



**Vattenfall Wind Power Ltd**

**Thanet Extension Offshore Wind Farm**

**Annex 2-4: Geophysical Investigation Report  
3 of 3 - Geophysical Site Survey**

June, 2018, Revision A

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Vattenfall Wind Power Ltd

Thanet Extension Offshore Wind Farm

Annex 2-4: Geophysical Investigation Report 3 of 3 - Geophysical Site Survey

June, 2018

Drafted By:	Fugro Group
Approved By:	Helen Jameson
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**FUGRO GROUP**

**Environmental Investigation Report  
Thanet Benthic Characterisation Report  
UK Continental Shelf, North Sea**

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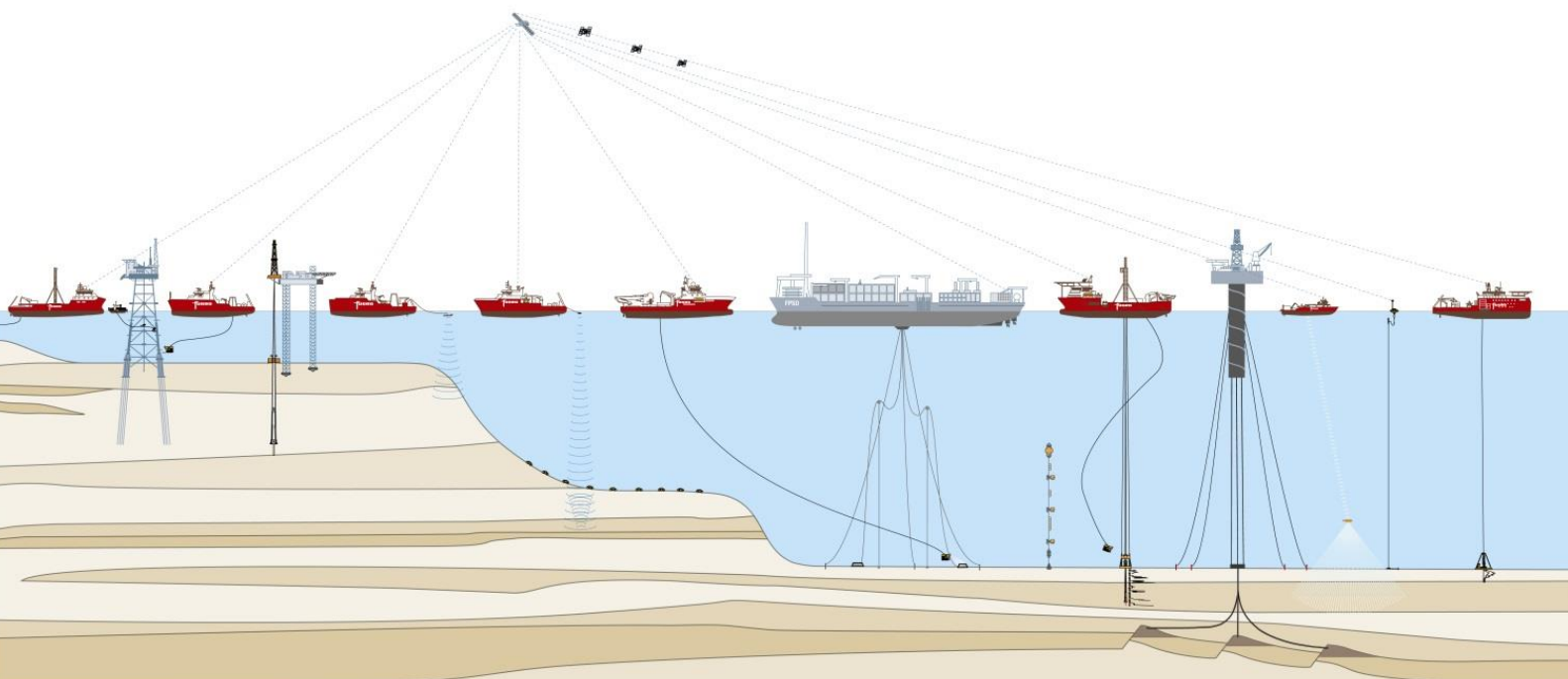
07 April 2017

Report 3 of 3

Fugro Group



Final



**Environmental Investigation Report  
Thanet Extension Offshore Wind Farm  
Thanet Benthic Characterisation Report  
UK Continental Shelf, North Sea**

30 October to 10 November 2016  
Fugro Project No.: 160975.2 (01)

Report 3 of 3

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**A. GUIDELINES ON USE OF REPORT**

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**B. CORRESPONDENCE WITH NATURAL ENGLAND**



**C. FIELD LOGS**



C.1 PROPOSED SURVEY ARRAY

Station Number	Sample Type	ETRS 1989 UTM Zone 31N		Rationale
		Easting [m]	Northing [m]	
CR01	Grab and camera	400 731	5 692 258	Predetermined
CR02	Grab	399 475	5 689 998	Predetermined
CR03	Grab	397 362	5 688 325	Predetermined
CR04	Grab and camera	394 643	5 686 781	Predetermined
CR05	Grab and camera	391 544	5 686 862	Predetermined
CR06	Camera	392 573	5 686 754	Predetermined
CR07	Camera	392 023	5 686 712	Predetermined
CR08	Camera	390 118	5 686 670	Predetermined
CR09	Camera	401 523	5 693 650	Predetermined
WF01	Grab	410 896	5 701 995	Predetermined
WF02	Grab and camera	407 599	5 701 673	Predetermined
WF03	Grab and camera	409 487	5 699 500	Predetermined
WF04	Grab	403 358	5 702 438	Predetermined
WF05	Grab and camera	409 569	5 697 347	Predetermined
WF06	Grab	396 764	5 701 795	Predetermined
WF07	Grab	399 042	5 701 231	Predetermined
WF08	Grab	399 597	5 698 534	Predetermined
WF09	Grab and camera	402 504	5 697 247	Predetermined
WF10	Grab and camera	402 744	5 694 913	Predetermined
WF11	Grab and camera	405 846	5 694 429	Predetermined
WF12	Grab and camera	401 014	5 696 904	Predetermined
WF13	Camera	396 451	5 701 478	Predetermined
WF14	Grab	397 113	5 701 164	Predetermined
WF15.2	Camera	398 758	5 700 183	This station was relocated from the original station WF15 (398 568E, 5 700 569N), in order to survey substrate identified from the acoustic data.
WF16.2	Camera	400 567	5 700 375	This station was relocated from the original station WF16 (400 122E, 5 700 718N), in order to survey substrate identified from the acoustic data
WF17	Camera	407 150	5 700 436	Predetermined
WF18	Camera	409 101	5 700 585	Predetermined
WF19	Grab	410 920	5 700 817	Predetermined
WF20	Camera	397 923	5 699 973	Predetermined
WF21	Camera	398 535	5 699 295	Predetermined
WF22	Grab	399 543	5 699 494	Predetermined
WF23	Camera	408 225	5 699 163	Predetermined
WF24	Camera	405 761	5 702 570	Predetermined
WF25	Grab	409 746	5 702 752	Predetermined
WF26	Camera	401 230	5 698 667	Predetermined
WF27	Grab	408 655	5 698 303	Predetermined
WF28	Camera	409 746	5 698 386	Predetermined
WF29	Grab	410 606	5 698 452	Predetermined
WF30	Camera	400 139	5 697 460	Predetermined

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**VATTENFALL THANET OFFSHORE WIND FARM**

Station Number	Sample Type	ETRS 1989 UTM Zone 31N		Rationale
		Easting [m]	Northing [m]	
WF31	Camera	409 383	5 701 710	Predetermined
WF32	Grab	401 462	5 701 677	Predetermined
WF33	Camera	407 332	5 702 652	Predetermined
WF34	Camera	401 862	5 695 809	Predetermined
WF35	Camera	403 238	5 696 126	Predetermined
WF36	Camera	409 609	5 696 232	Predetermined
WF37	Grab	402 073	5 701 991	Predetermined
WF38	Camera	405 143	5 694 941	Predetermined
WF39	Camera	407 810	5 694 878	Predetermined
WF40	Camera	403 788	5 694 221	Predetermined
WF41	Grab	400 221	5 702 768	Predetermined
WF42	Camera	409 059	5 694 518	Predetermined
WF43	Camera	404 961	5 693 674	Predetermined
WF44	Grab	406 286	5 693 671	Predetermined
WF45	Grab	408 106	5 693 629	Predetermined
WF46	Camera	407 432	5 693 203	Predetermined
WF47	Grab	398 105	5 702 851	Predetermined

C.2 VIDEO TRANSECTS LOG

Date	Transect	Video File	Time [UTC]	Point on Line	ETRS 1989 UTM Z31N		Length [m]*
					Easting [m]	Northing [m]	
13/11/2016	CR01	160975_ThanetOWF_CR_01	13:49:46	SOL	400 782	5 692 253	126
			13:56:12	EOL	400 801	5 692 128	
13/11/2016	CR04	160975_ThanetOWF_CR_04	14:42:21	SOL	394 684	5 686 756	108
			14:50:46	EOL	394 577	5 686 738	
03/12/2016	CR05.1	160975_ThanetOWF_CR_05.1	09:03:54	SOL	391 576	5 686 782	62
			09:14:59	EOL	391 616	5 686 830	
02/12/2016	CR06	160975_ThanetOWF_CR_06	17:43:21	SOL	392 571	5 686 733	27
			17:57:11	EOL	392 553	5 686 712	
03/12/2016	CR07	160975_ThanetOWF_CR_07	08:15:37	SOL	392 018	5 686 658	42
			08:27:26	EOL	392 031	5 686 698	
05/12/2016	CR08*	160975_ThanetOWF_CR_08	07:39:27	SOL	390 118	5 686 667	220
			07:50:46	EOL	390 110	5 686 684	
13/11/2016	CR09	160975_ThanetOWF_CR_09	13:26:45	SOL	401 564	5 693 683	143
			13:35:09	EOL	401 573	5 693 540	
05/12/2016	CR10 <sup>o</sup>	160975_ThanetOWF_CR_10	08:47:21	SOL	389 727	5 685 962	10
			09:03:47	EOL	389 718	5 685 958	
05/12/2016	CR11	160975_ThanetOWF_CR_11	09:39:56	SOL	388 995	5 682 291	54
			09:50:51	EOL	389 015	5 682 341	
11/11/2016	WF02	160975_ThanetOWF_WF_04	22:08:04	SOL	407 549	5 701 724	193
			22:14:54	EOL	407 725	5 701 645	
11/11/2016	WF03	160975_ThanetOWF_WF_03	18:46:07	SOL	409 459	5 699 440	218
			18:54:25	EOL	409 471	5 699 657	
11/11/2016	WF05	160975_ThanetOWF_WF_05	17:10:47	SOL	409 555	5 697 282	134
			17:17:25	EOL	409 574	5 697 415	
12/11/2016	WF09	160975_ThanetOWF_WF_09	04:20:03	SOL	402 532	5 697 181	189
			04:26:00	EOL	402 468	5 697 360	
13/11/2016	WF10	160975_ThanetOWF_WF_10	12:57:41	SOL	402 765	5 694 948	75
			13:04:23	EOL	402 743	5 694 877	
13/11/2016	WF11	160975_ThanetOWF_WF_11	11:10:55	SOL	405 882	5 694 457	51
			11:16:22	EOL	405 845	5 694 421	
12/11/2016	WF12	160975_ThanetOWF_WF_12	03:55:20	SOL	401 069	5 696 857	169
			04:00:04	EOL	400 931	5 696 955	
12/11/2016	WF13	160975_ThanetOWF_WF_13	01:31:27	SOL	396 476	5 701 587	198
			01:38:13	EOL	396 437	5 701 393	
12/11/2016	WF15.2	160975_ThanetOWF_WF_15	00:54:55	SOL	398 772	5 700 295	184
			01:02:26	EOL	398 753	5 700 112	
11/11/2016	WF16.2	160975_ThanetOWF_WF_16	00:14:23	SOL	400 567	5 700 390	189
			00:21:04	EOL	400 558	5 700 201	
11/11/2016	WF17	160975_ThanetOWF_WF_17	21:44:43	SOL	407 143	5 700 483	230
			21:58:47	EOL	407 239	5 700 273	
11/11/2016	WF18	160975_ThanetOWF_WF_18	21:16:43	SOL	409 061	5 700 674	223
			21:25:07	EOL	409 133	5 700 463	
12/11/2016	WF20	160975_ThanetOWF_WF_20	01:56:42	SOL	397 913	5 700 067	168
			02:03:09	EOL	397 954	5 699 904	
12/11/2016	WF21	160975_ThanetOWF_WF_21	02:15:06	SOL	398 495	5 699 369	140
			02:22:35	EOL	398 561	5 699 246	



Date	Transect	Video File	Time [UTC]	Point on Line	ETRS 1989 UTM Z31N		Length [m]*
					Easting [m]	Northing [m]	
11/11/2016	WF23	160975_ThanetOWF_WF_23	19:14:53	SOL	408 183	5 699 105	244
			19:23:27	EOL	408 295	5 699 322	
11/11/2016	WF24	160975_ThanetOWF_WF_24	23:07:08	SOL	405 726	5 702 645	175
			23:14:00	EOL	405 788	5 702 481	
12/11/2016	WF26	160975_ThanetOWF_WF_26(2)	03:00:32	SOL	401 146	5 698 693	174
			03:05:28	EOL	401 317	5 698 661	
11/11/2016	WF28	160975_ThanetOWF_WF_28	17:44:53	SOL	409 732	5 698 308	208
			17:54:29	EOL	409 779	5 698 511	
12/11/2016	WF30	160975_ThanetOWF_WF_30	03:27:14	SOL	400 161	5 697 417	199
			03:33:29	EOL	400 029	5 697 566	
11/11/2016	WF31	160975_ThanetOWF_WF_31	20:56:08	SOL	409 335	5 701 772	201
			21:02:35	EOL	409 453	5 701 609	
11/11/2016	WF33	160975_ThanetOWF_WF_33	22:31:35	SOL	407 284	5 702 728	269
			22:42:17	EOL	407 436	5 702 507	
12/11/2016	WF34	160975_ThanetOWF_WF_34	05:25:13	SOL	401 863	5 695 716	144
			05:35:34	EOL	401 839	5 695 858	
12/11/2016	WF35	160975_ThanetOWF_WF_35	05:00:14	SOL	403 243	5 696 051	130
			05:06:46	EOL	403 209	5 696 177	
13/11/2016	WF36	160975_ThanetOWF_WF_36(2)	08:35:48	SOL	409 610	5 696 189	80
			08:42:55	EOL	409 633	5 696 266	
13/11/2016	WF38	160975_ThanetOWF_WF_38	11:36:50	SOL	405 180	5 694 973	57
			11:47:41	EOL	405 139	5 694 934	
13/11/2016	WF39	160975_ThanetOWF_WF_39	09:31:21	SOL	407 814	5 694 894	69
			09:36:28	EOL	407 816	5 694 825	
13/11/2016	WF40	160975_ThanetOWF_WF_40	12:25:00	SOL	403 828	5 694 248	56
			12:33:30	EOL	403 787	5 694 209	
13/11/2016	WF42	160975_ThanetOWF_WF_42	09:02:23	SOL	409 042	5 694 461	150
			09:10:34	EOL	409 126	5 694 585	
13/11/2016	WF43	160975_ThanetOWF_WF_43	10:22:13	SOL	404 993	5 693 712	59
			10:28:29	EOL	404 959	5 693 664	
13/11/2016	WF46	160975_ThanetOWF_WF_46	09:53:08	SOL	407 472	5 693 238	50
			09:58:28	EOL	407 431	5 693 208	

**Notes:**  
 UTC = Universal time coordinated  
 SOL = Start of line  
 EOL = End of line  
 \* = High levels of suspended sediments meant that the seabed was not visible for the entire length of many of the video transects. The length of the transect is defined as the position at which the video system reached the seabed to the position it was retrieved from the seabed

**C.3      MACROBENTHIC GRAB SAMPLING LOGS**

FUGRO GROUP  
VATTENFALL THANET OFFSHORE WIND FARM



Date	Time [UTC]	Station	ETRS 1989 UTM Z31N		Sample	Volume (L)	Water Depth (m BSL)	Sediment Type	Sediment Description		Notes/Conspicuous Fauna
			Easting [m]	Northing [m]							
13/11/2016	18:33	CR01	400 728.4	5 692 261.0	FA/PSD	5	16	gmS	Gravelly muddy sand with cobbles and pebbles		Tubes, <i>Ophiothrix fragilis</i> , <i>Alcyonium digitatum</i> , <i>Spirobranchus</i> sp., Terebellidae
13/11/2016	17:12	CR02	399 487.1	5 689 997.8	PSD only	2	13	gS	Gravelly sand with cobbles and pebbles		Tubes, <i>Spirobranchus</i> sp., <i>Alcyonium digitatum</i> , <i>Psammechinus miliaris</i> . Three attempts were made, with all samples retrieved being low in volume. A faunal sample was therefore not obtained.
13/11/2016	16:27	CR03	397 367.7	5 688 311.8	FA/PSD	12	12	S	Fine sand with small proportion of shell fragments		
13/11/2016	15:41	CR04	394 639.4	5 686 768.6	No Sample	NA	NA	NA	NA	-	Three unsuccessful attempts were made, therefore no samples were obtained.
05/12/2016	14:38	CR05.1	391 627.0	5 686 838.1	No Sample	< 1	16	S	Slightly shelly sand	-	Original location moved due to the presence of a marker buoy at proposed station. Three unsuccessful attempts were made, therefore no samples were obtained.
05/12/2016	13:32	CR10	389 721.3	5 685 970.1	FA/PSD	6	8	S	Slightly shelly sand		
05/12/2016	11:42	CR11	388 984.4	5 682 323.5	PSD only	4	7	gS	Slightly muddy, pebbly, gravelly sand	-	Three attempts were made, with samples discarded due to pebbles preventing closure. A PSD only sample was retained and is considered representative only.
12/11/2016	23:11	WF01	410 905.2	5 702 003.6	PSD only	3	35	S	Fine sand and pebbles		

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**VATTENFALL THANET OFFSHORE WIND FARM**



Date	Time [UTC]	Station	ETRS 1989 UTM Z31N		Sample	Volume (L)	Water Depth (m BSL)	Sediment Type	Sediment Description		Notes/Conspicuous Fauna
			Easting [m]	Northing [m]							
12/11/2016	23:17	WF01	410 895.8	5 701 992.2	FA only	5	35	S	Fine sand and pebbles (with one flat cobble, compacted sand)		<i>Nephtys</i> sp.
13/11/2016	01:03	WF02	407 604.9	5 701 676.9	FA/PSD	12	33	mS	Fine sand with clay patches and shell fragments	Patches of anoxic sediment	
12/11/2016	22:00	WF03	409 479.4	5 699 504.4	FA/PSD	11	31	mS	Muddy sand (few pebbles and black mud nodules)	Patches of anoxic sediment, black mud nodules through sample	
13/11/2016	01:46	WF04	403 369.3	5 702 450.1	FA/PSD	10	27	mS	Fine sand overlaying mud	Patches of anoxic sediment	Tubes, Ophiuridae
12/11/2016	19:33	WF05	409 553.2	5 697 364.1	FA/PSD	12	33	S	Fine to medium sand over clay	Layer of clay from 10 cm	
12/11/2016	07:07	WF06	396 765.9	5 701 820.1	FA/PSD	5	19	M	Mud with shell fragments		Tubes, Ophiuridae
13/11/2016	04:16	WF07	399 038.5	5 701 228.3	FA/PSD	10	21	mS	Fine sand overlaying mud	Patches of anoxic sediment	Tubes, Echinoidea, Actinaria
14/11/2016	00:01	WF08	399 488.3	5 698 539.6	FA/PSD	8	24	mS	Fine sand overlaying silt	Patches of anoxic sediment	
13/11/2016	22:40	WF09	402 501.7	5 697 247.9	FA/PSD	7	21	mgS	Cobbles, pebbles and muddy gravelly sand		<i>Sabellaria</i> tubes (no elevation, no crust)
13/11/2016	22:04	WF10	402 736.4	5 694 915.6	PSD only	2	22	mgS	Cobbles, pebbles and muddy gravelly sand		Hydroid. Three attempts were made. Only one successful but with low volume. PSD only taken
13/11/2016	21:27	WF11	405 835.1	5 694 421.4	FA/PSD	6	21	gmS	Pebbles and gravelly muddy sand		Ophiuridae

**FUGRO GROUP**  
**VATTENFALL THANET OFFSHORE WIND FARM**



Date	Time [UTC]	Station	ETRS 1989 UTM Z31N		Sample	Volume (L)	Water Depth (m BSL)	Sediment Type	Sediment Description		Notes/Conspicuous Fauna
			Easting [m]	Northing [m]							
13/11/2016	23:18	WF12	401 019.2	5 696 897.2	PSD only	3	20	mgS	Large cobbles and muddy gravelly sand		<i>Spirobranchus</i> sp.
13/11/2016	23:22	WF12	401 011.4	5 696 911.1	FA only	5	20	mgS	Pebbles (incl. Chalk) and muddy gravelly sand		Terebellidae and <i>Spirobranchus</i> sp.
13/11/2016	05:05	WF14	397 125.4	5 701 160.2	FA/PSD	10	21	mS	Fine sand overlaying mud	Patches of anoxic sediment 1cm	Tubes, Echinoidea, Cardiidae, Decapoda, Actinaria
12/11/2016	22:27	WF19	410 914.2	5 700 819.2	FA/PSD	6	40	mS	Muddy sand with some shell fragments	Patches of anoxic sediment, black nodules	
13/11/2016	05:57	WF22	399 548.4	5 699 485.6	FA/PSD	8	21	gM	Silt with gravel, pebbles and cobbles	Streaks of anoxic sediment	Tubes, Echinoidea
13/11/2016	00:23	WF25	409 744.1	5 702 768.0	FA/PSD	12	29	S	Fine sand and shell fragments		Polychaeta
12/11/2016	20:22	WF27	408 666.1	5 698 302.7	FA/PSD	10	21	mS	Fine (to medium) sand over grey/black stiff sandy mud	Layer of sandy mud > 5 cm	
12/11/2016	21:14	WF29	410 567.8	5 698 486.2	FA/PSD	10	40	mS	Slightly muddy fine to medium sand (some pebbles and one cobble)	Patches of anoxic sediment	Tubes, <i>Nephtys</i> sp. A cardinal buoy close to the south
13/11/2016	03:01	WF32	401 453.7	5 701 661.4	FA/PSD	5	25	mS	Fine sand overlaying mud	Patches of anoxic sediment	Tubes, Echinoidea, Ophiuridae, Actinaria
13/11/2016	02:20	WF37	402 088.2	5 701 993.6	FA/PSD	8	25	mS	Fine sand overlaying mud	Patches of anoxic sediment	Tubes, Echinoidea, Ophiuridae, polychaetes
13/11/2016	03:34	WF41	400 227.0	5 702 751.8	FA/PSD	10	24	mS	Fine sand overlaying mud	Patches of anoxic sediment	Tubes, Echinoidea, Cariidae, Actinaria
13/11/2016	20:33	WF44	406 290.9	5 693 671.4	FA only	> 4	22	mgS	Pebbles (including chalk) and muddy gravelly sand		Tubes, Ophiuridae. Three attempts made, but only one successful and sufficient for fauna only



**FUGRO GROUP**  
**VATTENFALL THANET OFFSHORE WIND FARM**



Date	Time [UTC]	Station	ETRS 1989 UTM Z31N		Sample	Volume (L)	Water Depth (m BSL)	Sediment Type	Sediment Description		Notes/Conspicuous Fauna
			Easting [m]	Northing [m]							
13/11/2016	19:51	WF45	408 100.9	5 693 626.6	FA/PSD	7	27	mS	Slightly muddy fine to medium sand (some pebbles present)	Patches and layers of anoxic sediment > 10 cm and black muddy nodules	
12/11/2016	08:20	WF47	398 107.6	5 702 838.4	FA/PSD	8	23	M	Mud with shell fragments	Patches of anoxic sediment	Tubes, Echinoidea, Ophiuridae

**Notes:**







UTC = Universal time coordinated  
 BSL = Below sea level  
 FA = Sample for faunal analysis  
 PSD = Sample for particle size distribution analysis

C.4 MACROFAUNA GRAB SAMPLE PHOTOS

<p><b>CR01</b></p>	<p><b>CR02</b></p>
<p><b>CR03</b></p>	<p><b>CR10</b></p>
<p><b>CR11</b></p>	<p><b>WF01</b></p>



<b>WF02</b>	<b>WF03</b>
<b>WF04</b>	<b>WF05</b>
<b>WF06</b>	<b>WF07</b>

	
<b>WF08</b>	<b>WF09</b>
	
<b>WF10</b>	<b>WF11</b>
	
<b>WF12</b>	<b>WF14</b>



<p style="text-align: center;"><b>WF19</b></p>	<p style="text-align: center;"><b>WF22</b></p>
<p style="text-align: center;"><b>WF25</b></p>	<p style="text-align: center;"><b>WF27</b></p>
<p style="text-align: center;"><b>WF29</b></p>	<p style="text-align: center;"><b>WF32</b></p>

<b>WF37</b>	<b>WF41</b>
<b>WF44</b>	<b>WF45</b>
<b>WF47</b>	



**C.5 CONTAMINANTS GRAB SAMPLING LOGS**

**FUGRO GROUP**  
**VATTENFALL THANET OFFSHORE WIND FARM**



Date	Time [UTC]	Station	ETRS 1989 UTM Z31N		Sample	Water Depth (m BSL)	Volume (L)	Sediment Type	Sediment Description		Notes/Conspicuous Fauna
			Easting [m]	Northing [m]							
13/11/2016	18:37	CR01	400 720.1	5 692 256.0	HC/HM	16	NA	NA	NA	-	Three attempts were made and in all instances a stone caught in the jaws. Therefore no samples were obtained.
13/11/2016	17:21	CR02	399 464.1	5 689 989.1	HC/HM	13	NA	NA	NA		Three attempts were made and in all instances a stone caught in the jaws. Therefore no samples were obtained.
13/11/2016	16:30	CR03	397 370.0	5 688 318.3	HC/HM	12	10	S	Fine sand		
13/11/2016	15:51	CR04	394 634.2	5 686 776.1	HC/HM	9.5	>1.5	mS	Sandy mud/muddy sand		Mussel seed and <i>Asterias rubens</i>
05/12/2016	14:38	CR05.1	391 614.8	5 686 839.1	HC/HM	9	NA	NA	NA		Three attempts were made, but in all instances low volumes were collected. Therefore no sample was obtained.
05/12/2016	13:45	CR10	389 720.2	5 685 962.3	HC/HM	8.4	6	S	Slightly shelly sand		
12/11/2016	23:26	WF01	410 898.6	5 702 010.4	HC/HM	35	7	S	Fine sand		
13/11/2016	01:08	WF02	407 610.6	5 701 662.8	HC/HM	33	9	S	Fine sand		
11/11/2016	12:59	WF03	409 487.2	5 699 494.8	HC/HM	28	8	mS	Muddy sand (mud nodules on surface)	Patches of nodules at the surface and a layer at 2 cm	
13/11/2016	01:51	WF04	403 356.8	5 702 426.3	HC/HM	27	9	mS	Fine sand (1 cm) overlaying mud	Layer 1 cm	Tubes, Ophiuridae
11/11/2016	11:52	WF05	409 570.2	5 697 348.1	HC/HM	28	10	S	Fine sand		
12/11/2016	07:24	WF06	396 756.0	5 701 790.4	HC/HM	19	8	mS	Silty sand		Tubes



**FUGRO GROUP**  
**VATTENFALL THANET OFFSHORE WIND FARM**



Date	Time [UTC]	Station	ETRS 1989 UTM Z31N		Sample	Water Depth (m BSL)	Volume (L)	Sediment Type	Sediment Description		Notes/Conspicuous Fauna
			Easting [m]	Northing [m]							
13/11/2016	04:24	WF07	399 049.4	5 701 214.4	HC/HM	21	8	mS	Fine sand overlaying mud	Layer 1 cm	Tubes, Ophiuridae
14/11/2016	00:06	WF08	399 484.9	5 698 533.1	HC/HM	24	8	mS	Fine sand overlaying mud	Layer 1 cm	
13/11/2016	22:44	WF09	402 508.5	5 697 246.2	HC/HM	21	NA	NA	NA	-	Three unsuccessful attempts were made. Therefore no samples were obtained.
13/11/2016	22:12	WF10	402 754.1	5 694 911.0	HC/HM	22	NA	NA	NA	-	Three attempts were made and in all instances cobbles were collected. Therefore no samples were obtained.
13/11/2016	23:27	WF12	401 020.6	5 696 904.1	HC/HM	20	5	(m)gS	Pebble and slightly muddy gravelly sand		
13/11/2016	05:09	WF14	397 105.0	5 701 174.4	HC/HM	21	8	mS	Fine sand overlaying mud	Layer 1 cm	Tubes, Ophiuridae
12/11/2016	22:34	WF19	410 921.7	5 700 826.7	HC/HM	40	7	mS	Slightly muddy sand		<i>Buccinum undatum</i> (juvenile)
13/11/2016	06:01	WF22	399 547.9	5 699 507.1	HC/HM	21	-	-	-	-	Three attempts were made and in all instances a pebble caught in the jaws. Therefore no samples were obtained.
13/11/2016	00:27	WF25	409 743.5	5 702 752.5	HC/HM	29	10	S	Fine sand and shell fragments		
11/11/2016	12:25	WF27	408 641.4	5 698 340.8	HC/HM	27	8	S	Fine to medium shelly sand		
12/11/2016	21:23	WF29	410 572.4	5 698 491.2	HC/HM	40	6	mS	Muddy sand (film of mud and mud nodules at surface)	Patches < 2 cm	
13/11/2016	03:05	WF32	401 451.5	5 701 670.6	HC/HM	25	8	mS	Fine sand (1 cm) overlaying mud	Layer 1 cm	Tubes, Ophiuridae
13/11/2016	02:24	WF37	402 072.2	5 701 980.6	HC/HM	21	10	mS	Fine sand (1 cm) overlaying mud	Layer 1 cm	Tubes, Ophiuridae

**FUGRO GROUP**  
**VATTENFALL THANET OFFSHORE WIND FARM**




Date	Time [UTC]	Station	ETRS 1989 UTM Z31N		Sample	Water Depth (m BSL)	Volume (L)	Sediment Type	Sediment Description		Notes/Conspicuous Fauna
			Easting [m]	Northing [m]							
13/11/2016	03:38	WF41	400 215.2	5 702 767.7	HC/HM	24	8	mS	Fine sand overlaying mud	Layer 1 cm	Tubes, Ophiuridae
13/11/2016	20:40	WF44	406 283.9	5 693 662.0	HC/HM	22	-	-	-	-	Three attempts were made and in all instances a pebble caught in the jaws. Therefore no samples were obtained.
13/11/2016	20:03	WF45	408 101.3	5 693 619.7	HC/HM	27	-	-	-	-	Three attempts were made and in all instances a pebble caught in the jaws. Therefore no samples were obtained.
12/11/2016	08:31	WF47	398 106.3	5 702 853.8	HC/HM	23	10	M	Mud with clay	Layer, Mud 3 cm, clay below top 3 cm	Ophiuridae
<p><b>Notes:</b>            UTC = Universal time coordinated            BSL = Below sea level            UTC = Universal time coordinated            HM = Heavy metals            HC = Hydrocarbons</p>											

C.6 CONTAMINANTS GRAB SAMPLES PHOTOS

	
<p><b>CR03</b></p>	<p><b>CR04</b></p>
<p>No photo</p>	
<p><b>CR10</b></p>	<p><b>WF01</b></p>
	
<p><b>WF02</b></p>	<p><b>WF03</b></p>



	
<b>WF04</b>	<b>WF05</b>
	
<b>WF06</b>	<b>WF07</b>
	
<b>WF08</b>	<b>WF12</b>



<p><b>WF14</b></p>	<p><b>WF19</b></p>
<p><b>WF25</b></p>	<p><b>WF27</b></p>
<p><b>WF29</b></p>	<p><b>WF32</b></p>



**WF37**



**WF41**



**WF47**



**D. GRAB ANALYSIS DATA**





D.1 PSD RESULTS

Sample ID:		CR01	CR02	CR03	CR10	WF01	WF02	WF03
Textural group	Sample Type:	Trimodal, Very Poorly Sorted	Unimodal, Very Poorly Sorted	Unimodal, Moderately Well Sorted	Unimodal, Moderately Well Sorted	Bimodal, Very Poorly Sorted	Unimodal, Poorly Sorted	Unimodal, Very Poorly Sorted
	Folk [1954 Original]:	Sandy Gravel	Gravel	Slightly Gravelly Sand	Slightly Gravelly Sand	Sandy Gravel	Slightly Gravelly Muddy Sand	Slightly Gravelly Muddy Sand
	Folk [Bgs Modified]:	Sandy Gravel	Gravel	Slightly Gravelly Sand	Sand	Sandy Gravel	Slightly Gravelly Muddy Sand	Slightly Gravelly Muddy Sand
	Sediment Name:	Sandy Very Coarse Gravel	Very Coarse Gravel	Slightly Very Fine Gravelly Medium Sand	Slightly Very Fine Gravelly Medium Sand	Sandy Medium Gravel	Slightly Fine Gravelly Medium Silty Medium Sand	Slightly Fine Gravelly Fine Silty Medium Sand
Method of Moments Arithmetic [ $\mu\text{m}$ ]	Mean:	27562.12	51658.98	404.33	497.12	4807.76	671.79	492.53
	Sorting:	21183.26	32853.91	468.87	315.83	7757.82	1086.34	830.32
	Skewness:	-0.24	-0.60	8.60	7.70	1.62	5.48	5.48
	Kurtosis:	1.20	1.47	93.43	111.15	4.17	41.52	35.39
Method of Moments Geometric [ $\mu\text{m}$ ]	Mean:	8870.13	23472.64	318.08	421.50	1095.80	281.97	189.46
	Sorting:	8.93	6.80	1.64	1.54	5.22	5.47	6.45
	Skewness:	-1.27	-1.82	1.68	0.66	0.82	-1.78	-1.70
	Kurtosis:	4.08	6.10	9.86	5.23	2.02	6.66	5.59
Method of Moments Logarithmic [ $\phi$ ]	Mean:	-3.15	-4.55	1.65	1.25	-0.13	1.83	2.40
	Sorting:	3.16	2.77	0.71	0.62	2.38	2.45	2.69
	Skewness:	1.27	1.82	-1.68	-0.66	-0.82	1.78	1.70
	Kurtosis:	4.08	6.10	9.86	5.23	2.02	6.66	5.59
Folk and Ward Method [ $\mu\text{m}$ ]	Mean:	9317.13	29186.04	300.64	427.80	1172.33	327.86	192.66
	Sorting:	7.56	4.90	1.62	1.59	5.35	3.99	4.69
	Skewness:	-0.80	-0.89	-0.07	0.15	0.67	-0.43	-0.61
	Kurtosis:	0.61	1.29	1.18	0.99	0.66	2.39	2.69
Folk and Ward Method [ $\Phi$ ]	Mean:	-3.22	-4.87	1.73	1.22	-0.23	1.61	2.38
	Sorting:	2.92	2.29	0.69	0.67	2.42	2.00	2.23
	Skewness:	0.80	0.89	0.07	-0.15	-0.67	0.43	0.61
	Kurtosis:	0.61	1.29	1.18	0.99	0.66	2.39	2.69



**FUGRO GROUP**  
**VATTENFALL THANET OFFSHORE WIND FARM**



Sample ID:		CR01	CR02	CR03	CR10	WF01	WF02	WF03
<b>Folk and Ward Method [Description]</b>	<b>Mean:</b>	Medium Gravel	Coarse Gravel	Medium Sand	Medium Sand	Very Coarse Sand	Medium Sand	Fine Sand
	<b>Sorting:</b>	Very Poorly Sorted	Very Poorly Sorted	Moderately Well Sorted	Moderately Well Sorted	Very Poorly Sorted	Poorly Sorted	Very Poorly Sorted
	<b>Skewness:</b>	Very Fine Skewed	Very Fine Skewed	Symmetrical	Coarse Skewed	Very Coarse Skewed	Very Fine Skewed	Very Fine Skewed
	<b>Kurtosis:</b>	Very Platykurtic	Leptokurtic	Leptokurtic	Mesokurtic	Very Platykurtic	Very Leptokurtic	Very Leptokurtic
<b>Mode 1 [µM]:</b>	47250.00	76754.83	375.00	375.00	375.00	375.00	375.00	375.00
<b>Mode 2 [µM]:</b>	12000.00	0.00	0.00	0.00	0.00	12000.00	0.00	0.00
<b>Mode 3 [µM]:</b>	375.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Mode 1 [PHI]:</b>	-5.48	-6.24	1.50	1.50	1.50	1.50	1.50	1.50
<b>Mode 2 [PHI]:</b>	-3.50	0.00	0.00	0.00	0.00	-3.50	0.00	0.00
<b>Mode 3 [PHI]:</b>	1.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>D10 [µm]:</b>	324.97	718.75	160.33	258.35	255.26	20.75	8.85	
<b>D50 [µm]:</b>	32309.54	67708.57	317.80	402.00	468.85	425.01	335.66	
<b>D90 [µm]:</b>	55123.73	85405.28	490.15	815.44	17268.45	943.28	771.20	
<b>(D90 / D10) [µm]:</b>	169.63	118.83	3.06	3.16	67.65	45.45	87.10	
<b>(D90 - D10) [µm]:</b>	54798.76	84686.53	329.82	557.09	17013.19	922.53	762.34	
<b>(D75 / D25) [µm]:</b>	45.26	6.04	1.79	1.86	19.70	2.62	2.33	
<b>(D75 - D25) [µm]:</b>	44119.72	65331.34	183.74	262.79	5995.05	431.08	267.41	
<b>D10 [Phi]:</b>	-5.78	-6.42	1.03	0.29	-4.11	0.08	0.37	
<b>D50 [Phi]:</b>	-5.01	-6.08	1.65	1.31	1.09	1.23	1.57	
<b>D90 [Phi]:</b>	1.62	0.48	2.64	1.95	1.97	5.59	6.82	
<b>(D90 / D10) [Phi]:</b>	-0.28	-0.07	2.57	6.63	-0.48	66.36	18.19	
<b>(D90 - D10) [Phi]:</b>	7.41	6.89	1.61	1.66	6.08	5.51	6.44	
<b>(D75 / D25) [Phi]:</b>	0.00	0.59	1.66	2.10	-0.62	3.67	2.12	
<b>(D75 - D25) [Phi]:</b>	5.50	2.60	0.84	0.90	4.30	1.39	1.22	
<b>% Gravel [63000 - 2000 µm]:</b>	73.50	86.99	1.08	0.47	30.41	4.56	2.90	
<b>% Sand [&lt; 2000 - 63 µm]:</b>	24.75	12.23	98.92	99.53	69.59	81.05	78.77	
<b>% Mud [&lt; 63 µm]:</b>	1.76	0.78	0.00	0.00	0.00	14.40	18.33	
<b>% V Coarse Gravel:</b>	50.72	62.42	0.00	0.00	0.00	0.00	0.00	

**FUGRO GROUP**  
**VATTENFALL THANET OFFSHORE WIND FARM**



Sample ID:	CR01	CR02	CR03	CR10	WF01	WF02	WF03
% Coarse Gravel:	7.11	10.36	0.00	0.00	11.27	0.00	0.00
% Medium Gravel:	10.20	7.30	0.00	0.00	12.43	0.24	0.00
% Fine Gravel:	3.67	4.64	0.43	0.10	3.82	2.20	1.78
% V Fine Gravel:	1.80	2.27	0.65	0.37	2.89	2.12	1.13
% V Coarse Sand:	1.46	1.39	1.84	1.07	2.89	2.56	1.03
% Coarse Sand:	8.81	3.40	5.24	28.71	12.47	34.26	16.17
% Medium Sand:	10.03	4.50	63.99	62.71	45.60	36.78	51.99
% Fine Sand:	3.53	2.47	27.85	7.03	8.63	5.04	9.22
% V Fine Sand:	0.92	0.47	0.00	0.00	0.00	2.40	0.35
% V Coarse Silt:	0.39	0.17	0.00	0.00	0.00	2.98	2.89
% Coarse Silt:	0.22	0.13	0.00	0.00	0.00	2.40	2.37
% Medium Silt:	0.30	0.13	0.00	0.00	0.00	3.21	3.75
% Fine Silt:	0.37	0.16	0.00	0.00	0.00	2.92	4.24
% V Fine Silt:	0.09	0.04	0.00	0.00	0.00	0.55	0.96
% Clay:	0.39	0.16	0.00	0.00	0.00	2.34	4.12

**FUGRO GROUP**  
**VATTENFALL THANET OFFSHORE WIND FARM**



Sample ID:		WF04	WF05	WF06	WF07	WF08	WF09	WF10
Textural Group	Sample Type:	Unimodal, Very Poorly Sorted	Unimodal, Moderately Sorted	Unimodal, Poorly Sorted	Unimodal, Very Poorly Sorted	Unimodal, Poorly Sorted	Bimodal, Very Poorly Sorted	Unimodal, Poorly Sorted
	Folk [1954 Original]:	Slightly Gravelly Muddy Sand	Slightly Gravelly Sand	Slightly Gravelly Muddy Sand	Gravelly Muddy Sand	Slightly Gravelly Muddy Sand	Muddy Sandy Gravel	Gravel
	Folk [Bgs Modified]:	Muddy Sand	Sand	Muddy Sand	Gravelly Muddy Sand	Slightly Gravelly Muddy Sand	Muddy Sandy Gravel	Gravel
	Sediment Name:	Slightly Fine Gravelly Fine Silty Medium Sand	Slightly Very Fine Gravelly Medium Sand	Slightly Very Fine Gravelly Very Coarse Silty Medium Sand	Medium Gravelly Fine Silty Fine Sand	Slightly Very Fine Gravelly Fine Silty Medium Sand	Fine Silty Sandy Very Coarse Gravel	Very Coarse Gravel
Method of Moments Arithmetic [µm]	Mean:	321.53	513.80	293.65	858.22	336.22	23506.94	33715.99
	Sorting:	391.70	450.03	321.31	2350.20	687.13	22291.31	18210.70
	Skewness:	8.75	8.02	8.51	4.11	12.18	0.06	-0.79
	Kurtosis:	119.75	91.29	133.64	19.01	185.02	1.09	1.94
Method of Moments Geometric [µm]	Mean:	147.37	387.09	159.75	180.81	158.95	3871.58	17978.93
	Sorting:	5.63	2.39	4.26	6.34	4.77	16.75	5.48
	Skewness:	-1.82	-4.05	-2.16	-0.88	-2.03	-0.90	-2.40
	Kurtosis:	5.91	28.42	8.49	5.51	7.66	3.10	9.31
Method of Moments Logarithmic [Phi]	Mean:	2.76	1.37	2.65	2.47	2.65	-1.95	-4.17
	Sorting:	2.49	1.26	2.09	2.66	2.25	4.07	2.45
	Skewness:	1.82	4.05	2.16	0.88	2.03	0.90	2.40
	Kurtosis:	5.91	28.42	8.49	5.51	7.66	3.10	9.31
Folk and Ward Method [µm]	Mean:	171.50	428.51	196.01	194.97	203.89	5819.17	25434.98
	Sorting:	4.15	1.66	3.24	4.67	3.23	12.27	3.44
	Skewness:	-0.54	0.09	-0.33	-0.12	-0.37	-0.65	-0.69
	Kurtosis:	1.91	1.09	1.70	2.55	2.13	0.67	1.95
Folk and Ward Method [Phi]	Mean:	2.54	1.22	2.35	2.36	2.29	-2.54	-4.67
	Sorting:	2.05	0.73	1.69	2.22	1.69	3.62	1.78
	Skewness:	0.54	-0.09	0.33	0.12	0.37	0.65	0.69
	Kurtosis:	1.91	1.09	1.70	2.55	2.13	0.67	1.95

**FUGRO GROUP**  
**VATTENFALL THANET OFFSHORE WIND FARM**



Sample ID:	WF04	WF05	WF06	WF07	WF08	WF09	WF10	
<b>Folk and Ward Method [Description]</b>	<b>Mean:</b>	Fine Sand	Medium Sand	Fine Sand	Fine Sand	Fine Sand	Fine Gravel	Coarse Gravel
	<b>Sorting:</b>	Very Poorly Sorted	Moderately Sorted	Poorly Sorted	Very Poorly Sorted	Poorly Sorted	Very Poorly Sorted	Poorly Sorted
	<b>Skewness:</b>	Very Fine Skewed	Symmetrical	Very Fine Skewed	Fine Skewed	Very Fine Skewed	Very Fine Skewed	Very Fine Skewed
	<b>Kurtosis:</b>	Very Leptokurtic	Mesokurtic	Very Leptokurtic	Very Leptokurtic	Very Leptokurtic	Very Platykurtic	Very Leptokurtic
<b>Mode 1 [µm]:</b>	375.00	375.00	375.00	187.50	375.00	47250.00	47250.00	
<b>Mode 2 [µM]:</b>	0.00	0.00	0.00	0.00	0.00	375.00	0.00	
<b>Mode 3 [µM]:</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>Mode 1 [Phi]:</b>	1.50	1.50	1.50	2.50	1.50	-5.48	-5.48	
<b>Mode 2 [Phi]:</b>	0.00	0.00	0.00	0.00	0.00	1.50	0.00	
<b>Mode 3 [Phi]:</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>D10 [µm]:</b>	9.49	253.96	38.25	15.89	18.87	140.08	752.36	
<b>D50 [µm]:</b>	259.41	401.97	218.31	214.41	229.17	17352.60	35932.10	
<b>D90 [µm]:</b>	607.97	832.29	553.45	927.98	490.24	54081.76	56307.85	
<b>(D90 / D10) [µm]:</b>	64.06	3.28	14.47	58.39	25.98	386.07	74.84	
<b>(D90 - D10) [µm]:</b>	598.48	578.32	515.20	912.09	471.37	53941.67	55555.50	
<b>(D75 / D25) [µm]:</b>	3.13	1.92	3.19	3.05	2.63	113.84	2.97	
<b>(D75 - D25) [µm]:</b>	276.99	276.58	258.07	263.40	228.60	42636.76	31535.05	
<b>D10 [Phi]:</b>	0.72	0.26	0.85	0.11	1.03	-5.76	-5.82	
<b>D50 [Phi]:</b>	1.95	1.31	2.20	2.22	2.13	-4.12	-5.17	
<b>D90 [Phi]:</b>	6.72	1.98	4.71	5.98	5.73	2.84	0.41	
<b>(D90 / D10) [Phi]:</b>	9.36	7.47	5.52	55.41	5.57	-0.49	-0.07	
<b>(D90 - D10) [Phi]:</b>	6.00	1.71	3.85	5.87	4.70	8.59	6.23	
<b>(D75 / D25) [Phi]:</b>	2.27	2.19	2.19	2.19	1.97	-0.26	0.72	
<b>(D75 - D25) [Phi]:</b>	1.65	0.94	1.67	1.61	1.39	6.83	1.57	
<b>% Gravel [63000 - 2000 µm]:</b>	0.46	0.86	0.35	7.22	1.03	59.16	87.38	
<b>% Sand [&lt; 2000 - 63 µm]:</b>	81.62	96.81	87.55	78.29	85.34	34.59	11.68	
<b>% Mud [&lt; 63 µm]:</b>	17.92	2.33	12.10	14.49	13.63	6.25	0.94	
<b>% V Coarse Gravel:</b>	0.00	0.00	0.00	0.00	0.00	44.38	60.32	

**FUGRO GROUP**  
**VATTENFALL THANET OFFSHORE WIND FARM**



Sample ID:	WF04	WF05	WF06	WF07	WF08	WF09	WF10
% Coarse Gravel:	0.00	0.00	0.00	0.00	0.00	6.25	14.73
% Medium Gravel:	0.00	0.00	0.00	3.67	0.20	3.40	10.18
% Fine Gravel:	0.26	0.39	0.12	1.92	0.36	2.79	1.14
% V Fine Gravel:	0.20	0.47	0.22	1.63	0.47	2.34	1.00
% V Coarse Sand:	0.48	1.58	0.26	2.11	0.83	2.48	1.06
% Coarse Sand:	12.62	28.55	11.00	6.17	7.10	7.94	3.81
% Medium Sand:	38.49	60.38	32.59	27.01	36.60	13.42	4.75
% Fine Sand:	24.30	6.30	29.63	33.81	35.37	8.38	1.73
% V Fine Sand:	5.73	0.00	14.06	9.19	5.44	2.37	0.33
% V Coarse Silt:	3.09	0.00	2.97	2.19	1.91	1.05	0.19
% Coarse Silt:	2.44	0.08	1.45	2.36	2.37	0.84	0.11
% Medium Silt:	3.32	0.75	1.94	2.58	2.32	1.04	0.15
% Fine Silt:	4.08	0.79	2.34	3.28	3.00	1.36	0.20
% V Fine Silt:	0.94	0.13	0.64	0.77	0.76	0.37	0.06
% Clay:	4.04	0.58	2.76	3.30	3.27	1.58	0.24



Sample ID:		WF11	WF12	WF14	WF19	WF22	WF25	WF27
Textural Group	Sample Type:	Bimodal, Very Poorly Sorted	Bimodal, Very Poorly Sorted	Unimodal, Poorly Sorted	Unimodal, Poorly Sorted	Bimodal, Very Poorly Sorted	Unimodal, Moderately Sorted	Unimodal, Very Poorly Sorted
	Folk [1954 Original]:	Sandy Gravel	Sandy Gravel	Slightly Gravelly Muddy Sand	Slightly Gravelly Sand	Muddy Sandy Gravel	Slightly Gravelly Sand	Slightly Gravelly Muddy Sand
	Folk [Bgs Modified]:	Sandy Gravel	Sandy Gravel	Slightly Gravelly Muddy Sand	Slightly Gravelly Sand	Muddy Sandy Gravel	Slightly Gravelly Sand	Slightly Gravelly Muddy Sand
	Sediment Name:	Sandy Very Coarse Gravel	Sandy Coarse Gravel	Slightly Medium Gravelly Very Coarse Silty Fine Sand	Slightly Very Fine Gravelly Medium Sand	Fine Silty Sandy Medium Gravel	Slightly Very Fine Gravelly Medium Sand	Slightly Very Fine Gravelly Fine Silty Medium Sand
Method of Moments Arithmetic [ $\mu\text{m}$ ]	Mean:	29818.74	19619.84	292.46	576.28	4426.80	704.34	407.31
	Sorting:	20293.36	17686.00	1115.08	859.28	7473.21	1103.00	786.25
	Skewness:	-0.49	0.39	9.78	7.28	1.74	6.22	10.99
	Kurtosis:	1.47	1.81	101.13	80.45	4.68	51.49	151.28
Method of Moments Geometric [ $\mu\text{m}$ ]	Mean:	10415.93	5430.62	94.00	307.27	588.70	466.16	142.64
	Sorting:	8.91	9.59	5.23	3.89	10.52	1.97	7.27
	Skewness:	-1.45	-1.06	-1.46	-2.31	-0.34	1.59	-1.45
	Kurtosis:	4.52	3.65	6.11	11.21	3.34	7.04	4.35
Method of Moments Logarithmic [ $\phi$ ]	Mean:	-3.38	-2.44	3.41	1.70	0.76	1.10	2.81
	Sorting:	3.16	3.26	2.39	1.96	3.40	0.98	2.86
	Skewness:	1.45	1.06	1.46	2.31	0.34	-1.59	1.45
	Kurtosis:	4.52	3.65	6.11	11.21	3.34	7.04	4.35
Folk and Ward method [ $\mu\text{m}$ ]	Mean:	9482.97	6341.29	110.71	363.08	789.10	449.24	137.68
	Sorting:	7.41	7.76	3.69	2.90	10.01	1.90	6.46
	Skewness:	-0.80	-0.66	-0.45	-0.15	0.29	0.24	-0.65
	Kurtosis:	0.68	0.62	2.00	2.34	0.92	1.26	1.67
Folk and Ward Method [ $\phi$ ]	Mean:	-3.25	-2.66	3.18	1.46	0.34	1.15	2.86
	Sorting:	2.89	2.96	1.88	1.54	3.32	0.92	2.69
	Skewness:	0.80	0.66	0.45	0.15	-0.29	-0.24	0.65
	Kurtosis:	0.68	0.62	2.00	2.34	0.92	1.26	1.67

**FUGRO GROUP**  
**VATTENFALL THANET OFFSHORE WIND FARM**



Sample ID:	WF11	WF12	WF14	WF19	WF22	WF25	WF27	
<b>Folk and Ward Method [Description]</b>	<b>Mean:</b>	Medium Gravel	Fine Gravel	Very Fine Sand	Medium Sand	Coarse Sand	Medium Sand	Fine Sand
	<b>Sorting:</b>	Very Poorly Sorted	Very Poorly Sorted	Poorly Sorted	Poorly Sorted	Very Poorly Sorted	Moderately Sorted	Very Poorly Sorted
	<b>Skewness:</b>	Very Fine Skewed	Very Fine Skewed	Very Fine Skewed	Fine Skewed	Coarse Skewed	Coarse Skewed	Very Fine Skewed
	<b>Kurtosis:</b>	Platykurtic	Very Platykurtic	Very Leptokurtic	Very Leptokurtic	Mesokurtic	Leptokurtic	Very Leptokurtic
<b>Mode 1 [µM]:</b>	47250.00	23750.00	187.50	375.00	187.50	375.00	375.00	
<b>Mode 2 [µM]:</b>	375.00	375.00	0.00	0.00	12000.00	0.00	0.00	
<b>Mode 3 [µM]:</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>Mode 1 [PHI]:</b>	-5.48	-4.49	2.50	1.50	2.50	1.50	1.50	
<b>Mode 2 [PHI]:</b>	1.50	1.50	0.00	0.00	-3.50	0.00	0.00	
<b>Mode 3 [Phi]:</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>D10 [µm]:</b>	336.50	267.45	8.88	134.80	70.70	237.49	6.27	
<b>D50 [µm]:</b>	33237.10	18260.21	140.52	359.38	363.03	414.86	304.46	
<b>D90 [µm]:</b>	55436.66	46086.60	369.10	974.08	16065.40	950.38	740.08	
<b>(D90 / D10) [µm]:</b>	164.74	172.32	41.56	7.23	227.23	4.00	118.00	
<b>(D90 - D10) [µm]:</b>	55100.16	45819.15	360.22	839.27	15994.70	712.89	733.81	
<b>(D75 / D25) [µm]:</b>	28.62	48.56	2.95	2.22	32.33	2.17	4.56	
<b>(D75 - D25) [µm]:</b>	44160.92	29188.70	144.56	301.53	5027.35	351.53	361.33	
<b>D10 [Phi]:</b>	-5.79	-5.53	1.44	0.04	-4.01	0.07	0.43	
<b>D50 [Phi]:</b>	-5.05	-4.19	2.83	1.48	1.46	1.27	1.72	
<b>D90 [Phi]:</b>	1.57	1.90	6.82	2.89	3.82	2.07	7.32	
<b>(D90 / D10) [Phi]:</b>	-0.27	-0.34	4.74	76.30	-0.95	28.25	16.85	
<b>(D90 - D10) [Phi]:</b>	7.36	7.43	5.38	2.85	7.83	2.00	6.88	
<b>(D75 / D25) [Phi]:</b>	0.12	-0.14	1.71	2.33	-1.11	2.81	2.97	
<b>(D75 - D25) [Phi]:</b>	4.84	5.60	1.56	1.15	5.01	1.12	2.19	
<b>% Gravel [63000 - 2000 µm]:</b>	74.60	65.88	1.29	3.51	30.82	4.65	1.27	
<b>% Sand [&lt; 2000 - 63 µm]:</b>	23.62	31.82	79.60	88.95	60.52	95.35	74.88	
<b>% Mud [&lt; 63 µm]:</b>	1.77	2.30	19.11	7.54	8.65	0.00	23.85	
<b>% V Coarse Gravel:</b>	52.97	21.67	0.00	0.00	0.00	0.00	0.00	

**FUGRO GROUP**  
**VATTENFALL THANET OFFSHORE WIND FARM**



Sample ID:	WF11	WF12	WF14	WF19	WF22	WF25	WF27
% Coarse Gravel:	16.48	35.07	0.00	0.00	10.06	0.00	0.00
% Medium Gravel:	3.09	4.34	0.82	0.22	11.13	0.38	0.30
% Fine Gravel:	1.05	3.35	0.16	0.54	6.10	1.75	0.29
% V Fine Gravel:	1.02	1.45	0.31	2.74	3.53	2.52	0.67
% V Coarse Sand:	1.22	2.01	0.56	5.80	3.63	3.33	0.77
% Coarse Sand:	8.16	10.09	2.41	18.15	7.46	27.58	18.33
% Medium Sand:	10.52	13.31	13.12	47.31	17.52	53.65	41.40
% Fine Sand:	3.19	5.37	39.25	17.09	24.35	10.80	12.73
% V Fine Sand:	0.53	1.04	24.26	0.60	7.57	0.00	1.64
% V Coarse Silt:	0.35	0.46	3.90	1.77	0.99	0.00	3.98
% Coarse Silt:	0.21	0.29	2.75	0.94	1.57	0.00	3.37
% Medium Silt:	0.30	0.36	3.03	1.21	1.51	0.00	4.79
% Fine Silt:	0.39	0.47	3.69	1.60	1.97	0.00	5.39
% V Fine Silt:	0.10	0.14	1.09	0.38	0.50	0.00	1.19
% Clay:	0.41	0.59	4.66	1.64	2.13	0.00	5.12



**FUGRO GROUP**  
**VATTENFALL THANET OFFSHORE WIND FARM**



Sample ID:		WF29	WF32	WF37	WF41	WF45	WF47
Textural Group	Sample Type:	Unimodal, Moderately Well Sorted	Unimodal, Poorly Sorted	Unimodal, Poorly Sorted	Unimodal, Very Poorly Sorted	Unimodal, Poorly Sorted	Unimodal, Very Poorly Sorted
	Folk [1954 Original]:	Slightly Gravelly Sand	Slightly Gravelly Muddy Sand	Slightly Gravelly Muddy Sand	Slightly Gravelly Muddy Sand	Slightly Gravelly Sand	Slightly Gravelly Muddy Sand
	Folk [Bgs Modified]:	Slightly Gravelly Sand	Muddy Sand	Muddy Sand	Slightly Gravelly Muddy Sand	Slightly Gravelly Sand	Muddy Sand
	Sediment Name:	Slightly Very Fine Gravelly Medium Sand	Slightly Very Fine Gravelly Fine Silty Fine Sand	Slightly Very Fine Gravelly Fine Silty Medium Sand	Slightly Fine Gravelly Fine Silty Fine Sand	Slightly Fine Gravelly Medium Sand	Slightly Fine Gravelly Very Coarse Silty Fine Sand
Method of Moments Arithmetic [µm]	Mean:	602.40	268.56	301.71	264.13	425.10	205.21
	Sorting:	948.36	315.52	345.94	565.27	639.78	504.82
	Skewness:	8.87	9.83	8.26	8.61	7.50	9.85
	Kurtosis:	95.35	158.71	119.75	84.57	63.49	109.21
Method of Moments Geometric [µm]	Mean:	441.05	145.12	152.07	106.92	257.02	77.41
	Sorting:	1.73	4.41	4.88	5.50	3.48	5.68
	Skewness:	2.09	-2.21	-2.02	-1.67	-2.91	-1.49
	Kurtosis:	11.47	8.28	7.15	5.81	14.06	5.07
Method of Moments Logarithmic [phi]	Mean:	1.18	2.78	2.72	3.23	1.96	3.69
	Sorting:	0.79	2.14	2.29	2.46	1.80	2.51
	Skewness:	-2.09	2.21	2.02	1.67	2.91	1.49
	Kurtosis:	11.47	8.28	7.15	5.81	14.06	5.07
Folk and Ward Method [µm]	Mean:	434.22	187.28	194.58	123.51	306.07	83.08
	Sorting:	1.60	3.14	3.45	4.17	2.28	4.72
	Skewness:	0.19	-0.31	-0.37	-0.50	-0.43	-0.56
	Kurtosis:	0.98	2.11	1.97	1.94	3.30	2.03
Folk and Ward Method [phi]	Mean:	1.20	2.42	2.36	3.02	1.71	3.59
	Sorting:	0.68	1.65	1.79	2.06	1.19	2.24
	Skewness:	-0.19	0.31	0.37	0.50	0.43	0.56
	Kurtosis:	0.98	2.11	1.97	1.94	3.30	2.03

**FUGRO GROUP**  
**VATTENFALL THANET OFFSHORE WIND FARM**



Sample ID:		WF29	WF32	WF37	WF41	WF45	WF47
Folk and Ward Method [Description]	Mean:	Medium Sand	Fine Sand	Fine Sand	Very Fine Sand	Medium Sand	Very Fine Sand
	Sorting:	Moderately Well Sorted	Poorly Sorted	Poorly Sorted	Very Poorly Sorted	Poorly Sorted	Very Poorly Sorted
	Skewness:	Coarse Skewed	Very Fine Skewed	Very Fine Skewed	Very Fine Skewed	Very Fine Skewed	Very Fine Skewed
	Kurtosis:	Mesokurtic	Very Leptokurtic	Very Leptokurtic	Very Leptokurtic	Extremely Leptokurtic	Very Leptokurtic
Mode 1 [µm]:		375.00	187.50	375.00	187.50	375.00	187.50
Mode 2 [µm]:		0.00	0.00	0.00	0.00	0.00	0.00
Mode 3 [µm]:		0.00	0.00	0.00	0.00	0.00	0.00
Mode 1 [Phi]:		1.50	2.50	1.50	2.50	1.50	2.50
Mode 2 [Phi]:		0.00	0.00	0.00	0.00	0.00	0.00
Mode 3 [Phi]:		0.00	0.00	0.00	0.00	0.00	0.00
D10 [µm]:		259.89	22.07	15.70	7.97	139.62	5.93
D50 [µm]:		404.12	198.78	224.13	170.39	330.27	132.62
D90 [µm]:		851.13	473.36	563.92	421.88	489.86	334.56
(D90 / D10) [µm]:		3.27	21.45	35.91	52.91	3.51	56.39
(D90 - D10) [µm]:		591.24	451.30	548.21	413.90	350.24	328.62
(D75 / D25) [µm]:		1.89	2.57	2.91	3.15	1.64	3.26
(D75 - D25) [µm]:		272.31	202.11	249.23	186.28	164.39	145.78
D10 [Phi]:		0.23	1.08	0.83	1.25	1.03	1.58
D50 [Phi]:		1.31	2.33	2.16	2.55	1.60	2.91
D90 [Phi]:		1.94	5.50	5.99	6.97	2.84	7.40
(D90 / D10) [Phi]:		8.36	5.10	7.25	5.60	2.76	4.68
(D90 - D10) [Phi]:		1.71	4.42	5.17	5.73	1.81	5.82
(D75 / D25) [Phi]:		2.16	1.85	2.10	1.88	1.57	1.76
(D75 - D25) [Phi]:		0.92	1.36	1.54	1.65	0.71	1.71
% Gravel [63000 - 2000 µm]:		2.30	0.37	0.43	1.18	1.69	0.93
% Sand [< 2000 - 63 µm]:		97.70	87.81	85.28	80.34	90.54	75.07

**FUGRO GROUP**  
**VATTENFALL THANET OFFSHORE WIND FARM**



Sample ID:	WF29	WF32	WF37	WF41	WF45	WF47
% Mud [< 63 µm]:	0.00	11.83	14.29	18.48	7.77	24.00
% V Coarse Gravel:	0.00	0.00	0.00	0.00	0.00	0.00
% Coarse Gravel:	0.00	0.00	0.00	0.00	0.00	0.00
% Medium Gravel:	0.41	0.00	0.00	0.00	0.00	0.00
% Fine Gravel:	0.82	0.13	0.15	0.78	1.07	0.61
% V Fine Gravel:	1.06	0.23	0.28	0.40	0.62	0.32
% V Coarse Sand:	1.42	0.34	0.55	0.50	0.57	0.40
% Coarse Sand:	26.99	7.00	10.92	2.46	5.67	0.96
% Medium Sand:	62.80	29.06	33.05	23.90	70.33	13.30
% Fine Sand:	6.49	40.00	32.09	39.71	13.97	37.62
% V Fine Sand:	0.00	11.40	8.68	13.77	0.00	22.79
% V Coarse Silt:	0.00	0.65	2.06	2.47	1.70	5.10
% Coarse Silt:	0.00	2.34	2.25	3.08	0.79	3.44
% Medium Silt:	0.00	2.08	2.51	3.02	1.40	3.68
% Fine Silt:	0.00	2.84	3.29	3.94	1.84	4.48
% V Fine Silt:	0.00	0.74	0.79	1.13	0.39	1.38
% Clay:	0.00	3.18	3.40	4.84	1.66	5.92

**D.1.1 PSD Fractional and Cumulative Data**

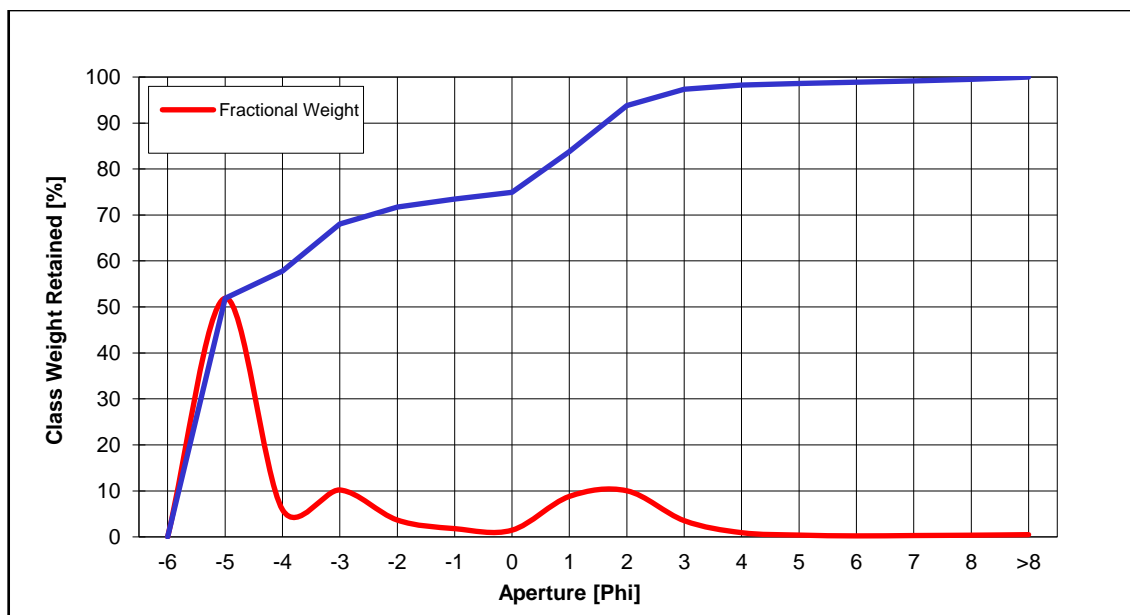
Based on Wentworth (1922) Grain Size Classification  
Statistics Based on Folk and Ward (1957)



CR01

Aperture [µm]	Aperture [Phi]	Fractional [%]	Cumulative [%]
63000.0	-6	0.0	0.0
31500.0	-5	51.9	51.9
16000.0	-4	5.9	57.8
8000.0	-3	10.2	68.0
4000.0	-2	3.7	71.7
2000.0	-1	1.8	73.5
1000.0	0	1.5	75.0
500.0	1	8.8	83.8
250.0	2	10.0	93.8
125.0	3	3.5	97.3
62.5	4	0.9	98.2
31.2	5	0.4	98.6
15.6	6	0.2	98.9
7.8	7	0.3	99.1
3.9	8	0.4	99.5
<3.9	>8	0.5	100.0
<b>Total</b>		100.0	100.0

<b>Sorting</b>	2.92	Very Poorly Sorted
<b>Skewness</b>	0.80	Very Fine Skewed
<b>Kurtosis</b>	0.61	Very Platykurtic
<b>Mean [µm]</b>	9317.1	Pebble
<b>Mean [phi]</b>	-3.22	
<b>Median [µm]</b>	32309.5	Pebble
<b>Median [phi]</b>	-5.01	
<b>Gravel [%]</b>	73.5	Sandy Gravel
<b>Sand [%]</b>	24.7	
<b>Mud [%]</b>	1.8	

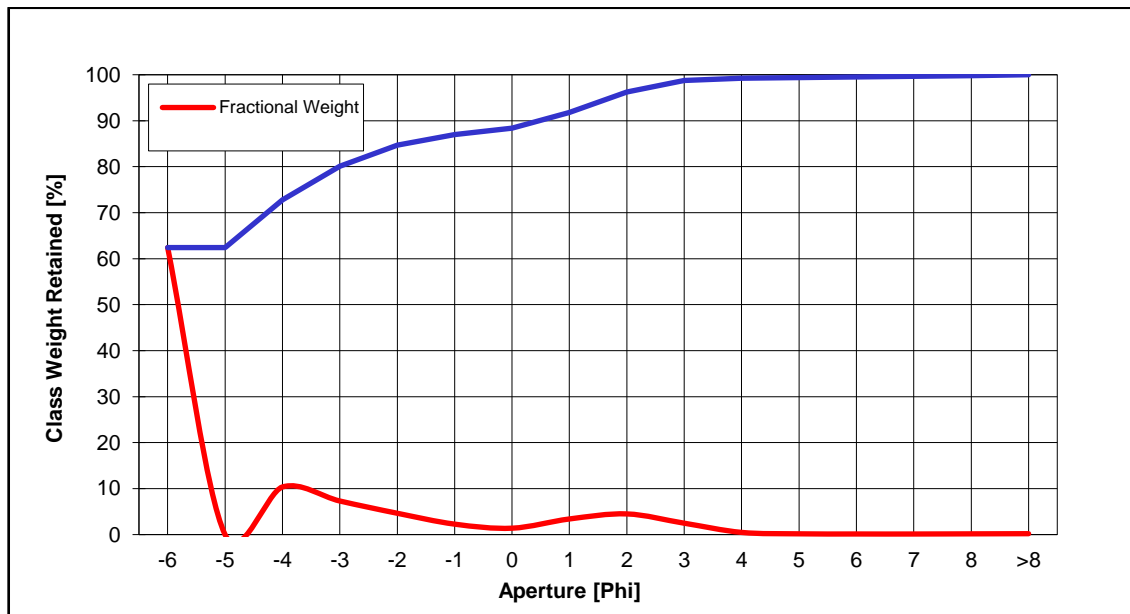




CR02

Aperture [µm]	Aperture [Phi]	Fractional [%]	Cumulative [%]
63000.0	-6	62.4	62.4
31500.0	-5	0.0	62.4
16000.0	-4	10.4	72.8
8000.0	-3	7.3	80.1
4000.0	-2	4.6	84.7
2000.0	-1	2.3	87.0
1000.0	0	1.4	88.4
500.0	1	3.4	91.8
250.0	2	4.5	96.3
125.0	3	2.5	98.7
62.5	4	0.5	99.2
31.2	5	0.2	99.4
15.6	6	0.1	99.5
7.8	7	0.1	99.6
3.9	8	0.2	99.8
<3.9	>8	0.2	100.0
<b>Total</b>		100.0	100.0

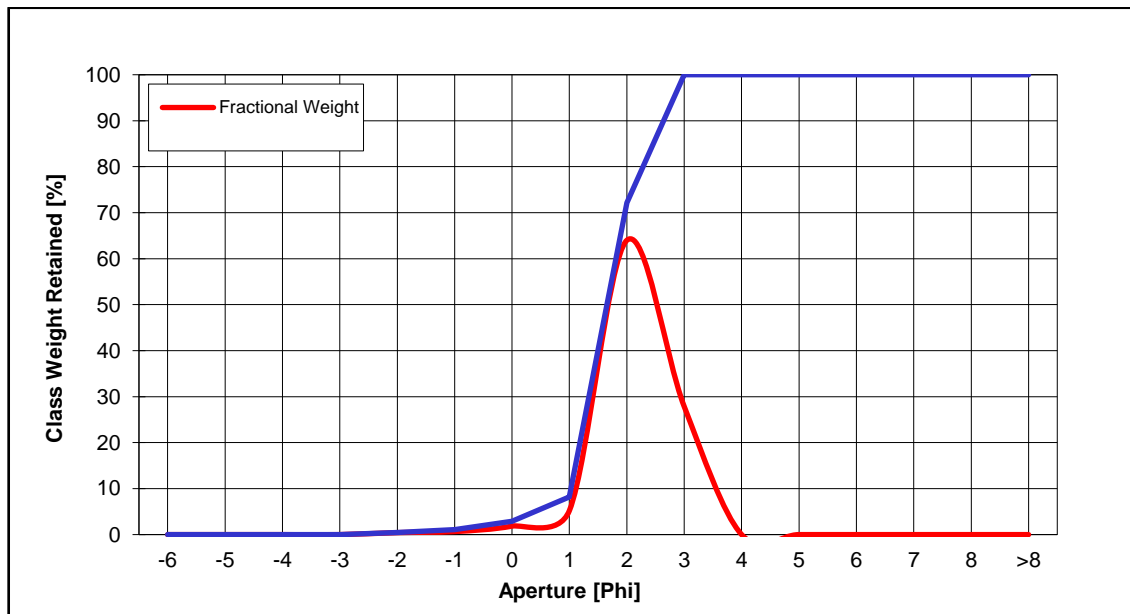
<b>Sorting</b>	2.29	Very Poorly Sorted
<b>Skewness</b>	0.89	Very Fine Skewed
<b>Kurtosis</b>	1.29	Leptokurtic
<b>Mean [µm]</b>	29186.0	Pebble
<b>Mean [phi]</b>	-4.87	
<b>Median [µm]</b>	67708.6	Cobble
<b>Median [phi]</b>	-6.08	
<b>Gravel [%]</b>	87.0	Gravel
<b>Sand [%]</b>	12.2	
<b>Mud [%]</b>	0.8	



CR03

Aperture [µm]	Aperture [Phi]	Fractional [%]	Cumulative [%]
63000.0	-6	0.0	0.0
31500.0	-5	0.0	0.0
16000.0	-4	0.0	0.0
8000.0	-3	0.0	0.0
4000.0	-2	0.4	0.4
2000.0	-1	0.7	1.1
1000.0	0	1.8	2.9
500.0	1	5.2	8.2
250.0	2	64.0	72.2
125.0	3	27.8	100.0
62.5	4	0.0	100.0
31.2	5	0.0	100.0
15.6	6	0.0	100.0
7.8	7	0.0	100.0
3.9	8	0.0	100.0
<3.9	>8	0.0	100.0
<b>Total</b>		<b>100.0</b>	<b>100.0</b>

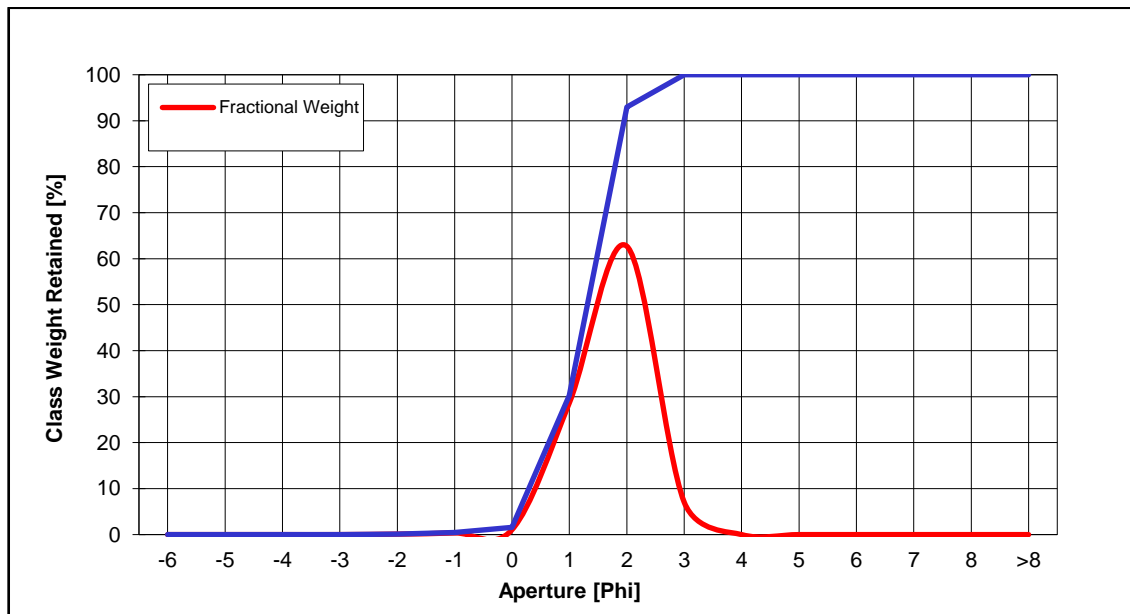
<b>Sorting</b>	0.69	Moderately Well Sorted
<b>Skewness</b>	0.07	Symmetrical
<b>Kurtosis</b>	1.18	Leptokurtic
<b>Mean [µm]</b>	300.6	Medium Sand
<b>Mean [phi]</b>	1.73	
<b>Median [µm]</b>	317.8	Medium Sand
<b>Median [phi]</b>	1.65	
<b>Gravel [%]</b>	1.1	Slightly Gravelly Sand
<b>Sand [%]</b>	98.9	
<b>Mud [%]</b>	0.0	



CR10

Aperture [µm]	Aperture [Phi]	Fractional [%]	Cumulative [%]
63000.0	-6	0.0	0.0
31500.0	-5	0.0	0.0
16000.0	-4	0.0	0.0
8000.0	-3	0.0	0.0
4000.0	-2	0.1	0.1
2000.0	-1	0.4	0.5
1000.0	0	1.1	1.5
500.0	1	28.7	30.3
250.0	2	62.7	93.0
125.0	3	7.0	100.0
62.5	4	0.0	100.0
31.2	5	0.0	100.0
15.6	6	0.0	100.0
7.8	7	0.0	100.0
3.9	8	0.0	100.0
<3.9	>8	0.0	100.0
<b>Total</b>		<b>100.0</b>	<b>100.0</b>

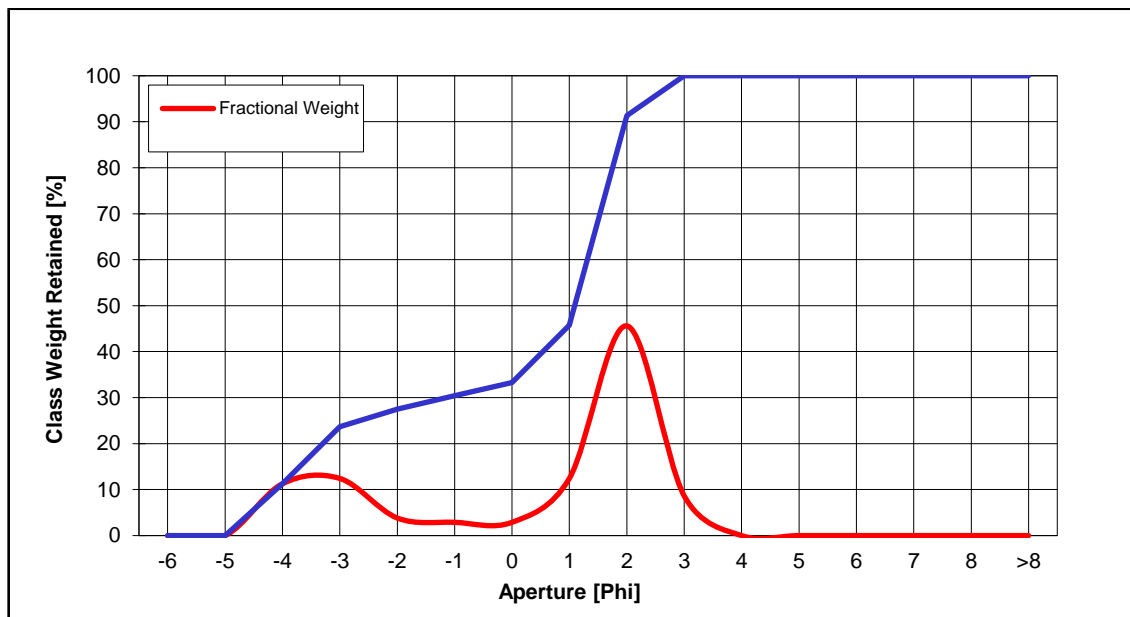
<b>Sorting</b>	0.67	Moderately Well Sorted
<b>Skewness</b>	-0.15	Coarse Skewed
<b>Kurtosis</b>	0.99	Mesokurtic
<b>Mean [µm]</b>	427.8	Medium Sand
<b>Mean [phi]</b>	1.22	
<b>Median [µm]</b>	402.0	Medium Sand
<b>Median [phi]</b>	1.31	
<b>Gravel [%]</b>	0.5	Slightly Gravelly Sand
<b>Sand [%]</b>	99.5	
<b>Mud [%]</b>	0.0	



WF01

Aperture [µm]	Aperture [Phi]	Fractional [%]	Cumulative [%]
63000.0	-6	0.0	0.0
31500.0	-5	0.0	0.0
16000.0	-4	11.3	11.3
8000.0	-3	12.4	23.7
4000.0	-2	3.8	27.5
2000.0	-1	2.9	30.4
1000.0	0	2.9	33.3
500.0	1	12.5	45.8
250.0	2	45.6	91.4
125.0	3	8.6	100.0
62.5	4	0.0	100.0
31.2	5	0.0	100.0
15.6	6	0.0	100.0
7.8	7	0.0	100.0
3.9	8	0.0	100.0
<3.9	>8	0.0	100.0
<b>Total</b>		<b>100.0</b>	<b>100.0</b>

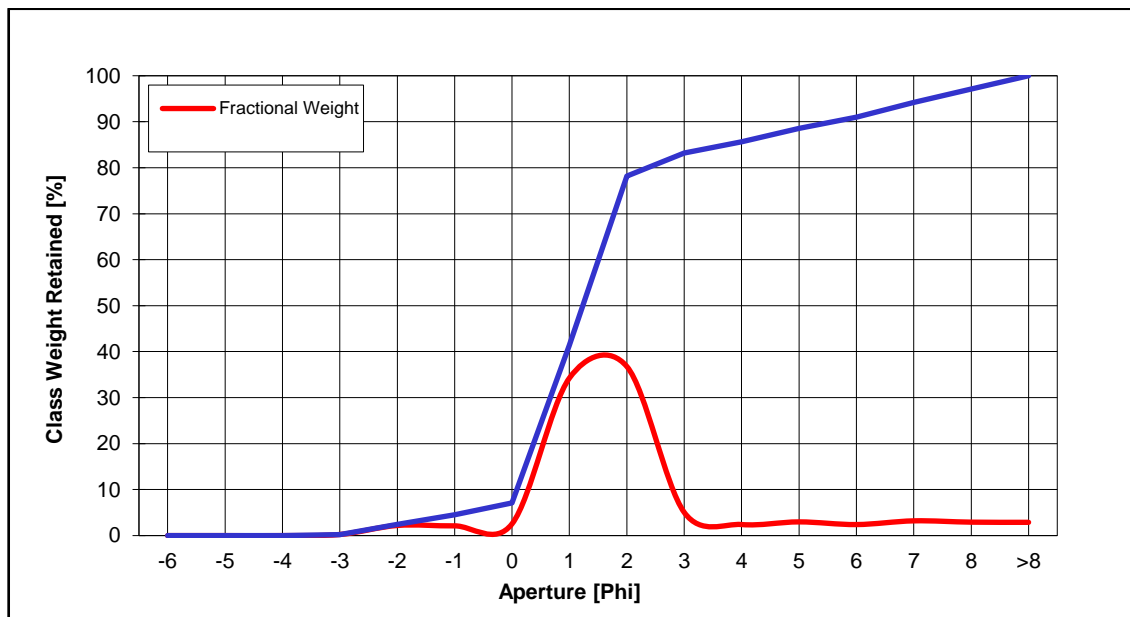
<b>Sorting</b>	2.42	Very Poorly Sorted
<b>Skewness</b>	-0.67	Very Coarse Skewed
<b>Kurtosis</b>	0.66	Very Platykurtic
<b>Mean [µm]</b>	1172.3	Very Coarse Sand
<b>Mean [phi]</b>	-0.23	
<b>Median [µm]</b>	468.9	Medium Sand
<b>Median [phi]</b>	1.09	
<b>Gravel [%]</b>	30.4	Sandy Gravel
<b>Sand [%]</b>	69.6	
<b>Mud [%]</b>	0.0	



WF02

Aperture [µm]	Aperture [Phi]	Fractional [%]	Cumulative [%]
63000.0	-6	0.0	0.0
31500.0	-5	0.0	0.0
16000.0	-4	0.0	0.0
8000.0	-3	0.2	0.2
4000.0	-2	2.2	2.4
2000.0	-1	2.1	4.6
1000.0	0	2.6	7.1
500.0	1	34.3	41.4
250.0	2	36.8	78.2
125.0	3	5.0	83.2
62.5	4	2.4	85.6
31.2	5	3.0	88.6
15.6	6	2.4	91.0
7.8	7	3.2	94.2
3.9	8	2.9	97.1
<3.9	>8	2.9	100.0
<b>Total</b>		<b>100.0</b>	<b>100.0</b>

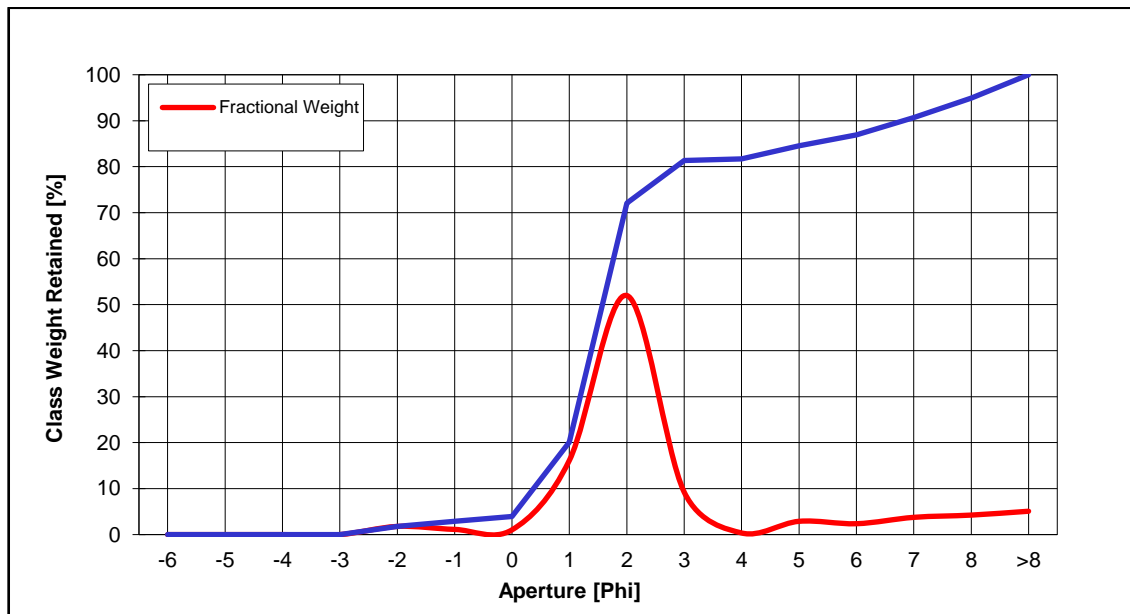
<b>Sorting</b>	2.00	Poorly Sorted
<b>Skewness</b>	0.43	Very Fine Skewed
<b>Kurtosis</b>	2.39	Very Leptokurtic
<b>Mean [µm]</b>	327.9	Medium Sand
<b>Mean [phi]</b>	1.61	
<b>Median [µm]</b>	425.0	Medium Sand
<b>Median [phi]</b>	1.23	
<b>Gravel [%]</b>	4.6	Slightly Gravelly Muddy Sand
<b>Sand [%]</b>	81.0	
<b>Mud [%]</b>	14.4	



WF03

Aperture [µm]	Aperture [Phi]	Fractional [%]	Cumulative [%]
63000.0	-6	0.0	0.0
31500.0	-5	0.0	0.0
16000.0	-4	0.0	0.0
8000.0	-3	0.0	0.0
4000.0	-2	1.8	1.8
2000.0	-1	1.1	2.9
1000.0	0	1.0	3.9
500.0	1	16.2	20.1
250.0	2	52.0	72.1
125.0	3	9.2	81.3
62.5	4	0.4	81.7
31.2	5	2.9	84.6
15.6	6	2.4	86.9
7.8	7	3.8	90.7
3.9	8	4.2	94.9
<3.9	>8	5.1	100.0
<b>Total</b>		<b>100.0</b>	<b>100.0</b>

<b>Sorting</b>	2.23	Very Poorly Sorted
<b>Skewness</b>	0.61	Very Fine Skewed
<b>Kurtosis</b>	2.69	Very Leptokurtic
<b>Mean [µm]</b>	192.7	Fine Sand
<b>Mean [phi]</b>	2.38	
<b>Median [µm]</b>	335.7	Medium Sand
<b>Median [phi]</b>	1.57	
<b>Gravel [%]</b>	2.9	Slightly Gravelly Muddy Sand
<b>Sand [%]</b>	78.8	
<b>Mud [%]</b>	18.3	

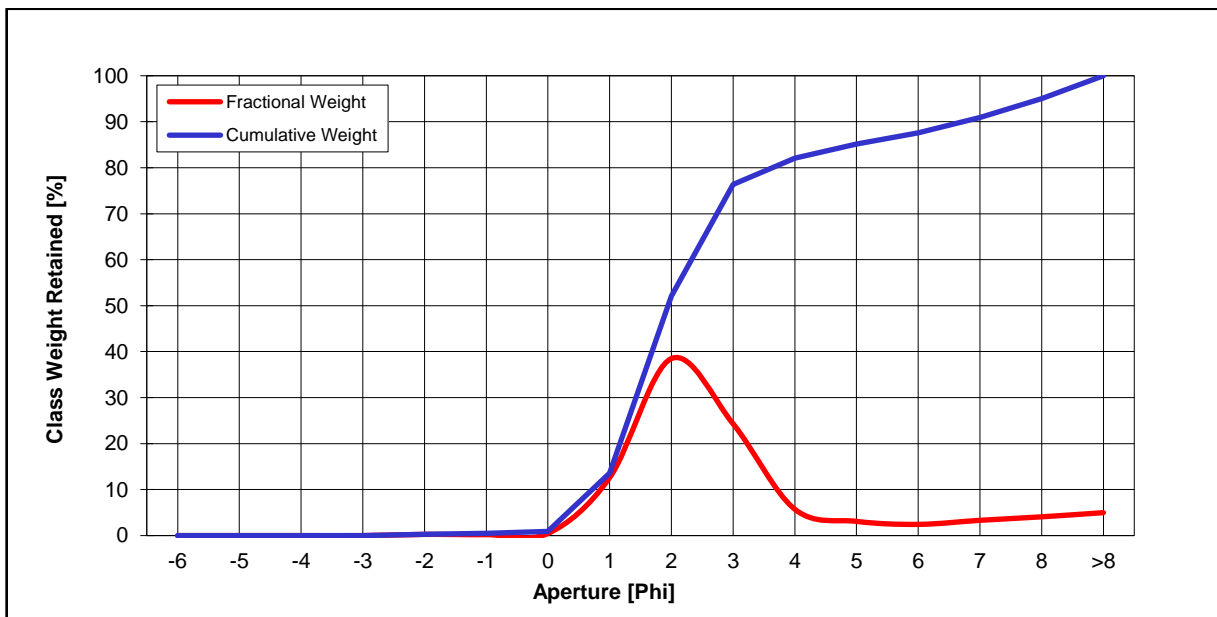




WF04

Aperture [µm]	Aperture [Phi]	Fractional [%]	Cumulative [%]
63000.0	-6	0.0	0.0
31500.0	-5	0.0	0.0
16000.0	-4	0.0	0.0
8000.0	-3	0.0	0.0
4000.0	-2	0.3	0.3
2000.0	-1	0.2	0.5
1000.0	0	0.5	0.9
500.0	1	12.6	13.6
250.0	2	38.5	52.1
125.0	3	24.3	76.4
62.5	4	5.7	82.1
31.2	5	3.1	85.2
15.6	6	2.4	87.6
7.8	7	3.3	90.9
3.9	8	4.1	95.0
<3.9	>8	5.0	100.0
<b>Total</b>		<b>100.0</b>	<b>100.0</b>

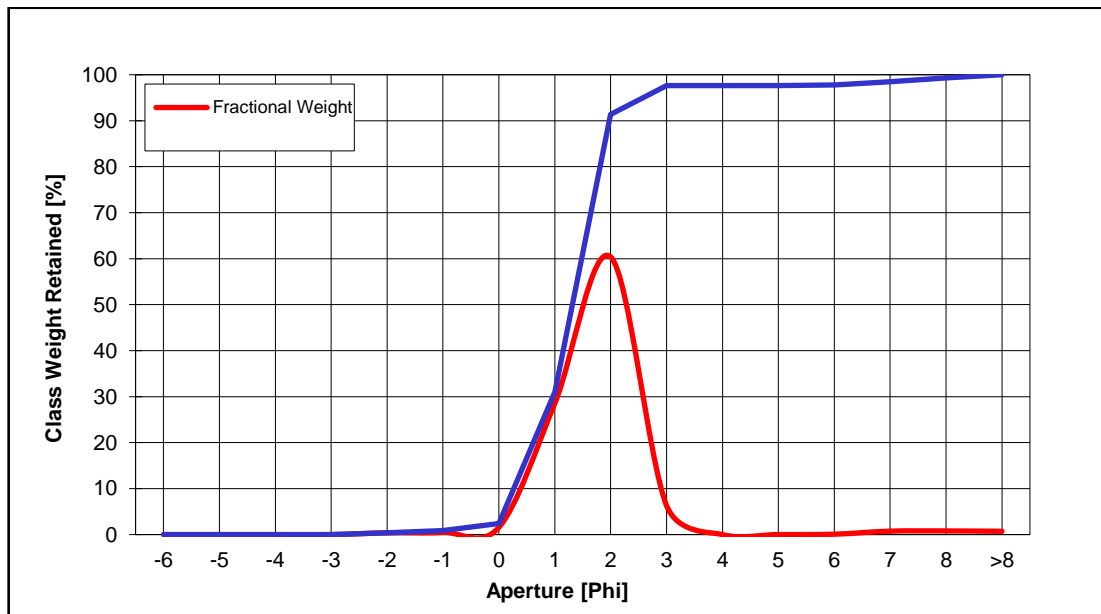
<b>Sorting</b>	2.05	Very Poorly Sorted
<b>Skewness</b>	0.54	Very Fine Skewed
<b>Kurtosis</b>	1.91	Very Leptokurtic
<b>Mean [µm]</b>	171.5	Fine Sand
<b>Mean [phi]</b>	2.54	
<b>Median [µm]</b>	259.4	Medium Sand
<b>Median [phi]</b>	1.95	
<b>Gravel [%]</b>	0.5	Slightly Gravelly Muddy Sand
<b>Sand [%]</b>	81.6	
<b>Mud [%]</b>	17.9	



WF05

Aperture [µm]	Aperture [Phi]	Fractional [%]	Cumulative [%]
63000.0	-6	0.0	0.0
31500.0	-5	0.0	0.0
16000.0	-4	0.0	0.0
8000.0	-3	0.0	0.0
4000.0	-2	0.4	0.4
2000.0	-1	0.5	0.9
1000.0	0	1.6	2.4
500.0	1	28.6	31.0
250.0	2	60.4	91.4
125.0	3	6.3	97.7
62.5	4	0.0	97.7
31.2	5	0.0	97.7
15.6	6	0.1	97.8
7.8	7	0.7	98.5
3.9	8	0.8	99.3
<3.9	>8	0.7	100.0
<b>Total</b>		<b>100.0</b>	<b>100.0</b>

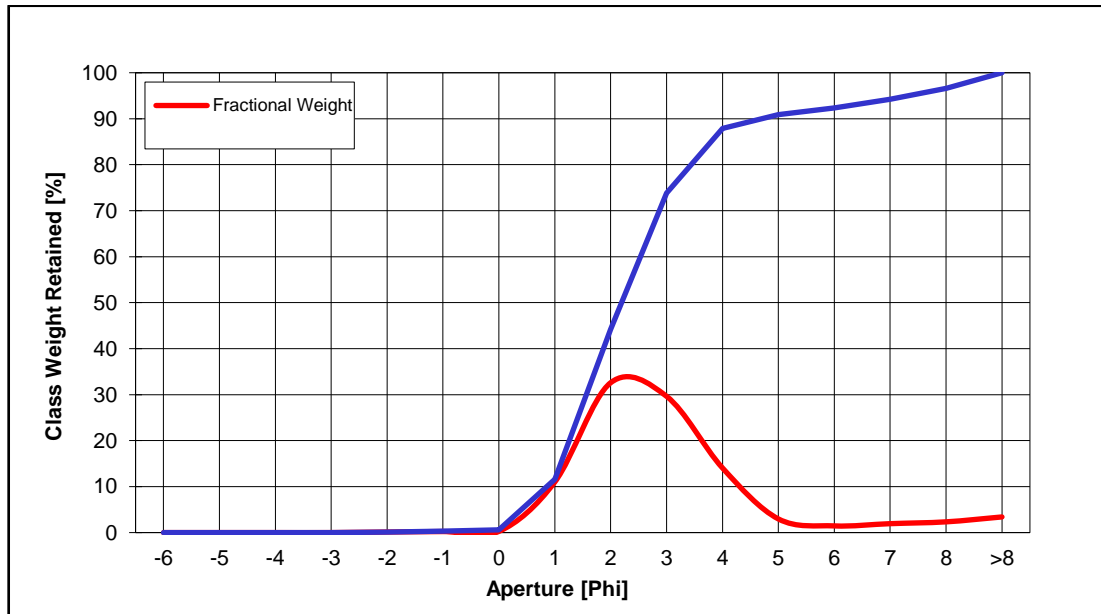
<b>Sorting</b>	0.73	Moderately Sorted
<b>Skewness</b>	-0.09	Symmetrical
<b>Kurtosis</b>	1.09	Mesokurtic
<b>Mean [µm]</b>	428.5	Medium Sand
<b>Mean [phi]</b>	1.22	
<b>Median [µm]</b>	402.0	Medium Sand
<b>Median [phi]</b>	1.31	
<b>Gravel [%]</b>	0.9	Slightly Gravelly Sand
<b>Sand [%]</b>	96.8	
<b>Mud [%]</b>	2.3	



WF06

Aperture [µm]	Aperture [Phi]	Fractional [%]	Cumulative [%]
63000.0	-6	0.0	0.0
31500.0	-5	0.0	0.0
16000.0	-4	0.0	0.0
8000.0	-3	0.0	0.0
4000.0	-2	0.1	0.1
2000.0	-1	0.2	0.3
1000.0	0	0.3	0.6
500.0	1	11.0	11.6
250.0	2	32.6	44.2
125.0	3	29.6	73.8
62.5	4	14.1	87.9
31.2	5	3.0	90.9
15.6	6	1.5	92.3
7.8	7	1.9	94.3
3.9	8	2.3	96.6
<3.9	>8	3.4	100.0
<b>Total</b>		<b>100.0</b>	<b>100.0</b>

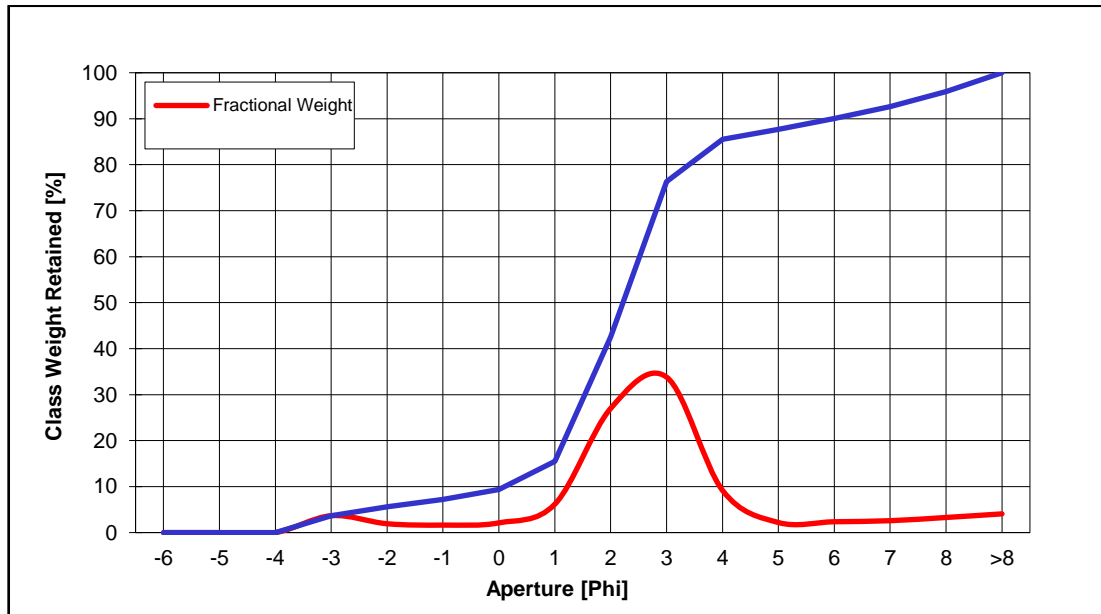
<b>Sorting</b>	1.69	Poorly Sorted
<b>Skewness</b>	0.33	Very Fine Skewed
<b>Kurtosis</b>	1.70	Very Leptokurtic
<b>Mean [µm]</b>	196.0	Fine Sand
<b>Mean [phi]</b>	2.35	
<b>Median [µm]</b>	218.3	Fine Sand
<b>Median [phi]</b>	2.20	
<b>Gravel [%]</b>	0.3	Slightly Gravelly Muddy Sand
<b>Sand [%]</b>	87.5	
<b>Mud [%]</b>	12.1	



WF07

Aperture [µm]	Aperture [Phi]	Fractional [%]	Cumulative [%]
63000.0	-6	0.0	0.0
31500.0	-5	0.0	0.0
16000.0	-4	0.0	0.0
8000.0	-3	3.7	3.7
4000.0	-2	1.9	5.6
2000.0	-1	1.6	7.2
1000.0	0	2.1	9.3
500.0	1	6.2	15.5
250.0	2	27.0	42.5
125.0	3	33.8	76.3
62.5	4	9.2	85.5
31.2	5	2.2	87.7
15.6	6	2.4	90.1
7.8	7	2.6	92.6
3.9	8	3.3	95.9
<3.9	>8	4.1	100.0
<b>Total</b>		<b>100.0</b>	<b>100.0</b>

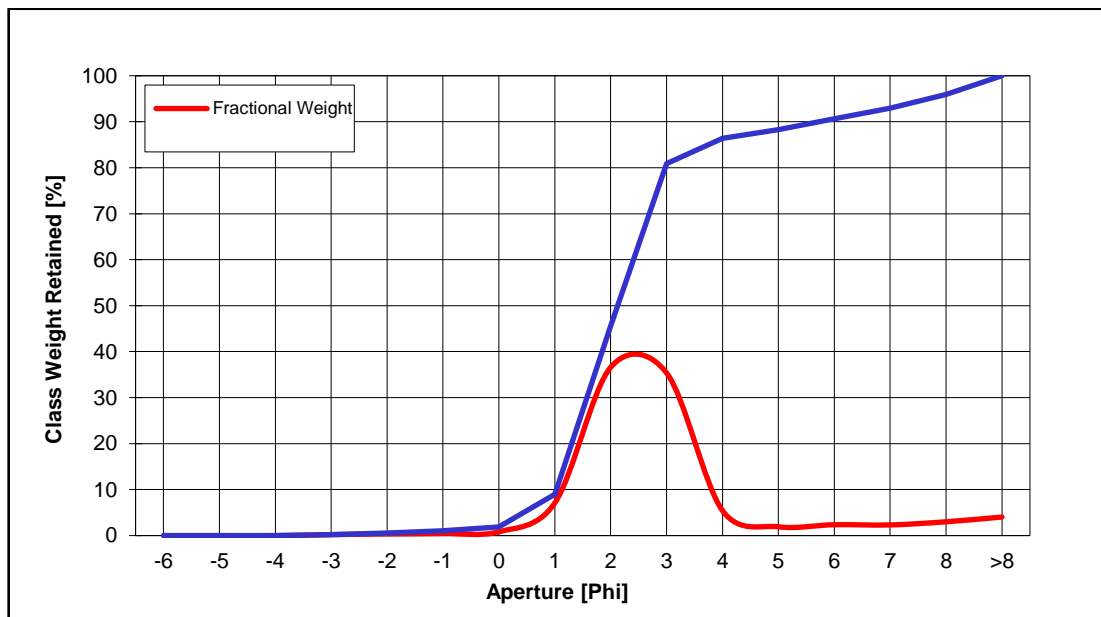
<b>Sorting</b>	2.22	Very Poorly Sorted
<b>Skewness</b>	0.12	Fine Skewed
<b>Kurtosis</b>	2.55	Very Leptokurtic
<b>Mean [µm]</b>	195.0	Fine Sand
<b>Mean [phi]</b>	2.36	
<b>Median [µm]</b>	214.4	Fine Sand
<b>Median [phi]</b>	2.22	
<b>Gravel [%]</b>	7.2	Gravelly Muddy Sand
<b>Sand [%]</b>	78.3	
<b>Mud [%]</b>	14.5	



WF08

Aperture [µm]	Aperture [Phi]	Fractional [%]	Cumulative [%]
63000.0	-6	0.0	0.0
31500.0	-5	0.0	0.0
16000.0	-4	0.0	0.0
8000.0	-3	0.2	0.2
4000.0	-2	0.4	0.6
2000.0	-1	0.5	1.0
1000.0	0	0.8	1.9
500.0	1	7.1	9.0
250.0	2	36.6	45.6
125.0	3	35.4	80.9
62.5	4	5.4	86.4
31.2	5	1.9	88.3
15.6	6	2.4	90.6
7.8	7	2.3	93.0
3.9	8	3.0	96.0
<3.9	>8	4.0	100.0
<b>Total</b>		<b>100.0</b>	<b>100.0</b>

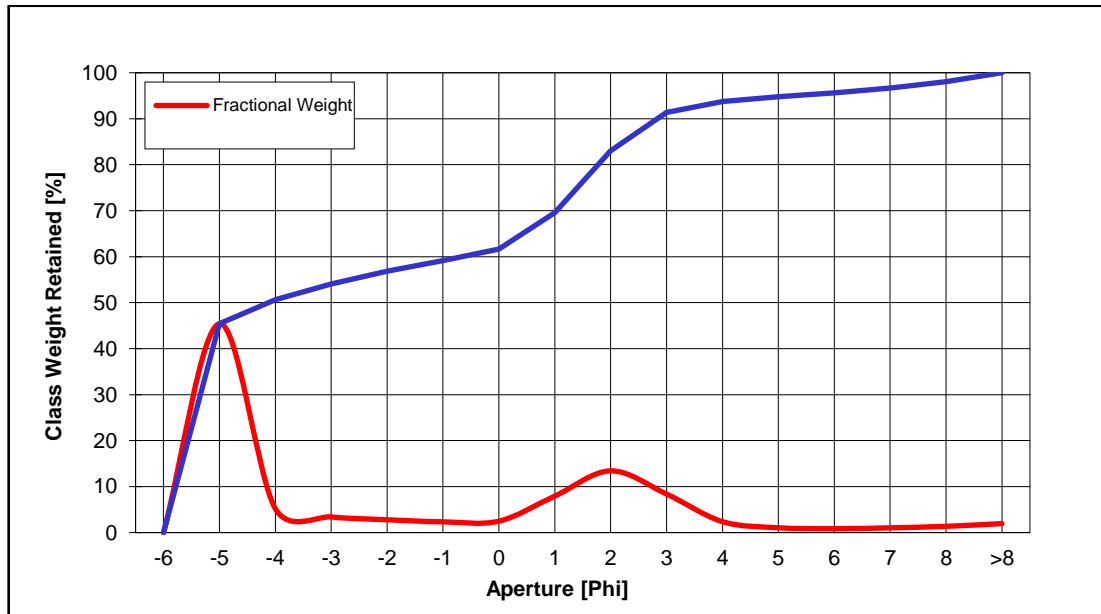
<b>Sorting</b>	1.69	Poorly Sorted
<b>Skewness</b>	0.37	Very Fine Skewed
<b>Kurtosis</b>	2.13	Very Leptokurtic
<b>Mean [µm]</b>	203.9	Fine Sand
<b>Mean [phi]</b>	2.29	
<b>Median [µm]</b>	229.2	Fine Sand
<b>Median [phi]</b>	2.13	
<b>Gravel [%]</b>	1.0	Slightly Gravelly Muddy Sand
<b>Sand [%]</b>	85.3	
<b>Mud [%]</b>	13.6	



WF09

Aperture [µm]	Aperture [Phi]	Fractional [%]	Cumulative [%]
63000.0	-6	0.0	0.0
31500.0	-5	45.4	45.4
16000.0	-4	5.2	50.6
8000.0	-3	3.4	54.0
4000.0	-2	2.8	56.8
2000.0	-1	2.3	59.2
1000.0	0	2.5	61.6
500.0	1	7.9	69.6
250.0	2	13.4	83.0
125.0	3	8.4	91.4
62.5	4	2.4	93.8
31.2	5	1.1	94.8
15.6	6	0.8	95.6
7.8	7	1.0	96.7
3.9	8	1.4	98.0
<3.9	>8	2.0	100.0
<b>Total</b>		<b>100.0</b>	<b>100.0</b>

<b>Sorting</b>	3.62	Very Poorly Sorted
<b>Skewness</b>	0.65	Very Fine Skewed
<b>Kurtosis</b>	0.67	Very Platykurtic
<b>Mean [µm]</b>	5819.2	Pebble
<b>Mean [phi]</b>	-2.54	
<b>Median [µm]</b>	17352.6	Pebble
<b>Median [phi]</b>	-4.12	
<b>Gravel [%]</b>	59.2	Muddy Sandy Gravel
<b>Sand [%]</b>	34.6	
<b>Mud [%]</b>	6.2	

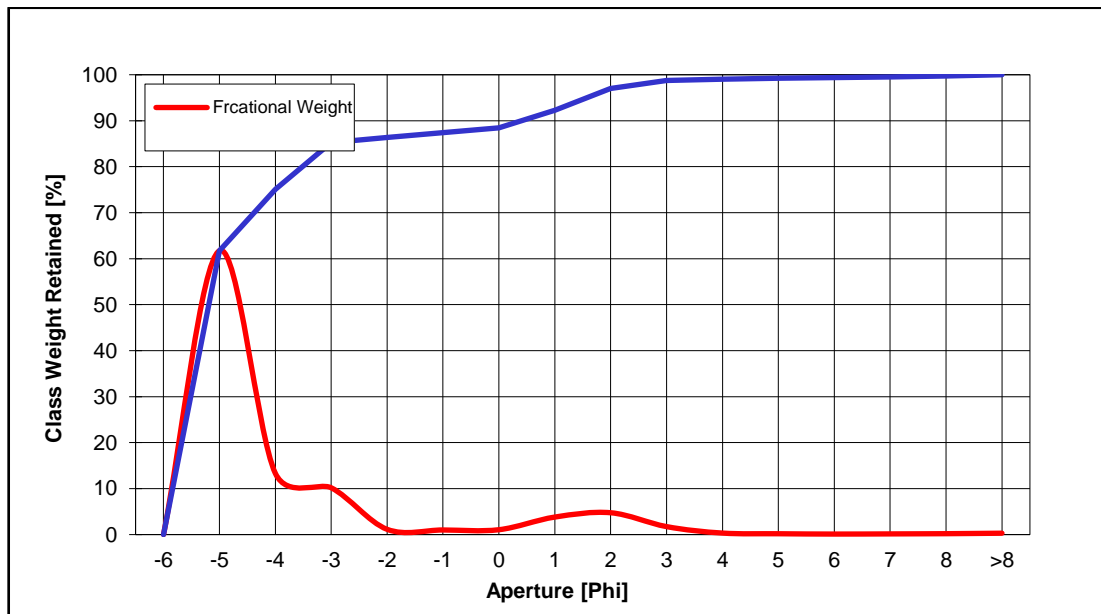




WF10

Aperture [µm]	Aperture [Phi]	Fractional [%]	Cumulative [%]
63000.0	-6	0.0	0.0
31500.0	-5	61.7	61.7
16000.0	-4	13.3	75.1
8000.0	-3	10.2	85.2
4000.0	-2	1.1	86.4
2000.0	-1	1.0	87.4
1000.0	0	1.1	88.4
500.0	1	3.8	92.2
250.0	2	4.8	97.0
125.0	3	1.7	98.7
62.5	4	0.3	99.1
31.2	5	0.2	99.2
15.6	6	0.1	99.4
7.8	7	0.1	99.5
3.9	8	0.2	99.7
<3.9	>8	0.3	100.0
<b>Total</b>		<b>100.0</b>	<b>100.0</b>

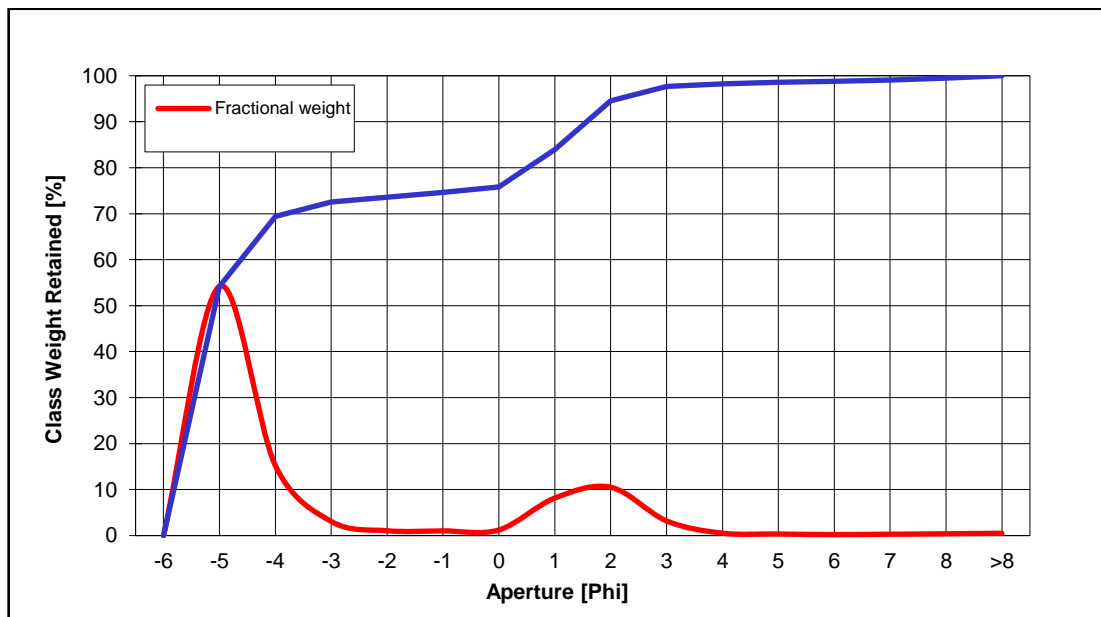
<b>Sorting</b>	1.78	Poorly Sorted
<b>Skewness</b>	0.69	Very Fine Skewed
<b>Kurtosis</b>	1.95	Very Leptokurtic
<b>Mean [µm]</b>	25435.0	Pebble
<b>Mean [phi]</b>	-4.67	
<b>Median [µm]</b>	35932.1	Pebble
<b>Median [phi]</b>	-5.17	
<b>Gravel [%]</b>	87.4	Gravel
<b>Sand [%]</b>	11.7	
<b>Mud [%]</b>	0.9	



WF11

Aperture [µm]	Aperture [Phi]	Fractional [%]	Cumulative [%]
63000.0	-6	0.0	0.0
31500.0	-5	54.2	54.2
16000.0	-4	15.2	69.4
8000.0	-3	3.1	72.5
4000.0	-2	1.1	73.6
2000.0	-1	1.0	74.6
1000.0	0	1.2	75.8
500.0	1	8.2	84.0
250.0	2	10.5	94.5
125.0	3	3.2	97.7
62.5	4	0.5	98.2
31.2	5	0.4	98.6
15.6	6	0.2	98.8
7.8	7	0.3	99.1
3.9	8	0.4	99.5
<3.9	>8	0.5	100.0
<b>Total</b>		<b>100.0</b>	<b>100.0</b>

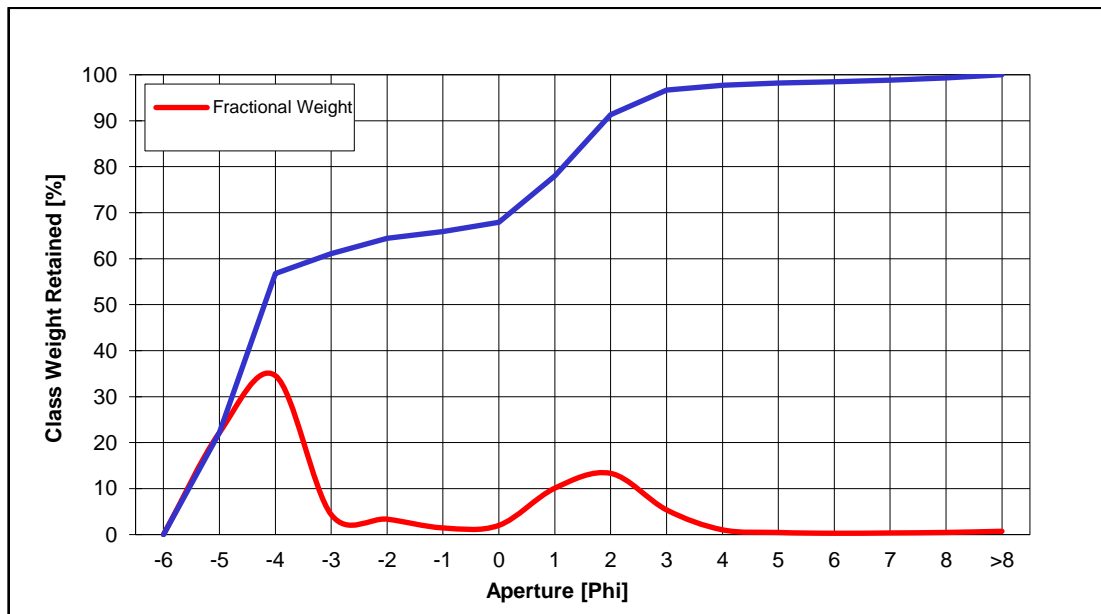
<b>Sorting</b>	2.89	Very Poorly Sorted
<b>Skewness</b>	0.80	Very Fine Skewed
<b>Kurtosis</b>	0.68	Platykurtic
<b>Mean [µm]</b>	9483.0	Pebble
<b>Mean [phi]</b>	-3.25	
<b>Median [µm]</b>	33237.1	Pebble
<b>Median [phi]</b>	-5.05	
<b>Gravel [%]</b>	74.6	Sandy Gravel
<b>Sand [%]</b>	23.6	
<b>Mud [%]</b>	1.8	



WF12

Aperture [µm]	Aperture [Phi]	Fractional [%]	Cumulative [%]
63000.0	-6	0.0	0.0
31500.0	-5	22.2	22.2
16000.0	-4	34.6	56.7
8000.0	-3	4.3	61.1
4000.0	-2	3.4	64.4
2000.0	-1	1.4	65.9
1000.0	0	2.0	67.9
500.0	1	10.1	78.0
250.0	2	13.3	91.3
125.0	3	5.4	96.7
62.5	4	1.0	97.7
31.2	5	0.5	98.2
15.6	6	0.3	98.5
7.8	7	0.4	98.8
3.9	8	0.5	99.3
<3.9	>8	0.7	100.0
<b>Total</b>		<b>100.0</b>	<b>100.0</b>

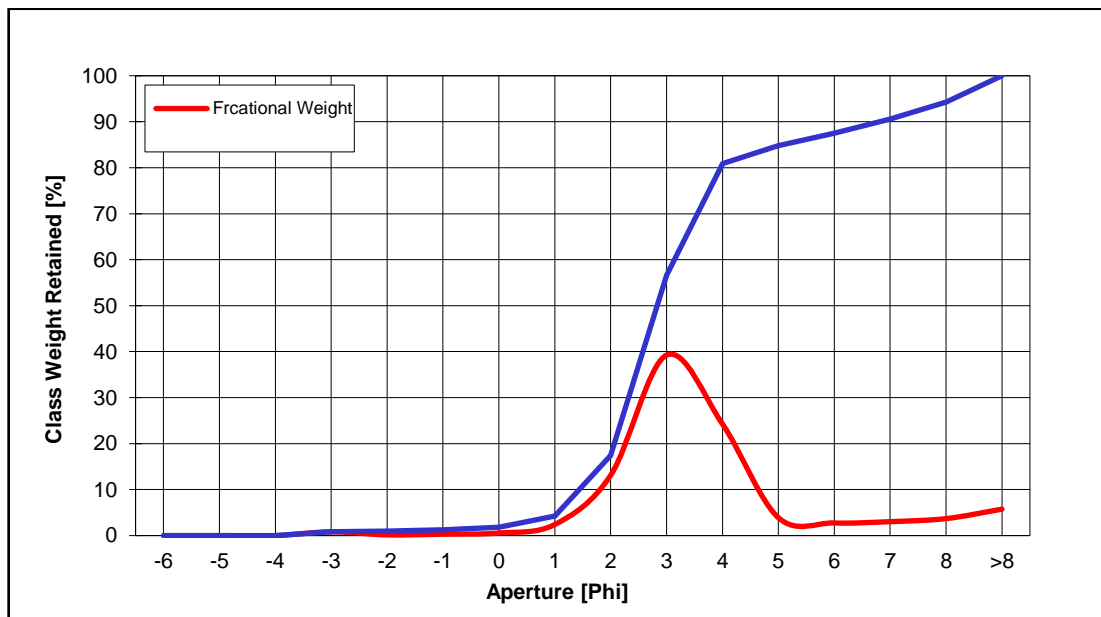
<b>Sorting</b>	2.96	Very Poorly Sorted
<b>Skewness</b>	0.66	Very Fine Skewed
<b>Kurtosis</b>	0.62	Very Platykurtic
<b>Mean [µm]</b>	6341.3	Pebble
<b>Mean [phi]</b>	-2.66	
<b>Median [µm]</b>	18260.2	Pebble
<b>Median [phi]</b>	-4.19	
<b>Gravel [%]</b>	65.9	Sandy Gravel
<b>Sand [%]</b>	31.8	
<b>Mud [%]</b>	2.3	



WF14

Aperture [µm]	Aperture [Phi]	Fractional [%]	Cumulative [%]
63000.0	-6	0.0	0.0
31500.0	-5	0.0	0.0
16000.0	-4	0.0	0.0
8000.0	-3	0.8	0.8
4000.0	-2	0.2	1.0
2000.0	-1	0.3	1.3
1000.0	0	0.6	1.8
500.0	1	2.4	4.3
250.0	2	13.1	17.4
125.0	3	39.3	56.6
62.5	4	24.3	80.9
31.2	5	3.9	84.8
15.6	6	2.7	87.5
7.8	7	3.0	90.6
3.9	8	3.7	94.3
<3.9	>8	5.7	100.0
<b>Total</b>		<b>100.0</b>	<b>100.0</b>

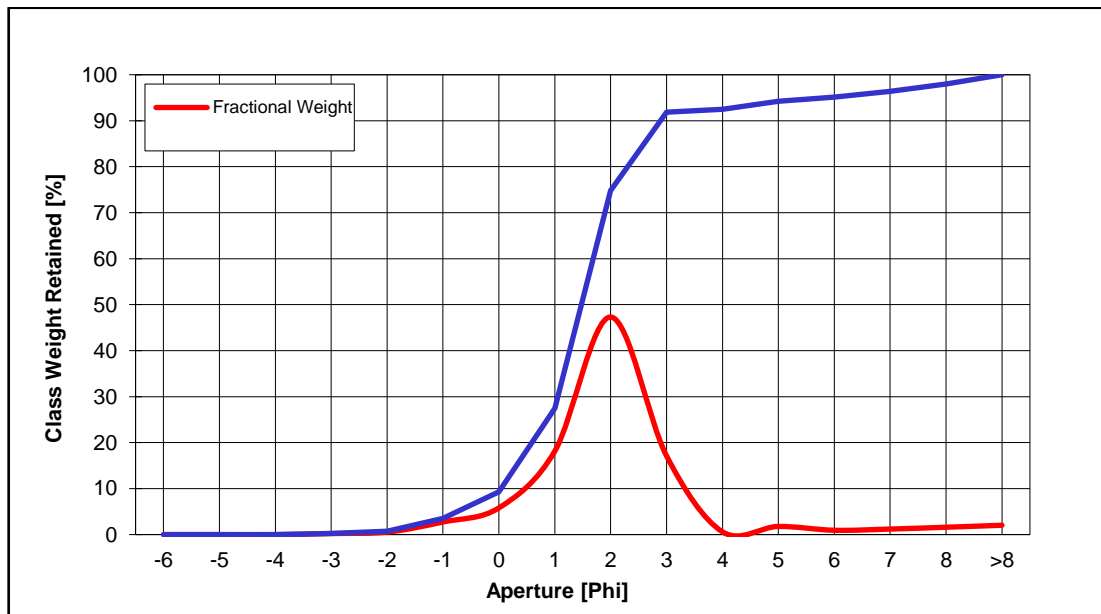
<b>Sorting</b>	1.88	Poorly Sorted
<b>Skewness</b>	0.45	Very Fine Skewed
<b>Kurtosis</b>	2.00	Very Leptokurtic
<b>Mean [µm]</b>	110.7	Very Fine Sand
<b>Mean [phi]</b>	3.18	
<b>Median [µm]</b>	140.5	Fine Sand
<b>Median [phi]</b>	2.83	
<b>Gravel [%]</b>	1.3	Slightly Gravelly Muddy Sand
<b>Sand [%]</b>	79.6	
<b>Mud [%]</b>	19.1	



WF19

Aperture [µm]	Aperture [Phi]	Fractional [%]	Cumulative [%]
63000.0	-6	0.0	0.0
31500.0	-5	0.0	0.0
16000.0	-4	0.0	0.0
8000.0	-3	0.2	0.2
4000.0	-2	0.5	0.8
2000.0	-1	2.7	3.5
1000.0	0	5.8	9.3
500.0	1	18.1	27.5
250.0	2	47.3	74.8
125.0	3	17.1	91.9
62.5	4	0.6	92.5
31.2	5	1.8	94.2
15.6	6	0.9	95.2
7.8	7	1.2	96.4
3.9	8	1.6	98.0
<3.9	>8	2.0	100.0
<b>Total</b>		<b>100.0</b>	<b>100.0</b>

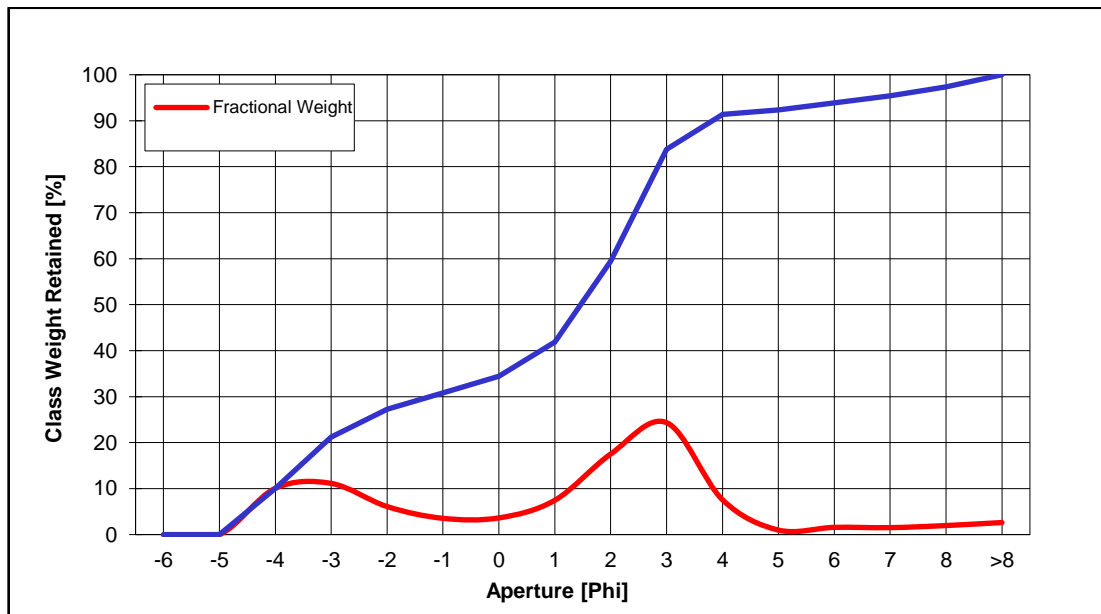
<b>Sorting</b>	1.54	Poorly Sorted
<b>Skewness</b>	0.15	Fine Skewed
<b>Kurtosis</b>	2.34	Very Leptokurtic
<b>Mean [µm]</b>	363.1	Medium Sand
<b>Mean [phi]</b>	1.46	
<b>Median [µm]</b>	359.4	Medium Sand
<b>Median [phi]</b>	1.48	
<b>Gravel [%]</b>	3.5	Slightly Gravelly Sand
<b>Sand [%]</b>	88.9	
<b>Mud [%]</b>	7.5	



WF22

Aperture [µm]	Aperture [Phi]	Fractional [%]	Cumulative [%]
63000.0	-6	0.0	0.0
31500.0	-5	0.0	0.0
16000.0	-4	10.1	10.1
8000.0	-3	11.1	21.2
4000.0	-2	6.1	27.3
2000.0	-1	3.5	30.8
1000.0	0	3.6	34.4
500.0	1	7.5	41.9
250.0	2	17.5	59.4
125.0	3	24.3	83.8
62.5	4	7.6	91.3
31.2	5	1.0	92.3
15.6	6	1.6	93.9
7.8	7	1.5	95.4
3.9	8	2.0	97.4
<3.9	>8	2.6	100.0
<b>Total</b>		<b>100.0</b>	<b>100.0</b>

<b>Sorting</b>	3.32	Very Poorly Sorted
<b>Skewness</b>	-0.29	Coarse Skewed
<b>Kurtosis</b>	0.92	Mesokurtic
<b>Mean [µm]</b>	789.1	Coarse Sand
<b>Mean [phi]</b>	0.34	
<b>Median [µm]</b>	363.0	Medium Sand
<b>Median [phi]</b>	1.46	
<b>Gravel [%]</b>	30.8	Muddy Sandy Gravel
<b>Sand [%]</b>	60.5	
<b>Mud [%]</b>	8.7	

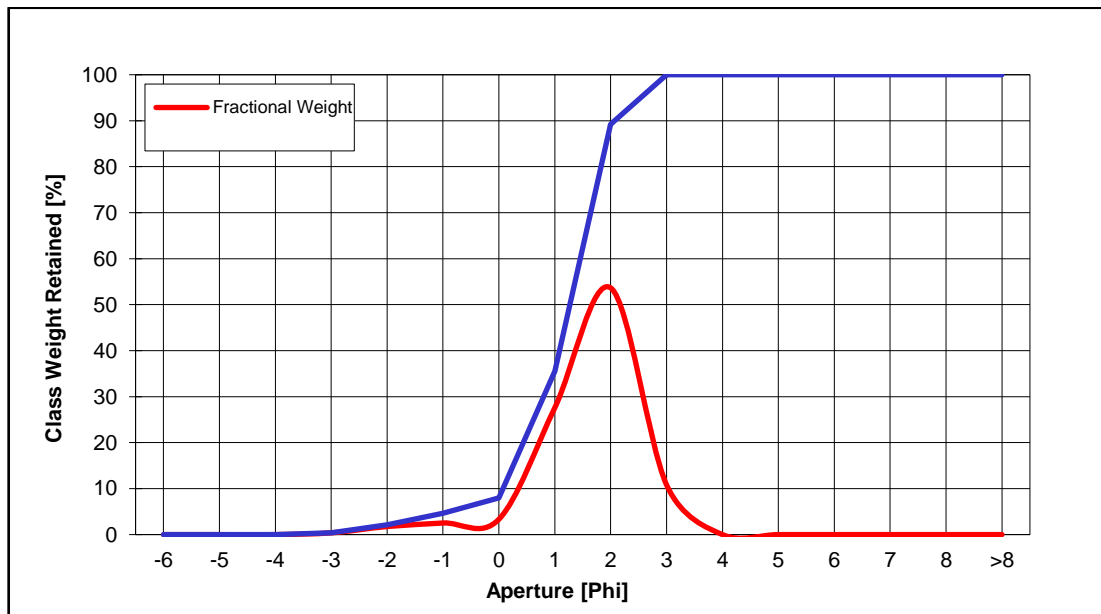




WF25

Aperture [µm]	Aperture [Phi]	Fractional [%]	Cumulative [%]
63000.0	-6	0.0	0.0
31500.0	-5	0.0	0.0
16000.0	-4	0.0	0.0
8000.0	-3	0.4	0.4
4000.0	-2	1.8	2.1
2000.0	-1	2.5	4.6
1000.0	0	3.3	8.0
500.0	1	27.6	35.6
250.0	2	53.6	89.2
125.0	3	10.8	100.0
62.5	4	0.0	100.0
31.2	5	0.0	100.0
15.6	6	0.0	100.0
7.8	7	0.0	100.0
3.9	8	0.0	100.0
<3.9	>8	0.0	100.0
<b>Total</b>		<b>100.0</b>	<b>100.0</b>

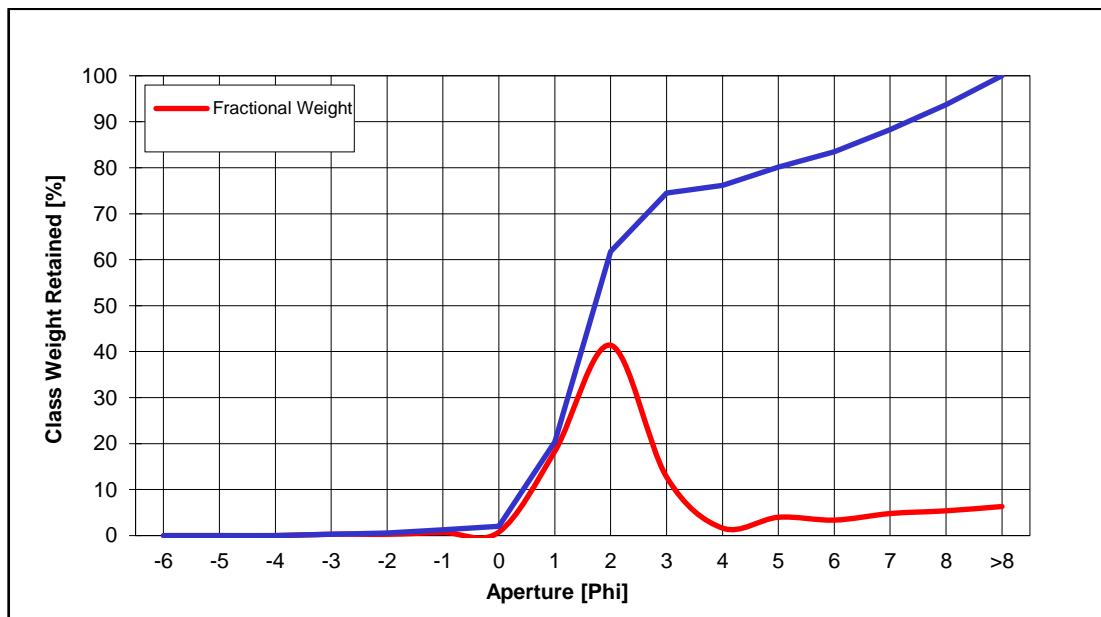
<b>Sorting</b>	0.92	Moderately Sorted
<b>Skewness</b>	-0.24	Coarse Skewed
<b>Kurtosis</b>	1.26	Leptokurtic
<b>Mean [µm]</b>	449.2	Medium Sand
<b>Mean [phi]</b>	1.15	
<b>Median [µm]</b>	414.9	Medium Sand
<b>Median [phi]</b>	1.27	
<b>Gravel [%]</b>	4.6	Slightly Gravelly Sand
<b>Sand [%]</b>	95.4	
<b>Mud [%]</b>	0.0	



WF27

Aperture [µm]	Aperture [Phi]	Fractional [%]	Cumulative [%]
63000.0	-6	0.0	0.0
31500.0	-5	0.0	0.0
16000.0	-4	0.0	0.0
8000.0	-3	0.3	0.3
4000.0	-2	0.3	0.6
2000.0	-1	0.7	1.3
1000.0	0	0.8	2.0
500.0	1	18.3	20.4
250.0	2	41.4	61.8
125.0	3	12.7	74.5
62.5	4	1.6	76.1
31.2	5	4.0	80.1
15.6	6	3.4	83.5
7.8	7	4.8	88.3
3.9	8	5.4	93.7
<3.9	>8	6.3	100.0
<b>Total</b>		<b>100.0</b>	<b>100.0</b>

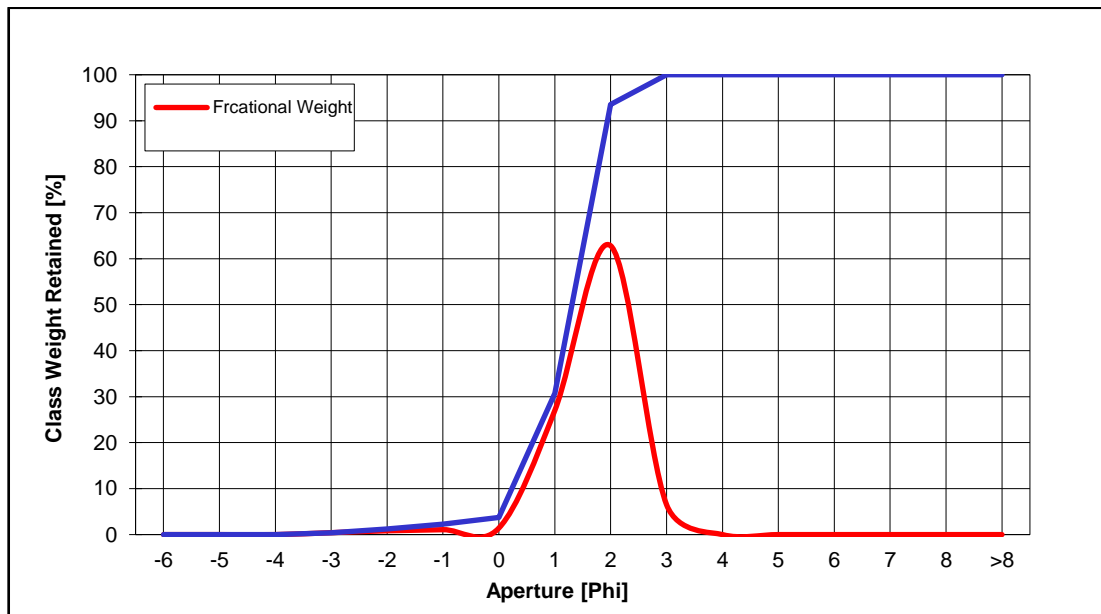
<b>Sorting</b>	2.69	Very Poorly Sorted
<b>Skewness</b>	0.65	Very Fine Skewed
<b>Kurtosis</b>	1.67	Very Leptokurtic
<b>Mean [µm]</b>	137.7	Fine Sand
<b>Mean [phi]</b>	2.86	
<b>Median [µm]</b>	304.5	Medium Sand
<b>Median [phi]</b>	1.72	
<b>Gravel [%]</b>	1.3	Slightly Gravelly Muddy Sand
<b>Sand [%]</b>	74.9	
<b>Mud [%]</b>	23.9	



WF29

Aperture [µm]	Aperture [Phi]	Fractional [%]	Cumulative [%]
63000.0	-6	0.0	0.0
31500.0	-5	0.0	0.0
16000.0	-4	0.0	0.0
8000.0	-3	0.4	0.4
4000.0	-2	0.8	1.2
2000.0	-1	1.1	2.3
1000.0	0	1.4	3.7
500.0	1	27.0	30.7
250.0	2	62.8	93.5
125.0	3	6.5	100.0
62.5	4	0.0	100.0
31.2	5	0.0	100.0
15.6	6	0.0	100.0
7.8	7	0.0	100.0
3.9	8	0.0	100.0
<3.9	>8	0.0	100.0
<b>Total</b>		<b>100.0</b>	<b>100.0</b>

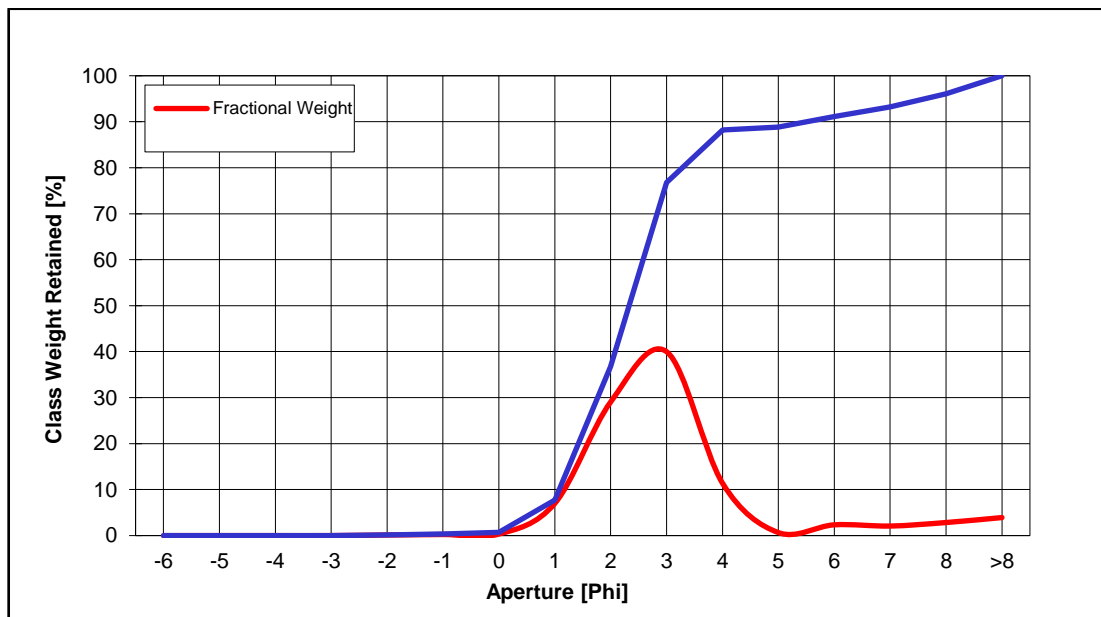
<b>Sorting</b>	0.68	Moderately Well Sorted
<b>Skewness</b>	-0.19	Coarse Skewed
<b>Kurtosis</b>	0.98	Mesokurtic
<b>Mean [µm]</b>	434.2	Medium Sand
<b>Mean [phi]</b>	1.20	
<b>Median [µm]</b>	404.1	Medium Sand
<b>Median [phi]</b>	1.31	
<b>Gravel [%]</b>	2.3	Slightly Gravelly Sand
<b>Sand [%]</b>	97.7	
<b>Mud [%]</b>	0.0	



WF32

Aperture [µm]	Aperture [Phi]	Fractional [%]	Cumulative [%]
63000.0	-6	0.0	0.0
31500.0	-5	0.0	0.0
16000.0	-4	0.0	0.0
8000.0	-3	0.0	0.0
4000.0	-2	0.1	0.1
2000.0	-1	0.2	0.4
1000.0	0	0.3	0.7
500.0	1	7.0	7.7
250.0	2	29.1	36.8
125.0	3	40.0	76.8
62.5	4	11.4	88.2
31.2	5	0.7	88.8
15.6	6	2.3	91.2
7.8	7	2.1	93.2
3.9	8	2.8	96.1
<3.9	>8	3.9	100.0
<b>Total</b>		<b>100.0</b>	<b>100.0</b>

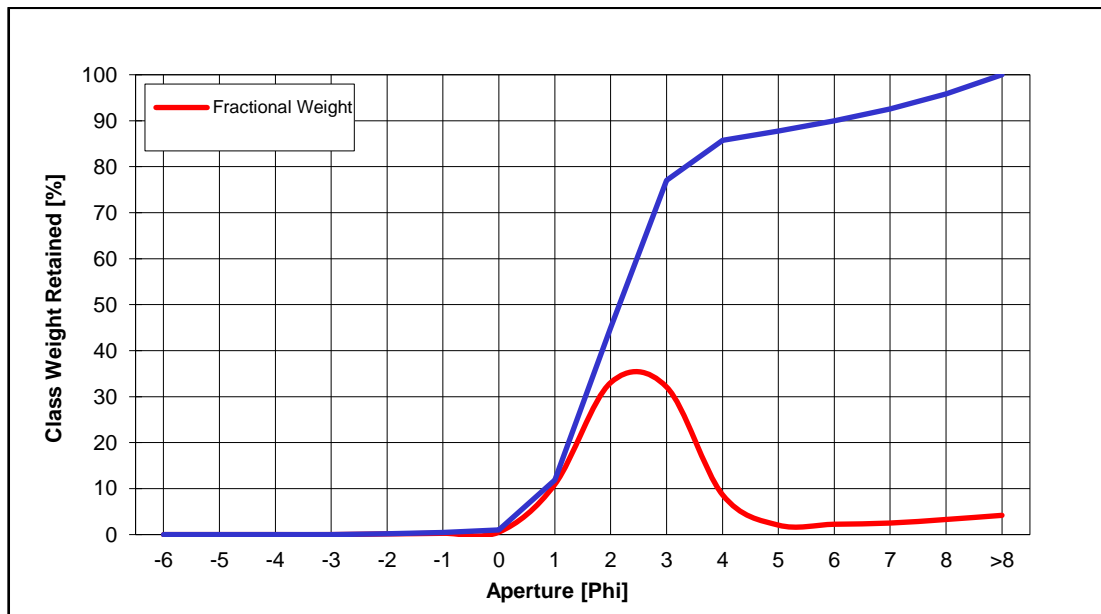
<b>Sorting</b>	1.65	Poorly Sorted
<b>Skewness</b>	0.31	Very Fine Skewed
<b>Kurtosis</b>	2.11	Very Leptokurtic
<b>Mean [µm]</b>	187.3	Fine Sand
<b>Mean [phi]</b>	2.42	
<b>Median [µm]</b>	198.8	Fine Sand
<b>Median [phi]</b>	2.33	
<b>Gravel [%]</b>	0.4	Slightly Gravelly Muddy Sand
<b>Sand [%]</b>	87.8	
<b>Mud [%]</b>	11.8	



WF37

Aperture [µm]	Aperture [Phi]	Fractional [%]	Cumulative [%]
63000.0	-6	0.0	0.0
31500.0	-5	0.0	0.0
16000.0	-4	0.0	0.0
8000.0	-3	0.0	0.0
4000.0	-2	0.1	0.1
2000.0	-1	0.3	0.4
1000.0	0	0.5	1.0
500.0	1	10.9	11.9
250.0	2	33.0	44.9
125.0	3	32.1	77.0
62.5	4	8.7	85.7
31.2	5	2.1	87.8
15.6	6	2.2	90.0
7.8	7	2.5	92.5
3.9	8	3.3	95.8
<3.9	>8	4.2	100.0
<b>Total</b>		<b>100.0</b>	<b>100.0</b>

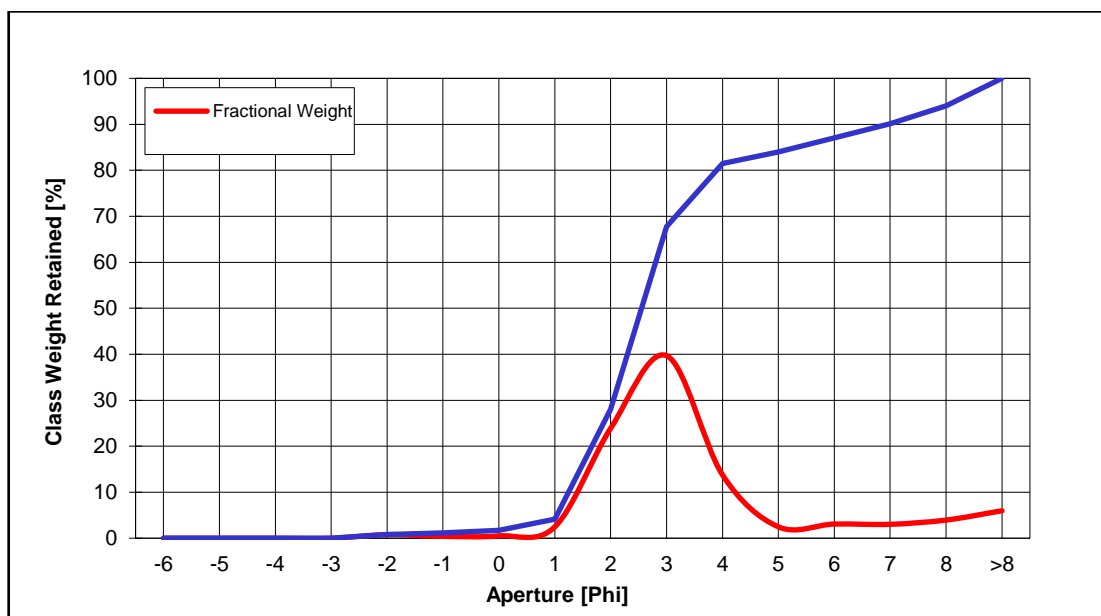
<b>Sorting</b>	1.79	Poorly Sorted
<b>Skewness</b>	0.37	Very Fine Skewed
<b>Kurtosis</b>	1.97	Very Leptokurtic
<b>Mean [µm]</b>	194.6	Fine Sand
<b>Mean [phi]</b>	2.36	
<b>Median [µm]</b>	224.1	Fine Sand
<b>Median [phi]</b>	2.16	
<b>Gravel [%]</b>	0.4	Slightly Gravelly Muddy Sand
<b>Sand [%]</b>	85.3	
<b>Mud [%]</b>	14.3	



WF41

Aperture [µm]	Aperture [Phi]	Fractional [%]	Cumulative [%]
63000.0	-6	0.0	0.0
31500.0	-5	0.0	0.0
16000.0	-4	0.0	0.0
8000.0	-3	0.0	0.0
4000.0	-2	0.8	0.8
2000.0	-1	0.4	1.2
1000.0	0	0.5	1.7
500.0	1	2.5	4.1
250.0	2	23.9	28.0
125.0	3	39.7	67.7
62.5	4	13.8	81.5
31.2	5	2.5	84.0
15.6	6	3.1	87.1
7.8	7	3.0	90.1
3.9	8	3.9	94.0
<3.9	>8	6.0	100.0
<b>Total</b>		100.0	100.0

<b>Sorting</b>	2.06	Very Poorly Sorted
<b>Skewness</b>	0.50	Very Fine Skewed
<b>Kurtosis</b>	1.94	Very Leptokurtic
<b>Mean [µm]</b>	123.5	Very Fine Sand
<b>Mean [phi]</b>	3.02	
<b>Median [µm]</b>	170.4	Fine Sand
<b>Median [phi]</b>	2.55	
<b>Gravel [%]</b>	1.2	Slightly Gravelly Muddy Sand
<b>Sand [%]</b>	80.3	
<b>Mud [%]</b>	18.5	

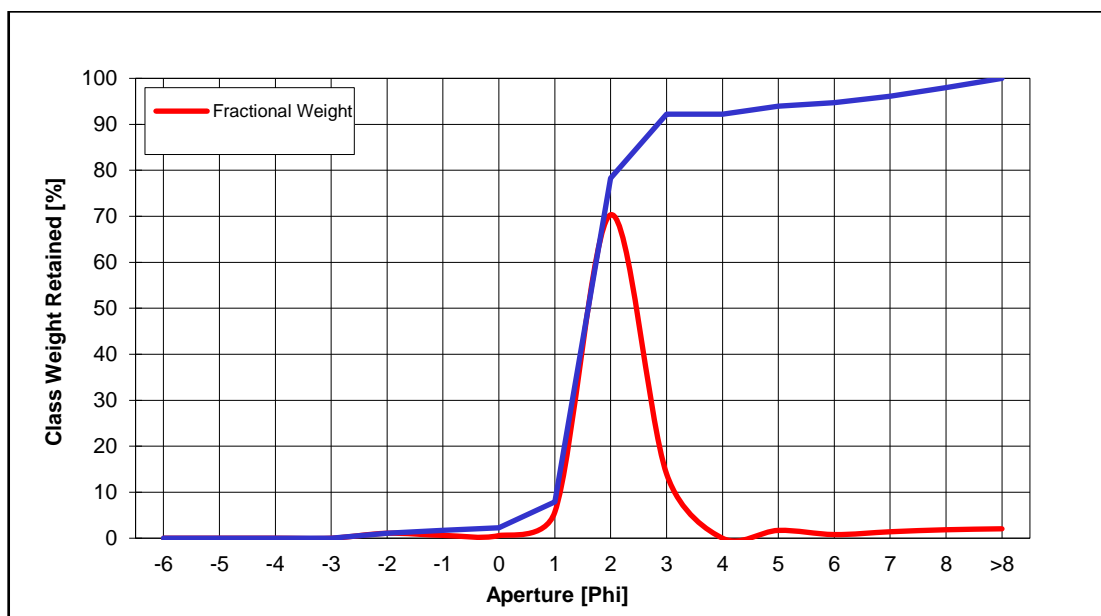




WF45

Aperture [µm]	Aperture [Phi]	Fractional [%]	Cumulative [%]
63000.0	-6	0.0	0.0
31500.0	-5	0.0	0.0
16000.0	-4	0.0	0.0
8000.0	-3	0.0	0.0
4000.0	-2	1.1	1.1
2000.0	-1	0.6	1.7
1000.0	0	0.6	2.3
500.0	1	5.7	7.9
250.0	2	70.3	78.3
125.0	3	14.0	92.2
62.5	4	0.0	92.2
31.2	5	1.7	93.9
15.6	6	0.8	94.7
7.8	7	1.4	96.1
3.9	8	1.8	98.0
<3.9	>8	2.0	100.0
<b>Total</b>		100.0	100.0

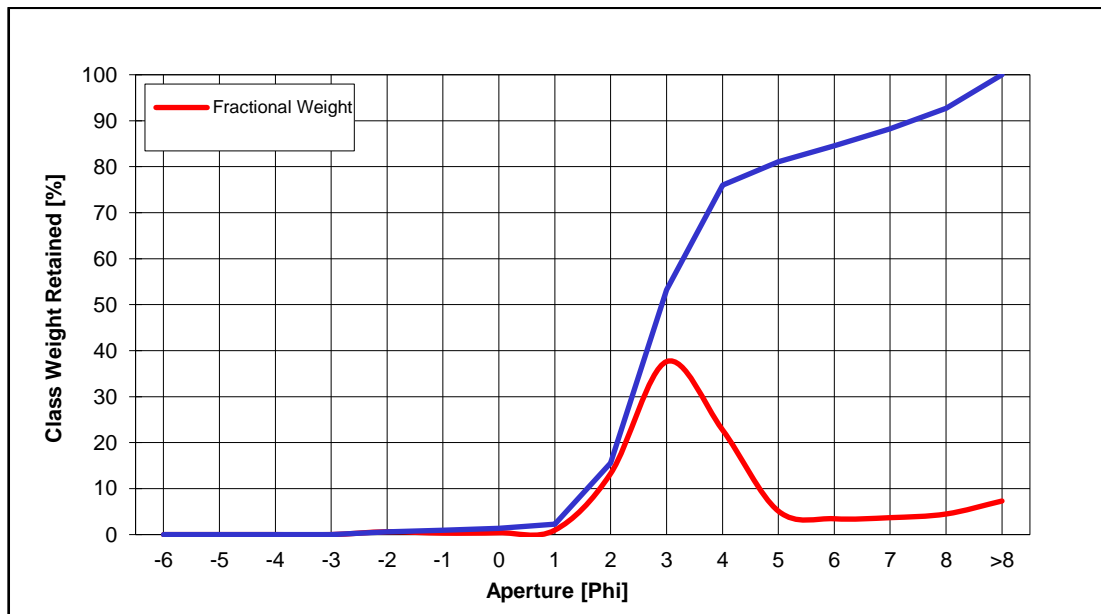
<b>Sorting</b>	1.19	Poorly Sorted
<b>Skewness</b>	0.43	Very Fine Skewed
<b>Kurtosis</b>	3.30	Extremely Leptokurtic
<b>Mean [µm]</b>	306.1	Medium Sand
<b>Mean [phi]</b>	1.71	
<b>Median [µm]</b>	330.3	Medium Sand
<b>Median [phi]</b>	1.60	
<b>Gravel [%]</b>	1.7	Slightly Gravelly Sand
<b>Sand [%]</b>	90.5	
<b>Mud [%]</b>	7.8	



WF47

Aperture [µm]	Aperture [Phi]	Fractional [%]	Cumulative [%]
63000.0	-6	0.0	0.0
31500.0	-5	0.0	0.0
16000.0	-4	0.0	0.0
8000.0	-3	0.0	0.0
4000.0	-2	0.6	0.6
2000.0	-1	0.3	0.9
1000.0	0	0.4	1.3
500.0	1	1.0	2.3
250.0	2	13.3	15.6
125.0	3	37.6	53.2
62.5	4	22.8	76.0
31.2	5	5.1	81.1
15.6	6	3.4	84.5
7.8	7	3.7	88.2
3.9	8	4.5	92.7
<3.9	>8	7.3	100.0
<b>Total</b>		<b>100.0</b>	<b>100.0</b>

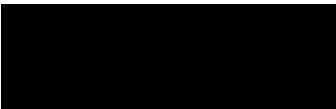
<b>Sorting</b>	2.24	Very Poorly Sorted
<b>Skewness</b>	0.56	Very Fine Skewed
<b>Kurtosis</b>	2.03	Very Leptokurtic
<b>Mean [µm]</b>	83.1	Very Fine Sand
<b>Mean [phi]</b>	3.59	
<b>Median [µm]</b>	132.6	Fine Sand
<b>Median [phi]</b>	2.91	
<b>Gravel [%]</b>	0.9	Slightly Gravelly Muddy Sand
<b>Sand [%]</b>	75.1	
<b>Mud [%]</b>	24.0	






**D.1.2 PSD Samples Certificate of Analysis**

<b>Certificate Number:</b>	EP/17/4728	<b>Fugro EMU Job Number:</b>	160975
<b>Job Reference:</b>	Thanet Extension Benthic Survey		
<b>Prepared For</b>	<b>Prepared By</b>		
Vattenfall	<b>James Hutchinson</b> <b>Fugro EMU Limited</b> Trafalgar Wharf (Unit 16) Hamilton Road Portchester Portsmouth PO6 4PX United Kingdom		
	<b>Phone:</b> +44 (0) 2392 205500 <b>Email:</b> <a href="mailto:sediment@fugroemu.com">sediment@fugroemu.com</a> <b>Web:</b> <a href="http://www.fugroemu.com">www.fugroemu.com</a>		

<b>Sampling Undertaken By:</b>	Fugro EMU	<b>Sampling Date:</b>	12/11/2016 – 05/12/2016
<b>Date of Receipt:</b>	16/11/2016 – 06/12/2016	<b>Date of Analysis:</b>	03/01/2017 – 09/01/2017
<b>Sample Matrix:</b>	Marine Sediments		
<b>Method Reference:</b>	Particle Size Distribution by Dry Sieving – Fugro EMU MET/01 based on BS1377: 1990: Parts 1 – 2, and *Fugro EMU MET/48 based on the NMBAQC PSA SOP for supporting biological data. *Particle Size Distribution by Laser Diffraction – Fugro EMU MET/50 based on BS ISO 13320: 2009. *Organic Content by Loss on Ignition @ 440°C for 4 hours – Fugro EMU MET/01 based on clause 4 of BS1377: Part 3: 1990.		
<b>Test Results:</b>	Refer to pages 2-5 of 5		
<b>Laboratory Comments:</b>	None		
<b>Authorised Signature:</b>			
<b>Name:</b>	James Hutchinson		
<b>Position:</b>	Sediment Laboratory Manager		
<b>Issue Date:</b>	11/01/2017		

<ul style="list-style-type: none"> <li>• Further information on methods of analysis may be obtained from the above address</li> <li>• Opinions and interpretations expressed herein are outside the scope of UKAS accreditation</li> <li>• *Indicates determinand not included in UKAS accreditation</li> <li>• Test results reported relate only to those items tested</li> <li>• <sup>Sub</sup>Indicates subcontracted test</li> <li>• <sup>DS</sup>Indicates relevant Deviating Code applies to test results</li> </ul>	<p><b>A UKAS TESTING LABORATORY</b></p>  <p>1272</p>
Fugro EMU Limited. Incorporated in England No. 3469947. Reg. Office: Fugro House, Hithercroft Road, Wallingford, Oxfordshire, OX10 9RB	

**FUGRO EMU LIMITED  
CERTIFICATE OF ANALYSIS**



**Test Results:** Particle Size Distribution by Dry Sieving (63000 - 1000 µm) and Laser Diffraction (<1000 - < 3.91 µm) @ 1 Phi Intervals  
**Fugro EMU Job Number:** 160975  
**Job Reference:** Thanet Extension Benthic Survey

SAMPLE ID:	CR01	CR02	CR03	WF01	WF02	WF03	WF04	WF05	WF06
LAB ID:	WL032616	WL032617	WL032618	WL032619	WL032620	WL032621	WL032622	WL032623	WL032624
Aperture [µm]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]
63000	0.00	62.42	0.00	0.00	0.00	0.00	0.00	0.00	0.00
31500	51.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16000	5.93	10.36	0.00	11.27	0.00	0.00	0.00	0.00	0.00
8000	10.20	7.30	0.00	12.43	0.24	0.00	0.00	0.00	0.00
4000	3.67	4.64	0.43	3.82	2.20	1.78	0.26	0.39	0.12
2000	1.80	2.27	0.65	2.89	2.12	1.13	0.20	0.47	0.22
1000	1.46	1.39	1.84	2.89	2.56	1.03	0.48	1.58	0.26
500	8.81	3.40	5.24	12.47	34.26	16.17	12.62	28.55	11.00
250	10.03	4.50	63.99	45.60	36.78	51.99	38.49	60.38	32.59
125	3.53	2.47	27.85	8.63	5.04	9.22	24.30	6.30	29.63
63	0.92	0.47	0.00	0.00	2.40	0.35	5.73	0.00	14.06
31.25	0.39	0.17	0.00	0.00	2.98	2.89	3.09	0.00	2.97
15.63	0.22	0.13	0.00	0.00	2.40	2.37	2.44	0.08	1.45
7.81	0.30	0.13	0.00	0.00	3.21	3.75	3.32	0.75	1.94
3.91	0.37	0.16	0.00	0.00	2.92	4.24	4.08	0.79	2.34
< 3.91	0.49	0.19	0.00	0.00	2.89	5.08	4.98	0.71	3.40
<b>TOTAL:</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

**FUGRO EMU LIMITED  
CERTIFICATE OF ANALYSIS**



**Test Results:** Particle Size Distribution by Dry Sieving (63000 - 1000 µm) and Laser Diffraction (<1000 - < 3.91 µm) @ 1 Phi Intervals  
**Fugro EMU Job Number:** 160975  
**Job Reference:** Thanet Extension Benthic Survey

SAMPLE ID:	WF07	WF08	WF09	WF10	WF11	WF12	WF14	WF19	WF22
LAB ID:	WL032625	WL032626	WL032627	WL032628	WL032629	WL032630	WL032631	WL032632	WL032633
Aperture [µm]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]	Fractional [%]
<b>63000</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>31500</b>	0.00	0.00	45.41	61.72	54.20	22.17	0.00	0.00	0.00
<b>16000</b>	0.00	0.00	5.21	13.33	15.24	34.57	0.00	0.00	10.06
<b>8000</b>	3.67	0.20	3.40	10.18	3.09	4.34	0.82	0.22	11.13
<b>4000</b>	1.92	0.36	2.79	1.14	1.05	3.35	0.16	0.54	6.10
<b>2000</b>	1.63	0.47	2.34	1.00	1.02	1.45	0.31	2.74	3.53
<b>1000</b>	2.11	0.83	2.48	1.06	1.22	2.01	0.56	5.80	3.63
<b>500</b>	6.17	7.10	7.94	3.81	8.16	10.09	2.41	18.15	7.46
<b>250</b>	27.01	36.60	13.42	4.75	10.52	13.31	13.12	47.31	17.52
<b>125</b>	33.81	35.37	8.38	1.73	3.19	5.37	39.25	17.09	24.35
<b>63</b>	9.19	5.44	2.37	0.33	0.53	1.04	24.26	0.60	7.57
<b>31.25</b>	2.19	1.91	1.05	0.19	0.35	0.46	3.90	1.77	0.99
<b>15.63</b>	2.36	2.37	0.84	0.11	0.21	0.29	2.75	0.94	1.57
<b>7.81</b>	2.58	2.32	1.04	0.15	0.30	0.36	3.03	1.21	1.51
<b>3.91</b>	3.28	3.00	1.36	0.20	0.39	0.47	3.69	1.60	1.97
<b>&lt; 3.91</b>	4.07	4.04	1.95	0.30	0.51	0.72	5.75	2.03	2.62
<b>TOTAL:</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

**FUGRO EMU LIMITED  
CERTIFICATE OF ANALYSIS**



**Test Results:** Particle Size Distribution by Dry Sieving (63000 - 1000 µm) and Laser Diffraction (<1000 - < 3.91 µm) @ 1 Phi Intervals  
**Fugro EMU Job Number:** 160975  
**Job Reference:** Thanet Extension Benthic Survey

<b>SAMPLE ID:</b>	<b>WF25</b>	<b>WF27</b>	<b>WF29</b>	<b>WF32</b>	<b>WF37</b>	<b>WF41</b>	<b>WF45</b>	<b>WF47</b>
<b>LAB ID:</b>	<b>WL032634</b>	<b>WL032635</b>	<b>WL032636</b>	<b>WL032637</b>	<b>WL032638</b>	<b>WL032639</b>	<b>WL032640</b>	<b>WL032641</b>
<b>Aperture [µm]</b>	<b>Fractional [%]</b>	<b>Fractional [%]</b>	<b>Fractional [%]</b>	<b>Fractional [%]</b>	<b>Fractional [%]</b>	<b>Fractional [%]</b>	<b>Fractional [%]</b>	<b>Fractional [%]</b>
<b>63000</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>31500</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>16000</b>	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>8000</b>	0.38	0.30	0.41	0.00	0.00	0.00	0.00	0.00
<b>4000</b>	1.75	0.29	0.82	0.13	0.15	0.78	1.07	0.61
<b>2000</b>	2.52	0.67	1.06	0.23	0.28	0.40	0.62	0.32
<b>1000</b>	3.33	0.77	1.42	0.34	0.55	0.50	0.57	0.40
<b>500</b>	27.58	18.33	26.99	7.00	10.92	2.46	5.67	0.96
<b>250</b>	53.65	41.40	62.80	29.06	33.05	23.90	70.33	13.30
<b>125</b>	10.80	12.73	6.49	40.00	32.09	39.71	13.97	37.62
<b>63</b>	0.00	1.64	0.00	11.40	8.68	13.77	0.00	22.79
<b>31.25</b>	0.00	3.98	0.00	0.65	2.06	2.47	1.70	5.10
<b>15.63</b>	0.00	3.37	0.00	2.34	2.25	3.08	0.79	3.44
<b>7.81</b>	0.00	4.79	0.00	2.08	2.51	3.02	1.40	3.68
<b>3.91</b>	0.00	5.39	0.00	2.84	3.29	3.94	1.84	4.48
<b>&lt; 3.91</b>	0.00	6.32	0.00	3.92	4.19	5.97	2.04	7.30
<b>TOTAL:</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

**FUGRO EMU LIMITED**  
**CERTIFICATE OF ANALYSIS**



**Test Results:** Organic Content by Loss on Ignition @ 440°C for 4 hours  
**Fugro EMU Job Number:** 160975  
**Job Reference:** Thanet Extension Benthic Survey

Sample ID	Lab ID	% Organic Content [<2mm]
CR01	WL032616	1.11
CR02	WL032617	1.15
CR03	WL032618	0.52
WF01	WL032619	0.66
WF02	WL032620	1.24
WF03	WL032621	1.51
WF04	WL032622	1.34
WF05	WL032623	0.83
WF06	WL032624	1.14
WF07	WL032625	1.29
WF08	WL032626	1.25
WF09	WL032627	1.43
WF10	WL032628	1.15
WF11	WL032629	1.15
WF12	WL032630	1.19
WF14	WL032631	1.30
WF19	WL032632	0.79
WF22	WL032633	1.34
WF25	WL032634	0.69
WF27	WL032635	1.01
WF29	WL032636	0.60
WF32	WL032637	0.94
WF37	WL032638	0.97
WF41	WL032639	1.11
WF45	WL032640	0.67
WF47	WL032641	1.22



**D.2 Chemistry Analysis Results and Certificate of the Analysis**

Client: Fugro EMU Ltd Project: 13881 Vattenfall - Marine Sediment  
 Quote Description: Marine Sediment  
 Folder No: 003754519 Sampled on: 5-Dec-16 @ 13:45  
 Comments: 160975 CR10  
 Quote No: 13881 Matrix: Sediment

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Flag</u>	<u>MRV</u>	<u>Accred</u>	<u>Lab ID</u>	<u>Testcode</u>
Hydrocarbons : Total : Dry Wt as Ekofisk	<0.9	mg/kg		0.9	UKAS	LE	402
Mercury : Dry Wt	<0.01	mg/kg		0.01	UKAS	LE	1042
Arsenic : Dry Wt	60.1	mg/kg		1	UKAS	LE	1041
Cadmium : Dry Wt	<0.04	mg/kg		0.04	UKAS	LE	1041
Chromium : Dry Wt	8.70	mg/kg		2	UKAS	LE	1041
Copper : Dry Wt	1.67	mg/kg		1	UKAS	LE	1041
Lead : Dry Wt	10.3	mg/kg		2	UKAS	LE	1041
Lithium : Dry Wt	3.00	mg/kg		0.3	None	LE	1041
Manganese : Dry Wt	417	mg/kg		0.2	UKAS	LE	1041
Nickel : Dry Wt	7.80	mg/kg		1	UKAS	LE	1041
Vanadium : Dry Wt	43.0	mg/kg		0.1	UKAS	LE	1041
Zinc : Dry Wt	33.0	mg/kg		2.5	UKAS	LE	1041
Acenaphthene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Acenaphthylene : Dry Wt	<1	ug/kg		1	None	LE	1051
Anthracene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Benzo(a)anthracene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Benzo(a)pyrene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Benzo(b)fluoranthene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Benzo(e) pyrene : Dry Wt	<5	ug/kg		5	UKAS	LE	1051
Benzo(ghi)perylene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Benzo(j)fluoranthene : Dry Wt	<10	ug/kg		10	None	LE	1051
Benzo(k)fluoranthene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Chrysene : Dry Wt	<3	ug/kg		3	UKAS	LE	1051
Chrysene + Triphenylene : Dry Wt	<3	ug/kg		3	None	LE	1051
Dibenzo(ah)anthracene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Dibenzothiophene : Dry Wt	<5	ug/kg		5	None	LE	1051
Fluoranthene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Fluorene : Dry Wt	<5	ug/kg		5	UKAS	LE	1051
Indeno(1,2,3-c,d)pyrene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Naphthalene : Dry Wt	<5	ug/kg		5	UKAS	LE	1051
Perylene : Dry Wt	<5	ug/kg		5	None	LE	1051
Phenanthrene : Dry Wt	<5	ug/kg		5	UKAS	LE	1051
Pyrene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Triphenylene : Dry Wt	<2	ug/kg		2	None	LE	1051
PCB - 028 : Dry Wt	<0.1	ug/kg		0.1	UKAS	LE	685
PCB - 052 : Dry Wt	<0.1	ug/kg		0.1	UKAS	LE	685

PCB - 101 : Dry Wt	<0.1	ug/kg	0.1	UKAS	LE	685
PCB - 118 : Dry Wt	<0.1	ug/kg	0.1	UKAS	LE	685
PCB - 138 : Dry Wt	<0.1	ug/kg	0.1	UKAS	LE	685
PCB - 153 : Dry Wt	<0.1	ug/kg	0.1	UKAS	LE	685
PCB - 180 : Dry Wt	<0.1	ug/kg	0.1	UKAS	LE	685
Dibutyl Tin : Dry Wt as Cation	<4	ug/kg	3	UKAS	LE	897
		ELEVATED_MRV : Dry weight calculation				
Diocetyl Tin : Dry Wt as Cation	<4	ug/kg	3	None	LE	897
		ELEVATED_MRV : Dry weight calculation				
Tetrabutyl Tin : Dry Wt as Cation	<2	ug/kg	2	UKAS	LE	897
Tributyl Tin : Dry Wt as Cation	<4	ug/kg	3	UKAS	LE	897
		ELEVATED_MRV : Dry weight calculation				
Triphenyl Tin : Dry Wt as Cation	<2	ug/kg	2	UKAS	LE	897
Dry Solids @ 30°C	82.9	%	0.5	None	LE	1130
Accreditation Assessment	2	No.	1	None	LE	924
Additional Material Present	Report	Text			LE	924

	Plant+Stones+Shells				
Drying Method	Report	Text			LE 924
	Air dried at 30°C				
Rejected Matter Description	Report	Text			LE 924
	No material removed				
Sample Colour	Report	Text			LE 924
	Brown				
Sample Matrix	Report	Text			LE 924
	Sandy Sediment				
Sample Preparation	Report	Text			LE 924
	Homogenised, Jaw Crushed & Sieved to <2mm				

Client: Fugro EMU Ltd Project: 13881 Vattenfall - Marine Sediment  
 Quote Description: Marine Sediment  
 Folder No: 003754521 Sampled on: 12-Nov-16 @ 23:26  
 Comments: 160975 WF01  
 Quote No: 13881 Matrix: Sediment

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Flag</u>	<u>MRV</u>	<u>Accred</u>	<u>Lab ID</u>	<u>Testcode</u>
Hydrocarbons : Total : Dry Wt as Ekofisk	<0.9	mg/kg		0.9	UKAS	LE	402
Mercury : Dry Wt	<0.01	mg/kg		0.01	UKAS	LE	1042
Arsenic : Dry Wt	26.3	mg/kg		1	UKAS	LE	1041
Cadmium : Dry Wt	<0.04	mg/kg		0.04	UKAS	LE	1041
Chromium : Dry Wt	6.70	mg/kg		2	UKAS	LE	1041
Copper : Dry Wt	<1	mg/kg		1	UKAS	LE	1041
Lead : Dry Wt	7.00	mg/kg		2	UKAS	LE	1041
Lithium : Dry Wt	2.80	mg/kg		0.3	None	LE	1041
Manganese : Dry Wt	166	mg/kg		0.2	UKAS	LE	1041
Nickel : Dry Wt	3.80	mg/kg		1	UKAS	LE	1041
Vanadium : Dry Wt	25.0	mg/kg		0.1	UKAS	LE	1041
Zinc : Dry Wt	17.0	mg/kg		2.5	UKAS	LE	1041
Acenaphthene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Acenaphthylene : Dry Wt	<1	ug/kg		1	None	LE	1051
Anthracene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Benzo(a)anthracene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Benzo(a)pyrene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Benzo(b)fluoranthene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Benzo(e) pyrene : Dry Wt	<5	ug/kg		5	UKAS	LE	1051
Benzo(ghi)perylene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Benzo(j)fluoranthene : Dry Wt	<10	ug/kg		10	None	LE	1051
Benzo(k)fluoranthene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Chrysene : Dry Wt	<3	ug/kg		3	UKAS	LE	1051
Chrysene + Triphenylene : Dry Wt	<3	ug/kg		3	None	LE	1051
Dibenzo(ah)anthracene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Dibenzothiophene : Dry Wt	<5	ug/kg		5	None	LE	1051
Fluoranthene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Fluorene : Dry Wt	<5	ug/kg		5	UKAS	LE	1051
Indeno(1,2,3-c,d)pyrene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Naphthalene : Dry Wt	<5	ug/kg		5	UKAS	LE	1051
Perylene : Dry Wt	<5	ug/kg		5	None	LE	1051
Phenanthrene : Dry Wt	<5	ug/kg		5	UKAS	LE	1051
Pyrene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Triphenylene : Dry Wt	<2	ug/kg		2	None	LE	1051
PCB - 028 : Dry Wt	<0.1	ug/kg		0.1	UKAS	LE	685
PCB - 052 : Dry Wt	<0.1	ug/kg		0.1	UKAS	LE	685

PCB - 101 : Dry Wt	<0.1	ug/kg	0.1	UKAS	LE	685
PCB - 118 : Dry Wt	<0.1	ug/kg	0.1	UKAS	LE	685
PCB - 138 : Dry Wt	<0.1	ug/kg	0.1	UKAS	LE	685
PCB - 153 : Dry Wt	<0.1	ug/kg	0.1	UKAS	LE	685
PCB - 180 : Dry Wt	<0.1	ug/kg	0.1	UKAS	LE	685
Dibutyl Tin : Dry Wt as Cation	<4	ug/kg	3	UKAS	LE	897
		ELEVATED_MRV : Dry weight calculation				
Diocetyl Tin : Dry Wt as Cation	<4	ug/kg	3	None	LE	897
		ELEVATED_MRV : Dry weight calculation				
Tetrabutyl Tin : Dry Wt as Cation	<2	ug/kg	2	UKAS	LE	897
Tributyl Tin : Dry Wt as Cation	<4	ug/kg	3	UKAS	LE	897
		ELEVATED_MRV : Dry weight calculation				
Triphenyl Tin : Dry Wt as Cation	<2	ug/kg	2	UKAS	LE	897
Dry Solids @ 30°C	81.0	%	0.5	None	LE	1130
Accreditation Assessment	2	No.	1	None	LE	924
Additional Material Present	Report	Text			LE	924

	Stones and Shells					
Drying Method	Report	Text			LE	924
	Air dried at 30°C					
Rejected Matter Description	Report	Text			LE	924
	No material removed					
Sample Colour	Report	Text			LE	924
	Brown					
Sample Matrix	Report	Text			LE	924
	Sandy Sediment					
Sample Preparation	Report	Text			LE	924
	Homogenised, Jaw Crushed & Sieved to <2mm					

Client: Fugro EMU Ltd Project: 13881 Vattenfall - Marine Sediment  
 Quote Description: Marine Sediment  
 Folder No: 003754526 Sampled on: 12-Nov-16 @ 21:23  
 Comments: 160975 WF29  
 Quote No: 13881 Matrix: Sediment

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Flag</u>	<u>MRV</u>	<u>Accred</u>	<u>Lab ID</u>	<u>Testcode</u>
Hydrocarbons : Total : Dry Wt as Ekofisk	8.45	mg/kg		0.9	UKAS	LE	402
Mercury : Dry Wt	<0.01	mg/kg		0.01	UKAS	LE	1042
Arsenic : Dry Wt	34.4	mg/kg		1	UKAS	LE	1041
Cadmium : Dry Wt	<0.04	mg/kg		0.04	UKAS	LE	1041
Chromium : Dry Wt	7.40	mg/kg		2	UKAS	LE	1041
Copper : Dry Wt	1.46	mg/kg		1	UKAS	LE	1041
Lead : Dry Wt	9.67	mg/kg		2	UKAS	LE	1041
Lithium : Dry Wt	5.20	mg/kg		0.3	None	LE	1041
Manganese : Dry Wt	204	mg/kg		0.2	UKAS	LE	1041
Nickel : Dry Wt	4.80	mg/kg		1	UKAS	LE	1041
Vanadium : Dry Wt	34.0	mg/kg		0.1	UKAS	LE	1041
Zinc : Dry Wt	23.2	mg/kg		2.5	UKAS	LE	1041
Acenaphthene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Acenaphthylene : Dry Wt	<1	ug/kg		1	None	LE	1051
Anthracene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Benzo(a)anthracene : Dry Wt	1.16	ug/kg		1	UKAS	LE	1051
Benzo(a)pyrene : Dry Wt	2.04	ug/kg		1	UKAS	LE	1051
Benzo(b)fluoranthene : Dry Wt	2.65	ug/kg		1	UKAS	LE	1051
Benzo(e) pyrene : Dry Wt	<5	ug/kg		5	UKAS	LE	1051
Benzo(ghi)perylene : Dry Wt	1.95	ug/kg		1	UKAS	LE	1051
Benzo(j)fluoranthene : Dry Wt	<10	ug/kg		10	None	LE	1051
Benzo(k)fluoranthene : Dry Wt	1.18	ug/kg		1	UKAS	LE	1051
Chrysene : Dry Wt	<3	ug/kg		3	UKAS	LE	1051
Chrysene + Triphenylene : Dry Wt	<3	ug/kg		3	None	LE	1051
Dibenzo(ah)anthracene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Dibenzothiophene : Dry Wt	<5	ug/kg		5	None	LE	1051
Fluoranthene : Dry Wt	2.46	ug/kg		1	UKAS	LE	1051
Fluorene : Dry Wt	<5	ug/kg		5	UKAS	LE	1051
Indeno(1,2,3-c,d)pyrene : Dry Wt	2.04	ug/kg		1	UKAS	LE	1051
Naphthalene : Dry Wt	<5	ug/kg		5	UKAS	LE	1051
Perylene : Dry Wt	<5	ug/kg		5	None	LE	1051
Phenanthrene : Dry Wt	<5	ug/kg		5	UKAS	LE	1051
Pyrene : Dry Wt	2.20	ug/kg		1	UKAS	LE	1051
Triphenylene : Dry Wt	<2	ug/kg		2	None	LE	1051
PCB - 028 : Dry Wt	<0.1	ug/kg		0.1	UKAS	LE	685
PCB - 052 : Dry Wt	<0.1	ug/kg		0.1	UKAS	LE	685

PCB - 101 : Dry Wt	<0.1	ug/kg	0.1	UKAS	LE	685
PCB - 118 : Dry Wt	<0.1	ug/kg	0.1	UKAS	LE	685
PCB - 138 : Dry Wt	<0.1	ug/kg	0.1	UKAS	LE	685
PCB - 153 : Dry Wt	<0.1	ug/kg	0.1	UKAS	LE	685
PCB - 180 : Dry Wt	<0.1	ug/kg	0.1	UKAS	LE	685
Dibutyl Tin : Dry Wt as Cation	<4	ug/kg	3	UKAS	LE	897
		ELEVATED_MRV : Dry weight calculation				
Diocetyl Tin : Dry Wt as Cation	<4	ug/kg	3	None	LE	897
		ELEVATED_MRV : Dry weight calculation				
Tetrabutyl Tin : Dry Wt as Cation	<3	ug/kg	2	UKAS	LE	897
		ELEVATED_MRV : Dry weight calculation				
Tributyl Tin : Dry Wt as Cation	<4	ug/kg	3	UKAS	LE	897
		ELEVATED_MRV : Dry weight calculation				
Triphenyl Tin : Dry Wt as Cation	<3	ug/kg	2	UKAS	LE	897
		ELEVATED_MRV : Dry weight calculation				
Dry Solids @ 30°C	77.2	%	0.5	None	LE	1130
Accreditation Assessment	2	No.	1	None	LE	924
Additional Material Present	Report	Text			LE	924

Stones and Shells
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Drying Method	Report	Text	LE	924
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Air dried at 30°C
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Rejected Matter Description	Report	Text	LE	924
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No material removed
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Sample Colour	Report	Text	LE	924
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Brown
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Sample Matrix	Report	Text	LE	924
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Sandy Sediment
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Sample Preparation	Report	Text	LE	924
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Homogenised, Jaw Crushed & Sieved to <2mm
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Client: Fugro EMU Ltd Project: 13881 Vattenfall - Marine Sediment  
 Quote Description: Marine Sediment  
 Folder No: 003754527 Sampled on: 13-Nov-16 @ 23:27  
 Comments: 160975 WF12  
 Quote No: 13881 Matrix: Sediment

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Flag</u>	<u>MRV</u>	<u>Accred</u>	<u>Lab ID</u>	<u>Testcode</u>
Hydrocarbons : Total : Dry Wt as Ekofisk	7.37	mg/kg		0.9	UKAS	LE	402
Mercury : Dry Wt	<0.01	mg/kg		0.01	UKAS	LE	1042
Arsenic : Dry Wt	26.0	mg/kg		1	UKAS	LE	1041
Cadmium : Dry Wt	<0.04	mg/kg		0.04	UKAS	LE	1041
Chromium : Dry Wt	9.20	mg/kg		2	UKAS	LE	1041
Copper : Dry Wt	1.44	mg/kg		1	UKAS	LE	1041
Lead : Dry Wt	9.91	mg/kg		2	UKAS	LE	1041
Lithium : Dry Wt	3.70	mg/kg		0.3	None	LE	1041
Manganese : Dry Wt	180	mg/kg		0.2	UKAS	LE	1041
Nickel : Dry Wt	4.80	mg/kg		1	UKAS	LE	1041
Vanadium : Dry Wt	35.3	mg/kg		0.1	UKAS	LE	1041
Zinc : Dry Wt	30.0	mg/kg		2.5	UKAS	LE	1041
Acenaphthene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Acenaphthylene : Dry Wt	<1	ug/kg		1	None	LE	1051
Anthracene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Benzo(a)anthracene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Benzo(a)pyrene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Benzo(b)fluoranthene : Dry Wt	1.50	ug/kg		1	UKAS	LE	1051
Benzo(e) pyrene : Dry Wt	<5	ug/kg		5	UKAS	LE	1051
Benzo(ghi)perylene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Benzo(j)fluoranthene : Dry Wt	<10	ug/kg		10	None	LE	1051
Benzo(k)fluoranthene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Chrysene : Dry Wt	<3	ug/kg		3	UKAS	LE	1051
Chrysene + Triphenylene : Dry Wt	<3	ug/kg		3	None	LE	1051
Dibenzo(ah)anthracene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Dibenzothiophene : Dry Wt	<5	ug/kg		5	None	LE	1051
Fluoranthene : Dry Wt	1.44	ug/kg		1	UKAS	LE	1051
Fluorene : Dry Wt	<5	ug/kg		5	UKAS	LE	1051
Indeno(1,2,3-c,d)pyrene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Naphthalene : Dry Wt	<5	ug/kg		5	UKAS	LE	1051
Perylene : Dry Wt	<5	ug/kg		5	None	LE	1051
Phenanthrene : Dry Wt	<5	ug/kg		5	UKAS	LE	1051
Pyrene : Dry Wt	1.51	ug/kg		1	UKAS	LE	1051
Triphenylene : Dry Wt	<2	ug/kg		2	None	LE	1051
PCB - 028 : Dry Wt	<0.1	ug/kg		0.1	UKAS	LE	685
PCB - 052 : Dry Wt	<0.1	ug/kg		0.1	UKAS	LE	685



PCB - 101 : Dry Wt	<0.1	ug/kg	0.1	UKAS	LE	685
PCB - 118 : Dry Wt	<0.1	ug/kg	0.1	UKAS	LE	685
PCB - 138 : Dry Wt	<0.1	ug/kg	0.1	UKAS	LE	685
PCB - 153 : Dry Wt	<0.1	ug/kg	0.1	UKAS	LE	685
PCB - 180 : Dry Wt	<0.1	ug/kg	0.1	UKAS	LE	685
Dibutyl Tin : Dry Wt as Cation	<4	ug/kg	3	UKAS	LE	897
		ELEVATED_MRV : Dry weight calculation				
Diocetyl Tin : Dry Wt as Cation	<4	ug/kg	3	None	LE	897
		ELEVATED_MRV : Dry weight calculation				
Tetrabutyl Tin : Dry Wt as Cation	<2	ug/kg	2	UKAS	LE	897
Tributyl Tin : Dry Wt as Cation	<4	ug/kg	3	UKAS	LE	897
		ELEVATED_MRV : Dry weight calculation				
Triphenyl Tin : Dry Wt as Cation	<2	ug/kg	2	UKAS	LE	897
Dry Solids @ 30°C	83.2	%	0.5	None	LE	1130
Accreditation Assessment	2	No.	1	None	LE	924
Additional Material Present	Report	Text			LE	924

	Stones and Shells					
Drying Method	Report	Text			LE	924
	Air dried at 30°C					
Rejected Matter Description	Report	Text			LE	924
	No material removed					
Sample Colour	Report	Text			LE	924
	Brown					
Sample Matrix	Report	Text			LE	924
	Sandy Sediment					
Sample Preparation	Report	Text			LE	924
	Homogenised, Jaw Crushed & Sieved to <2mm					

Client: Fugro EMU Ltd Project: 13881 Vattenfall - Marine Sediment  
 Quote Description: Marine Sediment  
 Folder No: 003754528 Sampled on: 13-Nov-16 @ 15:51  
 Comments: 160975 CR04  
 Quote No: 13881 Matrix: Sediment

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Flag</u>	<u>MRV</u>	<u>Accred</u>	<u>Lab ID</u>	<u>Testcode</u>
Hydrocarbons : Total : Dry Wt as Ekofisk	16.0	mg/kg		0.9	UKAS	LE	402
Mercury : Dry Wt	<0.01	mg/kg		0.01	UKAS	LE	1042
Arsenic : Dry Wt	12.0	mg/kg		1	UKAS	LE	1041
Cadmium : Dry Wt	<0.04	mg/kg		0.04	UKAS	LE	1041
Chromium : Dry Wt	12.1	mg/kg		2	UKAS	LE	1041
Copper : Dry Wt	1.82	mg/kg		1	UKAS	LE	1041
Lead : Dry Wt	5.54	mg/kg		2	UKAS	LE	1041
Lithium : Dry Wt	6.00	mg/kg		0.3	None	LE	1041
Manganese : Dry Wt	162	mg/kg		0.2	UKAS	LE	1041
Nickel : Dry Wt	4.90	mg/kg		1	UKAS	LE	1041
Vanadium : Dry Wt	20.9	mg/kg		0.1	UKAS	LE	1041
Zinc : Dry Wt	17.7	mg/kg		2.5	UKAS	LE	1041
Acenaphthene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Acenaphthylene : Dry Wt	<1	ug/kg		1	None	LE	1051
Anthracene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Benzo(a)anthracene : Dry Wt	3.44	ug/kg		1	UKAS	LE	1051
Benzo(a)pyrene : Dry Wt	6.08	ug/kg		1	UKAS	LE	1051
Benzo(b)fluoranthene : Dry Wt	9.14	ug/kg		1	UKAS	LE	1051
Benzo(e) pyrene : Dry Wt	9.40	ug/kg		5	UKAS	LE	1051
Benzo(ghi)perylene : Dry Wt	9.41	ug/kg		1	UKAS	LE	1051
Benzo(j)fluoranthene : Dry Wt	<10	ug/kg		10	None	LE	1051
Benzo(k)fluoranthene : Dry Wt	3.99	ug/kg		1	UKAS	LE	1051
Chrysene : Dry Wt	3.11	ug/kg		3	UKAS	LE	1051
Chrysene + Triphenylene : Dry Wt	4.38	ug/kg		3	None	LE	1051
Dibenzo(ah)anthracene : Dry Wt	2.00	ug/kg		1	UKAS	LE	1051
Dibenzothiophene : Dry Wt	<5	ug/kg		5	None	LE	1051
Fluoranthene : Dry Wt	5.53	ug/kg		1	UKAS	LE	1051
Fluorene : Dry Wt	<5	ug/kg		5	UKAS	LE	1051
Indeno(1,2,3-c,d)pyrene : Dry Wt	8.63	ug/kg		1	UKAS	LE	1051
Naphthalene : Dry Wt	<5	ug/kg		5	UKAS	LE	1051
Perylene : Dry Wt	<5	ug/kg		5	None	LE	1051
Phenanthrene : Dry Wt	<5	ug/kg		5	UKAS	LE	1051
Pyrene : Dry Wt	4.97	ug/kg		1	UKAS	LE	1051
Triphenylene : Dry Wt	<2	ug/kg		2	None	LE	1051
PCB - 028 : Dry Wt	<0.1	ug/kg		0.1	UKAS	LE	685
PCB - 052 : Dry Wt	<0.1	ug/kg		0.1	UKAS	LE	685

PCB - 101 : Dry Wt	<0.1	ug/kg	0.1	UKAS	LE	685
PCB - 118 : Dry Wt	<0.1	ug/kg	0.1	UKAS	LE	685
PCB - 138 : Dry Wt	<0.1	ug/kg	0.1	UKAS	LE	685
PCB - 153 : Dry Wt	<0.1	ug/kg	0.1	UKAS	LE	685
PCB - 180 : Dry Wt	<0.1	ug/kg	0.1	UKAS	LE	685
Dibutyl Tin : Dry Wt as Cation	<4	ug/kg	3	UKAS	LE	897
		ELEVATED_MRV : Dry weight calculation				
Diocetyl Tin : Dry Wt as Cation	<4	ug/kg	3	None	LE	897
		ELEVATED_MRV : Dry weight calculation				
Tetrabutyl Tin : Dry Wt as Cation	<2	ug/kg	2	UKAS	LE	897
Tributyl Tin : Dry Wt as Cation	<4	ug/kg	3	UKAS	LE	897
		ELEVATED_MRV : Dry weight calculation				
Triphenyl Tin : Dry Wt as Cation	<2	ug/kg	2	UKAS	LE	897
Dry Solids @ 30°C	77.6	%	0.5	None	LE	1130
Accreditation Assessment	2	No.	1	None	LE	924
Additional Material Present	Report	Text			LE	924

	Stones and Shells					
Drying Method	Report	Text			LE	924
	Air dried at 30°C					
Rejected Matter Description	Report	Text			LE	924
	No material removed					
Sample Colour	Report	Text			LE	924
	Brown					
Sample Matrix	Report	Text			LE	924
	Sandy Sediment					
Sample Preparation	Report	Text			LE	924
	Homogenised, Jaw Crushed & Sieved to <2mm					

Client: Fugro EMU Ltd Project: 13881 Vattenfall - Marine Sediment  
 Quote Description: Marine Sediment  
 Folder No: 003754529 Sampled on: 13-Nov-16 @ 16:30  
 Comments: 160975 CR03  
 Quote No: 13881 Matrix: Sediment

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Flag</u>	<u>MRV</u>	<u>Accred</u>	<u>Lab ID</u>	<u>Testcode</u>
Hydrocarbons : Total : Dry Wt as Ekofisk	<0.9	mg/kg		0.9	UKAS	LE	402
Mercury : Dry Wt	<0.01	mg/kg		0.01	UKAS	LE	1042
Arsenic : Dry Wt	18.1	mg/kg		1	UKAS	LE	1041
Cadmium : Dry Wt	<0.04	mg/kg		0.04	UKAS	LE	1041
Chromium : Dry Wt	13.4	mg/kg		2	UKAS	LE	1041
Copper : Dry Wt	1.14	mg/kg		1	UKAS	LE	1041
Lead : Dry Wt	5.00	mg/kg		2	UKAS	LE	1041
Lithium : Dry Wt	2.53	mg/kg		0.3	None	LE	1041
Manganese : Dry Wt	127	mg/kg		0.2	UKAS	LE	1041
Nickel : Dry Wt	4.80	mg/kg		1	UKAS	LE	1041
Vanadium : Dry Wt	21.0	mg/kg		0.1	UKAS	LE	1041
Zinc : Dry Wt	16.6	mg/kg		2.5	UKAS	LE	1041
Acenaphthene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Acenaphthylene : Dry Wt	<1	ug/kg		1	None	LE	1051
Anthracene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Benzo(a)anthracene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Benzo(a)pyrene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Benzo(b)fluoranthene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Benzo(e) pyrene : Dry Wt	<5	ug/kg		5	UKAS	LE	1051
Benzo(ghi)perylene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Benzo(j)fluoranthene : Dry Wt	<10	ug/kg		10	None	LE	1051
Benzo(k)fluoranthene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Chrysene : Dry Wt	<3	ug/kg		3	UKAS	LE	1051
Chrysene + Triphenylene : Dry Wt	<3	ug/kg		3	None	LE	1051
Dibenzo(ah)anthracene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Dibenzothiophene : Dry Wt	<5	ug/kg		5	None	LE	1051
Fluoranthene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Fluorene : Dry Wt	<5	ug/kg		5	UKAS	LE	1051
Indeno(1,2,3-c,d)pyrene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Naphthalene : Dry Wt	<5	ug/kg		5	UKAS	LE	1051
Perylene : Dry Wt	<5	ug/kg		5	None	LE	1051
Phenanthrene : Dry Wt	<5	ug/kg		5	UKAS	LE	1051
Pyrene : Dry Wt	<1	ug/kg		1	UKAS	LE	1051
Triphenylene : Dry Wt	<2	ug/kg		2	None	LE	1051
PCB - 028 : Dry Wt	<0.1	ug/kg		0.1	UKAS	LE	685
PCB - 052 : Dry Wt	<0.1	ug/kg		0.1	UKAS	LE	685

PCB - 101 : Dry Wt	<0.1	ug/kg	0.1	UKAS	LE	685
PCB - 118 : Dry Wt	<0.1	ug/kg	0.1	UKAS	LE	685
PCB - 138 : Dry Wt	<0.1	ug/kg	0.1	UKAS	LE	685
PCB - 153 : Dry Wt	<0.1	ug/kg	0.1	UKAS	LE	685
PCB - 180 : Dry Wt	<0.1	ug/kg	0.1	UKAS	LE	685
Dibutyl Tin : Dry Wt as Cation	<4	ug/kg	3	UKAS	LE	897
		ELEVATED_MRV : Dry weight calculation				
Diocetyl Tin : Dry Wt as Cation	<4	ug/kg	3	None	LE	897
		ELEVATED_MRV : Dry weight calculation				
Tetrabutyl Tin : Dry Wt as Cation	<2	ug/kg	2	UKAS	LE	897
Tributyl Tin : Dry Wt as Cation	<4	ug/kg	3	UKAS	LE	897
		ELEVATED_MRV : Dry weight calculation				
Triphenyl Tin : Dry Wt as Cation	<2	ug/kg	2	UKAS	LE	897
Dry Solids @ 30°C	81.8	%	0.5	None	LE	1130
Accreditation Assessment	2	No.	1	None	LE	924
Additional Material Present	Report	Text			LE	924

	Stones and Shells					
Drying Method	Report	Text			LE	924
	Air dried at 30°C					
Rejected Matter Description	Report	Text			LE	924
	No material removed					
Sample Colour	Report	Text			LE	924
	Brown					
Sample Matrix	Report	Text			LE	924
	Sandy Sediment					
Sample Preparation	Report	Text			LE	924
	Homogenised, Jaw Crushed & Sieved to <2mm					

Client: Fugro EMU Ltd Project: 13881 Vattenfall - Marine Sediment  
 Quote Description: Marine Sediment  
 Folder No: 003754532 Sampled on: Date Not Supplied  
 Comments: 160975 WF47  
 Quote No: 13881 Matrix: Sediment

<u>Analyte</u>	<u>Result</u>	<u>Units</u>	<u>Flag</u>	<u>MRV</u>	<u>Accred</u>	<u>Lab ID</u>	<u>Testcode</u>
Hydrocarbons : Total : Dry Wt as Ekofisk	34.9	mg/kg	DA	0.9	UKAS	LE	402
Mercury : Dry Wt	0.0173	mg/kg	DA	0.01	UKAS	LE	1042
Arsenic : Dry Wt	10.0	mg/kg	DA	1	UKAS	LE	1041
Cadmium : Dry Wt	0.0540	mg/kg	DA	0.04	UKAS	LE	1041
Chromium : Dry Wt	19.7	mg/kg	DA	2	UKAS	LE	1041
Copper : Dry Wt	3.96	mg/kg	DA	1	UKAS	LE	1041
Lead : Dry Wt	10.4	mg/kg	DA	2	UKAS	LE	1041
Lithium : Dry Wt	10.9	mg/kg	DA	0.3	None	LE	1041
Manganese : Dry Wt	159	mg/kg	DA	0.2	UKAS	LE	1041
Nickel : Dry Wt	8.29	mg/kg	DA	1	UKAS	LE	1041
Vanadium : Dry Wt	32.6	mg/kg	DA	0.1	UKAS	LE	1041
Zinc : Dry Wt	29.4	mg/kg	DA	2.5	UKAS	LE	1041
Acenaphthene : Dry Wt	<1	ug/kg	DA	1	UKAS	LE	1051
Acenaphthylene : Dry Wt	<1	ug/kg	DA	1	None	LE	1051
Anthracene : Dry Wt	1.48	ug/kg	DA	1	UKAS	LE	1051
Benzo(a)anthracene : Dry Wt	6.91	ug/kg	DA	1	UKAS	LE	1051
Benzo(a)pyrene : Dry Wt	10.9	ug/kg	DA	1	UKAS	LE	1051
Benzo(b)fluoranthene : Dry Wt	12.7	ug/kg	DA	1	UKAS	LE	1051
Benzo(e) pyrene : Dry Wt	9.07	ug/kg	DA	5	UKAS	LE	1051
Benzo(ghi)perylene : Dry Wt	9.85	ug/kg	DA	1	UKAS	LE	1051
Benzo(j)fluoranthene : Dry Wt	<10	ug/kg	DA	10	None	LE	1051
Benzo(k)fluoranthene : Dry Wt	6.00	ug/kg	DA	1	UKAS	LE	1051
Chrysene : Dry Wt	6.62	ug/kg	DA	3	UKAS	LE	1051
Chrysene + Triphenylene : Dry Wt	9.27	ug/kg	DA	3	None	LE	1051
Dibenzo(ah)anthracene : Dry Wt	1.81	ug/kg	DA	1	UKAS	LE	1051
Dibenzothiophene : Dry Wt	<5	ug/kg	DA	5	None	LE	1051
Fluoranthene : Dry Wt	13.4	ug/kg	DA	1	UKAS	LE	1051
Fluorene : Dry Wt	<5	ug/kg	DA	5	UKAS	LE	1051
Indeno(1,2,3-c,d)pyrene : Dry Wt	10.2	ug/kg	DA	1	UKAS	LE	1051
Naphthalene : Dry Wt	<5	ug/kg	DA	5	UKAS	LE	1051
Perylene : Dry Wt	6.96	ug/kg	DA	5	None	LE	1051
Phenanthrene : Dry Wt	8.60	ug/kg	DA	5	UKAS	LE	1051
Pyrene : Dry Wt	12.6	ug/kg	DA	1	UKAS	LE	1051
Triphenylene : Dry Wt	2.65	ug/kg	DA	2	None	LE	1051
PCB - 028 : Dry Wt	<0.1	ug/kg	DA	0.1	UKAS	LE	685
PCB - 052 : Dry Wt	<0.1	ug/kg	DA	0.1	UKAS	LE	685

PCB - 101 : Dry Wt	<0.1	ug/kg	DA	0.1	UKAS	LE	685
PCB - 118 : Dry Wt	<0.1	ug/kg	DA	0.1	UKAS	LE	685
PCB - 138 : Dry Wt	<0.1	ug/kg	DA	0.1	UKAS	LE	685
PCB - 153 : Dry Wt	<0.1	ug/kg	DA	0.1	UKAS	LE	685
PCB - 180 : Dry Wt	<0.1	ug/kg	DA	0.1	UKAS	LE	685
Dibutyl Tin : Dry Wt as Cation	<4	ug/kg	DA	3	UKAS	LE	897
		ELEVATED_MRV : Dry weight calculation					
Diocetyl Tin : Dry Wt as Cation	<4	ug/kg	DA	3	None	LE	897
		ELEVATED_MRV : Dry weight calculation					
Tetrabutyl Tin : Dry Wt as Cation	<3	ug/kg	DA	2	UKAS	LE	897
		ELEVATED_MRV : Dry weight calculation					
Tributyl Tin : Dry Wt as Cation	<4	ug/kg	DA	3	UKAS	LE	897
		ELEVATED_MRV : Dry weight calculation					
Triphenyl Tin : Dry Wt as Cation	<3	ug/kg	DA	2	UKAS	LE	897
		ELEVATED_MRV : Dry weight calculation					
Dry Solids @ 30°C	68.6	%	DA	0.5	None	LE	1130
Accreditation Assessment	2	No.	DA	1	None	LE	924
Additional Material Present	Report	Text	DA			LE	924

	Stones and Shells						
Drying Method	Report	Text	DA			LE	924
	Air dried at 30°C						
Rejected Matter Description	Report	Text	DA			LE	924
	No material removed						
Sample Colour	Report	Text	DA			LE	924
	Brown						
Sample Matrix	Report	Text	DA			LE	924
	Sandy Clay Sediment						
Sample Preparation	Report	Text	DA			LE	924
	Homogenised, Jaw Crushed & Sieved to <2mm						

Method Description Summary for all samples in batch Number 20102951

- 402 LE I Hydrocarbons by fluorescence
- 685 LE O OCP\_PAH\_PCB in Marine Biota and Sediment - solvent extracted, determined by GCMS QQQ
- 897 LE O Organotins (GCMS) 01 - acetic acid/methanol extracted; derivatised; determined GCMS (SIM); from "as received" sample
- 924 Sample Preparation; Dry Solids (30°C); from "as received" sample
- 1041 LE M Metals ICP-MS Sediment - microwave aqua regia digested, determined by ICPMS, samples are sieved to <2000um.
- 1042 LE M Mercury CSEMP - microwave aqua regia digeste, acidic SnCl2 reduced, determined by CV-AFS. Samples are sieved to <2000um.
- 1051 LE O OCP\_PAH\_PCB in Marine Biota and Sediment - solvent extracted, determined by GCMS QQQ
- 1130 LE P Soil Preparation 01: The sample is air-dried at <30°C in a controlled environment until a constant weight it achieved.



**Steve Moss**  
Laboratory Site Manager

Any additional accompanying reports received should be used in conjunction with the formal PDF and not as a standalone report. The formal PDF report provides full details of the accreditation status, sample deviation information and any other relevant related information.

All reporting limits quoted are those achievable for clean samples of the relevant matrix. No allowance is made for instances when dilutions are necessary owing to the nature of the sample or insufficient volume of the sample being available. In these cases higher reporting limits may be quoted and will be above the MRV.

Minimum Reporting Value (MRV). A minimum concentration selected for reporting purposes (i.e. the less than value), which is higher than the statistically derived method limit of detection.

Solid sample results are determined on a "dried" sample fraction except for parameters where the method description identifies that "as received" sample was used.

Uncertainty of Measurement information relating to sample results is supplied upon request. Uncertainty is estimated from the performance of routine quality control standards, using the calculation  $2 \times \text{Relative Standard Deviation} + \text{Bias}$ . This is based on the guidance issued by the UKTAG Chemistry task team - Guidance on the implementation of the Quality Assurance/Quality Control requirements' associated with Commission Directive 2009/90/EC, Article 4 (UoM =  $2 \times \%RSD$ ), with a contribution added for the bias.

Key to Results Flags:

DA Sampling date/time has not been provided and no assessment of sample stability can be made. It is possible that the results may be compromised.

The analysis start date specified is the date of the first test, dates for other analysis are available on request.

Please note all samples will be retained for 10 working days for aqueous samples and 30 working days for solid samples after reporting unless otherwise agreed with Customer Services

Key to Accreditation: UKAS = Methodology accredited to ISO/IEC 17025:2005, MCertS = Methodology accredited to MCertS Performance Standard for testing of soils, none = Methodology not accredited

Key to Lab ID: LE = Leeds, NM = Nottingham, SX = Starcross, SC = Sub-Contracted outside NLS, FI = Field Data - outside NLS, NLS = Calculated

Any subsequent version of this report denoted with a higher version number will supersede this and any previous versions

END OF TEST REPORT





**D.3 Grab Infaunal Abundance Raw Data**

**FUGRO GROUP**  
**VATTENFALL THANET OFFSHORE WIND FARM**



Taxon	APHIA ID	CR01	CR03	CR10	CR11	WF01	WF02	WF03	WF04	WF05	WF06	WF07	WF08	WF09	WF11	WF12	WF14	WF19	WF22	WF25	WF27
PLATYHELMINTHES	793															2			1		
NEMERTEA	152391				1				3		2	3		14	4	3			8		
CHAETOGNATHA	2081												1								
SIPUNCULA (juv.)	1268																				
<i>Golfingia elongata</i>	175026				1									3							
<i>Aphrodita</i> (juv.)	129194																				
<i>Aphrodita aculeata</i>	129840																1				
<i>Subadyte pellucida</i>	130833	1																			
<i>Gattyana cirrhosa</i>	130749													1							
<i>Harmothoe</i>	129491	2			1									1							
<i>Malmgrenia darbouxi</i>	863197														1						
<i>Lepidonotus squamatus</i>	130801				1									1							
<i>Pholoe baltica</i>	130599	2							2		2	1		5	1		2		5		
<i>Pholoe inornata</i>	130601																1				
<i>Sthenelais boa</i>	131074				1							1		1			1				
<i>Sthenelais limicola</i>	131077										1	1									
<i>Eteone longa</i> (agg.)	130616								2		1	1					3				
<i>Phyllodoce rosea</i>	334514								1		1	1			2				2		
<i>Eulalia bilineata</i>	130624														1						
<i>Eulalia ornata</i>	130632													15							
<i>Eumida sanguinea</i> (agg.)	130644	1													1						
<i>Glycera</i>	129296													1							
<i>Glycera alba</i>	130116	1					1		1			4		1					4		
<i>Glycera lapidum</i> (agg.)	130123	2					3							5	2						
<i>Glycera oxycephala</i>	130126			2																	
<i>Glycinde nordmanni</i>	130136								1			1					1		1		
<i>Goniada maculata</i>	130140								1	1			1	4		1	1		2		
<i>Sphaerodorum gracilis</i>	131100											1							1		
<i>Podarkeopsis capensis</i>	130195								1			4		1	1		1		1		

**FUGRO GROUP**  
**VATTENFALL THANET OFFSHORE WIND FARM**



Taxon	APHIA ID	CR01	CR03	CR10	CR11	WF01	WF02	WF03	WF04	WF05	WF06	WF07	WF08	WF09	WF11	WF12	WF14	WF19	WF22	WF25	WF27
<i>Syllis armillaris</i>	131415													1	1						
<i>Syllis garciai</i>	131431				1																
<i>Odontosyllis fulgurans</i>	131327														1						
<i>Eunereis longissima</i>	130375	2			9				1			2		3	1		1				
<i>Nephtys (juv.)</i>	129370						1					1									
<i>Nephtys caeca</i>	130355														1						
<i>Nephtys cirrosa</i>	130357	1		4			1	6		1								2		3	
<i>Nephtys hombergii</i>	130359								4			4					8	2			2
<i>Nephtys kersivalensis</i>	130363				1									2							
<i>Nephtys longosetosa</i>	130364												1							1	
<i>Marphysa bellii</i>	130072													3					1		
<i>Marphysa sanguinea</i>	130075	1																			
<i>Lysidice unicornis</i>	742232														1						
<i>Lumbrineris cingulata</i>	130240	9			14							1		15	6	3	1		1		
<i>Schistomeringos rudolphi</i>	154127													2					1		
<i>Paradoneis lyra</i>	130585													2	1	1					
<i>Poecilochaetus serpens</i>	130711														1						
<i>Aonides oxycephala</i>	131106	1			1									6		2					
<i>Aonides paucibranchiata</i>	131107				1										1						
<i>Laonice bahusiensis</i>	131127															1					
<i>Dipolydora coeca (agg.)</i>	131117															1					
<i>Dipolydora caulleryi</i>	131116													5	2						
<i>Dipolydora flava</i>	131118	1												2	2	1					
<i>Pseudopolydora pulchra</i>	131169								1										1		
<i>Spio gonioccephala</i>	131184			1		1														1	
<i>Spiophanes</i>	129626								1												
<i>Spiophanes bombyx</i>	131187								27		43	9			2	1	6		9		
<i>Magelona alleni</i>	130266													1							

**FUGRO GROUP**  
**VATTENFALL THANET OFFSHORE WIND FARM**



Taxon	APHIA ID	CR01	CR03	CR10	CR11	WF01	WF02	WF03	WF04	WF05	WF06	WF07	WF08	WF09	WF11	WF12	WF14	WF19	WF22	WF25	WF27
<i>Magelona johnstoni</i>	130269							7			1							4	1		
<i>Aphelochaeta marioni</i>	129938	1										2			1						
<i>Caulleriella alata</i>	129943	5			3		1							3	2	1			1		
<i>Chaetozone setosa</i>	129955			3																	
<i>Chaetozone zetlandica</i>	336485	1			2			1							1						
<i>Dodecaceria</i>	129246														1						
<i>Pherusa plumosa</i>	130113		1																		
<i>Mediomastus fragilis</i>	129892													12	7	2					
<i>Notomastus</i>	129220	2			9									6		4		1	2		4
<i>Arenicolidae (juv.)</i>	922				2										1						
<i>Leiochone</i>	146991														1						
<i>Leiochone johnstoni</i>	221095														2						
<i>Euclymene oerstedii</i>	130294						1				8	45	1	1		3	54		46		1
<i>Praxillella affinis</i>	130322				2										3	1					
<i>Ophelia borealis</i>	130491		1	3					1												
<i>Scalibregma celticum</i>	130979				2											2					
<i>Scalibregma inflatum</i>	130980	2									1			3		2	1				
<i>Galathowenia oculata</i>	146950											5		2	4	1				6	
<i>Owenia borealis</i>	329882								30		7	2		1	1		6		4		
<i>Lagis koreni</i>	152367								16		7	4		4			10		10		
<i>Sabellaria</i>	129520													1							
<i>Sabellaria spinulosa</i>	130867													1		181		1	9		12
<i>Ampharete lindstroemi</i> (agg.)	129781				2				2			1		7	1	4	1		1		
<i>Terebellides stroemii</i>	131573															1					
<i>Lanice conchilega</i>	131495																				
<i>Loimia medusa</i>	131499	1														1			1		
<i>Nicolea venustula</i>	131507	1												1		1					
<i>Polycirrus</i>	129710				1									2	1						
<i>Polycirrus denticulatus</i>	131527													2							

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**VATTENFALL THANET OFFSHORE WIND FARM**



Taxon	APHIA ID	CR01	CR03	CR10	CR11	WF01	WF02	WF03	WF04	WF05	WF06	WF07	WF08	WF09	WF11	WF12	WF14	WF19	WF22	WF25	WF27
<i>Thelepus setosus</i>	131544																				
<i>Sabella</i>	129549				2																
<i>Sabella pavonina</i>	130967				45																
<i>Spirobranchus lamarcki</i>	560033	6													5	5					
<i>Spirobranchus</i>	129582													1	1	1					
<i>Limnodrilus</i>	137388										7										
<i>Tubificoides amplivasatus</i>	137570												1								
<i>Tubificoides swirencoides</i>	137584				2																
<i>Nymphon brevirostre</i>	150520															1					
<i>Achelia echinata</i>	134599	1														2					
<i>Ammothella longipes</i>	134614														1						
<i>Anoplodactylus petiolatus</i>	134723											1		4					1		
<i>Leucothoe incisa</i>	102460								1												
<i>Urothoe brevicornis</i>	103226					7	17			21											
<i>Urothoe elegans</i>	103228												1		1						
<i>Urothoe poseidonis</i>	103235							1													
<i>Harpinia antennaria</i>	102960											1					4		2		
<i>Acidostoma neglectum</i>	102495													2							
<i>Nototropis guttatus</i>	488957				1																
<i>Ampelisca diadema</i>	101896				10									2							
<i>Ampelisca spinipes</i>	101928	1										1		1		1	1				
<i>Ampelisca tenuicornis</i>	101930											1							1		
<i>Bathyporeia elegans</i>	103058																				
<i>Bathyporeia pelagica</i>	103066																				
<i>Bathyporeia tenuipes</i>	103076												1								
<i>Abludomelita obtusata</i>	102788													1			2				
<i>Cheirocratus intermedius</i>	102795																				

**FUGRO GROUP**  
**VATTENFALL THANET OFFSHORE WIND FARM**



Taxon	APHIA ID	CR01	CR03	CR10	CR11	WF01	WF02	WF03	WF04	WF05	WF06	WF07	WF08	WF09	WF11	WF12	WF14	WF19	WF22	WF25	WF27
<i>Gammaropsis maculata</i>	102364				1																
<i>Ericthonius</i> (female)	101567															1					
<i>Ericthonius punctatus</i>	102408															1					
<i>Siphonocetes kroyeranus</i>	102111																				
<i>Unciola crenatipalma</i>	102057													8		1					
<i>Pseudoprotella phasma</i>	101871														1						
<i>Gnathia oxyuraea</i>	118995				1									3							
<i>Anthura gracilis</i>	118467	1													1	1					
<i>Cleantis prismatica</i>	119038				2																
<i>Pseudione hyndmanni</i>	118240											2									
<i>Bodotria scorpioides</i>	110445	1																			
<i>Diastylis</i>	110398																				
<i>Diastylis lucifera</i> (?, juv)	110483																	1			
<i>Eualus cranchii</i>	156083	1																			
Crangonidae	106782																				
<i>Philocheras trispinosus</i>	107562					1															
<i>Pagurus</i>	106854															1					
<i>Pagurus bernhardus</i>	107232	1										1									
<i>Galathea intermedia</i>	107150																				
<i>Pisidia longicornis</i>	107188	2			2											1					
<i>Ebalia tuberosa</i>	107301													1							
<i>Corystes cassivelaunus</i>	107277																1				
<i>Atelecyclus rotundatus</i>	107273				1																
<i>Liocarcinus navigator</i>	107392				1																
<i>Liocarcinus marmoreus</i>	107390											1									
<i>Pilumnus hirtellus</i>	107418													1							
<i>Leptochiton</i>	138117																				
<i>Leptochiton asellus</i>	140199	1													1						
<i>Gibbula cineraria</i>	141782	3			2																

**FUGRO GROUP**  
**VATTENFALL THANET OFFSHORE WIND FARM**



Taxon	APHIA ID	CR01	CR03	CR10	CR11	WF01	WF02	WF03	WF04	WF05	WF06	WF07	WF08	WF09	WF11	WF12	WF14	WF19	WF22	WF25	WF27
<i>Tornus subcarinatus</i>	141690	4																			
<i>Crepidula fornicata</i>	138963				2																
<i>Euspira catena</i>	140528																				
<i>Euspira nitida</i>	151894											1									
<i>Epitonium clathrus</i>	146905													2							
<i>Buccinum undatum</i>	138878				2																
<i>Tritia incrassata</i>	876825																1				
<i>Tritia reticulata</i>	876821								4												
? <i>Tritonia plebeia</i>	141738	1																			
BIVALVIA	105				1																
<i>Nucula (juv.)</i>	138262										1	1					3		1		
<i>Nucula hanleyi</i>	140588														1						
<i>Nucula nitidosa</i>	140589								9		4	21					11		1		
<i>Nucula nucleus</i>	140590				7						1	3			1		2				
Mytilidae (juv.)	211																				
<i>Mytilus edulis</i>	140480													1		2					
<i>Aequipecten opercularis</i>	140687																1				
<i>Thyasira flexuosa</i>	141662											2									
<i>Diplodonta rotundata</i>	141883																		1		
<i>Kurtiella bidentata</i>	345281	2			7				74		6	13	1				29			1	
<i>Tellimya ferruginosa</i>	146952											5					2				
<i>Acanthocardia echinata</i>	138992																2				
<i>Laevicardium crassum</i>	139004				1																
<i>Mactra stultorum</i>	140299								1												
<i>Spisula subtruncata</i>	140302								1		2	1					4		1		
<i>Lutraria lutraria</i>	140295																1				
<i>Ensis ensis</i>	140733			1																	
<i>Phaxas pellucidus</i>	140737											5					1		1		
<i>Fabulina fabula</i>	146907								10		14	1					2				

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**VATTENFALL THANET OFFSHORE WIND FARM**



Taxon	APHIA ID	CR01	CR03	CR10	CR11	WF01	WF02	WF03	WF04	WF05	WF06	WF07	WF08	WF09	WF11	WF12	WF14	WF19	WF22	WF25	WF27
<i>Asbjornsenia pygmaea</i>	879714				3																
<i>Abra</i> (juv.)	138474				5						1	1		1			1				
<i>Abra alba</i>	141433	2			4				5		1										1
<i>Polititapes rhomboides</i>	745846													1							
<i>Timoclea ovata</i>	141929										1	1		1			1		3		
Myidae	247													1							
<i>Sphenia binghami</i>	140432														1						
<i>Corbula gibba</i>	139410								1			3									
<i>Thracia villosiuscula</i>	141651																				
<i>Phoronis</i>	128545	2							1		1	2			1						
<i>Asterias rubens</i>	123776													1							
OPIUROIDEA (juv.)	123084										2		1	53		4	6		3		
<i>Ophiothrix fragilis</i>	125131	1													1						
Amphiuridae (juv.)	123206								12			2					8		1		
<i>Acrocnida brachiata</i>	236130		1																		
<i>Amphipholis squamata</i>	125064	6												41	1	6					
Ophiuridae	123200								1												
Ophiuridae (juv.)	123200	43			1				22			20	3	1	17	6	10		6	1	
<i>Ophiura albida</i>	124913								17		1	12		3	4	1	4		7		
<i>Ophiura ophiura</i>	124929								7								1				
ECHINOIDEA	123082							1													
ECHINOIDEA (juv.)	123082	3																			
<i>Psammechinus miliaris</i>	124319														1						
<i>Echinocardium cordatum</i>	124392											4									
ENTEROPNEUSTA	1820														1						

**Notes:**  
APHIA ID = World Register of Marine Species (WoRMS) taxon code  
Juv. = Juvenile  
agg. = Aggregate species



Taxon	APHIA ID	WF29	WF32	WF37	WF41	WF44	WF45	WF47
PLATYHELMINTHES	793					3		
NEMERTEA	152391				2	1		
CHAETOGNATHA	2081							
SIPUNCULA (juv.)	1268					1		
<i>Golfingia elongata</i>	175026							
<i>Aphrodita</i> (juv.)	129194		1					
<i>Aphrodita aculeata</i>	129840							
<i>Subadyte pellucida</i>	130833							
<i>Gattyana cirrhosa</i>	130749							
<i>Harmothoe</i>	129491					1		
<i>Malmgrenia darbouxi</i>	863197							
<i>Lepidonotus squamatus</i>	130801					1		
<i>Pholoe baltica</i>	130599		4	4	3	2		5
<i>Pholoe inornata</i>	130601							
<i>Sthenelais boa</i>	131074					3		
<i>Sthenelais limicola</i>	131077							
<i>Eteone longa</i> (agg.)	130616		1	3				
<i>Phyllodoce rosea</i>	334514			1	2			
<i>Eulalia bilineata</i>	130624							
<i>Eulalia ornata</i>	130632					2		
<i>Eumida sanguinea</i> (agg.)	130644							
<i>Glycera</i>	129296							
<i>Glycera alba</i>	130116			1				1

Taxon	APHIA ID	WF29	WF32	WF37	WF41	WF44	WF45	WF47
<i>Glycera lapidum</i> (agg.)	130123							
<i>Glycera oxycephala</i>	130126							
<i>Glycinde nordmanni</i>	130136					1		1
<i>Goniada maculata</i>	130140							1
<i>Sphaerodorum gracilis</i>	131100							1
<i>Podarkeopsis capensis</i>	130195		1	3				
<i>Syllis armillaris</i>	131415							
<i>Syllis garciai</i>	131431							
<i>Odontosyllis fulgurans</i>	131327							
<i>Eunereis longissima</i>	130375					1		
<i>Nephtys</i> (juv.)	129370							
<i>Nephtys caeca</i>	130355							
<i>Nephtys cirrosa</i>	130357	3					1	
<i>Nephtys hombergii</i>	130359		3	7	2			6
<i>Nephtys kersivalensis</i>	130363					1		
<i>Nephtys longosetosa</i>	130364							
<i>Marphysa bellii</i>	130072							
<i>Marphysa sanguinea</i>	130075							
<i>Lysidice unicornis</i>	742232							
<i>Lumbrineris cingulata</i>	130240				1	9		1
<i>Schistomeringos rudolphi</i>	154127							
<i>Paradoneis lyra</i>	130585					1		
<i>Poecilochaetus serpens</i>	130711							

Taxon	APHIA ID	WF29	WF32	WF37	WF41	WF44	WF45	WF47
<i>Aonides oxycephala</i>	131106							
<i>Aonides paucibranchiata</i>	131107							
<i>Laonice bahusiensis</i>	131127							
<i>Dipolydora coeca</i> (agg.)	131117							
<i>Dipolydora caulleryi</i>	131116							
<i>Dipolydora flava</i>	131118					4		
<i>Pseudopolydora pulchra</i>	131169							
<i>Spio goniocephala</i>	131184							
<i>Spiophanes</i>	129626							
<i>Spiophanes bombyx</i>	131187		2	21	15			1
<i>Magelona alleni</i>	130266							1
<i>Magelona johnstoni</i>	130269			1				
<i>Aphelochaeta marioni</i>	129938							
<i>Caulleriella alata</i>	129943		1	1		4		
<i>Chaetozone setosa</i>	129955							
<i>Chaetozone zetlandica</i>	336485							
<i>Dodecaceria</i>	129246							
<i>Pherusa plumosa</i>	130113							
<i>Mediomastus fragilis</i>	129892		1	1				
<i>Notomastus</i>	129220				2	1		
Arenicolidae (juv.)	922	1						
<i>Leiochone</i>	146991							

Taxon	APHIA ID	WF29	WF32	WF37	WF41	WF44	WF45	WF47
<i>Leiochone johnstoni</i>	221095							
<i>Euclymene oerstedii</i>	130294				1	2	1	67
<i>Praxillella affinis</i>	130322							
<i>Ophelia borealis</i>	130491	2						
<i>Scalibregma celticum</i>	130979							
<i>Scalibregma inflatum</i>	130980							1
<i>Galathowenia oculata</i>	146950					1		
<i>Owenia borealis</i>	329882			26	13	1		5
<i>Lagis koreni</i>	152367		1	37	6			2
<i>Sabellaria</i>	129520							
<i>Sabellaria spinulosa</i>	130867	5	1		3	85		
<i>Ampharete lindstroemi</i> (agg.)	129781		2	1	1	2		
<i>Terebellides stroemii</i>	131573							
<i>Lanice conchilega</i>	131495							1
<i>Loimia medusa</i>	131499							
<i>Nicolea venustula</i>	131507							
<i>Polycirrus</i>	129710							
<i>Polycirrus denticulatus</i>	131527							
<i>Thelepus setosus</i>	131544					1		
<i>Sabella</i>	129549							
<i>Sabella pavonina</i>	130967							
<i>Spirobranchus lamarcki</i>	560033					3		
<i>Spirobranchus</i>	129582					1		

Taxon	APHIA ID	WF29	WF32	WF37	WF41	WF44	WF45	WF47
<i>Limnodrilus</i>	137388							
<i>Tubificoides amplivasatus</i>	137570							
<i>Tubificoides swirencoides</i>	137584							
<i>Nymphon brevirostre</i>	150520							
<i>Achelia echinata</i>	134599					2		
<i>Ammothella longipes</i>	134614							
<i>Anoplodactylus petiolatus</i>	134723					2		
<i>Leucothoe incisa</i>	102460		3	2	2			
<i>Urothoe brevicornis</i>	103226	8						
<i>Urothoe elegans</i>	103228					1		
<i>Urothoe poseidonis</i>	103235							
<i>Harpinia antennaria</i>	102960							
<i>Acidostoma neglectum</i>	102495							
<i>Nototropis guttatus</i>	488957							
<i>Ampelisca diadema</i>	101896					5		
<i>Ampelisca spinipes</i>	101928					1		
<i>Ampelisca tenuicornis</i>	101930				1			
<i>Bathyporeia elegans</i>	103058						1	
<i>Bathyporeia pelagica</i>	103066						1	
<i>Bathyporeia tenuipes</i>	103076							
<i>Abludomelita obtusata</i>	102788							
<i>Cheirocratus intermedius</i>	102795				1			

Taxon	APHIA ID	WF29	WF32	WF37	WF41	WF44	WF45	WF47
<i>Gammaropsis maculata</i>	102364							
<i>Erichthonius</i> (female)	101567							
<i>Erichthonius punctatus</i>	102408							
<i>Siphonoecetes kroyeranus</i>	102111				1			
<i>Unciola crenatipalma</i>	102057					1		
<i>Pseudoprotella phasma</i>	101871							
<i>Gnathia oxyuraea</i>	118995							
<i>Anthura gracilis</i>	118467							
<i>Cleantis prismatica</i>	119038							
<i>Pseudione hyndmanni</i>	118240							
<i>Bodotria scorpioides</i>	110445					1		
<i>Diastylis</i>	110398			1				
<i>Diastylis lucifera</i> (? , juv)	110483							
<i>Eualus cranchii</i>	156083							
Crangonidae	106782		1					
<i>Philocheras trispinosus</i>	107562							
<i>Pagurus</i>	106854							
<i>Pagurus bernhardus</i>	107232							
<i>Galathea intermedia</i>	107150					1		
<i>Pisidia longicornis</i>	107188					8		
<i>Ebalia tuberosa</i>	107301					2		
<i>Corystes cassivelaunus</i>	107277							
<i>Atelecyclus rotundatus</i>	107273							

Taxon	APHIA ID	WF29	WF32	WF37	WF41	WF44	WF45	WF47
<i>Liocarcinus navigator</i>	107392							
<i>Liocarcinus marmoreus</i>	107390							
<i>Pilumnus hirtellus</i>	107418							
<i>Leptochiton</i>	138117					1		
<i>Leptochiton asellus</i>	140199							
<i>Gibbula cineraria</i>	141782					4		
<i>Tornus subcarinatus</i>	141690							
<i>Crepidula fornicata</i>	138963					2		
<i>Euspira catena</i>	140528				1			
<i>Euspira nitida</i>	151894				1			
<i>Epitonium clathrus</i>	146905							
<i>Buccinum undatum</i>	138878							
<i>Tritia incrassata</i>	876825							
<i>Tritia reticulata</i>	876821							
<i>Tritonia plebeia</i> (?)	141738							
BIVALVIA	105							
<i>Nucula</i> (juv.)	138262			8	7			2
<i>Nucula hanleyi</i>	140588							
<i>Nucula nitidosa</i>	140589			31	13			21
<i>Nucula nucleus</i>	140590							2
Mytilidae (juv.)	211							1
<i>Mytilus edulis</i>	140480	1				4		
<i>Aequipecten opercularis</i>	140687							1

Taxon	APHIA ID	WF29	WF32	WF37	WF41	WF44	WF45	WF47
<i>Thyasira flexuosa</i>	141662							1
<i>Diplodonta rotundata</i>	141883							
<i>Kurtiella bidentata</i>	345281		3	65	5	3		27
<i>Tellimya ferruginosa</i>	146952		27	26	11			8
<i>Acanthocardia echinata</i>	138992				1			2
<i>Laevicardium crassum</i>	139004							
<i>Mactra stultorum</i>	140299							
<i>Spisula subtruncata</i>	140302			1				1
<i>Lutraria lutraria</i>	140295							
<i>Ensis ensis</i>	140733							
<i>Phaxas pellucidus</i>	140737							1
<i>Fabulina fabula</i>	146907		1	6				
<i>Asbjornsenia pygmaea</i>	879714							
<i>Abra</i> (juv.)	138474		3		1	1		
<i>Abra alba</i>	141433		6	2				1
<i>Polititapes rhomboides</i>	745846							
<i>Timoclea ovata</i>	141929							
Myidae	247							
<i>Sphenia binghami</i>	140432					2		
<i>Corbula gibba</i>	139410				2			
<i>Thracia villosiuscula</i>	141651					1		
<i>Phoronis</i>	128545					2		3
<i>Asterias rubens</i>	123776							
OPIUROIDEA (juv.)	123084		2		1	33		



Taxon	APHIA ID	WF29	WF32	WF37	WF41	WF44	WF45	WF47
<i>Ophiothrix fragilis</i>	125131							
Amphiuridae (juv.)	123206			1				2
<i>Acrocnida brachiata</i>	236130			1	1			
<i>Amphipholis squamata</i>	125064					3		
Ophiuridae	123200							1
Ophiuridae (juv.)	123200		1	10	9	60		15
<i>Ophiura albida</i>	124913		4	5	8	4		9
<i>Ophiura ophiura</i>	124929		1					1
ECHINOIDEA	123082							
ECHINOIDEA (juv.)	123082							
<i>Psammechinus miliaris</i>	124319							
<i>Echinocardium cordatum</i>	124392		14	7	6			3
ENTEROPNEUSTA	1820							
<b>Notes:</b> APHIA ID = World Register of Marine Species (WoRMS) taxon code Juv. = Juvenile agg. = Aggregate species								


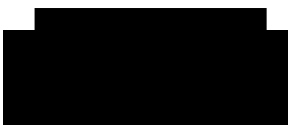


**D.4 Grab Sample Certificate of Analysis Infauna**

**FUGRO GB MARINE LIMITED  
CERTIFICATE OF ANALYSIS**



<b>Certificate Number</b>	EP/17/0005	<b>Fugro GB Marine Ltd Job Number</b>	160975
<b>Job Reference</b>	Vattenfall Thanet		
<b>Prepared For</b>		<b>Prepared By</b>	
<b>Seamus Whyte</b> Fugro GB Marine Limited Trafalgar Wharf (Unit 16) Hamilton Road Portchester Portsmouth PO6 4PX United Kingdom		<b>Grant Rowe</b> Fugro GB Marine Limited Y Plas Aberystwyth Road Machynlleth Powys SY20 8ER United Kingdom	
<b>Phone</b>	+44 (0) 2392 205500	<b>Phone</b>	+44 (0) 2392 205606
<b>Email</b>	<a href="mailto:sg.whyte@fugro.com">sg.whyte@fugro.com</a>	<b>Email</b>	<a href="mailto:g.rowe@fugro.com">g.rowe@fugro.com</a>
<b>Web</b>	<a href="http://www.fugro.com">www.fugro.com</a>	<b>Web</b>	<a href="http://www.fugro.com">www.fugro.com</a>

<b>Sampling Undertaken By</b>	Fugro GB Marine Limited	<b>Sampling Date</b>	October/November 2016
<b>Date of Receipt</b>	21-11-16	<b>Date of Analysis</b>	12-12-16 to 24-01-17
<b>Sample Matrix</b>	Macrobenthic Species ABUNDANCE (Infauna)		
<b>Method Reference</b>	TM23_001		
<b>Test Results</b>	Please double click on symbol: 		
<b>Laboratory Comments</b>	None		
<b>Deviating Codes</b>	None		
<b>Authorised Signature</b>			
<b>Name</b>	Grant Rowe		
<b>Position</b>	Principal Taxonomist/QC Manager		
<b>Issue Date</b>	26 <sup>th</sup> January 2017		

<ul style="list-style-type: none"> <li>■ Further information on methods of analysis may be obtained from the above address;</li> <li>■ Test results reported relate only to those items tested;</li> <li>■ <sup>Sub</sup>Indicates subcontracted test;</li> <li>■ <sup>DS</sup>Indicates relevant deviating code applies to test results.</li> </ul>	
Fugro GB Marine Limited. Incorporated in England No. 1135456. Reg. Office: Fugro House, Hithercroft Road, Wallingford, Oxfordshire, OX10 9RB	



**A. DEVIATING SAMPLE - CRITERIA**

Code and Criteria	Description	Reporting Comment
DS1 - Damaged container(s)/ packaging	Sample was received in a damaged container which may have resulted in contamination or loss of integrity of the sample.	<i>Sample was received in a damaged container. The results reported may not be representative of the sample at the time of sampling.</i>
DS2 - Unsuitable container	Sample was received in an unsuitable container that is known to have an effect on the analysis.	<i>Sample was received in an unsuitable container. The results reported may not be representative of the sample at the time of sampling.</i>
DS3 - Incorrect or no sample preservation	Sample was received with no preservative, an incorrect preservative, or in a condition which indicates inappropriate sample storage, where specific criteria are referenced in the method.	<i>Sample was received in a condition unsuitable for the test. The results reported may not be representative of the sample at the time of sampling.</i>
DS4 - Missing date/time details	Sample date/time details were not recorded at time of sampling or not provided to the laboratory.	<i>Sampling date/time was not provided and therefore assessment of sample stability cannot be made. The test results may have been compromised.</i>
DS5 - Error in sample labelling/details	Sample information is missing, unreadable, conflicting or incorrect. Analysis was undertaken but traceability of results cannot be guaranteed against sample location.	<i>Incorrect/incomplete sample details have been provided. The traceability of results may have been compromised.</i>
DS6 - Sample received outside holding time	The date and time information provided with the sample indicate the sample was received at the laboratory outside of the holding time.	<i>Sample was received outside analysis holding time. The results reported may not be representative of the sample at the time of sampling.</i>
DS7 - Analysis commenced after holding time	The sample was received at the laboratory within its holding time but an analytical issue led to delay in commencement of analysis which exceeded the holding time.	<i>The holding time expired prior to analysis being undertaken. The results reported may not be representative of the sample at the time of sampling.</i>
DS8 - Insufficient analysis material	Insufficient material was received which meant that analysis could not be undertaken, or the analysis could not be carried out in accordance with the method.	<i>Insufficient sample material was received. The test results may not be representative of the sample at the time of sampling.</i>
DS9 - Sample contamination	Sample was received in a satisfactory condition but cross-contamination has occurred due to an analytical issue which has resulted in loss of sample integrity.	<i>The sample integrity may have been compromised due to an analytical issue. The results reported may not be representative of the sample at the time of sampling and are outside the scope of UKAS accreditation.</i>
<p><b>Note:</b>                      Where it is agreed with the client that a deviating sample should not be tested, then the report should state "Sample not analysed" and the relevant deviating sample code recorded.</p>		

<ul style="list-style-type: none"> <li>■ Further information on methods of analysis may be obtained from the above address;</li> <li>■ Test results reported relate only to those items tested;</li> <li>■ <sup>Sub</sup>Indicates subcontracted test;</li> <li>■ <sup>DS</sup>Indicates relevant deviating code applies to test results.</li> </ul>	
Fugro GB Marine Limited. Incorporated in England No. 1135456. Reg. Office: Fugro House, Hithercroft Road, Wallingford, Oxfordshire, OX10 9RB	



**D.5 Grab Epifaunal (Non-Enumerated) Abundance Raw Data**

**FUGRO GROUP**  
**VATTENFALL THANET OFFSHORE WIND FARM**



Species	APHIA ID	CR01	CR03	CR10	CR11	WF01	WF02	WF03	WF04	WF05	WF06	WF07	WF08	WF09	WF11	WF12	WF14	WF19	WF22	WF25	WF27	WF29	WF32	WF37	WF41	WF44	WF45	WF47
Folliculinidae	1692			P			P			P	P	P	P					P	P	P	P	P					P	
PORIFERA	558				P																							
<i>Cliona (agg.)</i>	132026				P											P												
Microcionidae	131641				P																							
Tubulariidae	1603														P													
Bougainvilliidae	1594																								P	P		
<i>Hydrallmania falcata</i>	117890															P												
<i>Sertularella 'gaudichaudi'</i>	117901																									P		
<i>Sertularia</i>	117234	P													P	P										P		
<i>Clytia</i>	117030	P																										
<i>Alcyonium digitatum</i>	125333	P														P												
ACTINIARIA	1360	5					1							257		3				1						11		
<i>Barentsia</i>	111795																									P		
<i>Verruca stroemia</i>	106257															1												
<i>Alcyonidium</i>	110993				P								P													P	P	
<i>Amathia lendigera</i>	111659				P																							
Membraniporoidea	153579			P	P	P	P	P		P		P	P	P	P	P	P			P		P		P	P	P	P	P
<i>Conopeum reticulum</i>	111351				P				P		P	P		P			P		P				P	P	P		P	P
<i>Electra monostachys</i>	111354								P	P		P	P	P		P	P			P	P	P				P		
<i>Electra pilosa</i>	111355															P										P		
<i>Aspidelectra melolontha</i>	111350					P	P	P	P	P		P	P	P	P		P			P	P	P		P	P			P
<i>Bicellariella ciliata</i>	111147																									P		
<i>Scrupocellaria scruposa</i>	111250				P																							
<i>Escharella immersa</i>	111484	P			P										P	P										P		
<i>Schizomavella</i>	110829	P			P								P		P	P										P		

**FUGRO GROUP**  
**VATTENFALL THANET OFFSHORE WIND FARM**



Species	APHIA ID	CR01	CR03	CR10	CR11	WF01	WF02	WF03	WF04	WF05	WF06	WF07	WF08	WF09	WF11	WF12	WF14	WF19	WF22	WF25	WF27	WF29	WF32	WF37	WF41	WF44	WF45	WF47
ASCIDIACEA juv.	1839														2											2		
<i>Dendrodoa grossularia</i>	103882																									4		
Corallinaceae	143691				P																							
<b>Notes:</b> APHIA ID = World Register of Marine Species (WoRMS) taxon code Juv. = Juvenile agg. = Aggregate species P = Present																												





**D.5.1 Grab Sample Certificate of Analysis Epifauna**



**FUGRO GB MARINE LIMITED  
CERTIFICATE OF ANALYSIS**



<b>Certificate Number</b>	EP/17/004	<b>Fugro GB Marine Ltd Job Number</b>	160975
<b>Job Reference</b>	Vattenfall Thanet (Epifauna)		
<b>Prepared For</b>		<b>Prepared By</b>	
Seamus Whyte Fugro GB Marine Limited Trafalgar Wharf (Unit 16) Hamilton Road Portchester Portsmouth PO6 4PX United Kingdom		Camilla Robins Fugro GB Marine Limited Trafalgar Wharf (Unit 16) Hamilton Road Portchester Portsmouth PO6 4PX United Kingdom	
<b>Phone</b>	+44 (0) 2392 205500	<b>Phone</b>	+44 (0) 2392 205500
<b>Email</b>	sg.whyte@fugro.com	<b>Email</b>	c.robins@fugro.com
<b>Web</b>	<a href="http://www.fugro.com">www.fugro.com</a>	<b>Web</b>	<a href="http://www.fugro.com">www.fugro.com</a>

<b>Sampling Undertaken By</b>	Fugro GB Marine Limited	<b>Sampling Date</b>	October/November 2016
<b>Date of Receipt</b>	21/11/2016	<b>Date of Analysis</b>	21/11/2016– 12/01/2017
<b>Sample Matrix</b>	Macrobenthic Species ABUNDANCE (EPIFAUNA)		
<b>Method Reference</b>	TM23_001		
<b>Test Results</b>	Please double click on symbol: 		
<b>Laboratory Comments</b>			
<b>Deviating Codes</b>	None		
<b>Authorised Signature</b>			
<b>Name</b>	Camilla Robins		
<b>Position</b>	Senior Marine Taxonomist		
<b>Issue Date</b>	24/01/2017		

<ul style="list-style-type: none"> <li>■ Further information on methods of analysis may be obtained from the above address;</li> <li>■ Test results reported relate only to those items tested;</li> <li>■ <sup>Sub</sup>Indicates subcontracted test;</li> <li>■ <sup>DS</sup>Indicates relevant deviating code applies to test results.</li> </ul>
Fugro GB Marine Limited. Incorporated in England No. 1135456. Reg. Office: Fugro House, Hithercroft Road, Wallingford, Oxfordshire, OX10 9RB



**A. DEVIATING SAMPLE - CRITERIA**

Code and Criteria	Description	Reporting Comment
DS1 - Damaged container(s)/ packaging	Sample was received in a damaged container which may have resulted in contamination or loss of integrity of the sample.	<i>Sample was received in a damaged container. The results reported may not be representative of the sample at the time of sampling.</i>
DS2 - Unsuitable container	Sample was received in an unsuitable container that is known to have an effect on the analysis.	<i>Sample was received in an unsuitable container. The results reported may not be representative of the sample at the time of sampling.</i>
DS3 - Incorrect or no sample preservation	Sample was received with no preservative, an incorrect preservative, or in a condition which indicates inappropriate sample storage, where specific criteria are referenced in the method.	<i>Sample was received in a condition unsuitable for the test. The results reported may not be representative of the sample at the time of sampling.</i>
DS4 - Missing date/time details	Sample date/time details were not recorded at time of sampling or not provided to the laboratory.	<i>Sampling date/time was not provided and therefore assessment of sample stability cannot be made. The test results may have been compromised.</i>
DS5 - Error in sample labelling/details	Sample information is missing, unreadable, conflicting or incorrect. Analysis was undertaken but traceability of results cannot be guaranteed against sample location.	<i>Incorrect/incomplete sample details have been provided. The traceability of results may have been compromised.</i>
DS6 - Sample received outside holding time	The date and time information provided with the sample indicate the sample was received at the laboratory outside of the holding time.	<i>Sample was received outside analysis holding time. The results reported may not be representative of the sample at the time of sampling.</i>
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DS8 - Insufficient analysis material	Insufficient material was received which meant that analysis could not be undertaken, or the analysis could not be carried out in accordance with the method.	<i>Insufficient sample material was received. The test results may not be representative of the sample at the time of sampling.</i>
DS9 - Sample contamination	Sample was received in a satisfactory condition but cross-contamination has occurred due to an analytical issue which has resulted in loss of sample integrity.	<i>The sample integrity may have been compromised due to an analytical issue. The results reported may not be representative of the sample at the time of sampling and are outside the scope of UKAS accreditation.</i>
<b>Note:</b> Where it is agreed with the client that a deviating sample should not be tested, then the report should state "Sample not analysed" and the relevant deviating sample code recorded.		

- Further information on methods of analysis may be obtained from the above address;
- Test results reported relate only to those items tested;
- <sup>Sub</sup>Indicates subcontracted test;
- <sup>DS</sup>Indicates relevant deviating code applies to test results.

Fugro GB Marine Limited. Incorporated in England No. 1135456. Reg. Office: Fugro House, Hithercroft Road, Wallingford, Oxfordshire, OX10 9RB

**D.6 GRAB FAUNAL BIOMASS RAW DATA**

Station	Other Taxa [g/0.1 m <sup>2</sup> ]*	Crustace* [g/0.1 m <sup>2</sup> ]*	Echinodermata [g/0.1 m <sup>2</sup> ]*	Mollusca [g/0.1 m <sup>2</sup> ]*	Oligochaeta [g/0.1 m <sup>2</sup> ]*	Polychaeta [g/0.1 m <sup>2</sup> ]*
CR01	0.0289	0.0619	2.6099	0.0602		9.1676
CR03			0.0392			0.367
CR10				0.0292		0.2676
CR11	0.0883	3.2278	0.0047	24.165	0.0002	17.0533
WF01		0.0548				0.0035
WF02		0.055				0.0635
WF03		0.0047	0.0009			0.1697
WF04	0.1113	0.0011	2.7723	2.1104		3.5271
WF05		0.1076				0.1041
WF06	0.0329		0.3672	2.0042	0.0016	2.0594
WF07	0.0612	0.2104	0.0477	9.4275		3.164
WF08	0.0012	0.0021	0.065	0.0032	0.0002	0.0196
WF09	0.8423	0.0854	3.1263	0.0457		3.717
WF11	0.0457	0.0069	0.6299	0.1854		0.1722
WF12	0.0347	0.0513	0.0422	0.0019		1.6876
WF14		0.9398	1.6949	5.5315		2.7552
WF19		0.0007				0.2129
WF22	0.2728	0.0022	0.6747	0.3832		1.2745
WF25			0.0012	0.0012		1.9784
WF27				0.0352		0.7546
WF29		0.0449		0.0004		0.2188
WF32	0.0855	0.0109	149.6288	3.7414		0.2906
WF37		0.0064	44.9748	1.5809		6.2932
WF41	0.0053	0.0074	50.4324	44.5986		0.8764
WF44	0.0211	0.1521	0.4857	0.1175		0.6775
WF45		0.0018				0.0336
WF47	0.0709		49.5599	2.8477		3.6597

**Notes:**

\* = Blotted wet weights

**FUGRO GROUP**  
**VATTENFALL THANET OFFSHORE WIND FARM**



Station	Other Taxa [AFDW g/0.1 m <sup>2</sup> ]	Crustacea [AFDW g/0.1 m <sup>2</sup> ]	Echinodermata [AFDW g/0.1 m <sup>2</sup> ]	Mollusca [AFDW g/0.1 m <sup>2</sup> ]	Oligochaeta [AFDW g/0.1 m <sup>2</sup> ]	Polychaeta [AFDW g/0.1 m <sup>2</sup> ]
CR01	0.0045	0.0158	0.2218	0.0048		1.4210
CR03			0.0033			0.0569
CR10				0.0023		0.0415
CR11	0.0137	0.8231	0.0004	1.933		2.6433
WF01		0.0140				0.0005
WF02		0.0140				0.0098
WF03		0.0012	0.0001			0.0263
WF04	0.0173	0.0003	0.2356	0.1688		0.5467
WF05		0.0274				0.0161
WF06	0.0051		0.0312	0.1603	0.0002	0.3192
WF07	0.0095	0.0537	0.0041	0.7542		0.4904
WF08	0.0002	0.0005	0.006	0.0003		0.0030
WF09	0.1306	0.0218	0.2657	0.0037		0.5761
WF11	0.0071	0.0018	0.0535	0.0148		0.0267
WF12	0.0054	0.0131	0.0036	0.0002		0.2616
WF14		0.2396	0.1441	0.4425		0.4271
WF19		0.0002				0.0330
WF22	0.0423	0.0006	0.0573	0.0307		0.1975
WF25			0.0001	0.0001		0.3067
WF27				0.0028		0.1170
WF29		0.0114				0.0339
WF32	0.0133	0.0028	12.7184	0.2993		0.0450
WF37		0.0016	3.8229	0.1265		0.9754
WF41	0.0008	0.0019	4.2868	3.5679		0.1358
WF44	0.0033	0.0388	0.0413	0.0094		0.1050
WF45		0.0005				0.0052
WF47	0.0110		4.2126	0.2278		0.5673
<b>Notes:</b> AFDW = Ash Free Dry Weight						

**D.6.1 Grab Sample Certificate of Analysis Biomass**

**FUGRO GB MARINE LIMITED  
CERTIFICATE OF ANALYSIS**



<b>Certificate Number</b>	EP/17/0006	<b>Fugro GB Marine Ltd Job Number</b>	160975
<b>Job Reference</b>	Vattenfall Thanet		
<b>Prepared For</b>	<b>Prepared By</b>		
<b>Seamus Whyte</b> Fugro GB Marine Limited Trafalgar Wharf (Unit 16) Hamilton Road Portchester Portsmouth PO6 4PX United Kingdom	<b>Grant Rowe</b> Fugro GB Marine Limited Y Plas Aberystwyth Road Machynlleth Powys SY20 8ER United Kingdom		
<b>Phone</b>	+44 (0) 2392 205500	<b>Phone</b>	+44 (0) 2392 205606
<b>Email</b>	<a href="mailto:sg.whyte@fugro.com">sg.whyte@fugro.com</a>	<b>Email</b>	<a href="mailto:g.rowe@fugro.com">g.rowe@fugro.com</a>
<b>Web</b>	<a href="http://www.fugro.com">www.fugro.com</a>	<b>Web</b>	<a href="http://www.fugro.com">www.fugro.com</a>

<b>Sampling Undertaken By</b>	Fugro GB Marine Limited	<b>Sampling Date</b>	October/November 2016
<b>Date of Receipt</b>	21-11-16	<b>Date of Analysis</b>	12-12-16 to 24-01-17
<b>Sample Matrix</b>	Macrobenthic Species BIOMASS		
<b>Method Reference</b>	TM23_001		
<b>Test Results</b>	Please double click on symbol: 		
<b>Laboratory Comments</b>	None		
<b>Deviating Codes</b>	None		
<b>Authorised Signature</b>			
<b>Name</b>	Grant Rowe		
<b>Position</b>	Principal Taxonomist/QC Manager		
<b>Issue Date</b>	26 <sup>th</sup> January 2017		

<ul style="list-style-type: none"> <li>■ Further information on methods of analysis may be obtained from the above address;</li> <li>■ Test results reported relate only to those items tested;</li> <li>■ <sup>Sub</sup>Indicates subcontracted test;</li> <li>■ <sup>DS</sup>Indicates relevant deviating code applies to test results.</li> </ul>
Fugro GB Marine Limited. Incorporated in England No. 1135456. Reg. Office: Fugro House, Hithercroft Road, Wallingford, Oxfordshire, OX10 9RB



**A. DEVIATING SAMPLE - CRITERIA**

Code and Criteria	Description	Reporting Comment
DS1 - Damaged container(s)/ packaging	Sample was received in a damaged container which may have resulted in contamination or loss of integrity of the sample.	<i>Sample was received in a damaged container. The results reported may not be representative of the sample at the time of sampling.</i>
DS2 - Unsuitable container	Sample was received in an unsuitable container that is known to have an effect on the analysis.	<i>Sample was received in an unsuitable container. The results reported may not be representative of the sample at the time of sampling.</i>
DS3 - Incorrect or no sample preservation	Sample was received with no preservative, an incorrect preservative, or in a condition which indicates inappropriate sample storage, where specific criteria are referenced in the method.	<i>Sample was received in a condition unsuitable for the test. The results reported may not be representative of the sample at the time of sampling.</i>
DS4 - Missing date/time details	Sample date/time details were not recorded at time of sampling or not provided to the laboratory.	<i>Sampling date/time was not provided and therefore assessment of sample stability cannot be made. The test results may have been compromised.</i>
DS5 - Error in sample labelling/details	Sample information is missing, unreadable, conflicting or incorrect. Analysis was undertaken but traceability of results cannot be guaranteed against sample location.	<i>Incorrect/incomplete sample details have been provided. The traceability of results may have been compromised.</i>
DS6 - Sample received outside holding time	The date and time information provided with the sample indicate the sample was received at the laboratory outside of the holding time.	<i>Sample was received outside analysis holding time. The results reported may not be representative of the sample at the time of sampling.</i>
DS7 - Analysis commenced after holding time	The sample was received at the laboratory within its holding time but an analytical issue led to delay in commencement of analysis which exceeded the holding time.	<i>The holding time expired prior to analysis being undertaken. The results reported may not be representative of the sample at the time of sampling.</i>
DS8 - Insufficient analysis material	Insufficient material was received which meant that analysis could not be undertaken, or the analysis could not be carried out in accordance with the method.	<i>Insufficient sample material was received. The test results may not be representative of the sample at the time of sampling.</i>
DS9 - Sample contamination	Sample was received in a satisfactory condition but cross-contamination has occurred due to an analytical issue which has resulted in loss of sample integrity.	<i>The sample integrity may have been compromised due to an analytical issue. The results reported may not be representative of the sample at the time of sampling and are outside the scope of UKAS accreditation.</i>
<b>Note:</b> Where it is agreed with the client that a deviating sample should not be tested, then the report should state "Sample not analysed" and the relevant deviating sample code recorded.		

<ul style="list-style-type: none"> <li>■ Further information on methods of analysis may be obtained from the above address;</li> <li>■ Test results reported relate only to those items tested;</li> <li>■ <sup>Sub</sup>Indicates subcontracted test;</li> <li>■ <sup>DS</sup>Indicates relevant deviating code applies to test results.</li> </ul>
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E. DATA ANALYSIS

E.1 Particle Size Distribution Data Analysis

Sieve and laser data were merged and entered into the software GRADISTAT v8.0 (Blott and Pye, 2001) to derive statistics including percentage of each particle greater than each phi aperture size, mean and median grain size, bulk sediment classes (percentage silt, sand and gravel), skewness, sorting coefficients and Folk classification (Folk, 1954). These statistics are summarised in Table D.1.

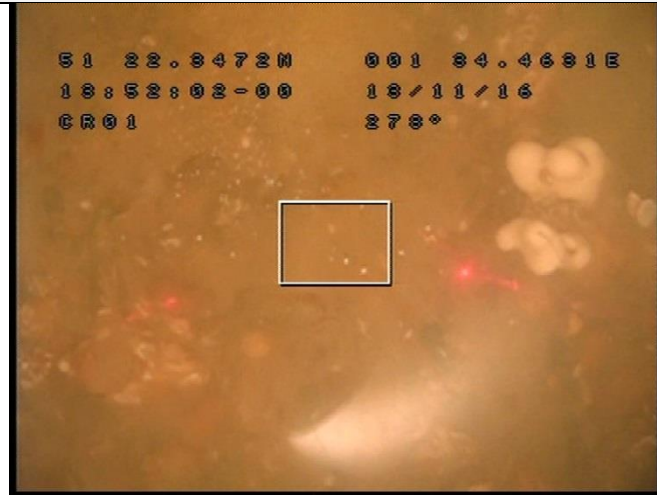
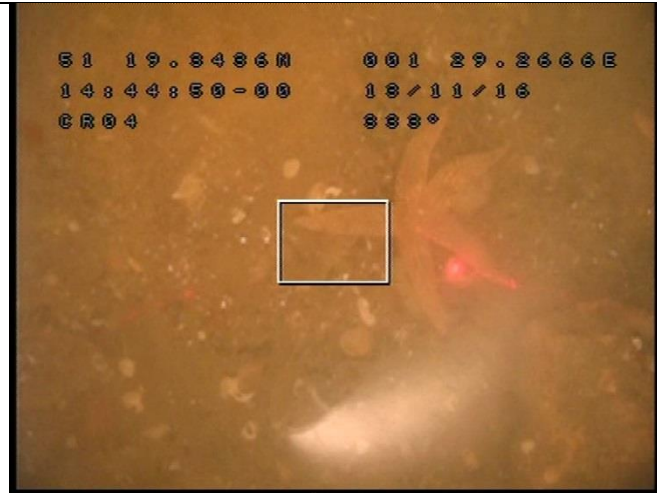
**Table D.1: Sediment Particle Size Distribution Statistics**



Distributional Statistic Measure	Description
Phi scale	A logarithmic scale which allows grain size data to be expressed in units of equal value for the purpose of graphical plotting and statistical calculations. The scale is based on the following relationship:  $phi = -log_2 d$  where $d$ is the grain size diameter in mm
Median or $D_{50}$	Measure of central tendency. Defined as the value where half of the sample particle size grain reside above this point and half below it.
Mode	Peak of the frequency distribution. The mode represents the particle size (or size range) most commonly found in the distribution
Sorting	A measure of the range of grain size present and the magnitude of the spread or scatter of these around the mean
Percentiles ( $D_{10}$ , $D_{50}$ , $D_{90}$ )	Defined as the maximum particle diameter below which 10%, 50% or 90% of the sample particle grain size occurs, respectively. Monitoring the percentiles allows assessing changes in the main particle size, as well as changes at the extremes of the distribution
Skewness	A degree of symmetry – skewness reflects sorting in the tails of a grain size data set. Data set that have a tail of excess fines particles are said to positively skewed or fine skewed; data sets with a tail of excess coarse particles are negatively skewed or coarse skewed
Kurtosis	The degree of sharpness or peakedness in a grain size frequency distribution curve





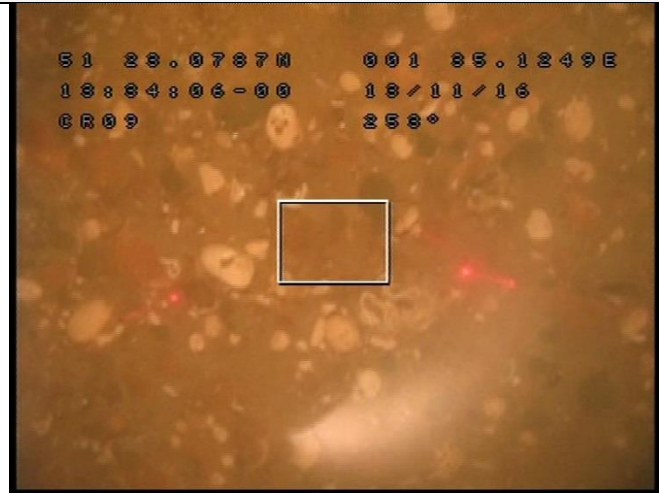

**F. VIDEO ANALYSIS RESULTS**


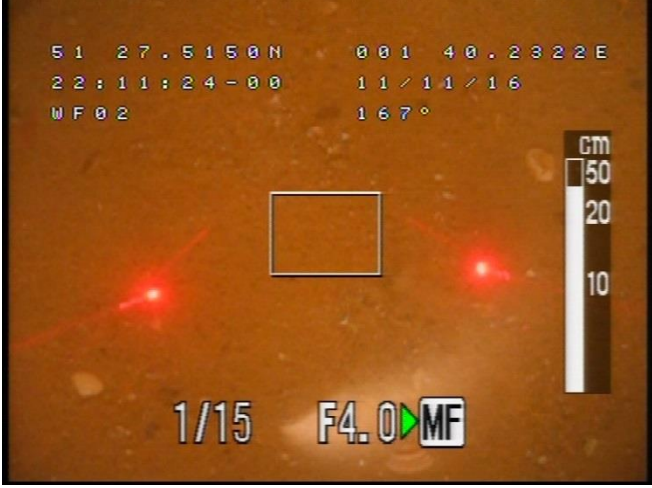
**F.1 Drop Down Video and Stills**

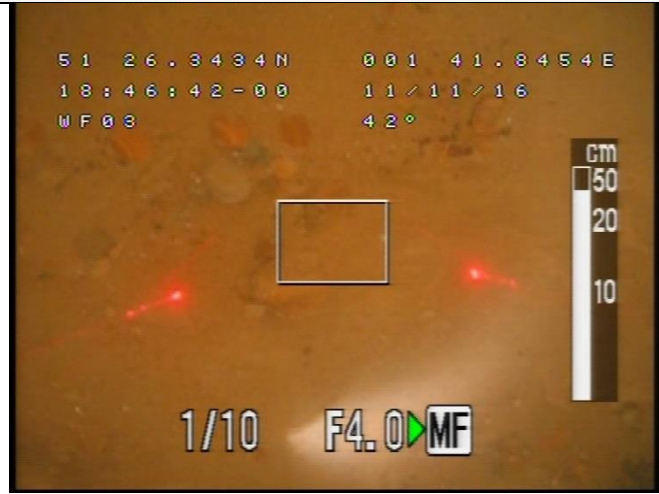
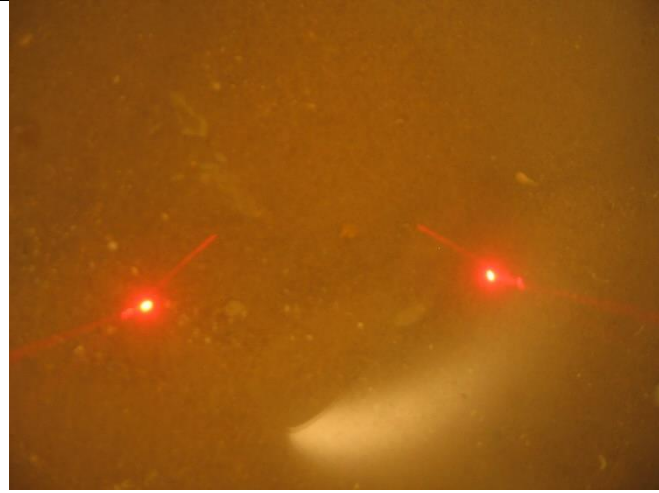
Site	General Description	Detailed Sediment Notes	Conspicuous Species	Representative Image
CR01	Gravelly pebbly sand	Sand with shells, shell fragments, pebbles and cobbles	<p>Asteroidea</p> <p><i>Asterias rubens</i></p> <p>Actiniaria</p> <p><i>Urticina felina</i></p> <p><i>Spirobranchus</i> sp.</p> <p><i>Alcyonium digitatum</i></p> <p>Hydroid/bryozoan turf</p>	
CR04	Gravelly pebbly sand	Sand with shells, shell fragments, pebbles and cobbles	<p><i>Asterias rubens</i></p> <p>Actiniaria</p> <p><i>Urticina felina</i></p> <p><i>Alcyonium digitatum</i></p> <p>Paguridae</p> <p>Hydroid/bryozoan turf</p> <p><i>Mytilus edulis</i></p>	

Site	General Description	Detailed Sediment Notes	Conspicuous Species	Representative Image
CR05	Gravelly pebbly sand	Sand with shells, shell fragments, pebbles and cobbles	<i>Asterias rubens</i> Actiniaria <i>Alcyonium digitatum</i> Porifera <i>Flustra foliacea</i>	 <p>51 19.3381N 001 26.6686E                      09:08:45-00 03/12/16                      CR05.1 0°                      300; \ 0 \ \ \</p>
CR06	Cobbles and pebbles	Pebbles and cobbles	<i>Asterias rubens</i> Actiniaria	 <p>51 19.3040N 001 27.4883E                      17:51:17-00 02/12/16                      CR05(3) 24°                      300; \ 0 \ \ \</p>

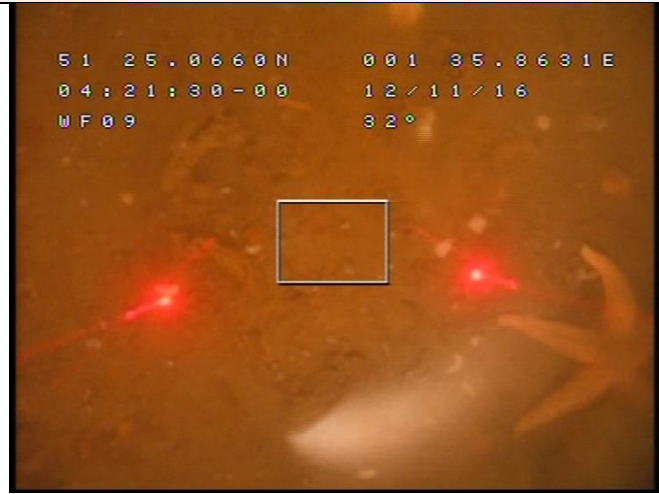
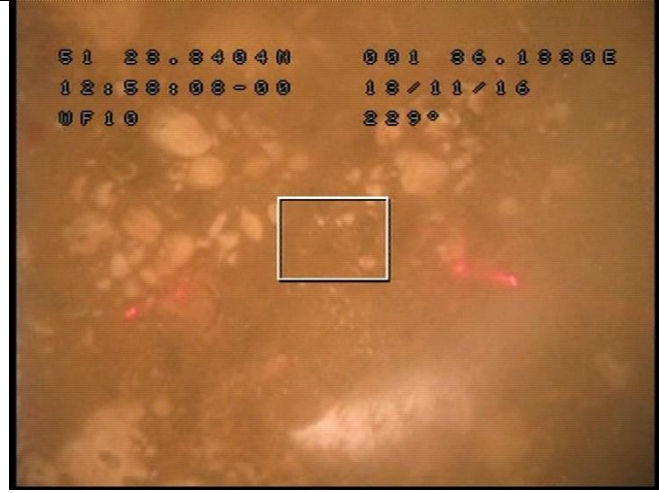
Site	General Description	Detailed Sediment Notes	Conspicuous Species	Representative Image
CR07	Gravelly pebbly sand	Sand with shells, shell fragments, pebbles and cobbles	<p><i>Asterias rubens</i></p> <p>Actinaria</p> <p><i>Urticina felina</i></p> <p><i>Spirobranchus</i> sp.</p> <p><i>Alcyonium digitatum</i></p> <p>Hydroid/bryozoan turf</p>	 <p>51 19.2633N 001 27.0207E 08:16:12-00 03/12/16 CR07(3) 27° 300; \ 0 \ \ \</p>
CR08	Sand	Muddy sand with clay	<p><i>Asterias rubens</i></p>	 <p>51 19.2077N 001 25.3675E 07:44:38-00 05/12/16 CR08(3) 55° 300; \ 0 \ \ \</p>



Site	General Description	Detailed Sediment Notes	Conspicuous Species	Representative Image
CR09	Gravelly pebbly sand	Sand with shells, shell fragments pebbles and cobbles	<p><i>Ophiothrix fragilis</i></p> <p>Actinaria</p> <p><i>Spirobranchus</i> sp.</p> <p><i>Alcyonium digitatum</i></p>	
CR10	No visibility	No visibility	No visibility	



Site	General Description	Detailed Sediment Notes	Conspicuous Species	Representative Image
CR11		Muddy sand	Asteroidea	
WF02	Sand	Sand with shell fragments	Asteroidea <i>Sabellaria spinulosa</i>	

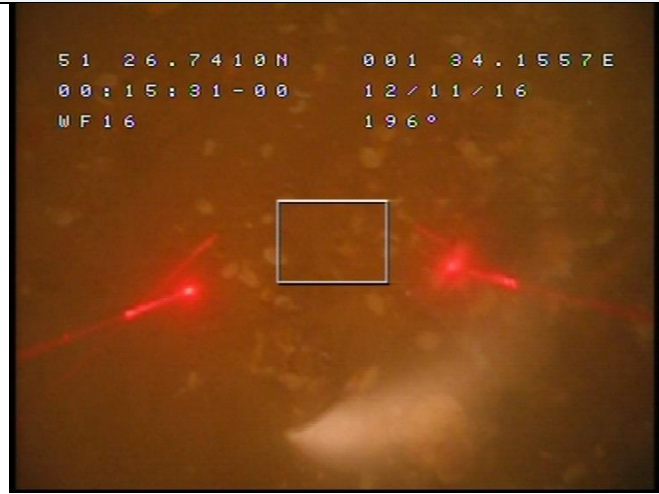

Site	General Description	Detailed Sediment Notes	Conspicuous Species	Representative Image
WF03	Sand	Sand with shell fragments	Paguridae	 <p>51 26.3434N 001 41.8454E        18:46:42-00 11/11/16        WF03 42°</p> <p>cm 50 20 10</p> <p>1/10 F4.0 MF</p>
WF05	Sand	Sand with shell fragments	None	

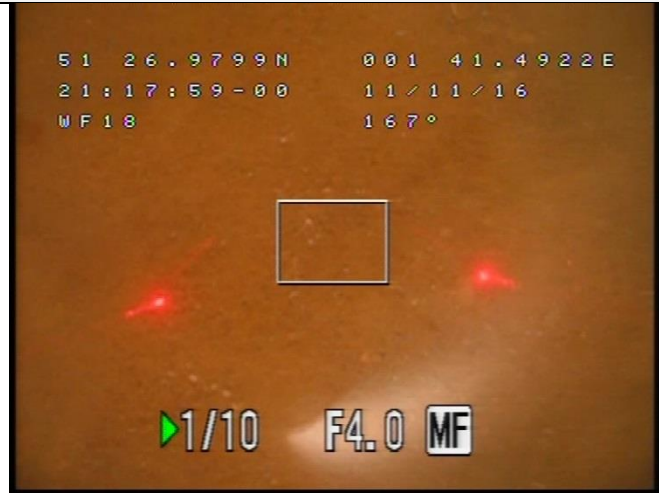




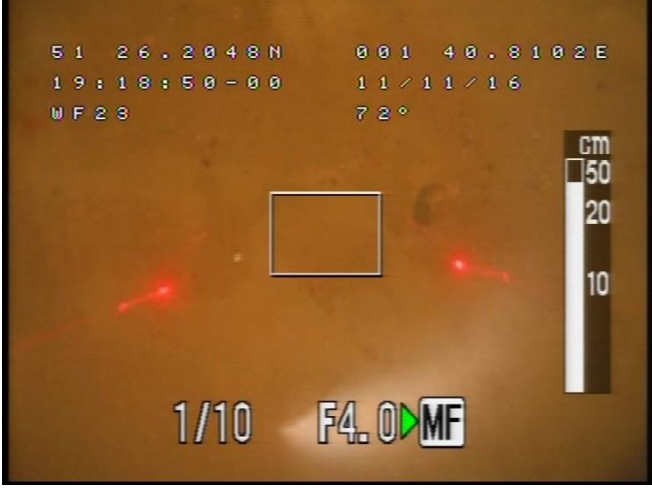
Site	General Description	Detailed Sediment Notes	Conspicuous Species	Representative Image
WF09	Sand	Sand with shell fragments	<i>Asterias rubens</i>	 <p>51 25.0660N 001 35.8631E 04:21:30-00 12/11/16 WF09 32°</p>
WF10	Gravelly pebbly sand	Sand with shells, shell fragments, pebbles and cobbles	Actinaria <i>Spirobranchus</i> sp. <i>Alcyonium digitatum</i>	 <p>51 28.8404N 001 36.1880E 12:58:08-00 18/11/16 WF10 229°</p>

Site	General Description	Detailed Sediment Notes	Conspicuous Species	Representative Image
WF11	Gravelly pebbly sand	Sand with shells, shell fragments, pebbles and cobbles	Ophiuroidea <i>Urticina</i> sp. <i>Spirobranchus</i> sp. <i>Alcyonium digitatum</i> <i>Psammechinus miliaris</i>	 <p>51 28.6105N 001 88.8800E 11:11:31-00 18/11/16 WF11 225°</p>
WF12	Gravelly pebbly sand	Sand with shells, shell fragments, pebbles and cobbles	Ophiuroidea <i>Spirobranchus</i> sp.	 <p>51 24.8822N 001 34.5815E 03:57:37-00 12/11/16 WF12 334°</p>



Site	General Description	Detailed Sediment Notes	Conspicuous Species	Representative Image
WF13	Sand	Sand with shells and shell fragments	Asteroidea Ophiuroidea	
WF15	Sand	Sand with shells and shell fragments	Asteroidea Ophiuroidea Actinaria <i>Spirobranchus</i> sp. Hydroid/bryozoan turf	


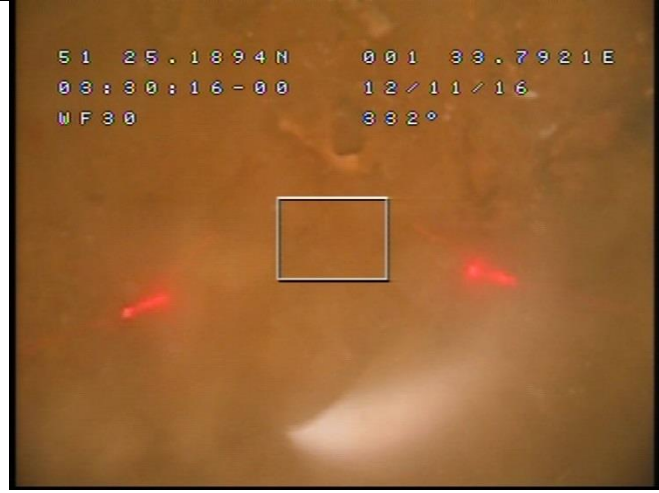
Site	General Description	Detailed Sediment Notes	Conspicuous Species	Representative Image
WF16	Sand	Sand with fragments	Asteroidea Ophiuroidea	
WF17	Sand	Sand with shell fragments	None	

Site	General Description	Detailed Sediment Notes	Conspicuous Species	Representative Image
WF18	Sand	Sand with shell fragments	<i>Pagurus bernhardus</i>	
WF20	Sand	Sand with shell fragments	Gastropoda Ophiuroidea Actiniaria	



Site	General Description	Detailed Sediment Notes	Conspicuous Species	Representative Image
WF21	Sand	Sand with shell fragments	Ophiuroidea	
WF23	Sand	Sand with shell fragments	Asteroidea Actinaria Paguridae <i>Sabellaria spinulosa</i> Hydroid/bryozoan turf	


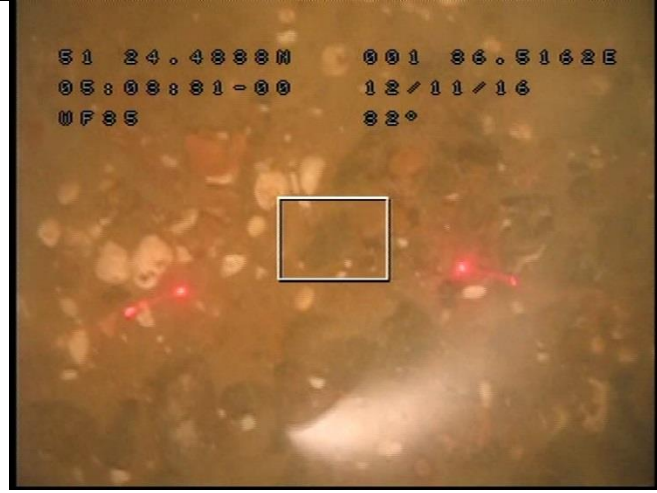


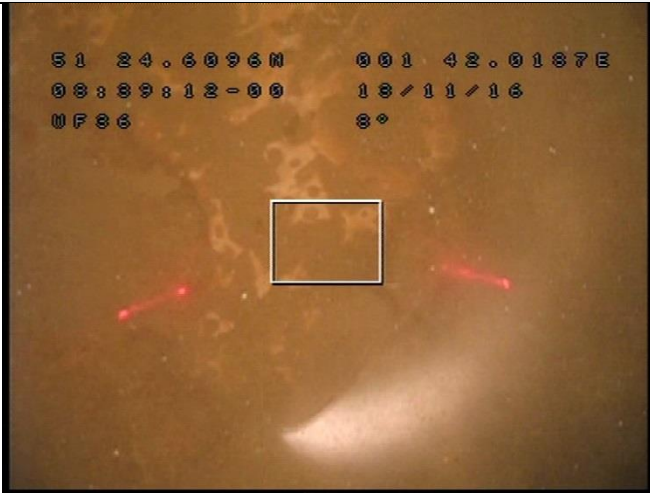

Site	General Description	Detailed Sediment Notes	Conspicuous Species	Representative Image
WF24	Sand	Sand with shell fragments	None	
WF26	Sand	Sand with shell fragments, occasional pebble	Ophiuroidea Hydroid/bryozoan turf	

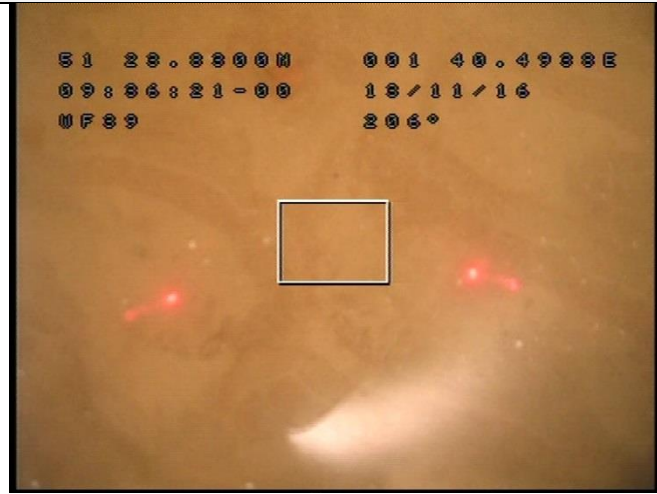
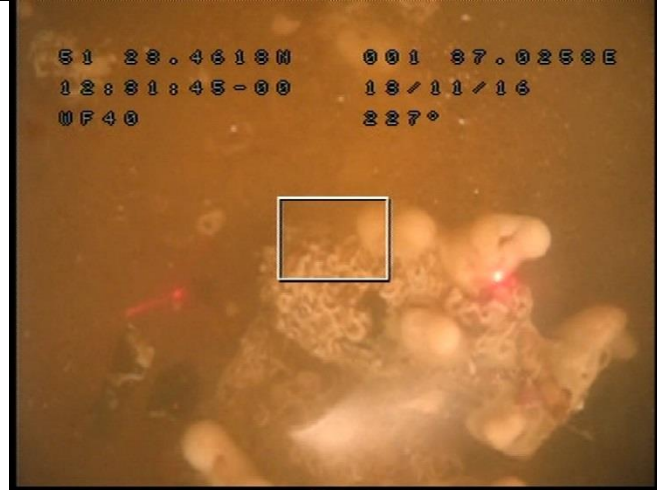
Site	General Description	Detailed Sediment Notes	Conspicuous Species	Representative Image
WF28	Pebbly sand	Sand with patch of pebbles and shells	Astroidea Actinaria Paguridae <i>Sabellaria spinulosa</i> Hydroid/bryozoan turf	
WF30	Sand	Sand with shell fragments	Astroidea	





Site	General Description	Detailed Sediment Notes	Conspicuous Species	Representative Image
WF31	Sand	Sand with shell fragments	None	
WF33	Sand	Sand with shell fragments	Asteroidea Paguridae	


Site	General Description	Detailed Sediment Notes	Conspicuous Species	Representative Image
WF34	Gravelly pebbly sand	Sand with shell fragments, pebbles and pieces of chalk	<p><i>Asterias rubens</i> Actiniaria <i>Urticina felina</i> <i>Spirobranchus</i> sp. <i>Alcyonium digitatum</i> <i>Calliostoma</i> sp. Porifera <i>Sabellaria spinulosa</i> Hydroid/bryozoan turf Brachyura</p>	 <p>51 24.2924N 001 85.8847E 05:29:06-00 12/11/16 WF34 87°</p>
WF35	Gravelly pebbly sand	Sand with shell fragments, pebbles, occasional cobbles and pieces of chalk	<p>Astroidea Ophiuroidea Actiniaria <i>Urticina felina</i> <i>Spirobranchus</i> sp. Porifera</p>	 <p>51 24.4888N 001 86.5162E 05:08:31-00 12/11/16 WF35 82°</p>

Site	General Description	Detailed Sediment Notes	Conspicuous Species	Representative Image
WF36	Sand	Sand overlying chalk	Asteroidea	
WF38	Gravelly pebbly sand	Sand with shells, shell fragments, pebbles and cobbles	Ophiuroidea Actinaria <i>Urticina felina</i> <i>Spirobranchus</i> sp. <i>Alcyonium digitatum</i> Porifera Paguridae Hydroid/bryozoan turf	

Site	General Description	Detailed Sediment Notes	Conspicuous Species	Representative Image
WF39	Sand	Sand with shell fragments	Paguridae Hydroid/bryozoan turf <i>Calliostoma</i> sp.	
WF40	Gravelly pebbly sand	Sand with shells, shell fragments, pebbles and cobbles	Astroidea <i>Spirobranchus</i> sp. <i>Alcyonium digitatum</i> <i>Calliostoma zizyphinum</i> Paguridae Hydroid/bryozoan turf	

Site	General Description	Detailed Sediment Notes	Conspicuous Species	Representative Image
WF42	Sand	Sand with shell fragments and occasional pebbles	None	
WF43	Gravelly pebbly sand	Sand with shells, shell fragments, pebbles and cobbles	Ophiuroidea <i>Spirobranchus</i> sp. <i>Alcyonium digitatum</i> <i>Sabellaria spinulosa</i> Paguridae Hydroid/bryozoan turf Unidentified fish (Pisces)	



Site	General Description	Detailed Sediment Notes	Conspicuous Species	Representative Image
WF46	Sand	Sand with shell fragments	Ophiuroidea Actinaria <i>Sabellaria spinulosa</i> Paguridae	

**F.2**      ***Sabellaria* Assessment**

Station	Sediment Description	Sabellaria form present					Sabellaria Characteristics			Representative Image	Reef Definition Based on			Overall Assessment
		Absent	Moribund Tubes	Crusts	Clumps	Potential Reef	Elevation	Patchiness	Brief Description of Sabellaria Recorded		Elevation	Patchiness	Consolidation	
WF28	Sand with patch of pebbles and shells	N	Y	N	Y	N	2 - 5 cm	12 %	<p><i>Sabellaria</i> was observed at this station in both small clumps and larger clumps of upright intertwined tubes. Some were also embedded in the sand, with moribund clumps also present. The elevation of the tubes from the sediment varied along the transect ranging between &lt; 2 cm and occasionally &gt; 5 cm.</p>		LOW	LOW	LOW/MEDIUM	LOW



Station	Sediment Description	Sabellaria form present					Sabellaria Characteristics			Representative Image	Reef Definition Based on			Overall Assessment
		Absent	Moribund Tubes	Crusts	Clumps	Potential Reef	Elevation	Patchiness	Brief Description of Sabellaria Recorded		Elevation	Patchiness	Consolidation	
WF46	Sand with shell fragments	N	Y	N	Y	N	< 2 cm	7 %	Sabellaria was observed at this station in small clumps mostly embedded in the sand, with moribund tubes also present.		NOT REEF	NOT REEF	NOT REEF	NOT REEF