



**MARINE AND COASTAL ACCESS ACT (2008). APPLICATION FOR THE TEES SOUTH BANK DEVELOPMENT PHASES 1 AND 2 BY THE TEES SOUTH BANK CORPORATION (TSBC) AT RIVER TEES, MIDDLESBOROUGH.**

Reference Number: MLA/2020/00506 (MLA/2020/00507)

From: Joe Perry  
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**To: Emmanuel Mulenga - MMO (by MCMS)**

1. With reference to the above application dated 23<sup>rd</sup> December 2020, please find my comments and observations below in my capacity as scientific and technical advisor on dredge and disposal.
2. This minute is provided in response to your advisory request in relation to the above proposal in my capacity as scientific and technical advisor for dredge and disposal. The response pertains to those areas of the pre-application request that are of relevance to this field. This minute does not provide specialist advice regarding benthic ecology, marine processes, fisheries, shellfisheries or underwater noise as, whilst these are within Cefas' remit, they are outside my area of specialism.
3. I have spent 7.5 hours of the allocated 7.5 hours in providing this advice, with time booked to C8167B390 (MLA/2020/00506).

**Documentation reviewed:**

4. South Bank Quay: EIA Report, Royal Haskoning (November 2020). Version P01.01/S0
5. MMO Results Template – Northern Gateway Container Terminal, PD Teesport (2019).

**Description of the proposed works**

6. South Tees Development Corporation (STDC) is proposing to construct a new quay at South Bank in the Tees estuary. It is envisaged that the new quay would be utilised predominantly by the renewable energy industry, as well as supporting more general industrial and storage/distribution activities. The proposed scheme comprises demolition of the existing wharf, jetties and other minor infrastructure along the river bank at South Bank (including an electrical substation), capital dredging (to deepen the northern half of the Tees Dock turning circle, a section of the existing approach channel and to create a berth pocket), offshore disposal of dredged sediments and construction and operation of a new quay (to be set back into the riverbank).
7. The applicant proposes to conduct a capital dredge to remove approximately 1,800,000 m<sup>3</sup> of material from the Tees Dock turning circle and parts of the existing navigation channel, the latter of which will also be dredged to form a deeper berth pocket. There is a variation of existing depths across the dredge areas, ranging from 5.7 to 13 m below Chart Datum (bCD),



and the target dredge depth ranges from 11 m bCD for most areas, to 15.6 m bCD for the berth pocket only. The applicant anticipates that trailer suction (TSHD) and backhoe would be used to remove soft and hard material (mudstone) respectively. Once dredged, the applicant intends to dispose of dredged material at Tees Bay C (TY150) disposal site.

8. Consultation commissioned by the MMO for these works has been split into two separate consultations, intended to provide advice separately for Phases 1 (MLA/2020/00506) and 2 (MLA/2020/00507). My assessment of the material provided for these consultations is that there is no meaningful distinction between the two Phases which would materially change my advice for dredge and disposal. Further, there is only one EIA report for both phases, which also does not seem to delineate the two phases concerning impacts posed. As such, my advice for both Phases is identical.

Answers to questions posed by the MMO – all comments are observations unless otherwise stated

**To the best of your knowledge is the description of the environment and potential impacts accurate?**

9. The report provided gives a clear overview of sediment quality in the Tees river, and potential impacts relevant to my advisory remit are adequately explained.

#### Minor comments

10. In Section 3.8, the applicant states the following in reference to the selection of their preferred disposal site; Tees Bay C (TY150): *“Tees Bay C has predominantly been used in the past for capital dredged material but has received quantities of maintenance material in some years. Tees Bay A (TY160) (the site closest to the shore) has been used in the past for soft non-cohesive maintenance material (ABPmer, 2005, cited in Royal Haskoning, 2006). DEFRA records from Tees Bay C (TY150) show periodic smallscale usage with a peak volume deposited in 1999 totalling 1.9 million wet tonnes. However, the typical yearly volume is 0.1 million wet tonnes, with some years showing no usage at all.”*
11. This is a fairly accurate characterisation of the site, though it is unclear what “DEFRA records” refer to. Figure 1 of this advice minute provides an overview of annual volumes disposed at Tees Bay C (TY150) from 1988 to 2019 according to available OSPAR returns data.

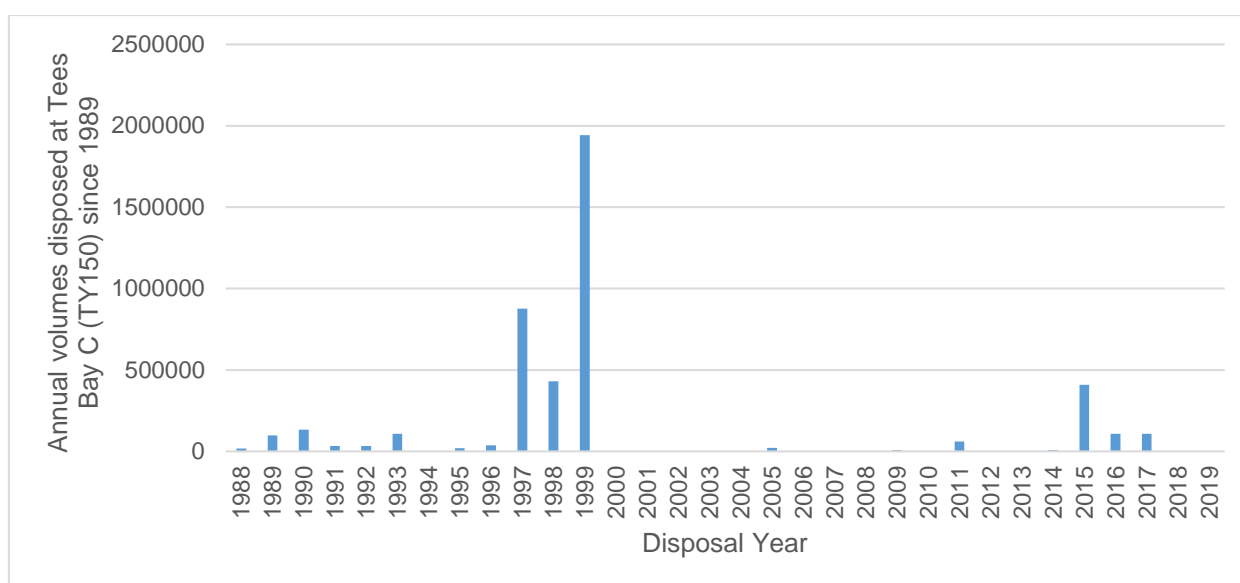


Figure 1. Barchart detailing annual volumes disposed at Tees Bay C (TY150) from 1988 - 2019. Units are in metric wet tonnes. OSPAR data are not yet available for 2020.

12. As indicated by Figure 1, Tees Bay C (TY150) has indeed received smallscale usage up to a maximum of 1.9 million wet tonnes in 1999. The data indicate that the proposed disposal volume is similar to the maximum annual volume received by the site, however, the length of time that has passed since the site received volumes of this magnitude should be acknowledged. There may be uncertainty concerning the likely effects on the surrounding environment from a disposal of similar magnitude, particularly given the relatively low volumes it has received in the last 20 years.

**Has the appropriate evidence base been used? Is the evidence complete for its intended use i.e. is there sufficient information to allow a decision on the application to be made? If not please explain why and what you would expect to see and any additional work.**

13. The report uses a range of data from marine licensing sediment sampling and targeted sediment survey work conducted in the Tees within the last 10 years, to give a broad overview of the quality and chemical composition of sediment within the River. These data include those generated to support the Hartlepool Approach Channel Project (SAM/2018/00050, MLA/2018/00555), the Teesside Gasport project (SAM/2018/00005, MLA/2019/00469), and the Northern Gateway Container Terminal (NGCT) project (SAM/2018/00069, MLA/2020/00079).

**Major comment**

14. These data are indeed appropriate to support a high-level characterisation of the general Tees area, however, they are not complete to inform a marine licence application for the proposed South Bank Quay works. The applicant states that they have sought sampling advice (SAM/2020/00026) for these works and are collecting data. Therefore, the evidence base is not complete until these data are provided.

**Major comment**

15. The data presented for the NGCT project partially overlap with the proposed dredge areas, but they are mostly downstream of the South Bank project area. Accordingly, whilst the evidence presented is indeed relevant to characterise the Tees river to an extent, they are not accurate enough or appropriately located to fully characterise the South Bank project area. In this regard, the evidence base is not sufficiently representative of the project area at this time.

**Do you agree with the conclusions reached?**

16. Conclusions about sediment quality largely rely on the assessment of previous licensing sample data as discussed in points 13 – 15. These conclusions adhere to the respective Cefas licence consultations under MLA/2018/00555 (Joe Perry, 28<sup>th</sup> February 2019), MLA/2019/00469 (Joe Perry, 31<sup>st</sup> December 2019) and MLA/2020/00079 (Joe Perry, 29<sup>th</sup> April 2020), in that the applicant recognises the Tees river's known presence of hydrocarbons and other organic pollutants (like Polybrominated Diphenylethers (PBDEs)). This presents an adequate characterisation of the general Tees area, but as detailed in previous comments, the data presented are not appropriate to characterise the South Bank project area.

**Are the proposed mitigation and monitoring measures sufficient?**

17. The applicant specifies throughout the EIA that they have conducted an assessment of sediment management options alternative to disposal to adhere to the waste hierarchy defined in the Waste Framework Directive. I am satisfied with their findings that the nature of the material and lack of opportunities for reuse in the surrounding area make disposal the best option. The MMO may wish to comment.
18. General dredging best practice is referenced throughout the EIA. The practices specified adhere to usual standards, and I have no concern at this time in this regard, though I expect

that these will be stipulated as marine licence conditions as is the usual practice, however I defer this to the MMO.

### **Major comment**

19. As detailed in points 13 – 15 I cannot fully comment on whether any additional mitigation or monitoring measures are necessary until the complete evidence base is provided. If it is the case that the new data show unacceptable levels of contaminants, then additional sampling analysis, repeat sampling analysis, modified dredge methods or alternative disposal may be recommended.

**Are there any minor technical or presentational comments that affect the overall confidence in the conclusions? Please insert as an annex.**

20. N/A

**Is the project description clearly presented and consistent throughout the ES?**

21. The project description is clear and consistent.

**Is there an adequate description of the baseline physical and biological environment?**

22. There is an adequate description of the physical environment within my advisory remit. I defer comment concerning the biological environment to relevant advisors.

**Is the EIA methodology and assessment presented clearly and fully justified?**

23. The EIA methodology is clear, and typical of usual practice.

**Is there an adequate description of the potential project impacts and effects on the physical and biological environment?**

24. Please refer to comments for question 1.

**Is there an adequate description of the potential cumulative and inter-related impacts and effects on the physical and biological environment?**

25. Section 27 of the ES details the cumulative impacts identified through the cumulative impacts assessment. The applicant correctly identifies the various dredging operations planned in the Tees river, particularly the NGCT, which is by and large the most significant project of a similar nature and one of the more important projects to consider in a cumulative impacts assessment. The NGCT was taken forward for cumulative impact assessment (CIA) and this is appropriate. The following CIA considers the impacts to selected receptors; I defer comment to relevant advisors concerning the validity of these conclusions.

### **Minor comments**

26. Section 27.5.22 comprises a short paragraph concluding that there will be no significant cumulative impact to ecological receptors from the disposal of dredged sediment offshore. Whether this is correct or not is outside of my remit, however, I recommend that the MMO consider the cumulative change that may be incurred on the selected disposal site – Tees Bay C (TY150). Whilst Tees Bay C (TY150) has received total annual disposal volumes of up to 1.9 M wet tonnes, the combination of the South Bank disposal and NGCT disposal volumes amounts to 4.9 Mm<sup>3</sup> (using an SG of 1.3 for silt, this equates to approximately 6.37M wet tonnes). Whilst it may not be the case that these two campaigns would dispose of their total volumes within the same year or at the same time, I would've expected more detailed assessment as to the capacity for the site to receive this combined quantity of dredged sediment. For cumulative operations of this scale, some modelling to determine the likely effects should material from South Bank and NGCT be deposited at the same time or within similar time periods.

27. 6.37 M wet tonnes is more than three times larger than the largest volume received by Tees Bay C (TY150). This is further compounded by the fact that the largest volume (1.9 M wet tonnes) was deposited at the site over 20 years ago. The question as to the capacity to receive disposed sediment of Tees Bay C (TY150) cannot be answered in this consultation, and would likely require sediment and plume dispersal modelling as part of a cumulative impact assessment.

**Is there an adequate description of the potential transboundary impacts and effects on the physical and biological environment?**

28. N/A – the works are located far outside of the median line.

**Are measures to avoid, reduce or remedy significant adverse effects clearly presented and appropriately justified?**

29. Please refer to points 17 - 19.

**Are monitoring proposals and recommendations clearly presented and appropriately justified?**

30. Please refer to points 17 - 19.

**In collecting data have details of any quality standards or assurance methods been given?**

31. The sediment data presented for this application have been reported in the MMO Results Template, and it is clear that laboratories validated by the MMO have been selected for their respective analyses (e.g. Ocean Ecology for PSA; SOCOTEC for hydrocarbons). This adheres to usual practice and the OSPAR guidelines.

**If not please explain what you would expect to see and if they have, please explain if such standards and methods are suitable.**

32. N/A

**Please assess the methodology used to prepare and gather evidence. Have they used standard practices?**

33. Please refer to my response to question 2

**Is the timeliness of the data appropriate for the intended use?**

34. The data presented are used to characterise the general Tees area. They are the most recent such data from the Tees that I believe, and are dated within the last 3 – 5 years, and therefore are considered timely under the OSPAR guidance. However, I cannot comment fully until the whole evidence base relative to the area to be dredged is provided for review.

**Is the evidence that has been supplied appropriate (i.e. proportionate and targeted) for its intended use?**

35. Please refer to points 13 – 15.

**Is the evidence consistent with that submitted for operations of a similar nature?**

36. The evidence presented is consistent with dredge and disposal operations of a similar scale, nature and context.

**For evidence that relies on modelled data has an unbiased statistical accuracy assessment been carried out?**

37. N/A

## Summary

38. The EIA report presented is generally detailed and well constructed, however the data on which it relies are not complete to support a marine licence application with regard to my advisory remit. I therefore defer final comment until these data would be presented. I also would've expected more detail concerning the likely capacity of disposal site Tees Bay C (TY150) to receive the volumes of sediment proposed by both the NGCT and South Bank Quay, and recommend that the applicant provides a more detailed impact assessment including cumulative effects.

Please do not hesitate to get in touch should you require any further clarification.

Joe Perry

Advisor

<i>Quality Check</i>	<i>Date</i>
Sylvia Blake	08/02/2021