsuitable to support their designated

features. Given the nature of the subtidal works, the impact on these special protected areas is considered to be low as appropriate mitigation measures have been put in place to further avoid and minimise disruption as far as practicable.

- 5.97 Mitigation measures include but, are not limited to the following: dredging will seek to avoid the need for artificial lighting where possible, and any artificial lighting required will not be directed at the water in order to minimise disturbance; the scale of the proposed works has been kept to the previously established operational depth and area to facilitate the required activities at Able Seaton Port; and the use of an experience contractor will ensure adherence to standard best practice measures to minimise disturbance.
- 5.98 This application will also be subject to a Shadow HRA which will further review any potential impacts to the Protected Areas in and around the site.
- 5.99 As such, it is not anticipated that there will be any more than temporary disturbance to the adjacent WFD Protected areas, nor therefore to the Teesmouth and Cleveland Ramsar site, given the short-term nature of the works. This aligns with the existing baselines identified within the EA Catchment Data Explorer as associated with the essential HMWB uses of the Tees waterbody, including routine dredging operations such as those proposed in this application.
- 5.100 Furthermore, it is considered that the extent of the marine works to deepen the existing berths at Able Seaton Port will make no change to the functional capacity of that area of land to support designated features in the surrounding area and is in line with what was previously approved.
- 5.101 With all the above points having been considered, the proposed works are considered to generate **no perceptible change** to the suitability of the protected habitat features in the Tees waterbody.
- 5.102 Overall, there is likely to be a **Negligible** degree of change to the WFD Protected Areas within and in close proximity to the Application Site as a result of the proposed capital and maintenance dredging and disposal operations.

Assessment Outcome:

- 5.103 According to the findings of the above assessment, the proposed works will generate a **Slight** pressure upon the WFD Protected Areas.

Invasive Non-Native Species (INNS)

Potential Impacts:

- 5.104 Potential spread of INNS following introduction into a new environment where they may outcompete native species, cause environmental degradation, increase risk to human and animal safety and reduce the value of land and assets.

Baseline and Pressure Pathways:

- 5.105 For all activities where products or equipment are being transported in/out of a site in close proximity to a water body, there must be consideration of the risk of; transporting, introducing and enabling the subsequent spread of INNS. According to the pressure matrix the risks tend to be associated with long-distance transportation of shellfish and other aquaculture, as well as ballast water and other accidental release.
- 5.106 A review of the EA Catchment data does not suggest that INNS are a RNAGS for the Tees water body on the whole, and so it would logically follow to conclude that standard preventative measures in place along the extent of the water body have been successful in avoiding and minimising the risks thus far. However, there are measures in the RBMP to train action groups to safely remove INNS, suggesting the wider Tees catchment is adversely affected by non-native species.
- 5.107 There has not been an ecological survey of the application site due to the existing precedent of dredging works being undertaken at this location. As such, it cannot be confirmed that there are no INNS present within the proposed dredge area. Overall, given the nature of the site and lack of RNAGS for the waterbody, but potential for INNS to be present in a river where so many vessels travel in and out of the area and upstream areas are affected, a precautionary approach must be taken and the receptor will be considered to have a **Medium** sensitivity to INNS introduction and spread.

The Development and Embedded Mitigation:

- 5.108 With consideration to the EA Catchment Data, it is also important to consider potential pathways of introductions onto the Site from elsewhere and for mitigation measures/procedures to be implemented in order to prevent this. As such, the developer will need to avoid the introduction, movement, and spread of non-native species on and off the construction Site, as a matter of legal responsibility.
- 5.109 Given the proximate locations of the Able Seaton Port and the disposal sites (Tees Bay A (TY160) or Tees Bay C (TY150)), the lack of unknown INNS within these areas, combined with the likelihood of vessels involved being based solely in the Tees area as well as the frequency

of dredging activity along the river, it is considered unlikely that contamination of the Site with INNS will occur as a result of the dredge vessel.

- 5.110 Furthermore, the dredging contractors used by Able UK Ltd at Able Seaton Port are contractors used across the East coast of England and Scotland and are well established and aware of their responsibilities to appropriately maintain their fleet to prevent the spread of INNS.
- 5.111 Albeit the risk of INNS spreading being low, a precautionary measure and a degree of mitigation should always be set in place in line with the legal responsibilities as a result of the Wildlife and Countryside Act 1981 to prevent the introduction and spread of INNS. As such, it must be ensured that all vessels and operations in relation to the dredging, transporting, and disposal of the material are in line with standard best practice procedures.
- 5.112 The risk of cross-contamination is lowered further with the use of standard best practice procedures, for example the Non-Native Species Secretariat (NNSS) Check, Clean, Dry measures, to prevent introduction of invasive species. In addition, all equipment and footwear will be cleaned before entering and leaving the Site with a suitable disinfectant solution in accordance with the EA guidance measures. The details will be finalised in conjunction with the contractors, to ensure legal compliance. This will ensure that there will be **no perceptible change** as a result of these works.
- 5.113 With account to the above, it is considered that while standard best procedures are in place to prevent any risk of cross contamination this will prevent INNS contamination contributing to the deterioration or failing of ecological potential. As such, it is considered that the required mitigations in place as part of dredging operations such that the degree of change to the Tees as a result of INNS will be **Negligible**.

Assessment Outcome:

- 5.114 The assessment concludes that with the standard best practice procedures in place in order to avoid risk of INNS spread and the use of a trusted dredging contractor, the pressures on receptors will be **Negligible**.

Conclusion to the Impact Assessment:

- 5.115 With account to the above, it is not considered that this project will contribute to the deterioration of the Moderate status of the water body after considering the risks posed from each element, once the appropriate mitigation measures have been put in place. The potential pressures from the project tend to be **Slight to Negligible** and hence are not expected to jeopardise the status of the Tees.
- 5.116 It is noteworthy that the works are not considered to positively contribute, nor pose jeopardy to the achievement of Good ecological status of the Tees water body. This is primarily due the nature of the river system as a Highly Modified Water Body for the purposes of heavy industry and navigation, including dredging activities such as those considered in this WFD Assessment report, presents too great a burden to overcome in order to achieve Good status. Therefore, regardless of the outcome of this assessment, there is nothing which could be implemented at the scale of the proposed works which could overcome the present conditions and result in the achievement of Good status.
- 5.117 This is a working document and upon receipt of the Report to Inform a Habitat Regulation Assessment and the sample results will be updated if required.

6.0 CONCLUSION

- 6.1 Fairhurst consider that this assessment constitutes a valid and comprehensive Water Framework Directive assessment which takes into account all the relevant information from the approved sources and regulating authorities. After assessing all the available data against the pressures-activity matrix we can conclude that the proposed dredging activity does not pose a risk to the status of the *Tees* water body, and as such endorse the outcome of this assessment in favour of the granting of a Marine License for the proposed dredging works.
- 6.2 This WFD compliance assessment has concluded that provided the mitigation measures detailed in this document are implemented thoroughly then the scheme will not cause deterioration to the status of the *Tees*, or any other water body, nor contribute to the deterioration of Moderate Ecological Status in future.
- 6.3 The following table sets out the conclusions of this assessment in relation to the wider WFD implications of these works.

Table 6.1: WFD Assessment Conclusions

WFD Questions	Assessment Conclusions
Will this development lead to deterioration of WFD status of the waterbody?	This WFD assessment has concluded that, due to the scale of the works, limited operational time per annum, and isolated location of the works, the scheme is unlikely to generate effects that would cause a deterioration to the status of the <i>Tees</i> Water Body.
Will this development compromise achievement of Good status of the waterbody?	The <i>Tees</i> is not, at present able to achieve Good status, and it is considered a disproportionate burden to do so due to the HMWB nature of the water body. However, provided the mitigation measures detailed in this document are implemented thoroughly, then the Proposed Works will not jeopardise achievement of or cause the deterioration from its present Moderate Status.
Will the development compromise the achievement of WFD objectives in those waterbodies that are hydrologically linked?	This WFD assessment has concluded that, due to the nominal increase in scale of the works, and provided the mitigation measures detailed in this document are implemented thoroughly, then the scheme will have only a Slight to Negligible impact on the immediate water body, and so it is not anticipated that the extent of any changes as a result of the works would be substantial enough to influence hydrologically linked waterbodies further from the Site.

Will the proposed development contribute towards a cumulative deterioration of WFD status or prevent cumulative enhancement of WFD status in any waterbody?	Due to the pressures on each of the WFD receptors being assessed as Slight or Negligible, it is considered that there will not be a deterioration of the River Tees as a result of the proposed dredging. As such, there are minimal effects which could be assessed to accumulate, and based upon a review of the MMO public access register, there are no relevant nearby projects outwith the accepted operation of the Statutory Harbour Authority, which forms the baseline of the area. As such, it is considered that there will be no jeopardy of WFD status as a result of cumulation of this application's pressures with others.
Can any of the mitigation measures proposed in the Northumbria RBMP be delivered within this application?	There are a number of present and future potential measures identified which are of relevance to the Proposed Works, in particular: Living Waterways; Tees Estuary Habitat Vision; Tees INNS initiative and the Tees Tidelands project. The Proposed Works includes embedded and additional mitigation measures which ensure that the Proposed Works complies with the intentions of the RBMP measures e.g., avoiding and minimising disturbance to intertidal habitats, implementation of all best practice measures with regards to the prevention of the spread of INNS, as well as undisturbed periods for disposal and sensitive lighting direction in order to minimise disturbance to migratory fish. Overall, it is considered that the aforementioned elements of the works do deliver towards the stated RBMP improvement measures. However, due to the scale of the works, and the regional scale of many of the RBMP measures, it is not considered proportionate or plausible for the Proposed Works to commit to delivering the type of measures posed in the RBMP in isolation.
Can the development support the delivery of those measures identified in the current River Basin Management Plan that are required to achieve waterbody objectives?	The Tees is designated as a HMWB, and therefore all practicable mitigation must be taken to achieve good ecological potential. However, as identified above, the existing baselines of the river mean that Good status is not achievable. The Proposed Works involves a range of measures which contributes to the overall slight/negligible pressures expected to result from the works. Given the small

	scale and limited impacts of the Proposed Dredging Works, it is considered that a suitable suite of practicable mitigation measures has been put in place to protect the Moderate ecological status of the <i>Tees</i> water body and its tributaries, whilst still enabling the operation of the Site to continue. As noted above, the Proposed Works measures are considered to support the relevant RBMP measures towards the <i>Tees</i> water body objectives as far as is practicable.
Statement of compliance with WFD:	These works are considered to be in compliance with the Water Framework Directive, as illustrated by the screening, scoping and impact assessment processes which have been undertaken in order to generate this report.

- 6.4 To conclude, this assessment has been based upon currently available WFD baseline data, and the information available relating to the proposed dredging works. As such, this document is to be considered 'live' and should be reviewed and during the works if elements are subject to change.

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