Note / Memo

HaskoningDHV UK Ltd.
Industry & Buildings

To:	Marine Management Organisation
From:	Royal HaskoningDHV
Date:	Tuesday, 29 November 2022
Our reference:	PC1084-RHD-SB-EN-NT-EV-1139
Classification:	Project related

Subject: **South Bank Quay Phase 1 Further Information Request 18 Response**

Dear Ashley,

Thank you for sending through the Further Information Request.

We have provided the further information requested by Cefas below.

Cefas Table 1

MMO comment:
Cefas have explained that document PC1084-RHD-SB-EN-NT-EV-1134-L.2021.00333 South Bank Quay Marine Licence Variation Request 2.pdf has proven difficult to synthesise for the purposes of providing advice. They have created Table 1 below to base their advice upon. Please can you confirm this is correct. If not, please explain what is incorrect and offer an alternative in a similar format.

RHDHV response:
Table 1 included in the MLA_2020_00506_2_RFI_18 document reflects the cubic metres and wet tonnages originally consented and now applied for within this variation.

The specific gravity factors used within the original application (which has therefore been used to convert the varied volumes) are 1.7 for ‘clay’ (which is representing the geological mudstone and till material) and 1.9 for sand.

PBDE Sampling

MMO comment:
The MMO note that the number of samples tested for PBDEs is lower than the number of samples taken in total (Table 2). The options paper explains that the PBDE testing was conducted “down to the top of Glacial Till”. This explains why only a subset of samples were tested for PBDEs, however the MMO note that this is not the case for the other contaminants, where all 1m interval samples were tested. The MMO requires clarification as to why all samples would be tested for other contaminants, but only a subset would be tested for PBDEs.

RHDHV response:
The ground investigations to take sediment samples were undertaken between February and March 2022 prior to the agreement of the sample plan with MMO and therefore prior to the advice provided by MMO that sampling for PBDEs was required.

At the time, due to the lack of agreed sample plan, a precautionary approach was taken, testing all samples to the maximum dredge depth for all determinands. Due to the lead in time to PBDE sampling at the time (six months) the remaining data was received, and then the MMO sample plan was provided, noting

sampling was not required for glacial till and mudstone material. The PBDE sample analysis was then reduced to only test those samples down to the till and mudstone layers, in line with the sample plan.

A full timeline and associated references have been provided below:

- 4th February 2022 – Note ref. "PC1084-RHD-SB-EN-NT-EV-1125 South Bank Quay Phase 1 - sediment sampling plan associated with proposed change in dredge footprint" was submitted to MMO
- 22nd February 2022 – Borehole investigations commenced on site
- 16th March 2022 – Completion of the BH investigations on site – samples collected to full depth and testing for all MMO suite of determinands commenced
- 23rd March 2022 – Sample data for all required determinands excluding PBDEs received
- 11th April 2022 – Sample plan advice received from the MMO confirming that the Mercia Mudstone and glacial till can be exempted from sampling (SAM/2022/00019)
- 3rd August 2022 – Sample data for PBDEs received

ES Assessment

MMO comment:
The MMO notes that the ES splits the dredge volumes into Phase 1 and Phase 2, as shown in Table 3.2. It is unclear whether the total dredge volume now exceeds scope or not. As this application is amending the phase 1 volume to 1,133,000m3, then this implies that the overall total would then exceed the volume assessed in the ES. Please clarify this point.

RHDHV response:
The total dredge volume does now exceed the total dredge volume assessed within the ES. However, the material to be dredged was always going to be removed but was originally intended to be excavated to land. The overall envelope of Phase 1 has therefore not changed, but rather the proportion of material to be dredged and disposed of offshore.

The original EIA (which assessed the impacts of Phase 1 and 2 combined) did not identify any significant impacts to marine water and sediment quality. As the new dredge volume for Phase 1 is less than the total volume assessed in the EIA Report for Phase 1 and 2 combined, no significant impacts are predicted to marine water and sediment quality. However, updated sedimentary plume modelling to take account of the increase in dredge and disposal volume required for Phase 1 was undertaken to support the marine licence variations.

This approach was reviewed and agreed by MMO through EIA/2021/00049, which screened out the variations of requiring an EIA.

Hydrodynamic Modelling

MMO comment: The MMO note that the dredge volumes considered in the dispersion model submitted for marine licence variation 1 include an extra two metres of dredge material down to a bed level of -15.6mCD. Marine licence variation 2 is to increase the dredge level in the berth pocket to -15.9mCD. The MMO note that document PC1084-RHD-SB-EN-NT-EV-1137 submitted in response to RFI 17 states that "the conclusions presented within the Hydrodynamic and Sediment Plume Modelling report remain valid for MLV2." Please clarify how the change in dredge depth has been considered when reassessing the hydrodynamic and sediment plume model?

RHDHV response:
The increase in maximum dredge depth incorporates the requirements to incorporate increased tolerances for CSD (as was undertaken in marine licence variation 1). This does not represent an increase the target dredge depth, but rather an acknowledgement that the dredging may influence deeper depths due to the increased tolerances required. The target dredge depth has not been varied as part of this variation and therefore it is considered that the conclusions of the report remain valid.