

1. 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.

**Table 1. Existing and proposed dredge and disposal volumes/weights, adapted from document 4. "WT" = wet tonnes. Values in wet tonnes are converted to cubic metres through the following formula:  $X_{\text{wet tonnes}} / \text{SG} = X_{\text{m}^3}$ , where SG (specific gravity) is 1.6 for sand and 1.3 for clay.**

Activity	Existing allowance	Proposed variation	Extent of Change	Total
<b>Dredging</b>				
Turning Circle	187,000 m <sup>3</sup>	216,000 m <sup>3</sup>	+ 29,000 m <sup>3</sup>	+ 445,000 m <sup>3</sup>
Berth pocket	715,000 m <sup>3</sup>	1,131,000 m <sup>3</sup>	+ 416,000 m <sup>3</sup>	
	15.6 m bCD	15.9 m bCD	+ 0.3 m	
<b>Disposal at sea</b>				
Turning Circle (Sand)	355,300 WT (~222,062 m <sup>3</sup> )	410,400 WT (~256,500 m <sup>3</sup> )	+ 55,100 WT (~34,437 m <sup>3</sup> )	+ 355,700 WT (~273,615 m <sup>3</sup> )
Berth pocket (Clay)	280,500 WT (~215,769 m <sup>3</sup> )	987,700 WT (~759,769 m <sup>3</sup> )	+ 707,200 WT (~544,000 m <sup>3</sup> )	
Berth pocket (Sand)	1,045,000 WT (~653,125 m <sup>3</sup> )	638,400 WT (~399,00 m <sup>3</sup> )	- 406,600 WT (~254,125 m <sup>3</sup> )	

2. 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.

**Table 2. Distribution of samples tested for PBDEs ("Y") and those which have not ("N"). Cells shaded in light grey denote depths at which samples were not taken in accordance with the respective target dredge depths. Note that here, "Depth" refers to the sampling depth and not the target depths in Chart Datum.**

Depth (m)	B H1	B H2	B H3	B H4	B H5	B H6	B H7	B H8	B H9	BH 10	BH 11	BH 12	BH 13	BH 14	BH 15
1	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
2	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
3	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
4	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
5	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
6	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
7	Y	Y	N	Y	N	N	Y	N	Y	Y	Y	N	Y	Y	N
8	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
9	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
10	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
11	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
12	N	N	N	N		N	N	N	N	N	N	N	N	N	
13	N	N	N	N		N	N	N	N	N	N	N	N	N	
14	N	N	N	N		N	N	N	N	N		N		N	
15	N	N	N			N	N	N	N	N					
16		N						N	N						

3. 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 1,133,000m<sup>3</sup>, then this implies that the overall total would then exceed the volume assessed in the ES. Please clarify this point.

**Table 3.2 Proposed volumes of marine sediments to be dredged (excluding over-dredge volumes)**

Material classification	Phase 1 dredge volume (m <sup>3</sup> )	Phase 2 dredge volume (m <sup>3</sup> )	Total dredge volume (m <sup>3</sup> )
Soft material	670,000	790,000	1,460,000
Hard material (mudstone)	150,000	190,000	340,000
<b>Total</b>	<b>820,000</b>	<b>980,000</b>	<b>1,800,000</b>

4. 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?