PORT OF TILBURY LONDON

PLANNING ACT 2008
INFRASTRUCTURE PLANNING
(APPLICATIONS: PRESCRIBED FORMS AND PROCEDURE) REGULATIONS 2009
REGULATION 5 (2) (a)

PROPOSED PORT TERMINAL AT FORMER TILBURY POWER STATION

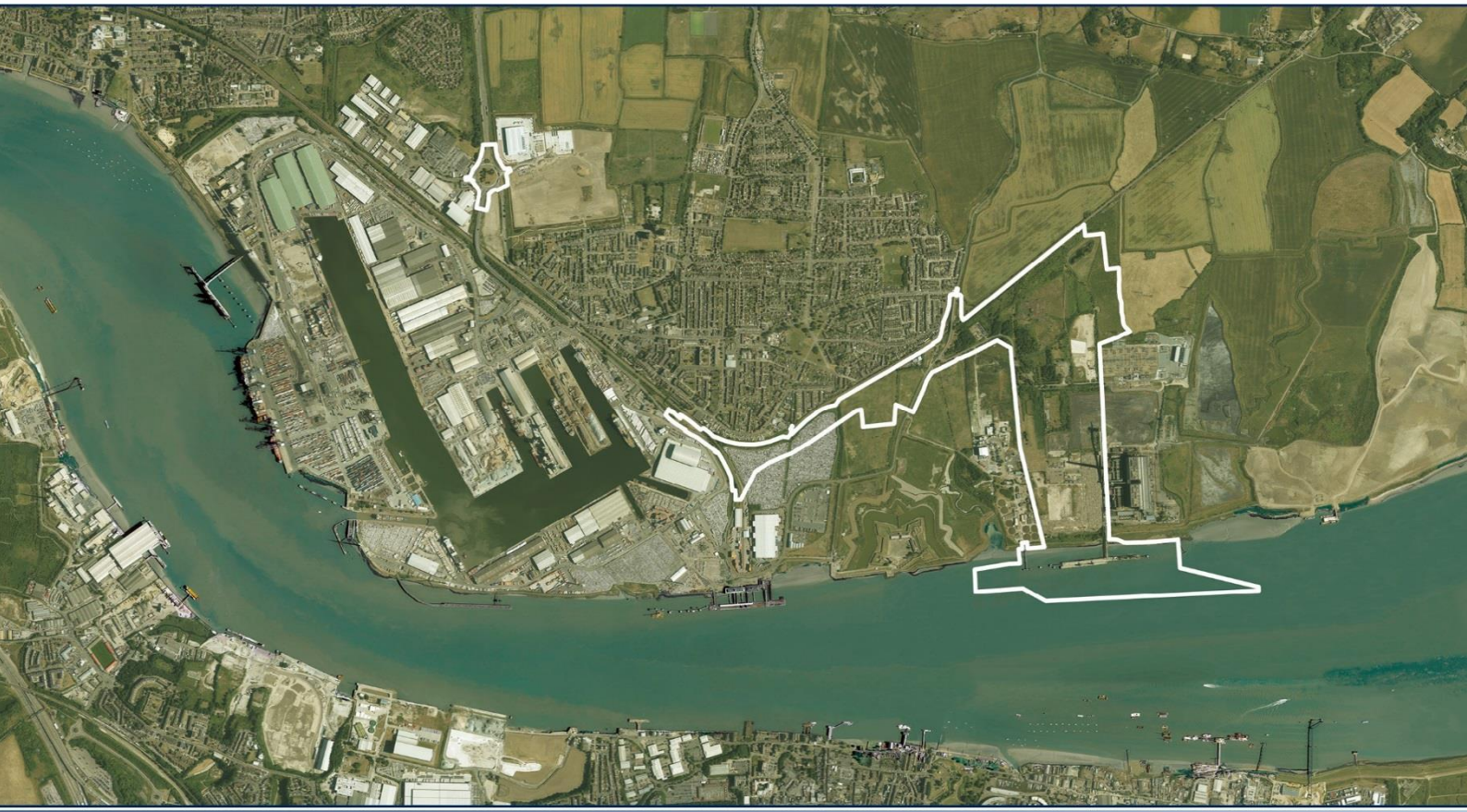
TILBURY2

TR030003

VOLUME 6 PART B

ES APPENDIX 11.C: SEDIMENT CONTAMINATION RESULTS

DOCUMENT REF: 6.2 11.C



TILBURY2

Applicant Information

Instructions:

1. All applicants and laboratories should refer to the most recent guidance on sediment analysis in support of marine licence applications
   Sediment analysis guidance
2. Full information must be provided under each relevant sheet of the workbook. Grey highlighted cells indicate where information can be entered.
3. Where information cannot be provided, the applicant should consult with the MMO prior to submission.
4. Worksheets are protected to prevent accidental amendments to calculated values. If amendments are required please consult with the MMO.
5. Sample IDs used through the data output worksheets should correspond to Sample IDs provided on this worksheet.
6 Where more than 6 dredge areas or 30 samples are required, please contact MMO.
7. Macros must be enabled to use this workbook

Marine licence applicant information:

Applicant:	Port of Tilbury London Limited
Application number:	SAM/2017/00013
Application title:	Tilbury2
Date sampled:	19/05/2017-26/05/2017
Sampling location:	

Dredge area tonnages:

Dredge Area	Dredging tonnages	% total dredged material	Total dredged material
Area i	171,000	81.82%	209,000
Area ii	38,000	18.18%	
Area iii			
Area iv			
Area v			
Area vi			

MMO use only

Sample numbers and locations

Sample ID	Excluded sample (MMO use)	Sample location (decimal degrees, WGS84)		Location name (as per sampling plan)	Sampling depth (m)	Dredge area
		Position latitude	Position longitude			
2017-MO-RBS01_0.00-0.30		51.451490	0.380914	Ro-Ro Berth (West) BH PLA 1	0-0.3	Area i
2017-MO-BH01_0.00-0.50		51.451508	0.380900	Ro-Ro Berth (West) BH PLA 1	0-0.5	Area i
2017-MO-BH01_2		51.451508	0.380900	Ro-Ro Berth (West) BH PLA 1	2	Area i
2017-MO-RBS02_0		51.451667	0.382362	Ro-Ro Berth (West) BH PLA 2	0	Area i
2017-MO-BH02_1		51.451640	0.382390	Ro-Ro Berth (West) BH PLA 2	1	Area i
2017-MO-BH02_1.6		51.451640	0.382390	Ro-Ro Berth (West) BH PLA 2	1.6	Area i
2017-MO-BH03_0		51.451693	0.389920	k Handling Berth (East) BH PL	0	Area i
2017-MO-BH03_3		51.451693	0.389920	k Handling Berth (East) BH PL	3	Area i
2017-MO-BH03_5		51.451693	0.389920	k Handling Berth (East) BH PL	5	Area i
2017-MO-RBS04_0		51.451921	0.390652	k Handling Berth (East) BH PL	0	Area i
2017-MO-BH04_4		51.451939	0.390667	k Handling Berth (East) BH PL	4	Area i
2017-MO-BH04_7		51.451939	0.390667	k Handling Berth (East) BH PL	7	Area i
2017-MO-RBS05_0.00-0.30		51.452005	0.391822	k Handling Berth (East) BH PL	0-0.3	Area i
2017-MO-BH05_5		51.452015	0.391794	k Handling Berth (East) BH PL	5	Area i
2017-MO-BH05_8		51.452015	0.391794	k Handling Berth (East) BH PL	8	Area i
2017-MO-BH06_0		51.451587	0.392016	k Handling Berth (East) BH PL	0	Area i
2017-MO-BH06_3		51.451587	0.392016	k Handling Berth (East) BH PL	3	Area i
2017-MO-BH06_5		51.451587	0.392016	k Handling Berth (East) BH PL	5	Area i
2017-MO-RBS07_0.00-0.30		51.450822	0.392969	Approach Channel BH PLA 7	0-0.3	Area ii
2017-MO-BH07_0		51.450840	0.392941	Approach Channel BH PLA 7	0	Area ii
2017-MO-BH07_1		51.450840	0.392941	Approach Channel BH PLA 7	1	Area ii
217-MO-RBS08_0.00-0.30		51.451036	0.393902	Approach Channel BH PLA 8	0-0.3	Area ii
2017-MO-BH08_0.00-0.50		51.451045	0.393931	Approach Channel BH PLA 8	0-0.5	Area ii
2017-MO-BH08_1		51.451045	0.393931	Approach Channel BH PLA 8	1	Area ii

Physical characteristics data

Instructions:

1. Record the laboratory/contractor responsible for analysis
2. Record the date the samples were analysed.
3. Enter full dataset for each sample in the analysis results table
4. Where copying and pasting entries please use paste values only
5. Where entering multiple Sample IDs please use the pop-up form
   IDs should be separated by a comma

Analysis information:

Laboratory/contractor:	
Date of analysis:	

Physical characteristics analysis outputs:

Laboratory sample number	Dredge Area	Sample ID(s)	Visual appearance*	Exempt from chemical analysis◦	Total Solids (% total sediments)	Organic matter (total organic carbon)	-5.5	-5.0	-4.5	-4.0	-3.5	-3.0	-2.5
							45mm	31.5mm	22.4mm	16mm	11.2mm	8mm	5.6mm
2017/40186	Area i	2017-MO-RBS01_0.00-0.30	Thick, brown, slightly gravelly, muddy sand, containing organic matter.		67.1		0.00	0.00	0.00	0.00	0.00	0.00	0.07
2017/40187	Area i	2017-MO-BH01_0.00-0.50	Sticky, dark brown, slightly gravelly, muddy sand (peat?) containing organic matter.		21.2		0.00	0.00	0.00	0.00	0.00	0.00	0.12
2017/40188	Area i	2017-MO-BH01_2	Thick, sticky, grey-brown, slightly sandy mud (clay) containing organic matter		57.7		0.00	0.00	0.00	0.00	0.00	0.00	0.00
2017/40189	Area i	2017-MO-RBS02_0	Brown, slightly gravelly, sandy mud (clay) containing organic matter.		39.1		0.00	0.00	0.00	0.00	0.00	0.09	0.13
2017/40190	Area i	2017-MO-BH02_1	Thick, sticky, grey-brown, sandy mud (clay) containing organic matter.		50.6		0.00	0.00	0.00	0.00	0.00	0.00	0.00
2017/40191	Area ii	2017-MO-BH02_1.6	Thick, sticky, brown, sandy mud (clay) containing organic matter.		52.5		0.00	0.00	0.00	0.00	0.00	0.00	0.00
2017/40195	Area i	2017-MO-BH03_0	Thick, sticky, grey-brown, slightly sandy mud (clay).		58.4		0.00	0.00	0.00	0.00	0.00	0.00	0.00
2017/40196	Area i	2017-MO-BH03_3	Thick, sticky, dark brown, slightly gravelly, sandy mud (clay) containing organic matter.		55.3		0.00	0.00	0.00	0.00	0.00	0.00	1.01
2017/40197	Area i	2017-MO-BH03_5	Pale brown, slightly sandy gravel.		88.3		0.00	0.00	0.00	13.62	10.71	8.72	11.73
2017/40203	Area i	2017-MO-RBS04_0	Thick, sticky, brown, sandy mud (clay).		53.8		0.00	0.00	0.00	0.00	0.00	0.00	0.00
2017/40204	Area i	2017-MO-BH04_4	Brown, gravelly sand.		83.4		0.00	0.00	0.00	0.00	9.18	1.52	3.05
2017/40205	Area i	2017-MO-BH04_7	Orangey-brown, sandy gravel.		94.2		0.00	0.00	0.00	0.00	20.63	9.65	4.59
2017/40200	Area i	2017-MO-RBS05_0.00-0.30	Thick, sticky, brown, sandy mud (clay) containing organic matter.		51.4		0.00	0.00	0.00	0.00	0.00	0.00	0.04
2017/40201	Area i	2017-MO-BH05_5	Brown, gravelly sand.		82.6		0.00	0.00	0.00	26.17	0.00	0.00	0.00
2017/40202	Area i	2017-MO-BH05_8	Orangey-brown, gravelly sand. Chemical smell present.		86.3		0.00	0.00	0.00	0.00	12.49	3.76	4.66
2017/40192	Area i	2017-MO-BH06_0	Thick, sticky, grey-brown, gravelly, sandy mud (clay).		53		0.00	0.00	0.00	0.00	0.00	0.00	3.43
2017/40193	Area i	2017-MO-BH06_3	Pale brown, slightly sandy, muddy gravel.		84		0.00	0.00	0.00	0.00	7.73	16.94	21.18
2017/40194	Area i	2017-MO-BH06_5	Orangey-brown, sandy gravel.		97.3		0.00	0.00	0.00	50.49	0.00	16.07	1.33
2017/40206	Area ii	2017-MO-RBS07_0.00-0.30	Thick, sticky, grey-brown, slightly sandy mud (clay), containing organic matter.		55.5		0.00	0.00	0.00	0.00	0.00	0.00	0.00
2017/40207	Area ii	2017-MO-BH07_0	Thick, sticky, grey-brown, slightly sandy mud (clay).		59.2		0.00	0.00	0.00	0.00	0.00	0.00	0.00
2017/40208	Area ii	2017-MO-BH07_1	Thick, sticky, grey-brown, slightly sandy mud (clay).		61.1		0.00	0.00	0.00	0.00	0.00	0.00	0.00
2017/40209	Area ii	217-MO-RBS08_0.00-0.30	Thick, black, slightly sandy, muddy gravel.		48.7		0.00	0.00	0.00	0.00	24.84	5.07	2.57
2017/40198	Area ii	2017-MO-BH08_0.00-0.50	Dark brown, slightly sandy gravel, containing organic matter.		76.8		0.00	0.00	0.00	0.00	30.11	22.28	4.35
2017/40199	Area ii	2017-MO-BH08_1	Gravel.	y			0.00	21.17	24.51	25.93	23.55	3.03	0.41

* **Visual appearance**: Incude a description of what the material looks like and what it contains, e.g. sandy material containing brick fragments, or black silt, or foreign man made matter caught in the sample.

◦ **Exempt from chemical analysis:** enter 'y' where sediment samples contain glacial material or are too coarse and thus exempt from chemical analysis.

												Particle size distribution (% at 0.5 phi intervals)					
-2.0	-1.5	-1.0	-0.5	0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5
4mm	2.8mm	2mm	1.4mm	1mm	707µm	500µm	353.6µm	250µm	176.8µm	125µm	88.39µm	63µm	44.2µm	31.3µm	22.1µm	15.6µm	11µm
0.55	0.96	1.31	1.65	1.44	4.49	4.85	5.17	4.92	6.16	6.49	6.70	6.83	6.62	6.08	5.67	5.38	5.02
0.70	0.94	1.06	1.88	1.64	6.57	6.77	6.91	6.10	7.19	7.35	7.45	7.56	6.61	5.64	4.95	4.41	3.87
0.00	0.00	0.06	0.06	0.03	0.00	0.45	0.99	0.58	2.08	2.21	2.57	4.09	6.84	8.35	7.81	7.18	6.99
0.21	0.34	0.38	0.43	0.38	4.20	4.37	4.85	3.74	6.13	6.53	5.78	5.39	4.82	5.19	4.77	5.33	5.71
0.04	0.04	0.12	0.16	0.16	4.21	4.43	4.33	3.48	4.73	4.54	3.48	2.92	3.14	2.94	4.19	5.92	6.99
0.00	0.04	0.08	0.08	0.08	0.65	3.55	3.40	2.69	3.85	3.96	3.81	3.80	3.91	4.29	5.20	6.21	7.15
0.00	0.00	0.06	0.03	0.03	0.00	0.00	0.00	0.12	1.77	3.17	4.11	7.00	9.45	8.89	7.25	6.49	6.39
0.98	0.71	0.38	0.58	0.48	1.43	2.35	2.88	3.67	5.95	5.72	6.20	6.81	7.41	7.18	6.39	5.99	5.89
10.72	10.76	5.79	2.93	1.26	2.58	4.32	4.44	3.10	2.09	0.90	0.46	0.42	0.38	0.32	0.26	0.27	0.36
0.41	0.00	0.22	0.13	0.19	1.50	3.03	3.18	2.44	3.95	4.44	4.81	4.88	5.29	5.61	5.50	6.54	7.00
1.25	4.18	6.32	7.68	5.89	12.34	14.23	15.71	10.03	4.19	1.82	0.87	0.45	0.26	0.16	0.11	0.09	0.08
12.88	13.80	9.07	8.04	4.33	5.46	4.50	2.75	1.53	0.91	0.55	0.39	0.27	0.18	0.11	0.07	0.05	0.04
0.04	0.00	0.11	0.15	0.11	0.36	2.67	3.03	2.82	4.53	5.43	5.80	5.42	5.26	5.01	4.48	5.42	6.06
2.04	3.20	1.85	1.60	0.98	6.61	17.64	23.13	10.54	2.33	0.81	0.34	0.23	0.24	0.22	0.25	0.25	0.28
7.14	9.52	7.12	7.19	5.28	8.59	9.23	7.52	5.42	3.93	2.68	1.71	1.12	0.73	0.45	0.28	0.19	0.14
2.12	1.80	0.72	0.69	0.31	0.00	0.47	0.90	0.97	2.24	2.76	3.28	3.78	4.93	6.03	6.35	6.52	6.99
15.44	11.81	6.03	3.05	1.81	0.65	1.14	0.97	0.53	0.34	0.26	0.29	0.25	0.25	0.29	0.40	0.59	0.95
3.62	6.60	5.04	4.66	2.43	3.08	2.59	1.82	0.95	0.52	0.24	0.12	0.07	0.04	0.03	0.03	0.03	0.03
0.00	0.03	0.00	0.03	0.03	0.00	0.00	0.00	0.30	2.42	3.34	3.95	4.40	5.54	6.64	7.07	7.29	7.75
0.00	0.00	0.03	0.05	0.05	0.00	0.00	0.08	1.15	2.42	3.66	4.56	4.99	6.17	6.82	6.68	6.57	7.02
0.00	0.00	0.00	0.03	0.03	0.00	0.00	0.00	0.30	2.35	3.14	3.54	3.71	5.01	6.42	6.58	7.51	7.64
1.46	1.13	0.53	0.45	0.30	0.08	0.82	1.02	0.65	2.08	3.51	4.31	3.80	3.62	3.92	4.40	4.91	5.29
3.80	3.31	2.76	1.54	0.92	1.40	2.13	2.97	2.59	2.69	3.28	3.49	2.22	1.20	0.85	0.72	0.88	0.96
0.03	0.09	0.05	0.04	0.05	0.06	0.08	0.10	0.09	0.08	0.12	0.14	0.09	0.05	0.04	0.04	0.04	0.04

7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0	14.5	>14.5
7.8µm	5.5µm	3.9µm	2.75µm	1.95µm	1.38µm	0.98µm	0.69µm	0.49µm	0.34µm	0.24µm	0.17µm	0.12µm	0.09µm	0.06µm	0.04µm	<0.04µm
4.27	3.53	2.84	2.19	1.63	1.19	0.86	0.69	0.63	0.59	0.50	0.34	0.21	0.11	0.04	0.00	0.00
3.19	2.54	1.95	1.40	0.94	0.59	0.36	0.28	0.27	0.27	0.23	0.14	0.08	0.03	0.01	0.00	0.00
6.26	5.93	5.59	5.09	4.78	4.38	3.71	3.10	2.77	2.52	2.14	1.55	1.05	0.60	0.22	0.03	0.00
5.22	4.70	4.10	3.39	2.79	2.19	1.64	1.40	1.47	1.54	1.33	0.84	0.44	0.17	0.04	0.00	0.00
6.57	6.03	5.27	4.40	3.84	3.30	2.65	2.33	2.41	2.49	2.18	1.44	0.81	0.35	0.10	0.01	0.00
6.70	6.24	5.65	4.89	4.35	3.77	3.01	2.55	2.50	2.51	2.17	1.47	0.87	0.42	0.13	0.02	0.00
5.67	5.26	4.90	4.46	4.23	3.99	3.52	3.02	2.66	2.34	1.94	1.42	0.99	0.58	0.22	0.03	0.00
5.20	4.47	3.75	3.04	2.48	2.02	1.59	1.27	1.09	0.95	0.79	0.58	0.41	0.24	0.09	0.01	0.00
0.42	0.48	0.49	0.44	0.38	0.31	0.24	0.20	0.20	0.20	0.18	0.14	0.10	0.06	0.02	0.00	0.00
6.43	5.96	5.40	4.59	3.80	2.98	2.24	1.88	1.89	1.92	1.67	1.10	0.63	0.28	0.08	0.01	0.00
0.07	0.06	0.05	0.04	0.05	0.06	0.06	0.05	0.04	0.03	0.02	0.02	0.01	0.01	0.00	0.00	0.00
0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00
5.76	5.68	5.40	4.83	4.30	3.59	2.72	2.25	2.27	2.34	2.00	1.25	0.63	0.22	0.04	0.00	0.00
0.24	0.19	0.14	0.10	0.09	0.10	0.09	0.07	0.06	0.05	0.05	0.04	0.03	0.02	0.01	0.00	0.00
0.10	0.09	0.08	0.07	0.07	0.07	0.07	0.06	0.06	0.05	0.04	0.03	0.03	0.02	0.01	0.00	0.00
6.58	6.25	5.76	5.02	4.41	3.79	3.08	2.50	2.16	1.92	1.61	1.17	0.81	0.47	0.17	0.02	0.00
1.15	1.28	1.25	1.05	0.84	0.62	0.42	0.37	0.46	0.55	0.51	0.34	0.18	0.07	0.02	0.00	0.00
0.03	0.03	0.03	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00
7.14	6.81	6.41	5.67	5.03	4.34	3.49	2.82	2.47	2.23	1.88	1.34	0.89	0.49	0.18	0.02	0.00
6.59	6.33	5.97	5.38	4.93	4.34	3.51	2.84	2.52	2.31	1.96	1.41	0.94	0.52	0.19	0.02	0.00
6.88	6.60	6.27	5.68	5.22	4.68	3.92	3.26	2.89	2.60	2.19	1.59	1.08	0.62	0.23	0.03	0.00
5.06	4.59	3.85	2.96	2.20	1.61	1.17	0.89	0.75	0.66	0.55	0.41	0.28	0.16	0.06	0.01	0.00
0.92	0.87	0.78	0.65	0.53	0.43	0.33	0.25	0.20	0.17	0.14	0.11	0.08	0.05	0.02	0.00	0.00
0.03	0.03	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Trace metal data

Instructions:

1. Record the laboratory/contractor responsible for trace metal analysis
2. Record the date the samples were analysed.
3. Enter full dataset for each sample in the analysis results table
4. Trace metal analysis results should be reported in mg/kg (ppm) dry weight
5. Enter methdological limit of detection for each trace metal prior to inputting raw data
6. Where analysis outputs are less than the limits of detection please enter text "<LOD"
7. Where copying and pasting entries please use paste values only
8. Where entering multiple Sample IDs please use the pop-up form
   IDs should be separated by a comma

Analysis information:

Laboratory/contractor:	Cefas
Date of analysis:	06/06/2017

Determinand analysis outputs:

Laboratory sample number	Dredge Area	Sample ID(s)	Total solids (%)	Metals as mg/kg dry weight							
				Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Copper (Cu)	Mercury (Hg)	Nickel (Ni)	Lead (Pb)	Zinc (Zn)
2017/40186	Area i	017-MO-RBS01_0.00-0.	67.1	7.66	0.05	29.9	10.2	0.036	17.7	7.31	32.8
2017/40187	Area i	017-MO-BH01_0.00-0.5	21.2	10.4	0.11	55.8	17.1	0.122	37.2	14.8	61.6
2017/40188	Area i	2017-MO-BH01_2	57.7	12.2	0.13	76.8	13.2	0.043	37.8	19.6	94.6
2017/40189	Area i	2017-MO-RBS02_0	39.1	24.2	0.13	79.3	14.6	0.061	43.2	20.5	96.4
2017/40190	Area i	2017-MO-BH02_1	50.6	16.9	0.15	95.9	16.1	0.044	48.8	25.4	114
2017/0191	Area i	2017-MO-BH02_1.6	52.5	27.9	0.15	80.4	13.7	0.049	43	22.9	106
2017/40195	Area i	2017-MO-BH03_0	58.4	13.2	0.12	54.9	9.45	0.036	28.8	15.2	69.2
2017/40196	Area i	2017-MO-BH03_3	55.3	14.2	0.18	42	9.76	0.042	28.4	11	66.8
2017/40197	Area i	2017-MO-BH03_5	88.3	7.44	0.03	14.6	3.86	0.029	11.7	5.3	14.2
2017/40203	Area i	2017-MO-RBS04_0	53.8	20.3	0.15	62.4	11.9	0.048	38.4	19.7	86.5
2017/40204	Area i	2017-MO-BH04_4	83.4	4.39	0.011	9.39	1.89	0.027	7.91	1.94	9.72
2017/40205	Area i	2017-MO-BH04_7	94.2	6.89	0.03	15.3	2.98	0.025	17.5	4.21	16.6
2017/40200	Area i	017-MO-RBS05_0.00-0.	51.4	33.1	0.14	74.8	13.1	0.051	42.5	24.8	98.6
2017/40201	Area i	2017-MO-BH05_5	82.6	8.51	0.012	11.4	1.41	0.03	9.27	2.97	11.5
2017/40202	Area i	2017-MO-BH05_8	86.3	3.24	0.01	6.75	2.1	0.024	10.7	3.07	14.2
2017/40192	Area i	2017-MO-BH06_0	53	17.1	0.14	62.2	11.1	0.044	35.9	17.1	81.3
2017/40193	Area i	2017-MO-BH06_3	84	11.8	0.06	33.7	9.17	0.029	20.2	14.5	36.5
2017/40194	Area i	2017-MO-BH06_5	97.3	5.86	0.02	10.8	2.36	0.028	11.4	3.84	20.4
2017/40206	Area ii	017-MO-RBS07_0.00-0.	55.5	17.1	0.18	61.4	14.9	0.07	33.9	26.5	92.3
2017/40207	Area ii	2017-MO-BH07_0	59.2	16.3	0.15	58.4	11.8	0.043	32.2	20.1	79.3
2017/40208	Area ii	2017-MO-BH07_1	61.1	15.6	0.14	60.6	11.8	0.039	33.4	20.9	81.7
2017/40209	Area ii	17-MO-RBS08_0.00-0.3	48.7	33.7	0.43	48.3	54.4	2.97	23.4	207	153
2017/40198	Area ii	017-MO-BH08_0.00-0.5	76.8	9.14	0.11	13.5	9.28	0.2	8.91	36.3	34.9
			Limits of detection (mg/kg dry weight):	0.039	0.01	0.026	0.005	0.019	0.0007	0.0006	0.064

Organotin data

Instructions:

1. Record the laboratory/contractor responsible for organotin analysis
2. Record the date the samples were analysed.
3. Enter full dataset for each sample in the analysis results table
4. Organotin analysis results should be reported in mg/kg (ppm) dry weight
5. Enter methdological limit of detection for each organotin prior to inputting raw data
6. Where analysis outputs are less than the limits of detection please enter text "<LOD"
7. Where copying and pasting entries please use paste values only
8. Where entering multiple Sample IDs please use the pop-up form
   IDs should be separated by a comma

Analysis information:

Laboratory/contractor:	Cefas
Date of analysis:	06/06/2017

determinand analysis outputs:

Laboratory sample number	Dredge Area	Sample ID(s)	Total solids (%)	Organotins as mg/kg dry weight	
				Dibutyltine (DBT)	Tributyltin (TBT)
2017/40186	Area i	-MO-RBS01_0.00	67.1	<LOD	<LOD
2017/40187	Area i	7-MO-BH01_0.00-	21.2	0.003	0.003
2017/40188	Area i	2017-MO-BH01_2	57.7	<LOD	<LOD
2017/40189	Area i	2017-MO-RBS02_	39.1	0.002	0.002
2017/40190	Area i	2017-MO-BH02_1	50.6	<LOD	<LOD
2017/0191	Area i	2017-MO-BH02_1.	52.5	<LOD	<LOD
2017/40195	Area i	2017-MO-BH03_0	58.4	<LOD	<LOD
2017/40196	Area i	2017-MO-BH03_3	55.3	<LOD	<LOD
2017/40197	Area i	2017-MO-BH03_5	88.3	<LOD	<LOD
2017/40203	Area i	2017-MO-RBS04_	53.8	<LOD	<LOD
2017/40204	Area i	2017-MO-BH04_4	83.4	<LOD	<LOD
2017/40205	Area i	2017-MO-BH04_7	94.2	<LOD	<LOD
2017/40200	Area i	-MO-RBS05_0.00	51.4	<LOD	<LOD
2017/40201	Area i	2017-MO-BH05_5	82.6	<LOD	<LOD
2017/40202	Area i	2017-MO-BH05_8	86.3	<LOD	<LOD
2017/40192	Area i	2017-MO-BH06_0	53	<LOD	<LOD
2017/40193	Area i	2017-MO-BH06_3	84	<LOD	<LOD
2017/40194	Area i	2017-MO-BH06_5	97.3	<LOD	<LOD
2017/40206	Area ii	-MO-RBS07_0.00	55.5	<LOD	<LOD
2017/40207	Area ii	2017-MO-BH07_0	59.2	<LOD	<LOD
2017/40208	Area ii	2017-MO-BH07_1	61.1	<LOD	<LOD
2017/40209	Area ii	-MO-RBS08_0.00-	48.7	<LOD	<LOD
2017/40198	Area ii	7-MO-BH08_0.00-	76.8	<LOD	<LOD
			Limits of detection (mg/kg dry weight):	0.002	0.002

Polyaromatic hydrocarbon data

Instructions:

1. Record the laboratory/contractor responsible for PAH analysis
2. Record the date the samples were analysed.
3. Enter full dataset for each sample in the analysis results table
4. Analysis results for individual PAHs should be reported in µg/kg (ppb) dry weight. THC should be reported as mg/kg (ppm)
5. Enter methdological limit of detection for each PAH prior to inputting raw data
6. Where analysis outputs are less than the limits of detection please enter text "<LOD"
7. Where copying and pasting entries please use paste values only
8. Where entering multiple Sample IDs please use the pop-up form IDs should be separated by a comma

Analysis information:

Laboratory/contractor: Cefas
Date of analysis: 06/06/2017

determinand analysis outputs:

Laboratory sample number	Dredge Area	Sample ID(s)	Total Solids (%)	PAHs as dry weight (µg/kg dry weight)																							Total hydrocarbon content (mg/kg)
				Acenaphthene	Acenaphthylene	Anthracene	Benz[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene	Benzo[e]pyrene	Benzo[k]fluoranthene	C1-Napthalenes	C1-Phenanthrenes	C2-Napthalenes	C3-Napthalenes	Chrysene	Dibenz[a,h]anthracene	Fluoranthene	Fluorene	Indeno[123-c,d]pyrene	Napthalene	Perylene	Phenanthrene	Pyrene	
2017/40186	Area i	MO-RBS01_0.00	67.1	9.73	14.2	14.2	<LOD	11.8	39.3	14.2	19.5	14	18.6	78.5	23.5	55.4	20.3	2.26	147	25	25.3	34.2	316	132	79.7	176
2017/40187	Area i	7-MO-BH01_0.00-	21.2	10.1	16.4	29.6	<LOD	28.9	84.5	31	35.3	33.7	14	115	20	42.3	52.9	7.25	242	27.5	61.5	27.1	476	183	118	145
2017/40188	Area i	2017-MO-BH01_2	57.7	0.627	0.68	0.615	<LOD	<LOD	2.51	2.91	1.85	0.782	5.3	11.2	9.66	14.4	1.16	0.447	4.02	1.68	3.46	2.54	414	5.69	3.03	12.7
2017/40189	Area i	2017-MO-RBS02	39.1	18.7	12.4	10.2	7.56	<LOD	10.6	4.68	6.53	<LOD	18.7	42.8	25.9	38.3	10.8	<LOD	56.2	13.7	7.41	49.8	76.6	83.8	46.8	510
2017/40190	Area i	2017-MO-BH02_3	50.6	19.7	2.74	3.16	<LOD	<LOD	2.66	2.1	1.91	1.13	10.8	15.7	11.5	14	2.17	0.303	15.1	4.21	3.51	38.5	61.4	21.5	14.1	14.3
2017/0191	Area i	017-MO-BH02_1	52.5	1.23	0.956	0.785	<LOD	<LOD	2.02	2.24	1.43	0.67	4.03	11.1	9.05	13.4	1.29	0.333	4.55	1.5	2.88	3.34	174	6.31	3.87	14.5
2017/40195	Area i	2017-MO-BH03_0	58.4	0.365	0.561	0.55	<LOD	<LOD	2	2.73	1.82	0.73	5.26	12.4	9.8	13.4	1.05	0.414	3.87	1.58	3.28	1.97	666	5.62	2.98	10.1
2017/40196	Area i	2017-MO-BH03_3	55.3	0.334	0.495	0.353	<LOD	<LOD	1.6	15.1	1.44	0.454	2.86	10.1	14.3	9.02	<LOD	0.569	3.23	1.11	3.23	1.49	2250	3.59	2.75	34
2017/40197	Area i	2017-MO-BH03_5	88.3	<LOD	<LOD	<LOD	<LOD	<LOD	0.157	0.186	<LOD	<LOD	0.253	4.79	<LOD	<LOD	<LOD	<LOD	0.76	0.123	<LOD	0.236	26.5	0.917	0.569	2.4
2017/40203	Area i	2017-MO-RBS04	53.8	0.201	0.619	0.713	<LOD	1.55	5.3	4.07	2.8	1.23	4.67	15.6	12.7	26	1.24	0.706	4.46	1.74	2.82	1.66	468	7.43	3.73	20.5
2017/40204	Area i	2017-MO-BH04_4	83.4	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	0.143	<LOD	<LOD	1.62	0.125	<LOD	<LOD	<LOD	<LOD	<LOD	6.62	<LOD	<LOD	0.65
2017/40205	Area i	2017-MO-BH04_7	94.2	<LOD	0.1	<LOD	<LOD	<LOD	1.24	<LOD	<LOD	1.33	0.357	<LOD	1.07	1.97	0.136	<LOD	0.992	0.152	<LOD	0.235	<LOD	<LOD	<LOD	0.397
2017/40200	Area i	7-MO-RBS05_0.00	51.4	1.01	0.682	0.673	<LOD	<LOD	1.46	1.95	1.14	0.827	4.56	10.8	8.72	14.8	1.08	0.256	3.47	1.45	<LOD	2.84	156	4.92	3.23	10.1
2017/40201	Area i	2017-MO-BH05_0	82.6	<LOD	<LOD	<LOD	<LOD	<LOD	0.207	<LOD	2.34	<LOD	1.12	5.55	1.97	2.54	<LOD	<LOD	0.782	0.121	<LOD	0.566	0.471	0.913	0.498	0.84
2017/40202	Area i	2017-MO-BH05_8	86.3	<LOD	0.13	<LOD	<LOD	<LOD	0.337	0.174	0.267	<LOD	1.07	5.53	1.5	3.59	1.27	<LOD	0.645	0.249	<LOD	0.814	0.253	1.53	0.567	2.63
2017/40192	Area i	2017-MO-BH06_0	53	0.567	0.508	0.562	<LOD	<LOD	3.32	3.97	2.27	1.31	4	9.98	8.27	10.3	1.11	0.633	4.18	1.86	5.21	1.91	930	5.71	3.05	11
2017/40193	Area i	2017-MO-BH06_2	84	<LOD	0.607	0.271	<LOD	<LOD	0.545	0.411	0.288	0.262	0.921	15.7	1.28	4.96	0.901	<LOD	4.51	0.682	2.31	0.545	62.5	6.9	2.62	<LOD
2017/40194	Area i	2017-MO-BH06_5	97.3	<LOD	0.141	<LOD	<LOD	<LOD	0.108	0.101	<LOD	<LOD	0.237	<LOD	0.37	1.29	<LOD	<LOD	<LOD	0.198	0.652	0.33	21.8	1.59	0.812	1.34
2017/40206	Area ii	7-MO-RBS07_0.00	55.5	2.44	2.98	8.68	30.9	38.5	62.6	33.3	34.7	22	17.2	33.7	31.3	47.8	16.3	6.85	55.6	5.23	47.4	9.75	680	28.4	50.5	66.4
2017/40207	Area ii	2017-MO-BH07_0	59.2	0.799	1.17	3.28	13	11.2	19.7	11.4	10.4	7.19	7.83	16.6	15.6	23.5	5.83	2.21	19.1	2.64	14.7	4.21	722	11.6	17.6	29.3
2017/40208	Area ii	2017-MO-BH07_3	61.1	0.847	1.4	3.57	15	10.8	18.1	10.7	10.5	7.43	8.01	17.2	16	24.2	6.74	1.7	21.1	3.01	14.4	5.04	766	15	18.7	24.6
2017/40209	Area ii	MO-RBS08_0.00-	48.7	35.1	84.9	320	820	867	1110	548	718	500	250	650	578	834	579	131	1910	124	762	190	376	492	1360	669
2017/40198	Area ii	7-MO-BH08_0.00-	76.8	5.36	11.6	32	101	115	121	57.5	75.1	53.4	64.9	90.9	111	162	61	14.4	256	16.1	97.4	28.4	141	66.9	180	97.1
		Limits of detection (µg/kg dry weight):		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Polychlorinated biphenyl data

Instructions:

1. Record the laboratory/contractor responsible for PCB analysis
2. Record the date the samples were analysed.
3. Enter full dataset for each sample in the analysis results table
4. Analysis results should be reported in mg/kg (ppm) dry weight.
5. Enter methdological limit of detection for each PCB prior to inputting raw data
6. Where analysis outputs are less than the limits of detection please enter text '<LOD'
7. ICES 7 PCBs are highlighted in bold
8. Where copying and pasting entries please use paste values only
9. Where entering multiple Sample IDs please use the pop-up form IDs should be separated by a comma

Analysis information:

Laboratory/contractor: Cefas

Date of analysis: 06/06/2017

determinand analysis outputs:

Laboratory sample number	Dredge Area	Sample ID(s)	Total Solids (%)	PCBs as mg/kg dry weight																								
				2,2',4,5,5'-Pentachlorobiphenyl CB101	2,3,3',4,4'-Pentachlorobiphenyl CB105	2,3,3',4',6-Pentachlorobiphenyl CB110	2,3',4,4',5-Pentachlorobiphenyl CB118	2,2',3,3',4,4'-Hexachlorobiphenyl CB128	2,2',3,3',4,5'-Hexachlorobiphenyl CB138	2,2',3,4,5,5'-Hexachlorobiphenyl CB141	2,2',3,4',5',6-Hexachlorobiphenyl CB149	2,2',3,5,5',6-Hexachlorobiphenyl CB151	2,2',4,4',5,5'-Hexachlorobiphenyl CB153	2,3,3',4,4',5-Hexachlorobiphenyl CB156	2,3,3',4,4',6-Hexachlorobiphenyl CB158	2,2',3,3',4,4',5-Heptachlorobiphenyl CB170	2,2',5- Trichlorobiphenyl CB18	2,2',3,4,4',5,5'-Heptachlorobiphenyl CB180	2,2',3,4,4',5',6-Heptachlorobiphenyl CB183	2,2',3,4',5,5',6-Heptachlorobiphenyl CB187	2,2',3,3',4,4',5,5'-Octachlorobiphenyl CB194	2,4,4'-Trichlorobiphenyl CB28	2,4',5-Trichlorobiphenyl CB31	2,2',3,5'-Tetrachlorobiphenyl CB44	2,2',4,4'-Tetrachlorobiphenyl CB47	2,2',4,5'-Tetrachlorobiphenyl CB49	2,2',5,5'-Tetrachlorobiphenyl CB52	2,3',4,4'-Tetrachlorobiphenyl CB66
2017/40186	Area i	MO-RBS01_0.00	67.1	<LOD	0.000201	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
2017/40187	Area i	7-MO-BH01_0.00	21.2	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
2017/40188	Area i	2017-MO-BH01_2	57.7	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
2017/40189	Area i	2017-MO-RBS02_	39.1	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
2017/40190	Area i	2017-MO-BH02_	50.6	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
2017/0191	Area i	2017-MO-BH02_1	52.5	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
2017/40195	Area i	2017-MO-BH03_0	58.4	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	0.000737	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
2017/40196	Area i	2017-MO-BH03_1	55.3	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
2017/40197	Area i	2017-MO-BH03_2	88.3	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
2017/40203	Area i	2017-MO-RBS04_	53.8	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
2017/40204	Area i	2017-MO-BH04_	83.4	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
2017/40205	Area i	2017-MO-BH04_	94.2	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
2017/40200	Area i	MO-RBS05_0.00	51.4	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
2017/40201	Area i	2017-MO-BH05_	82.6	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
2017/40202	Area i	2017-MO-BH05_	86.3	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
2017/40192	Area i	2017-MO-BH06_	53	<LOD	0.000202	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
2017/40193	Area i	2017-MO-BH06_	84	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
2017/40194	Area i	2017-MO-BH06_	97.3	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
2017/40206	Area ii	MO-RBS07_0.00	55.5	<LOD	<LOD	<LOD	<LOD	<LOD	0.000364	<LOD	<LOD	<LOD	0.000292	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
2017/40207	Area ii	2017-MO-BH07_0	59.2	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
2017/40208	Area ii	2017-MO-BH07_1	61.1	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
2017/40209	Area ii	MO-RBS08_0.00	48.7	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
2017/40198	Area ii	7-MO-BH08_0.00	76.8	<LOD	<LOD	0.000309	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD
Limits of detection (mg/kg dry weight)				0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002

Organochlorine data

Instructions:

1. Record the laboratory/contractor responsible for analysis
2. Record the date the samples were analysed.
3. Enter full dataset for each sample in the analysis results table
4. Analysis results should be reported in mg/kg (ppm) dry weight.
5. Enter methdological limit of detection for each Organochlorine prior to inputting raw data
6. Where analysis outputs are less than the limits of detection please enter text "<LOD"
7. Where copying and pasting entries please use paste values only
8. Where entering multiple Sample IDs please use the pop-up form
   IDs should be separated by a comma

Analysis information:

Laboratory/contractor:	
Date of analysis:	

determinand analysis outputs:

Laboratory sample number	Dredge Area	Sample ID(s)	Total Solids (%)	**Organochlorine pesticides as mg/kg dry weight**							
				alpha-hexachlorocyclohexane (AHCH)	beta-hexachlorocyclohexane (BHCH)	gamma-hexachlorocyclohexane (GHCH)	Dieldrin	Hexachlorobenzene (HCB)	1,1-Dichloro-2,2-bis(p-chlorophenyl) ethylene (PPDDE)	Dichlorodiphenyltrichloro ethane (PPDDT)	1,1-dichloro-2,2-bis(p-chlorophenyl)ethane (PPTDE)
Limits of detection (mg/kg dry weight):											

Brominated flame retardant data

Instructions:

1. Record the laboratory/contractor responsible for analysis
2. Record the date the samples were analysed.
3. Enter full dataset for each sample in the analysis results table
4. Analysis results should be reported in mg/kg (ppm) dry weight.
5. Enter methdological limit of detection for each BDE prior to inputting raw data
6. Where analysis outputs are less than the limits of detection please enter text "<LOD"
7. Where copying and pasting entries please use paste values only
8. Where entering multiple Sample IDs please use the pop-up form
   IDs should be separated by a comma

Analysis information:

Laboratory/contractor:	
Date of analysis:	

determinand analysis outputs:

Laboratory sample number	Dredge Area	Sample ID(s)	Total Solids (%)	Brominated flame retardants as mg/kg dry weight											
				2,2′,4,4′,6-penta-bromodiphenyl ether (BDE100)	Hexabromodiphenyl ether (BDE138)	2,2′,4,4′,5,5′-hexa-bromodiphenyl ether (BDE153)	2,2′,4,4′,5,6′-hexa-bromodiphenyl ether (BDE154)	2,2´,4-tri-bromodiphenylether (BDE17)	2,2′,3,4,4′,5′,6-heptabromodiphenyl ether (BDE183)	2,2',3,3',4,4',5,5',6,6'-decabrominated diphenyl ether (BDE 209)	2,4,4'-tribromodiphenyl ether (BDE28)	2,2′,4,4′-Tetrabromodiphenyl ether (BDE47)	2,3',4,4'-Tetrabromodiphenyl ether (BDE66)	2,2',3,4,4'-Pentabromodiphenyl ether (BDE85)	2,2',4,4',5-pentabromodiphenyl ether (BDE99)
			Limits of detection (mg/kg dry weight):												