

Seaton Port Dredge, Able UK

Water Framework Directive Assessment

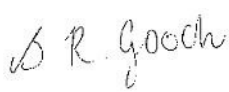


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	Prepared by	Sophie Gooch			09.08.2018	
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1	Water Framework Directive Scoping Assessment
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1.0 Introduction

- 1.1 This Water Framework Directive (WFD) Assessment has been prepared by Fairhurst on behalf of Able UK to accompany a variation to an existing Marine Licence for dredging at Seaton Port.

- 1.2 The site is located adjacent to the existing Able UK Seaton Port Dry Dock facility on the north bank of the River Tees. Drawing no. ASC-001-00009 Rev F 'Dredge Locations' shows the existing and proposed dredging areas and depths respectively; this assessment relates to a variation to the existing licence which is specifically to enable maintenance dredging of the TERRC basin to -6.65mCD, the Grounding Bed to -6.07mCD, and capital and then ongoing maintenance dredging of the area in front of quays 7, 8 and 9 to -9.5mCD.

- 1.3 This assessment has been undertaken following a WFD Scoping Assessment that identified topics for further consideration, the results of which are included in Appendix 1.

2.0 Step 1 – Water Body Baseline Data

- 2.1 Able Seaton Port is located at Graythorp, Hartlepool on the North Bank of the Seaton on Tees channel at the western end of the Tees estuary. According to the Environment Agency's River Basin Management Plan, the River Tees is located within the Northumbria region.
- 2.2 Using the 2015 Northumbria River Basin Management Plan it is evident that the proposed development site is not located within a WFD classified waterbody. The proposed dredge pocket sits within the dry dock/ wet basin at Able, not within the main river channel.
- 2.3 Nonetheless, the dredge pocket is immediately adjacent to the Tees estuarine water body, which is classed as a Heavily Modified Water Body (HMWB) (Environment Agency reference number: GB510302509900), and the MMO have therefore requested that a WFD Assessment is carried out. The summary data for this waterbody is included in the appended WFD Scoping Assessment.
- 2.4 As a HMWB, this water body was classified by the Environment Agency within the 2015 Northumbria River Basin Management Plan (RBMP) as having 'Moderate Potential'.
- 2.5 Although the 2015 RBMP was updated in December 2015 and the revised document published on 18 February 2016, the measurement for Ecological Potential remains at 2015 and shows the Tees as 'Moderate'. Until this is updated with predictions for 2021 or 2027 we are unable to fully consider whether the proposed extension will prevent the Tees water body from either achieving a 'Good' Ecological Potential or maintaining a 'Moderate' Potential.
- 2.6 It is however considered very unlikely that predictions will be for the Tees to achieve 'Good' Ecological Potential, given that the Tees Estuary failure to meet 'Good' Ecological Potential is likely to be due to the levels of nitrogen in the water and the extent of opportunistic macroalgae present on the mudflats of Seal Sands SSSI. Poor water quality has the potential to impact on the benthic community and the bird species protected by the various designations in Seal Sands. It is highly likely,

therefore, that the measurement for Ecological Potential beyond 2015 will remain as 'Moderate'.

3.0 Step 2 – Proposed Scheme Baseline Data

- 3.1 The proposed dredging pocket is located within the existing Able UK Seaton Port dry dock/ wet basin facility on the north bank of the River Tees.
- 3.2 Maintenance dredging was undertaken at Able Seaton Port in the main channel under a 2007 consent relating to the wider TERRC proposal, until this Marine Licence expired at the end of January 2016 (Licence Number L/2012/00160/8). That licence provided a channel for vessels and oil rigs to access the existing quays in operation at that time.
- 3.3 A new Marine Licence (L/2017/00012/1) was then granted in 2017, which enabled capital dredging of the channel, holding basin and also quays 10/11 followed by ongoing maintenance dredging for 10 years. Subsequent variations have been issued to correct the quantities on the licence (variation L/2017/00012/2) and also to level the grounding bed to allow barges to ground safely in the dock (variation L/2017/00012/3).
- 3.4 A WFD Assessment submitted with the L/2017/00012/1 Marine Licence application (WFD Assessment dated May 2016, Fairhurst, document reference D/I/D/114896/501) concluded that any impacts would not alter the natural baseline as assessed as part of the original 2007 consent, and would not therefore have any impact on existing water quality or a failure to meet water quality targets in the area.
- 3.5 This current variation is to enable maintenance dredging of the TERRC basin to -6.65mCD, the Grounding Bed to -6.07mCD, and capital and then ongoing maintenance dredging of the area in front of quays 7, 8 and 9 to -9.5mCD, as shown on drawing no. ASC-001-00009 Rev F 'Dredge Locations'.
- 3.6 There is an immediate requirement to remove 75,000m³ (97,500 wet tonnes) of excess silt which has settled in the TERRC basin including across the Grounding Bed after channel dredging, and an ongoing maintenance requirement to dredge 12,150m³ (15, 795 wet tonnes) of silt.

- 3.7 The area in front of quays 7, 8 and 9 requires a capital dredge comprising of 75,000m³ (165,000 wet tonnes) of clay, and an ongoing maintenance requirement to dredge 3,750m³ (4,875 wet tonnes) of silt.
- 3.8 The anticipated impacts of this are discussed in Section 4.0.

4.0 Step 3 – Preliminary Assessment

- 4.1 The 2007 Environmental Statement stated that the main impact as a result of the wider TERRC proposal would be the remobilisation of contaminated river sediments and an increase in water turbidity. This was associated with the dredging activities that were proposed, and consented, in the 2007 application. However, these impacts were assessed as neutral overall as the impacts were found to be within the natural baseline currently experienced, and as the contaminated sediments had a relatively low solubility they were expected to quickly resettle and not become bio available.
- 4.2 The approved 2016 WFD Assessment (Fairhurst, document reference D/I/D/114896/501) concluded that as the 2016 licence related to an application to extend the former dredging licence (and pocket), any impacts would not alter the natural hydromorphology baseline.
- 4.3 This variation relates to dredging of the TERRC Basin and the area in front of quays 7, 8 and 9; these areas are all within the dry dock/ wet basin. The appended WFD Scoping Assessment dictates which potential impacts require further assessment, and details of these are provided below.
- 4.4 For hydromorphology, it is important to note that the basin is not actually within the WFD classification for the Tees as it is outwith the main channel. Therefore, there is considered to be even less likelihood of the varied proposals affecting the natural baseline than those assessed in 2016, as the proposals are not, unlike those assessed in 2016, directly within the river channel and activities in the basin are therefore highly unlikely to alter the natural hydromorphology baseline of the Tees.
- 4.5 In terms of WFD Protected Areas, an assessment of impacts on protected areas is required as the site is within 2km of the Teesmouth and Cleveland Coast SPA and the proposed SPA extension. The impacts on this SPA were originally assessed with Marine Licence application L/2017/00012/1. The variation proposals are not considered to pose any additional impacts in terms of SPA habitat or species; the proposed dredging pocket is outwith the SPA habitat (including the proposed extension area) and outwith the WFD classification for the Tees, so no direct impacts on habitat will arise. Moreover, any dredging operations in this area would be

undertaken as part of the main dredge campaign (i.e. not in addition to the existing approved dredging regime), so there would be no additional or cumulative noise or disturbance impacts on protected species.

4.6 In relation to water quality, an impact assessment is required as previous sampling has shown that there are contaminated sediments above Cefas Action Level 1 (AL1) present in the area to be dredged. 4 samples undertaken and analysed by Cefas in 2017 for material in front of quays 7, 8 and 9 indicate some metal traces above AL1. However, these were all relatively close to AL1 levels, as opposed to the Action Level 2 (AL2) thresholds which would preclude disposal to sea. Table 1 below illustrates this. Organotins (DBT and TBT) were below AL1 and no other analyses were undertaken relating to Cefas Action Level 1 contaminants (PAHs were analysed, but there are no Cefas Action Levels for these).

4.7 5 further samples were taken in May 2018 for material in the TERRC Basin and overlying the Grounding Bed, and analysed by the MMO approved National Laboratory Service. The results indicate some metal traces above AL1. However, as with the 2017 results these were all relatively close to AL1 levels, as opposed to the AL2 thresholds which would preclude disposal to sea. Table 1 below also illustrates this. Again, Organotins (DBT and TBT) were below AL1 and no other analyses were undertaken relating to Cefas Action Level 1 contaminants (PAH and particle size analysis were also undertaken, but there are no Cefas Action Levels for these).

Table 1: Assessment of sample results against Cefas Action Levels

	Action Level 1	Highest 2017 Sample Result	Highest 2018 Sample Result	Action Level 2
Contaminant / Compound	mg/kg Dry Weight (ppm)	mg/kg Dry Weight (ppm)	mg/kg Dry Weight (ppm)	mg/kg Dry Weight (ppm)
Arsenic	20	36.28	26.2	100
Mercury	0.3	0.72	0.35	3
Cadmium	0.4	0.47	Below AL1	5
Chromium	40	105.84	92.8	400
Copper	40	66.4	40	400
Nickel	20	42.88	40.2	200
Lead	50	151.32	108	500
Zinc	130	244.5	199	800

- 4.8 Given that the levels are not of cause for concern in relation to offshore disposal (i.e. not in excess of, or indeed close to, AL2); the material is to be dredged using standard pollution prevention measures to prevent any escape of contaminated sediment; and the dredge area is within the existing basin as opposed to the main WFD-classified river channel; it is not considered that there is any significant risk of impacts arising in terms of water quality.
- 4.9 In summary, based on Steps 1 and 2, using the Environment Agency resources, and previously collected baseline data for the area, Fairhurst do not consider that the variation to the licence which is the subject of this assessment will cause any impacts on hydromorphology, any impacts on WFD Protected Areas, or any deterioration in water quality status; nor will it result in a failure to meet water quality targets in the area.

5.0 Conclusion

- 5.1 Fairhurst consider that the Scoping Assessment completed in Appendix 1 and the further details presented in this report constitute a valid WFD Assessment and takes into account all relevant information required for the regulating authorities to make a comprehensive and concise recommendation on the outcome of the Marine Licence variation application.

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