

Plate 79 TP19



Plate 80 TP19

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Ground Technologies & Investigation

Project :
Swansea Tidal Lagoon

Client: Tidal Lagoon (Swansea Bay) Plc

Project No.: A095973-2 | Date: Dec 2016



Plate 81 TP20



Plate 82 TP20

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Plate 83 TP21



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Plate 85 TP22



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Plate 89 TP24



Plate 90 TP24

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Plate 91 TP29



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Plate 93 TP30



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Plate 95 TP31



Plate 96 TP31

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Plate 1 WS01



Plate 2 WS01

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Plate 3 WS01



Plate 4 WS01

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Plate 7 WS03



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Plate 9 WS03



Plate 10 WS04

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Plate 13 WS04



Plate 14 WS05

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Plate 18 WS06

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Plate 19 WS06



Plate 20 WS06

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Plate 21 WS06



Plate 22 WS07

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Plate 23 WS07



Plate 24 WS07

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Plate 26 WS09

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Plate 27 WS10



Plate 28 WS11

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Plate 29 WS12



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Plate 31 WS12



Plate 32 WS13

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Plate 33 WS13



Plate 34 WS14

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Plate 35 WS14



Plate 36 WS15

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Plate 39 WS17



Plate 40 WS18

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Plate 41 WS19



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Plate 43 WS20



Plate 44 WS21

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Plate 45 WS22



Plate 46 WS22

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Plate 47 WS24



Plate 48 WS24

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Plate 49 WS25



Plate 50 WS26

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Plate 51 WS27



Plate 52 WS27

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Plate 53 WS27



Plate 54 WS28

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Plate 55 WS28



Plate 56 WS29

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Plate 57 WS29



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Plate 59 WS30



Plate 60

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Plate 61 WS32



Plate 62 WS33

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Plate 63 WS34



Plate 64 WS34

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Project No.: A095973-2

Date: Dec 2016

Appendix C – CBR (by TRL Probe) Results

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Ground Engineering Services

PROJECT No.:	A095973-2
PROJECT NAME:	Tidal Lagoon Swansea Onshore GI
CLIENT:	Tidal Lagoon Power
FIGURE No.:	

DCP-CBR Corellation

$Log_{10}(CBR) = 2.48-1.057 \times Log_{10}$ (mm/blow)

DCP -Modulus E Corellation

$E = 17.6\ (CBR)^{0.64}$ MPa

In situ CBR by TRL Probe

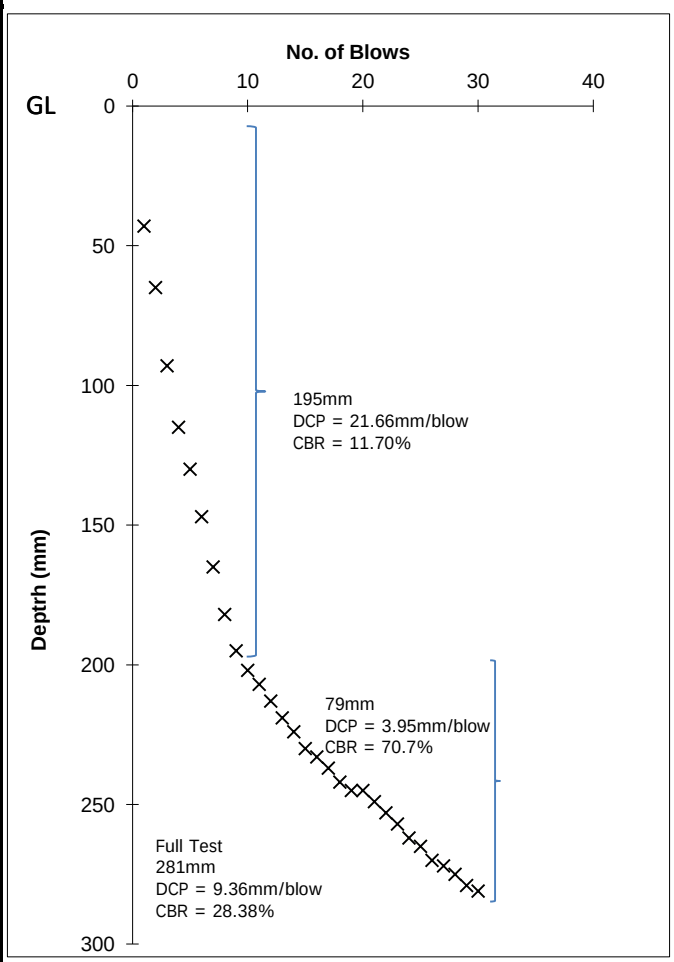
Reference: 1 Position: TP1 Date: 23.11.2016

mm per blow	Σ Blows	Reading on Scale (mm)	Depth from Ground Level (mm)	mm per blow	Σ Blows	Reading on Scale (mm)	Depth from Ground Level (mm)
43	1	102	43		46		-59
22	2	124	65		47		-59
28	3	152	93		48		-59
22	4	174	115		49		-59
15	5	189	130		50		-59
17	6	206	147		51		-59
18	7	224	165		52		-59
17	8	241	182		53		-59
13	9	254	195		54		-59
7	10	261	202		55		-59
	11	266	207		56		-59
6	12	272	213		57		-59
6	13	278	219		58		-59
5	14	283	224		59		-59
6	15	289	230		60		-59
3	16	292	233		61		-59
4	17	296	237		62		-59
5	18	301	242		63		-59
3	19	304	245		64		-59
	20	304	245		65		-59
4	21	308	249		66		-59
4	22	312	253		67		-59
4	23	316	257		68		-59
5	24	321	262		69		-59
3	25	324	265		70		-59
5	26	329	270		71		-59
2	27	331	272		72		-59
3	28	334	275		73		-59
4	29	338	279		74		-59
2	30	340	281		75		-59
-340	31		-59		76		-59
	32		-59		77		-59
	33		-59		78		-59
	34		-59		79		-59
	35		-59		80		-59
	36		-59		81		-59
	37		-59		82		-59
	38		-59		83		-59
	39		-59		84		-59
	40		-59		85		-59
	41		-59		86		-59
	42		-59		87		-59
	43		-59		88		-59
	44		-59		89		-59
	45		-59		90		-59

Test started at: 0 m below ground level

Zero Reading: 59 mm

Zero reading = start depth below ground surface



After Design manual for Roads and Bridges, Volume 7 Pavement Design and maintenance, Section 3 Pavement Maintenace Assessment, Part 2 HD29/08

Data compiled by: JB
Data checked by: SJ

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PROJECT No.:	A095973-2
PROJECT NAME:	Tidal Lagoon Swansea Onshore GI
CLIENT:	Tidal Lagoon Power
FIGURE No.:	

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In situ CBR by TRL Probe

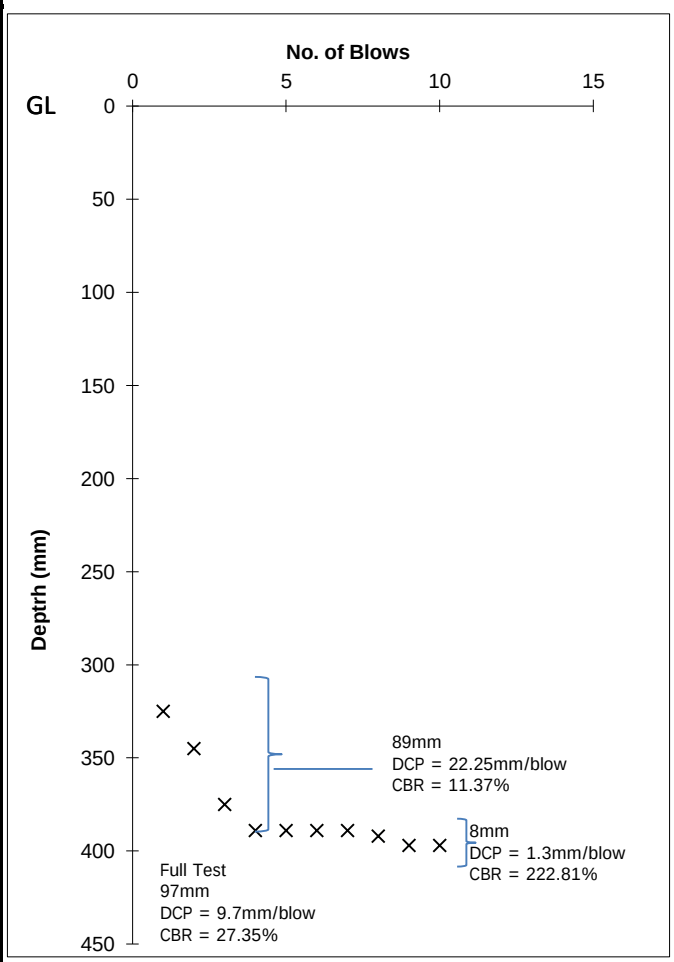
Reference: 1 Position: TP4 Date: 23.11.2016

mm per blow	Σ Blows	Reading on Scale (mm)	Depth from Ground Level (mm)	mm per blow	Σ Blows	Reading on Scale (mm)	Depth from Ground Level (mm)
25	1	140	325		46		185
20	2	160	345		47		185
30	3	190	375		48		185
14	4	204	389		49		185
	5	204	389		50		185
	6	204	389		51		185
	7	204	389		52		185
3	8	207	392		53		185
5	9	212	397		54		185
	10	212	397		55		185
	11		185		56		185
	12		185		57		185
	13		185		58		185
	14		185		59		185
	15		185		60		185
	16		185		61		185
	17		185		62		185
	18		185		63		185
	19		185		64		185
	20		185		65		185
	21		185		66		185
	22		185		67		185
	23		185		68		185
	24		185		69		185
	25		185		70		185
	26		185		71		185
	27		185		72		185
	28		185		73		185
	29		185		74		185
	30		185		75		185
	31		185		76		185
	32		185		77		185
	33		185		78		185
	34		185		79		185
	35		185		80		185
	36		185		81		185
	37		185		82		185
	38		185		83		185
	39		185		84		185
	40		185		85		185
	41		185		86		185
	42		185		87		185
	43		185		88		185
	44		185		89		185
	45		185		90		185

Test started at: 0.3 m below ground level

Zero Reading: 115 mm

Zero reading = start depth below ground surface



After Design manual for Roads and Bridges, Volume 7 Pavement Design and maintenance, Section 3 Pavement Maintenace Assessment, Part 2 HD29/08

Data compiled by: JB
Data checked by: SJ

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FIGURE No.:	

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$Log_{10}(CBR) = 2.48-1.057 \times Log_{10}$ (mm/blow)

DCP -Modulus E Corellation

$E = 17.6\ (CBR)^{0.64}$ MPa

In situ CBR by TRL Probe

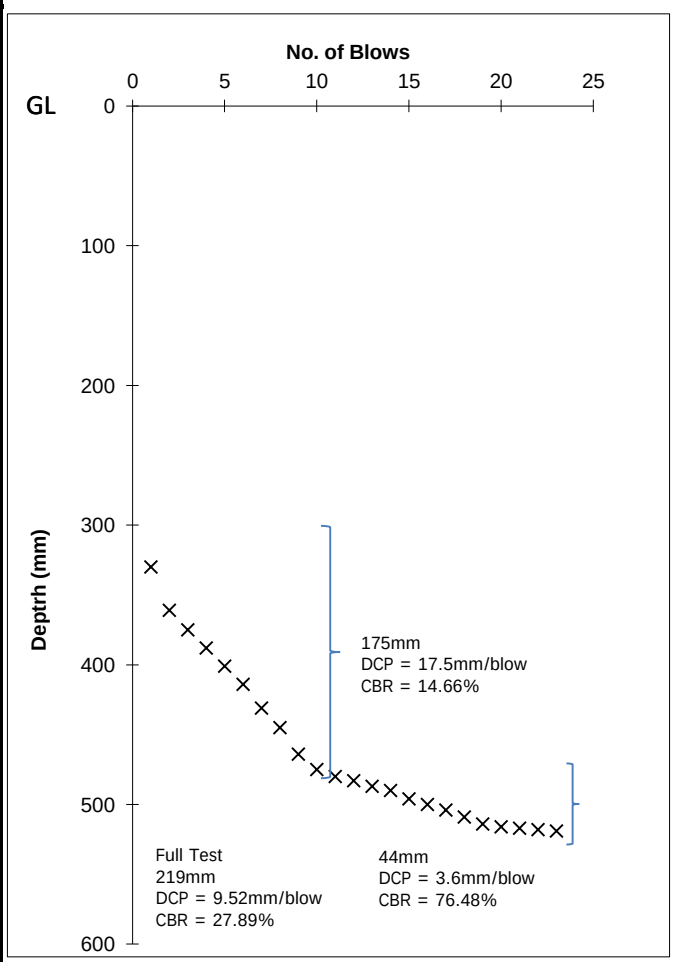
Reference: 1 Position: TP5 Date: 23.11.2016

mm per blow	Σ Blows	Reading on Scale (mm)	Depth from Ground Level (mm)	mm per blow	Σ Blows	Reading on Scale (mm)	Depth from Ground Level (mm)
30	1	144	330		46		186
31	2	175	361		47		186
14	3	189	375		48		186
13	4	202	388		49		186
13	5	215	401		50		186
13	6	228	414		51		186
17	7	245	431		52		186
14	8	259	445		53		186
19	9	278	464		54		186
11	10	289	475		55		186
5	11	294	480		56		186
3	12	297	483		57		186
4	13	301	487		58		186
3	14	304	490		59		186
6	15	310	496		60		186
4	16	314	500		61		186
4	17	318	504		62		186
5	18	323	509		63		186
5	19	328	514		64		186
2	20	330	516		65		186
1	21	331	517		66		186
1	22	332	518		67		186
1	23	333	519		68		186
	24		186		69		186
	25		186		70		186
	26		186		71		186
	27		186		72		186
	28		186		73		186
	29		186		74		186
	30		186		75		186
	31		186		76		186
	32		186		77		186
	33		186		78		186
	34		186		79		186
	35		186		80		186
	36		186		81		186
	37		186		82		186
	38		186		83		186
	39		186		84		186
	40		186		85		186
	41		186		86		186
	42		186		87		186
	43		186		88		186
	44		186		89		186
	45		186		90		186

Test started at: 0.3 m below ground level

Zero Reading: 114 mm

Zero reading = start depth below ground surface



After Design manual for Roads and Bridges, Volume 7 Pavement Design and maintenance, Section 3 Pavement Maintenace Assessment, Part 2 HD29/08

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PROJECT No.:	A095973-2
PROJECT NAME:	Tidal Lagoon Swansea Onshore GI
CLIENT:	Tidal Lagoon Power
FIGURE No.:	

DCP-CBR Corellation

$Log_{10}(CBR) = 2.48-1.057 \times Log_{10}$ (mm/blow)

DCP -Modulus E Corellation

$E = 17.6\ (CBR)^{0.64}$ MPa

In situ CBR by TRL Probe

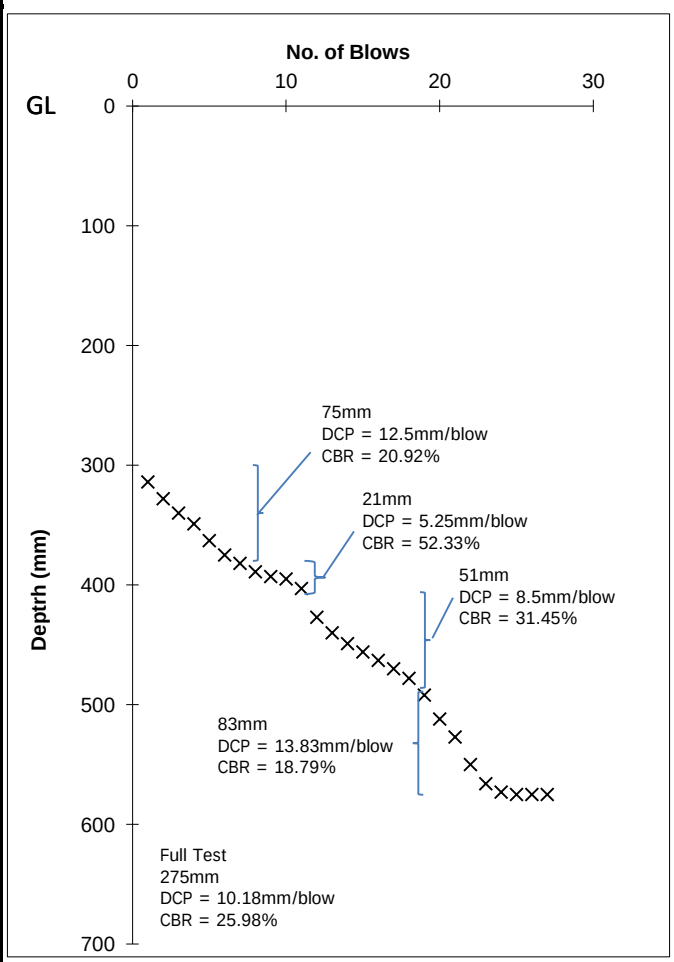
Reference: 1 Position: TP9 Date: 23.11.2016

mm per blow	Σ Blows	Reading on Scale (mm)	Depth from Ground Level (mm)	mm per blow	Σ Blows	Reading on Scale (mm)	Depth from Ground Level (mm)
14	1	95	314		46		219
14	2	109	328		47		219
12	3	121	340		48		219
9	4	130	349		49		219
14	5	144	363		50		219
12	6	156	375		51		219
7	7	163	382		52		219
7	8	170	389		53		219
4	9	174	393		54		219
2	10	176	395		55		219
8	11	184	403		56		219
24	12	208	427		57		219
13	13	221	440		58		219
9	14	230	449		59		219
7	15	237	456		60		219
7	16	244	463		61		219
7	17	251	470		62		219
8	18	259	478		63		219
14	19	273	492		64		219
20	20	293	512		65		219
15	21	308	527		66		219
23	22	331	550		67		219
16	23	347	566		68		219
7	24	354	573		69		219
2	25	356	575		70		219
	26	356	575		71		219
	27	356	575		72		219
-356	28		219		73		219
	29		219		74		219
	30		219		75		219
	31		219		76		219
	32		219		77		219
	33		219		78		219
	34		219		79		219
	35		219		80		219
	36		219		81		219
	37		219		82		219
	38		219		83		219
	39		219		84		219
	40		219		85		219
	41		219		86		219
	42		219		87		219
	43		219		88		219
	44		219		89		219
	45		219		90		219

Test started at: 0.3 m below ground level

Zero Reading: 81 mm

Zero reading = start depth below ground surface



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PROJECT No.:	A095973-2
PROJECT NAME:	Tidal Lagoon Swansea Onshore GI
CLIENT:	Tidal Lagoon Power
FIGURE No.:	

DCP-CBR Corellation

$Log_{10}(CBR) = 2.48-1.057 \times Log_{10}$ (mm/blow)

DCP -Modulus E Corellation

$E = 17.6\ (CBR)^{0.64}$ MPa

In situ CBR by TRL Probe

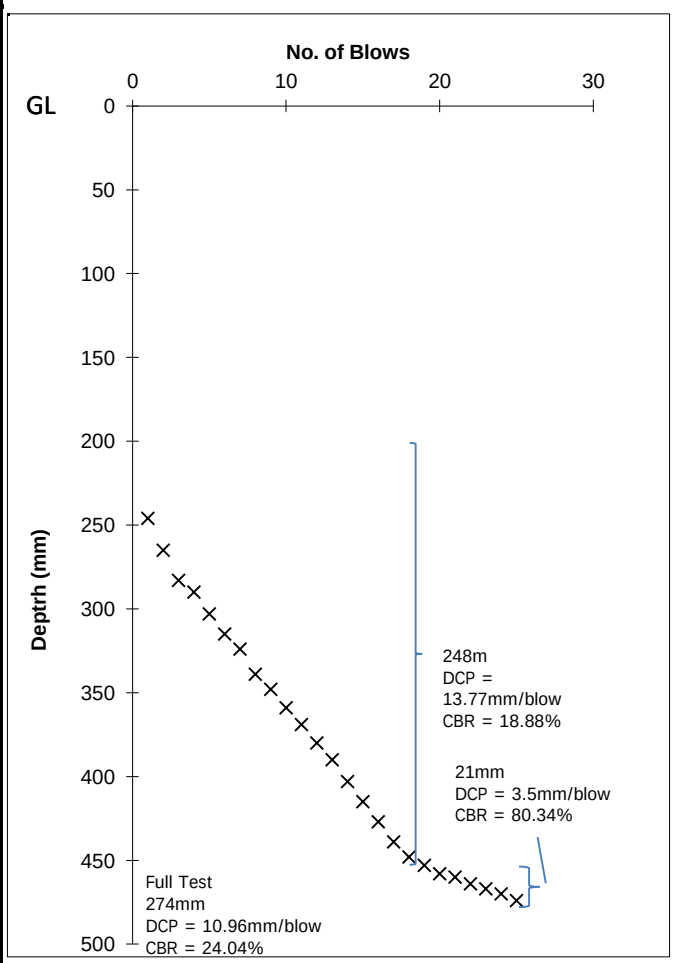
Reference: 1 Position: TP11 Date: 02.12.2016

Test started at: 0.2 m below ground level

Zero Reading: 65 mm

Zero reading = start depth below ground surface

mm per blow	Σ Blows	Reading on Scale (mm)	Depth from Ground Level (mm)	mm per blow	Σ Blows	Reading on Scale (mm)	Depth from Ground Level (mm)
46	1	111	246		46		135
19	2	130	265		47		135
18	3	148	283		48		135
7	4	155	290		49		135
13	5	168	303		50		135
12	6	180	315		51		135
9	7	189	324		52		135
15	8	204	339		53		135
9	9	213	348		54		135
11	10	224	359		55		135
10	11	234	369		56		135
11	12	245	380		57		135
10	13	255	390		58		135
13	14	268	403		59		135
12	15	280	415		60		135
12	16	292	427		61		135
12	17	304	439		62		135
9	18	313	448		63		135
5	19	318	453		64		135
5	20	323	458		65		135
2	21	325	460		66		135
4	22	329	464		67		135
3	23	332	467		68		135
3	24	335	470		69		135
4	25	339	474		70		135
-339	26		135		71		135
	27		135		72		135
	28		135		73		135
	29		135		74		135
	30		135		75		135
	31		135		76		135
	32		135		77		135
	33		135		78		135
	34		135		79		135
	35		135		80		135
	36		135		81		135
	37		135		82		135
	38		135		83		135
	39		135		84		135
	40		135		85		135
	41		135		86		135
	42		135		87		135
	43		135		88		135
	44		135		89		135
	45		135		90		135



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PROJECT No.:	A095973-2
PROJECT NAME:	Tidal Lagoon Swansea Onshore GI
CLIENT:	Tidal Lagoon Power
FIGURE No.:	

DCP-CBR Corellation

$Log_{10}(CBR) = 2.48-1.057 \times Log_{10}$ (mm/blow)

DCP -Modulus E Corellation

$E = 17.6\ (CBR)^{0.64}$ MPa

In situ CBR by TRL Probe

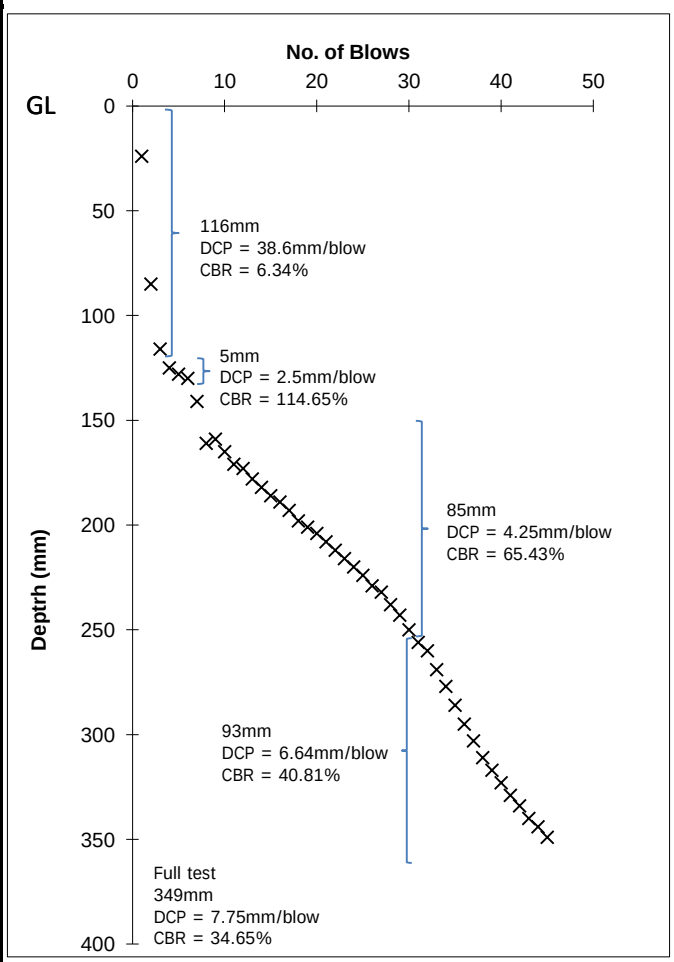
Reference: 1 Position: TP13 Date: 02.12.2016

Test started at: 0 m below ground level

Zero Reading: 65 mm

Zero reading = start depth below ground surface

mm per blow	Σ Blows	Reading on Scale (mm)	Depth from Ground Level (mm)	mm per blow	Σ Blows	Reading on Scale (mm)	Depth from Ground Level (mm)
24	1	89	24	-414	46		-65
61	2	150	85		47		-65
31	3	181	116		48		-65
9	4	190	125		49		-65
3	5	193	128		50		-65
2	6	195	130		51		-65
11	7	206	141		52		-65
20	8	226	161		53		-65
-2	9	224	159		54		-65
6	10	230	165		55		-65
6	11	236	171		56		-65
2	12	238	173		57		-65
5	13	243	178		58		-65
4	14	247	182		59		-65
4	15	251	186		60		-65
3	16	254	189		61		-65
4	17	258	193		62		-65
5	18	263	198		63		-65
3	19	266	201		64		-65
3	20	269	204		65		-65
4	21	273	208		66		-65
4	22	277	212		67		-65
4	23	281	216		68		-65
4	24	285	220		69		-65
4	25	289	224		70		-65
5	26	294	229		71		-65
3	27	297	232		72		-65
6	28	303	238		73		-65
5	29	308	243		74		-65
7	30	315	250		75		-65
6	31	321	256		76		-65
4	32	325	260		77		-65
9	33	334	269		78		-65
8	34	342	277		79		-65
9	35	351	286		80		-65
9	36	360	295		81		-65
8	37	368	303		82		-65
8	38	376	311		83		-65
6	39	382	317		84		-65
6	40	388	323		85		-65
6	41	394	329		86		-65
5	42	399	334		87		-65
6	43	405	340		88		-65
4	44	409	344		89		-65
5	45	414	349		90		-65
		0	0				



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PROJECT No.:	A095973-2
PROJECT NAME:	Tidal Lagoon Swansea Onshore GI
CLIENT:	Tidal Lagoon Power
FIGURE No.:	

DCP-CBR Corellation

$Log_{10}(CBR) = 2.48-1.057 \times Log_{10}$ (mm/blow)

DCP -Modulus E Corellation

$E = 17.6\ (CBR)^{0.64}$ MPa

In situ CBR by TRL Probe

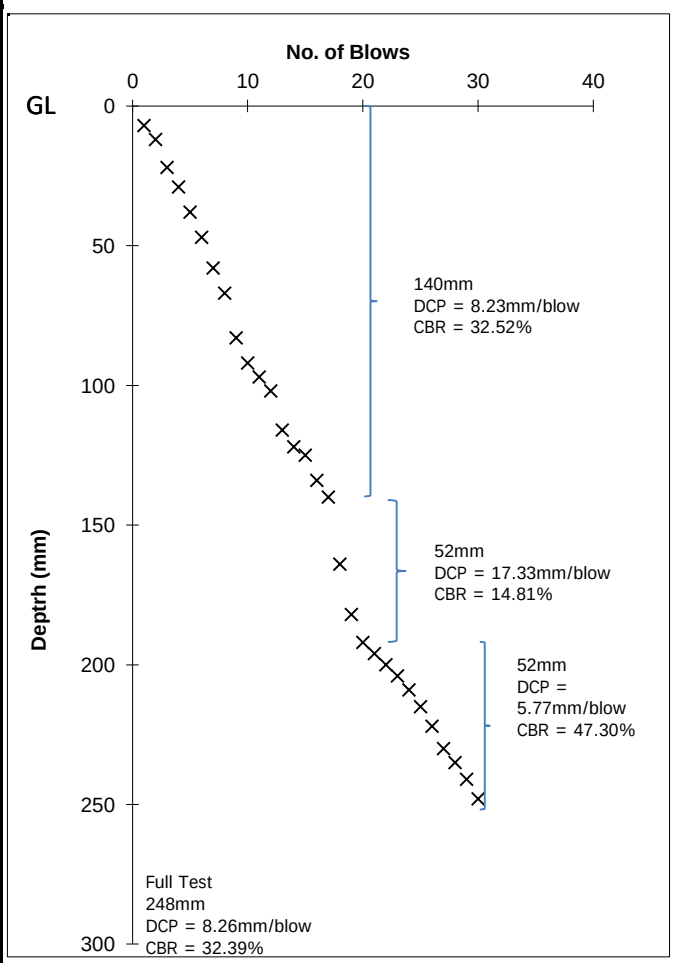
Reference: 1 Position: TP14 Date: 02.12.2016

mm per blow	Σ Blows	Reading on Scale (mm)	Depth from Ground Level (mm)	mm per blow	Σ Blows	Reading on Scale (mm)	Depth from Ground Level (mm)
7	1	60	7		46		-53
5	2	65	12		47		-53
10	3	75	22		48		-53
7	4	82	29		49		-53
9	5	91	38		50		-53
9	6	100	47		51		-53
11	7	111	58		52		-53
9	8	120	67		53		-53
16	9	136	83		54		-53
9	10	145	92		55		-53
5	11	150	97		56		-53
5	12	155	102		57		-53
14	13	169	116		58		-53
6	14	175	122		59		-53
3	15	178	125		60		-53
9	16	187	134		61		-53
6	17	193	140		62		-53
24	18	217	164		63		-53
18	19	235	182		64		-53
10	20	245	192		65		-53
4	21	249	196		66		-53
4	22	253	200		67		-53
4	23	257	204		68		-53
5	24	262	209		69		-53
6	25	268	215		70		-53
7	26	275	222		71		-53
8	27	283	230		72		-53
5	28	288	235		73		-53
6	29	294	241		74		-53
7	30	301	248		75		-53
-301	31		-53		76		-53
	32		-53		77		-53
	33		-53		78		-53
	34		-53		79		-53
	35		-53		80		-53
	36		-53		81		-53
	37		-53		82		-53
	38		-53		83		-53
	39		-53		84		-53
	40		-53		85		-53
	41		-53		86		-53
	42		-53		87		-53
	43		-53		88		-53
	44		-53		89		-53
	45		-53		90		-53
		0					

Test started at: 0 m below ground level

Zero Reading: 53 mm

Zero reading = start depth below ground surface



After Design manual for Roads and Bridges, Volume 7 Pavement Design and maintenance, Section 3 Pavement Maintenace Assessment, Part 2 HD29/08

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PROJECT No.:	A095973-2
PROJECT NAME:	Tidal Lagoon Swansea Onshore GI
CLIENT:	Tidal Lagoon Power
FIGURE No.:	

DCP-CBR Corellation

$Log_{10}(CBR) = 2.48-1.057 \times Log_{10}$ (mm/blow)

DCP -Modulus E Corellation

$E = 17.6\ (CBR)^{0.64}$ MPa

In situ CBR by TRL Probe

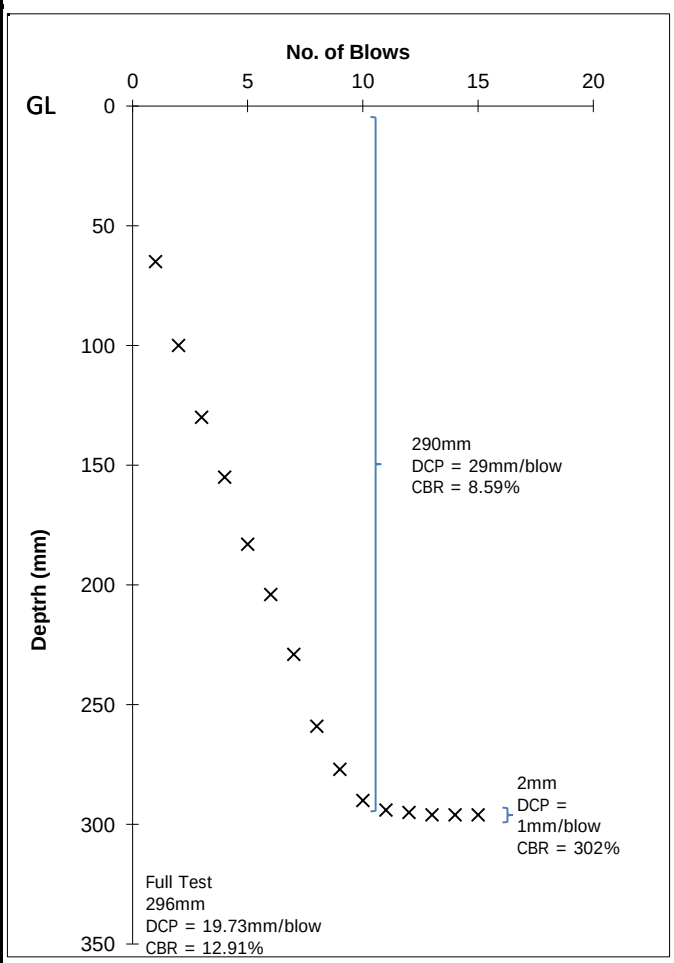
Reference: 1 Position: TP16 Date: 02.12.2016

Test started at: 0 m below ground level

Zero Reading: 65 mm

Zero reading = start depth below ground surface

mm per blow	Σ Blows	Reading on Scale (mm)	Depth from Ground Level (mm)	mm per blow	Σ Blows	Reading on Scale (mm)	Depth from Ground Level (mm)
65	1	130	65		46		-65
35	2	165	100		47		-65
30	3	195	130		48		-65
25	4	220	155		49		-65
28	5	248	183		50		-65
21	6	269	204		51		-65
25	7	294	229		52		-65
30	8	324	259		53		-65
18	9	342	277		54		-65
13	10	355	290		55		-65
4	11	359	294		56		-65
1	12	360	295		57		-65
1	13	361	296		58		-65
	14	361	296		59		-65
	15	361	296		60		-65
-361	16		-65		61		-65
	17		-65		62		-65
	18		-65		63		-65
	19		-65		64		-65
	20		-65		65		-65
	21		-65		66		-65
	22		-65		67		-65
	23		-65		68		-65
	24		-65		69		-65
	25		-65		70		-65
	26		-65		71		-65
	27		-65		72		-65
	28		-65		73		-65
	29		-65		74		-65
	30		-65		75		-65
	31		-65		76		-65
	32		-65		77		-65
	33		-65		78		-65
	34		-65		79		-65
	35		-65		80		-65
	36		-65		81		-65
	37		-65		82		-65
	38		-65		83		-65
	39		-65		84		-65
	40		-65		85		-65
	41		-65		86		-65
	42		-65		87		-65
	43		-65		88		-65
	44		-65		89		-65
	45		-65		90		-65
		0					



After Design manual for Roads and Bridges, Volume 7 Pavement Design and maintenance, Section 3 Pavement Maintenace Assessment, Part 2 HD29/08

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PROJECT No.:	A095973-2
PROJECT NAME:	Tidal Lagoon Swansea Onshore GI
CLIENT:	Tidal Lagoon Power
FIGURE No.:	

DCP-CBR Corellation

$Log_{10}(CBR) = 2.48-1.057 \times Log_{10}$ (mm/blow)

DCP -Modulus E Corellation

$E = 17.6\ (CBR)^{0.64}$ MPa

In situ CBR by TRL Probe

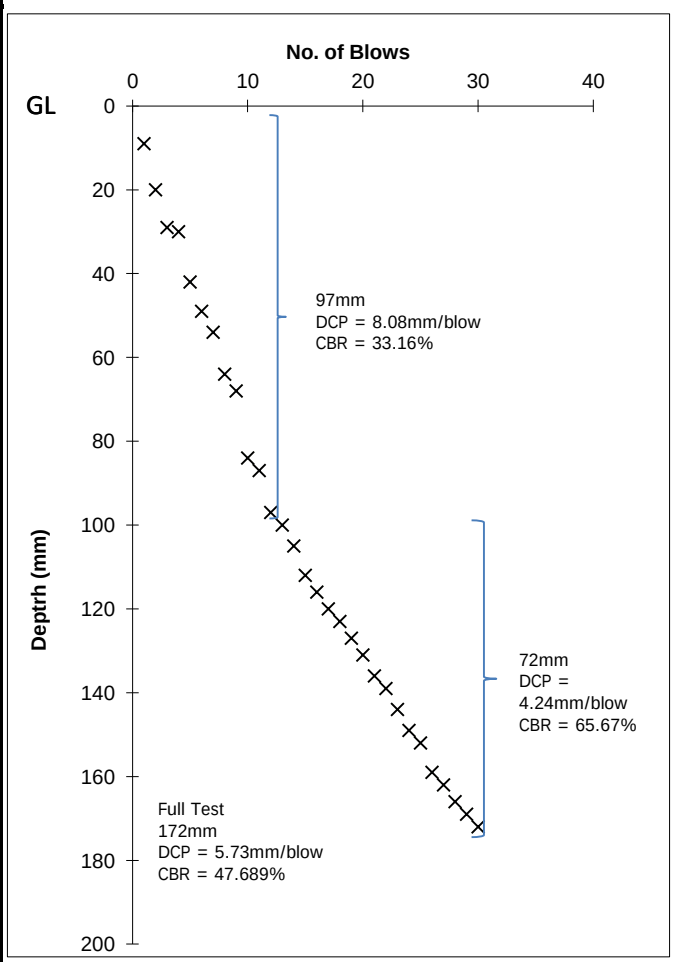
Reference: 1 Position: TP18 Date: 02.12.2016

Test started at: 0 m below ground level

Zero Reading: 45 mm

Zero reading = start depth below ground surface

mm per blow	Σ Blows	Reading on Scale (mm)	Depth from Ground Level (mm)	mm per blow	Σ Blows	Reading on Scale (mm)	Depth from Ground Level (mm)
9	1	54	9		46		-45
11	2	65	20		47		-45
9	3	74	29		48		-45
1	4	75	30		49		-45
12	5	87	42		50		-45
7	6	94	49		51		-45
5	7	99	54		52		-45
10	8	109	64		53		-45
4	9	113	68		54		-45
16	10	129	84		55		-45
3	11	132	87		56		-45
10	12	142	97		57		-45
3	13	145	100		58		-45
5	14	150	105		59		-45
7	15	157	112		60		-45
4	16	161	116		61		-45
4	17	165	120		62		-45
3	18	168	123		63		-45
4	19	172	127		64		-45
4	20	176	131		65		-45
5	21	181	136		66		-45
3	22	184	139		67		-45
5	23	189	144		68		-45
5	24	194	149		69		-45
3	25	197	152		70		-45
7	26	204	159		71		-45
3	27	207	162		72		-45
4	28	211	166		73		-45
3	29	214	169		74		-45
3	30	217	172		75		-45
-217	31		-45		76		-45
	32		-45		77		-45
	33		-45		78		-45
	34		-45		79		-45
	35		-45		80		-45
	36		-45		81		-45
	37		-45		82		-45
	38		-45		83		-45
	39		-45		84		-45
	40		-45		85		-45
	41		-45		86		-45
	42		-45		87		-45
	43		-45		88		-45
	44		-45		89		-45
	45		-45		90		-45



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Data compiled by: JB
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PROJECT No.:	A095973-2
PROJECT NAME:	Tidal Lagoon Swansea Onshore GI
CLIENT:	Tidal Lagoon Power
FIGURE No.:	

DCP-CBR Corellation

$Log_{10}(CBR) = 2.48-1.057 \times Log_{10}$ (mm/blow)

DCP -Modulus E Corellation

$E = 17.6\ (CBR)^{0.64}$ MPa

In situ CBR by TRL Probe

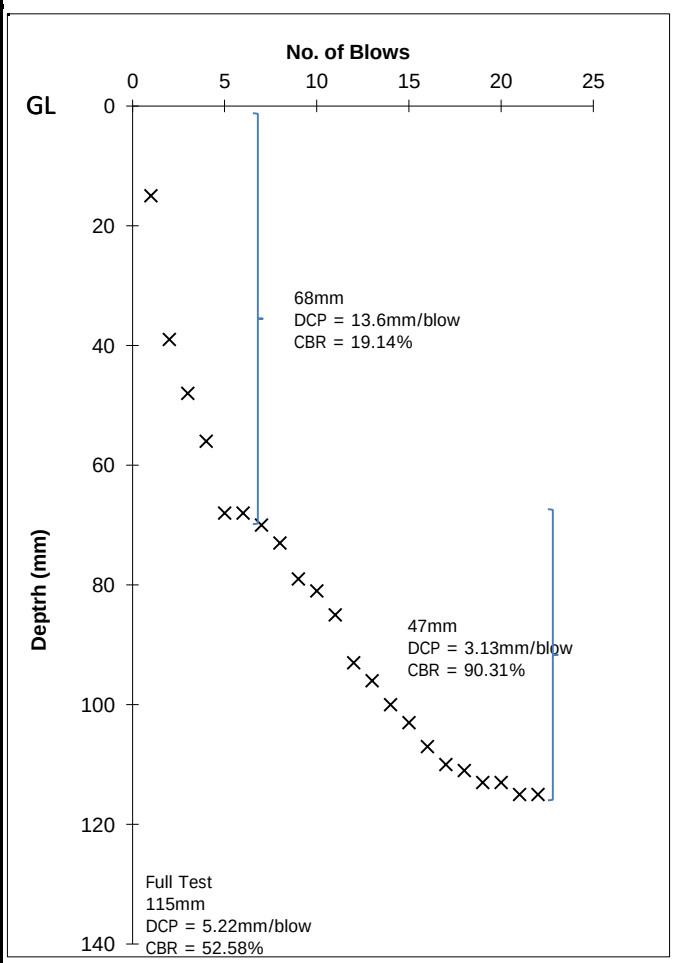
Reference: 1 Position: TP19 Date: 02.12.2016

Test started at: 0 m below ground level

Zero Reading: 45 mm

Zero reading = start depth below ground surface

mm per blow	Σ Blows	Reading on Scale (mm)	Depth from Ground Level (mm)	mm per blow	Σ Blows	Reading on Scale (mm)	Depth from Ground Level (mm)
15	1	60	15		46		-45
24	2	84	39		47		-45
9	3	93	48		48		-45
8	4	101	56		49		-45
12	5	113	68		50		-45
0	6	113	68		51		-45
2	7	115	70		52		-45
3	8	118	73		53		-45
6	9	124	79		54		-45
2	10	126	81		55		-45
4	11	130	85		56		-45
8	12	138	93		57		-45
3	13	141	96		58		-45
4	14	145	100		59		-45
3	15	148	103		60		-45
4	16	152	107		61		-45
3	17	155	110		62		-45
1	18	156	111		63		-45
2	19	158	113		64		-45
	20	158	113		65		-45
2	21	160	115		66		-45
0	22	160	115		67		-45
-160	23		-45		68		-45
	24		-45		69		-45
	25		-45		70		-45
	26		-45		71		-45
	27		-45		72		-45
	28		-45		73		-45
	29		-45		74		-45
	30		-45		75		-45
	31		-45		76		-45
	32		-45		77		-45
	33		-45		78		-45
	34		-45		79		-45
	35		-45		80		-45
	36		-45		81		-45
	37		-45		82		-45
	38		-45		83		-45
	39		-45		84		-45
	40		-45		85		-45
	41		-45		86		-45
	42		-45		87		-45
	43		-45		88		-45
	44		-45		89		-45
	45		-45		90		-45
		0					



After Design manual for Roads and Bridges, Volume 7 Pavement Design and maintenance, Section 3 Pavement Maintenace Assessment, Part 2 HD29/08

Data compiled by: JB
Data checked by: SJ

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Ground Engineering Services

PROJECT No.:	A095973-2
PROJECT NAME:	Tidal Lagoon Swansea Onshore GI
CLIENT:	Tidal Lagoon Power
FIGURE No.:	

DCP-CBR Corellation

$Log_{10}(CBR) = 2.48-1.057 \times Log_{10}$ (mm/blow)

DCP -Modulus E Corellation

$E = 17.6\ (CBR)^{0.64}$ MPa

In situ CBR by TRL Probe

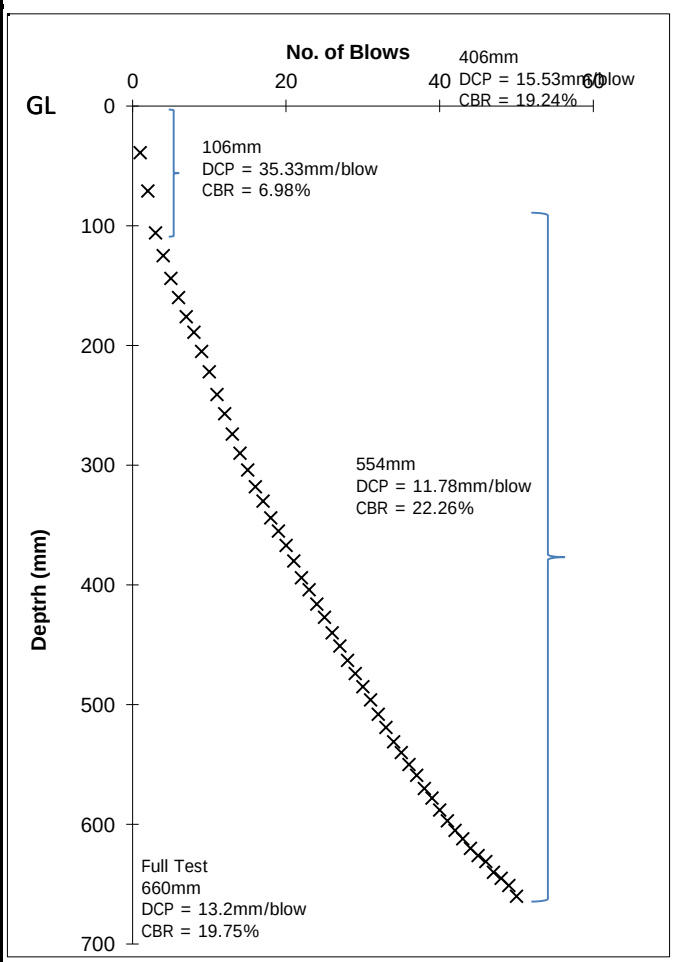
Reference: 1 Position: TP22 Date: 02.12.2016

Test started at: 0 m below ground level

Zero Reading: 44 mm

Zero reading = start depth below ground surface

mm per blow	Σ Blows	Reading on Scale (mm)	Depth from Ground Level (mm)	mm per blow	Σ Blows	Reading on Scale (mm)	Depth from Ground Level (mm)
39	1	83	39	5	46	675	631
32	2	115	71	9	47	684	640
35	3	150	106	5	48	689	645
19	4	169	125	6	49	695	651
19	5	188	144	9	50	704	660
16	6	204	160	-704	51		-44
16	7	220	176		52		-44
13	8	233	189		53		-44
16	9	249	205		54		-44
17	10	266	222		55		-44
19	11	285	241		56		-44
16	12	301	257		57		-44
17	13	318	274		58		-44
16	14	334	290		59		-44
14	15	348	304		60		-44
14	16	362	318		61		-44
12	17	374	330		62		-44
14	18	388	344		63		-44
11	19	399	355		64		-44
12	20	411	367		65		-44
13	21	424	380		66		-44
14	22	438	394		67		-44
10	23	448	404		68		-44
12	24	460	416		69		-44
11	25	471	427		70		-44
13	26	484	440		71		-44
11	27	495	451		72		-44
12	28	507	463		73		-44
11	29	518	474		74		-44
11	30	529	485		75		-44
11	31	540	496		76		-44
12	32	552	508		77		-44
11	33	563	519		78		-44
12	34	575	531		79		-44
9	35	584	540		80		-44
10	36	594	550		81		-44
9	37	603	559		82		-44
11	38	614	570		83		-44
8	39	622	578		84		-44
10	40	632	588		85		-44
9	41	641	597		86		-44
8	42	649	605		87		-44
7	43	656	612		88		-44
8	44	664	620		89		-44
6	45	670	626		90		-44
		675					
		684					



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PROJECT No.:	A095973-2
PROJECT NAME:	Tidal Lagoon Swansea Onshore GI
CLIENT:	Tidal Lagoon Power
FIGURE No.:	

DCP-CBR Corellation

$Log_{10}(CBR) = 2.48-1.057 \times Log_{10}$ (mm/blow)

DCP -Modulus E Corellation

$E = 17.6\ (CBR)^{0.64}$ MPa

In situ CBR by TRL Probe

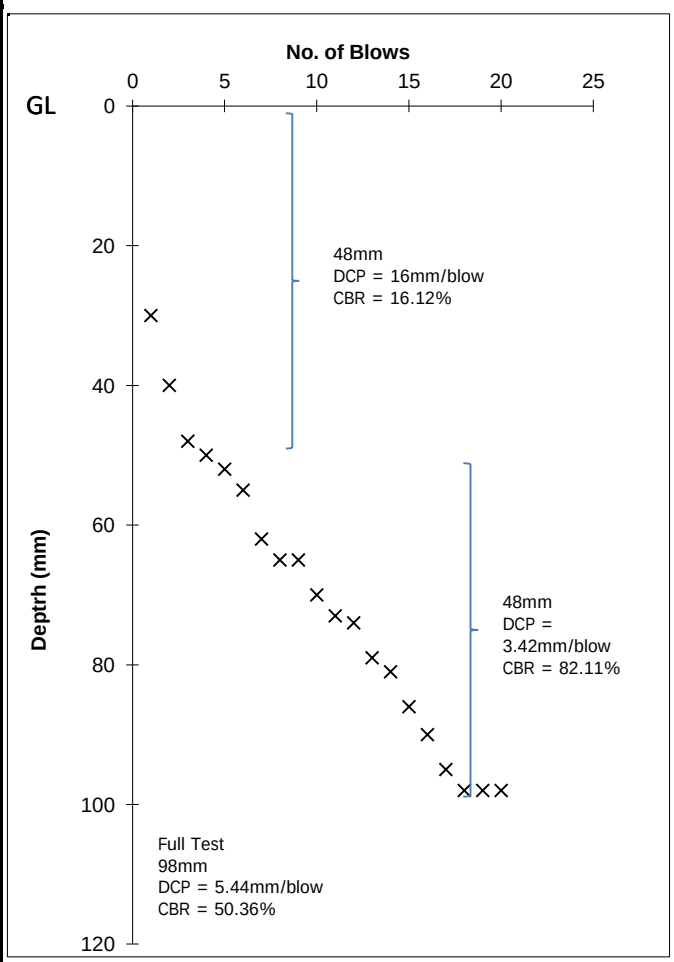
Reference: 1 Position: TP31 Date: 02.12.2016

Test started at: 0 m below ground level

Zero Reading: 70 mm

Zero reading = start depth below ground surface

mm per blow	Σ Blows	Reading on Scale (mm)	Depth from Ground Level (mm)	mm per blow	Σ Blows	Reading on Scale (mm)	Depth from Ground Level (mm)
30	1	100	30		46		-70
10	2	110	40		47		-70
8	3	118	48		48		-70
2	4	120	50		49		-70
2	5	122	52		50		-70
3	6	125	55		51		-70
7	7	132	62		52		-70
3	8	135	65		53		-70
	9	135	65		54		-70
5	10	140	70		55		-70
3	11	143	73		56		-70
1	12	144	74		57		-70
5	13	149	79		58		-70
2	14	151	81		59		-70
5	15	156	86		60		-70
4	16	160	90		61		-70
5	17	165	95		62		-70
3	18	168	98		63		-70
	19	168	98		64		-70
	20	168	98		65		-70
-168	21		-70		66		-70
	22		-70		67		-70
	23		-70		68		-70
	24		-70		69		-70
	25		-70		70		-70
	26		-70		71		-70
	27		-70		72		-70
	28		-70		73		-70
	29		-70		74		-70
	30		-70		75		-70
	31		-70		76		-70
	32		-70		77		-70
	33		-70		78		-70
	34		-70		79		-70
	35		-70		80		-70
	36		-70		81		-70
	37		-70		82		-70
	38		-70		83		-70
	39		-70		84		-70
	40		-70		85		-70
	41		-70		86		-70
	42		-70		87		-70
	43		-70		88		-70
	44		-70		89		-70
	45		-70		90		-70
		0					



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PROJECT No.:	A095973-2
PROJECT NAME:	Tidal Lagoon Swansea Onshore GI
CLIENT:	Tidal Lagoon Power
FIGURE No.:	

DCP-CBR Corellation

$Log_{10}(CBR) = 2.48-1.057 \times Log_{10}$ (mm/blow)

DCP -Modulus E Corellation

$E = 17.6\ (CBR)^{0.64}$ MPa

In situ CBR by TRL Probe

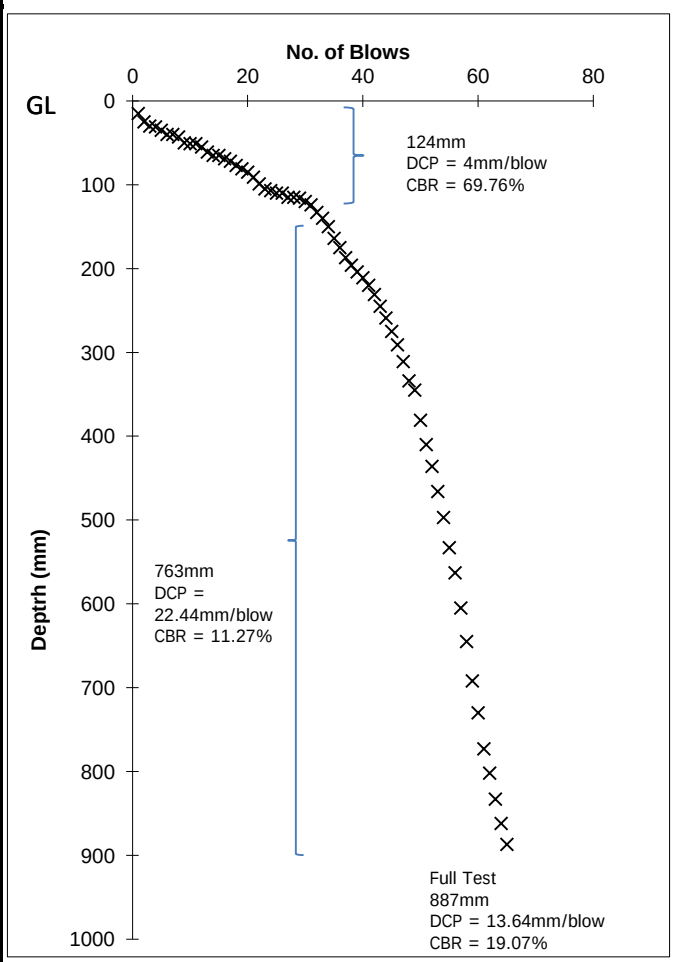
Reference: 1 Position: WS07 Date: 09.02.2017

Test started at: 0 m below ground level

Zero Reading: 60 mm

Zero reading = start depth below ground surface

mm per blow	Σ Blows	Reading on Scale (mm)	Depth from Ground Level (mm)	mm per blow	Σ Blows	Reading on Scale (mm)	Depth from Ground Level (mm)
15	1	75	15	16	46	351	291
10	2	85	25	20	47	371	311
5	3	90	30	23	48	394	334
1	4	91	31	11	49	405	345
4	5	95	35	36	50	441	381
5	6	100	40	29	51	470	410
	7	100	40	26	52	496	436
3	8	103	43	30	53	526	466
7	9	110	50	31	54	557	497
1	10	111	51	36	55	593	533
	11	111	51	30	56	623	563
4	12	115	55	42	57	665	605
6	13	121	61	40	58	705	645
4	14	125	65	47	59	752	692
	15	125	65	38	60	790	730
4	16	129	69	43	61	833	773
3	17	132	72	29	62	862	802
5	18	137	77	31	63	893	833
4	19	141	81	29	64	922	862
4	20	145	85	25	65	947	887
6	21	151	91	-947	66		-60
8	22	159	99		67		-60
6	23	165	105		68		-60
2	24	167	107		69		-60
3	25	170	110		70		-60
	26	170	110		71		-60
5	27	175	115		72		-60
	28	175	115		73		-60
1	29	176	116		74		-60
4	30	180	120		75		-60
4	31	184	124		76		-60
9	32	193	133		77		-60
7	33	200	140		78		-60
10	34	210	150		79		-60
14	35	224	164		80		-60
11	36	235	175		81		-60
12	37	247	187		82		-60
9	38	256	196		83		-60
8	39	264	204		84		-60
7	40	271	211		85		-60
9	41	280	220		86		-60
11	42	291	231		87		-60
14	43	305	245		88		-60
14	44	319	259		89		-60
16	45	335	275		90		-60
		351					
		371					



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PROJECT No.:	A095973-2
PROJECT NAME:	Tidal Lagoon Swansea Onshore GI
CLIENT:	Tidal Lagoon Power
FIGURE No.:	

DCP-CBR Corellation

$Log_{10}(CBR) = 2.48-1.057 \times Log_{10}$ (mm/blow)

DCP -Modulus E Corellation

$E = 17.6\ (CBR)^{0.64}$ MPa

In situ CBR by TRL Probe

Reference: 1 Position: WS32 Date: 09.02.2017

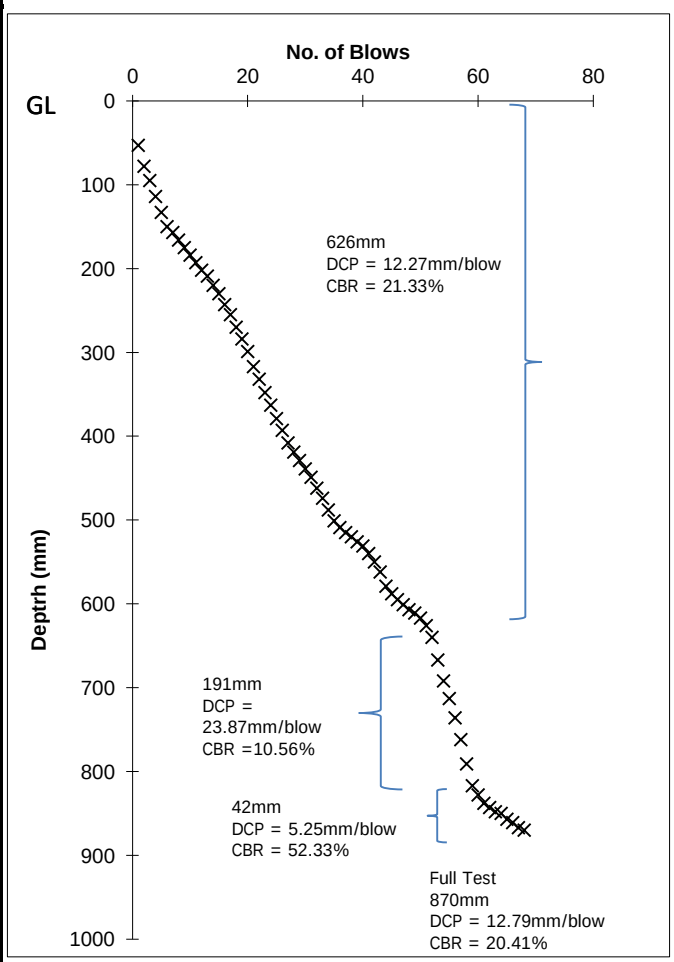
Test started at: 0 m below ground level

Zero Reading: 67 mm

Zero reading = start depth below ground surface

mm per blow	Σ Blows	Reading on Scale (mm)	Depth from Ground Level (mm)	mm per blow	Σ Blows	Reading on Scale (mm)	Depth from Ground Level (mm)
53	1	120	53	7	46	662	595
25	2	145	78	6	47	668	601
17	3	162	95	6	48	674	607
19	4	181	114	4	49	678	611
19	5	200	133	6	50	684	617
17	6	217	150	9	51	693	626
7	7	224	157	14	52	707	640
9	8	233	166	27	53	734	667
9	9	242	175	25	54	759	692
9	10	251	184	21	55	780	713
9	11	260	193	23	56	803	736
9	12	269	202	26	57	829	762
7	13	276	209	29	58	858	791
11	14	287	220	26	59	884	817
10	15	297	230	11	60	895	828
13	16	310	243	10	61	905	838
12	17	322	255	5	62	910	843
15	18	337	270	5	63	915	848
14	19	351	284	2	64	917	850
15	20	366	299	7	65	924	857
18	21	384	317	4	66	928	861
15	22	399	332	6	67	934	867
16	23	415	348	3	68	937	870
15	24	430	363	-937	69		-67
16	25	446	379		70		-67
14	26	460	393		71		-67
15	27	475	408		72		-67
11	28	486	419		73		-67
10	29	496	429		74		-67
10	30	506	439		75		-67
10	31	516	449		76		-67
13	32	529	462		77		-67
12	33	541	474		78		-67
14	34	555	488		79		-67
13	35	568	501		80		-67
8	36	576	509		81		-67
6	37	582	515		82		-67
5	38	587	520		83		-67
6	39	593	526		84		-67
5	40	598	531		85		-67
9	41	607	540		86		-67
10	42	617	550		87		-67
12	43	629	562		88		-67
17	44	646	579		89		-67
9	45	655	588		90		-67

662
668



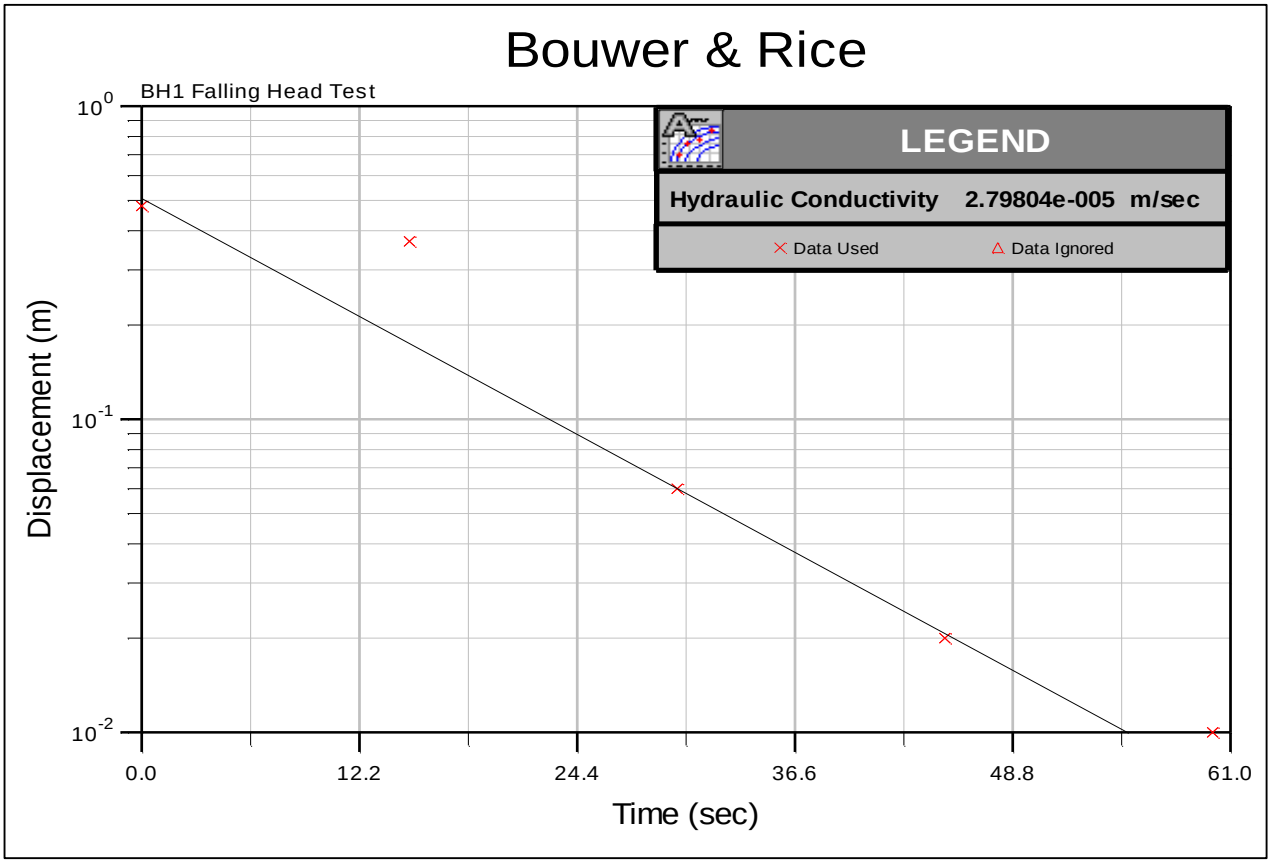
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Data compiled by: JB
Data checked by: SJ

Appendix D – In-situ Permeability Testing

FALLING HEAD PERMEABILITY TEST

BOREHOLE No.:	BH1	**TEST No.:**	1	**SHEET No.:**	1	**ENGINEER:**	CW
BOREHOLE DEPTH (m):	9	**DATE:**	16/01/2017	**WEATHER:**	Rain		



Time (secs)	Water Level (m bgl)	Displacement (m)	Time (secs)	Water Level (m bgl)	Displacement (m)
0	4.05	0.484			
15	4.16	0.374			
30	4.47	0.064			
45	4.51	0.018			
60	4.52	0.007			
75	4.53	0.000			

Groundwater Level (m bgl):	4.53
Borehole Depth (m):	9.0
Casing Inner Diameter (m):	0.05
Borehole Drilled Diameter (m):	0.15
Borehole Screen Length (m):	3
Screen Top Length (m bgl):	6
Test Start Time:	10:36:55
Test Finish Time:	10:39:10

Test Remarks:

Groundwater was added to the borehole through the top of the standpipe, to allow completion of falling head test. Calculations have been performed in AquiferWin32 software based on the Bouwer & Rice (1976) solution method.

Geological Description:

Yellow coarse SAND (MADE GROUND).

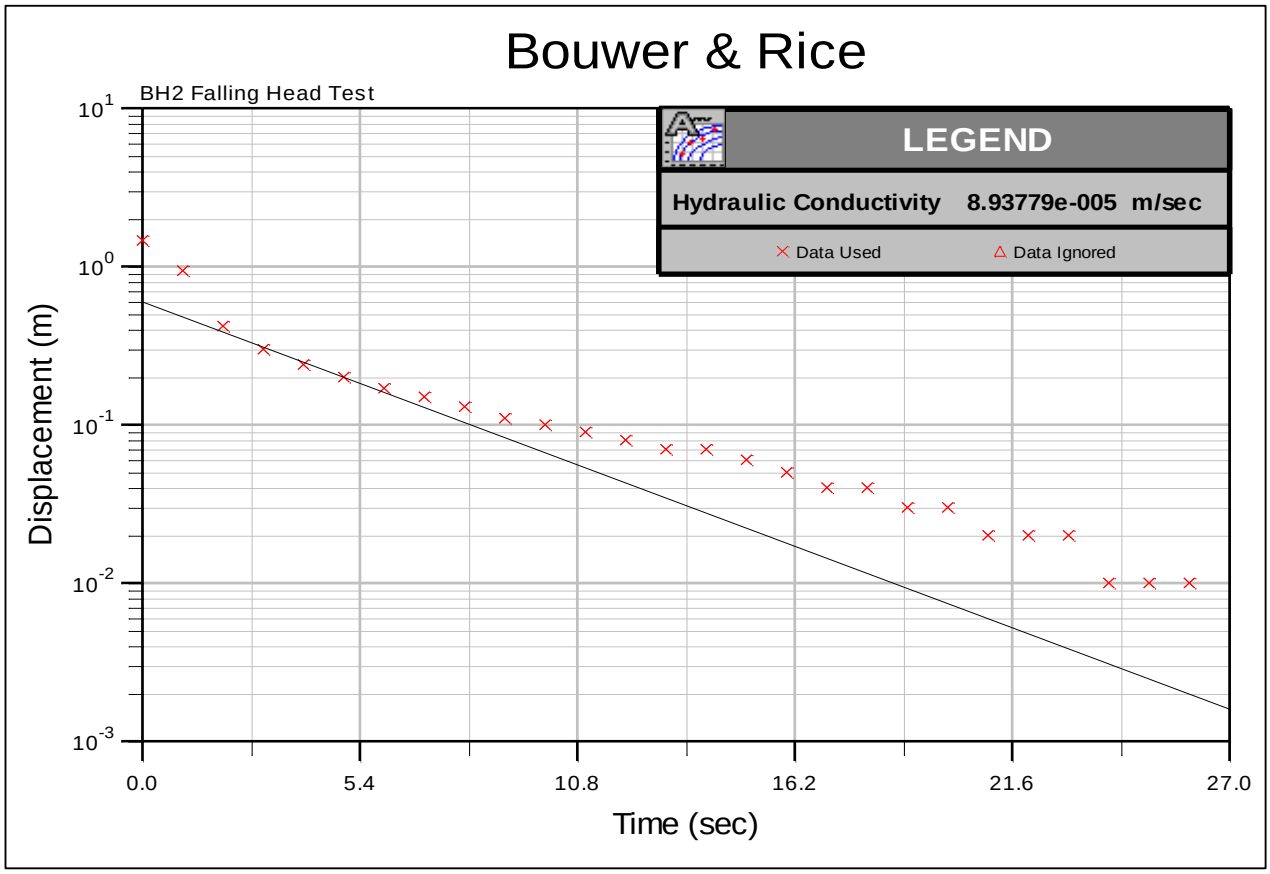
Compiled By	JM	Date	07/02/2017
Checked By	AJ	Date	07/02/2017

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PROJECT No.:	A095973-2
PROJECT NAME:	Swansea Tidal Lagoon
CLIENT:	Tidal Lagoon Power

FALLING HEAD PERMEABILITY TEST

BOREHOLE No.:	BH2	**TEST No.:**	1	**SHEET No.:**	1	**ENGINEER:**	CW
BOREHOLE DEPTH (m):	11.0	**DATE:**	13/01/2017	**WEATHER:**	Rain		



Time (secs)	Water Level (m bgl)	Displacement (m)	Time (secs)	Water Level (m bgl)	Displacement (m)
0	1.21	1.46	24	2.66	0.01
1	1.73	0.94	25	2.66	0.01
2	2.25	0.42	26	2.66	0.01
3	2.37	0.30	27	2.67	0.00
4	2.43	0.24			
5	2.47	0.20			
6	2.50	0.17			
7	2.52	0.15			
8	2.54	0.13			
9	2.56	0.11			
10	2.57	0.10			
11	2.58	0.09			
12	2.59	0.08			
13	2.60	0.07			
14	2.60	0.07			
15	2.61	0.06			
16	2.62	0.05			
17	2.63	0.04			
18	2.63	0.04			
19	2.64	0.03			
20	2.64	0.03			
21	2.65	0.02			
22	2.65	0.02			
23	2.65	0.02			

Groundwater Level (m bgl):	2.67
Borehole Depth (m):	11.0
Casing Inner Diameter (m):	0.05
Borehole Drilled Diameter (m):	0.15
Borehole Screen Length (m):	3
Screen Top Length (m bgl):	8
Test Start Time:	10:51:33
Test Finish Time:	10:58:18

Test Remarks:

Groundwater was added to the borehole through the top of the standpipe, to allow completion of falling head test. Calculations have been performed in AquiferWin32 software based on the Bouwer & Rice (1976) solution method.

Geological Description:

Grey brown GRAVEL with occasional cobbles (MADE GROUND).

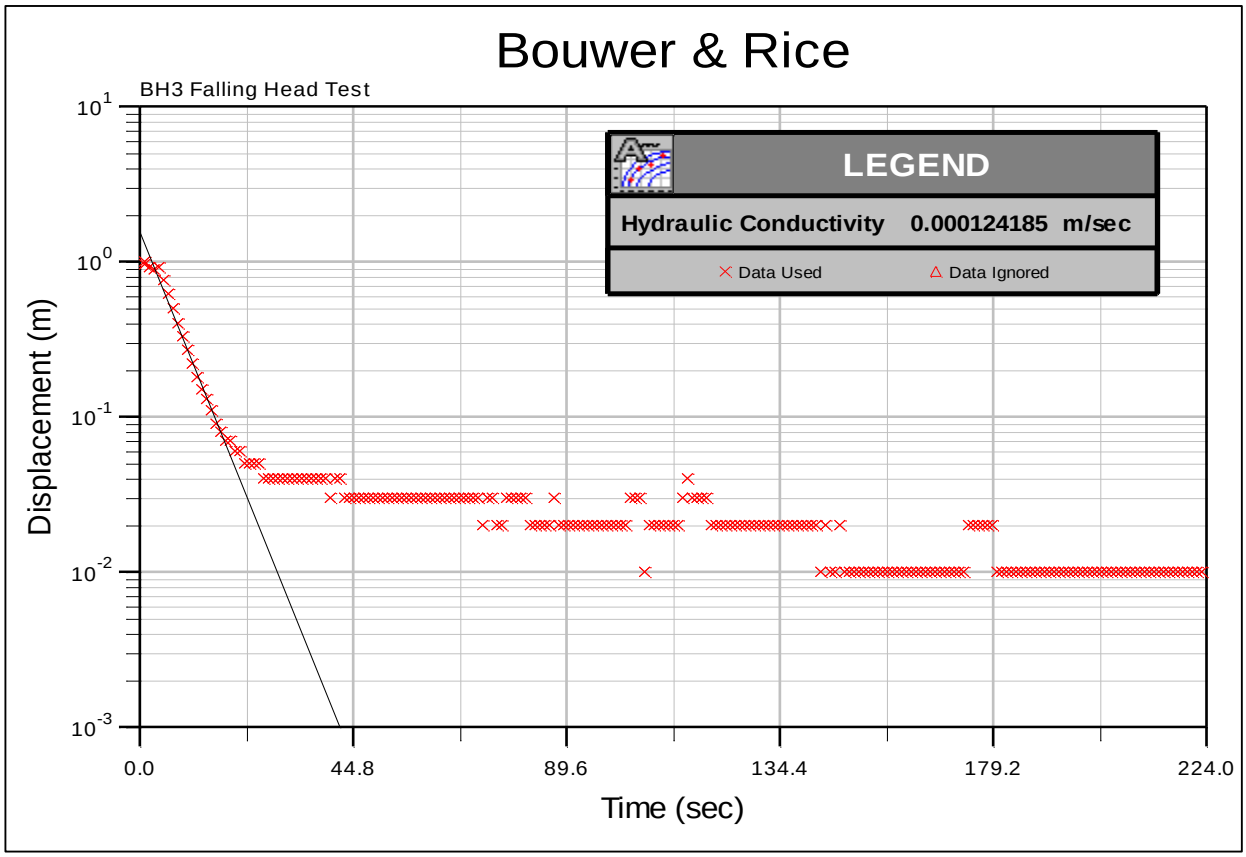
Compiled By	JM	Date	07/01/2017
Checked By	AJ	Date	07/01/2017

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PROJECT No.:	A095973-2
PROJECT NAME:	Swansea Tidal Lagoon
CLIENT:	Tidal Lagoon Power

FALLING HEAD PERMEABILITY TEST

BOREHOLE No.:	BH3	**TEST No.:**	1	**SHEET No.:**	1	**ENGINEER:**	CW
BOREHOLE DEPTH (m):	8.50	**DATE:**	13/01/2017	**WEATHER:**	Rain		



Time (secs)	Water Level (m bgl)	Displacement (m)	Time (secs)	Water Level (m bgl)	Displacement (m)
0	1.77	1.61	24	2.76	0.62
1	1.87	1.51	25	2.74	0.64
2	2.14	1.24	26	2.76	0.62
3	2.28	1.10	27	2.69	0.69
4	2.43	0.95	28	2.57	0.81
5	2.59	0.79	29	2.49	0.89
6	2.75	0.63	30	2.56	0.82
7	2.84	0.54	60	3.22	0.16
8	2.83	0.55	90	3.33	0.05
9	2.80	0.58	120	3.35	0.03
10	2.85	0.53	150	3.36	0.02
11	2.89	0.49	180	3.35	0.03
12	2.92	0.46	210	3.36	0.02
13	2.93	0.45	240	3.36	0.02
14	2.93	0.45	270	3.37	0.01
15	2.90	0.48	290	3.38	0.00
16	2.91	0.47			
17	2.87	0.51			
18	2.78	0.60			
19	2.79	0.59			
20	2.82	0.56			
21	2.82	0.56			
22	2.81	0.57			
23	2.80	0.58			

Groundwater Level (m bgl):	3.38
Borehole Depth (m):	8.50
Casing Inner Diameter (m):	0.05
Borehole Drilled Diameter (m):	0.15
Borehole Screen Length (m):	1.5
Screen Top Length (m bgl):	7
Test Start Time:	11:35:09
Test Finish Time:	11:35:31

Test Remarks:

Groundwater was added to the borehole through the top of the standpipe, to allow completion of falling head test. Calculations have been performed in AquiferWin32 software based on the Bouwer & Rice (1976) solution method.

Geological Description:

Light brown coarse SAND (MADE GROUND).

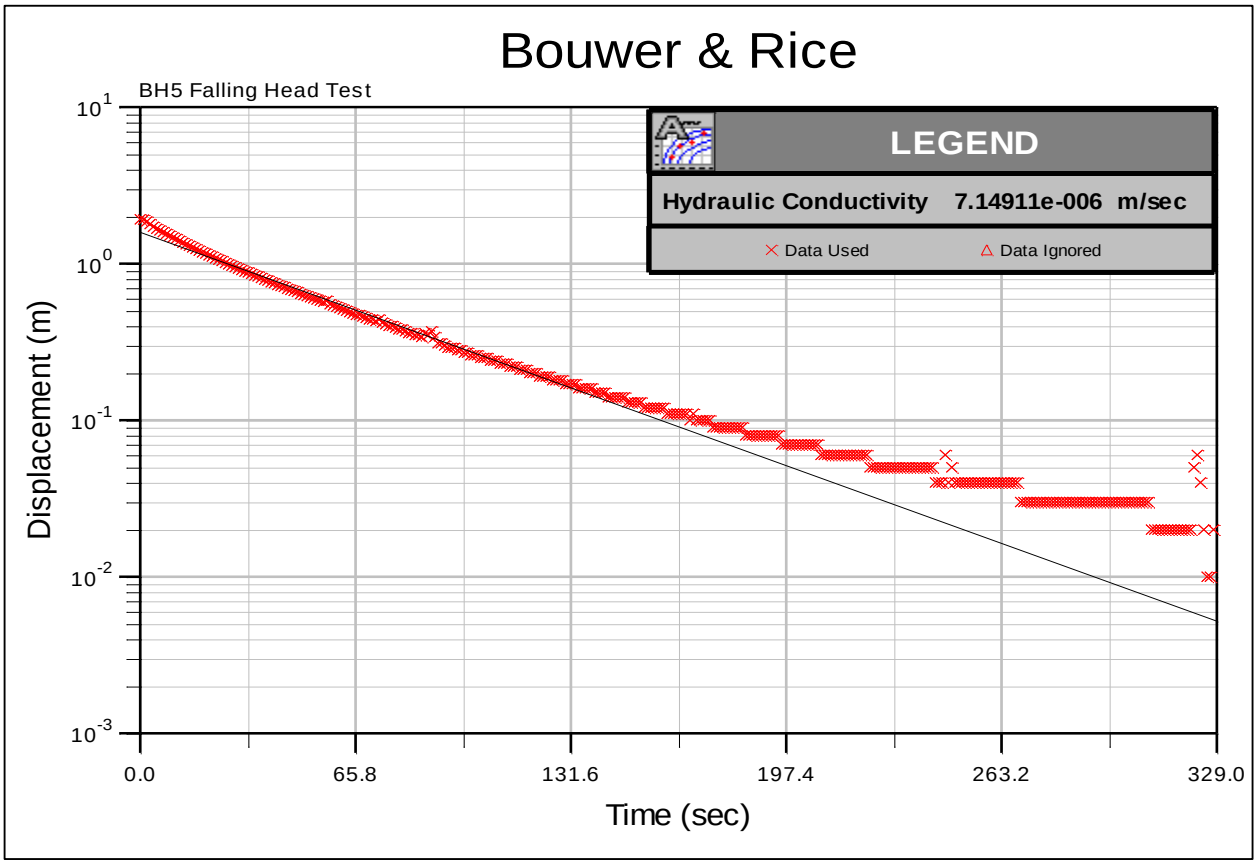
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PROJECT No.:	A095973-2
PROJECT NAME:	Swansea Tidal Lagoon
CLIENT:	Tidal Lagoon Power

FALLING HEAD PERMEABILITY TEST

BOREHOLE No.:	BH5	**TEST No.:**	1	**SHEET No.:**	1	**ENGINEER:**	CW
BOREHOLE DEPTH (m):	9.00	**DATE:**	13/01/2017	**WEATHER:**	Rain		



Time (secs)	Water Level (m bgl)	Displacement (m)	Time (secs)	Water Level (m bgl)	Displacement (m)
0	0.22	1.92	24	1.08	1.06
1	0.23	1.91	25	1.10	1.04
2	0.28	1.86	26	1.13	1.01
3	0.35	1.79	27	1.15	0.99
4	0.42	1.72	28	1.17	0.97
5	0.47	1.67	29	1.19	0.95
6	0.51	1.63	30	1.21	0.93
7	0.55	1.59	60	1.61	0.53
8	0.59	1.55	90	1.80	0.34
9	0.63	1.51	120	1.94	0.20
10	0.67	1.47	150	2.01	0.13
11	0.70	1.44	180	2.05	0.09
12	0.74	1.40	210	2.08	0.06
13	0.78	1.36	240	2.09	0.05
14	0.81	1.33	270	2.11	0.03
15	0.84	1.30	300	2.11	0.03
16	0.87	1.27	327	2.13	0.01
17	0.90	1.24			
18	0.93	1.21			
19	0.96	1.18			
20	0.98	1.16			
21	1.01	1.13			
22	1.03	1.11			
23	1.06	1.08			

Groundwater Level (m bgl):	2.14
Borehole Depth (m):	9
Casing Inner Diameter (m):	0.05
Borehole Drilled Diameter (m):	0.15
Borehole Screen Length (m):	3
Screen Top Length (m bgl):	6
Test Start Time:	12:57:09
Test Finish Time:	13:02:37

Test Remarks:

Groundwater was added to the borehole through the top of the standpipe, to allow completion of falling head test. Calculations have been performed in AquiferWin32 software based on the Bouwer & Rice (1976) solution method.

Geological Description:

Dark grey gravelly coarse SAND (MADE GROUND) 6.00-8.10m bgl. Soft grey slightly silty cobbly CLAY (GLACIAL DEPOSITS) 8.10-9.00m bgl.

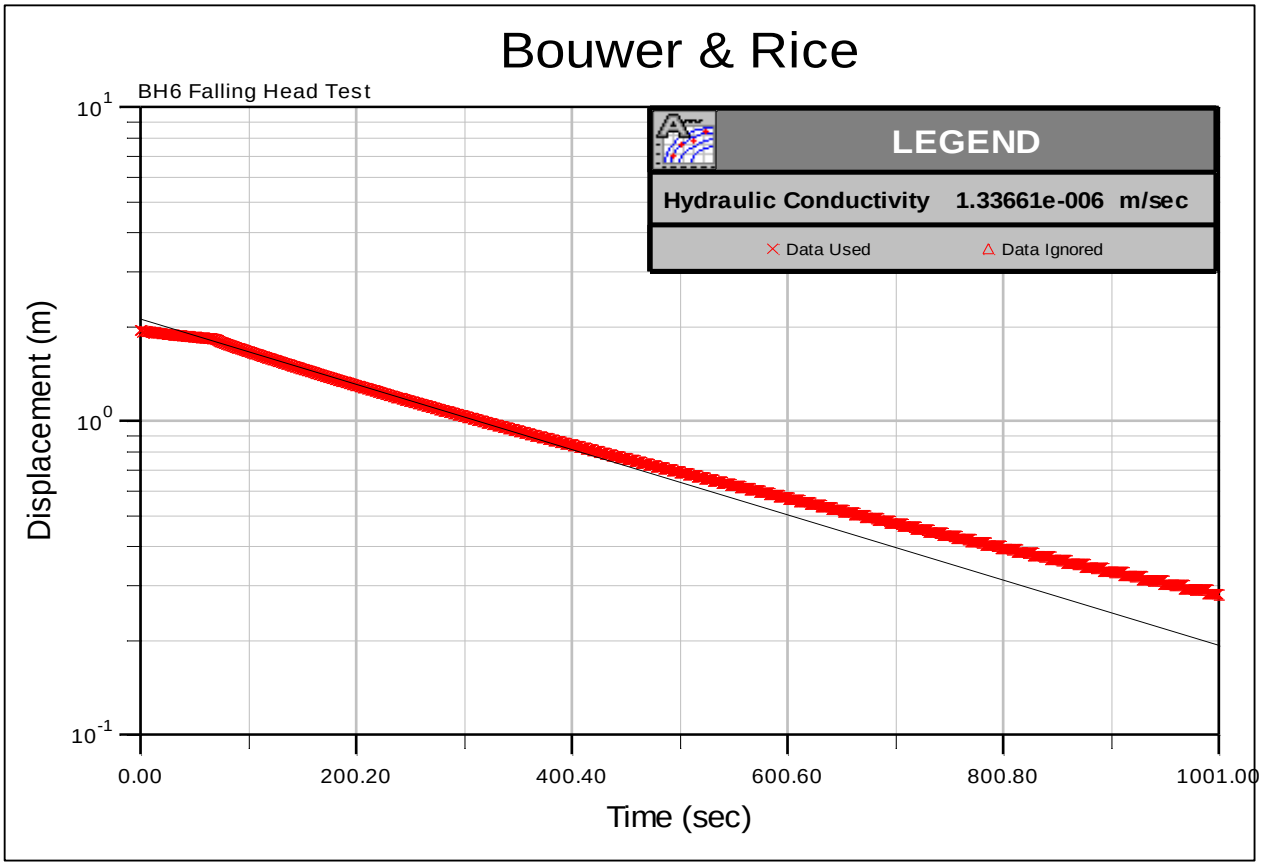
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PROJECT No.:	A095973-2
PROJECT NAME:	Swansea Tidal Lagoon
CLIENT:	Tidal Lagoon Power

FALLING HEAD PERMEABILITY TEST

BOREHOLE No.:	BH6	**TEST No.:**	1	**SHEET No.:**	1	**ENGINEER:**	CW
BOREHOLE DEPTH (m):	9.00	**DATE:**	13/01/2017	**WEATHER:**	Rain		



Time (secs)	Water Level (m bgl)	Displacement (m)	Time (secs)	Water Level (m bgl)	Displacement (m)
0	0.03	1.94	24	0.08	1.89
1	0.03	1.94	25	0.09	1.88
2	0.06	1.91	26	0.09	1.88
3	0.05	1.92	27	0.09	1.88
4	0.04	1.93	28	0.09	1.88
5	0.04	1.93	29	0.09	1.88
6	0.05	1.92	30	0.09	1.88
7	0.05	1.92	60	0.14	1.83
8	0.05	1.92	90	0.27	1.70
9	0.05	1.92	120	0.39	1.58
10	0.06	1.91	150	0.51	1.46
11	0.06	1.91	180	0.61	1.36
12	0.06	1.91	210	0.70	1.27
13	0.06	1.91	240	0.79	1.18
14	0.06	1.91	270	0.87	1.10
15	0.07	1.90	300	0.94	1.03
16	0.07	1.90	1300	1.80	0.17
17	0.07	1.90	2300	1.92	0.05
18	0.07	1.90	3300	1.94	0.03
19	0.07	1.90	4300	1.95	0.02
20	0.08	1.89	5300	1.95	0.02
21	0.08	1.89			
22	0.08	1.89			
23	0.08	1.89			

Groundwater Level (m bgl):	1.97
Borehole Depth (m):	9.00
Casing Inner Diameter (m):	0.05
Borehole Drilled Diameter (m):	0.15
Borehole Screen Length (m):	2.0
Screen Top Length (m bgl):	7.0
Test Start Time:	12:40:50
Test Finish Time:	14:15:11

Test Remarks:

Groundwater was added to the borehole through the top of the standpipe, to allow completion of falling head test. Calculations have been performed in AquiferWin32 software based on the Bouwer & Rice (1976) solution method.

Geological Description:

Brown coarse SAND (BEACH DEPOSITS).

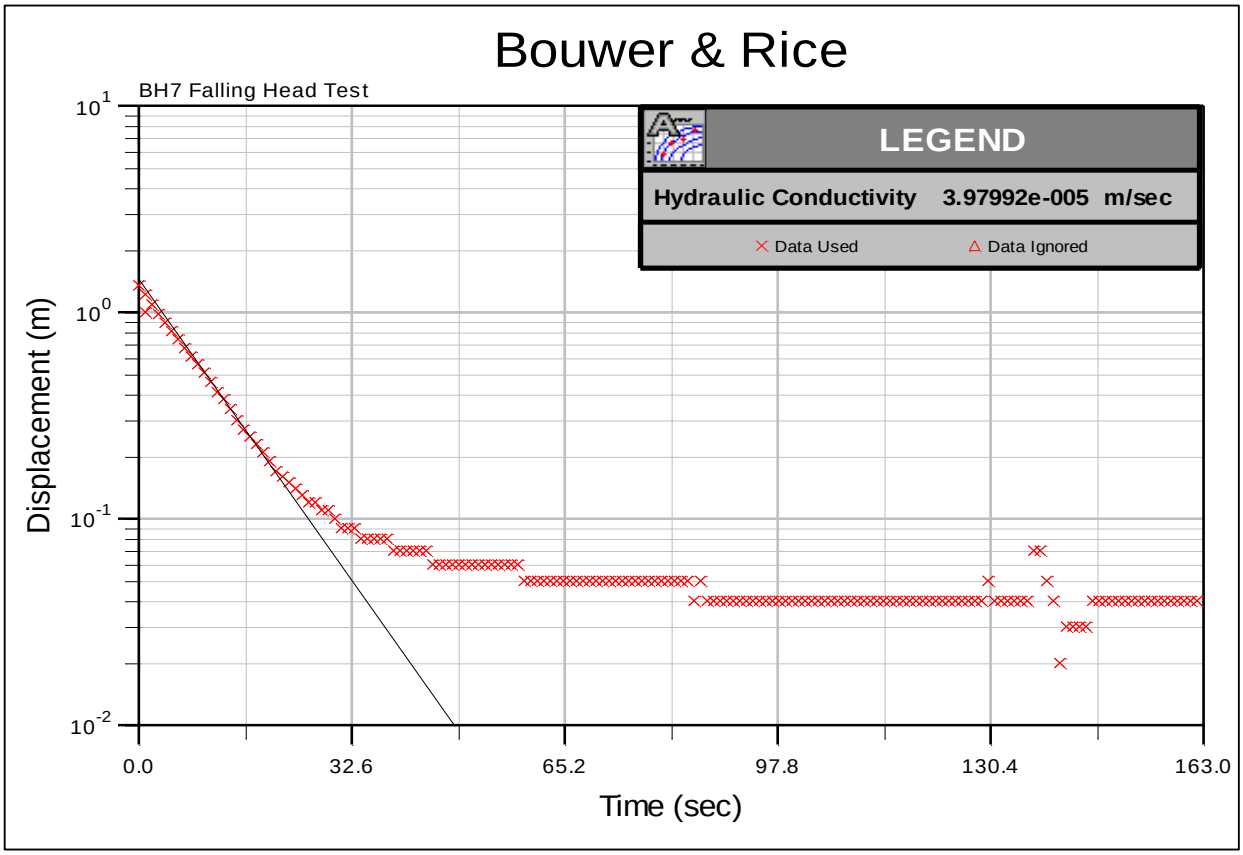
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PROJECT No.:	A095973-2
PROJECT NAME:	Swansea Tidal Lagoon
CLIENT:	Tidal Lagoon Power

FALLING HEAD PERMEABILITY TEST

BOREHOLE No.:	BH7	**TEST No.:**	1	**SHEET No.:**	1	**ENGINEER:**	CW
BOREHOLE DEPTH (m):	8.00	**DATE:**	13/01/2017	**WEATHER:**	Rain		



Time (secs)	Water Level (m bgl)	Displacement (m)	Time (secs)	Water Level (m bgl)	Displacement (m)
0	0.65	1.35	24	1.86	0.14
1	0.78	1.22	25	1.87	0.13
2	0.91	1.09	26	1.88	0.12
3	1.02	0.98	27	1.88	0.12
4	1.11	0.89	28	1.89	0.11
5	1.19	0.81	29	1.90	0.11
6	1.26	0.74	30	1.90	0.10
7	1.33	0.67	60	1.95	0.05
8	1.39	0.61	90	1.96	0.04
9	1.44	0.56	120	1.96	0.04
10	1.49	0.51	150	1.96	0.04
11	1.54	0.46	162	1.96	0.04
12	1.59	0.41			
13	1.62	0.38			
14	1.66	0.34			
15	1.70	0.30			
16	1.73	0.27			
17	1.75	0.25			
18	1.77	0.23			
19	1.79	0.21			
20	1.81	0.19			
21	1.83	0.17			
22	1.84	0.16			
23	1.85	0.15			

Groundwater Level (m bgl):	2.00
Borehole Depth (m):	8.00
Casing Inner Diameter (m):	0.05
Borehole Drilled Diameter (m):	0.15
Borehole Screen Length (m):	3.0
Screen Top Length (m bgl):	5.0
Test Start Time:	12:12:53
Test Finish Time:	12:15:35

Test Remarks:

Groundwater was added to the borehole through the top of the standpipe, to allow completion of falling head test. Calculations have been performed in AquiferWin32 software based on the Bouwer & Rice (1976) solution method.

Geological Description:

Grey coarse SAND with shells and rare iron slag. (MADE GROUND)

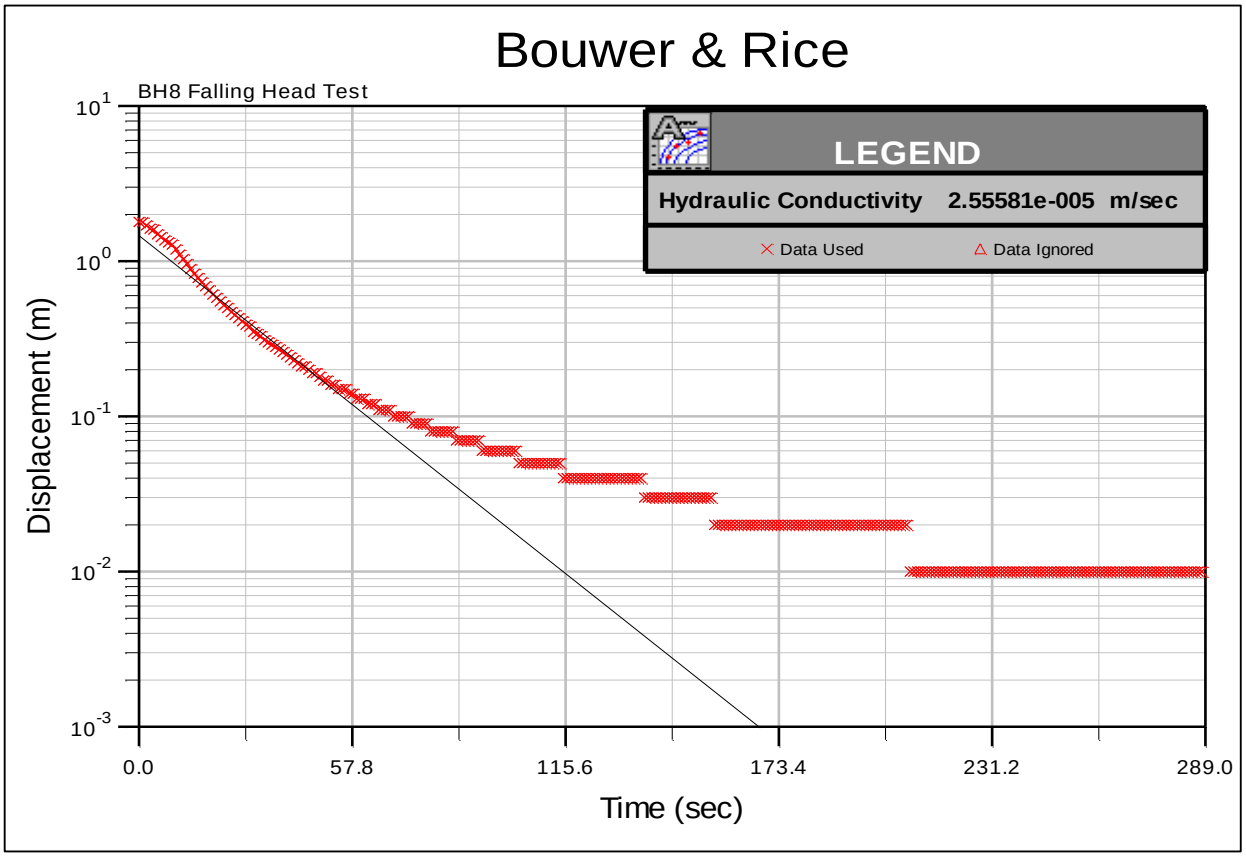
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PROJECT No.:	A095973-2
PROJECT NAME:	Swansea Tidal Lagoon
CLIENT:	Tidal Lagoon Power

FALLING HEAD PERMEABILITY TEST

BOREHOLE No.:	BH8	**TEST No.:**	1	**SHEET No.:**	1	**ENGINEER:**	CW
BOREHOLE DEPTH (m):	9.00	**DATE:**	13/01/2017	**WEATHER:**	Rain		



Time (secs)	Water Level (m bgl)	Displacement (m)	Time (secs)	Water Level (m bgl)	Displacement (m)
0	0.88	1.79	24	2.17	0.50
1	0.89	1.78	25	2.20	0.47
2	0.97	1.70	26	2.22	0.45
3	1.05	1.62	27	2.24	0.43
4	1.07	1.60	28	2.26	0.41
5	1.18	1.49	29	2.28	0.39
6	1.24	1.43	30	2.29	0.38
7	1.31	1.36	60	2.54	0.13
8	1.35	1.32	90	2.60	0.07
9	1.39	1.28	120	2.63	0.04
10	1.48	1.19	150	2.64	0.03
11	1.57	1.10	180	2.65	0.02
12	1.64	1.03	210	2.66	0.01
13	1.72	0.96	240	2.66	0.01
14	1.78	0.89	270	2.66	0.01
15	1.84	0.83	290	2.67	0.00
16	1.89	0.78			
17	1.94	0.73			
18	1.98	0.69			
19	2.02	0.65			
20	2.06	0.61			
21	2.09	0.58			
22	2.12	0.55			
23	2.15	0.52			

Groundwater Level (m bgl):	2.67
Borehole Depth (m):	9.00
Casing Inner Diameter (m):	0.05
Borehole Drilled Diameter (m):	0.15
Borehole Screen Length (m):	2.00
Screen Top Length (m bgl):	6.00
Test Start Time:	13:27:51
Test Finish Time:	13:32:41

Test Remarks:

Groundwater was added to the borehole through the top of the standpipe, to allow completion of falling head test. Calculations have been performed in AquiferWin32 software based on the Bouwer & Rice (1976) solution method.

Geological Description:

Grey coarse SAND. (BEACH DEPOSITS)

Compiled By	JM	Date	08/02/2017
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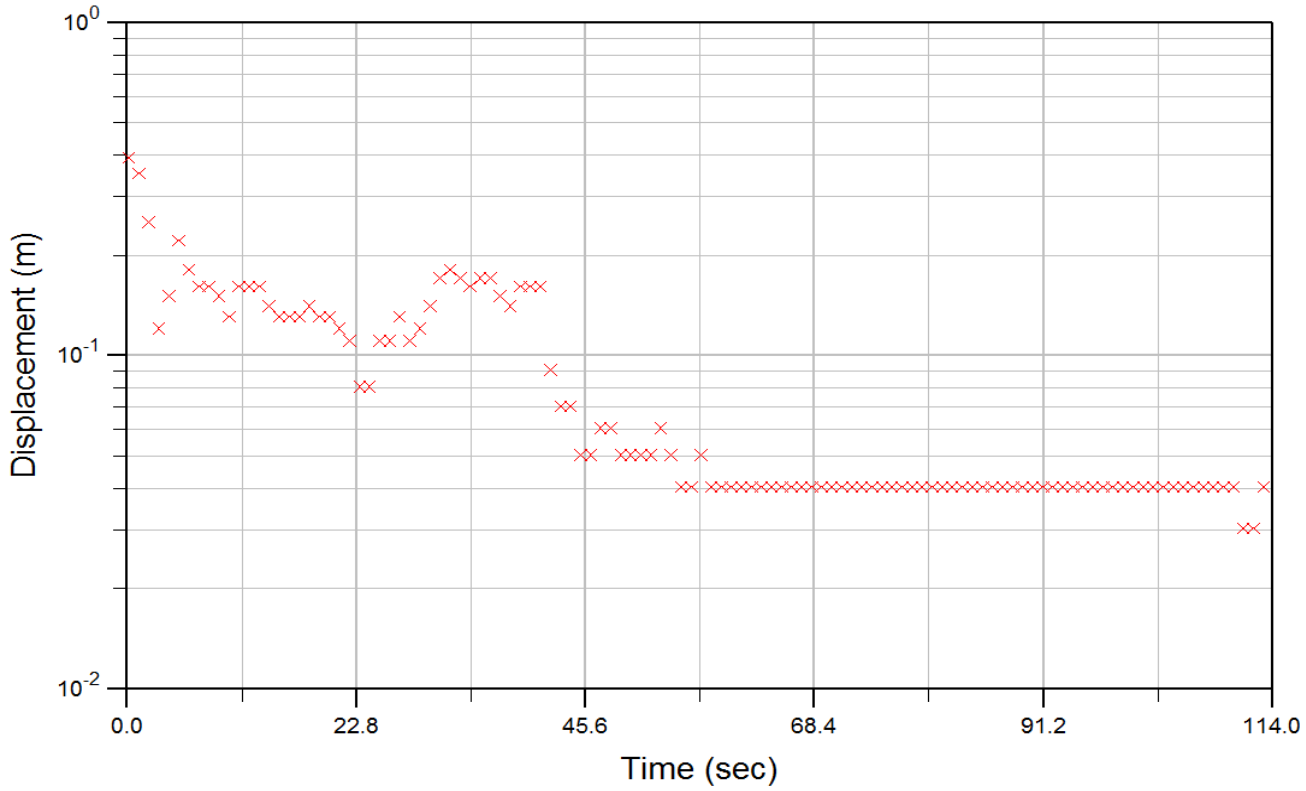
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PROJECT No.:	A095973-2
PROJECT NAME:	Swansea Tidal Lagoon
CLIENT:	Tidal Lagoon Power

FALLING HEAD PERMEABILITY TEST

BOREHOLE No.:	BH9	**TEST No.:**	1	**SHEET No.:**	1	**ENGINEER:**	CW
BOREHOLE DEPTH (m):	6.50	**DATE:**	16/01/2017	**WEATHER:**	Rain		

Bouwer & Rice



Time (secs)	Water Level (m bgl)	Displacement (m)	Time (secs)	Water Level (m bgl)	Displacement (m)
0	1.75	0.39	24	2.06	0.08
1	1.79	0.35	25	2.03	0.11
2	1.89	0.25	26	2.03	0.11
3	2.02	0.12	27	2.01	0.13
4	1.99	0.15	28	2.03	0.11
5	1.92	0.22	29	2.02	0.12
6	1.96	0.18	30	2	0.14
7	1.98	0.16	60	2.10	0.04
8	1.98	0.16	90	2.10	0.04
9	1.99	0.15	113	2.10	0.04
10	2.01	0.13			
11	1.98	0.16			
12	1.98	0.16			
13	1.98	0.16			
14	2	0.14			
15	2.01	0.13			
16	2.02	0.13			
17	2.01	0.13			
18	2	0.14			
19	2.01	0.13			
20	2.01	0.13			
21	2.02	0.12			
22	2.03	0.11			
23	2.06	0.08			

Groundwater Level (m bgl):	2.14
Borehole Depth (m):	6.50
Casing Inner Diameter (m):	0.05
Borehole Drilled Diameter (m):	0.15
Borehole Screen Length (m):	2.0
Screen Top Length (m bgl):	4.50
Test Start Time:	12:12:53
Test Finish Time:	12:15:35

Test Remarks:

Groundwater was added to the borehole through the top of the standpipe, to allow completion of falling head test. Calculations have been performed in AquiferWin32 software based on the Bouwer & Rice (1976) solution method. **Note - This test is considered to be a FAILED TEST.**

Geological Description:

Grey coarse SAND (MADE GROUND).

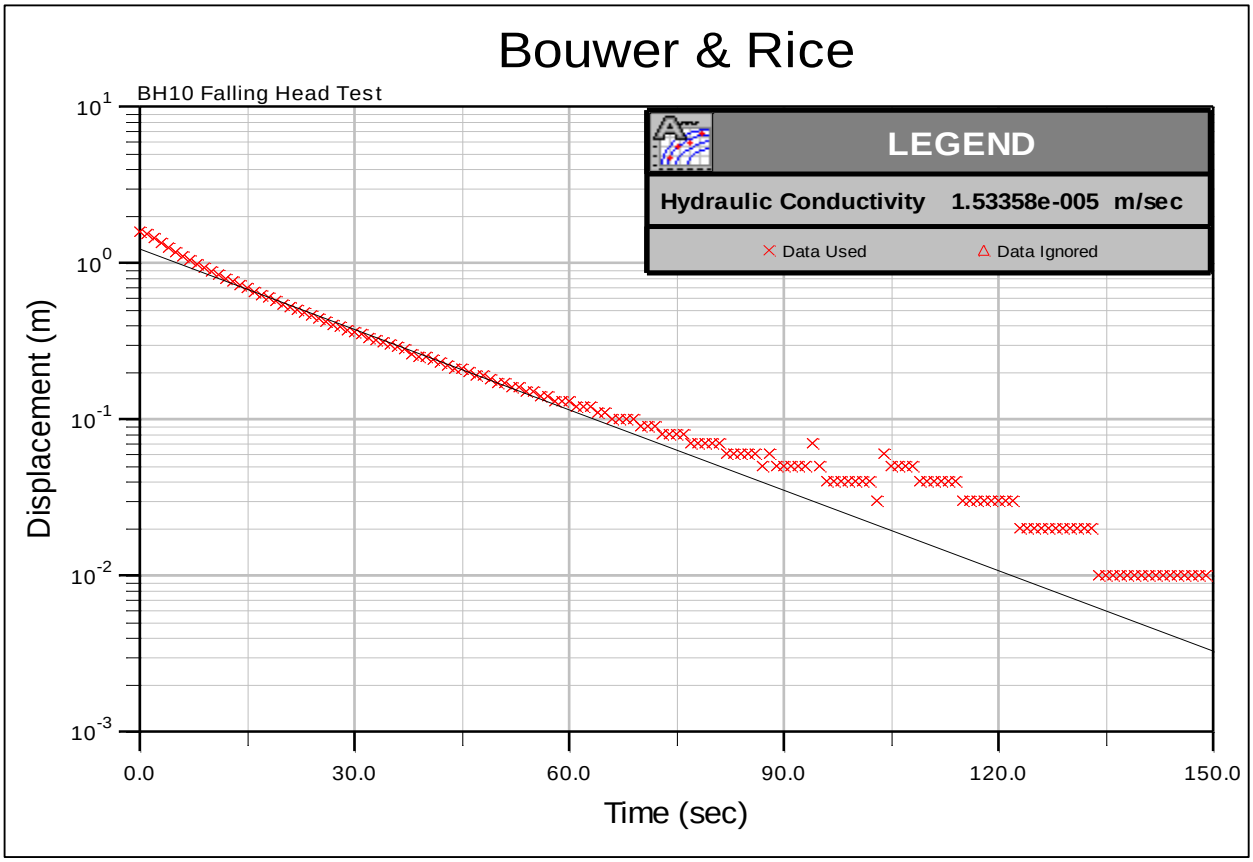
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PROJECT No.:	A095973-2
PROJECT NAME:	Swansea Tidal Lagoon
CLIENT:	Tidal Lagoon Power

FALLING HEAD PERMEABILITY TEST

BOREHOLE No.:	BH10	**TEST No.:**	1	**SHEET No.:**	1	**ENGINEER:**	CW
BOREHOLE DEPTH (m):	9.00	**DATE:**	16/01/2017	**WEATHER:**	Rain		



Time (secs)	Water Level (m bgl)	Displacement (m)	Time (secs)	Water Level (m bgl)	Displacement (m)
0	0.39	1.58	24	1.51	0.46
1	0.44	1.53	25	1.53	0.44
2	0.53	1.44	26	1.55	0.42
3	0.63	1.34	27	1.57	0.40
4	0.72	1.25	28	1.58	0.39
5	0.80	1.17	29	1.60	0.37
6	0.87	1.10	30	1.61	0.36
7	0.93	1.04	60	1.84	0.13
8	0.99	0.98	90	1.92	0.05
9	1.04	0.93	120	1.94	0.03
10	1.09	0.88	150	1.97	0.00
11	1.13	0.84			
12	1.18	0.79			
13	1.21	0.76			
14	1.25	0.72			
15	1.28	0.69			
16	1.32	0.65			
17	1.35	0.62			
18	1.37	0.60			
19	1.40	0.57			
20	1.43	0.54			
21	1.45	0.52			
22	1.47	0.50			
23	1.49	0.48			

Groundwater Level (m bgl):	1.97
Borehole Depth (m):	9.00
Casing Inner Diameter (m):	0.05
Borehole Drilled Diameter (m):	0.15
Borehole Screen Length (m):	3.0
Screen Top Length (m bgl):	6.0
Test Start Time:	12:06:13
Test Finish Time:	12:08:44

Test Remarks:

Groundwater was added to the borehole through the top of the standpipe, to allow completion of falling head test. Calculations have been performed in AquiferWin32 software based on the Bouwer & Rice (1976) solution method.

Geological Description:

Grey coarse SAND (MADE GROUND from 6.00-7.50m bgl. BEACH DEPOSITS from 7.50-9.00m bgl)

Compiled By	JM	Date	08/02/2017
Checked By	AJ	Date	08/02/2017

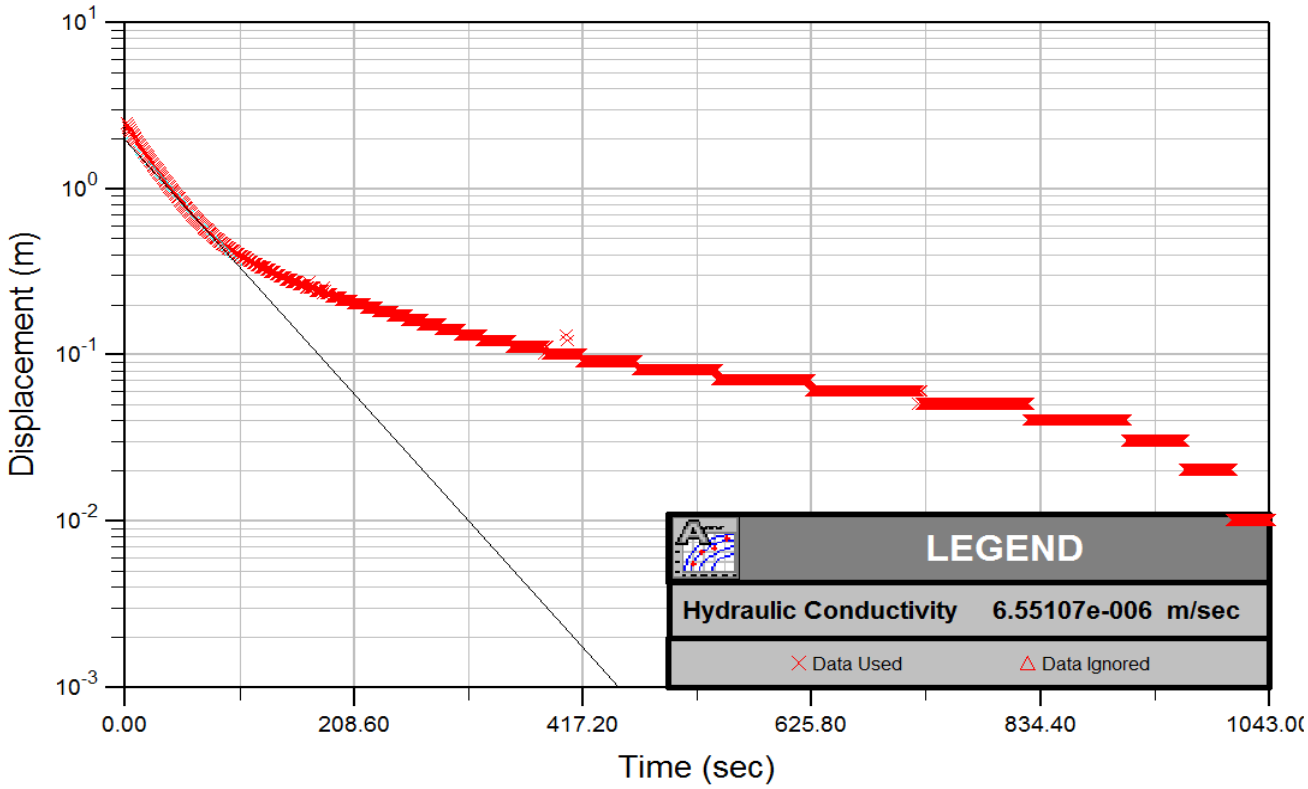
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PROJECT No.:	A095973-2
PROJECT NAME:	Swansea Tidal Lagoon
CLIENT:	Tidal Lagoon Power

FALLING HEAD PERMEABILITY TEST

BOREHOLE No.:	BH11	**TEST No.:**	1	**SHEET No.:**	1	**ENGINEER:**	CW
BOREHOLE DEPTH (m):	9.00	**DATE:**	16/01/2017	**WEATHER:**	Rain		

Bouwer & Rice



Time (secs)	Water Level (m bgl)	Displacement (m)	Time (secs)	Water Level (m bgl)	Displacement (m)
0	0.26	2.44	24	1.32	1.38
1	0.33	2.37	25	1.35	1.35
2	0.40	2.30	26	1.38	1.32
3	0.47	2.23	27	1.41	1.29
4	0.53	2.17	28	1.43	1.27
5	0.59	2.11	29	1.46	1.24
6	0.64	2.06	30	1.48	1.22
7	0.69	2.01	60	2.02	0.68
8	0.74	1.96	90	2.25	0.45
9	0.78	1.92	120	2.36	0.34
10	0.83	1.87	150	2.42	0.28
11	0.87	1.83	180	2.45	0.25
12	0.91	1.79	210	2.50	0.20
13	0.95	1.75	240	2.52	0.18
14	0.99	1.71	270	2.55	0.15
15	1.03	1.67	300	2.56	0.14
16	1.07	1.63	400	2.60	0.10
17	1.10	1.60	500	2.62	0.08
18	1.14	1.56	600	2.63	0.07
19	1.17	1.53	700	2.64	0.06
20	1.20	1.50	800	2.65	0.05
21	1.23	1.47	900	2.66	0.04
22	1.26	1.44	1043	2.70	0.00
23	1.29	1.41			

Groundwater Level (m bgl):	2.7
Borehole Depth (m):	9.00
Casing Inner Diameter (m):	0.05
Borehole Drilled Diameter (m):	0.15
Borehole Screen Length (m):	3.0
Screen Top Length (m bgl):	6.0
Test Start Time:	11:54:00
Test Finish Time:	12:11:41

Test Remarks:

Groundwater was added to the borehole through the top of the standpipe, to allow completion of falling head test. Calculations have been performed in AquiferWin32 software based on the Bouwer & Rice (1976) solution method.

Geological Description:

Grey gravellycoarse SAND (MADE GROUND)

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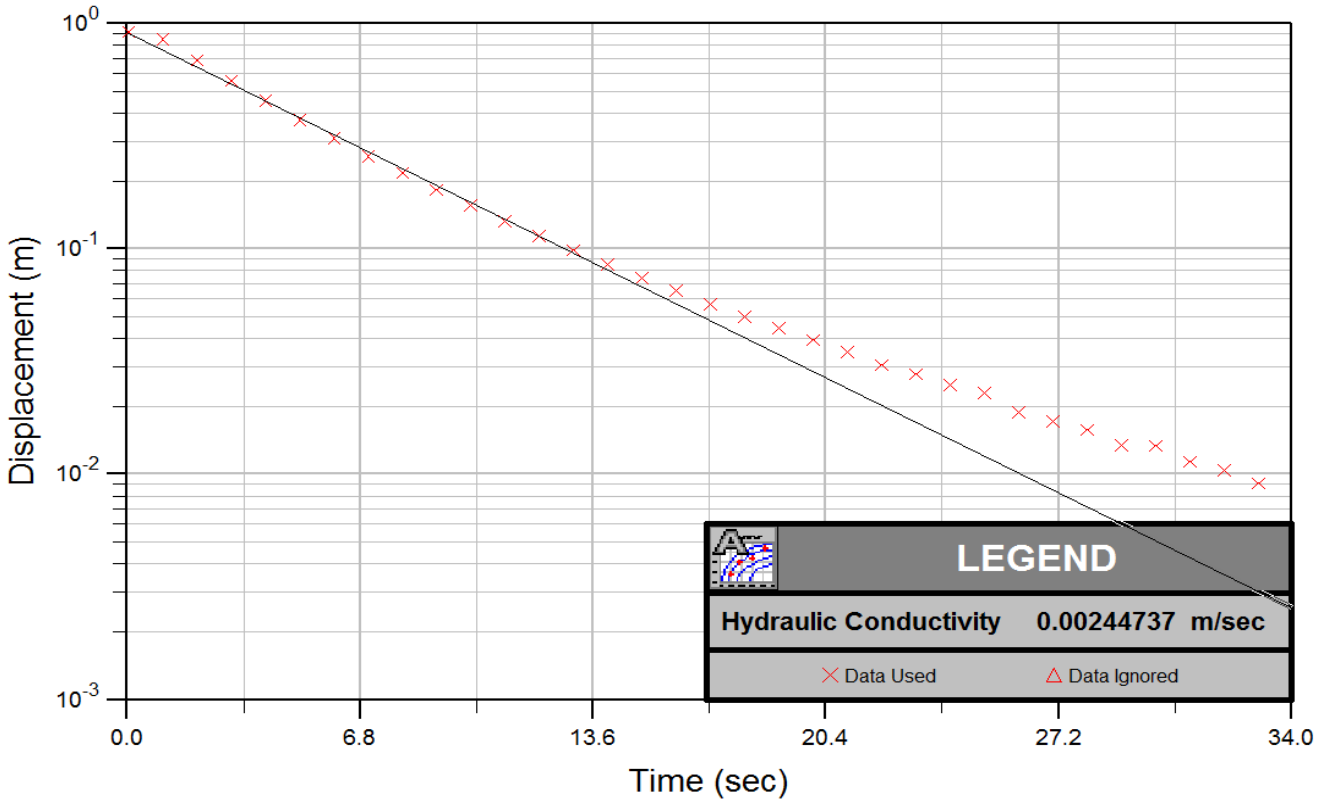
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PROJECT No.:	A095973-2
PROJECT NAME:	Swansea Tidal Lagoon
CLIENT:	Tidal Lagoon Power

FALLING HEAD PERMEABILITY TEST

BOREHOLE No.:	BH12	**TEST No.:**	1	**SHEET No.:**	1	**ENGINEER:**	CW
BOREHOLE DEPTH (m):	5.00	**DATE:**	16/01/2017	**WEATHER:**	Rain		

Bouwer & Rice



Time (secs)	Water Level (m bgl)	Displacement (m)	Time (secs)	Water Level (m bgl)	Displacement (m)
0	0.48	0.99	24	1.16	0.31
1	0.61	0.86	25	1.22	0.25
2	0.77	0.70	26	1.26	0.21
3	0.74	0.73	27	1.29	0.18
4	0.73	0.74	28	1.32	0.15
5	0.69	0.78	29	1.34	0.13
6	0.67	0.80	30	1.36	0.11
7	0.60	0.87	31	1.37	0.10
8	0.59	0.88	32	1.39	0.08
9	0.57	0.90	33	1.40	0.07
10	0.56	0.91	34	1.41	0.06
11	0.55	0.92	35	1.41	0.06
12	0.56	0.91	36	1.42	0.05
13	0.57	0.90	37	1.43	0.04
14	0.60	0.87	38	1.43	0.04
15	0.61	0.86	39	1.44	0.03
16	0.59	0.88	40	1.44	0.03
17	0.56	0.91	41	1.44	0.03
18	0.56	0.91	42	1.45	0.02
19	0.63	0.84	43	1.45	0.02
20	0.79	0.68	44	1.45	0.02
21	0.92	0.55	45	1.45	0.02
22	1.02	0.45	54	1.47	0.00
23	1.10	0.37			

Groundwater Level (m bgl):	2.14
Borehole Depth (m):	5.00
Casing Inner Diameter (m):	0.05
Borehole Drilled Diameter (m):	0.15
Borehole Screen Length (m):	3.0
Screen Top Length (m bgl):	2.0
Test Start Time:	14:03:41
Test Finish Time:	14:04:35

Test Remarks:

Groundwater was added to the borehole through the top of the standpipe, to allow completion of falling head test. Calculations have been performed in AquiferWin32 software based on the Bouwer & Rice (1976) solution method.

Geological Description:

Black coarse SAND with shells, rare iron slag and cobbles. (MADE GROUND)

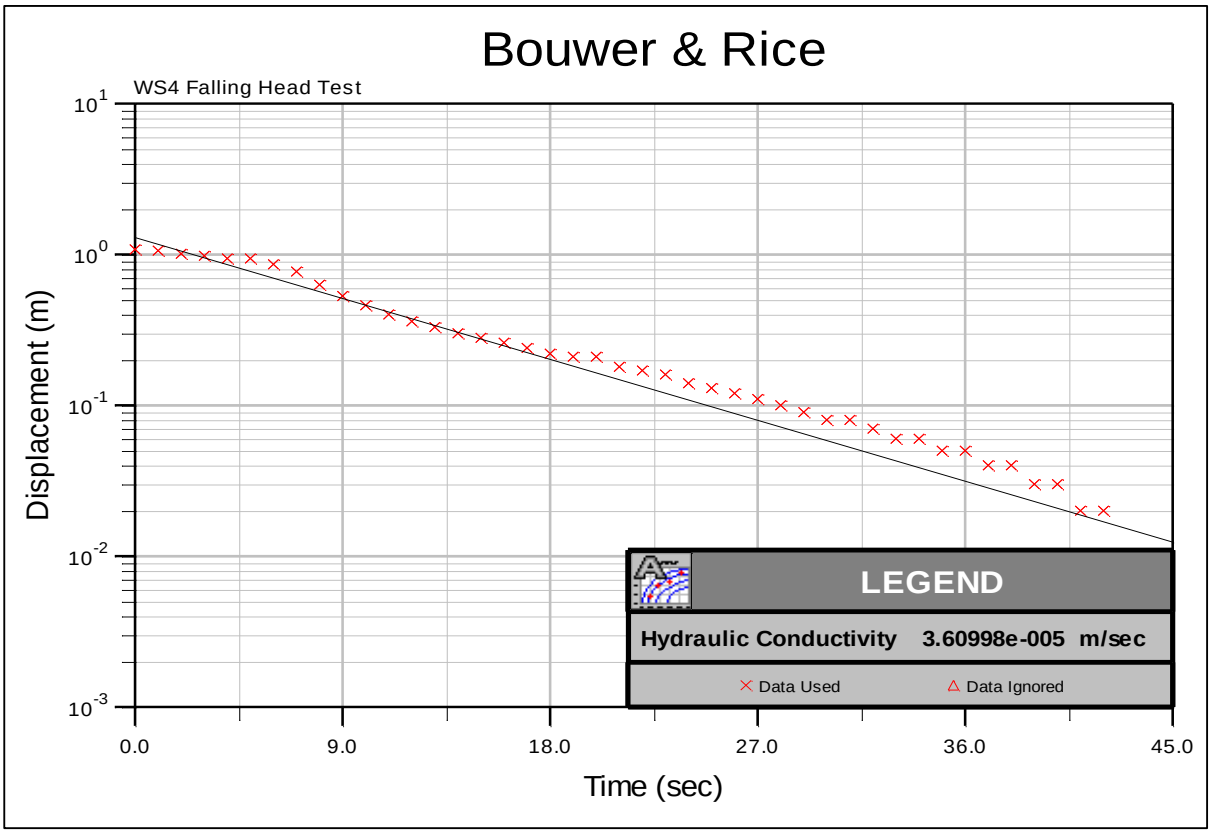
Compiled By	JM	Date	08/02/2017
Checked By	AJ	Date	08/02/2017

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47 Newport Road
Cardiff
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Tel. 02920 829 200

PROJECT No.:	A095973-2
PROJECT NAME:	Swansea Tidal Lagoon
CLIENT:	Tidal Lagoon Power

FALLING HEAD PERMEABILITY TEST

BOREHOLE No.:	WS4	**TEST No.:**	1	**SHEET No.:**	1	**ENGINEER:**	CW
BOREHOLE DEPTH (m):	4.00	**DATE:**	16/01/2017	**WEATHER:**	Rain		



Time (secs)	Water Level (m bgl)	Displacement (m)	Time (secs)	Water Level (m bgl)	Displacement (m)
0	2.18	1.08	24	3.12	0.14
1	2.20	1.06	25	3.13	0.13
2	2.25	1.01	26	3.14	0.12
3	2.28	0.98	27	3.15	0.11
4	2.32	0.94	28	3.16	0.10
5	2.32	0.94	29	3.17	0.09
6	2.40	0.86	30	3.18	0.08
7	2.49	0.77	31	3.18	0.08
8	2.63	0.63	32	3.19	0.07
9	2.73	0.53	33	3.20	0.06
10	2.80	0.46	34	3.20	0.06
11	2.86	0.40	35	3.21	0.05
12	2.90	0.36	36	3.21	0.05
13	2.93	0.33	37	3.22	0.04
14	2.96	0.30	38	3.22	0.04
15	2.98	0.28	39	3.23	0.03
16	3.00	0.26	40	3.23	0.03
17	3.02	0.24	41	3.24	0.02
18	3.04	0.22	42	3.24	0.02
19	3.05	0.21	43	3.25	0.01
20	3.05	0.21	44	3.25	0.01
21	3.08	0.18			
22	3.09	0.17			
23	3.10	0.16			

Groundwater Level (m bgl):	3.26
Borehole Depth (m):	4.00
Casing Inner Diameter (m):	0.11
Borehole Drilled Diameter (m):	0.05
Borehole Screen Length (m):	3.0
Screen Top Length (m bgl):	2.0
Test Start Time:	12:55:23
Test Finish Time:	12:56:08

Test Remarks:

Groundwater was added to the borehole through the top of the standpipe, to allow completion of falling head test. Calculations have been performed in AquiferWin32 software based on the Bouwer & Rice (1976) solution method.

Geological Description:

Light brown coarse SAND with rare shell and iron slag cobbles. (MADE GROUND)

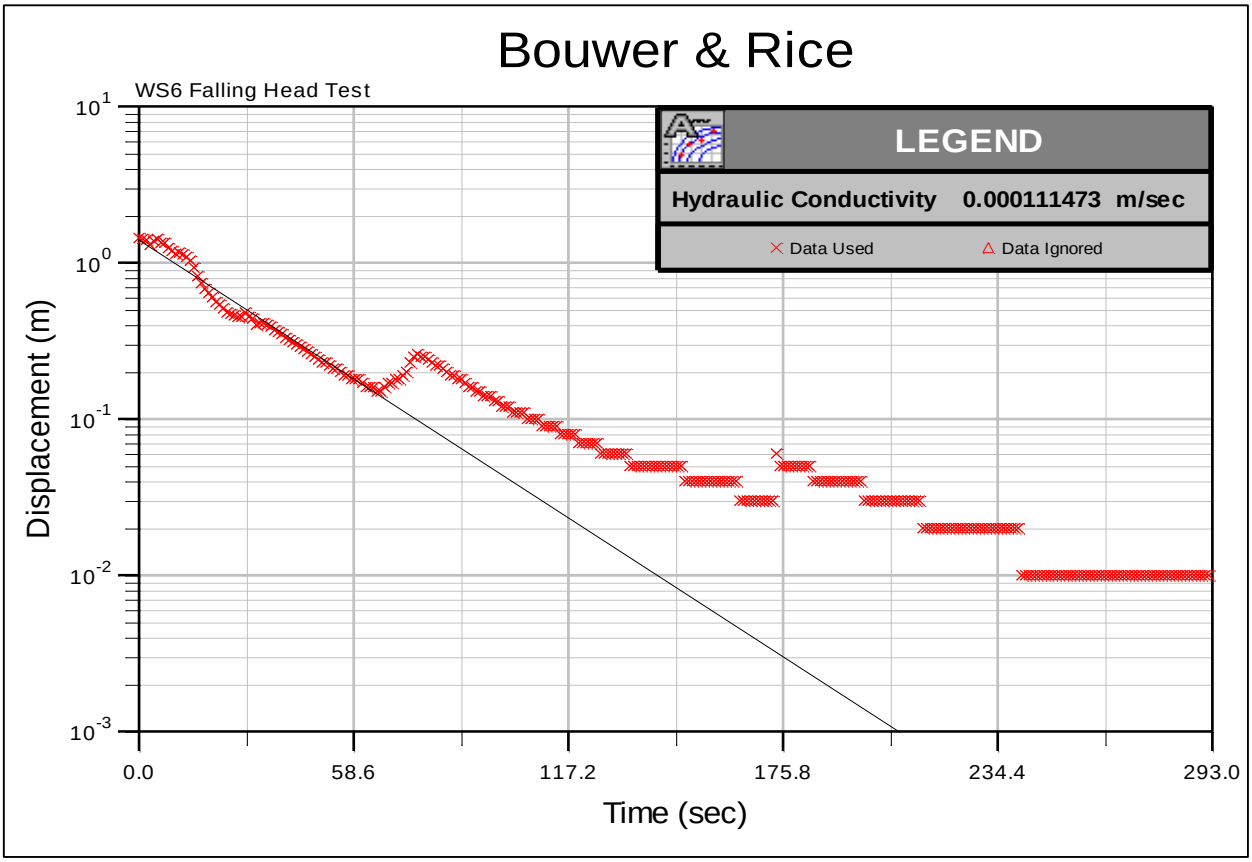
Compiled By	JM	Date	08/02/2017
Checked By	AJ	Date	08/02/2017

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PROJECT No.:	A095973-2
PROJECT NAME:	Swansea Tidal Lagoon
CLIENT:	Tidal Lagoon Power

FALLING HEAD PERMEABILITY TEST

BOREHOLE No.:	WS6	**TEST No.:**	1	**SHEET No.:**	1	**ENGINEER:**	CW
BOREHOLE DEPTH (m):	4.00	**DATE:**	16/01/2017	**WEATHER:**	Rain		



Time (secs)	Water Level (m bgl)	Displacement (m)	Time (secs)	Water Level (m bgl)	Displacement (m)
0	1.45	1.44	24	2.41	0.48
1	1.47	1.42	25	2.42	0.47
2	1.49	1.40	26	2.43	0.46
3	1.59	1.30	27	2.44	0.45
4	1.51	1.38	28	2.44	0.45
5	1.47	1.42	29	2.41	0.48
6	1.55	1.34	30	2.44	0.45
7	1.55	1.34	60	2.71	0.18
8	1.65	1.24	90	2.73	0.16
9	1.70	1.19	120	2.82	0.07
10	1.75	1.14	150	2.85	0.04
11	1.73	1.16	180	2.84	0.05
12	1.76	1.13	210	2.86	0.03
13	1.80	1.09	240	2.87	0.02
14	1.86	1.03	270	2.88	0.01
15	1.96	0.93	293	2.89	0.00
16	2.07	0.82			
17	2.15	0.74			
18	2.21	0.68			
19	2.25	0.64			
20	2.29	0.60			
21	2.33	0.56			
22	2.35	0.54			
23	2.38	0.51			

Groundwater Level (m bgl):	2.89
Borehole Depth (m):	4.00
Casing Inner Diameter (m):	0.11
Borehole Drilled Diameter (m):	0.05
Borehole Screen Length (m):	1
Screen Top Length (m bgl):	3
Test Start Time:	13:08:01
Test Finish Time:	13:12:54
Start Test Water Level (m bgl):	2.89
Maximum Test Water Level (m bgl):	1.45
Maximum Water Displacement (m):	1.44

Test Remarks:

Groundwater was added to the borehole through the top of the standpipe, to allow completion of falling head test. Calculations have been performed in AquiferWin32 software based on the Bouwer & Rice (1976) solution method. It is worth noting, that the jump in water level observed on the graph is an anomaly - this could be an error with the data levelogger; the levelogger may have been distrubed or it could be the result of a poorly contructed well (i.e. water may be seeping through the outside of the well and affecting the result).

Geological Description:

Light brown coarse SAND with rare shell and iron slag fragments. (MADE GROUND)

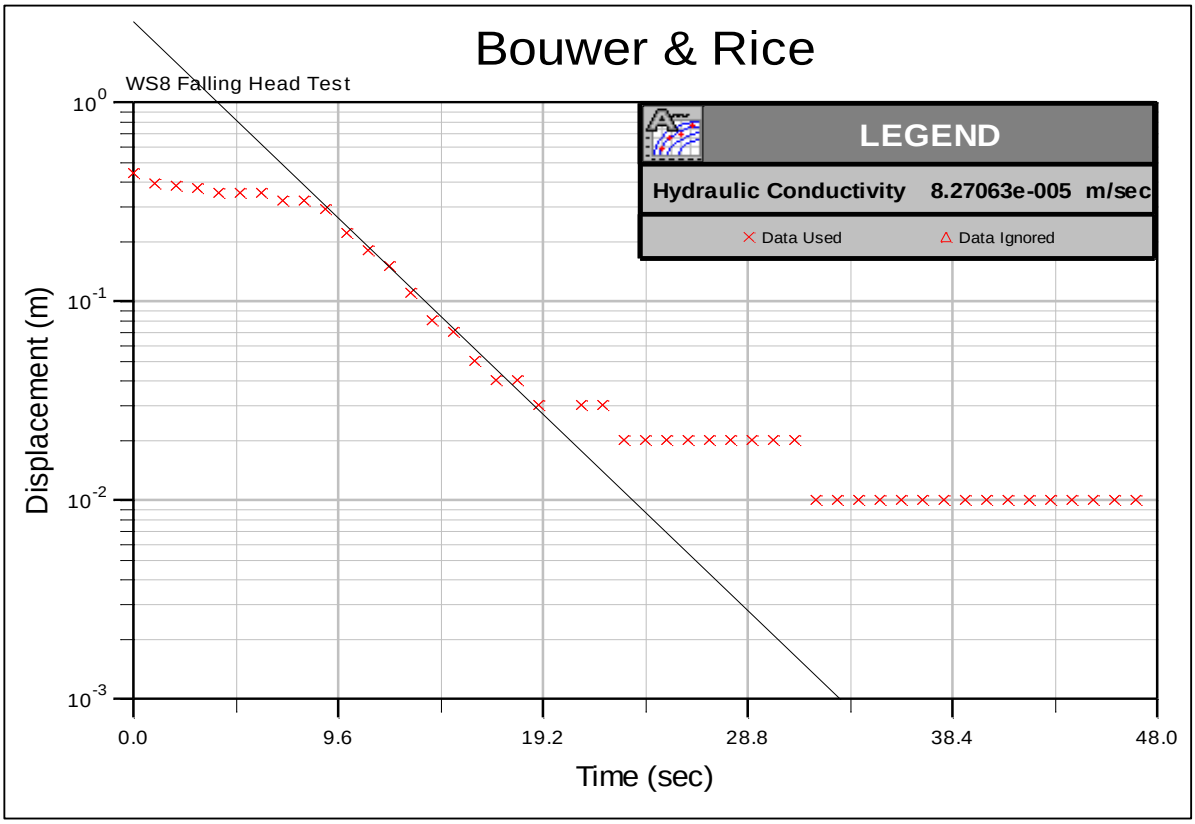
Compiled By	JM	Date	08/02/2017
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PROJECT No.:	A095973-2
PROJECT NAME:	Swansea Tidal Lagoon
CLIENT:	Tidal Lagoon Power

FALLING HEAD PERMEABILITY TEST

BOREHOLE No.:	WS8	**TEST No.:**	1	**SHEET No.:**	1	**ENGINEER:**	CW
BOREHOLE DEPTH (m):	3.80	**DATE:**	16/01/2017	**WEATHER:**	Rain		



Time (secs)	Water Level (m bgl)	Displacement (m)	Time (secs)	Water Level (m bgl)	Displacement (m)
0	2.95	0.44	24	3.37	0.02
1	3.00	0.39	25	3.37	0.02
2	3.01	0.38	26	3.37	0.02
3	3.02	0.37	27	3.37	0.02
4	3.04	0.35	28	3.37	0.02
5	3.04	0.35	29	3.37	0.02
6	3.04	0.35	30	3.37	0.02
7	3.07	0.32	31	3.37	0.02
8	3.07	0.32	32	3.38	0.01
9	3.10	0.29	33	3.38	0.01
10	3.17	0.22	34	3.38	0.01
11	3.21	0.18	35	3.38	0.01
12	3.24	0.15	36	3.38	0.01
13	3.28	0.11	37	3.38	0.01
14	3.31	0.08	38	3.38	0.01
15	3.32	0.07	39	3.38	0.01
16	3.34	0.05	40	3.38	0.01
17	3.35	0.04	41	3.38	0.01
18	3.35	0.04	42	3.38	0.01
19	3.36	0.03	43	3.38	0.01
20	3.34	0.05	44	3.38	0.01
21	3.36	0.03	45	3.38	0.01
22	3.36	0.03	46	3.38	0.01
23	3.37	0.02			

Groundwater Level (m bgl):	3.39
Borehole Depth (m):	3.80
Casing Inner Diameter (m):	0.05
Borehole Drilled Diameter (m):	0.11
Borehole Screen Length (m):	3
Screen Top Length (m bgl):	1
Test Start Time:	12:33:42
Test Finish Time:	12:34:31

Test Remarks:

Groundwater was added to the borehole through the top of the standpipe, to allow completion of falling head test. Calculations have been performed in AquiferWin32 software based on the Bouwer & Rice (1976) solution method.

Geological Description:

Black sandy angular fine to coarse brick and iron slag GRAVEL. (MADE GROUND)

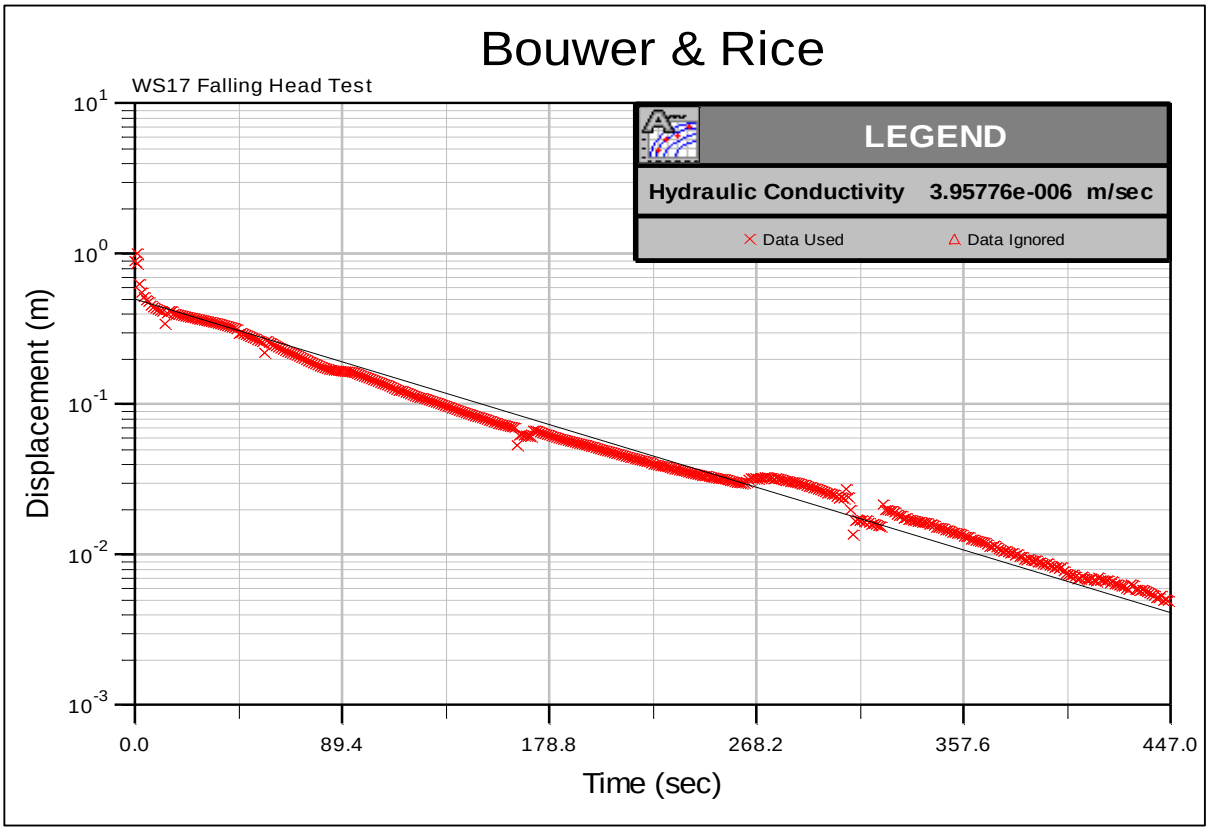
Compiled By	JM	Date	08/02/2017
Checked By	AJ	Date	08/02/2017

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PROJECT No.:	A095973-2
PROJECT NAME:	Swansea Tidal Lagoon
CLIENT:	Tidal Lagoon Power

FALLING HEAD PERMEABILITY TEST

BOREHOLE No.:	WS17	**TEST No.:**	1	**SHEET No.:**	1	**ENGINEER:**	CW
BOREHOLE DEPTH (m):	3.80	**DATE:**	16/01/2017	**WEATHER:**	Rain		



Time (secs)	Water Level (m bgl)	Displacement (m)	Time (secs)	Water Level (m bgl)	Displacement (m)
0	2.12	0.89	24	2.64	0.37
1	2.16	0.85	25	2.64	0.37
2	2.39	0.63	26	2.64	0.37
3	2.46	0.55	27	2.64	0.37
4	2.50	0.51	28	2.65	0.36
5	2.52	0.49	29	2.65	0.36
6	2.53	0.48	30	2.65	0.36
7	2.56	0.45	60	2.76	0.25
8	2.57	0.44	120	2.90	0.11
9	2.58	0.43	180	2.95	0.06
10	2.59	0.42	240	2.98	0.03
11	2.60	0.42	300	2.98	0.03
12	2.60	0.41	360	3.00	0.01
13	2.67	0.34	420	3.00	0.01
14	2.61	0.40	444	3.01	0.00
15	2.60	0.41			
16	2.60	0.41			
17	2.61	0.40			
18	2.62	0.39			
19	2.62	0.39			
20	2.62	0.39			
21	2.63	0.38			
22	2.63	0.38			
23	2.63	0.38			

Groundwater Level (m bgl):	3.01
Borehole Depth (m):	3.80
Casing Inner Diameter (m):	0.05
Borehole Drilled Diameter (m):	0.1
Borehole Screen Length (m):	2.8
Screen Top Length (m bgl):	1
Test Start Time:	13:35:34
Test Finish Time:	13:43:20

Test Remarks:

Groundwater was added to the borehole through the top of the standpipe, to allow completion of falling head test. Calculations have been performed in AquiferWin32 software based on the Bouwer & Rice (1976) solution method.

Geological Description:

Brown slightly gravelly slightly silty SAND 0.00-1.70m bgl (MADE GROUND). Coarse GRAVEL of concrete 1.70-1.90m bgl. Dark brown to grey slightly sandy slightly silty GRAVEL 1.90-3.00m bgl (MADE GROUND). Light brown coarse SAND with rare shell and iron slag fragments 3.00-3.80m bgl (MADE GROUND).

Compiled By	JM	Date	08/02/2017
Checked By	AJ	Date	08/02/2017

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PROJECT No.:	A095973-2
PROJECT NAME:	Swansea Tidal Lagoon
CLIENT:	Tidal Lagoon Power

Appendix E – Geotechnical Laboratory Analysis Results

Laboratory Report

UKAS TESTING 2788

GSTL

GEO Site & Testing Services Ltd

Contract Number: 33394

Client's Reference: **A095973-2**

Report Date: **23-12-2016**

Client **WYG Group**
5th Floor
Longcross Court
47 Newport Road
Cardiff
CF24 0AD

Contract Title: **Swansea Tidal Lagoon Swansea**

For the attention of: **Chris Pugh**

Date Received: **02-12-2016**

Date Commenced: **02-12-2016**

Date Completed: **23-12-2016**

Test Description	Qty
Moisture Content 1377 : 1990 Part 2 : 3.2 - * UKAS	11
4 Point Liquid & Plastic Limit (LL/PL) 1377 : 1990 Part 2 : 4.3 & 5.3 - * UKAS	11
PSD Wet Sieve method 1377 : 1990 Part 2 : 9.2 - * UKAS	32
PSD: Sedimentation by hydrometer 1377 : 1990 Part 2 : 9.5 - @ Non Accredited Test	7
Dry Den/MC (4.5kg Rammer Method 1 Litre Mould) 1377 : 1990 Part 4 : 3.5 - * UKAS	9
CBR at each compaction point - * UKAS	30
CBR: Remoulded Specimen and tested at top only 1377 : 1990 Part 4 : 7 - * UKAS	8

Notes: ~~**Observations and Interpretations are outside the UKAS Accreditation**~~
*** - denotes test included in laboratory scope of accreditation**
- denotes test carried out by approved contractor
@ - denotes non accredited tests

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved Signatories:
Alex Wynn (Associate Director) - Benjamin Sharp (Contracts Manager) - Emma Sharp (Office Manager)
Paul Evans (Quality/Technical Manager) - Vaughan Edwards (Managing Director)

GEO Site & Testing Services Ltd
Unit 3-4, Heol Aur, Dafen Ind Estate, Dafen, Llanelli, Carmarthenshire SA14 8QN
Tel: 01554 784040 Fax: 01554 784041 info@gstl.co.uk gstl.co.uk

Laboratory Report

2788

GEO Site & Testing Services Ltd

Contract Number: 33394

Test Description	Qty
Organic Matter Content-dichromate method 1377 : 1990 Part 3 : 3 - @ Non Accredited Test	20
(GI) BRE SD1 Reduced Suite pH, Acid Soluble Sulphate, Water Soluble Sulphate and Total Sulphur 1377 : 1990 Part 3 & BRE CP2/79 - @ Non Accredited Test	20
Disposal of Samples on Project	1

Notes: **Observations and Interpretations are outside the UKAS Accreditation**
*** - denotes test included in laboratory scope of accreditation**
- denotes test carried out by approved contractor
@ - denotes non accredited tests

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Approved Signatories:
Alex Wynn (Associate Director) - Benjamin Sharp (Contracts Manager) - Emma Sharp (Office Manager)
Paul Evans (Quality/Technical Manager) - Vaughan Edwards (Managing Director)

GEO Site & Testing Services Ltd
Unit 3-4, Heol Aur, Dafen Ind Estate, Dafen, Llanelli, Carmarthenshire SA14 8QN
Tel: 01554 784040 Fax: 01554 784041 info@gstl.co.uk gstl.co.uk

Client ref: A095973-3

Location: Swansea Tidal Lagoon Swansea

Contract Number: 33394-

Hole Number	Sample Number	Type	Depth (m)	Description of Sample*
BH5	11	B	8.10 - 9.60	Greyish brown fine to coarse gravelly SAND.
BH5	13	B	9.60 - 11.10	Greyish brown saturated SILT.
BH6	16	B	9.00 - 10.00	Greyish brown saturated soft clayey SILT.
BH7	20	B	9.50 - 9.70	Greyish brown saturated sandy soft clayey SILT.
BH7	22	B	11.00 - 11.20	Greyish brown saturated sandy soft silty CLAY.
BH9	20	B	9.70 - 9.90	Dark brown SAND.
BH11	13	B	9.50 - 10.50	Greyish brown gravelly fine to coarse saturated clayey SILT.
BH11	15	B	10.50 - 12.00	Greyish brown saturated sandy soft clayey SILT.
BH11	17	B	12.00 - 13.50	Greyish brown saturated sandy soft clayey SILT.
BH11	19	B	13.50 - 15.00	Greyish brown saturated sandy soft silty CLAY.
BH12	18	B	8.00 - 8.20	Greyish brown fine to coarse gravelly SAND.

Note: Results on this table are in summary format and may not meet the requirements of the relevant standards, additional information is held by the laboratory

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GEO SITE & TESTING SERVICES LTD

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Emma Sharp (Office Manager)

Date: 22.12.16

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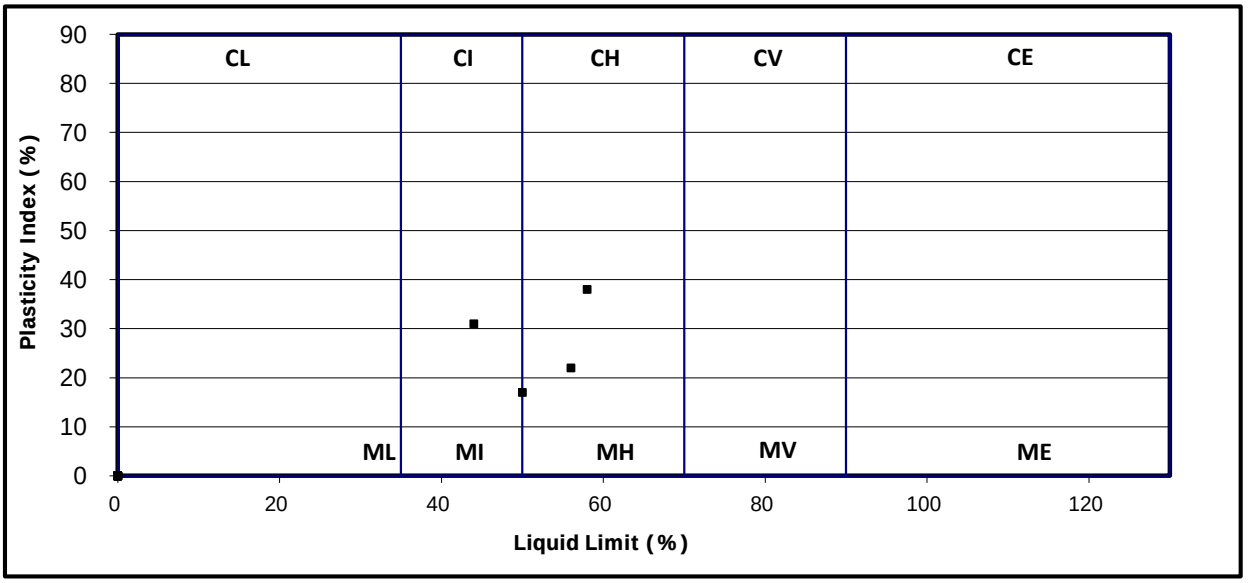
Test Report: **Method of the Determination of the plastic limit and plasticity index**
BS 1377 : Part 2 : 1990 Method 5

Client ref: **A095973-3**
Location: **Swansea Tidal Lagoon Swansea**
Contract Number: **33394-**

Hole/ Sample Number	Sample Type	Depth m	Moisture Content % Cl. 3.2	Liquid Limit % Cl. 4.3/4.4	Plastic Limit % Cl. 5.	Plasticity Index % Cl. 6.	% Passing .425mm	Remarks
BH5/11	B	8.10 - 9.60	15		NP		100	
BH5/13	B	9.60 - 11.10	50		NP		100	
BH6/16	B	9.00 - 10.00	39	56	34	22	100	MH High Plasticity
BH7/20	B	9.50 - 9.70	39	50	33	17	100	MI/H Inter/High Plasticity
BH7/22	B	11.00 - 11.20	31	44	13	31	100	CI Intermediate Plasticity
BH9/20	B	9.70 - 9.90	34		NP		100	
BH11/13	B	9.50 - 10.50	31		NP		95	
BH11/15	B	10.50 - 12.00	26		NP		30	
BH11/17	B	12.00 - 13.50	35		NP		90	
BH11/19	B	13.50 - 15.00	35	58	20	38	100	CH High Plasticity
BH12/18	B	8.00 - 8.20	7.5		NP		100	

Symbols: **NP : Non Plastic** **# : Liquid Limit and Plastic Limit Wet Sieved**

PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.
BS 5930:1999+A2:2010



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For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Emma Sharp (Office Manager)
Date: 22.12.16

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Test Report:

Particle Size Distribution Test

BS 1377 Part 2:1990.

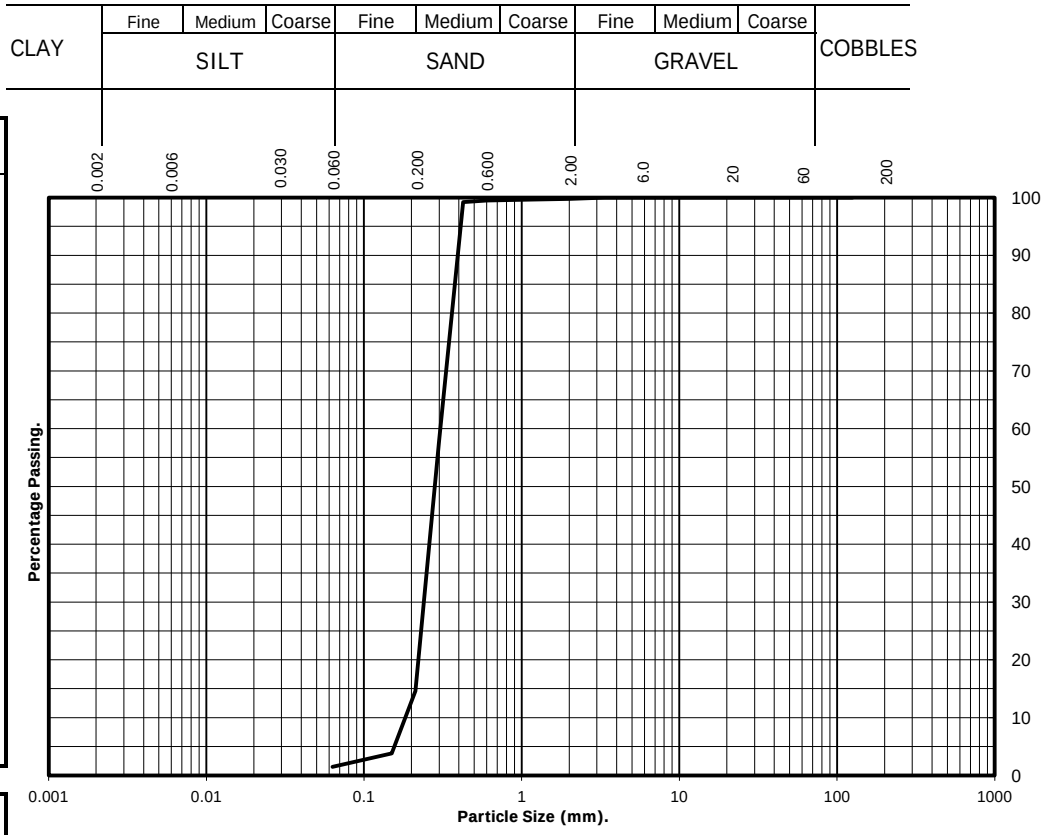
Wet Sieve, Clause 9.2

Client ref:	**A095973-2**	**Sample Number:**	**5**
Contract Number:	**33394-**	**Depth from (m):**	**2.20**
Hole Number:	**BH1**	**Depth to (m):**	**3.20**
		Sample Type:	**B**

Location: **Swansea Tidal Lagoon Swansea**

Description: **Brown fine to medium slightly silty clayey SAND.**

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	100
37.5	100
28	100
20	100
14	100
10	100
6.3	100
5.0	100
3.35	100
2.00	100
1.18	100
0.60	100
0.425	99
0.300	58
0.212	15
0.150	4
0.063	1



Particle Diameter	% Passing
0.02	#
0.006	#
0.002	#

	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	1	99	0	0	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Emma Sharp (Office Manager)

Date: 22.12.16

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Test Report:

Particle Size Distribution Test

BS 1377 Part 2:1990.

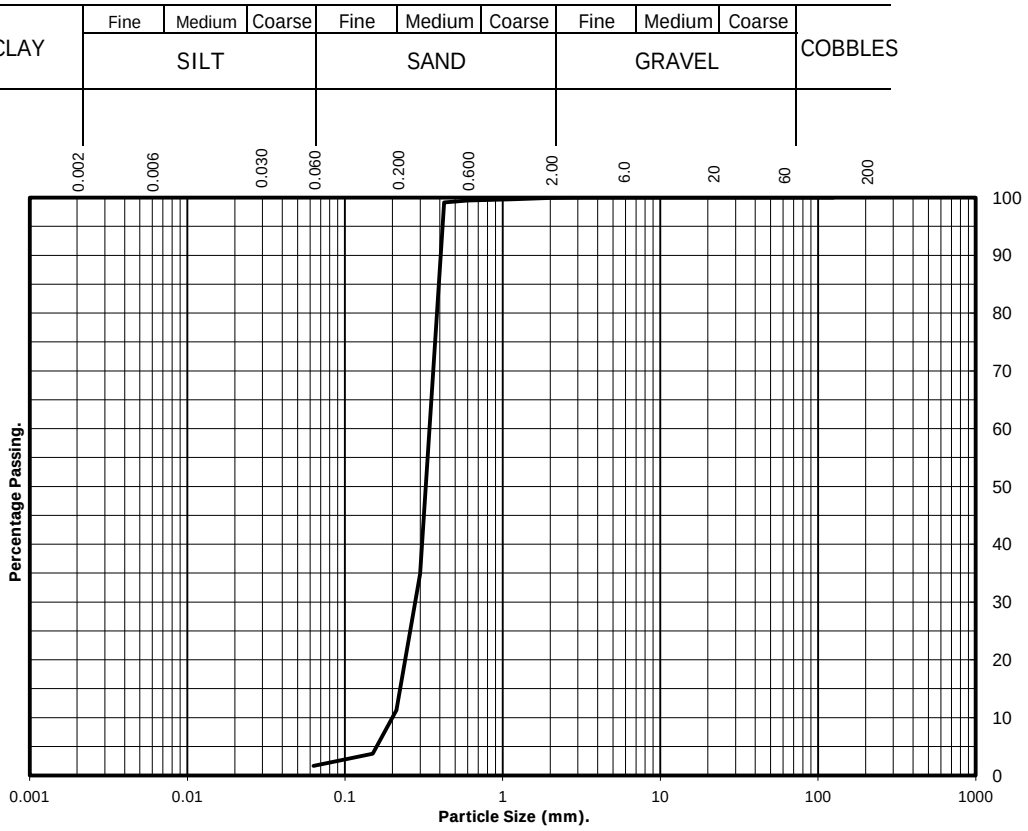
Wet Sieve, Clause 9.2

Client ref:	**A095973-2**	**Sample Number:**	**13**
Contract Number:	**33394-**	**Depth from (m):**	**6.00**
Hole Number:	**BH1**	**Depth to (m):**	**7.50**
		Sample Type:	**B**

Location: **Swansea Tidal Lagoon Swansea**

Description: **Brown fine to medium slightly silty clayey SAND.**

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	100
37.5	100
28	100
20	100
14	100
10	100
6.3	100
5.0	100
3.35	100
2.00	100
1.18	100
0.60	100
0.425	99
0.300	35
0.212	11
0.150	4
0.063	2



Particle Diameter	% Passing
0.02	#
0.006	#
0.002	#

	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	2	98	0	0	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Emma Sharp (Office Manager)

Date: 22.12.16

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Test Report:

Particle Size Distribution Test

BS 1377 Part 2:1990.

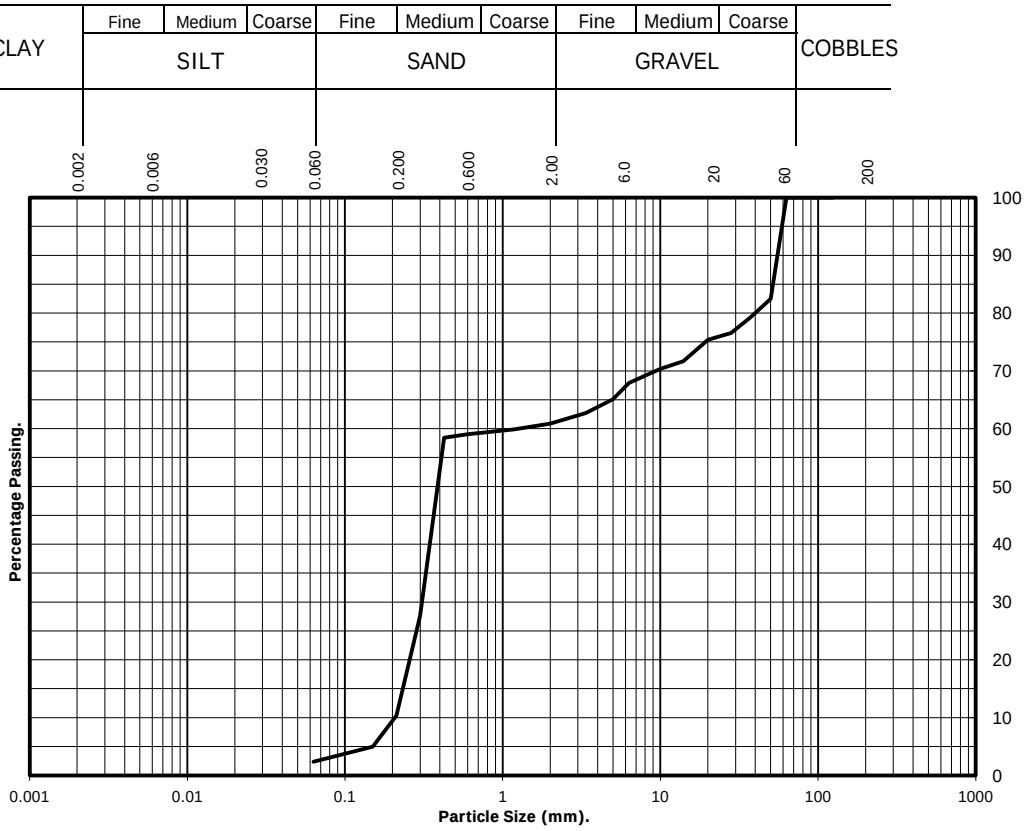
Wet Sieve, Clause 9.2

Client ref:	**A095973-2**	**Sample Number:**	**17**
Contract Number:	**33394-**	**Depth from (m):**	**9.00**
Hole Number:	**BH1**	**Depth to (m):**	**10.00**
		Sample Type:	**B**

Location: **Swansea Tidal Lagoon Swansea**

Description: **Brown fine to medium slightly silty clayey gravelly SAND.**

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	82
37.5	79
28	77
20	75
14	72
10	70
6.3	68
5.0	65
3.35	63
2.00	61
1.18	60
0.60	59
0.425	58
0.300	28
0.212	10
0.150	5
0.063	2



Particle Diameter	% Passing
0.02	#
0.006	#
0.002	#

	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	2	59	39	0	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Emma Sharp (Office Manager)

Date: 22.12.16

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2788

Test Report:

Particle Size Distribution Test

BS 1377 Part 2:1990.

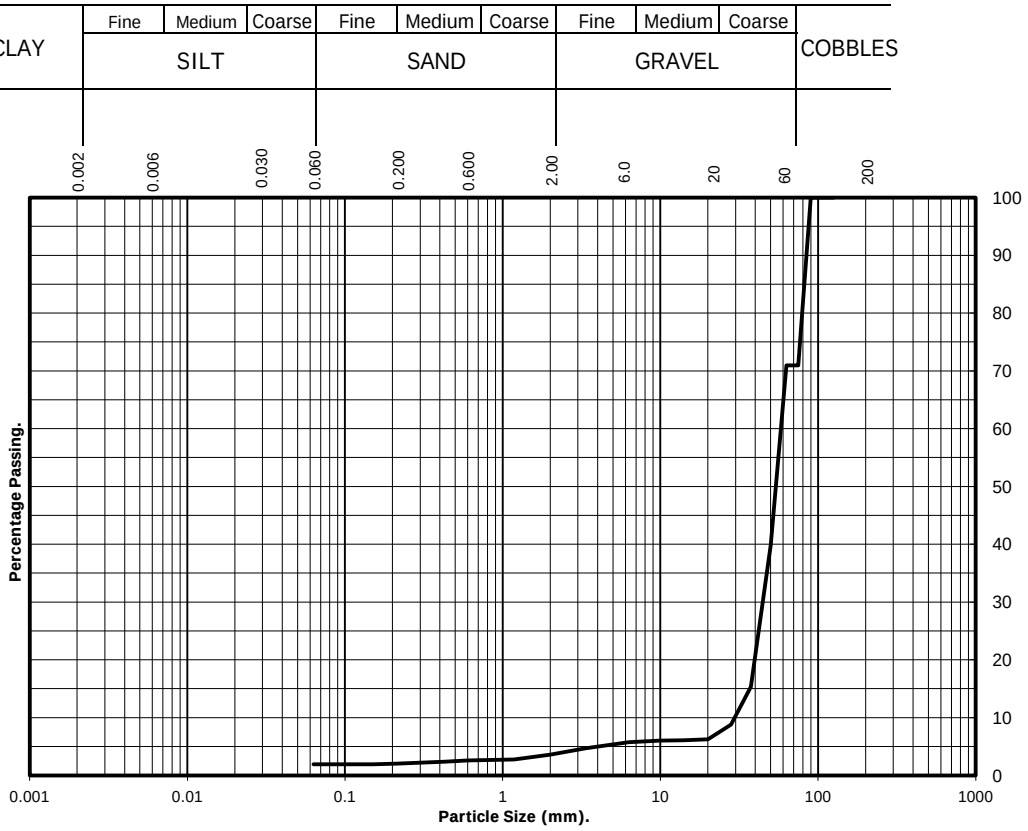
Wet Sieve, Clause 9.2

Client ref:	**A095973-2**	**Sample Number:**	**20**
Contract Number:	**33394-**	**Depth from (m):**	**11.00**
Hole Number:	**BH2**	**Depth to (m):**	**12.00**
		Sample Type:	**B**

Location: **Swansea Tidal Lagoon Swansea**

Description: **Brown fine to medium slightly silty clayey sandy GRAVEL with many cobbles.**

BS Test Sieve	% Passing
125	100
90	100
75	71
63	71
50	40
37.5	15
28	9
20	6
14	6
10	6
6.3	6
5.0	5
3.35	5
2.00	4
1.18	3
0.60	3
0.425	2
0.300	2
0.212	2
0.150	2
0.063	2



Particle Diameter	% Passing
0.02	#
0.006	#
0.002	#

	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	2	2	67	29	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Emma Sharp (Office Manager)

Date: 22.12.16

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Test Report:

Particle Size Distribution Test

BS 1377 Part 2:1990.

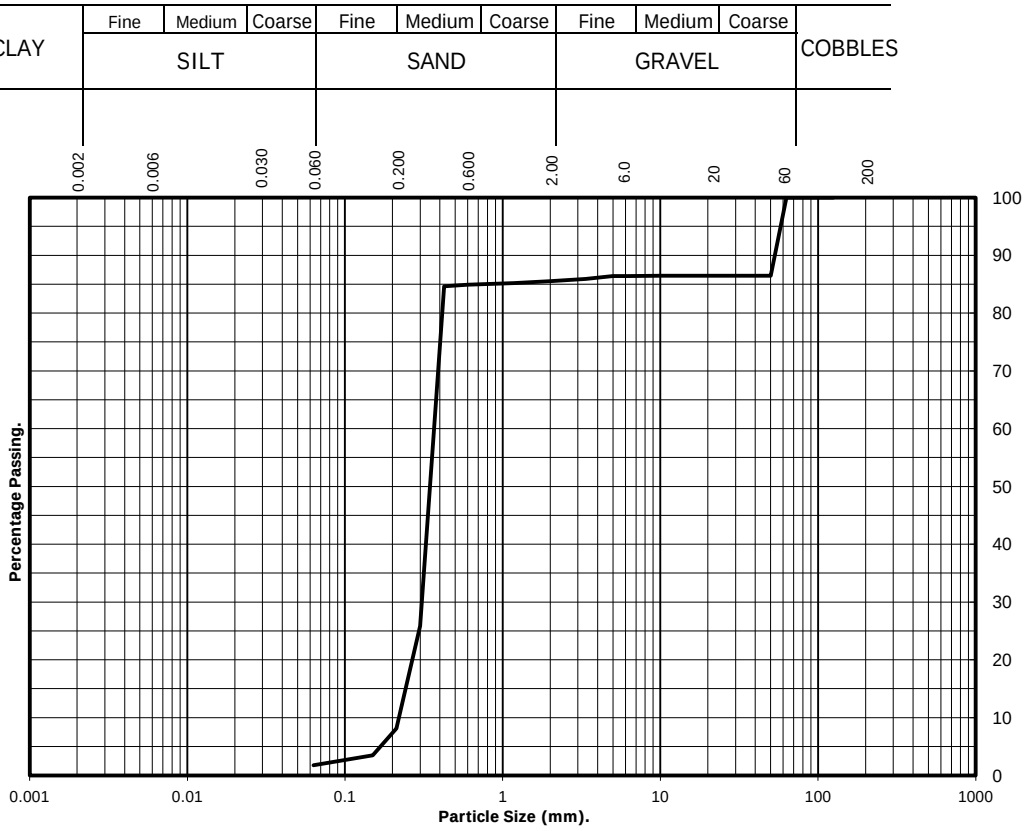
Wet Sieve, Clause 9.2

Client ref:	**A095973-2**	**Sample Number:**	**6**
Contract Number:	**33394-**	**Depth from (m):**	**3.20**
Hole Number:	**BH3**	**Depth to (m):**	**3.30**
		Sample Type:	**B**

Location: **Swansea Tidal Lagoon Swansea**

Description: **Brown fine to medium slightly silty clayey gravelly SAND.**

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	86
37.5	86
28	86
20	86
14	86
10	86
6.3	86
5.0	86
3.35	86
2.00	86
1.18	85
0.60	85
0.425	85
0.300	26
0.212	8
0.150	3
0.063	2



Particle Diameter	% Passing
0.02	#
0.006	#
0.002	#

	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	2	84	14	0	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
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Date: 22.12.16

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Test Report:

Particle Size Distribution Test

BS 1377 Part 2:1990.

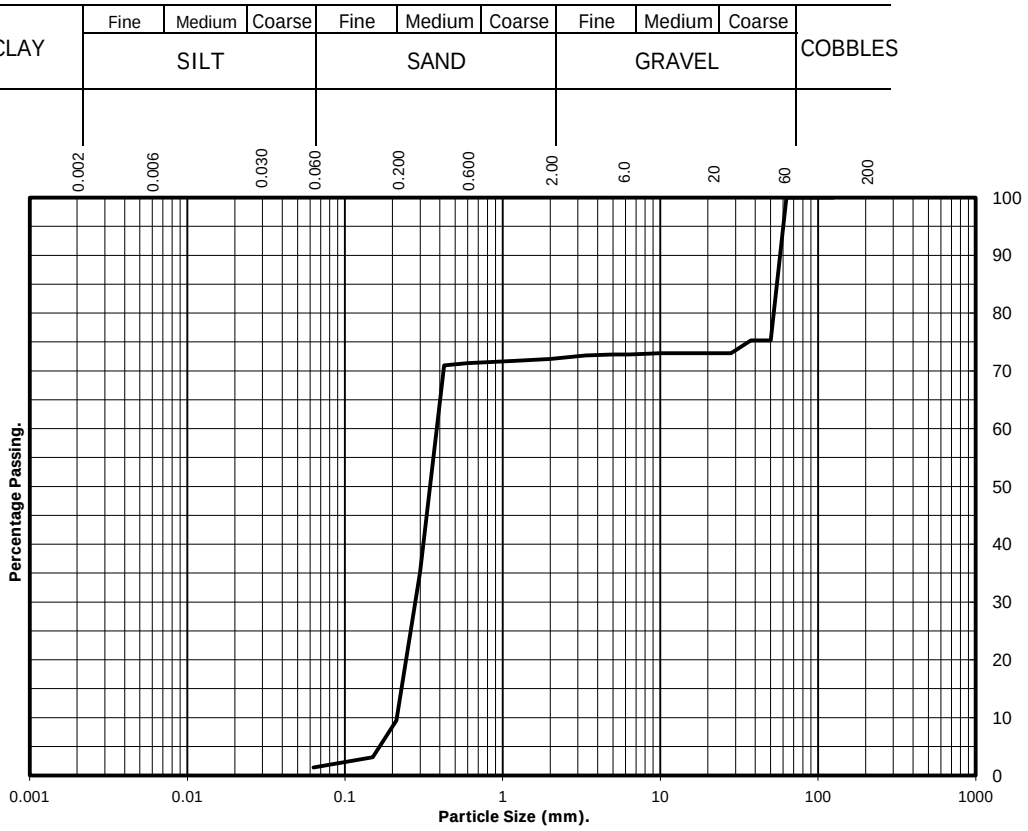
Wet Sieve, Clause 9.2

Client ref:	**A095973-2**	**Sample Number:**	**14**
Contract Number:	**33394-**	**Depth from (m):**	**6.70**
Hole Number:	**BH3**	**Depth to (m):**	**8.20**
		Sample Type:	**B**

Location: **Swansea Tidal Lagoon Swansea**

Description: **Brown fine to medium slightly silty clayey gravelly SAND.**

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	75
37.5	75
28	73
20	73
14	73
10	73
6.3	73
5.0	73
3.35	73
2.00	72
1.18	72
0.60	71
0.425	71
0.300	35
0.212	10
0.150	3
0.063	1



Particle Diameter	% Passing
0.02	#
0.006	#
0.002	#

	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	1	71	28	0	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
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Date: 22.12.16

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Test Report:

Particle Size Distribution Test

BS 1377 Part 2:1990.

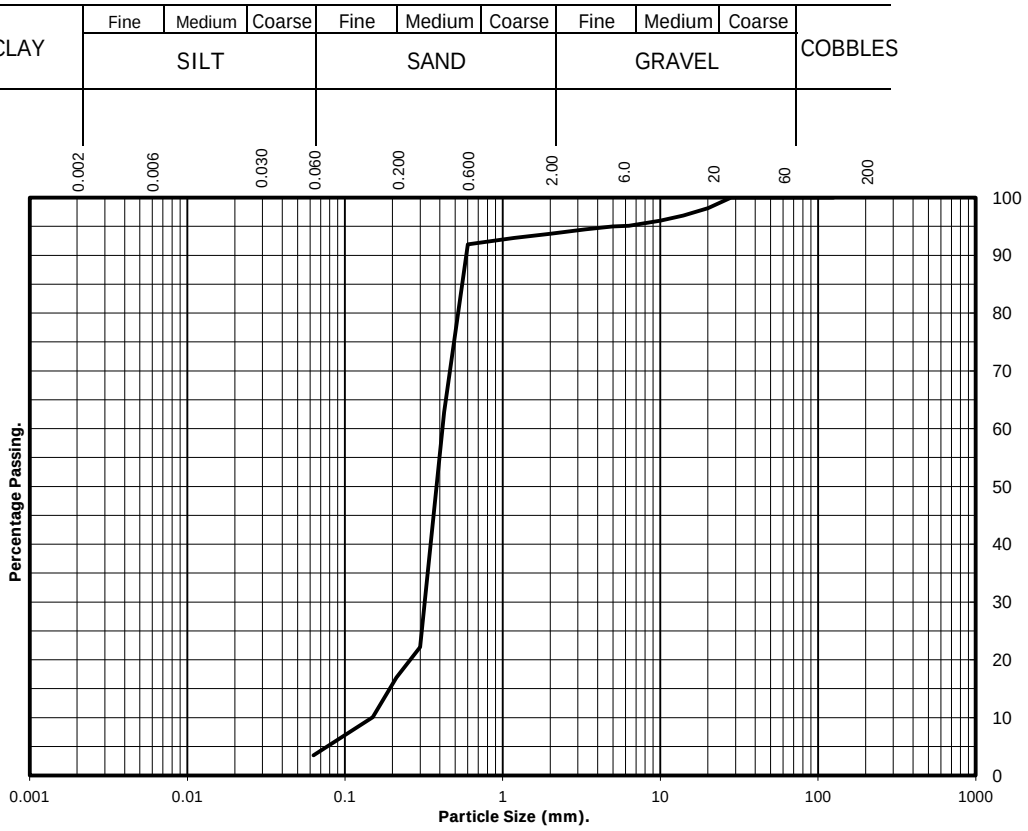
Wet Sieve, Clause 9.2

Client ref:	**A095973-2**	**Sample Number:**	**7**
Contract Number:	**33394-**	**Depth from (m):**	**6.00**
Hole Number:	**BH5**	**Depth to (m):**	**7.50**
		Sample Type:	**B**

Location: **Swansea Tidal Lagoon Swansea**

Description: **Brown fine to medium slightly silty clayey gravelly SAND.**

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	100
37.5	100
28	100
20	98
14	97
10	96
6.3	95
5.0	95
3.35	95
2.00	94
1.18	93
0.60	92
0.425	63
0.300	22
0.212	17
0.150	10
0.063	3



Particle Diameter	% Passing
0.02	#
0.006	#
0.002	#

	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	3	91	6	0	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Emma Sharp (Office Manager)

Date: 22.12.16

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Test Report:

Particle Size Distribution Test

BS 1377 Part 2:1990.

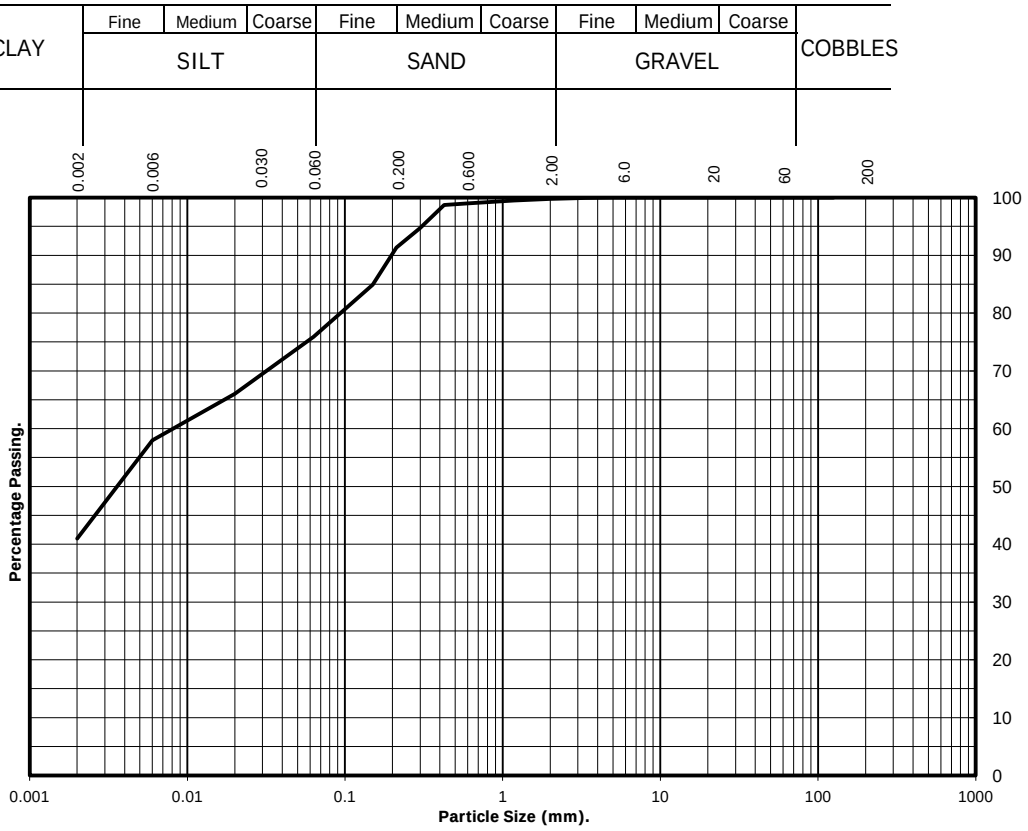
Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Client ref:	**A095973-2**	**Sample Number:**	**15**
Contract Number:	**33394-**	**Depth from (m):**	**11.10**
Hole Number:	**BH5**	**Depth to (m):**	**12.00**
		Sample Type:	**B**

Location: **Swansea Tidal Lagoon Swansea**

Description: **Brown fine to medium sandy silty CLAY.**

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	100
37.5	100
28	100
20	100
14	100
10	100
6.3	100
5.0	100
3.35	100
2.00	100
1.18	99
0.60	99
0.425	99
0.300	95
0.212	91
0.150	85
0.063	76



Particle Diameter	% Passing
0.02	66
0.006	58
0.002	41

Clay	Silt	Sand	Gravel	Cobbles	Soil Fraction
41	35	24	0	0	Total Percentage

Remarks:

Cl 9.4.8 - Sample has not been pretreated

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Emma Sharp (Office Manager)

Date: 22.12.16

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Test Report:

Particle Size Distribution Test

BS 1377 Part 2:1990.

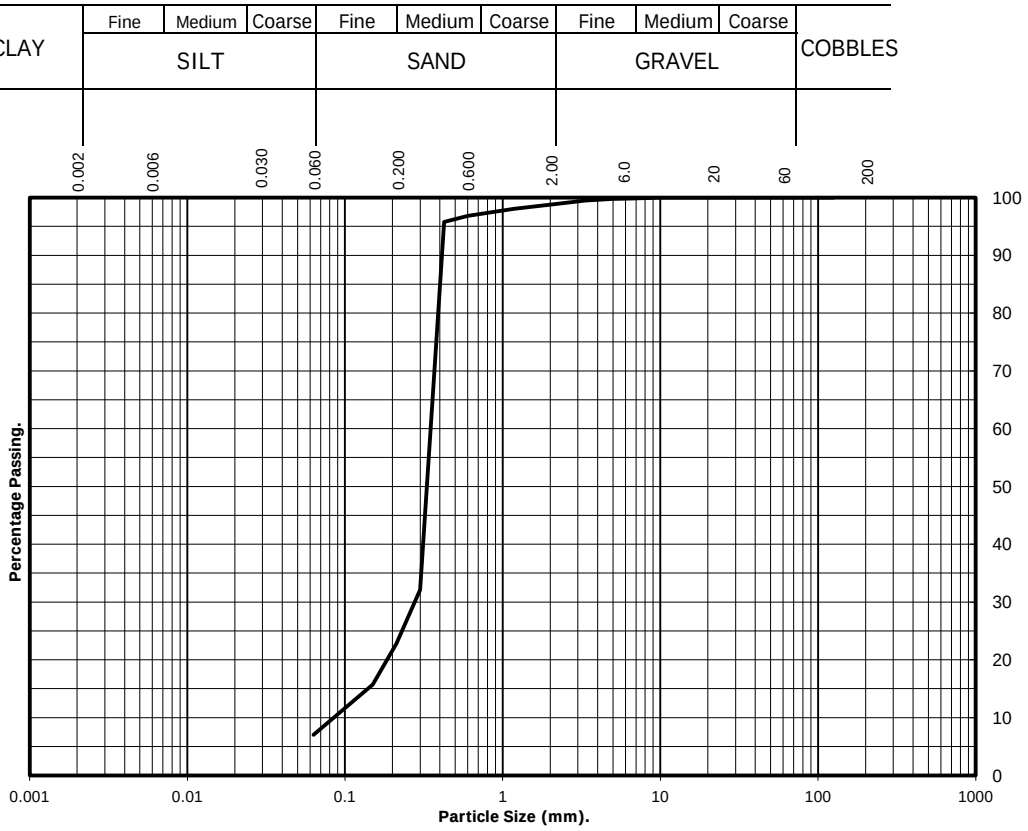
Wet Sieve, Clause 9.2

Client ref:	**A095973-2**	**Sample Number:**	**12**
Contract Number:	**33394-**	**Depth from (m):**	**6.50**
Hole Number:	**BH6**	**Depth to (m):**	**8.00**
		Sample Type:	**B**

Location: **Swansea Tidal Lagoon Swansea**

Description: **Brown fine to medium gravelly silty clayey SAND.**

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	100
37.5	100
28	100
20	100
14	100
10	100
6.3	100
5.0	100
3.35	99
2.00	99
1.18	98
0.60	97
0.425	96
0.300	32
0.212	23
0.150	16
0.063	7



Particle Diameter	% Passing
0.02	#
0.006	#
0.002	#

	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	7	92	1	0	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Emma Sharp (Office Manager)

Date: 22.12.16

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Test Report:

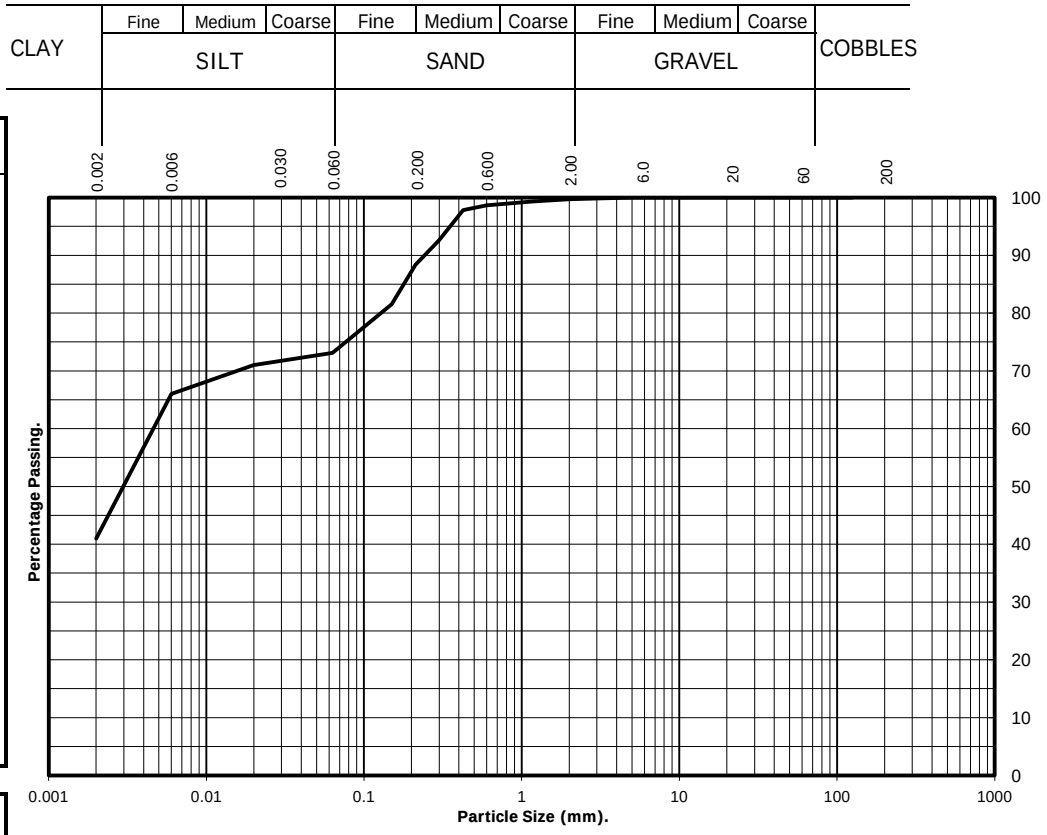
Particle Size Distribution Test

BS 1377 Part 2:1990.

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Client ref:	**A095973-2**	**Sample Number:**	**16**
Contract Number:	**33394-**	**Depth from (m):**	**9.00**
Hole Number:	**BH6**	**Depth to (m):**	**10.00**
		Sample Type:	**B**
Location:	**Swansea Tidal Lagoon Swansea**		
Description:	**Brown fine to medium sandy silty CLAY.**		

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	100
37.5	100
28	100
20	100
14	100
10	100
6.3	100
5.0	100
3.35	100
2.00	100
1.18	99
0.60	99
0.425	98
0.300	93
0.212	88
0.150	82
0.063	73



Particle Diameter	% Passing
0.02	71
0.006	66
0.002	41

Clay	Silt	Sand	Gravel	Cobbles	Soil Fraction
41	32	27	0	0	Total Percentage

Remarks:

Cl 9.4.8 - Sample has not been pretreated

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Emma Sharp (Office Manager)

Date: 22.12.16

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Test Report:

Particle Size Distribution Test

BS 1377 Part 2:1990.

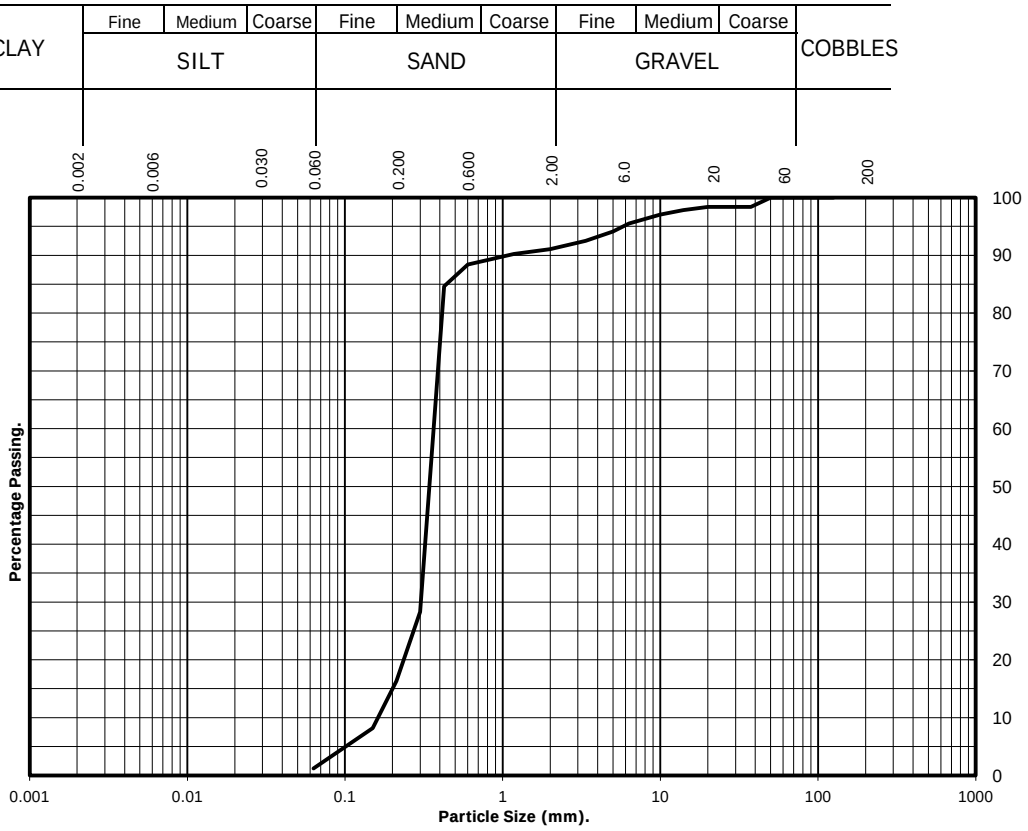
Wet Sieve, Clause 9.2

Client ref:	**A095973-2**	**Sample Number:**	**12**
Contract Number:	**33394-**	**Depth from (m):**	**5.50**
Hole Number:	**BH7**	**Depth to (m):**	**5.70**
		Sample Type:	**B**

Location: **Swansea Tidal Lagoon Swansea**

Description: **Brown fine to medium silty clayey gravelly SAND.**

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	100
37.5	98
28	98
20	98
14	98
10	97
6.3	95
5.0	94
3.35	92
2.00	91
1.18	90
0.60	88
0.425	85
0.300	28
0.212	16
0.150	8
0.063	1



Particle Diameter	% Passing
0.02	#
0.006	#
0.002	#

	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	1	90	9	0	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Emma Sharp (Office Manager)

Date: 22.12.16

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Test Report:

Particle Size Distribution Test

BS 1377 Part 2:1990.

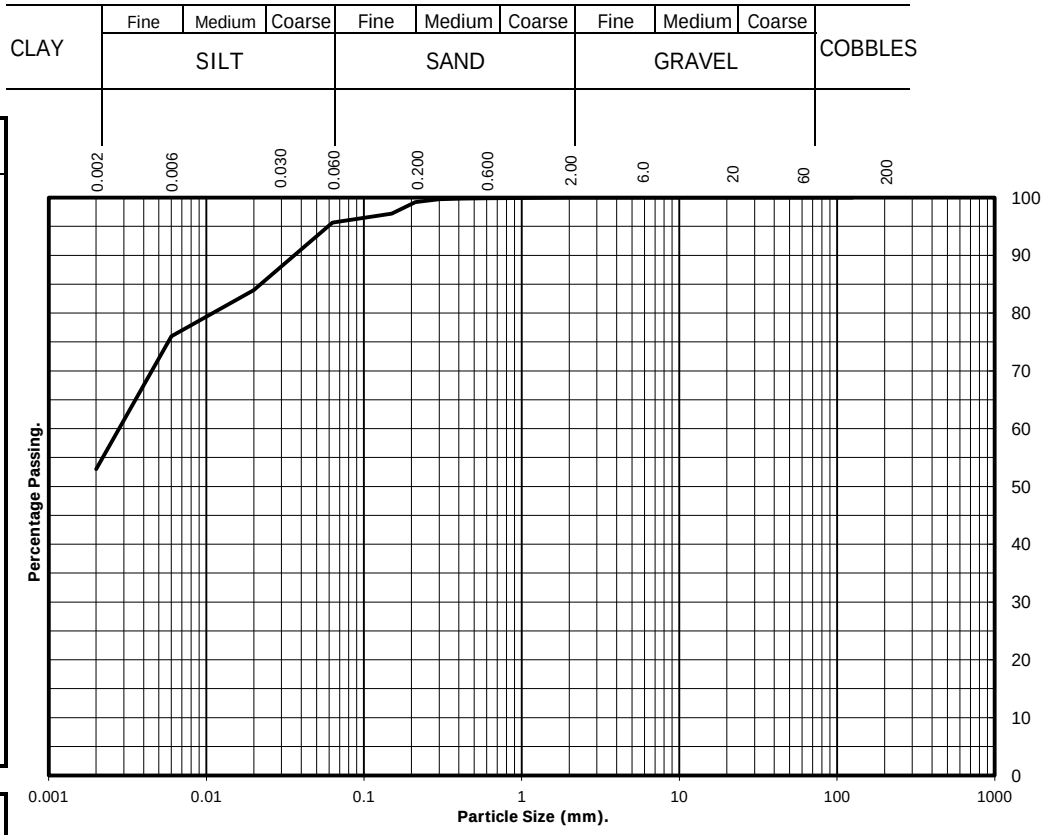
Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Client ref:	**A095973-2**	**Sample Number:**	**20**
Contract Number:	**33394-**	**Depth from (m):**	**9.50**
Hole Number:	**BH7**	**Depth to (m):**	**9.70**
		Sample Type:	**B**

Location: **Swansea Tidal Lagoon Swansea**

Description: **Brown fine to medium sandy silty CLAY.**

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	100
37.5	100
28	100
20	100
14	100
10	100
6.3	100
5.0	100
3.35	100
2.00	100
1.18	100
0.60	100
0.425	100
0.300	100
0.212	99
0.150	97
0.063	96



Particle Diameter	% Passing
0.02	84
0.006	76
0.002	53

Clay	Silt	Sand	Gravel	Cobbles	Soil Fraction
53	43	4	0	0	Total Percentage

Remarks:

Cl 9.4.8 - Sample has not been pretreated

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Emma Sharp (Office Manager)

Date: 22.12.16

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Test Report:

Particle Size Distribution Test

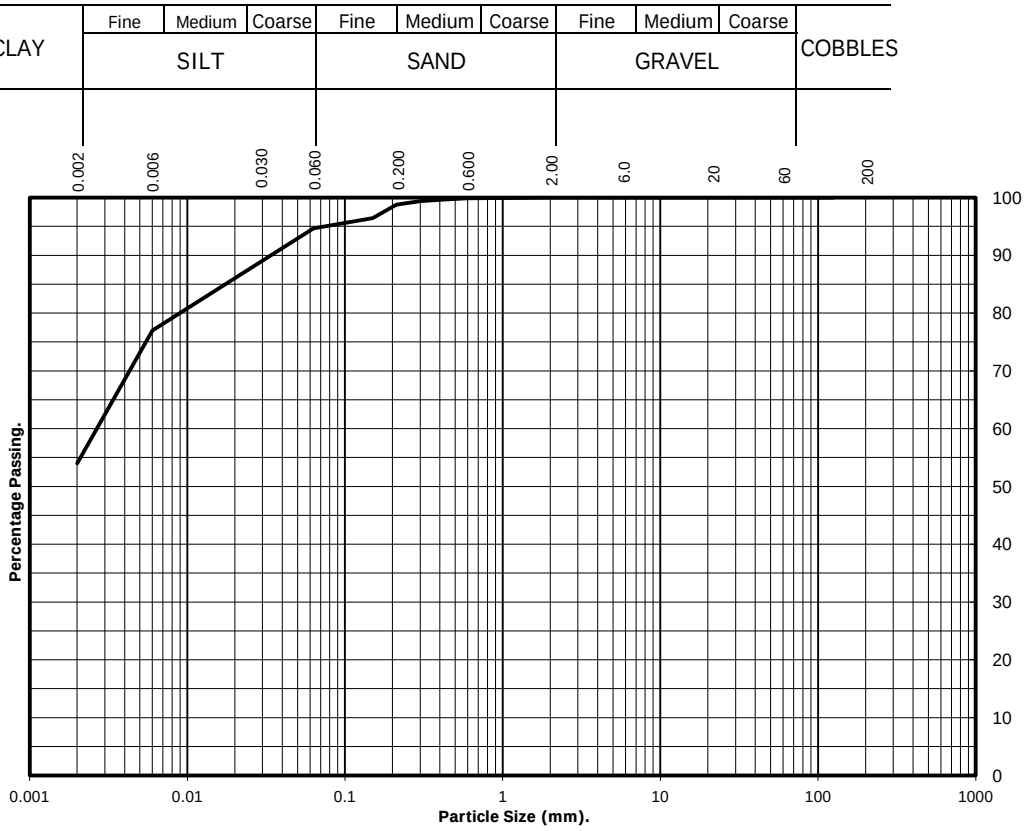
BS 1377 Part 2:1990.

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Client ref:	**A095973-2**	**Sample Number:**	**22**
Contract Number:	**33394-**	**Depth from (m):**	**11.00**
Hole Number:	**BH7**	**Depth to (m):**	**11.20**
		Sample Type:	**B**

Location: **Swansea Tidal Lagoon Swansea**

Description: **Brown fine to medium sandy silty CLAY.**



BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	100
37.5	100
28	100
20	100
14	100
10	100
6.3	100
5.0	100
3.35	100
2.00	100
1.18	100
0.60	100
0.425	100
0.300	99
0.212	99
0.150	96
0.063	95

Particle Diameter	% Passing
0.02	86
0.006	77
0.002	54

Clay	Silt	Sand	Gravel	Cobbles	Soil Fraction
54	41	5	0	0	Total Percentage

Remarks:

Cl 9.4.8 - Sample has not been pretreated

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
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Date: 22.12.16

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Test Report:

Particle Size Distribution Test

BS 1377 Part 2:1990.

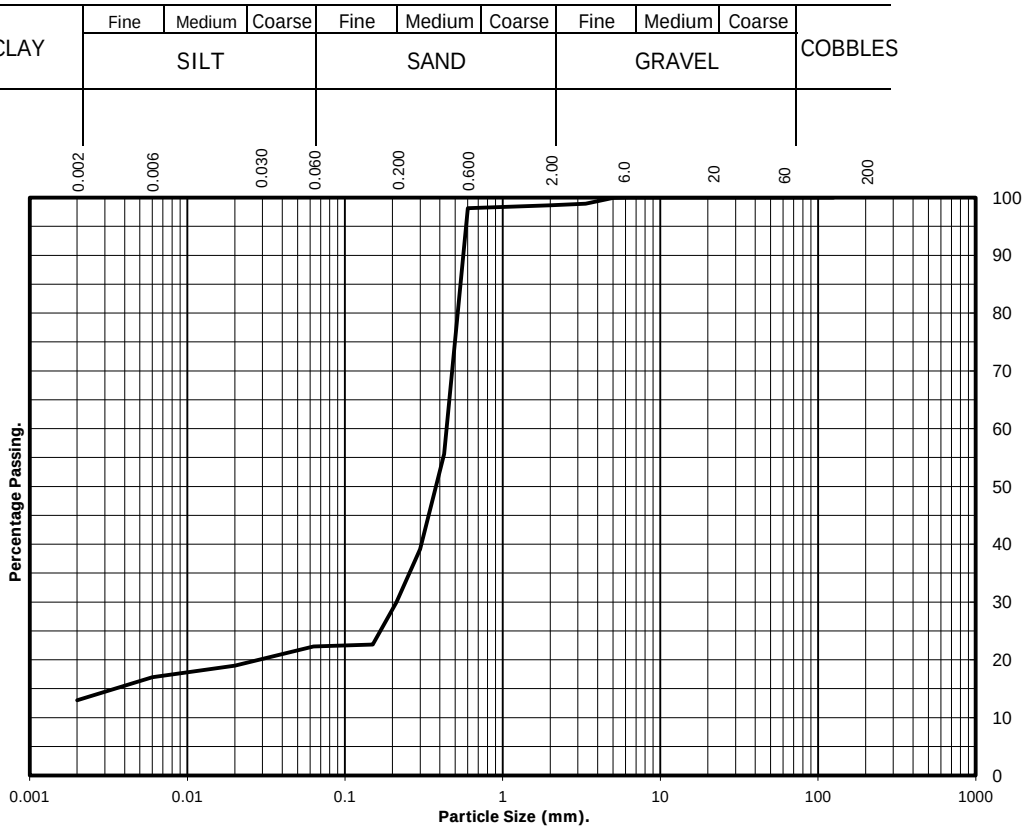
Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Client ref:	**A095973-2**	**Sample Number:**	**20**
Contract Number:	**33394-**	**Depth from (m):**	**9.70**
Hole Number:	**BH9**	**Depth to (m):**	**9.90**
		Sample Type:	**B**

Location: **Swansea Tidal Lagoon Swansea**

Description: **Brown fine to medium slightly gravelly silty clayey SAND.**

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	100
37.5	100
28	100
20	100
14	100
10	100
6.3	100
5.0	100
3.35	99
2.00	99
1.18	98
0.60	98
0.425	56
0.300	39
0.212	30
0.150	23
0.063	22



Particle Diameter	% Passing
0.02	19
0.006	17
0.002	13

Clay	Silt	Sand	Gravel	Cobbles	Soil Fraction
13	9	77	1	0	Total Percentage

Remarks:

Cl 9.4.8 - Sample has not been pretreated

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Emma Sharp (Office Manager)

Date: 22.12.16

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Test Report:

Particle Size Distribution Test

BS 1377 Part 2:1990.

Wet Sieve, Clause 9.2

Client ref:	**A095973-2**	**Sample Number:**	**11**
Contract Number:	**33394-**	**Depth from (m):**	**6.00**
Hole Number:	**BH10**	**Depth to (m):**	**7.50**
		Sample Type:	**B**

Location: **Swansea Tidal Lagoon Swansea**

Description: **Brown fine to medium slightly silty clayey gravelly SAND.**

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	65
37.5	65
28	61
20	60
14	60
10	60
6.3	60
5.0	60
3.35	60
2.00	60
1.18	59
0.60	59
0.425	58
0.300	30
0.212	17
0.150	11
0.063	3



Particle Diameter	% Passing
0.02	#
0.006	#
0.002	#

	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	3	57	40	0	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Emma Sharp (Office Manager)

Date: 22.12.16

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Test Report:

Particle Size Distribution Test

BS 1377 Part 2:1990.

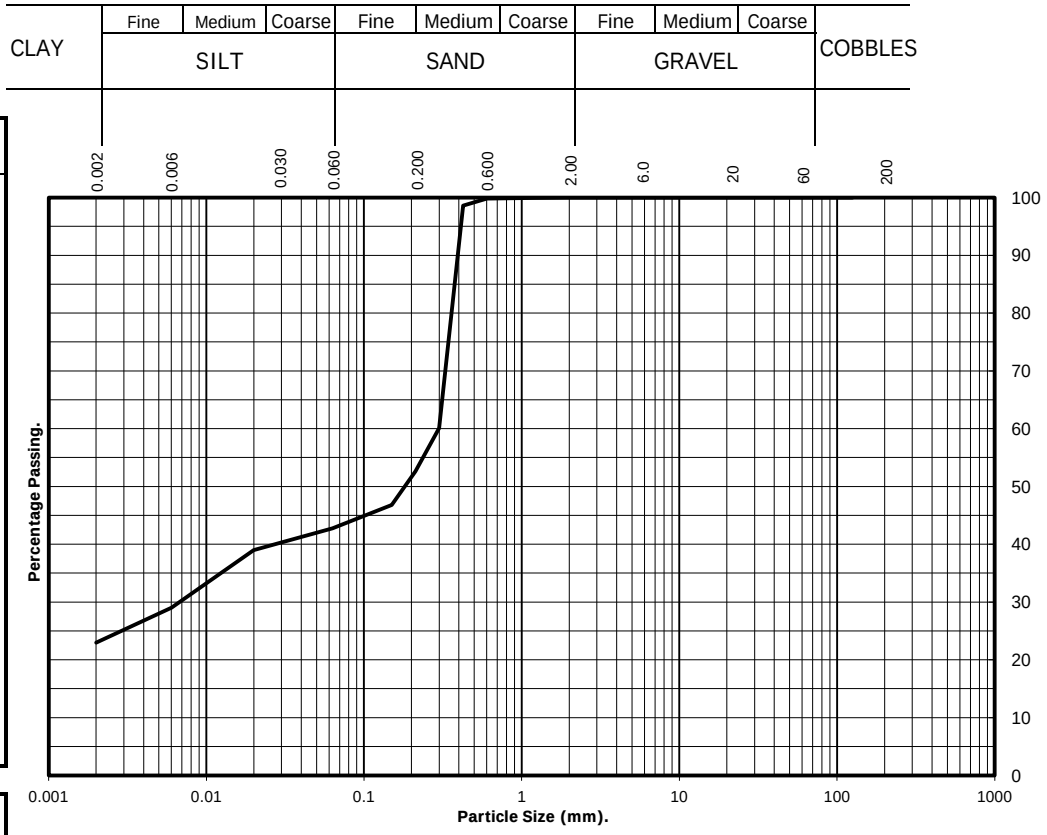
Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Client ref:	**A095973-2**	**Sample Number:**	**13**
Contract Number:	**33394-**	**Depth from (m):**	**9.50**
Hole Number:	**BH11**	**Depth to (m):**	**10.50**
		Sample Type:	**B**

Location: **Swansea Tidal Lagoon Swansea**

Description: **Brown fine to medium sandy silty CLAY.**

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	100
37.5	100
28	100
20	100
14	100
10	100
6.3	100
5.0	100
3.35	100
2.00	100
1.18	100
0.60	100
0.425	99
0.300	60
0.212	53
0.150	47
0.063	43



Particle Diameter	% Passing
0.02	39
0.006	29
0.002	23

Clay	Silt	Sand	Gravel	Cobbles	Soil Fraction
23	20	57	0	0	Total Percentage

Remarks:

Cl 9.4.8 - Sample has not been pretreated

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Emma Sharp (Office Manager)

Date: 22.12.16

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Test Report:

Particle Size Distribution Test

BS 1377 Part 2:1990.

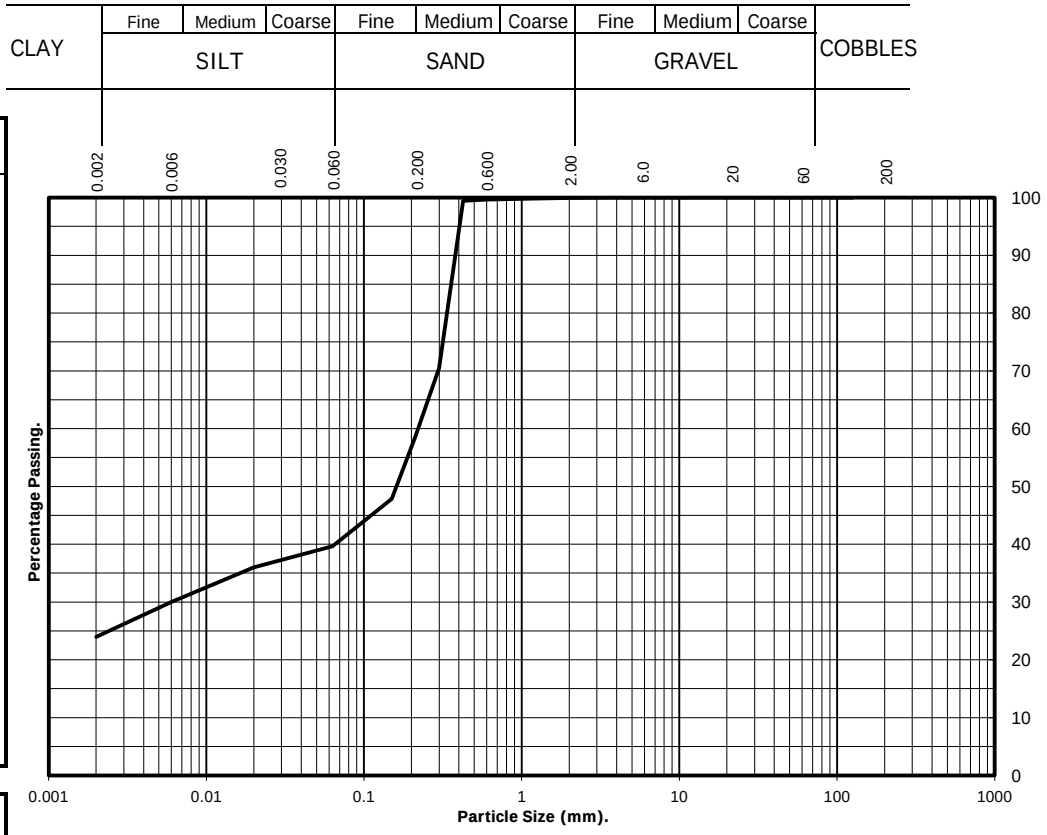
Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Client ref:	**A095973-2**	**Sample Number:**	**17**
Contract Number:	**33394-**	**Depth from (m):**	**12.00**
Hole Number:	**BH11**	**Depth to (m):**	**13.50**
		Sample Type:	**B**

Location: **Swansea Tidal Lagoon Swansea**

Description: **Brown fine to medium silty clayey SAND.**

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	100
37.5	100
28	100
20	100
14	100
10	100
6.3	100
5.0	100
3.35	100
2.00	100
1.18	100
0.60	100
0.425	99
0.300	71
0.212	59
0.150	48
0.063	40



Particle Diameter	% Passing
0.02	36
0.006	30
0.002	24

Clay	Silt	Sand	Gravel	Cobbles	Soil Fraction
24	16	60	0	0	Total Percentage

Remarks:

Cl 9.4.8 - Sample has not been pretreated

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Emma Sharp (Office Manager)

Date: 22.12.16

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Test Report:

Particle Size Distribution Test

BS 1377 Part 2:1990.

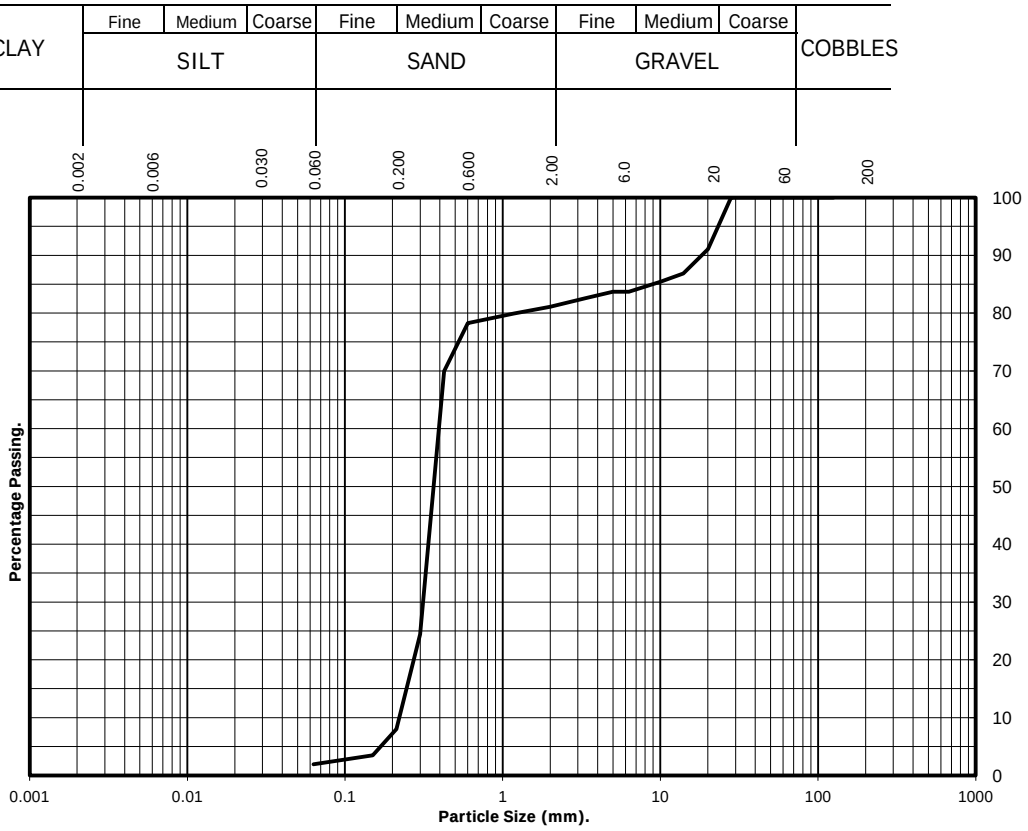
Wet Sieve, Clause 9.2

Client ref:	**A095973-2**	**Sample Number:**	**18**
Contract Number:	**33394-**	**Depth from (m):**	**8.00**
Hole Number:	**BH12**	**Depth to (m):**	**8.20**
		Sample Type:	**B**

Location: **Swansea Tidal Lagoon Swansea**

Description: **Brown fine to medium silty clayey gravelly SAND.**

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	100
37.5	100
28	100
20	91
14	87
10	85
6.3	84
5.0	84
3.35	83
2.00	81
1.18	80
0.60	78
0.425	70
0.300	24
0.212	8
0.150	3
0.063	2



Particle Diameter	% Passing
0.02	#
0.006	#
0.002	#

	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	2	79	19	0	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Emma Sharp (Office Manager)

Date: 22.12.16

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Test Report:

Particle Size Distribution Test

BS 1377 Part 2:1990.

Wet Sieve, Clause 9.2

Client ref:	**A095973-2**	**Sample Number:**	**N/A**
Contract Number:	**33394-**	**Depth from (m):**	**1.00**
Hole Number:	**HP01**	**Depth to (m):**	**2.00**
		Sample Type:	**B**

Location: **Swansea Tidal Lagoon Swansea**

Description: **Brown fine to medium silty clayey sandy GRAVEL with many cobbes.**

BS Test Sieve	% Passing
125	100
90	100
75	100
63	83
50	83
37.5	68
28	65
20	60
14	58
10	56
6.3	51
5.0	49
3.35	45
2.00	40
1.18	36
0.60	32
0.425	30
0.300	25
0.212	20
0.150	17
0.063	15



Particle Diameter	% Passing
0.02	#
0.006	#
0.002	#

	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	15	25	43	17	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Emma Sharp (Office Manager)

Date: 22.12.16

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Test Report:

Particle Size Distribution Test

BS 1377 Part 2:1990.

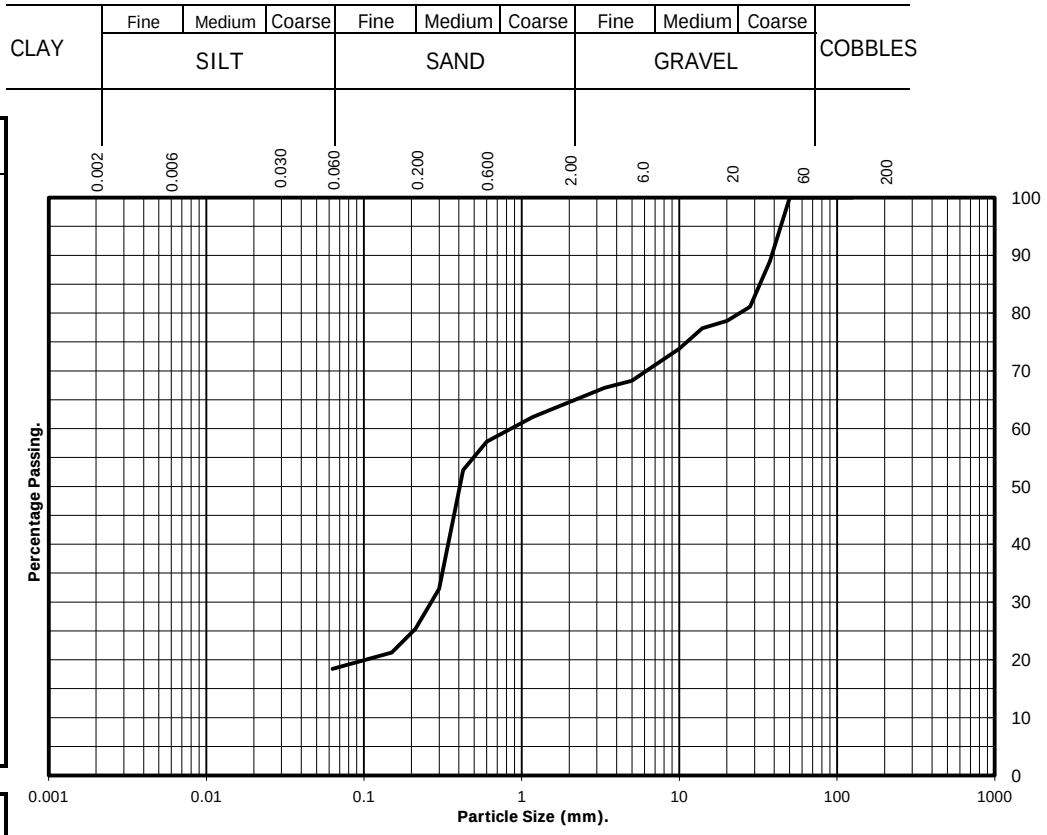
Wet Sieve, Clause 9.2

Client ref:	**A095973-2**	**Sample Number:**	**N/A**
Contract Number:	**33394-**	**Depth from (m):**	**0.60**
Hole Number:	**HP05**	**Depth to (m):**	**1.60**
		Sample Type:	**B**

Location: **Swansea Tidal Lagoon Swansea**

Description: **Brown fine to medium silty clayey gravelly SAND.**

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	100
37.5	89
28	81
20	79
14	77
10	74
6.3	70
5.0	68
3.35	67
2.00	65
1.18	62
0.60	58
0.425	53
0.300	32
0.212	25
0.150	21
0.063	18



Particle Diameter	% Passing
0.02	#
0.006	#
0.002	#

	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	18	47	35	0	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Emma Sharp (Office Manager)

Date: 23.12.16

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Test Report:

Particle Size Distribution Test

BS 1377 Part 2:1990.

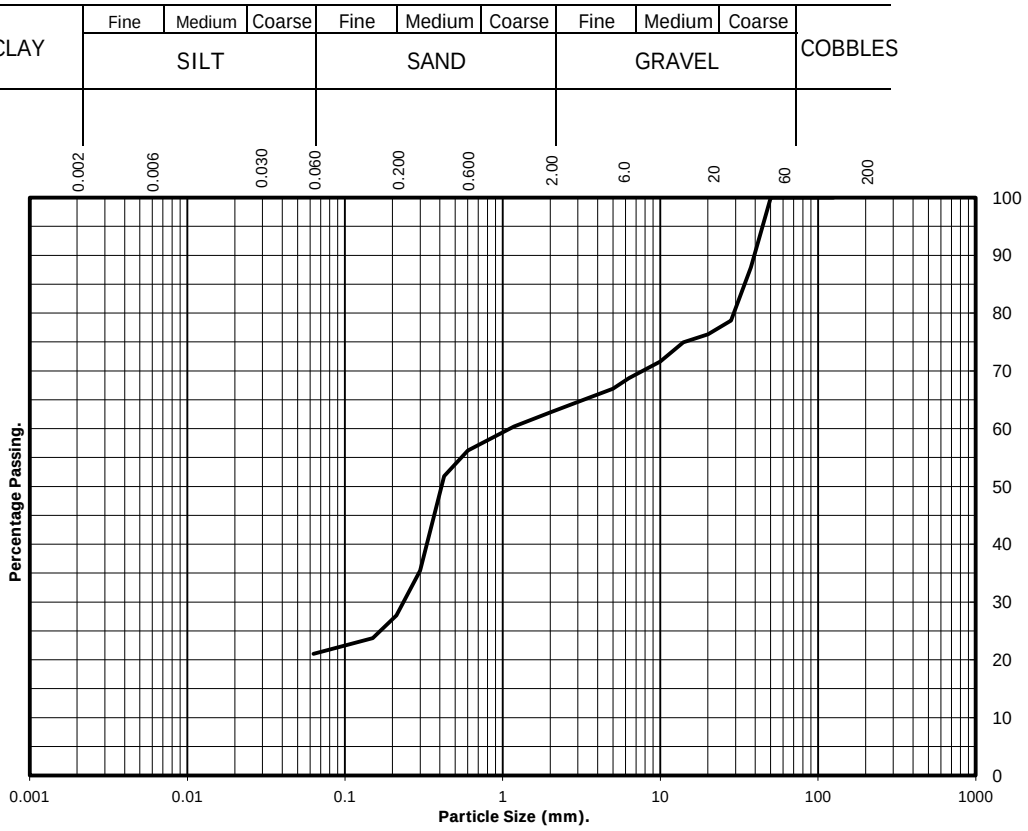
Wet Sieve, Clause 9.2

Client ref:	**A095973-2**	**Sample Number:**	**N/A**
Contract Number:	**33394-**	**Depth from (m):**	**1.00**
Hole Number:	**HP08**	**Depth to (m):**	**2.00**
		Sample Type:	**B**

Location: **Swansea Tidal Lagoon Swansea**

Description: **Brown fine to medium silty clayey gravelly SAND.**

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	100
37.5	88
28	79
20	76
14	75
10	72
6.3	69
5.0	67
3.35	65
2.00	63
1.18	60
0.60	56
0.425	52
0.300	35
0.212	28
0.150	24
0.063	21



Particle Diameter	% Passing
0.02	#
0.006	#
0.002	#

	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	21	42	37	0	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Emma Sharp (Office Manager)

Date: 22.12.16

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Test Report:

Particle Size Distribution Test

BS 1377 Part 2:1990.

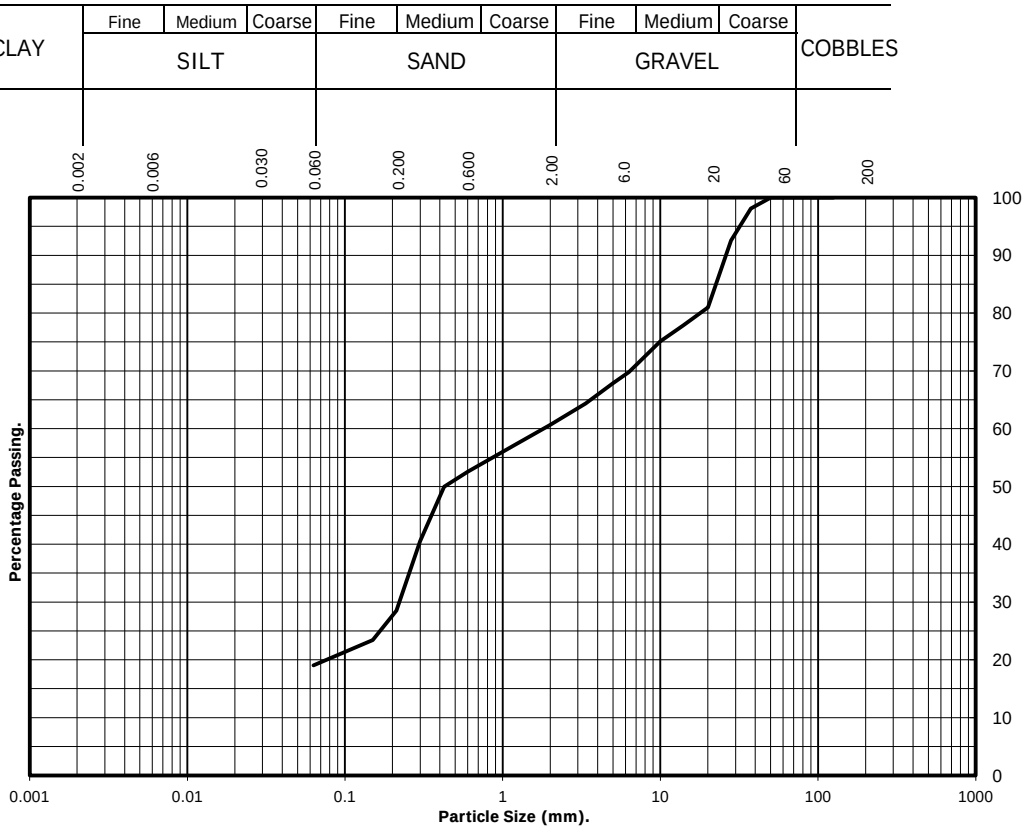
Wet Sieve, Clause 9.2

Client ref:	**A095973-2**	**Sample Number:**	**N/A**
Contract Number:	**33394-**	**Depth from (m):**	**1.00**
Hole Number:	**HP12**	**Depth to (m):**	**2.00**
		Sample Type:	**B**

Location: **Swansea Tidal Lagoon Swansea**

Description: **Brown fine to medium silty clayey gravelly SAND.**

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	100
37.5	98
28	93
20	81
14	78
10	75
6.3	70
5.0	68
3.35	64
2.00	61
1.18	57
0.60	53
0.425	50
0.300	41
0.212	28
0.150	23
0.063	19



Particle Diameter	% Passing
0.02	#
0.006	#
0.002	#

	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	19	42	39	0	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Emma Sharp (Office Manager)

Date: 22.12.16

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Test Report:

Particle Size Distribution Test

BS 1377 Part 2:1990.

Wet Sieve, Clause 9.2

Client ref:	**A095973-2**	**Sample Number:**	**N/A**
Contract Number:	**33394-**	**Depth from (m):**	**1.00**
Hole Number:	**HP15**	**Depth to (m):**	**2.00**
		Sample Type:	**B**

Location: **Swansea Tidal Lagoon Swansea**

Description: **Brown fine to medium silty clayey sandy GRAVEL with many cobbles.**

BS Test Sieve	% Passing
125	100
90	70
75	70
63	70
50	70
37.5	70
28	62
20	53
14	48
10	43
6.3	39
5.0	38
3.35	35
2.00	32
1.18	30
0.60	27
0.425	25
0.300	21
0.212	18
0.150	15
0.063	13



Particle Diameter	% Passing
0.02	#
0.006	#
0.002	#

	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	13	19	38	30	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Emma Sharp (Office Manager)

Date: 22.12.16

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Test Report:

Particle Size Distribution Test

BS 1377 Part 2:1990.

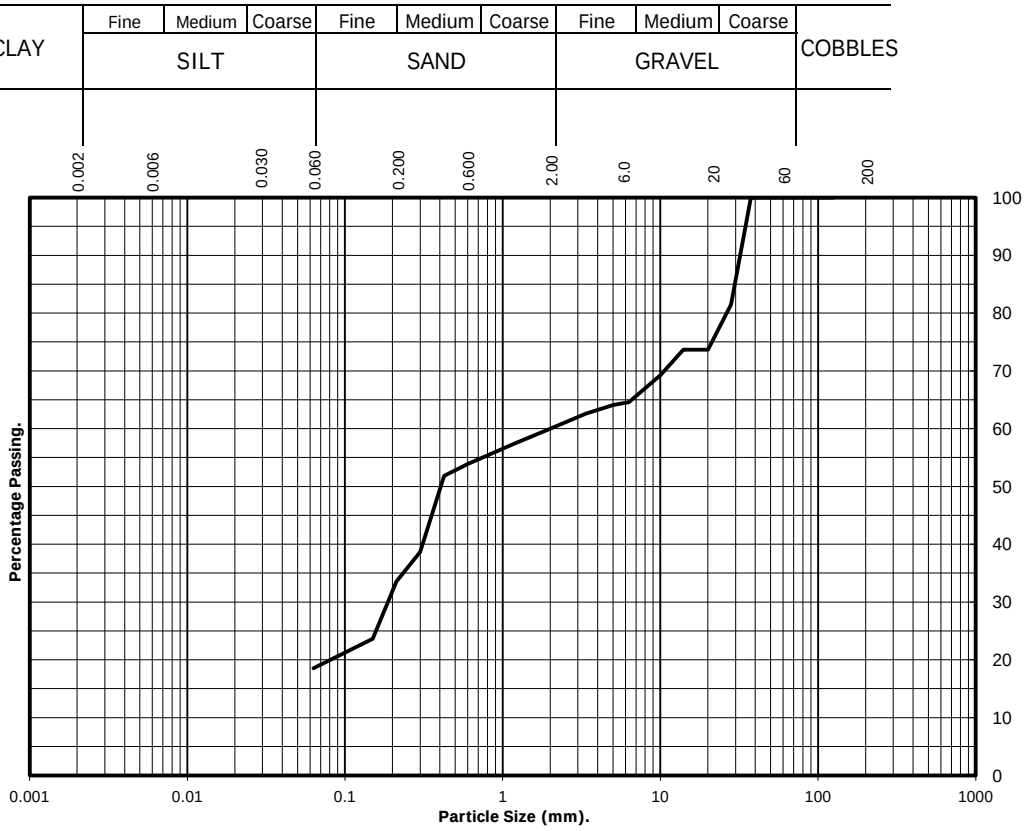
Wet Sieve, Clause 9.2

Client ref:	**A095973-2**	**Sample Number:**	**N/A**
Contract Number:	**33394-**	**Depth from (m):**	**0.70**
Hole Number:	**TP01**	**Depth to (m):**	**1.70**
		Sample Type:	**B**

Location: **Swansea Tidal Lagoon Swansea**

Description: **Brown fine to medium silty clayey gravelly SAND.**

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	100
37.5	100
28	81
20	74
14	74
10	69
6.3	65
5.0	64
3.35	63
2.00	60
1.18	57
0.60	54
0.425	52
0.300	39
0.212	34
0.150	24
0.063	19



Particle Diameter	% Passing
0.02	#
0.006	#
0.002	#

	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	19	41	40	0	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Emma Sharp (Office Manager)

Date: 22.12.16

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Test Report:

Particle Size Distribution Test

BS 1377 Part 2:1990.

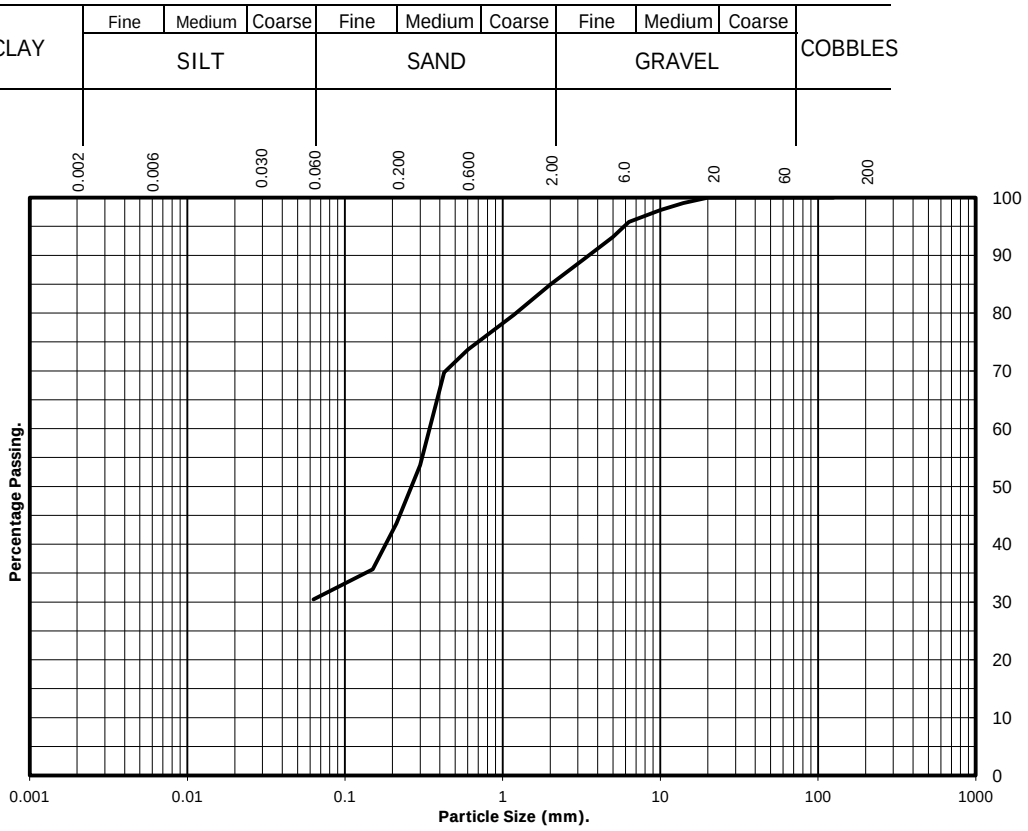
Wet Sieve, Clause 9.2

Client ref:	**A095973-2**	**Sample Number:**	**N/A**
Contract Number:	**33394-**	**Depth from (m):**	**0.50**
Hole Number:	**TP03**	**Depth to (m):**	**1.00**
		Sample Type:	**B**

Location: **Swansea Tidal Lagoon Swansea**

Description: **Brown fine to medium gravelly silty clayey SAND.**

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	100
37.5	100
28	100
20	100
14	99
10	98
6.3	96
5.0	93
3.35	90
2.00	85
1.18	80
0.60	74
0.425	70
0.300	54
0.212	44
0.150	36
0.063	30



Particle Diameter	% Passing
0.02	#
0.006	#
0.002	#

	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	30	55	15	0	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Emma Sharp (Office Manager)

Date: 22.12.16

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Test Report:

Particle Size Distribution Test

BS 1377 Part 2:1990.

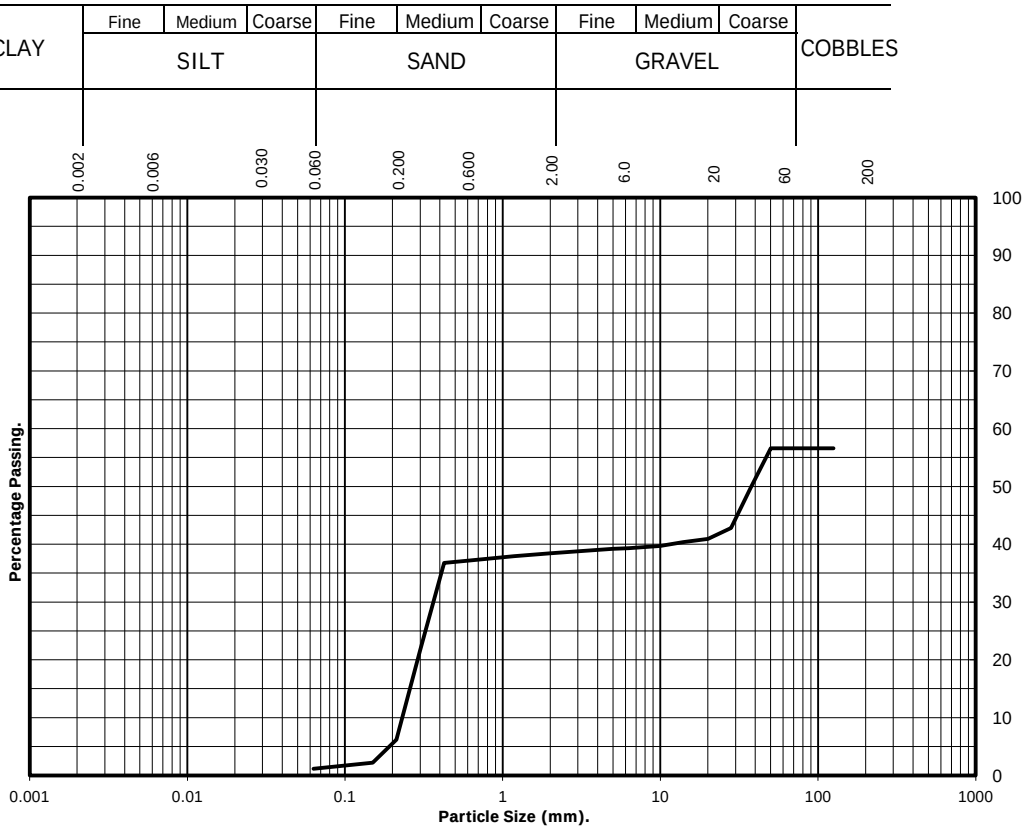
Wet Sieve, Clause 9.2

Client ref:	**A095973-2**	**Sample Number:**	**N/A**
Contract Number:	**33394-**	**Depth from (m):**	**1.00**
Hole Number:	**TP05**	**Depth to (m):**	**2.00**
		Sample Type:	**B**

Location: **Swansea Tidal Lagoon Swansea**

Description: **Brown fine to medium silty clayey gravelly SAND with many cobbles.**

BS Test Sieve	% Passing
125	57
90	57
75	57
63	57
50	57
37.5	50
28	43
20	41
14	40
10	40
6.3	39
5.0	39
3.35	39
2.00	38
1.18	38
0.60	37
0.425	37
0.300	22
0.212	6
0.150	2
0.063	1



Particle Diameter	% Passing
0.02	#
0.006	#
0.002	#

	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	1	37	19	43	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Emma Sharp (Office Manager)

Date: 22.12.16

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Test Report:

Particle Size Distribution Test

BS 1377 Part 2:1990.

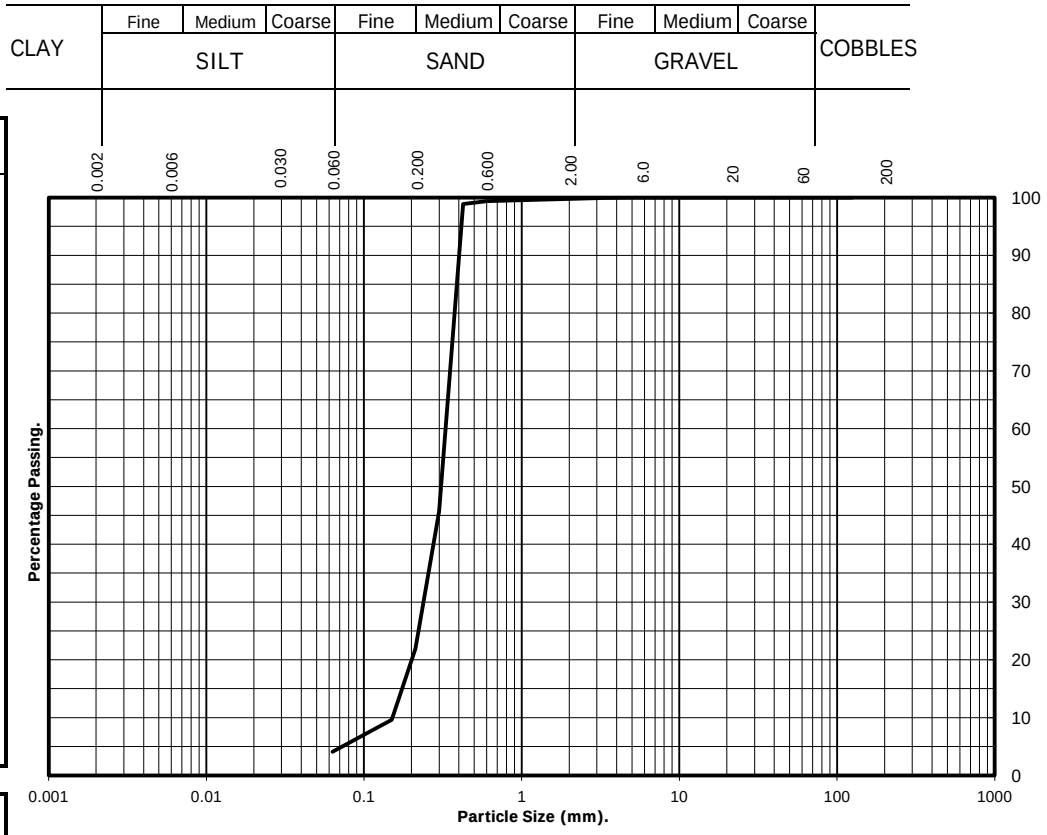
Wet Sieve, Clause 9.2

Client ref:	**A095973-2**	**Sample Number:**	**N/A**
Contract Number:	**33394-**	**Depth from (m):**	**1.00**
Hole Number:	**TP09**	**Depth to (m):**	**2.00**
		Sample Type:	**B**

Location: **Swansea Tidal Lagoon Swansea**

Description: **Brown fine to medium silty clayey SAND .**

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	100
37.5	100
28	100
20	100
14	100
10	100
6.3	100
5.0	100
3.35	100
2.00	100
1.18	100
0.60	99
0.425	99
0.300	46
0.212	22
0.150	10
0.063	4



Particle Diameter	% Passing
0.02	#
0.006	#
0.002	#

	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	4	96	0	0	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Emma Sharp (Office Manager)

Date: 22.12.16

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Test Report:

Particle Size Distribution Test

BS 1377 Part 2:1990.

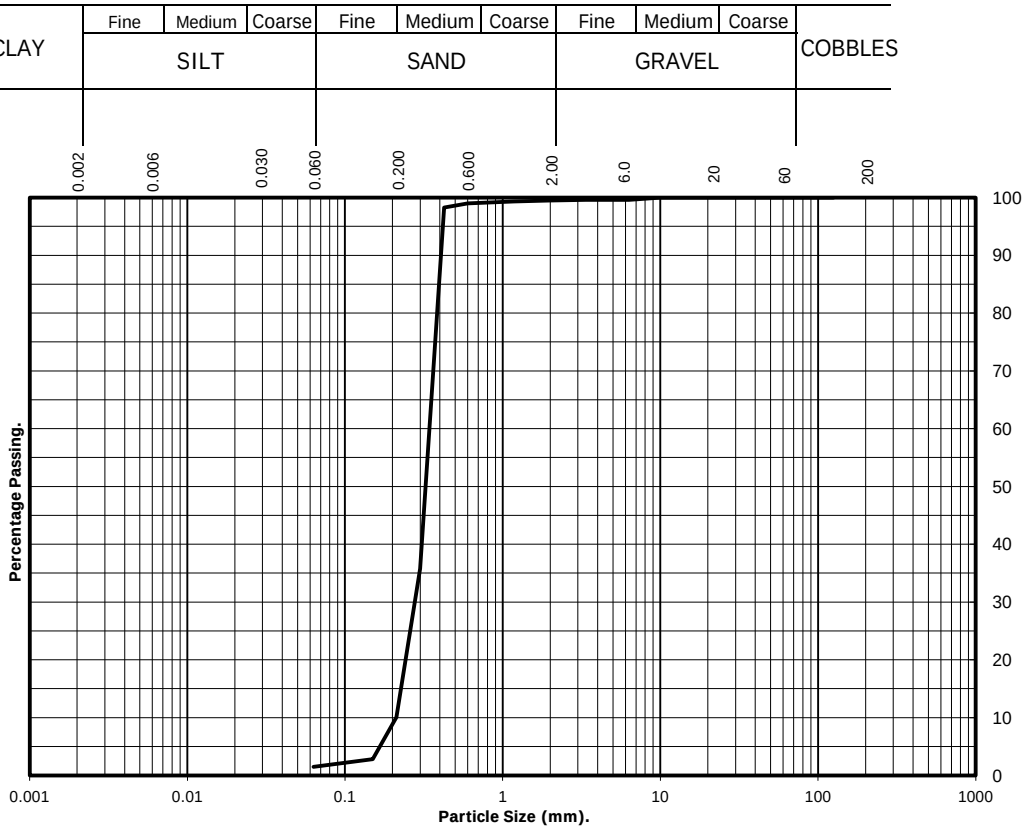
Wet Sieve, Clause 9.2

Client ref:	**A095973-2**	**Sample Number:**	**N/A**
Contract Number:	**33394-**	**Depth from (m):**	**0.80**
Hole Number:	**TP11**	**Depth to (m):**	**2.00**
		Sample Type:	**B**

Location: **Swansea Tidal Lagoon Swansea**

Description: **Brown fine to medium slightly silty clayey gravelly SAND .**

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	100
37.5	100
28	100
20	100
14	100
10	100
6.3	100
5.0	100
3.35	100
2.00	99
1.18	99
0.60	99
0.425	98
0.300	36
0.212	10
0.150	3
0.063	1



Particle Diameter	% Passing
0.02	#
0.006	#
0.002	#

	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	1	98	1	0	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Emma Sharp (Office Manager)

Date: 22.12.16

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Test Report:

Particle Size Distribution Test

BS 1377 Part 2:1990.

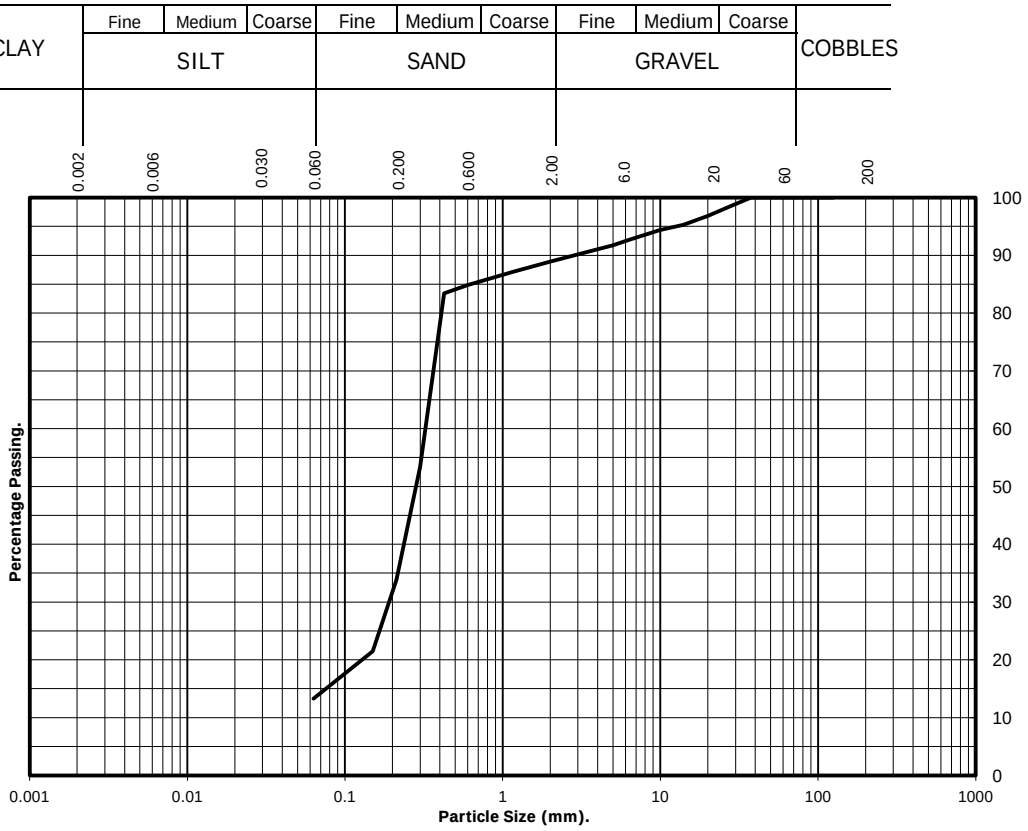
Wet Sieve, Clause 9.2

Client ref:	**A095973-2**	**Sample Number:**	**N/A**
Contract Number:	**33394-**	**Depth from (m):**	**0.60**
Hole Number:	**TP13**	**Depth to (m):**	**1.60**
		Sample Type:	**B**

Location: **Swansea Tidal Lagoon Swansea**

Description: **Brown fine to medium slightly silty clayey gravelly SAND .**

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	100
37.5	100
28	99
20	97
14	95
10	94
6.3	93
5.0	92
3.35	91
2.00	89
1.18	87
0.60	85
0.425	83
0.300	53
0.212	34
0.150	22
0.063	13



Particle Diameter	% Passing
0.02	#
0.006	#
0.002	#

	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	13	76	11	0	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Emma Sharp (Office Manager)

Date: 22.12.16

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Test Report:

Particle Size Distribution Test

BS 1377 Part 2:1990.

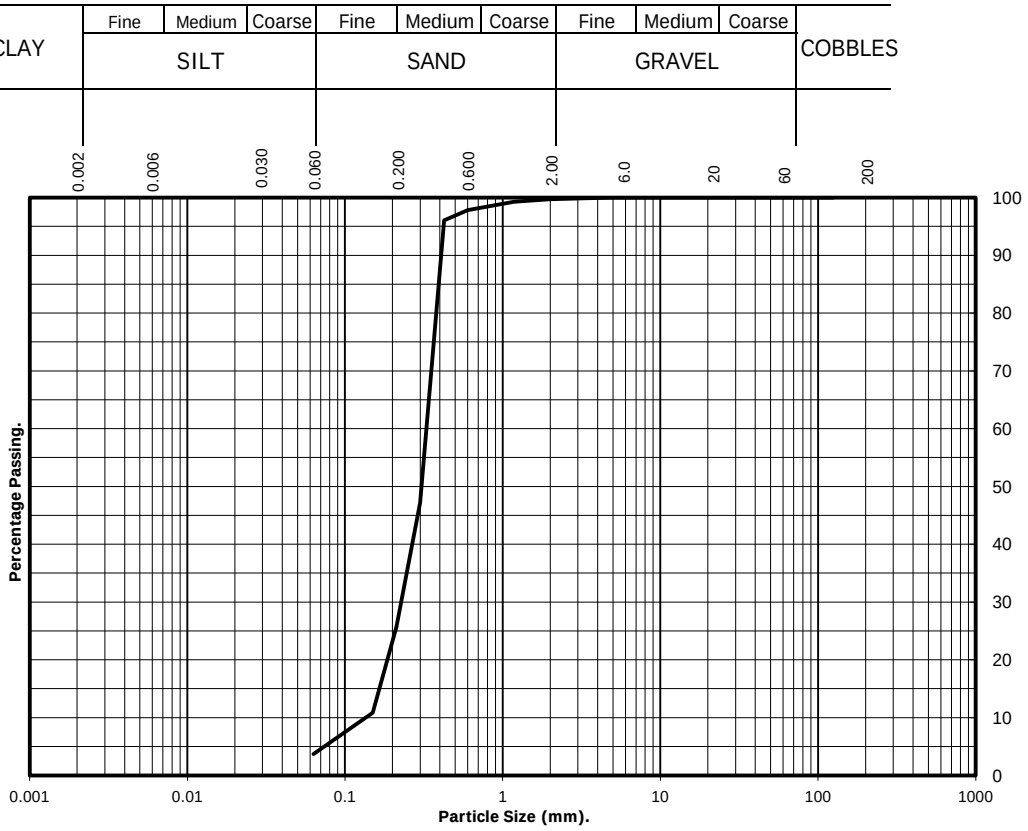
Wet Sieve, Clause 9.2

Client ref:	**A095973-2**	**Sample Number:**	**N/A**
Contract Number:	**33394-**	**Depth from (m):**	**1.20**
Hole Number:	**TP15**	**Depth to (m):**	**1.50**
		Sample Type:	**B**

Location: **Swansea Tidal Lagoon Swansea**

Description: **Brown fine to medium slightly silty clayey SAND .**

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	100
37.5	100
28	100
20	100
14	100
10	100
6.3	100
5.0	100
3.35	100
2.00	100
1.18	99
0.60	98
0.425	96
0.300	47
0.212	26
0.150	11
0.063	4



Particle Diameter	% Passing
0.02	#
0.006	#
0.002	#

	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	4	96	0	0	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Emma Sharp (Office Manager)

Date: 22.12.16

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Test Report:

Particle Size Distribution Test

BS 1377 Part 2:1990.

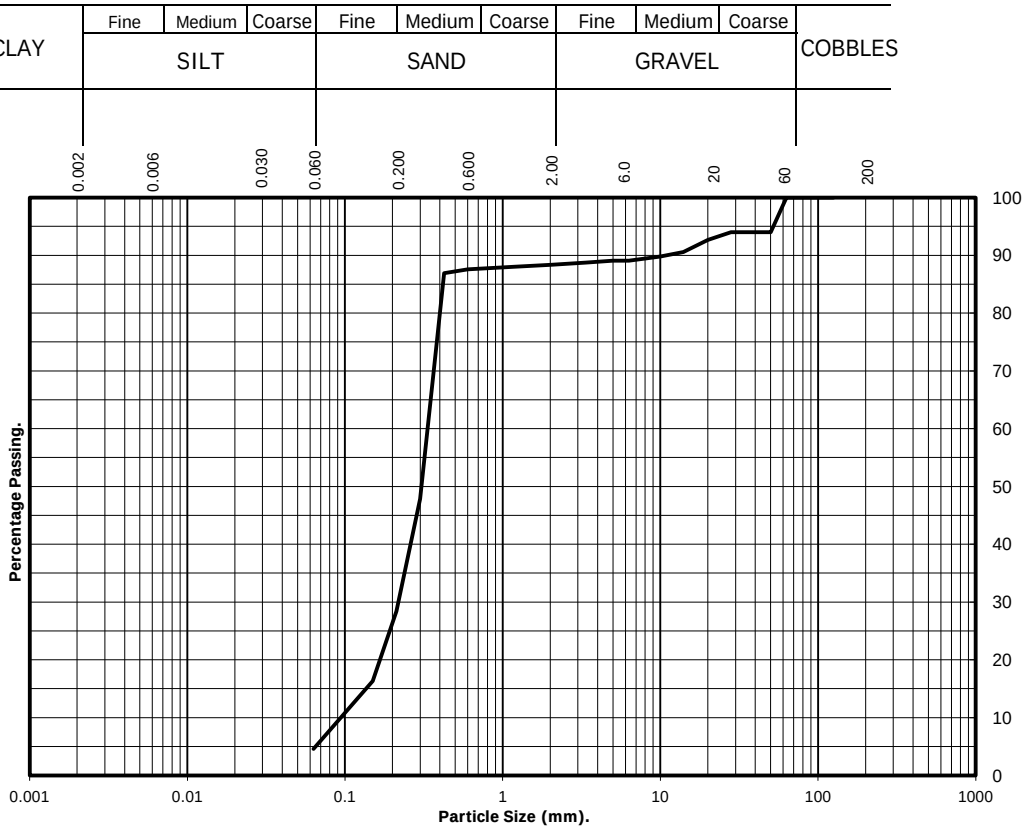
Wet Sieve, Clause 9.2

Client ref:	**A095973-2**	**Sample Number:**	**N/A**
Contract Number:	**33394-**	**Depth from (m):**	**0.40**
Hole Number:	**TP19**	**Depth to (m):**	**1.40**
		Sample Type:	**B**

Location: **Swansea Tidal Lagoon Swansea**

Description: **Brown fine to medium slightly silty clayey gravelly SAND .**

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	94
37.5	94
28	94
20	93
14	91
10	90
6.3	89
5.0	89
3.35	89
2.00	88
1.18	88
0.60	88
0.425	87
0.300	48
0.212	28
0.150	16
0.063	5



Particle Diameter	% Passing
0.02	#
0.006	#
0.002	#

	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	5	83	12	0	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Emma Sharp (Office Manager)

Date: 22.12.16

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Test Report:

Particle Size Distribution Test

BS 1377 Part 2:1990.

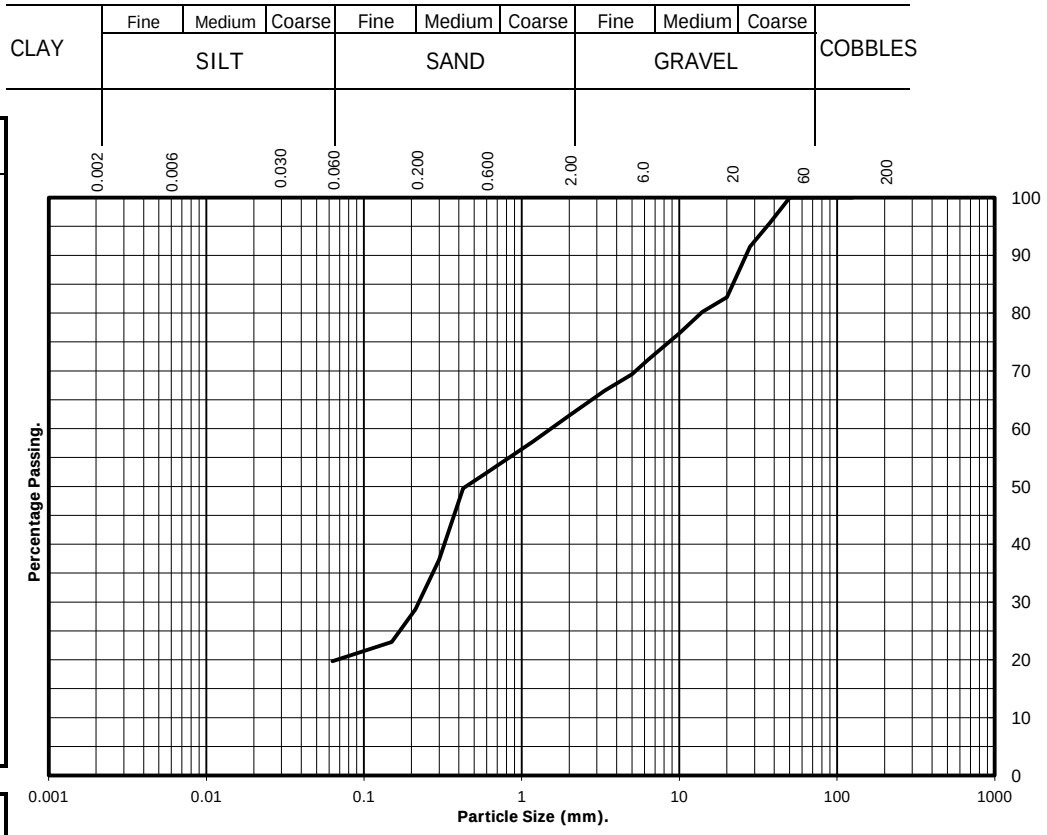
Wet Sieve, Clause 9.2

Client ref:	**A095973-2**	**Sample Number:**	**N/A**
Contract Number:	**33394-**	**Depth from (m):**	**1.40**
Hole Number:	**TP22**	**Depth to (m):**	**2.40**
		Sample Type:	**B**

Location: **Swansea Tidal Lagoon Swansea**

Description: **Brown fine to medium slightly silty clayey gravelly SAND .**

BS Test Sieve	% Passing
125	100
90	100
75	100
63	100
50	100
37.5	96
28	92
20	83
14	80
10	77
6.3	72
5.0	69
3.35	67
2.00	62
1.18	58
0.60	52
0.425	50
0.300	37
0.212	29
0.150	23
0.063	20



Particle Diameter	% Passing
0.02	#
0.006	#
0.002	#

	Silt and Clay	Sand	Gravel	Cobbles	Soil Fraction
	20	42	38	0	Total Percentage

Remarks:

#- not determined

For and behalf of GEO Site & Testing Services Ltd

Authorised By:
Emma Sharp (Office Manager)

Date: 22.12.16

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Certificate of Analysis

Date:	20-12-16
Client:	WYG
Our Reference:	33394
Client Reference:	A096973-2
Contract Title:	Swansea Tidal Lagoon
Description: (Total Samples)	30
Date Received:	
Date Started:	16-09-16
Date Completed:	20-12-16
Test Procedures:	(B.S. 1377 : PART 3 : 1990)

Notes:

Solid samples will be disposed 1 month and liquids 2 weeks

Approved By:

Authorised Signatories:

Emma Sharp	Ben Sharp	Paul Evans
Laboratory Office Manager	Contracts Manager	Quality Manager

Contract No: 33394
Client Ref: A096973-2
Location: Swansea Tidal Lagoon
Date: 20-12-2016

SUMMARY OF CHEMICAL ANALYSIS

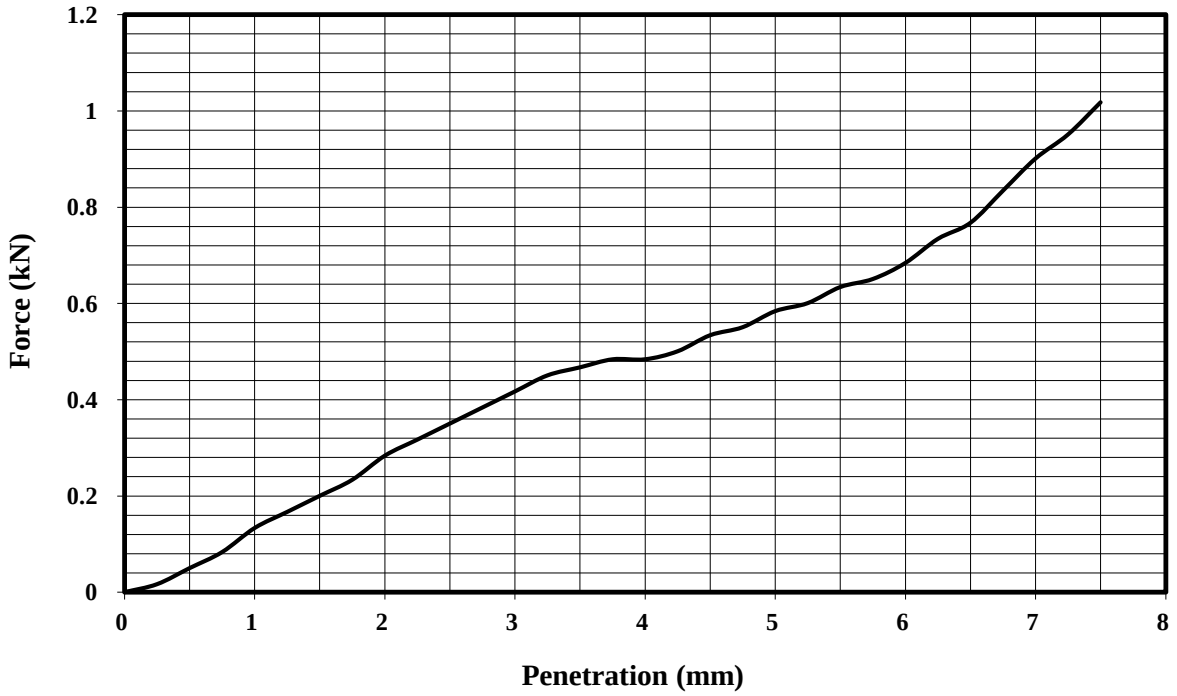
(B.S. 1377 : PART 3 : 1990)

Hole Number	Sample Number	Sample Type	Depth m	Sulphate Content SO_3			Chloride Content		pH Value @ 25°C Redox	Organic Matter Content %	Total Sulphur
				Acid Soluble Sulphate as % SO_3	Aqueous Extract Sulphate as g/l SO_3	Ground-water g/l	2/1 Water Soluble Chloride ions %	Acid Soluble Chloride %			
				Clause 5.2 & 5.5.	Clause 5.3 & 5.5.	Clause 5.4.	Clause 7.2	Clause 7.3	Clause 9.5	Clause 3	Clause 4
BH1		D	2.20-2.65	0.22	0.03				7.22		0.08
BH1		D	4.20-4.65	0.14	0.03				7.53		0.06
BH1		D	6.0-6.45	0.15	0.02				7.25		0.06
BH1		B	9.0-10.0	0.24	0.03				7.63		0.09
BH11		B	5.0-6.50	0.12	0.05				7.51		0.05
BH12		B	5.00-5.45	0.17	0.03				7.46		0.06
BH2		B	6.50-7.50	0.12	0.01				6.88		0.05
BH3		D	5.20-5.65	0.21	0.04				7.02		0.07
BH5		D	8.10-8.55	0.15	0.03				7.16		0.05
BH6		D	9.0-9.45	0.12	0.02				6.91		0.06
WS01		B	0.6-1.20	0.22	0.03				8.23	0.2	0.08
WS02		B	1.20-2.0							8.7	
WS03		B	0.75-1.50	0.17	0.03				7.66	1.2	0.06
WS04		B	0.3-1.0							3.1	
WS05		B	0.5-1.20	0.21	0.03				7.83	1.9	0.08
WS06		B	1.20-2.0	0.15	0.03				7.21	0.2	0.06
WS07		B	0.6-1.20							2.2	
WS08		B	0.15-1.0	0.19	0.04				7.65	5.8	0.07
WS09		B	0.0-1.20							3.1	
WS10		B	0.0-1.20	0.21	0.03				7.99	6.2	0.08
WS12		B	0.50-1.20							7.3	
WS13		B	0.5-1.20	0.14	0.03				8.02	8.0	0.05
WS14		B	0.0-1.0							6.0	
WS15		B	0.5-1.0	0.17	0.07				8.09	5.2	0.06
WS16		B	1.20-1.80							12.2	
WS17		B	0.10-0.80	0.21	0.04				7.62	1.1	0.07
WS18		B	1.20-1.85							0.9	
WS19		B	1.20-2.0	0.14	0.03				7.38	1.3	0.05
WS20		B	1.20-2.0							3.1	
WS21		B	0.40-1.20							2.4	

NCP - No Chloride present

Test Report: **Determination of the California Bearing Ratio**
BS 1377: Part 4: 1990 Clause 7

Client ref:	**A095973-2**
Location:	**Swansea Tidal Lagoon Swansea**
Contract Number:	**33394-**
Sample Type:	**B**
Hole Number:	**TP01**
Sample Number:	**N/A**
Depth (m):	**0.20 - 0.70**
Description:	**Dark brown sandy gravelly silty CLAY.**



Initial Sample Conditions		Test Conditions		**Method of Compaction:** **2.5kg Rammer**	
Moisture Content:	**19**	Surcharge Kg:	**2.0**	Final Moisture Content %	
Bulk Density Mg/m3:	**1.99**	Soaking Time (hrs):		Sample Top	**19**
Dry Density Mg/m3:	**1.68**	Swelling mm:		Sample Bottom	**19**
C.B.R. Value %	Sample Top	**2.92**			
Percentage retained on 20mm BS test sieve:		**0**	Remarks:		

Checked By:
Emma Sharp (Office Manager)

Approved By:
Paul Evans (Quality Manager

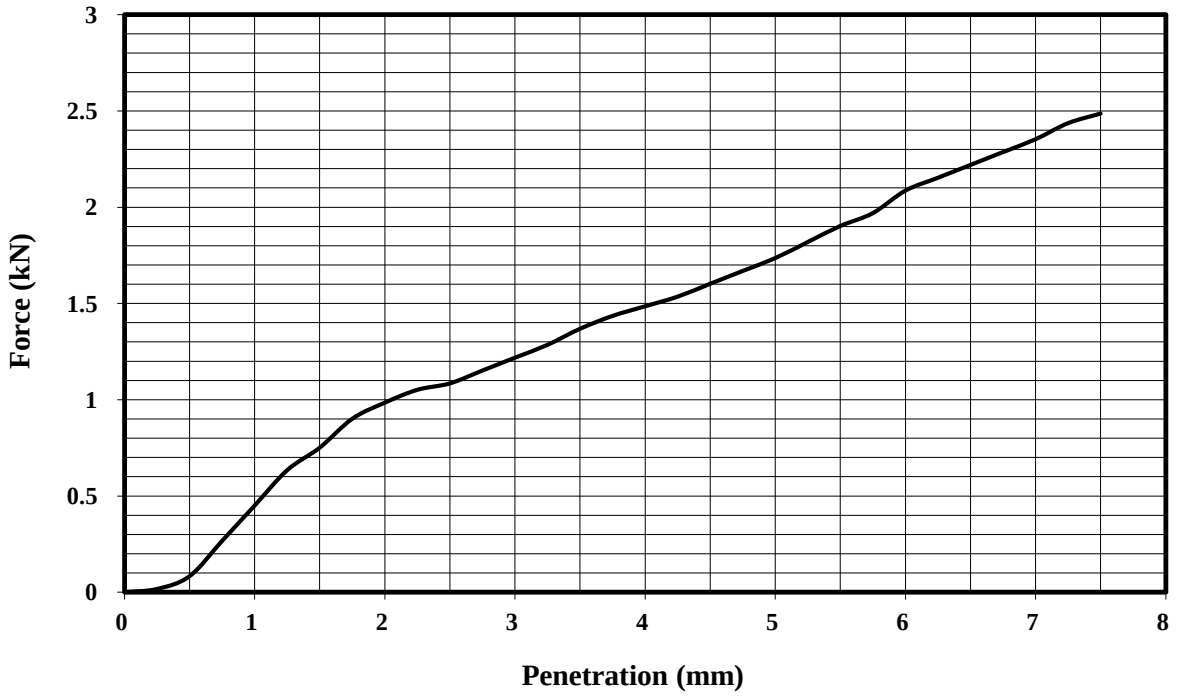
Date Approved: 23.12.16

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Test Report: **Determination of the California Bearing Ratio**
BS 1377: Part 4: 1990 Clause 7

Client ref:	**A095973-2**
Location:	**Swansea Tidal Lagoon Swansea**
Contract Number:	**33394-**
Sample Type:	**B**
Hole Number:	**TP03**
Sample Number:	**N/A**
Depth (m):	**1.50 - 2.00**
Description:	**Brown gravelly SAND**



Initial Sample Conditions		Test Conditions		**Method of Compaction:** **2.5kg Rammer**	
Moisture Content:	**5.1**	Surcharge Kg:	**2.0**	Final Moisture Content %	
Bulk Density Mg/m3:	**1.67**	Soaking Time (hrs):		Sample Top	**5.1**
Dry Density Mg/m3:	**1.58**	Swelling mm:		Sample Bottom	**5.1**
C.B.R. Value %	Sample Top	**8.68**			
Percentage retained on 20mm BS test sieve:		**0**	Remarks:		

Checked By:
Emma Sharp (Office Manager)

Approved By:
Paul Evans (Quality Manager

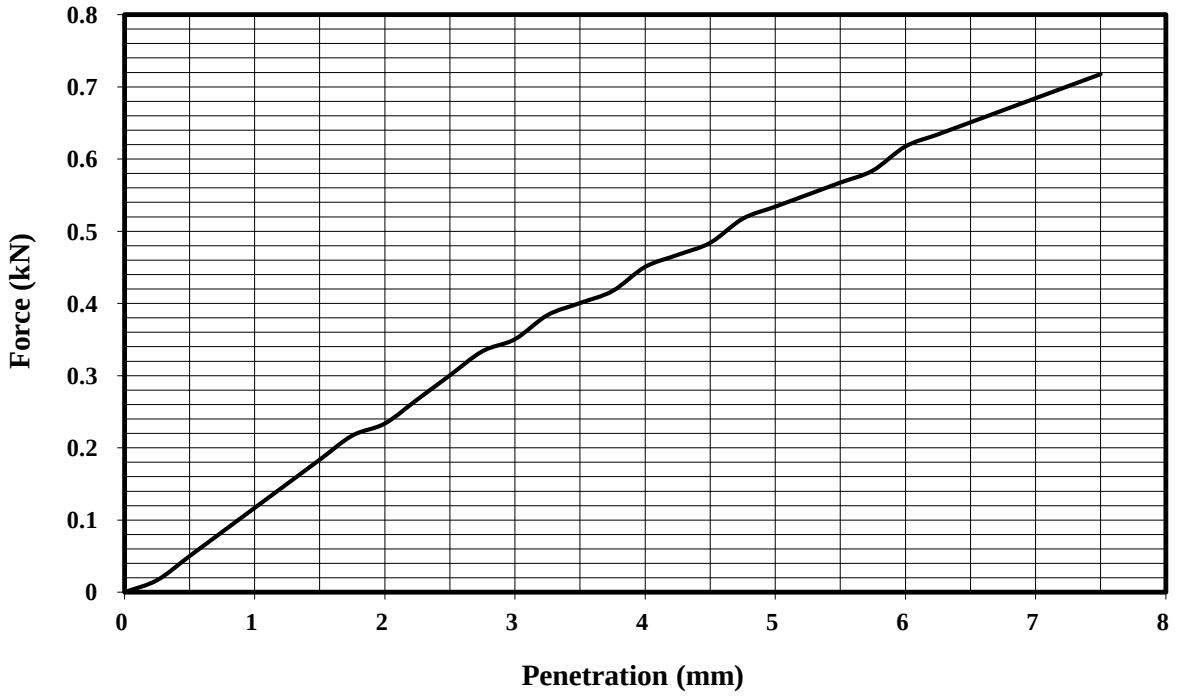
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Date Approved: 23.12.16

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Test Report: **Determination of the California Bearing Ratio**
BS 1377: Part 4: 1990 Clause 7

Client ref:	**A095973-2**
Location:	**Swansea Tidal Lagoon Swansea**
Contract Number:	**33394-**
Sample Type:	**B**
Hole Number:	**TP04**
Sample Number:	**N/A**
Depth (m):	**0.30 - 1.30**
Description:	**Brown clayey silty SAND**



Initial Sample Conditions		Test Conditions		**Method of Compaction:**	
				2.5kg Rammer	
Moisture Content:	**7.7**	Surcharge Kg:	**2.0**	Final Moisture Content %	
Bulk Density Mg/m3:	**1.75**	Soaking Time (hrs):		Sample Top	**7.7**
Dry Density Mg/m3:	**1.62**	Swelling mm:		Sample Bottom	**7.7**
C.B.R. Value %	Sample Top	**2.67**			
Percentage retained on 20mm BS test sieve:		**0**	Remarks:		

Checked By:
Emma Sharp (Office Manager)

Approved By:
Paul Evans (Quality Manager

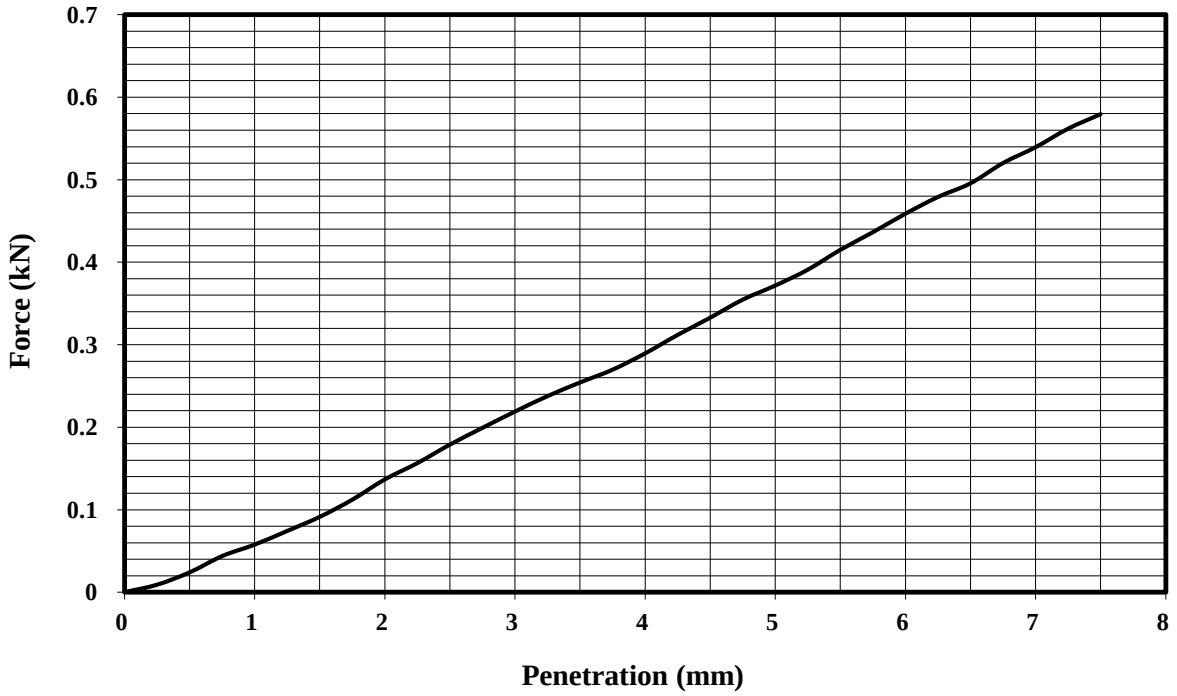
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Date Approved: 23.12.16

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Test Report: **Determination of the California Bearing Ratio**
BS 1377: Part 4: 1990 Clause 7

Client ref:	**A095973-2**
Location:	**Swansea Tidal Lagoon Swansea**
Contract Number:	**33394-**
Sample Type:	**B**
Hole Number:	**TP05**
Sample Number:	**N/A**
Depth (m):	**0.50 - 1.00**
Description:	**Dark brown sady gravelly silty CLAY.**



Initial Sample Conditions		Test Conditions		**Method of Compaction:**
				2.5kg Rammer
Moisture Content:	**13**	Surcharge Kg:	**2.0**	Final Moisture Content %
Bulk Density Mg/m3:	**2.25**	Soaking Time (hrs):		Sample Top **13**
Dry Density Mg/m3:	**2.00**	Swelling mm:		Sample Bottom **13**
C.B.R. Value %	Sample Top	**1.86**		
Percentage retained on 20mm BS test sieve:		**0**	Remarks:	

Checked By:
Emma Sharp (Office Manager)

Approved By:
Paul Evans (Quality Manager

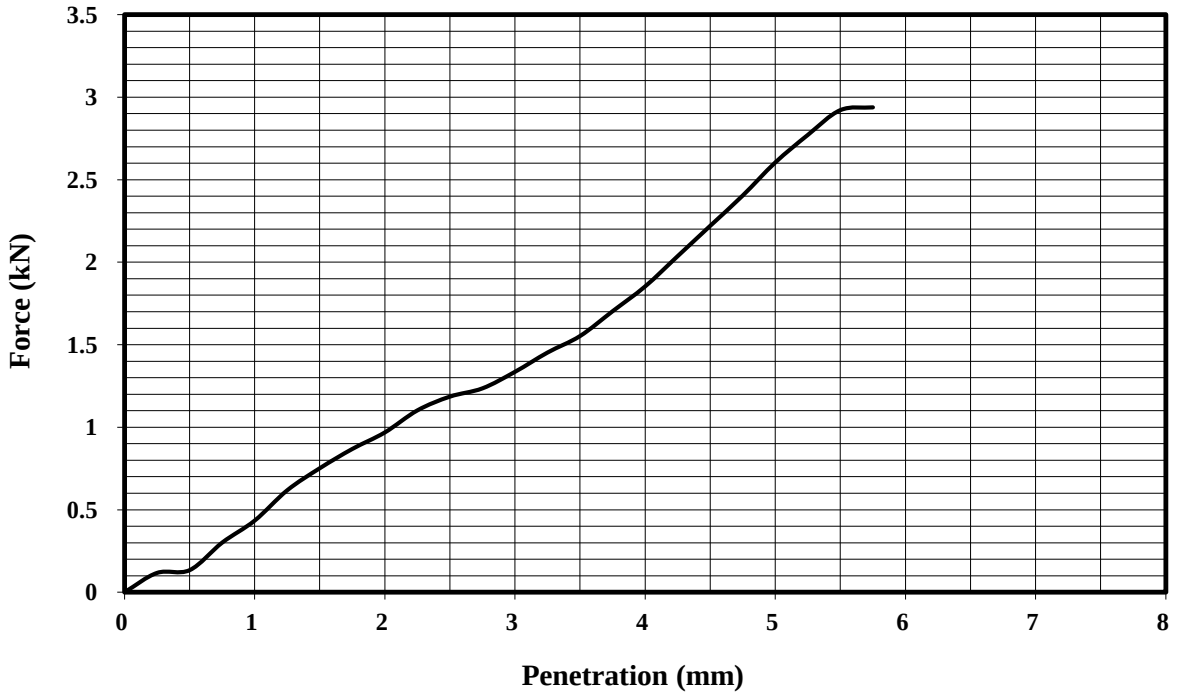
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Date Approved: 23.12.16

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Test Report: **Determination of the California Bearing Ratio**
BS 1377: Part 4: 1990 Clause 7

Client ref:	**A095973-2**
Location:	**Swansea Tidal Lagoon Swansea**
Contract Number:	**33394-**
Sample Type:	**B**
Hole Number:	**TP10**
Sample Number:	**N/A**
Depth (m):	**1.00 - 1.80**
Description:	**Brown gravelly SAND**



Initial Sample Conditions		Test Conditions		**Method of Compaction:**	
				2.5kg Rammer	
Moisture Content:	**5.4**	Surcharge Kg:	**2.0**	Final Moisture Content %	
Bulk Density Mg/m3:	**1.67**	Soaking Time (hrs):		Sample Top	**5.4**
Dry Density Mg/m3:	**1.59**	Swelling mm:		Sample Bottom	**5.4**
C.B.R. Value %	Sample Top	**13.02**			
Percentage retained on 20mm BS test sieve:		**0**	Remarks:		

Checked By:
Emma Sharp (Office Manager)

Approved By:
Paul Evans (Quality Manager

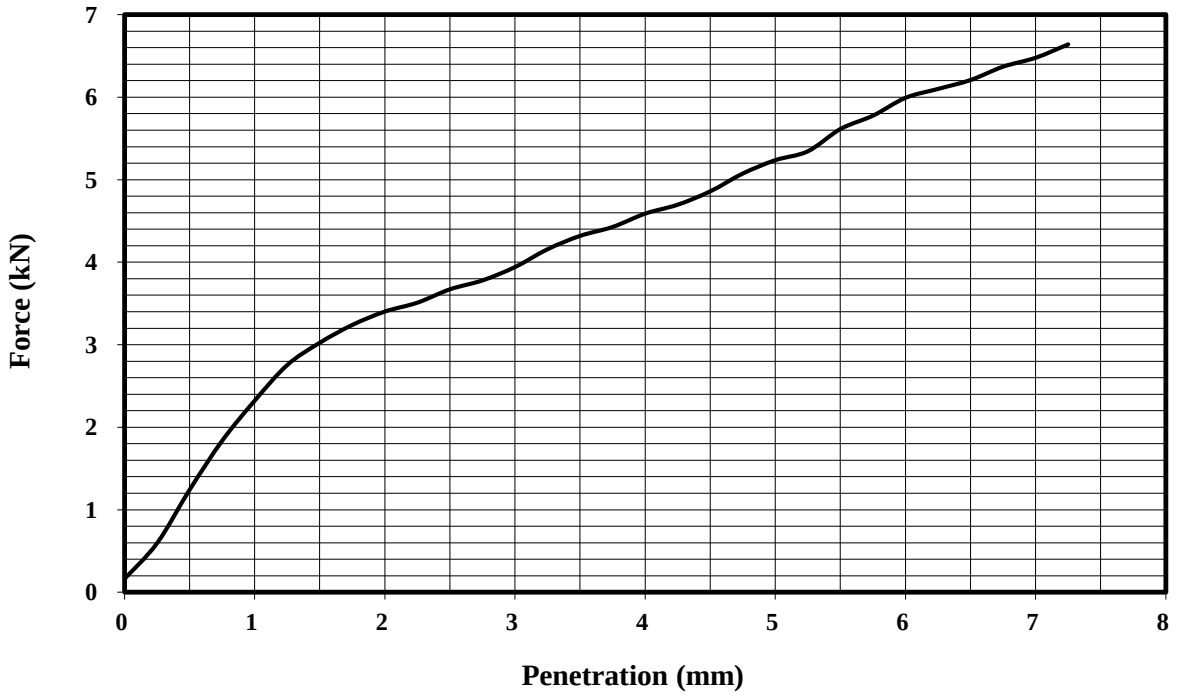
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Test Report: **Determination of the California Bearing Ratio**
BS 1377: Part 4: 1990 Clause 7

Client ref:	**A095973-2**
Location:	**Swansea Tidal Lagoon Swansea**
Contract Number:	**33394-**
Sample Type:	**B**
Hole Number:	**TP12**
Sample Number:	**N/A**
Depth (m):	**0.20 - 1.30**
Description:	**Brown gravelly SAND**



Initial Sample Conditions		Test Conditions		**Method of Compaction:**	
				2.5kg Rammer	
Moisture Content:	**13**	Surcharge Kg:	**2.0**	Final Moisture Content %	
Bulk Density Mg/m3:	**2.36**	Soaking Time (hrs):		Sample Top	**13**
Dry Density Mg/m3:	**2.09**	Swelling mm:		Sample Bottom	**13**
C.B.R. Value %	Sample Top	**26.59**			
Percentage retained on 20mm BS test sieve:		**0**	Remarks:		

Checked By:
Emma Sharp (Office Manager)

Approved By:
Paul Evans (Quality Manager

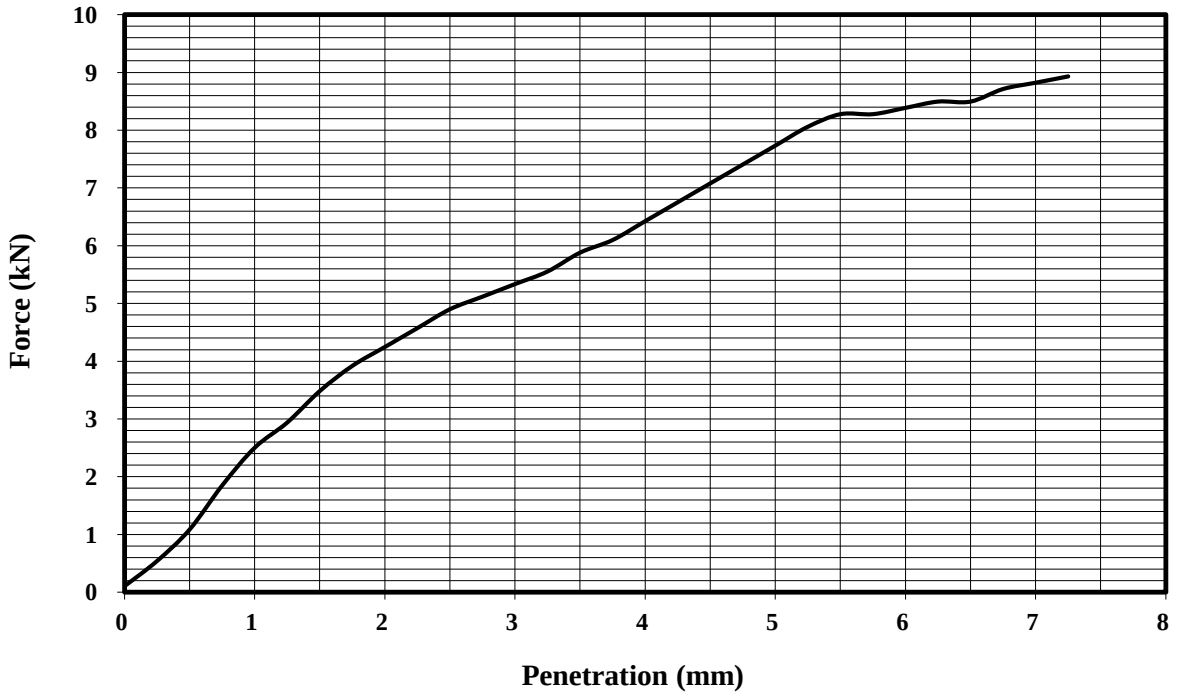
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Test Report: **Determination of the California Bearing Ratio**
BS 1377: Part 4: 1990 Clause 7

Client ref:	**A095973-2**
Location:	**Swansea Tidal Lagoon Swansea**
Contract Number:	**33394-**
Sample Type:	**B**
Hole Number:	**TP15**
Sample Number:	**N/A**
Depth (m):	**0.00 - 1.20**
Description:	**Brown gravelly SAND**



Initial Sample Conditions		Test Conditions		**Method of Compaction:**
				2.5kg Rammer
Moisture Content:	**5.5**	Surcharge Kg:	**2.0**	Final Moisture Content %
Bulk Density Mg/m3:	**1.67**	Soaking Time (hrs):		Sample Top **5.5**
Dry Density Mg/m3:	**1.58**	Swelling mm:		Sample Bottom **5.5**
C.B.R. Value %	Sample Top	**37.04**		
Percentage retained on 20mm BS test sieve:		**0**	Remarks:	

Checked By:
Emma Sharp (Office Manager)

Approved By:
Paul Evans (Quality Manager

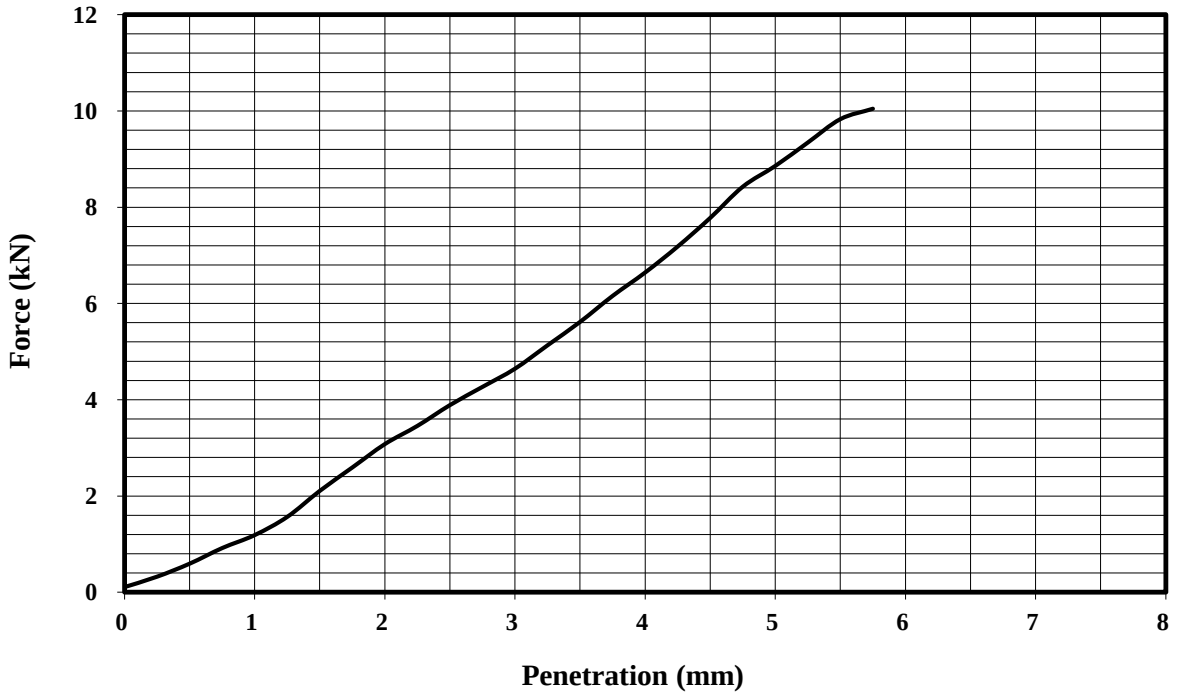
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Date Approved: 23.12.16

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Test Report: **Determination of the California Bearing Ratio**
BS 1377: Part 4: 1990 Clause 7

Client ref:	**A095973-2**
Location:	**Swansea Tidal Lagoon Swansea**
Contract Number:	**33394-**
Sample Type:	**B**
Hole Number:	**TP20**
Sample Number:	**N/A**
Depth (m):	**0.30 - 0.80**
Description:	**Brown silty clayey SAND**



Initial Sample Conditions		Test Conditions		**Method of Compaction:**
				2.5kg Rammer
Moisture Content:	**13**	Surcharge Kg:	**2.0**	Final Moisture Content %
Bulk Density Mg/m3:	**1.91**	Soaking Time (hrs):		Sample Top **13**
Dry Density Mg/m3:	**1.69**	Swelling mm:		Sample Bottom **13**
C.B.R. Value %	Sample Top	**42.12**		
Percentage retained on 20mm BS test sieve:		**0**	Remarks:	

Checked By:
Emma Sharp (Office Manager)

Approved By:
Paul Evans (Quality Manager

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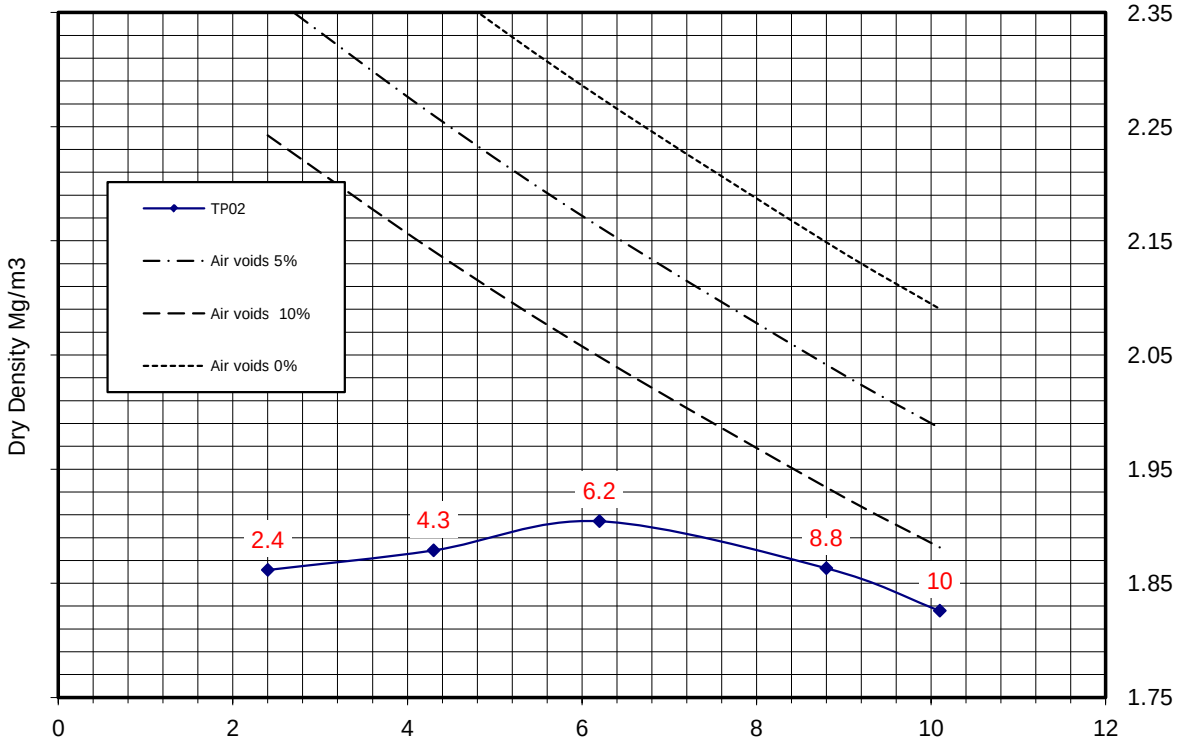
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Dry Density / Moisture Content Relationship

BS 1377:Part 4:1990

Client ref:	**A095973-2**		
Location:	**Swansea Tidal Lagoon Swansea**		
Contract Number:	**33394-**		
Hole Number:	**TP02**		
Sample Number:	**N/A**		
Depth (m):	**0.50**	**-**	**1.50**
Sample Type:	**B**		



Compaction Point:	**1**	**2**	**3**	**4**	**5**
Moisture Content:	2.4	4.3	6.2	8.8	10.1
Bulk Density (Mg/m^3):	1.91	1.96	2.02	2.03	2.01
Dry Density (Mg/m^3):	1.86	1.88	1.90	1.86	1.83

Initial Moisture Content:	**8.8**	Method of Compaction:	**4.5kg Rammer**
Particle Density (Mg/m^3):	**2.65 Assumed**	Material Retained on 37.5 mm Test Sieve (%):	**0**
Maximum Dry Density (mg/m^3):	**1.90**	Material Retained on 20.0 mm Test Sieve (%):	**0.7**
Optimum Moisture Content (%):	**6.2**	Sample Preparation Clause:	**3.2.4.1**

Remarks:

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Checked By:
Emma Sharp

Approved By:
Paul Evans

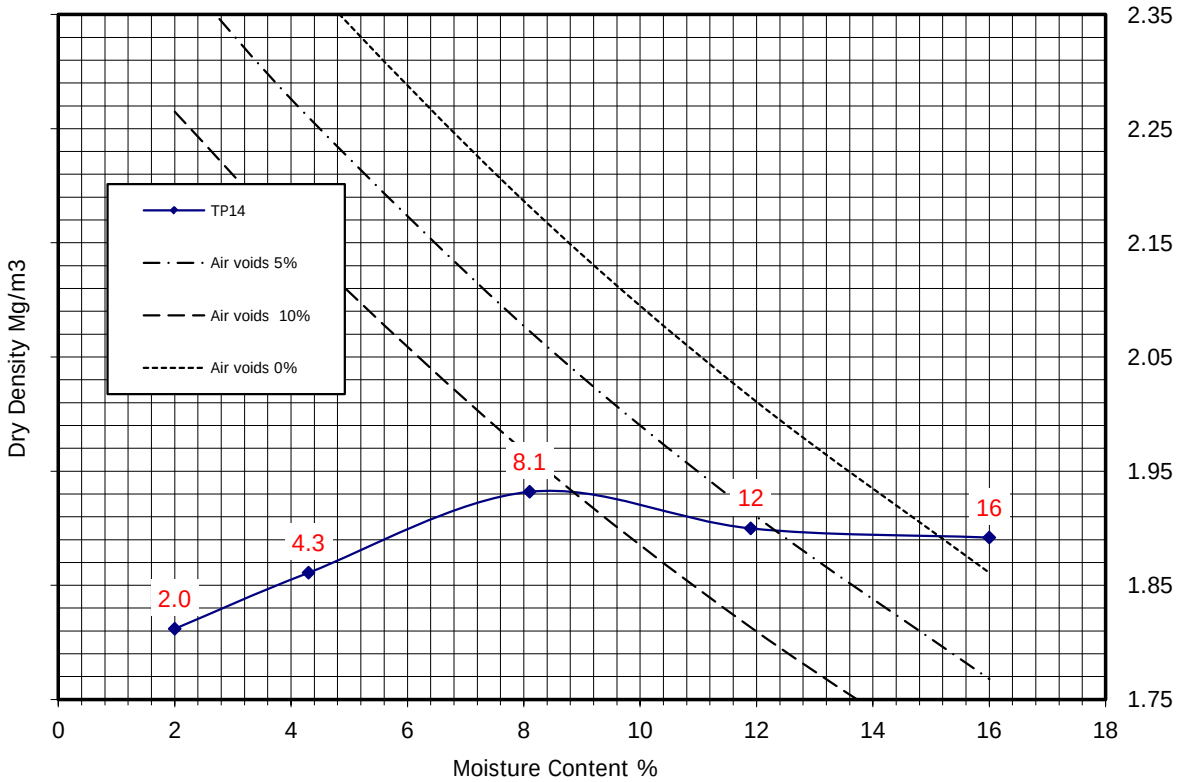
Date Approved: 23.12.16

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Dry Density / Moisture Content Relationship

BS 1377:Part 4:1990

Client ref:	**A095973-2**		
Location:	**Swansea Tidal Lagoon Swansea**		
Contract Number:	**33394-**		
Hole Number:	**TP14**		
Sample Number:	**N/A**		
Depth (m):	**0.30**	**-**	**1.30**
Sample Type:	**B**		



Compaction Point:	**1**	**2**	**3**	**4**	**5**
Moisture Content:	2.0	4.3	8.1	11.9	16.0
Bulk Density (Mg/m^3):	1.85	1.94	2.09	2.13	2.19
Dry Density (Mg/m^3):	1.81	1.86	1.93	1.90	1.89

Initial Moisture Content:	**12**	Method of Compaction:	**4.5kg Rammer**
Particle Density (Mg/m^3):	**2.65 Assumed**	Material Retained on 37.5 mm Test Sieve (%):	**0**
Maximum Dry Density (mg/m^3):	**1.93**	Material Retained on 20.0 mm Test Sieve (%):	**6.3**
Optimum Moisture Content (%):	**8.1**	Sample Preparation Clause:	**3.2.4.1**

Remarks:

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Checked By:
Emma Sharp

Approved By:
Paul Evans

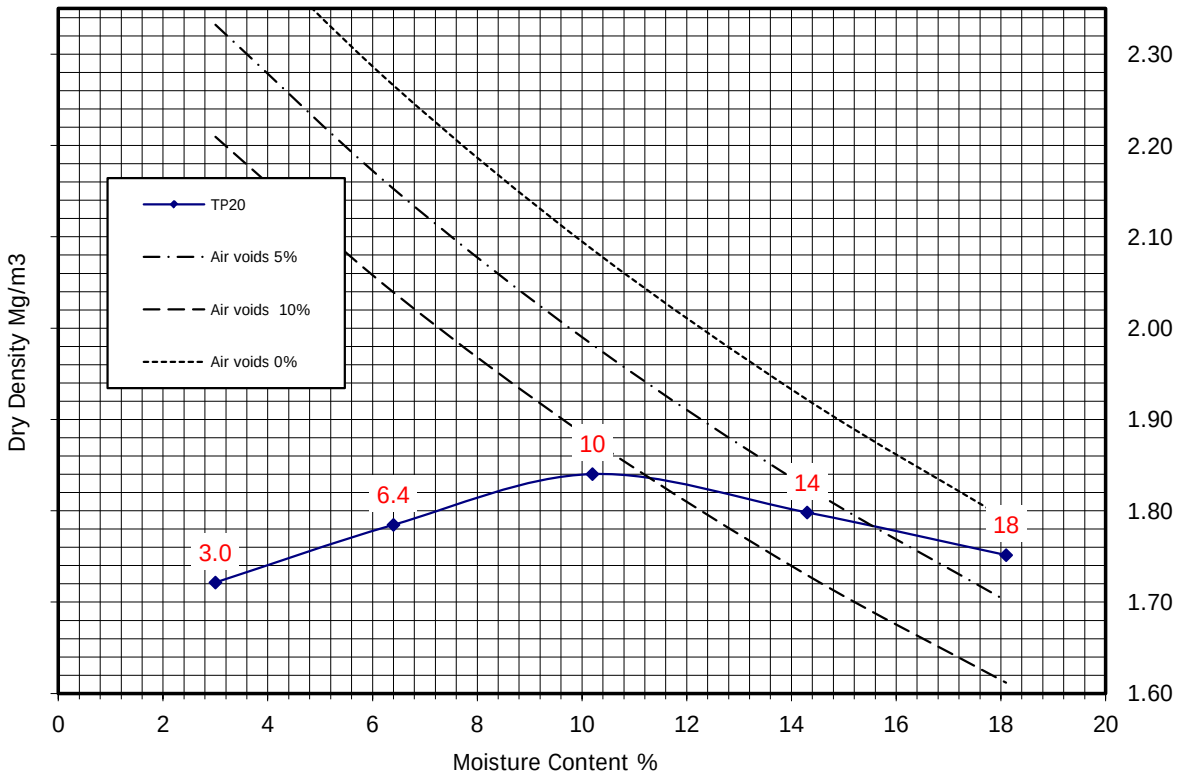
Date Approved: **23.12.16**

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2788

Dry Density / Moisture Content Relationship

BS 1377:Part 4:1990

Client ref:	**A095973-2**		
Location:	**Swansea Tidal Lagoon Swansea**		
Contract Number:	**33394-**		
Hole Number:	**TP20**		
Sample Number:	**N/A**		
Depth (m):	**0.80**	**-**	**1.40**
Sample Type:	**B**		



Compaction Point:	**1**	**2**	**3**	**4**	**5**
Moisture Content:	3.0	6.4	10	14.3	18.1
Bulk Density (Mg/m^3):	1.77	1.90	2.03	2.06	2.07
Dry Density (Mg/m^3):	1.72	1.78	1.84	1.80	1.75

Initial Moisture Content:	**14**	Method of Compaction:	**4.5kg Rammer**
Particle Density (Mg/m^3):	**2.65 Assumed**	Material Retained on 37.5 mm Test Sieve (%):	**0**
Maximum Dry Density (mg/m^3):	**1.84**	Material Retained on 20.0 mm Test Sieve (%):	**5.6**
Optimum Moisture Content (%):	**10**	Sample Preparation Clause:	**3.2.4.1**

Remarks:

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Checked By:
Emma Sharp

Approved By:
Paul Evans

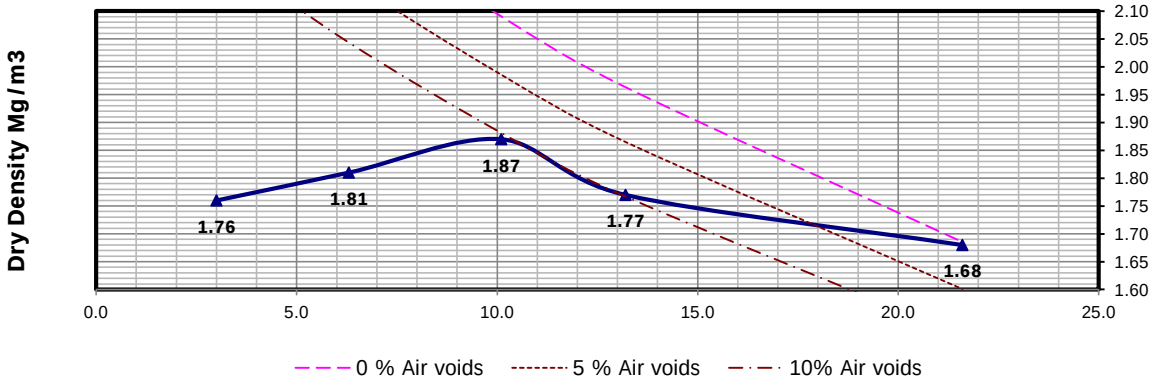
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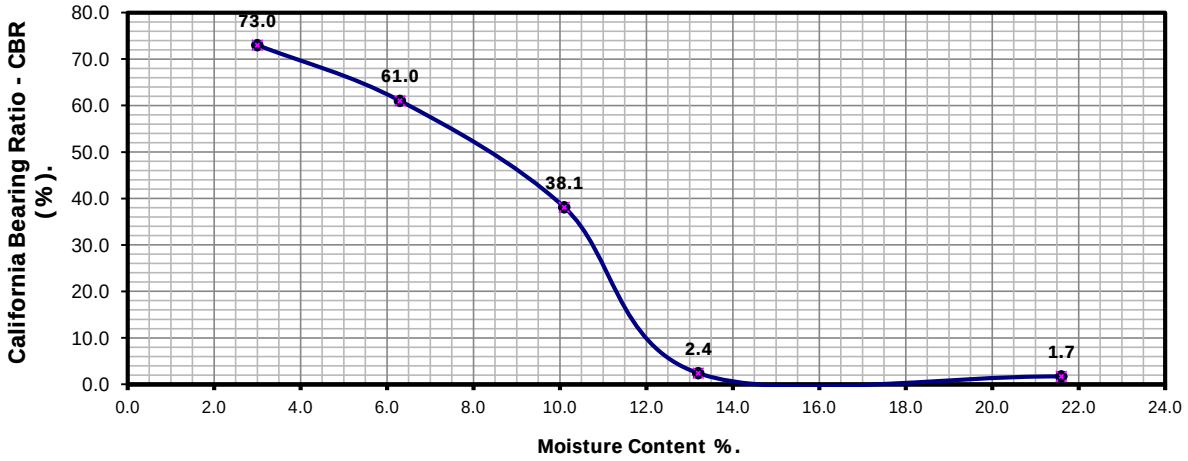
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California Bearing Ratio / Dry Density Moisture Content Relationship

BS 1377:Part 4:1990

Client ref:	**A095973-12**
Location:	**Swansea Tidal Lagoon Swansea**
Contract Number:	**33394-**
Hole Number:	**TP03**
Sample Number:	
Depth (m) : from	**0.50**
Depth (m) : to	**1.00**
Sample Type	**B**





Moisture Content	3.0	6.3	10.1	13.2	21.6	
CBR Value Top	73.0	61.0	38.1	2.4	1.7	
CBR Value Bot	73.0	61.0	38.1	2.4	1.7	
Mean CBR Value	73	61	38	2	2	
Dry Density	1.76	1.81	1.87	1.77	1.68	

Initial Sample Conditions:			Method of Compaction 4.5 KG Rammer
Initial Moisture Content (%):		21.6	Single sample Tested
Material Retained on the 37.5mm BS Sieve (%):		0	Maximum Dry Density (Mg/m^3 1.87
Material Retained on the 20.0mm BS Sieve (%):		8	Optimum Moisture Content (% 10
Particle Density (Mg/m^3) :	Assumed	2.65	

Checked by **Date** 23-12-16 **Approved by** **Date** 23-12-16

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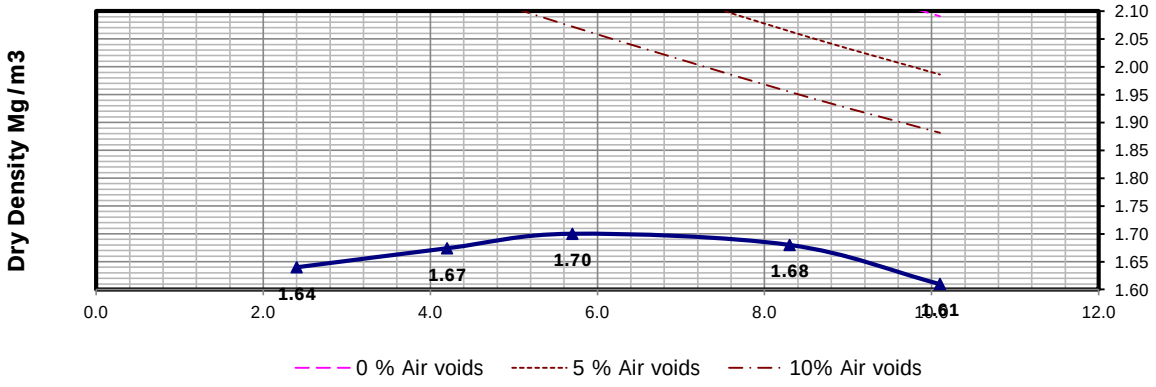
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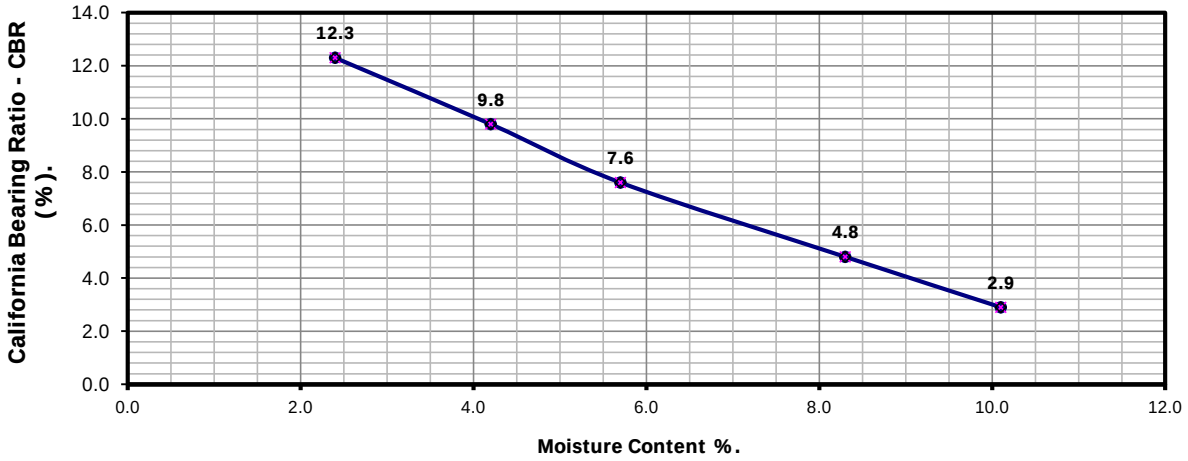
Client Ref No: **A095973-12**

California Bearing Ratio / Dry Density Moisture Content Relationship

BS 1377:Part 4:1990

Client ref:	**A095973-12**
Location:	**Swansea Tidal Lagoon Swansea**
Contract Number:	**33394-**
Hole Number:	**TP05**
Sample Number:	
Depth (m) : from	**1.00**
Depth (m) : to	**2.00**
Sample Type	**B**





Moisture Content	2.4	4.2	5.7	8.3	10.1	
CBR Value Top	12.3	9.8	7.6	4.8	2.9	
CBR Value Bot	12.3	9.8	7.6	4.8	2.9	
Mean CBR Value	12	10	8	5	3	
Dry Density	1.64	1.67	1.70	1.68	1.61	

Initial Sample Conditions:		Method of Compaction 4.5 KG Rammer
Initial Moisture Content (%):	5.7	Single sample Tested
Material Retained on the 37.5mm BS Sieve (%):	0	Maximum Dry Density (Mg/m^3 1.61
Material Retained on the 20.0mm BS Sieve (%):	0	Optimum Moisture Content (% 6
Particle Density (Mg/m^3) : Assumed	2.65	

Checked by **Date** 23-12-16 **Approved by** **Date** 23-12-16

GSTL
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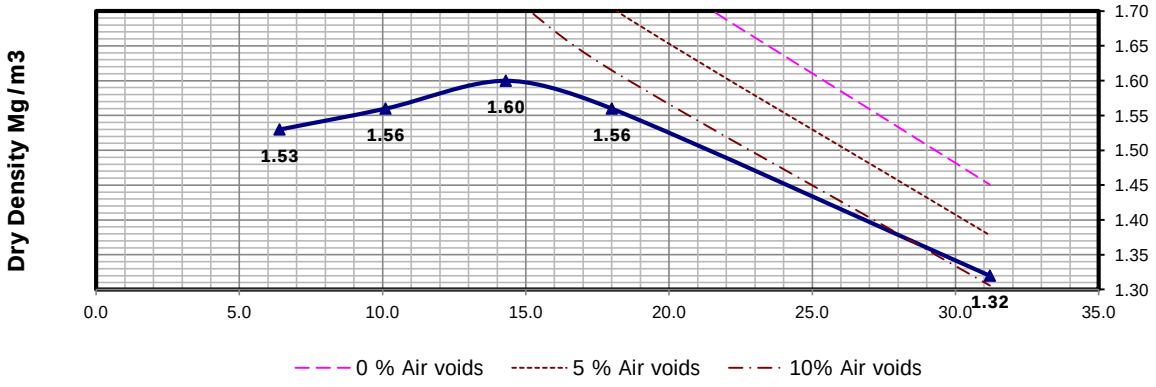
Contract No.: **33394-**

Client Ref No: **A095973-12**

California Bearing Ratio / Dry Density Moisture Content Relationship

BS 1377:Part 4:1990

Client ref:	**A095973-12**
Location:	**Swansea Tidal Lagoon Swansea**
Contract Number:	**33394-**
Hole Number:	**TP06**
Sample Number:	
Depth (m) : from	**1.50**
Depth (m) : to	**2.20**
Sample Type	**B**





Moisture Content	6.4	10.1	14.3	18.0	31.2	
CBR Value Top	80.6	64.3	36.7	18.1	3.5	
CBR Value Bot	80.6	64.3	36.7	18.1	3.5	
Mean CBR Value	81	64	37	18	4	
Dry Density	1.53	1.56	1.60	1.56	1.32	

Initial Sample Conditions:		Method of Compaction 4.5 KG Rammer
Initial Moisture Content (%):	31.2	Single sample Tested
Material Retained on the 37.5mm BS Sieve (%):	0	Maximum Dry Density (Mg/m^3 1.60
Material Retained on the 20.0mm BS Sieve (%):	9	Optimum Moisture Content (% 14
Particle Density (Mg/m^3) : Assumed	2.65	

Checked by **Date** 23-12-16 **Approved by** **Date** 23-12-16

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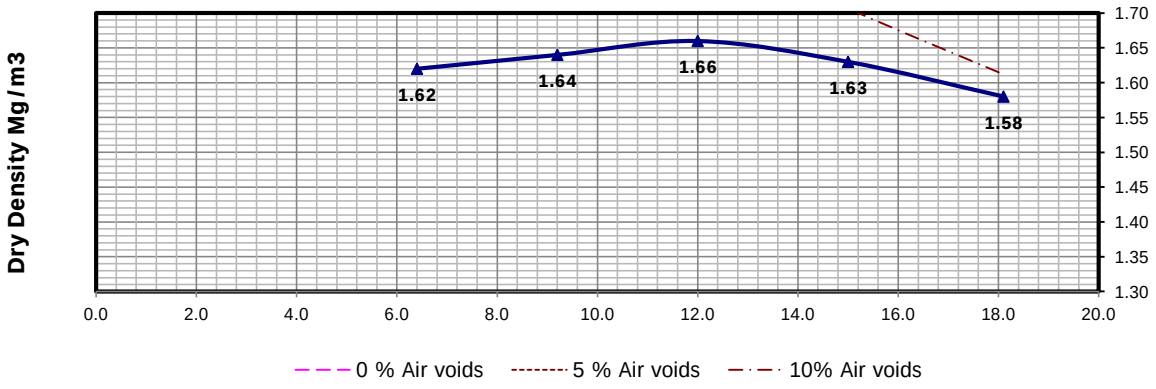
UKAS TESTING

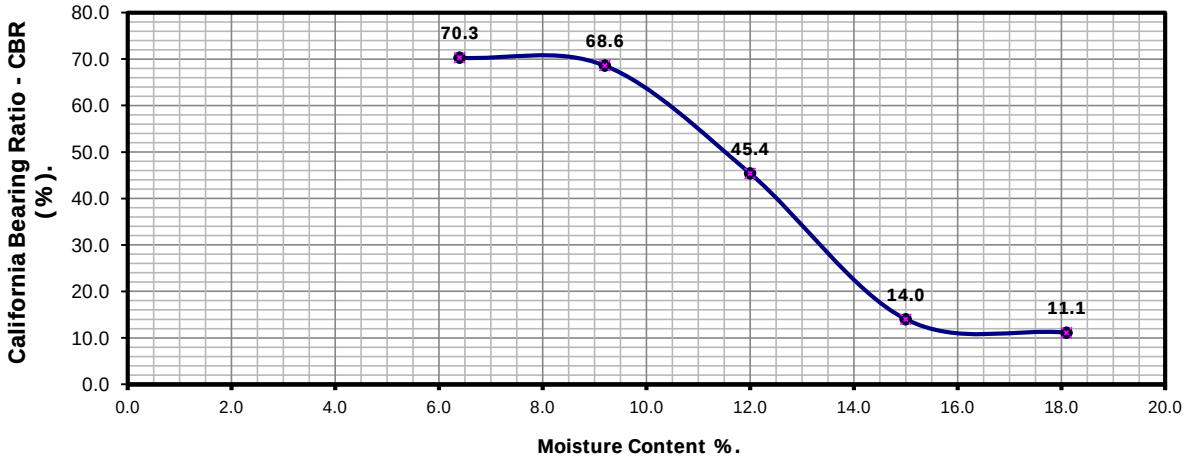
Contract No.:
33394-
Client Ref No:
A095973-12

California Bearing Ratio / Dry Density Moisture Content Relationship

BS 1377:Part 4:1990

Client ref:	**A095973-12**
Location:	**Swansea Tidal Lagoon Swansea**
Contract Number:	**33394-**
Hole Number:	**TP10**
Sample Number:	
Depth (m) : from	**0.30**
Depth (m) : to	**1.00**
Sample Type	**B**





Moisture Content	6.4	9.2	12.0	15.0	18.1	
CBR Value Top	70.3	68.6	45.4	14.0	11.1	
CBR Value Bot	70.3	68.6	45.4	14.0	11.1	
Mean CBR Value	70	69	45	14	11	
Dry Density	1.62	1.64	1.66	1.63	1.58	

Initial Sample Conditions:		Method of Compaction 4.5 KG	Rammer
Initial Moisture Content (%):	18.1	Single sample Tested	
Material Retained on the 37.5mm BS Sieve (%):	0	Maximum Dry Density (Mg/m^3	1.66
Material Retained on the 20.0mm BS Sieve (%):	9	Optimum Moisture Content (%	12
Particle Density (Mg/m^3) : Assumed	2.65		

Checked by **Date** 23-12-16 **Approved by** **Date** 23-12-16

GSTL
GEO SITE & TESTING SERVICES LTD

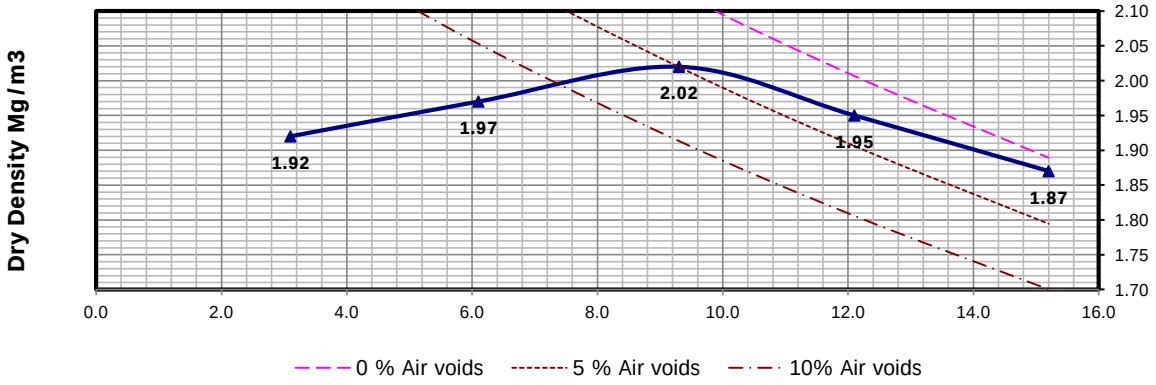
Contract No.: **33394-**

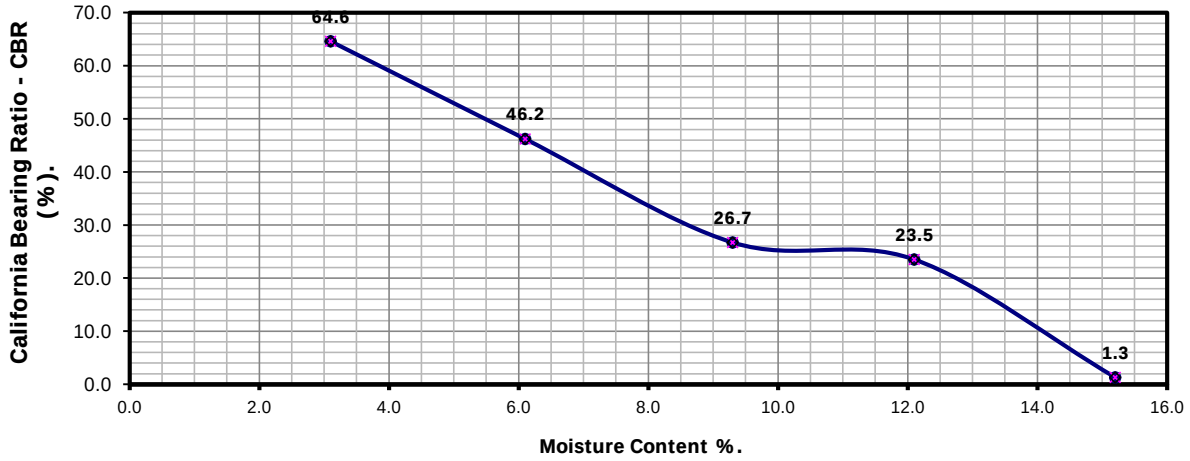
Client Ref No: **A095973-12**

California Bearing Ratio / Dry Density Moisture Content Relationship

BS 1377:Part 4:1990

Client ref:	**A095973-12**
Location:	**Swansea Tidal Lagoon Swansea**
Contract Number:	**33394-**
Hole Number:	**TP11**
Sample Number:	
Depth (m) : from	**0.40**
Depth (m) : to	**0.80**
Sample Type	**B**





Moisture Content	3.1	6.1	9.3	12.1	15.2	
CBR Value Top	64.6	46.2	26.7	23.5	1.3	
CBR Value Bot	64.6	46.2	26.7	23.5	1.3	
Mean CBR Value	65	46	27	24	1	
Dry Density	1.92	1.97	2.02	1.95	1.87	

Initial Sample Conditions:			Method of Compaction 4.5 KG Rammer
Initial Moisture Content (%):		12.1	Single sample Tested
Material Retained on the 37.5mm BS Sieve (%):		0	Maximum Dry Density (Mg/m^3 2.02
Material Retained on the 20.0mm BS Sieve (%):		0	Optimum Moisture Content (% 9
Particle Density (Mg/m^3) :	Assumed	2.65	

Checked by **Date** 23-12-16 **Approved by** **Date** 23-12-16

GSTL
GEO SITE & TESTING SERVICES LTD

UKAS TESTING

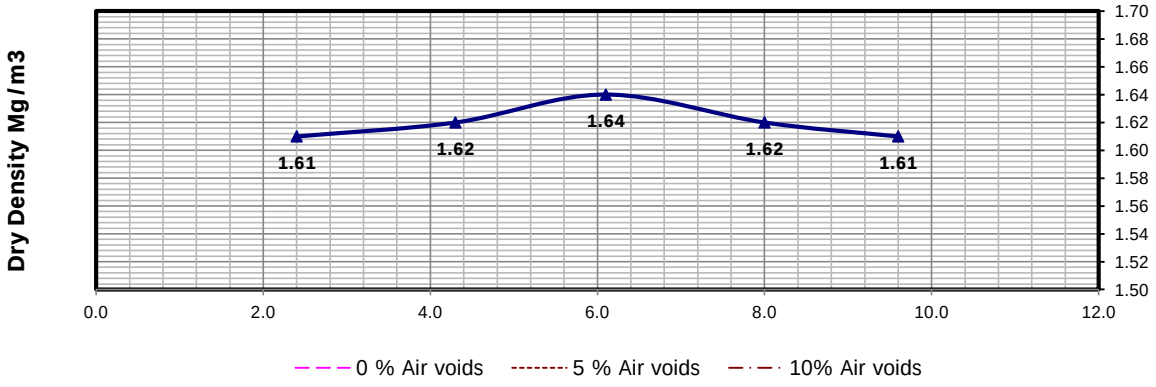
Contract No.: **33394-**

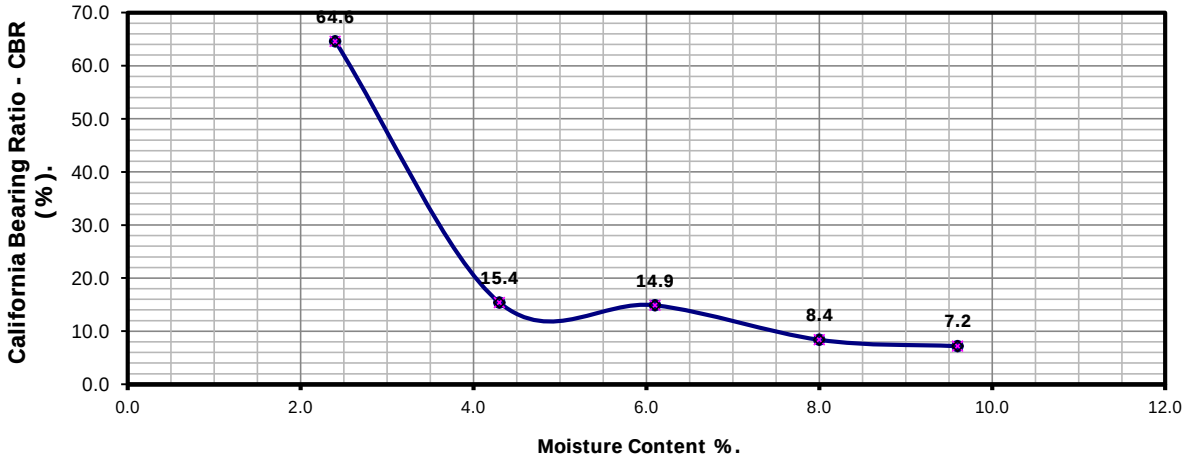
Client Ref No: **A095973-12**

California Bearing Ratio / Dry Density Moisture Content Relationship

BS 1377:Part 4:1990

Client ref:	**A095973-12**
Location:	**Swansea Tidal Lagoon Swansea**
Contract Number:	**33394-**
Hole Number:	**TP15**
Sample Number:	
Depth (m) : from	**1.20**
Depth (m) : to	**1.50**
Sample Type	**B**





Moisture Content	2.4	4.3	6.1	8.0	9.6	
CBR Value Top	64.6	15.4	14.9	8.4	7.2	
CBR Value Bot	64.6	15.4	14.9	8.4	7.2	
Mean CBR Value	65	15	15	8	7	
Dry Density	1.61	1.62	1.64	1.62	1.61	

Initial Sample Conditions:		Method of Compaction 4.5 KG Rammer
Initial Moisture Content (%):	9.6	Single sample Tested
Material Retained on the 37.5mm BS Sieve (%):	0	Maximum Dry Density (Mg/m^3 1.64
Material Retained on the 20.0mm BS Sieve (%):	0	Optimum Moisture Content (% 6
Particle Density (Mg/m^3) : Assumed	2.65	

Checked by **Date** 23-12-16 **Approved by** **Date** 23-12-16

GSTL
GEO SITE & TESTING SERVICES LTD

Contract No.: **33394-**

Client Ref No: **A095973-12**

Appendix F – Chemical Laboratory Analysis Results

Exova Jones Environmental

Registered Address : Exova (UK) Ltd, Lochend Industrial Estate, Newbridge, Midlothian, EH28 8PL

Unit 3 Deeside Point
Zone 3
Deeside Industrial Park
Deeside
CH5 2UA

Tel: +44 (0) 1244 833780
Fax: +44 (0) 1244 833781

WYG
5th Floor
Longcross Court
47 Newport Road
Cardiff
CF24 0AD

Attention :	Nicholas Bool
Date :	22nd November, 2016
Your reference :	A095973-2
Our reference :	Test Report 16/16961 Batch 1
Location :	Tidal Lagoon
Date samples received :	11th November, 2016
Status :	Final report
Issue :	1

Seven samples were received for analysis on 11th November, 2016 of which two were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Phil Sommerton BSc
Project Manager

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	4-6	16-18									LOD/LOR	Units	Method No.
Sample ID	BH1	BH1											
Depth	1.0	5.0											
COC No / misc													
Containers	V J T	V J T											
Sample Date	09/11/2016	09/11/2016											
Sample Type	Soil	Soil											
Batch Number	1	1											
Date of Receipt	11/11/2016	11/11/2016											
Arsenic #M	21.6	14.0									<0.5	mg/kg	TM30/PM15
Cadmium #M	0.8	<0.1									<0.1	mg/kg	TM30/PM15
Chromium #M	34.1	40.1									<0.5	mg/kg	TM30/PM15
Copper #M	18	16									<1	mg/kg	TM30/PM15
Lead #M	167	8									<5	mg/kg	TM30/PM15
Mercury #M	<0.1	<0.1									<0.1	mg/kg	TM30/PM15
Nickel #M	8.8	5.6									<0.7	mg/kg	TM30/PM15
Selenium #M	<1	<1									<1	mg/kg	TM30/PM15
Water Soluble Boron #M	0.4	0.3									<0.1	mg/kg	TM74/PM32
Zinc #M	974	38									<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene #M	<0.04	<0.04									<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03									<0.03	mg/kg	TM4/PM8
Acenaphthene #M	<0.05	<0.05									<0.05	mg/kg	TM4/PM8
Fluorene #M	<0.04	<0.04									<0.04	mg/kg	TM4/PM8
Phenanthrene #M	0.06	<0.03									<0.03	mg/kg	TM4/PM8
Anthracene #	<0.04	<0.04									<0.04	mg/kg	TM4/PM8
Fluoranthene #M	0.12	<0.03									<0.03	mg/kg	TM4/PM8
Pyrene #	0.13	<0.03									<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	0.09	<0.06									<0.06	mg/kg	TM4/PM8
Chrysene #M	0.08	<0.02									<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	0.12	<0.07									<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	0.06	<0.04									<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	<0.04	<0.04									<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04	<0.04									<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	<0.04	<0.04									<0.04	mg/kg	TM4/PM8
PAH 16 Total	0.7	<0.6									<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.09	<0.05									<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.03	<0.02									<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	104	100									<0	%	TM4/PM8
EPH >C8-C10 #M	<5	<5									<5	mg/kg	TM5/PM8
EPH >C10-C12 #M	<10	<10									<10	mg/kg	TM5/PM8
EPH >C12-C16 #M	<10	<10									<10	mg/kg	TM5/PM8
EPH >C16-C21 #M	<10	<10									<10	mg/kg	TM5/PM8
EPH >C21-C40	124	<10									<10	mg/kg	TM5/PM8
EPH >C8-C40	124	<30									<30	mg/kg	TM5/PM8
Total Phenols HPLC	<0.15	<0.15									<0.15	mg/kg	TM26/PM21
Natural Moisture Content	7.5	21.8									<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3									<0.3	mg/kg	TM38/PM20

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	4-6	16-18									LOD/LOR	Units	Method No.
Sample ID	BH1	BH1											
Depth	1.0	5.0											
COC No / misc													
Containers	V J T	V J T											
Sample Date	09/11/2016	09/11/2016											
Sample Type	Soil	Soil											
Batch Number	1	1											
Date of Receipt	11/11/2016	11/11/2016											
Sulphate as SO4 (2:1 Ext) #M	0.0047	0.0075									<0.0015	g/l	TM38/PM20
Free Cyanide	<0.5	<0.5									<0.5	mg/kg	TM89/PM45
Total Cyanide #M	<0.5	<0.5									<0.5	mg/kg	TM89/PM45
Fraction Organic Carbon	0.020	<0.001									<0.001	None	TM21/PM24
pH #M	8.86	9.09									<0.01	pH units	TM73/PM11
Sample Type	Sand	Sand										None	PM13/PM0
Sample Colour	Medium Brown	Medium Brown										None	PM13/PM0
Other Items	stones	NA										None	PM13/PM0

Please see attached notes for all abbreviations and acronyms

Please include all sections of this report if it is reproduced
All solid results are expressed on a dry weight basis unless stated otherwise.

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

Signed on behalf of Jones Environmental Laboratory:

Ryan Butterworth
Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	1	BH1	1.0	5	16/11/2016	**General Description (Bulk Analysis)**	Soil/Sand
					16/11/2016	**Asbestos Fibres**	NAD
					16/11/2016	**Asbestos Fibres (2)**	NAD
					16/11/2016	**Asbestos ACM**	NAD
					16/11/2016	**Asbestos ACM (2)**	NAD
					16/11/2016	**Asbestos Type**	NAD
					16/11/2016	**Asbestos Type (2)**	NAD
					16/11/2016	**Asbestos Level Screen**	NAD
16/16961	1	BH1	5.0	17	16/11/2016	**General Description (Bulk Analysis)**	Soil/Sand
					16/11/2016	**Asbestos Fibres**	NAD
					16/11/2016	**Asbestos Fibres (2)**	NAD
					16/11/2016	**Asbestos ACM**	NAD
					16/11/2016	**Asbestos ACM (2)**	NAD
					16/11/2016	**Asbestos Type**	NAD
					16/11/2016	**Asbestos Type (2)**	NAD
					16/11/2016	**Asbestos Level Screen**	NAD

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
No deviating sample report results for job 16/16961						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.
Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 16/16961

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 (UKAS) accreditation applies to surface water and groundwater and one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
SA	ISO17025 (SANAS) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.			AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.	Yes	Yes	AD	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.	Yes		AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.	Yes	Yes	AR	Yes

Exova Jones Environmental

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WYG
5th Floor
Longcross Court
47 Newport Road
Cardiff
CF24 0AD

Attention :	Nicholas Bool
Date :	13th December, 2016
Your reference :	A095973-2
Our reference :	Test Report 16/16961 Batch 2
Location :	Tidal Lagoon
Date samples received :	12th November, 2016
Status :	Final report
Issue :	2

Thirty four samples were received for analysis on 12th November, 2016 of which eighteen were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Phil Sommerton BSc
Project Manager

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	25-27	37-39	40-42	49-51	52-54	58-60	64-66	70-72	79-81	82-84	LOD/LOR	Units	Method No.
Sample ID	WS3	WS3	TP4	TP4	TP3	TP3	TP2	TP2	TP1	TP1			
Depth	1.00	5.00	0.00-0.30	2.00	0.30	0.00-1.00	0.00-0.20	1.00-1.50	0.50	1.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	2	2	2	2	2	2	2	2	2	2			
Date of Receipt	12/11/2016	12/11/2016	12/11/2016	12/11/2016	12/11/2016	12/11/2016	12/11/2016	12/11/2016	12/11/2016	12/11/2016			
Arsenic #M	21.6	34.3	1417.0 AB	24.7	99.7	18.6	55.1	27.0	31.0	12.7	<0.5	mg/kg	TM30/PM15
Arsenic	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Cadmium #M	1.7	<0.1	5.8	3.0	2.3	0.1	2.6	0.7	1.1	<0.1	<0.1	mg/kg	TM30/PM15
Cadmium	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Chromium #M	48.6	39.3	36.4	37.2	49.1	35.7	40.0	39.6	34.0	38.1	<0.5	mg/kg	TM30/PM15
Chromium	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Copper #M	80	21	858 AA	35	153	39	107	74	149	41	<1	mg/kg	TM30/PM15
Copper	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Lead #M	76	25	22580 AB	130	1106	73	588	112	118	21	<5	mg/kg	TM30/PM15
Lead	-	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62
Mercury #M	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	mg/kg	TM30/PM15
Mercury	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Nickel #M	27.2	6.5	73.0	7.7	38.6	11.7	42.3	11.4	27.2	22.5	<0.7	mg/kg	TM30/PM15
Nickel	-	-	-	-	-	-	-	-	-	-	<0.7	mg/kg	TM30/PM62
Selenium #M	<1	<1	3	<1	<1	<1	<1	<1	<1	<1	<1	mg/kg	TM30/PM15
Selenium	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Water Soluble Boron #M	1.1	0.4	4.8	0.9	1.5	0.6	0.8	0.4	0.7	0.7	<0.1	mg/kg	TM74/PM32
Water Soluble Boron	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM74/PM61
Zinc #M	468	106	43230 AC	1844	3423 AA	199	2318	428	382	101	<5	mg/kg	TM30/PM15
Zinc	-	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene #M	<0.04	<0.04	0.20	<0.04	0.44	0.26	0.07	<0.04	0.26	<0.04	<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	0.06	0.69	0.15	<0.03	<0.03	<0.03	0.08	<0.03	<0.03	mg/kg	TM4/PM8
Acenaphthene #M	<0.05	<0.05	0.26	<0.05	0.13	0.06	<0.05	<0.05	0.06	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene #M	<0.04	<0.04	0.17	0.05	0.13	0.06	<0.04	<0.04	0.08	<0.04	<0.04	mg/kg	TM4/PM8
Phenanthrene #M	0.19	0.05	3.83	0.09	1.69	0.39	0.37	0.27	0.67	0.10	<0.03	mg/kg	TM4/PM8
Anthracene #	0.07	<0.04	0.76	1.53	0.44	0.07	0.05	0.10	0.18	<0.04	<0.04	mg/kg	TM4/PM8
Fluoranthene #M	0.41	0.06	6.12	0.82	2.74	0.40	0.74	0.56	0.96	0.19	<0.03	mg/kg	TM4/PM8
Pyrene #	0.32	0.05	5.42	1.48	2.26	0.35	0.67	0.53	0.81	0.18	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	0.25	0.06	2.37	0.38	1.34	0.24	0.41	0.22	0.51	0.13	<0.06	mg/kg	TM4/PM8
Chrysene #M	0.26	0.03	2.62	0.46	1.69	0.20	0.44	0.24	0.52	0.10	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	0.33	<0.07	4.32	1.00	2.45	0.27	0.68	0.34	0.94	0.17	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	0.14	<0.04	2.56	0.44	1.41	0.16	0.37	0.19	0.47	0.11	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	0.09	<0.04	1.70	0.23	0.99	0.10	0.30	0.13	0.38	0.07	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04	<0.04	0.31	<0.04	0.18	<0.04	0.06	<0.04	0.08	<0.04	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	0.08	<0.04	1.40	0.15	0.84	0.07	0.24	0.11	0.36	0.09	<0.04	mg/kg	TM4/PM8
PAH 16 Total	2.1	<0.6	32.1	7.3	16.9	2.6	4.4	2.7	6.4	1.1	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.24	<0.05	3.11	0.72	1.76	0.19	0.49	0.24	0.68	0.12	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.09	<0.02	1.21	0.28	0.69	0.08	0.19	0.10	0.26	0.05	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	98	101	97	96	106	102	103	92	96	96	<0	%	TM4/PM8
Methyl Tertiary Butyl Ether #	-	-	-	-	-	-	-	<2	-	-	<2	ug/kg	TM15/PM10
Benzene #	-	-	-	-	-	-	-	<3	-	-	<3	ug/kg	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	25-27	37-39	40-42	49-51	52-54	58-60	64-66	70-72	79-81	82-84	LOD/LOR	Units	Method No.
Sample ID	WS3	WS3	TP4	TP4	TP3	TP3	TP2	TP2	TP1	TP1			
Depth	1.00	5.00	0.00-0.30	2.00	0.30	0.00-1.00	0.00-0.20	1.00-1.50	0.50	1.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	2	2	2	2	2	2	2	2	2	2			
Date of Receipt	12/11/2016	12/11/2016	12/11/2016	12/11/2016	12/11/2016	12/11/2016	12/11/2016	12/11/2016	12/11/2016	12/11/2016			
Toluene #	-	-	-	-	-	-	-	<3	-	-	<3	ug/kg	TM15/PM10
Ethylbenzene #	-	-	-	-	-	-	-	<3	-	-	<3	ug/kg	TM15/PM10
p/m-Xylene #	-	-	-	-	-	-	-	<5	-	-	<5	ug/kg	TM15/PM10
o-Xylene #	-	-	-	-	-	-	-	<3	-	-	<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	-	-	-	-	-	-	-	104	-	-	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	-	-	-	-	-	-	-	106	-	-	<0	%	TM15/PM10
EPH >C8-C10 #M	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	mg/kg	TM5/PM8
EPH >C10-C12 #M	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	mg/kg	TM5/PM8
EPH >C12-C16 #M	<10	<10	<10	<10	<10	<10	25	<10	120	21	<10	mg/kg	TM5/PM8
EPH >C16-C21 #M	<10	<10	43	16	58	<10	202	<10	748	152	<10	mg/kg	TM5/PM8
EPH >C21-C40	<10	<10	250	174	422	<10	1609	<10	3057	866	<10	mg/kg	TM5/PM8
EPH >C8-C40	<30	<30	293	190	480	<30	1836	<30	3925	1039	<30	mg/kg	TM5/PM8
TPH CWG													
Aliphatics													
>C5-C6 #M	-	-	-	-	-	-	-	<0.1	-	-	<0.1	mg/kg	TM36/PM12
>C6-C8 #M	-	-	-	-	-	-	-	<0.1	-	-	<0.1	mg/kg	TM36/PM12
>C8-C10	-	-	-	-	-	-	-	<0.1	-	-	<0.1	mg/kg	TM36/PM12
>C10-C12 #M	-	-	-	-	-	-	-	<0.2	-	-	<0.2	mg/kg	TM5/PM16
>C12-C16 #M	-	-	-	-	-	-	-	<4	-	-	<4	mg/kg	TM5/PM16
>C16-C21 #M	-	-	-	-	-	-	-	<7	-	-	<7	mg/kg	TM5/PM16
>C21-C35 #M	-	-	-	-	-	-	-	<7	-	-	<7	mg/kg	TM5/PM16
Total aliphatics C5-35	-	-	-	-	-	-	-	<19	-	-	<19	mg/kg	TM5/TM36/PM12/PM16
Aromatics													
>C5-EC7 #	-	-	-	-	-	-	-	<0.1	-	-	<0.1	mg/kg	TM36/PM12
>EC7-EC8 #	-	-	-	-	-	-	-	<0.1	-	-	<0.1	mg/kg	TM36/PM12
>EC8-EC10 #M	-	-	-	-	-	-	-	<0.1	-	-	<0.1	mg/kg	TM36/PM12
>EC10-EC12 #	-	-	-	-	-	-	-	<0.2	-	-	<0.2	mg/kg	TM5/PM16
>EC12-EC16 #	-	-	-	-	-	-	-	<4	-	-	<4	mg/kg	TM5/PM16
>EC16-EC21 #	-	-	-	-	-	-	-	<7	-	-	<7	mg/kg	TM5/PM16
>EC21-EC35 #	-	-	-	-	-	-	-	19	-	-	<7	mg/kg	TM5/PM16
Total aromatics C5-35 #	-	-	-	-	-	-	-	19	-	-	<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	-	-	-	-	-	-	-	<38	-	-	<38	mg/kg	TM5/TM36/PM12/PM16
Total Phenols HPLC	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	0.79	<0.15	<0.15	<0.15	<0.15	mg/kg	TM26/PM21
Natural Moisture Content	11.7	4.1	18.1	5.0	14.3	6.1	17.7	7.6	17.0	13.0	<0.1	%	PM4/PM0
Natural Moisture Content	-	-	-	-	-	-	-	-	-	-	<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #M	0.0246	0.0040	0.0813	0.0265	0.0148	0.0068	0.0101	0.0046	0.0696	0.0293	<0.0015	g/l	TM38/PM20
Sulphate as SO4 (2:1 Ext)	-	-	-	-	-	-	-	-	-	-	<0.0015	g/l	TM38/PM60

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	25-27	37-39	40-42	49-51	52-54	58-60	64-66	70-72	79-81	82-84	LOD/LOR	Units	Method No.
Sample ID	WS3	WS3	TP4	TP4	TP3	TP3	TP2	TP2	TP1	TP1			
Depth	1.00	5.00	0.00-0.30	2.00	0.30	0.00-1.00	0.00-0.20	1.00-1.50	0.50	1.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	2	2	2	2	2	2	2	2	2	2			
Date of Receipt	12/11/2016	12/11/2016	12/11/2016	12/11/2016	12/11/2016	12/11/2016	12/11/2016	12/11/2016	12/11/2016	12/11/2016			
Free Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Total Cyanide [#M]	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	9.1	0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
pH [#M]	9.10	9.36	8.43	9.22	8.49	9.27	8.17	8.72	7.79	8.24	<0.01	pH units	TM73/PM11
Sample Type	Clay	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand		None	PM13/PM0
Sample Colour	Dark Brown	Medium Brown	Dark Brown	Medium Brown	Dark Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown		None	PM13/PM0
Other Items	stones, sand	NA	stones, clinker	NA	Stones	Stones	Stones, clinker	stones	stones, clinker	stones, clay		None	PM13/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

J E Sample No.	85-87	88-90	91-93	97-99	103-105	109-111	112-114	115-117			LOD/LOR	Units	Method No.
Sample ID	TP1	TP1	TP5	TP5	TP6	TP6	TP7	TP7					
Depth	2.00	2.60	0.30	1.20	0.30	2.00	0.30	0.50					
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T					
Sample Date	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016					
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil					
Batch Number	2	2	2	2	2	2	2	2					
Date of Receipt	12/11/2016	12/11/2016	12/11/2016	12/11/2016	12/11/2016	12/11/2016	12/11/2016	12/11/2016					
Arsenic #M	12.8	13.4	61.4	14.5	18.2	-	-	-			<0.5	mg/kg	TM30/PM15
Arsenic	-	-	-	-	-	95.3	85.9	33.8			<0.5	mg/kg	TM30/PM62
Cadmium #M	0.2	<0.1	3.5	1.1	1.1	-	-	-			<0.1	mg/kg	TM30/PM15
Cadmium	-	-	-	-	-	6.0	2.2	2.0			<0.1	mg/kg	TM30/PM62
Chromium #M	32.7	31.5	69.0	40.5	62.9	-	-	-			<0.5	mg/kg	TM30/PM15
Chromium	-	-	-	-	-	22.7	34.3	15.0			<0.5	mg/kg	TM30/PM62
Copper #M	35	20	311$_{AA}$	20	113	-	-	-			<1	mg/kg	TM30/PM15
Copper	-	-	-	-	-	281$_{AA}$	1122$_{AB}$	415$_{AA}$			<1	mg/kg	TM30/PM62
Lead #M	30	20	1093	68	486	-	-	-			<5	mg/kg	TM30/PM15
Lead	-	-	-	-	-	4901$_{AA}$	1663	623			<5	mg/kg	TM30/PM62
Mercury #M	<0.1	<0.1	1.4	<0.1	1.4	-	-	-			<0.1	mg/kg	TM30/PM15
Mercury	-	-	-	-	-	<0.1	0.5	<0.1			<0.1	mg/kg	TM30/PM62
Nickel #M	23.2	22.4	64.0	17.1	18.0	-	-	-			<0.7	mg/kg	TM30/PM15
Nickel	-	-	-	-	-	78.8	148.8	46.6			<0.7	mg/kg	TM30/PM62
Selenium #M	<1	<1	2	<1	6	-	-	-			<1	mg/kg	TM30/PM15
Selenium	-	-	-	-	-	<1	4	5			<1	mg/kg	TM30/PM62
Water Soluble Boron #M	0.7	0.9	1.8	0.6	1.9	-	-	-			<0.1	mg/kg	TM74/PM32
Water Soluble Boron	-	-	-	-	-	0.9	1.1	2.5			<0.1	mg/kg	TM74/PM61
Zinc #M	133	90	3064$_{AA}$	518	581	-	-	-			<5	mg/kg	TM30/PM15
Zinc	-	-	-	-	-	7026$_{AA}$	8505$_{AB}$	2319			<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene #M	0.08	<0.04	1.28$_{AA}$	<0.04	1.19$_{AA}$	1.61$_{AA}$	1.49$_{AA}$	2.81			<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	0.67$_{AA}$	<0.03	0.35$_{AA}$	1.02$_{AA}$	0.41$_{AA}$	0.50			<0.03	mg/kg	TM4/PM8
Acenaphthene #M	<0.05	<0.05	0.88$_{AA}$	<0.05	1.59$_{AA}$	1.24$_{AA}$	4.84$_{AA}$	1.01			<0.05	mg/kg	TM4/PM8
Fluorene #M	<0.04	<0.04	1.03$_{AA}$	<0.04	0.96$_{AA}$	1.08$_{AA}$	7.32$_{AA}$	1.04			<0.04	mg/kg	TM4/PM8
Phenanthrene #M	0.31	0.04	12.37$_{AA}$	0.06	17.83$_{AA}$	19.43$_{AA}$	100.51$_{AA}$	10.47			<0.03	mg/kg	TM4/PM8
Anthracene #	0.09	<0.04	3.16$_{AA}$	<0.04	4.27$_{AA}$	4.80$_{AA}$	17.72$_{AA}$	2.64			<0.04	mg/kg	TM4/PM8
Fluoranthene #M	0.39	0.04	21.33$_{AA}$	0.11	30.96$_{AA}$	36.74$_{AA}$	131.00$^{++}_{AA}$	15.63			<0.03	mg/kg	TM4/PM8
Pyrene #	0.32	0.04	16.89$_{AA}$	0.08	24.92$_{AA}$	29.46$_{AA}$	88.54$_{AA}$	12.30			<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	0.20	<0.06	10.00$_{AA}$	0.07	12.04$_{AA}$	16.05$_{AA}$	64.99$_{AA}$	6.74			<0.06	mg/kg	TM4/PM8
Chrysene #M	0.17	0.03	11.27$_{AA}$	0.05	13.60$_{AA}$	17.49$_{AA}$	78.25$_{AA}$	6.73			<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	0.28	<0.07	18.54$_{AA}$	0.07	22.53$_{AA}$	29.58$_{AA}$	101.21$_{AA}$	11.51			<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	0.14	<0.04	9.82$_{AA}$	0.04	12.80$_{AA}$	16.08$_{AA}$	46.99$_{AA}$	6.69			<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	0.11	<0.04	7.00$_{AA}$	<0.04	9.79$_{AA}$	11.90$_{AA}$	30.30$_{AA}$	4.93			<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04	<0.04	1.51$_{AA}$	<0.04	1.67$_{AA}$	1.99$_{AA}$	7.53$_{AA}$	0.60			<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	0.13	<0.04	5.79$_{AA}$	<0.04	7.70$_{AA}$	9.58$_{AA}$	23.55$_{AA}$	3.97			<0.04	mg/kg	TM4/PM8
PAH 16 Total	2.2	<0.6	121.5$_{AA}$	<0.6	162.2$_{AA}$	198.1$_{AA}$	704.7$_{AA}$	87.6			<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.20	<0.05	13.35$_{AA}$	0.05	16.22$_{AA}$	21.30$_{AA}$	72.87$_{AA}$	8.29			<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.08	<0.02	5.19$_{AA}$	<0.02	6.31$_{AA}$	8.28$_{AA}$	28.34$_{AA}$	3.22			<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	99	97	110$_{AA}$	94	100$_{AA}$	113$_{AA}$	105$_{AA}$	95			<0	%	TM4/PM8
Methyl Tertiary Butyl Ether #	<2	<2	<2	-	-	-	-	-			<2	ug/kg	TM15/PM10
Benzene #	<3	<3	<3	-	-	-	-	-			<3	ug/kg	TM15/PM10

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

J E Sample No.	85-87	88-90	91-93	97-99	103-105	109-111	112-114	115-117			LOD/LOR	Units	Method No.
Sample ID	TP1	TP1	TP5	TP5	TP6	TP6	TP7	TP7					
Depth	2.00	2.60	0.30	1.20	0.30	2.00	0.30	0.50					
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T					
Sample Date	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016					
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil					
Batch Number	2	2	2	2	2	2	2	2					
Date of Receipt	12/11/2016	12/11/2016	12/11/2016	12/11/2016	12/11/2016	12/11/2016	12/11/2016	12/11/2016					
Toluene #	<3	<3	7	-	-	-	-	-			<3	ug/kg	TM15/PM10
Ethylbenzene #	<3	<3	3	-	-	-	-	-			<3	ug/kg	TM15/PM10
p/m-Xylene #	<5	<5	20	-	-	-	-	-			<5	ug/kg	TM15/PM10
o-Xylene #	<3	<3	7	-	-	-	-	-			<3	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	87	99	91	-	-	-	-	-			<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	67	89	58	-	-	-	-	-			<0	%	TM15/PM10
EPH >C8-C10 #M	<5	<5	<5	<5	<5	<5	<5	<5			<5	mg/kg	TM5/PM8
EPH >C10-C12 #M	<10	<10	<10	<10	<10	<10	<10	<10			<10	mg/kg	TM5/PM8
EPH >C12-C16 #M	52	40	32	<10	<10	20	18	<10			<10	mg/kg	TM5/PM8
EPH >C16-C21 #M	249	177	235	<10	174	257	218	92			<10	mg/kg	TM5/PM8
EPH >C21-C40	987	667	1047	<10	1246	1290	946	414			<10	mg/kg	TM5/PM8
EPH >C8-C40	1288	884	1314	<30	1420	1567	1182	506			<30	mg/kg	TM5/PM8
TPH CWG													
Aliphatics													
>C5-C6 #M	<0.1	<0.1	<0.1 SV	-	-	-	-	-			<0.1	mg/kg	TM36/PM12
>C6-C8 #M	<0.1	<0.1	<0.1 SV	-	-	-	-	-			<0.1	mg/kg	TM36/PM12
>C8-C10	<0.1	<0.1	<0.1 SV	-	-	-	-	-			<0.1	mg/kg	TM36/PM12
>C10-C12 #M	<0.2	<0.2	<0.2	-	-	-	-	-			<0.2	mg/kg	TM5/PM16
>C12-C16 #M	9	11	<4	-	-	-	-	-			<4	mg/kg	TM5/PM16
>C16-C21 #M	57	35	<7	-	-	-	-	-			<7	mg/kg	TM5/PM16
>C21-C35 #M	125	52	56	-	-	-	-	-			<7	mg/kg	TM5/PM16
Total aliphatics C5-35	191	98	56	-	-	-	-	-			<19	mg/kg	TM5/TM36/PM12/PM16
Aromatics													
>C5-EC7 #	<0.1	<0.1	<0.1 SV	-	-	-	-	-			<0.1	mg/kg	TM36/PM12
>EC7-EC8 #	<0.1	<0.1	<0.1 SV	-	-	-	-	-			<0.1	mg/kg	TM36/PM12
>EC8-EC10 #M	<0.1	<0.1	<0.1 SV	-	-	-	-	-			<0.1	mg/kg	TM36/PM12
>EC10-EC12 #	<0.2	<0.2	0.6	-	-	-	-	-			<0.2	mg/kg	TM5/PM16
>EC12-EC16 #	<4	<4	11	-	-	-	-	-			<4	mg/kg	TM5/PM16
>EC16-EC21 #	16	22	116	-	-	-	-	-			<7	mg/kg	TM5/PM16
>EC21-EC35 #	128	89	449	-	-	-	-	-			<7	mg/kg	TM5/PM16
Total aromatics C5-35 #	144	111	577	-	-	-	-	-			<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	335	209	633	-	-	-	-	-			<38	mg/kg	TM5/TM36/PM12/PM16
Total Phenols HPLC	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15			<0.15	mg/kg	TM26/PM21
Natural Moisture Content	13.7	15.9	15.8	4.9	18.2	-	-	-			<0.1	%	PM4/PM0
Natural Moisture Content	-	-	-	-	-	28.1	18.0	19.9			<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3			<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #M	0.0378	0.0384	0.0875	0.0117	0.2928	-	-	-			<0.0015	g/l	TM38/PM20
Sulphate as SO4 (2:1 Ext)	-	-	-	-	-	0.0366	0.0092	0.1149			<0.0015	g/l	TM38/PM60

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	85-87	88-90	91-93	97-99	103-105	109-111	112-114	115-117			LOD/LOR	Units	Method No.
Sample ID	TP1	TP1	TP5	TP5	TP6	TP6	TP7	TP7					
Depth	2.00	2.60	0.30	1.20	0.30	2.00	0.30	0.50					
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T					
Sample Date	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016	10/11/2016					
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil					
Batch Number	2	2	2	2	2	2	2	2					
Date of Receipt	12/11/2016	12/11/2016	12/11/2016	12/11/2016	12/11/2016	12/11/2016	12/11/2016	12/11/2016					
Free Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	mg/kg	TM89/PM45
Total Cyanide #M	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	mg/kg	TM89/PM45
pH #M	8.32	8.11	8.84	9.13	8.42	7.93	8.27	9.36			<0.01	pH units	TM73/PM11
Sample Type	Sand	Clay	Sand	Sand	Sand	NDP	NDP	NDP				None	PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Dark Brown	Medium Brown	Dark Brown	NDP	NDP	NDP				None	PM13/PM0
Other Items	stones, clay	stones, sand	stones, clay	stones	stones	NDP	NDP	NDP				None	PM13/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

SVOC Report : **Solid**

J E Sample No.	70-72	85-87	88-90	91-93									
Sample ID	TP2	TP1	TP1	TP5									
Depth	1.00-1.50	2.00	2.60	0.30							Please see attached notes for all abbreviations and acronyms		
COC No / misc													
Containers	V J T	V J T	V J T	V J T									
Sample Date	10/11/2016	10/11/2016	10/11/2016	10/11/2016									
Sample Type	Soil	Soil	Soil	Soil									
Batch Number	2	2	2	2									
Date of Receipt	12/11/2016	12/11/2016	12/11/2016	12/11/2016							LOD/LOR	Units	Method No.
SVOC MS													
Phenols													
2-Chlorophenol #M	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
2-Methylphenol	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
2,4-Dichlorophenol #M	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
4-Methylphenol	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
Phenol #M	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene #M	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
2-Methylnaphthalene #M	<10	72	<10	19214 AB							<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	<100	<100	<100	<1000 AB							<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<100	<100	<1000 AB							<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<100	<100	<100	<1000 AB							<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<100	<100	<1000 AB							<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<100	<100	<1000 AB							<100	ug/kg	TM16/PM8
Dimethyl phthalate #M	<100	<100	<100	<1000 AB							<100	ug/kg	TM16/PM8
Other SVOCs													
1,2-Dichlorobenzene	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #M	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #M	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
Azobenzene	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
Carbazole	23	30	<10	16509 AB							<10	ug/kg	TM16/PM8
Dibenzofuran #M	<10	<10	<10	20578 AB							<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
Hexachlorobutadiene #M	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
Isophorone #M	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #M	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
Nitrobenzene #M	<10	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
Surrogate Recovery 2-Fluorobiphenyl	132	146	132	150 AB							<0	%	TM16/PM8
Surrogate Recovery p-Terphenyl-d14	135	150	135	183 AB							<0	%	TM16/PM8

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

VOC Report : **Solid**

J E Sample No.	70-72	85-87	88-90	91-93									
Sample ID	TP2	TP1	TP1	TP5									
Depth	1.00-1.50	2.00	2.60	0.30							Please see attached notes for all abbreviations and acronyms		
COC No / misc													
Containers	V J T	V J T	V J T	V J T									
Sample Date	10/11/2016	10/11/2016	10/11/2016	10/11/2016									
Sample Type	Soil	Soil	Soil	Soil									
Batch Number	2	2	2	2									
Date of Receipt	12/11/2016	12/11/2016	12/11/2016	12/11/2016									
											LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2							<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #	<2	<2	<2	<2							<2	ug/kg	TM15/PM10
Chloromethane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	<2	<2							<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1	<1							<1	ug/kg	TM15/PM10
Chloroethane #	<2	<2	<2	<2							<2	ug/kg	TM15/PM10
Trichlorofluoromethane #	<2	<2	<2	<2							<2	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<6	<6	<6	<6							<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	-	-	-	123							<30	ug/kg	TM15/PM10
Dichloromethane (DCM) #	<7	<7	<7	-							<7	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
1,1-Dichloroethane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
Bromochloromethane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
Chloroform #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
1,1,1-Trichloroethane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
Carbon tetrachloride #	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
1,2-Dichloroethane #	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
Benzene #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
Trichloroethene (TCE) #	11	<3	47	<3							<3	ug/kg	TM15/PM10
1,2-Dichloropropane #	<6	<6	<6	<6							<6	ug/kg	TM15/PM10
Dibromomethane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
Bromodichloromethane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
Toluene #	<3	<3	<3	7							<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	20	<3	20	<3							<3	ug/kg	TM15/PM10
1,3-Dichloropropane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
Dibromochloromethane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
Chlorobenzene #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
Ethylbenzene #	<3	<3	<3	3							<3	ug/kg	TM15/PM10
p/m-Xylene #	<5	<5	<5	20							<5	ug/kg	TM15/PM10
o-Xylene #	<3	<3	<3	7							<3	ug/kg	TM15/PM10
Styrene	<3	<3	<3	<3							<3	ug/kg	TM15_A/PM10
Bromoform	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
Isopropylbenzene #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2	<2							<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
Propylbenzene #	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5	<5	<5	<5							<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	<6	<6	<6	<6							<6	ug/kg	TM15/PM10
sec-Butylbenzene #	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
4-Isopropyltoluene #	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
n-Butylbenzene #	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane #	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene #	<7	<7	<7	<7							<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
Naphthalene	<27	<27	<27	361							<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene #	<7	<7	<7	<7							<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	104	87	99	91							<0	%	TM15/PM10

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

VOC Report : **Solid**

J E Sample No.	70-72	85-87	88-90	91-93							LOD/LOR	Units	Method No.
Sample ID	TP2	TP1	TP1	TP5									
Depth	1.00-1.50	2.00	2.60	0.30									
COC No / misc													
Containers	V J T	V J T	V J T	V J T									
Sample Date	10/11/2016	10/11/2016	10/11/2016	10/11/2016									
Sample Type	Soil	Soil	Soil	Soil									
Batch Number	2	2	2	2									
Date of Receipt	12/11/2016	12/11/2016	12/11/2016	12/11/2016									
VOC MS Continued													
Surrogate Recovery 4-Bromofluorobenzene	106	67	89	58							<0	%	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

Signed on behalf of Jones Environmental Laboratory:



Ryan Butterworth
Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	2	WS3	1.00	26	16/11/2016	**General Description (Bulk Analysis)**	Soil/Sand
					16/11/2016	**Asbestos Fibres**	NAD
					16/11/2016	**Asbestos Fibres (2)**	NAD
					16/11/2016	**Asbestos ACM**	NAD
					16/11/2016	**Asbestos ACM (2)**	NAD
					16/11/2016	**Asbestos Type**	NAD
					16/11/2016	**Asbestos Type (2)**	NAD
					16/11/2016	**Asbestos Level Screen**	NAD
16/16961	2	WS3	5.00	38	16/11/2016	**General Description (Bulk Analysis)**	Soil/Sand
					16/11/2016	**Asbestos Fibres**	NAD
					16/11/2016	**Asbestos Fibres (2)**	NAD
					16/11/2016	**Asbestos ACM**	NAD
					16/11/2016	**Asbestos ACM (2)**	NAD
					16/11/2016	**Asbestos Type**	NAD
					16/11/2016	**Asbestos Type (2)**	NAD
					16/11/2016	**Asbestos Level Screen**	NAD
16/16961	2	TP4	0.00-0.30	41	16/11/2016	**General Description (Bulk Analysis)**	Soil/Stone
					16/11/2016	**Asbestos Fibres**	NAD
					16/11/2016	**Asbestos Fibres (2)**	NAD
					16/11/2016	**Asbestos ACM**	NAD
					16/11/2016	**Asbestos ACM (2)**	NAD
					16/11/2016	**Asbestos Type**	NAD
					16/11/2016	**Asbestos Type (2)**	NAD
					16/11/2016	**Asbestos Level Screen**	NAD
16/16961	2	TP4	2.00	50	16/11/2016	**General Description (Bulk Analysis)**	Soil/Stone
					16/11/2016	**Asbestos Fibres**	NAD
					16/11/2016	**Asbestos Fibres (2)**	NAD
					16/11/2016	**Asbestos ACM**	NAD
					16/11/2016	**Asbestos ACM (2)**	NAD
					16/11/2016	**Asbestos Type**	NAD
					16/11/2016	**Asbestos Type (2)**	NAD
					16/11/2016	**Asbestos Level Screen**	NAD
16/16961	2	TP3	0.30	53	16/11/2016	**General Description (Bulk Analysis)**	Soil/Stone
					16/11/2016	**Asbestos Fibres**	NAD
					16/11/2016	**Asbestos Fibres (2)**	NAD

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	2	TP3	0.30	53	16/11/2016	**Asbestos ACM**	NAD
					16/11/2016	**Asbestos ACM (2)**	NAD
					16/11/2016	**Asbestos Type**	NAD
					16/11/2016	**Asbestos Type (2)**	NAD
					16/11/2016	**Asbestos Level Screen**	NAD
16/16961	2	TP3	0.00-1.00	59	16/11/2016	**General Description (Bulk Analysis)**	soil/stones
					16/11/2016	**Asbestos Fibres**	NAD
					16/11/2016	**Asbestos Fibres (2)**	NAD
					16/11/2016	**Asbestos ACM**	NAD
					16/11/2016	**Asbestos ACM (2)**	NAD
					16/11/2016	**Asbestos Type**	NAD
					16/11/2016	**Asbestos Type (2)**	NAD
					16/11/2016	**Asbestos Level Screen**	NAD
16/16961	2	TP2	0.00-0.20	65	16/11/2016	**General Description (Bulk Analysis)**	soil/stones
					16/11/2016	**Asbestos Fibres**	NAD
					16/11/2016	**Asbestos Fibres (2)**	NAD
					16/11/2016	**Asbestos ACM**	NAD
					16/11/2016	**Asbestos ACM (2)**	NAD
					16/11/2016	**Asbestos Type**	NAD
					16/11/2016	**Asbestos Type (2)**	NAD
					16/11/2016	**Asbestos Level Screen**	NAD
16/16961	2	TP2	1.00-1.50	71	16/11/2016	**General Description (Bulk Analysis)**	soil/stones
					16/11/2016	**Asbestos Fibres**	NAD
					16/11/2016	**Asbestos Fibres (2)**	NAD
					16/11/2016	**Asbestos ACM**	NAD
					16/11/2016	**Asbestos ACM (2)**	NAD
					16/11/2016	**Asbestos Type**	NAD
					16/11/2016	**Asbestos Type (2)**	NAD
					16/11/2016	**Asbestos Level Screen**	NAD
16/16961	2	TP1	0.50	80	16/11/2016	**General Description (Bulk Analysis)**	soil/stones
					16/11/2016	**Asbestos Fibres**	NAD
					16/11/2016	**Asbestos Fibres (2)**	NAD
					16/11/2016	**Asbestos ACM**	NAD
					16/11/2016	**Asbestos ACM (2)**	NAD
					16/11/2016	**Asbestos Type**	NAD
					16/11/2016	**Asbestos Type (2)**	NAD
					16/11/2016	**Asbestos Level Screen**	NAD
16/16961	2	TP1	1.00	83	16/11/2016	**General Description (Bulk Analysis)**	soil/stones
					16/11/2016	**Asbestos Fibres**	NAD
					16/11/2016	**Asbestos Fibres (2)**	NAD
					16/11/2016	**Asbestos ACM**	NAD
					16/11/2016	**Asbestos ACM (2)**	NAD
					16/11/2016	**Asbestos Type**	NAD
					16/11/2016	**Asbestos Type (2)**	NAD
					16/11/2016	**Asbestos Level Screen**	NAD
16/16961	2	TP1	2.00	86	16/11/2016	**General Description (Bulk Analysis)**	soil/stones
					16/11/2016	**Asbestos Fibres**	NAD

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	2	TP1	2.00	86	16/11/2016	**Asbestos Fibres (2)**	NAD
					16/11/2016	**Asbestos ACM**	NAD
					16/11/2016	**Asbestos ACM (2)**	NAD
					16/11/2016	**Asbestos Type**	NAD
					16/11/2016	**Asbestos Type (2)**	NAD
					16/11/2016	**Asbestos Level Screen**	NAD
16/16961	2	TP1	2.60	89	16/11/2016	**General Description (Bulk Analysis)**	Soil/Stone
					16/11/2016	**Asbestos Fibres**	NAD
					16/11/2016	**Asbestos Fibres (2)**	NAD
					16/11/2016	**Asbestos ACM**	NAD
					16/11/2016	**Asbestos ACM (2)**	NAD
					16/11/2016	**Asbestos Type**	NAD
					16/11/2016	**Asbestos Type (2)**	NAD
					16/11/2016	**Asbestos Level Screen**	NAD
16/16961	2	TP5	0.30	92	16/11/2016	**General Description (Bulk Analysis)**	soil-stones
					16/11/2016	**Asbestos Fibres**	NAD
					16/11/2016	**Asbestos Fibres (2)**	NAD
					16/11/2016	**Asbestos ACM**	NAD
					16/11/2016	**Asbestos ACM (2)**	NAD
					16/11/2016	**Asbestos Type**	NAD
					16/11/2016	**Asbestos Type (2)**	NAD
					16/11/2016	**Asbestos Level Screen**	NAD
16/16961	2	TP5	1.20	98	16/11/2016	**General Description (Bulk Analysis)**	sand-stones
					16/11/2016	**Asbestos Fibres**	NAD
					16/11/2016	**Asbestos Fibres (2)**	NAD
					16/11/2016	**Asbestos ACM**	NAD
					16/11/2016	**Asbestos ACM (2)**	NAD
					16/11/2016	**Asbestos Type**	NAD
					16/11/2016	**Asbestos Type (2)**	NAD
					16/11/2016	**Asbestos Level Screen**	NAD
16/16961	2	TP6	0.30	104	16/11/2016	**General Description (Bulk Analysis)**	soil-stones
					16/11/2016	**Asbestos Fibres**	NAD
					16/11/2016	**Asbestos Fibres (2)**	NAD
					16/11/2016	**Asbestos ACM**	NAD
					16/11/2016	**Asbestos ACM (2)**	NAD
					16/11/2016	**Asbestos Type**	NAD
					16/11/2016	**Asbestos Type (2)**	NAD
					16/11/2016	**Asbestos Level Screen**	NAD
16/16961	2	TP6	2.00	110	16/11/2016	**General Description (Bulk Analysis)**	soil/stones
					16/11/2016	**Asbestos Fibres**	Fibre Bundles
					16/11/2016	**Asbestos ACM**	NAD
					16/11/2016	**Asbestos Type**	Chrysotile
					16/11/2016	**Asbestos Level Screen**	<0.1%
					13/12/2016	**Asbestos Gravimetric Quantification**	<0.001 (mass %)
					13/12/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					13/12/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	2	TP7	0.30	113	16/11/2016	**General Description (Bulk Analysis)**	soil/stones
					16/11/2016	**Asbestos Fibres**	Fibre Bundles
					16/11/2016	**Asbestos ACM**	NAD
					16/11/2016	**Asbestos Type**	Chrysotile
					16/11/2016	**Asbestos Level Screen**	<0.1%
					13/12/2016	**Asbestos Gravimetric Quantification**	<0.001 (mass %)
					13/12/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					13/12/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)
16/16961	2	TP7	0.50	116	16/11/2016	**General Description (Bulk Analysis)**	soil/stones
					16/11/2016	**Asbestos Fibres**	Fibre Bundles
					16/11/2016	**Asbestos ACM**	NAD
					16/11/2016	**Asbestos Type**	Chrysotile
					16/11/2016	**Asbestos Level Screen**	<0.1%
					13/12/2016	**Asbestos Gravimetric Quantification**	<0.001 (mass %)
					13/12/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					13/12/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)

Client Name: WYG **Matrix : Solid**
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	NDP Reason
16/16961	2	TP6	2.00	109-111	Asbestos detected in sample
16/16961	2	TP7	0.30	112-114	Asbestos detected in sample
16/16961	2	TP7	0.50	115-117	Asbestos detected in sample

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
No deviating sample report results for job 16/16961						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.
Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 16/16961

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
SA	ISO17025 (SANAS) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x5 Dilution
AB	x10 Dilution
AC	x20 Dilution

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.			AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.	Yes	Yes	AD	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM60	As received solid samples are extracted with deionised water in a 2:1 ratio of water to solid.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM61	As received solid samples are extracted with hot water in a 20:1 ratio of water to soil ready for analysis by ICP.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.	Yes	Yes	AR	Yes
TM15_A	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds, Vinyl Chloride & Styrene by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

Exova Jones Environmental

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WYG
5th Floor
Longcross Court
47 Newport Road
Cardiff
CF24 0AD

Attention :	Nicholas Bool
Date :	13th December, 2016
Your reference :	A095973-2
Our reference :	Test Report 16/16961 Batch 3
Location :	Tidal Lagoon
Date samples received :	16th November, 2016
Status :	Final report
Issue :	2

Fifty four samples were received for analysis on 16th November, 2016 of which twenty two were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Phil Sommerton BSc
Project Manager

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	126-128	129-131	135-137	141-143	147-149	156-158	162-164	168-170	174-176	180-182	LOD/LOR	Units	Method No.
Sample ID	HP3	HP3	HP2	HP2	HP1	HP1	HP4	HP4	HP5	HP5			
Depth	0.50	1.00	0.00-0.20	1.00	0.30	2.00	0.50	2.00	0.50	2.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	3	3	3	3	3	3	3	3	3	3			
Date of Receipt	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016			
Arsenic [#M]	36.6	43.9	33.2	-	-	-	-	-	139.7	62.0	<0.5	mg/kg	TM30/PM15
Arsenic	-	-	-	140.6	83.7	92.8	98.2	257.9	-	-	<0.5	mg/kg	TM30/PM62
Cadmium [#M]	1.7	0.9	0.9	-	-	-	-	-	14.8	1.3	<0.1	mg/kg	TM30/PM15
Cadmium	-	-	-	20.5	8.2	2.4	31.4 [AC]	7.2	-	-	<0.1	mg/kg	TM30/PM62
Chromium [#M]	37.4	46.1	35.5	-	-	-	-	-	45.6	37.0	<0.5	mg/kg	TM30/PM15
Chromium	-	-	-	21.9	20.1	24.5	19.1	23.2	-	-	<0.5	mg/kg	TM30/PM62
Copper [#M]	169	269 [AB]	268 [AB]	-	-	-	-	-	753 [AB]	334 [AB]	<1	mg/kg	TM30/PM15
Copper	-	-	-	1077 [AB]	536 [AB]	294	576 [AC]	577 [AB]	-	-	<1	mg/kg	TM30/PM62
Lead [#M]	202	135	208	-	-	-	-	-	1777	320	<5	mg/kg	TM30/PM15
Lead	-	-	-	2026	647	1521	1080	6875 [AB]	-	-	<5	mg/kg	TM30/PM62
Mercury [#M]	0.1	<0.1	0.4	-	-	-	-	-	3.1	<0.1	<0.1	mg/kg	TM30/PM15
Mercury	-	-	-	0.8	0.2	<0.1	0.4	2.4	-	-	<0.1	mg/kg	TM30/PM62
Nickel [#M]	34.8	29.2	28.1	-	-	-	-	-	816.2 [AB]	50.0	<0.7	mg/kg	TM30/PM15
Nickel	-	-	-	228.7	91.9	36.2	1860.2 [AC]	99.0	-	-	<0.7	mg/kg	TM30/PM62
Selenium [#M]	2	1	2	-	-	-	-	-	2	2	<1	mg/kg	TM30/PM15
Selenium	-	-	-	1	1	1	2	2	-	-	<1	mg/kg	TM30/PM62
Water Soluble Boron [#M]	0.9	0.7	1.7	-	-	-	-	-	1.2	1.4	<0.1	mg/kg	TM74/PM32
Water Soluble Boron	-	-	-	2.7	1.1	1.2	1.4	1.8	-	-	<0.1	mg/kg	TM74/PM61
Zinc [#M]	541	337	396	-	-	-	-	-	4991 [AB]	911	<5	mg/kg	TM30/PM15
Zinc	-	-	-	6451 [AB]	1709	2532	8929 [AC]	10125 [AB]	-	-	<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene [#M]	2.70	1.26	0.91	6.60 [AC]	2.77	1.27	0.49	<0.40 [AC]	2.32 [AC]	6.67 [AC]	<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.46	0.28	0.13	1.19 [AC]	0.26	0.09	0.19	<0.30 [AC]	0.57 [AC]	1.78 [AC]	<0.03	mg/kg	TM4/PM8
Acenaphthene [#M]	0.21	0.12	0.10	1.66 [AC]	1.01	0.34	0.17	<0.50 [AC]	0.92 [AC]	1.27 [AC]	<0.05	mg/kg	TM4/PM8
Fluorene [#M]	0.25	0.16	0.12	1.40 [AC]	0.66	0.32	0.22	<0.40 [AC]	0.83 [AC]	1.67 [AC]	<0.04	mg/kg	TM4/PM8
Phenanthrene [#M]	7.48	2.22	1.80	22.84 [AC]	13.59	3.81	2.71	5.02 [AC]	14.94 [AC]	16.28 [AC]	<0.03	mg/kg	TM4/PM8
Anthracene [#]	2.54	0.58	0.45	5.30 [AC]	2.81	0.97	0.73	1.28 [AC]	3.31 [AC]	4.57 [AC]	<0.04	mg/kg	TM4/PM8
Fluoranthene [#M]	13.18	3.63	2.87	35.17 [AC]	18.20	5.77	4.97	7.40 [AC]	27.68 [AC]	22.74 [AC]	<0.03	mg/kg	TM4/PM8
Pyrene [#]	10.65	3.10	2.43	28.88 [AC]	14.85	5.04	4.15	5.95 [AC]	23.37 [AC]	18.82 [AC]	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene [#]	6.77	1.50	1.31	14.42 [AC]	8.19	3.32	2.94	3.44 [AC]	10.97 [AC]	8.53 [AC]	<0.06	mg/kg	TM4/PM8
Chrysene [#M]	6.78	1.70	1.48	15.47 [AC]	8.86	3.74	2.83	3.54 [AC]	12.61 [AC]	9.20 [AC]	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene [#M]	11.57	2.55	2.28	24.45 [AC]	13.90	6.39	5.10	5.08 [AC]	21.48 [AC]	12.80 [AC]	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene [#]	5.86	1.22	1.12	12.39 [AC]	7.63	3.68	2.75	2.96 [AC]	11.92 [AC]	6.43 [AC]	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene [#M]	3.91	0.72	0.69	8.69 [AC]	5.25	2.65	1.78	2.02 [AC]	8.98 [AC]	4.22 [AC]	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene [#]	0.93	0.20	0.17	2.26 [AC]	1.05	0.51	0.42	<0.40 [AC]	1.53 [AC]	1.04 [AC]	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene [#]	3.35	0.58	0.56	6.60 [AC]	3.76	1.93	1.65	1.63 [AC]	7.81 [AC]	3.07 [AC]	<0.04	mg/kg	TM4/PM8
PAH 16 Total	76.6	19.8	16.4	187.3 [AC]	102.8	39.8	31.1	38.3 [AC]	149.2 [AC]	119.1 [AC]	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	8.33	1.84	1.64	17.60 [AC]	10.01	4.60	3.67	3.66 [AC]	15.47 [AC]	9.22 [AC]	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	3.24	0.71	0.64	6.85 [AC]	3.89	1.79	1.43	1.42 [AC]	6.01 [AC]	3.58 [AC]	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	93	93	90	100 [AC]	101	100	92	83 [AC]	101 [AC]	98 [AC]	<0	%	TM4/PM8
Methyl Tertiary Butyl Ether [#M]	-	<6	-	-	-	-	-	-	-	-	<6	ug/kg	TM15/PM10
Benzene [#M]	-	<5	-	-	-	-	-	-	-	-	<5	ug/kg	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	126-128	129-131	135-137	141-143	147-149	156-158	162-164	168-170	174-176	180-182	LOD/LOR	Units	Method No.
Sample ID	HP3	HP3	HP2	HP2	HP1	HP1	HP4	HP4	HP5	HP5			
Depth	0.50	1.00	0.00-0.20	1.00	0.30	2.00	0.50	2.00	0.50	2.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	3	3	3	3	3	3	3	3	3	3			
Date of Receipt	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016			
Toluene #M	-	<3	-	-	-	-	-	-	-	-	<3	ug/kg	TM15/PM10
Ethylbenzene #M	-	<3	-	-	-	-	-	-	-	-	<3	ug/kg	TM15/PM10
p/m-Xylene #M	-	<4	-	-	-	-	-	-	-	-	<4	ug/kg	TM15/PM10
o-Xylene #M	-	<4	-	-	-	-	-	-	-	-	<4	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	-	95	-	-	-	-	-	-	-	-	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	-	65	-	-	-	-	-	-	-	-	<0	%	TM15/PM10
EPH >C8-C10 #M	<5	<5	<5	<5	<5	52	<5	<5	21	<5	<5	mg/kg	TM5/PM8
EPH >C10-C12 #M	<10	<10	<10	<10	<10	46	<10	<10	26	<10	<10	mg/kg	TM5/PM8
EPH >C12-C16 #M	<10	<10	<10	22	13	151	<10	<10	199	32	<10	mg/kg	TM5/PM8
EPH >C16-C21 #M	70	53	44	230	124	177	96	93	2036	287	<10	mg/kg	TM5/PM8
EPH >C21-C40	326	103	341	1021	600	5593	708	639	3971	744	<10	mg/kg	TM5/PM8
EPH >C8-C40	396	156	385	1273	737	6019	804	732	6253	1063	<30	mg/kg	TM5/PM8
TPH CWG													
Aliphatics													
>C5-C6 #M	-	<0.1 SV	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
>C6-C8 #M	-	<0.1 SV	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
>C8-C10	-	<0.1 SV	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
>C10-C12 #M	-	<0.2	-	-	-	-	-	-	-	-	<0.2	mg/kg	TM5/PM16
>C12-C16 #M	-	<4	-	-	-	-	-	-	-	-	<4	mg/kg	TM5/PM16
>C16-C21 #M	-	<7	-	-	-	-	-	-	-	-	<7	mg/kg	TM5/PM16
>C21-C35 #M	-	<7	-	-	-	-	-	-	-	-	<7	mg/kg	TM5/PM16
Total aliphatics C5-35	-	<19	-	-	-	-	-	-	-	-	<19	mg/kg	TM5/TM36/PM12/PM16
Aromatics													
>C5-EC7 #	-	<0.1 SV	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
>EC7-EC8 #	-	<0.1 SV	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
>EC8-EC10 #M	-	<0.1 SV	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
>EC10-EC12 #	-	0.8	-	-	-	-	-	-	-	-	<0.2	mg/kg	TM5/PM16
>EC12-EC16 #	-	8	-	-	-	-	-	-	-	-	<4	mg/kg	TM5/PM16
>EC16-EC21 #	-	84	-	-	-	-	-	-	-	-	<7	mg/kg	TM5/PM16
>EC21-EC35 #	-	202	-	-	-	-	-	-	-	-	<7	mg/kg	TM5/PM16
Total aromatics C5-35 #	-	295	-	-	-	-	-	-	-	-	<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	-	295	-	-	-	-	-	-	-	-	<38	mg/kg	TM5/TM36/PM12/PM16
PCB 77	-	<5	-	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 81	-	<5	-	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 105	-	<5	-	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 114	-	<5	-	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 118	-	<5	-	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 123	-	<5	-	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 126	-	<5	-	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 156	-	<5	-	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 157	-	<5	-	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	126-128	129-131	135-137	141-143	147-149	156-158	162-164	168-170	174-176	180-182	LOD/LOR	Units	Method No.
Sample ID	HP3	HP3	HP2	HP2	HP1	HP1	HP4	HP4	HP5	HP5			
Depth	0.50	1.00	0.00-0.20	1.00	0.30	2.00	0.50	2.00	0.50	2.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	3	3	3	3	3	3	3	3	3	3			
Date of Receipt	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016			
PCB 167	-	<5	-	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 169	-	<5	-	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 189	-	<5	-	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
Total 12 PCBs	-	<60	-	-	-	-	-	-	-	-	<60	ug/kg	TM16/PM8
Total Phenols HPLC	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	0.15	<0.15	mg/kg	TM26/PM21
Natural Moisture Content	15.5	16.7	23.1	-	-	-	-	-	19.9	21.9	<0.1	%	PM4/PM0
Natural Moisture Content	-	-	-	27.6	22.0	24.4	20.4	21.9	-	-	<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #M	0.0889	0.0563	0.0948	-	-	-	-	-	0.1214	0.0645	<0.0015	g/l	TM38/PM20
Sulphate as SO4 (2:1 Ext)	-	-	-	0.1666	0.0222	0.1207	0.1022	0.2297	-	-	<0.0015	g/l	TM38/PM60
Free Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Total Cyanide #M	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Fraction Organic Carbon	0.128	0.073	0.159	NDP	NDP	NDP	NDP	NDP	0.195	0.156	<0.001	None	TM21/PM24
pH #M	8.13	8.30	7.92	7.86	8.14	7.91	7.81	7.65	7.94	7.84	<0.01	pH units	TM73/PM11
Sample Type	Clayey Loam	Loamy Sand	Clay	NDP	NDP	NDP	NDP	NDP	Sandy Loam	Sand		None	PM13/PM0
Sample Colour	Dark Brown	Medium Brown	Dark Brown	NDP	NDP	NDP	NDP	NDP	Dark Brown	Dark Brown		None	PM13/PM0
Other Items	Stones, vegetation and sand	Stones	Loam, stones, sand and vegetation	NDP	NDP	NDP	NDP	NDP	Stones and clay	Stones and clay		None	PM13/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	186-188	189-191	195-197	201-203	210-212	226-228	240-242	246-248	252-254	255-257	LOD/LOR	Units	Method No.
Sample ID	HP6	HP6	HP7	HP7	WS01	WS04	WS04	WS05	WS05	WS05			
Depth	0.50	1.00	0.30	1.00	1.00	0.30	5.00	1.00	3.00	4.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	J T	V J T	V J T	V J T			
Sample Date	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	3	3	3	3	3	3	3	3	3	3			
Date of Receipt	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016			
Arsenic #M	-	-	34.2	56.3	52.0	5.9	14.3	169.2	10.7	11.0	<0.5	mg/kg	TM30/PM15
Arsenic	93.5	108.2	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Cadmium #M	-	-	0.8	1.7	1.4	0.2	<0.1	16.7	2.1	0.2	<0.1	mg/kg	TM30/PM15
Cadmium	9.4	24.2	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Chromium #M	-	-	42.4	34.7	59.6	49.3	59.1	39.5	51.6	62.6	<0.5	mg/kg	TM30/PM15
Chromium	17.7	12.4	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Copper #M	-	-	167	336$_{AB}$	676$_{AB}$	22	37	269$_{AB}$	3	6	<1	mg/kg	TM30/PM15
Copper	525$_{AB}$	625$_{AB}$	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Lead #M	-	-	124	323	440	29	6	6195$_{AB}$	7	8	<5	mg/kg	TM30/PM15
Lead	1270	1320	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62
Mercury #M	-	-	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM30/PM15
Mercury	0.4	<0.1	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Nickel #M	-	-	33.3	54.2	15.8	37.5	7.4	34.9	6.5	5.9	<0.7	mg/kg	TM30/PM15
Nickel	58.7	205.8	-	-	-	-	-	-	-	-	<0.7	mg/kg	TM30/PM62
Selenium #M	-	-	1	2	<1	<1	<1	1	<1	<1	<1	mg/kg	TM30/PM15
Selenium	<1	<1	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Water Soluble Boron #M	-	-	0.8	1.1	0.5	0.6	1.3	1.7	0.6	0.4	<0.1	mg/kg	TM74/PM32
Water Soluble Boron	1.3	1.3	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM74/PM61
Zinc #M	-	-	314	565	1186	127	59	26560$_{AD}$	295	21	<5	mg/kg	TM30/PM15
Zinc	2678	4812$_{AB}$	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene #M	1.14	17.82$_{AC}$	0.56	6.64	<0.04	<0.04	<0.04	0.32	<0.04	0.51	<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.28	5.45$_{AC}$	0.15	1.84	<0.03	0.04	<0.03	0.28	<0.03	0.45	<0.03	mg/kg	TM4/PM8
Acenaphthene #M	0.23	0.93$_{AC}$	<0.05	0.60	<0.05	<0.05	<0.05	0.11	<0.05	0.25	<0.05	mg/kg	TM4/PM8
Fluorene #M	0.25	1.32$_{AC}$	<0.04	0.90	<0.04	<0.04	<0.04	0.14	<0.04	0.51	<0.04	mg/kg	TM4/PM8
Phenanthrene #M	3.01	21.07$_{AC}$	1.10	19.81	0.25	0.23	<0.03	2.40	<0.03	0.83	<0.03	mg/kg	TM4/PM8
Anthracene #	0.87	8.93$_{AC}$	0.55	3.58	0.06	0.11	<0.04	1.06	<0.04	0.06	<0.04	mg/kg	TM4/PM8
Fluoranthene #M	5.38	62.68$_{AC}$	3.97	34.87^{++}	0.40	0.63	<0.03	6.27	<0.03	0.13	<0.03	mg/kg	TM4/PM8
Pyrene #	4.63	57.06$_{AC}$	3.61	25.03^{++}	0.33	0.47	<0.03	5.23	<0.03	0.18	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	2.53	25.89$_{AC}$	2.76	8.33	0.24	0.38	<0.06	2.83	<0.06	0.07	<0.06	mg/kg	TM4/PM8
Chrysene #M	2.91	26.84$_{AC}$	2.87	8.36	0.21	0.44	<0.02	2.98	<0.02	0.05	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	5.03	44.77$_{AC}$	5.04	12.25	0.30	0.53	<0.07	5.07	<0.07	<0.07	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	2.48	21.75$_{AC}$	2.59	5.03	0.17	0.27	<0.04	2.83	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	1.87	14.81$_{AC}$	1.46	3.48	0.12	0.17	<0.04	2.37	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	0.38	3.31$_{AC}$	0.45	0.80	<0.04	0.04	<0.04	0.44	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	1.35	9.98$_{AC}$	1.18	2.32	0.10	0.13	<0.04	1.90	<0.04	<0.04	<0.04	mg/kg	TM4/PM8
PAH 16 Total	32.3	322.6$_{AC}$	26.3	133.8	2.2	3.4	<0.6	34.2	<0.6	3.0	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	3.62	32.23$_{AC}$	3.63	8.82	0.22	0.38	<0.05	3.65	<0.05	<0.05	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	1.41	12.54$_{AC}$	1.41	3.43	0.08	0.15	<0.02	1.42	<0.02	<0.02	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	94	90$_{AC}$	92	92	93	92	96	95	94	99	<0	%	TM4/PM8
Methyl Tertiary Butyl Ether #M	-	-	<6	-	-	-	-	-	<6	<12$_{AA}$	<6	ug/kg	TM15/PM10
Benzene #M	-	-	<5	-	-	-	-	-	<5	<10$_{AA}$	<5	ug/kg	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	186-188	189-191	195-197	201-203	210-212	226-228	240-242	246-248	252-254	255-257	LOD/LOR	Units	Method No.
Sample ID	HP6	HP6	HP7	HP7	WS01	WS04	WS04	WS05	WS05	WS05			
Depth	0.50	1.00	0.30	1.00	1.00	0.30	5.00	1.00	3.00	4.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	J T	V J T	V J T	V J T			
Sample Date	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	3	3	3	3	3	3	3	3	3	3			
Date of Receipt	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016			
Toluene #M	-	-	<3	-	-	-	-	-	<3	<6 AA	<3	ug/kg	TM15/PM10
Ethylbenzene #M	-	-	<3	-	-	-	-	-	<3	1650 AA	<3	ug/kg	TM15/PM10
p/m-Xylene #M	-	-	<4	-	-	-	-	-	<4	<8 AA	<4	ug/kg	TM15/PM10
o-Xylene #M	-	-	<4	-	-	-	-	-	<4	985 AA	<4	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	-	-	86	-	-	-	-	-	103	93 AA	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	-	-	52	-	-	-	-	-	112	64 AA	<0	%	TM15/PM10
EPH >C8-C10 #M	7	<5	<5	<5	<5	<5	<5	<5	<5	4471	<5	mg/kg	TM5/PM8
EPH >C10-C12 #M	<10	<10	<10	<10	<10	<10	<10	<10	<10	2460	<10	mg/kg	TM5/PM8
EPH >C12-C16 #M	14	24	<10	24	<10	<10	<10	<10	<10	1710	<10	mg/kg	TM5/PM8
EPH >C16-C21 #M	96	256	64	211	<10	<10	<10	74	<10	477	<10	mg/kg	TM5/PM8
EPH >C21-C40	565	837	254	653	92	136	<10	464	<10	161	<10	mg/kg	TM5/PM8
EPH >C8-C40	682	1117	318	888	92	136	<30	538	<30	9279	<30	mg/kg	TM5/PM8
TPH CWG													
Aliphatics													
>C5-C6 #M	-	-	<0.1 SV	-	-	-	-	-	<0.1	16.4 AC	<0.1	mg/kg	TM36/PM12
>C6-C8 #M	-	-	<0.1 SV	-	-	-	-	-	<0.1	1055.2 ++ AC	<0.1	mg/kg	TM36/PM12
>C8-C10	-	-	<0.1 SV	-	-	-	-	-	<0.1	6341.8 ++ AC	<0.1	mg/kg	TM36/PM12
>C10-C12 #M	-	-	<0.2	-	-	-	-	-	<0.2	1296.7	<0.2	mg/kg	TM5/PM16
>C12-C16 #M	-	-	<4	-	-	-	-	-	<4	824	<4	mg/kg	TM5/PM16
>C16-C21 #M	-	-	<7	-	-	-	-	-	<7	187	<7	mg/kg	TM5/PM16
>C21-C35 #M	-	-	<7	-	-	-	-	-	<7	25	<7	mg/kg	TM5/PM16
Total aliphatics C5-35	-	-	<19	-	-	-	-	-	<19	9746	<19	mg/kg	TM5/TM36/PM12/PM16
Aromatics													
>C5-EC7 #	-	-	<0.1 SV	-	-	-	-	-	<0.1	1.3 AC	<0.1	mg/kg	TM36/PM12
>EC7-EC8 #	-	-	<0.1 SV	-	-	-	-	-	<0.1	4.2 ++ AC	<0.1	mg/kg	TM36/PM12
>EC8-EC10 #M	-	-	<0.1 SV	-	-	-	-	-	<0.1	120.8 ++ AC	<0.1	mg/kg	TM36/PM12
>EC10-EC12 #	-	-	<0.2	-	-	-	-	-	<0.2	636.8	<0.2	mg/kg	TM5/PM16
>EC12-EC16 #	-	-	<4	-	-	-	-	-	<4	433	<4	mg/kg	TM5/PM16
>EC16-EC21 #	-	-	27	-	-	-	-	-	<7	138	<7	mg/kg	TM5/PM16
>EC21-EC35 #	-	-	115	-	-	-	-	-	<7	23	<7	mg/kg	TM5/PM16
Total aromatics C5-35 #	-	-	142	-	-	-	-	-	<19	1357	<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	-	-	142	-	-	-	-	-	<38	11103	<38	mg/kg	TM5/TM36/PM12/PM16
PCB 77	-	-	<5	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 81	-	-	<5	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 105	-	-	<5	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 114	-	-	<5	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 118	-	-	<5	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 123	-	-	<5	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 126	-	-	<5	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 156	-	-	<5	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 157	-	-	<5	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	186-188	189-191	195-197	201-203	210-212	226-228	240-242	246-248	252-254	255-257	LOD/LOR	Units	Method No.
Sample ID	HP6	HP6	HP7	HP7	WS01	WS04	WS04	WS05	WS05	WS05			
Depth	0.50	1.00	0.30	1.00	1.00	0.30	5.00	1.00	3.00	4.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	J T	V J T	V J T	V J T			
Sample Date	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	3	3	3	3	3	3	3	3	3	3			
Date of Receipt	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016			
PCB 167	-	-	<5	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 169	-	-	<5	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 189	-	-	<5	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
Total 12 PCBs	-	-	<60	-	-	-	-	-	-	-	<60	ug/kg	TM16/PM8
Total Phenols HPLC	<0.15	0.24	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	mg/kg	TM26/PM21
Natural Moisture Content	-	-	19.5	21.9	6.2	5.7	18.6	20.6	12.0	21.7	<0.1	%	PM4/PM0
Natural Moisture Content	18.6	22.0	-	-	-	-	-	-	-	-	<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #M	-	-	0.0276	0.0715	0.0081	0.1244	0.2143	0.3645	0.0190	0.0730	<0.0015	g/l	TM38/PM20
Sulphate as SO4 (2:1 Ext)	0.0853	0.0915	-	-	-	-	-	-	-	-	<0.0015	g/l	TM38/PM60
Free Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Total Cyanide #M	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Fraction Organic Carbon	NDP	NDP	0.085	0.246	0.013	0.011	<0.001	0.161	<0.001	0.002	<0.001	None	TM21/PM24
pH #M	7.79	7.65	8.29	7.61	8.78	10.22	8.90	8.40	9.20	8.03	<0.01	pH units	TM73/PM11
Sample Type	NDP	NDP	Clay	Clayey Loam	Sand	Clay	Sand	Sandy Loam	Sand	Sand		None	PM13/PM0
Sample Colour	NDP	NDP	Medium Brown	Dark Brown	Medium Brown	Medium Brown	Medium Brown	Dark Brown	Medium Brown	Medium Grey		None	PM13/PM0
Other Items	NDP	NDP	Stones and sand	Stones, sand, vegetation and pottery	Stones and vegetation	Stones	NA	Stones	NA	Chemical odour		None	PM13/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	258-260												
Sample ID	WS05												
Depth	5.00												
COC No / misc													
Containers	V J T												
Sample Date	11/11/2016												
Sample Type	Soil												
Batch Number	3												
Date of Receipt	16/11/2016												

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
Arsenic #M	6.5										<0.5	mg/kg	TM30/PM15
Arsenic	-										<0.5	mg/kg	TM30/PM62
Cadmium #M	<0.1										<0.1	mg/kg	TM30/PM15
Cadmium	-										<0.1	mg/kg	TM30/PM62
Chromium #M	68.3										<0.5	mg/kg	TM30/PM15
Chromium	-										<0.5	mg/kg	TM30/PM62
Copper #M	12										<1	mg/kg	TM30/PM15
Copper	-										<1	mg/kg	TM30/PM62
Lead #M	18										<5	mg/kg	TM30/PM15
Lead	-										<5	mg/kg	TM30/PM62
Mercury #M	<0.1										<0.1	mg/kg	TM30/PM15
Mercury	-										<0.1	mg/kg	TM30/PM62
Nickel #M	6.6										<0.7	mg/kg	TM30/PM15
Nickel	-										<0.7	mg/kg	TM30/PM62
Selenium #M	<1										<1	mg/kg	TM30/PM15
Selenium	-										<1	mg/kg	TM30/PM62
Water Soluble Boron #M	0.5										<0.1	mg/kg	TM74/PM32
Water Soluble Boron	-										<0.1	mg/kg	TM74/PM61
Zinc #M	50										<5	mg/kg	TM30/PM15
Zinc	-										<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene #M	23.03										<0.04	mg/kg	TM4/PM8
Acenaphthylene	8.52										<0.03	mg/kg	TM4/PM8
Acenaphthene #M	2.15										<0.05	mg/kg	TM4/PM8
Fluorene #M	2.93										<0.04	mg/kg	TM4/PM8
Phenanthrene #M	4.49										<0.03	mg/kg	TM4/PM8
Anthracene #	1.85										<0.04	mg/kg	TM4/PM8
Fluoranthene #M	8.98										<0.03	mg/kg	TM4/PM8
Pyrene #	7.67										<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	1.88										<0.06	mg/kg	TM4/PM8
Chrysene #M	1.48										<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	1.24										<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	0.52										<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	0.18										<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04										<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	0.13										<0.04	mg/kg	TM4/PM8
PAH 16 Total	65.1										<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.89										<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.35										<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	104										<0	%	TM4/PM8
Methyl Tertiary Butyl Ether #M	<12 AA										<6	ug/kg	TM15/PM10
Benzene #M	<10 AA										<5	ug/kg	TM15/PM10

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	258-260										Please see attached notes for all abbreviations and acronyms		
Sample ID	WS05												
Depth	5.00												
COC No / misc													
Containers	V J T												
Sample Date	11/11/2016												
Sample Type	Soil												
Batch Number	3												
Date of Receipt	16/11/2016												
											LOD/LOR	Units	Method No.
Toluene #M	<6 AA										<3	ug/kg	TM15/PM10
Ethylbenzene #M	982 AA										<3	ug/kg	TM15/PM10
p/m-Xylene #M	411 AA										<4	ug/kg	TM15/PM10
o-Xylene #M	1039 AA										<4	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	74 AA										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	62 AA										<0	%	TM15/PM10
EPH >C8-C10 #M	9499 ++										<5	mg/kg	TM5/PM8
EPH >C10-C12 #M	4764 ++										<10	mg/kg	TM5/PM8
EPH >C12-C16 #M	5170 ++										<10	mg/kg	TM5/PM8
EPH >C16-C21 #M	281 ++										<10	mg/kg	TM5/PM8
EPH >C21-C40	211 ++										<10	mg/kg	TM5/PM8
EPH >C8-C40	19925 ++										<30	mg/kg	TM5/PM8
TPH CWG													
Aliphatics													
>C5-C6 #M	1.2 SV										<0.1	mg/kg	TM36/PM12
>C6-C8 #M	11.3 SV										<0.1	mg/kg	TM36/PM12
>C8-C10	48.3 SV										<0.1	mg/kg	TM36/PM12
>C10-C12 #M	1868.1										<0.2	mg/kg	TM5/PM16
>C12-C16 #M	1146										<4	mg/kg	TM5/PM16
>C16-C21 #M	62										<7	mg/kg	TM5/PM16
>C21-C35 #M	21										<7	mg/kg	TM5/PM16
Total aliphatics C5-35	3158										<19	mg/kg	TM5/TM36/PM12/PM16
Aromatics													
>C5-EC7 #	<0.1 SV										<0.1	mg/kg	TM36/PM12
>EC7-EC8 #	<0.1 SV										<0.1	mg/kg	TM36/PM12
>EC8-EC10 #M	0.7 SV										<0.1	mg/kg	TM36/PM12
>EC10-EC12 #	2440.5										<0.2	mg/kg	TM5/PM16
>EC12-EC16 #	3321										<4	mg/kg	TM5/PM16
>EC16-EC21 #	142										<7	mg/kg	TM5/PM16
>EC21-EC35 #	61										<7	mg/kg	TM5/PM16
Total aromatics C5-35 #	5965										<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	9123										<38	mg/kg	TM5/TM36/PM12/PM16
PCB 77	-										<5	ug/kg	TM16/PM8
PCB 81	-										<5	ug/kg	TM16/PM8
PCB 105	-										<5	ug/kg	TM16/PM8
PCB 114	-										<5	ug/kg	TM16/PM8
PCB 118	-										<5	ug/kg	TM16/PM8
PCB 123	-										<5	ug/kg	TM16/PM8
PCB 126	-										<5	ug/kg	TM16/PM8
PCB 156	-										<5	ug/kg	TM16/PM8
PCB 157	-										<5	ug/kg	TM16/PM8

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	258-260												
Sample ID	WS05												
Depth	5.00												
COC No / misc													
Containers	V J T												
Sample Date	11/11/2016												
Sample Type	Soil												
Batch Number	3												
Date of Receipt	16/11/2016												
PCB 167	-										<5	ug/kg	TM16/PM8
PCB 169	-										<5	ug/kg	TM16/PM8
PCB 189	-										<5	ug/kg	TM16/PM8
Total 12 PCBs	-										<60	ug/kg	TM16/PM8
Total Phenols HPLC	<0.15										<0.15	mg/kg	TM26/PM21
Natural Moisture Content	22.7										<0.1	%	PM4/PM0
Natural Moisture Content	-										<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3										<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #M	0.0344										<0.0015	g/l	TM38/PM20
Sulphate as SO4 (2:1 Ext)	-										<0.0015	g/l	TM38/PM60
Free Cyanide	<0.5										<0.5	mg/kg	TM89/PM45
Total Cyanide #M	<0.5										<0.5	mg/kg	TM89/PM45
Fraction Organic Carbon	<0.001										<0.001	None	TM21/PM24
pH #M	7.94										<0.01	pH units	TM73/PM11
Sample Type	Sand											None	PM13/PM0
Sample Colour	Medium Grey											None	PM13/PM0
Other Items	Vegetation and chemical odour											None	PM13/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

SVOC Report : **Solid**

J E Sample No.	129-131	195-197	252-254	255-257	258-260								
Sample ID	HP3	HP7	WS05	WS05	WS05								
Depth	1.00	0.30	3.00	4.00	5.00						Please see attached notes for all abbreviations and acronyms		
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T								
Sample Date	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016								
Sample Type	Soil	Soil	Soil	Soil	Soil								
Batch Number	3	3	3	3	3						LOD/LOR	Units	Method No.
Date of Receipt	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016								
SVOC MS													
Phenols													
2-Chlorophenol #M	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
2-Methylphenol	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
2,4-Dichlorophenol #M	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
4-Methylphenol	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
Phenol #M	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene #M	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
2-Methylnaphthalene #M	359	153	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	<100	<100	<100	<500 AB	<500 AB						<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<100	<100	<500 AB	<500 AB						<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<100	<100	<100	<500 AB	<500 AB						<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<100	<100	<500 AB	<500 AB						<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<100	<100	<500 AB	<500 AB						<100	ug/kg	TM16/PM8
Dimethyl phthalate #M	<100	<100	<100	<500 AB	<500 AB						<100	ug/kg	TM16/PM8
Other SVOCs													
1,2-Dichlorobenzene	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #M	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #M	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
Azobenzene	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
Carbazole	404	187	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
Dibenzofuran #M	558	244	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
Hexachlorobutadiene #M	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
Isophorone #M	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #M	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
Nitrobenzene #M	<10	<10	<10	<50 AB	<50 AB						<10	ug/kg	TM16/PM8
Surrogate Recovery 2-Fluorobiphenyl	86	90	112	113 AB	108 AB						<0	%	TM16/PM8
Surrogate Recovery p-Terphenyl-d14	116	110	110	116 AB	119 AB						<0	%	TM16/PM8

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

VOC Report : **Solid**

J E Sample No.	129-131	195-197	252-254	255-257	258-260							
Sample ID	HP3	HP7	WS05	WS05	WS05							
Depth	1.00	0.30	3.00	4.00	5.00							
COC No / misc												
Containers	V J T	V J T	V J T	V J T	V J T							
Sample Date	11/11/2016	11/11/2016	11/11/2016	11/11/2016	11/11/2016							
Sample Type	Soil	Soil	Soil	Soil	Soil							
Batch Number	3	3	3	3	3							
Date of Receipt	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016							

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<4 AA	<4 AA						<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #M	<6	<6	<6	<12 AA	<12 AA						<6	ug/kg	TM15/PM10
Chloromethane #	<3	<3	<3	<6 AA	<6 AA						<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	<2	<4 AA	<4 AA						<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1	<2 AA	<2 AA						<1	ug/kg	TM15/PM10
Chloroethane #M	<6	<6	<6	<12 AA	<12 AA						<6	ug/kg	TM15/PM10
Trichlorofluoromethane #M	<3	<3	<3	<6 AA	<6 AA						<3	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #M	<6	<6	<6	<12 AA	<12 AA						<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	<7	<7	<7	<14 AA	<14 AA						<7	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3	<3	<6 AA	<6 AA						<3	ug/kg	TM15/PM10
1,1-Dichloroethane #M	<6	<6	<6	<12 AA	<12 AA						<6	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #M	<7	<7	<7	<14 AA	<14 AA						<7	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4	<8 AA	<8 AA						<4	ug/kg	TM15/PM10
Bromochloromethane #M	<4	<4	<4	<8 AA	<8 AA						<4	ug/kg	TM15/PM10
Chloroform #M	<5	<5	<5	<10 AA	<10 AA						<5	ug/kg	TM15/PM10
1,1,1-Trichloroethane #M	<5	<5	<5	<10 AA	<10 AA						<5	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3	<3	<3	<6 AA	<6 AA						<3	ug/kg	TM15/PM10
Carbon tetrachloride #M	<4	<4	<4	<8 AA	<8 AA						<4	ug/kg	TM15/PM10
1,2-Dichloroethane #M	<5	<5	<5	<10 AA	<10 AA						<5	ug/kg	TM15/PM10
Benzene #M	<5	<5	<5	<10 AA	<10 AA						<5	ug/kg	TM15/PM10
Trichloroethene (TCE) #M	<5	<5	<5	<10 AA	<10 AA						<5	ug/kg	TM15/PM10
1,2-Dichloropropane #M	<4	<4	<4	<8 AA	<8 AA						<4	ug/kg	TM15/PM10
Dibromomethane #M	<4	<4	<4	<8 AA	<8 AA						<4	ug/kg	TM15/PM10
Bromodichloromethane #M	<4	<4	<4	<8 AA	<8 AA						<4	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4	<8 AA	<8 AA						<4	ug/kg	TM15/PM10
Toluene #M	<3	<3	<3	<6 AA	<6 AA						<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3	<6 AA	<6 AA						<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #M	<4	<4	<4	<8 AA	<8 AA						<4	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3	<3	<6 AA	<6 AA						<3	ug/kg	TM15/PM10
1,3-Dichloropropane #M	<4	<4	<4	<8 AA	<8 AA						<4	ug/kg	TM15/PM10
Dibromochloromethane #M	<5	<5	<5	<10 AA	<10 AA						<5	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3	<3	<3	<6 AA	<6 AA						<3	ug/kg	TM15/PM10
Chlorobenzene #M	<4	<4	<4	<8 AA	<8 AA						<4	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #M	<5	<5	<5	<10 AA	<10 AA						<5	ug/kg	TM15/PM10
Ethylbenzene #M	<3	<3	<3	1650 AA	982 AA						<3	ug/kg	TM15/PM10
p/m-Xylene #M	<4	<4	<4	<8 AA	411 AA						<4	ug/kg	TM15/PM10
o-Xylene #M	<4	<4	<4	985 AA	1039 AA						<4	ug/kg	TM15/PM10
Styrene	<3	<3	<3	<6 AA	<6 AA						<3	ug/kg	TM15_A/PM10
Bromoform	<4	<4	<4	<8 AA	<8 AA						<4	ug/kg	TM15/PM10
Isopropylbenzene #	<3	<3	<3	9340 ++ AA	11519 ++ AA						<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #M	<3	<3	<3	<6 AA	<6 AA						<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2	<4 AA	<4 AA						<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #M	<4	<4	<4	<8 AA	<8 AA						<4	ug/kg	TM15/PM10
Propylbenzene #	<4	<4	<4	33148 ++ AA	25660 ++ AA						<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3	<6 AA	<6 AA						<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	<3	<3	<3	<6 AA	<6 AA						<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3	<6 AA	<6 AA						<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5	<5	<5	<10 AA	<10 AA						<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	<6	<6	<6	225400 ++ AA	201803 ++ AA						<6	ug/kg	TM15/PM10
sec-Butylbenzene #	<4	<4	<4	<8 AA	24260 ++ AA						<4	ug/kg	TM15/PM10
4-Isopropyltoluene #	<4	<4	<4	4932 ++ AA	651 AA						<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #M	<4	<4	<4	<8 AA	<8 AA						<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4	<4	<4	<8 AA	<8 AA						<4	ug/kg	TM15/PM10
n-Butylbenzene #	<4	<4	<4	30713 ++ AA	27499 ++ AA						<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #M	<4	<4	<4	<8 AA	<8 AA						<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane #	<4	<4	<4	<8 AA	<8 AA						<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene #	<7	<7	<7	<14 AA	<14 AA						<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4	<8 AA	<8 AA						<4	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene #	<7	<7	<7	<14 AA	<14 AA						<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	95	86	103	93 AA	74 AA						<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	65	52	112	64 AA	62 AA						<0	%	TM15/PM10

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

Signed on behalf of Jones Environmental Laboratory:



Ryan Butterworth
Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	3	HP3	0.50	127	17/11/2016	**General Description (Bulk Analysis)**	Soil/Stones
					17/11/2016	**Asbestos Fibres**	NAD
					17/11/2016	**Asbestos Fibres (2)**	NAD
					17/11/2016	**Asbestos ACM**	NAD
					17/11/2016	**Asbestos ACM (2)**	NAD
					17/11/2016	**Asbestos Type**	NAD
					17/11/2016	**Asbestos Type (2)**	NAD
					17/11/2016	**Asbestos Level Screen**	NAD
16/16961	3	HP3	1.00	130	17/11/2016	**General Description (Bulk Analysis)**	Soil/Stones
					17/11/2016	**Asbestos Fibres**	NAD
					17/11/2016	**Asbestos Fibres (2)**	NAD
					17/11/2016	**Asbestos ACM**	NAD
					17/11/2016	**Asbestos ACM (2)**	NAD
					17/11/2016	**Asbestos Type**	NAD
					17/11/2016	**Asbestos Type (2)**	NAD
					17/11/2016	**Asbestos Level Screen**	NAD
16/16961	3	HP2	0.00-0.20	136	17/11/2016	**General Description (Bulk Analysis)**	Soil/Stones
					17/11/2016	**Asbestos Fibres**	NAD
					17/11/2016	**Asbestos Fibres (2)**	NAD
					17/11/2016	**Asbestos ACM**	NAD
					17/11/2016	**Asbestos ACM (2)**	NAD
					17/11/2016	**Asbestos Type**	NAD
					17/11/2016	**Asbestos Type (2)**	NAD
					17/11/2016	**Asbestos Level Screen**	NAD
16/16961	3	HP2	1.00	142	17/11/2016	**General Description (Bulk Analysis)**	Soil/Stones
					17/11/2016	**Asbestos Fibres**	Fibre Bundles
					17/11/2016	**Asbestos ACM**	NAD
					17/11/2016	**Asbestos Type**	Chrysotile
					17/11/2016	**Asbestos Level Screen**	<0.1%
					13/12/2016	**Asbestos Gravimetric Quantification**	<0.001 (mass %)
					13/12/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					13/12/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)
16/16961	3	HP1	0.30	148	17/11/2016	**General Description (Bulk Analysis)**	soil-stones
					17/11/2016	**Asbestos Fibres**	Fibre Bundles
					17/11/2016	**Asbestos ACM**	NAD

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	3	HP1	0.30	148	17/11/2016	**Asbestos Type**	Chrysotile
					17/11/2016	**Asbestos Level Screen**	<0.1%
					13/12/2016	**Asbestos Gravimetric Quantification**	<0.001 (mass %)
					13/12/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					13/12/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)
16/16961	3	HP1	2.00	157	17/11/2016	**General Description (Bulk Analysis)**	soil-stones
					17/11/2016	**Asbestos Fibres**	Fibre Bundles
					17/11/2016	**Asbestos ACM**	NAD
					17/11/2016	**Asbestos Type**	Chrysotile
					13/12/2016	**Asbestos Gravimetric Quantification**	<0.001 (mass %)
					13/12/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					13/12/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)
16/16961	3	HP4	0.50	163	17/11/2016	**General Description (Bulk Analysis)**	soil-stones
					17/11/2016	**Asbestos Fibres**	Fibre Bundles
					17/11/2016	**Asbestos ACM**	NAD
					17/11/2016	**Asbestos Type**	Chrysotile
					17/11/2016	**Asbestos Level Screen**	<0.1%
					13/12/2016	**Asbestos Gravimetric Quantification**	<0.001 (mass %)
					13/12/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					13/12/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)
16/16961	3	HP4	2.00	169	17/11/2016	**General Description (Bulk Analysis)**	soil-stones
					17/11/2016	**Asbestos Fibres**	Fibre Bundles
					17/11/2016	**Asbestos ACM**	NAD
					17/11/2016	**Asbestos Type**	Chrysotile
					17/11/2016	**Asbestos Level Screen**	<0.1%
					13/12/2016	**Asbestos Gravimetric Quantification**	<0.001 (mass %)
					13/12/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					13/12/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)
16/16961	3	HP5	0.50	175	17/11/2016	**General Description (Bulk Analysis)**	soil/stones
					17/11/2016	**Asbestos Fibres**	NAD
					17/11/2016	**Asbestos Fibres (2)**	NAD
					17/11/2016	**Asbestos ACM**	NAD
					17/11/2016	**Asbestos ACM (2)**	NAD
					17/11/2016	**Asbestos Type**	NAD
					17/11/2016	**Asbestos Type (2)**	NAD
					17/11/2016	**Asbestos Level Screen**	NAD
16/16961	3	HP5	2.00	181	17/11/2016	**General Description (Bulk Analysis)**	soil/stones
					17/11/2016	**Asbestos Fibres**	NAD
					17/11/2016	**Asbestos Fibres (2)**	NAD
					17/11/2016	**Asbestos ACM**	NAD
					17/11/2016	**Asbestos ACM (2)**	NAD
					17/11/2016	**Asbestos Type**	NAD
					17/11/2016	**Asbestos Type (2)**	NAD
					17/11/2016	**Asbestos Level Screen**	NAD
16/16961	3	HP6	0.50	187	17/11/2016	**General Description (Bulk Analysis)**	soil/stones
					17/11/2016	**Asbestos Fibres**	Fibre Bundles

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	3	HP6	0.50	187	17/11/2016	**Asbestos ACM**	NAD
					17/11/2016	**Asbestos Type**	Chrysotile
					17/11/2016	**Asbestos Level Screen**	<0.1%
					13/12/2016	**Asbestos Gravimetric Quantification**	<0.001 (mass %)
					13/12/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					13/12/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)
16/16961	3	HP6	1.00	190	17/11/2016	**General Description (Bulk Analysis)**	soil/stones
					17/11/2016	**Asbestos Fibres**	Fibre Bundles
					17/11/2016	**Asbestos ACM**	NAD
					17/11/2016	**Asbestos Type**	Chrysotile
					17/11/2016	**Asbestos Level Screen**	<0.1%
					13/12/2016	**Asbestos Gravimetric Quantification**	<0.001 (mass %)
					13/12/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					13/12/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)
16/16961	3	HP7	0.30	196	17/11/2016	**General Description (Bulk Analysis)**	soil/stones
					17/11/2016	**Asbestos Fibres**	NAD
					17/11/2016	**Asbestos Fibres (2)**	NAD
					17/11/2016	**Asbestos ACM**	NAD
					17/11/2016	**Asbestos ACM (2)**	NAD
					17/11/2016	**Asbestos Type**	NAD
					17/11/2016	**Asbestos Type (2)**	NAD
					17/11/2016	**Asbestos Level Screen**	NAD
16/16961	3	HP7	1.00	202	17/11/2016	**General Description (Bulk Analysis)**	soil/stones
					17/11/2016	**Asbestos Fibres**	NAD
					17/11/2016	**Asbestos Fibres (2)**	NAD
					17/11/2016	**Asbestos ACM**	NAD
					17/11/2016	**Asbestos ACM (2)**	NAD
					17/11/2016	**Asbestos Type**	NAD
					17/11/2016	**Asbestos Type (2)**	NAD
					17/11/2016	**Asbestos Level Screen**	NAD
16/16961	3	WS01	1.00	211	17/11/2016	**General Description (Bulk Analysis)**	Soil/Stone
					17/11/2016	**Asbestos Fibres**	NAD
					17/11/2016	**Asbestos Fibres (2)**	NAD
					17/11/2016	**Asbestos ACM**	NAD
					17/11/2016	**Asbestos ACM (2)**	NAD
					17/11/2016	**Asbestos Type**	NAD
					17/11/2016	**Asbestos Type (2)**	NAD
					17/11/2016	**Asbestos Level Screen**	NAD
16/16961	3	WS02	0.05	224	17/11/2016	**General Description (Bulk Analysis)**	Concrete
					17/11/2016	**Asbestos Fibres**	NAD
					17/11/2016	**Asbestos Fibres (2)**	NAD
					17/11/2016	**Asbestos ACM**	NAD
					17/11/2016	**Asbestos ACM (2)**	NAD
					17/11/2016	**Asbestos Type**	NAD
					17/11/2016	**Asbestos Type (2)**	NAD
					17/11/2016	**Asbestos Level Screen**	NAD

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	3	WS04	0.30	227	17/11/2016	**General Description (Bulk Analysis)**	Soil/Stone
					17/11/2016	**Asbestos Fibres**	NAD
					17/11/2016	**Asbestos Fibres (2)**	NAD
					17/11/2016	**Asbestos ACM**	NAD
					17/11/2016	**Asbestos ACM (2)**	NAD
					17/11/2016	**Asbestos Type**	NAD
					17/11/2016	**Asbestos Type (2)**	NAD
					17/11/2016	**Asbestos Level Screen**	NAD
16/16961	3	WS04	5.00	240	17/11/2016	**General Description (Bulk Analysis)**	Soil/Sand
					17/11/2016	**Asbestos Fibres**	NAD
					17/11/2016	**Asbestos Fibres (2)**	NAD
					17/11/2016	**Asbestos ACM**	NAD
					17/11/2016	**Asbestos ACM (2)**	NAD
					17/11/2016	**Asbestos Type**	NAD
					17/11/2016	**Asbestos Type (2)**	NAD
					17/11/2016	**Asbestos Level Screen**	NAD
16/16961	3	WS05	1.00	247	17/11/2016	**General Description (Bulk Analysis)**	Soil/Stone
					17/11/2016	**Asbestos Fibres**	NAD
					17/11/2016	**Asbestos Fibres (2)**	NAD
					17/11/2016	**Asbestos ACM**	NAD
					17/11/2016	**Asbestos ACM (2)**	NAD
					17/11/2016	**Asbestos Type**	NAD
					17/11/2016	**Asbestos Type (2)**	NAD
					17/11/2016	**Asbestos Level Screen**	NAD
16/16961	3	WS05	3.00	253	17/11/2016	**General Description (Bulk Analysis)**	Soil/Sand
					17/11/2016	**Asbestos Fibres**	NAD
					17/11/2016	**Asbestos Fibres (2)**	NAD
					17/11/2016	**Asbestos ACM**	NAD
					17/11/2016	**Asbestos ACM (2)**	NAD
					17/11/2016	**Asbestos Type**	NAD
					17/11/2016	**Asbestos Type (2)**	NAD
					17/11/2016	**Asbestos Level Screen**	NAD
16/16961	3	WS05	4.00	256	17/11/2016	**General Description (Bulk Analysis)**	Soil/Sand
					17/11/2016	**Asbestos Fibres**	NAD
					17/11/2016	**Asbestos Fibres (2)**	NAD
					17/11/2016	**Asbestos ACM**	NAD
					17/11/2016	**Asbestos ACM (2)**	NAD
					17/11/2016	**Asbestos Type**	NAD
					17/11/2016	**Asbestos Type (2)**	NAD
					17/11/2016	**Asbestos Level Screen**	NAD
16/16961	3	WS05	5.00	259	17/11/2016	**General Description (Bulk Analysis)**	Soil/Stone
					17/11/2016	**Asbestos Fibres**	NAD
					17/11/2016	**Asbestos Fibres (2)**	NAD
					17/11/2016	**Asbestos ACM**	NAD
					17/11/2016	**Asbestos ACM (2)**	NAD
					17/11/2016	**Asbestos Type**	NAD
					17/11/2016	**Asbestos Type (2)**	NAD
					17/11/2016	**Asbestos Level Screen**	NAD

Client Name: WYG **Matrix : Solid**
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	NDP Reason
16/16961	3	HP2	1.00	141-143	Asbestos detected in sample
16/16961	3	HP1	0.30	147-149	Asbestos detected in sample
16/16961	3	HP1	2.00	156-158	Asbestos detected in sample
16/16961	3	HP4	0.50	162-164	Asbestos detected in sample
16/16961	3	HP4	2.00	168-170	Asbestos detected in sample
16/16961	3	HP6	0.50	186-188	Asbestos detected in sample
16/16961	3	HP6	1.00	189-191	Asbestos detected in sample

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
No deviating sample report results for job 16/16961						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.
Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 16/16961

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
SA	ISO17025 (SANAS) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x2 Dilution
AB	x5 Dilution
AC	x10 Dilution
AD	x20 Dilution

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.			AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.	Yes	Yes	AD	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM60	As received solid samples are extracted with deionised water in a 2:1 ratio of water to solid.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM61	As received solid samples are extracted with hot water in a 20:1 ratio of water to soil ready for analysis by ICP.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.	Yes	Yes	AR	Yes
TM15_A	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds, Vinyl Chloride & Styrene by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

Exova Jones Environmental

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Longcross Court
47 Newport Road
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CF24 0AD

Attention :	Nicholas Bool
Date :	13th December, 2016
Your reference :	A095973-2
Our reference :	Test Report 16/16961 Batch 4
Location :	Tidal Lagoon
Date samples received :	17th November, 2016
Status :	Final report
Issue :	1

Thirty three samples were received for analysis on 17th November, 2016 of which nineteen were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Phil Sommerton BSc
Project Manager

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	279-281	285-287	291-293	300-302	303-305	306-307	310-311	314-315	316-318	331-333	LOD/LOR	Units	Method No.
Sample ID	BH4	BH4	BH3	BH3	BH3	WS16	WS16	WS16	WS12	WS14			
Depth	0.50	3.00	1.00	5.00	7.00	0.30	1.50	3.50	0.30	0.50			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J	V J	V J	V J T	V J T			
Sample Date	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	4	4	4	4	4	4	4	4	4	4			
Date of Receipt	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016			
Arsenic #M	99.1	13.4	122.1	24.9	21.5	55.8	126.1	13.3	17.4	-	<0.5	mg/kg	TM30/PM15
Arsenic	-	-	-	-	-	-	-	-	-	37.2	<0.5	mg/kg	TM30/PM62
Cadmium #M	2.6	1.8	5.3	<0.1	<0.1	1.6	0.6	2.6	1.3	-	<0.1	mg/kg	TM30/PM15
Cadmium	-	-	-	-	-	-	-	-	-	4.8	<0.1	mg/kg	TM30/PM62
Chromium #M	80.2	57.0	41.2	31.4	68.7	57.6	104.8	56.5	15.8	-	<0.5	mg/kg	TM30/PM15
Chromium	-	-	-	-	-	-	-	-	-	29.0	<0.5	mg/kg	TM30/PM62
Copper #M	143	39	228	38	24	350$_{AA}$	1100$_{AC}$	32	59	-	<1	mg/kg	TM30/PM15
Copper	-	-	-	-	-	-	-	-	-	1085$_{AC}$	<1	mg/kg	TM30/PM62
Lead #M	1289	149	3479$_{AC}$	26	<5	735	2273	163	518	-	<5	mg/kg	TM30/PM15
Lead	-	-	-	-	-	-	-	-	-	602	<5	mg/kg	TM30/PM62
Mercury #M	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	2.1	<0.1	<0.1	-	<0.1	mg/kg	TM30/PM15
Mercury	-	-	-	-	-	-	-	-	-	0.2	<0.1	mg/kg	TM30/PM62
Nickel #M	24.2	10.0	45.1	12.6	5.9	34.1	146.0	9.0	8.6	-	<0.7	mg/kg	TM30/PM15
Nickel	-	-	-	-	-	-	-	-	-	80.7	<0.7	mg/kg	TM30/PM62
Selenium #M	3	<1	1	<1	<1	<1	9	<1	<1	-	<1	mg/kg	TM30/PM15
Selenium	-	-	-	-	-	-	-	-	-	<1	<1	mg/kg	TM30/PM62
Water Soluble Boron #M	1.2	0.3	1.4	0.9	0.8	0.6	0.6	0.3	0.3	-	<0.1	mg/kg	TM74/PM32
Water Soluble Boron	-	-	-	-	-	-	-	-	-	0.5	<0.1	mg/kg	TM74/PM61
Zinc #M	8275$_{AC}$	398	11790$_{AC}$	123	57	1545	983	2301	765	-	<5	mg/kg	TM30/PM15
Zinc	-	-	-	-	-	-	-	-	-	1412	<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene #M	0.13	<0.04	0.40$_{AA}$	<0.04	<0.04	0.25	1.25$_{AA}$	<0.04	0.14	0.79$_{AB}$	<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.17	<0.03	<0.15$_{AA}$	<0.03	<0.03	0.09	<0.15$_{AA}$	<0.03	0.21	<0.30$_{AB}$	<0.03	mg/kg	TM4/PM8
Acenaphthene #M	0.08	<0.05	0.65$_{AA}$	<0.05	<0.05	0.14	<0.25$_{AA}$	<0.05	<0.05	<0.50$_{AB}$	<0.05	mg/kg	TM4/PM8
Fluorene #M	0.08	<0.04	0.69$_{AA}$	<0.04	<0.04	0.10	<0.20$_{AA}$	<0.04	<0.04	1.15$_{AB}$	<0.04	mg/kg	TM4/PM8
Phenanthrene #M	1.60	0.12	7.79$_{AA}$	0.08	<0.03	0.92	0.28$_{AA}$	<0.03	0.19	9.63$_{AB}$	<0.03	mg/kg	TM4/PM8
Anthracene #	0.42	<0.04	1.91$_{AA}$	<0.04	<0.04	0.48	<0.20$_{AA}$	<0.04	0.09	2.63$_{AB}$	<0.04	mg/kg	TM4/PM8
Fluoranthene #M	3.09	0.22	9.21$_{AA}$	0.08	<0.03	1.95	0.23$_{AA}$	<0.03	0.19	13.12$_{AB}$	<0.03	mg/kg	TM4/PM8
Pyrene #	2.37	0.17	7.54$_{AA}$	0.07	<0.03	2.30	0.22$_{AA}$	<0.03	0.18	10.15$_{AB}$	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	1.53	0.12	4.27$_{AA}$	0.08	<0.06	1.09	<0.30$_{AA}$	<0.06	0.14	7.00$_{AB}$	<0.06	mg/kg	TM4/PM8
Chrysene #M	1.95	0.13	4.69$_{AA}$	0.05	<0.02	1.56	0.26$_{AA}$	<0.02	0.15	6.75$_{AB}$	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	3.15	0.17	6.43$_{AA}$	<0.07	<0.07	2.36	<0.35$_{AA}$	<0.07	0.31	11.28$_{AB}$	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	1.54	0.08	4.01$_{AA}$	<0.04	<0.04	0.99	<0.20$_{AA}$	<0.04	0.15	5.45$_{AB}$	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	0.96	0.06	2.33$_{AA}$	<0.04	<0.04	0.53	<0.20$_{AA}$	<0.04	0.16	3.40$_{AB}$	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	0.21	<0.04	0.38$_{AA}$	<0.04	<0.04	0.10	<0.20$_{AA}$	<0.04	<0.04	<0.40$_{AB}$	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	0.86	0.05	2.08$_{AA}$	<0.04	<0.04	0.51	0.35$_{AA}$	<0.04	0.20	3.07$_{AB}$	<0.04	mg/kg	TM4/PM8
PAH 16 Total	18.1	1.1	52.4$_{AA}$	<0.6	<0.6	13.4	<3.0$_{AA}$	<0.6	2.1	74.4$_{AB}$	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	2.27	0.12	4.63$_{AA}$	<0.05	<0.05	1.70	<0.25$_{AA}$	<0.05	0.22	8.12$_{AB}$	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.88	0.05	1.80$_{AA}$	<0.02	<0.02	0.66	<0.10$_{AA}$	<0.02	0.09	3.16$_{AB}$	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	117	120	151$_{AA}$	111	103	102	109$_{AA}$	102	104	111$_{AB}$	<0	%	TM4/PM8
Methyl Tertiary Butyl Ether #M	-	<6	-	-	-	-	-	<6	-	-	<6	ug/kg	TM15/PM10
Benzene #M	-	<5	-	-	-	-	-	11	-	-	<5	ug/kg	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	279-281	285-287	291-293	300-302	303-305	306-307	310-311	314-315	316-318	331-333	LOD/LOR	Units	Method No.
Sample ID	BH4	BH4	BH3	BH3	BH3	WS16	WS16	WS16	WS12	WS14			
Depth	0.50	3.00	1.00	5.00	7.00	0.30	1.50	3.50	0.30	0.50			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J	V J	V J	V J T	V J T			
Sample Date	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	4	4	4	4	4	4	4	4	4	4			
Date of Receipt	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016			
Toluene #M	-	6	-	-	-	-	-	6	-	-	<3	ug/kg	TM15/PM10
Ethylbenzene #M	-	<3	-	-	-	-	-	4	-	-	<3	ug/kg	TM15/PM10
p/m-Xylene #M	-	10	-	-	-	-	-	6	-	-	<4	ug/kg	TM15/PM10
o-Xylene #M	-	<4	-	-	-	-	-	<4	-	-	<4	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	-	103	-	-	-	-	-	100	-	-	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	-	100	-	-	-	-	-	102	-	-	<0	%	TM15/PM10
EPH >C8-C10 #M	<5	50	<5	<5	<5	<5	55	<5	<5	438	<5	mg/kg	TM5/PM8
EPH >C10-C12 #M	<10	38	<10	<10	<10	<10	41	<10	<10	196	<10	mg/kg	TM5/PM8
EPH >C12-C16 #M	17	190	<10	<10	<10	<10	108	<10	34	68	<10	mg/kg	TM5/PM8
EPH >C16-C21 #M	98	156	66	<10	<10	52	462	<10	247	331	<10	mg/kg	TM5/PM8
EPH >C21-C40	384	58	246	<10	<10	461	1843	<10	224	1829	<10	mg/kg	TM5/PM8
EPH >C8-C40	499	492	312	<30	<30	513	2509	<30	505	2862	<30	mg/kg	TM5/PM8
TPH CWG													
Aliphatics													
>C5-C6 #M	-	<0.1	-	-	-	-	-	<0.1	-	-	<0.1	mg/kg	TM36/PM12
>C6-C8 #M	-	0.6	-	-	-	-	-	<0.1	-	-	<0.1	mg/kg	TM36/PM12
>C8-C10	-	17.0	-	-	-	-	-	<0.1	-	-	<0.1	mg/kg	TM36/PM12
>C10-C12 #M	-	22.7	-	-	-	-	-	<0.2	-	-	<0.2	mg/kg	TM5/PM16
>C12-C16 #M	-	91	-	-	-	-	-	<4	-	-	<4	mg/kg	TM5/PM16
>C16-C21 #M	-	61	-	-	-	-	-	<7	-	-	<7	mg/kg	TM5/PM16
>C21-C35 #M	-	<7	-	-	-	-	-	<7	-	-	<7	mg/kg	TM5/PM16
Total aliphatics C5-35	-	192	-	-	-	-	-	<19	-	-	<19	mg/kg	TM5/TM36/PM12/PM16
Aromatics													
>C5-EC7 #	-	<0.1	-	-	-	-	-	<0.1	-	-	<0.1	mg/kg	TM36/PM12
>EC7-EC8 #	-	<0.1	-	-	-	-	-	<0.1	-	-	<0.1	mg/kg	TM36/PM12
>EC8-EC10 #M	-	0.2	-	-	-	-	-	<0.1	-	-	<0.1	mg/kg	TM36/PM12
>EC10-EC12 #	-	0.5	-	-	-	-	-	<0.2	-	-	<0.2	mg/kg	TM5/PM16
>EC12-EC16 #	-	38	-	-	-	-	-	<4	-	-	<4	mg/kg	TM5/PM16
>EC16-EC21 #	-	36	-	-	-	-	-	<7	-	-	<7	mg/kg	TM5/PM16
>EC21-EC35 #	-	<7	-	-	-	-	-	<7	-	-	<7	mg/kg	TM5/PM16
Total aromatics C5-35 #	-	75	-	-	-	-	-	<19	-	-	<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	-	267	-	-	-	-	-	<38	-	-	<38	mg/kg	TM5/TM36/PM12/PM16
PCB 77	-	<5	-	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 81	-	<5	-	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 105	-	<5	-	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 114	-	<5	-	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 118	-	<5	-	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 123	-	<5	-	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 126	-	<5	-	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 156	-	<5	-	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 157	-	<5	-	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	279-281	285-287	291-293	300-302	303-305	306-307	310-311	314-315	316-318	331-333	LOD/LOR	Units	Method No.
Sample ID	BH4	BH4	BH3	BH3	BH3	WS16	WS16	WS16	WS12	WS14			
Depth	0.50	3.00	1.00	5.00	7.00	0.30	1.50	3.50	0.30	0.50			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J	V J	V J	V J T	V J T			
Sample Date	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	4	4	4	4	4	4	4	4	4	4			
Date of Receipt	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016			
PCB 167	-	<5	-	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 169	-	<5	-	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 189	-	<5	-	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
Total 12 PCBs	-	<60	-	-	-	-	-	-	-	-	<60	ug/kg	TM16/PM8
Total Phenols HPLC	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	mg/kg	TM26/PM21
Natural Moisture Content	10.0	30.5	14.6	20.1	20.2	13.1	23.6	22.7	7.6	-	<0.1	%	PM4/PM0
Natural Moisture Content	-	-	-	-	-	-	-	-	-	24.1	<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #M	0.0264	0.0592	0.0305	0.0827	0.0654	0.0724	0.1254	0.0538	0.0953	-	<0.0015	g/l	TM38/PM20
Sulphate as SO4 (2:1 Ext)	-	-	-	-	-	-	-	-	-	0.5730	<0.0015	g/l	TM38/PM60
Free Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Total Cyanide #M	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	0.5	1.5	<0.5	mg/kg	TM89/PM45
Fraction Organic Carbon	0.065	0.003	0.061	0.002	<0.001	0.037	0.325	0.007	0.018	NDP	<0.001	None	TM21/PM24
pH #M	9.46	8.51	8.87	9.05	9.15	8.38	7.58	8.49	8.52	7.61	<0.01	pH units	TM73/PM11
Sample Type	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	NDP		None	PM13/PM0
Sample Colour	Dark Brown	Dark Brown	Dark Brown	Medium Brown	Medium Brown	Dark Brown	Dark Brown	Medium Brown	Dark Brown	NDP		None	PM13/PM0
Other Items	stones, vegetation	stones, wet	clay, stones	stones	stones	stones	stones	NA	stones, vegetation, clay	NDP		None	PM13/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	340-342	343-344	345-346	350-352	353-355	356-358	359-361	362-364	368-370		LOD/LOR	Units	Method No.
Sample ID	WS14	TP9	TP9	TP10	TP10	TP11	TP11	TP19	TP19				
Depth	4.00	0.20	0.50	0.50	1.50	0.30	0.50	0.30	1.00				
COC No / misc										Please see attached notes for all abbreviations and acronyms			
Containers	V J T	V J	V J	V J T	V J T	V J T	V J T	V J T	V J T				
Sample Date	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016				
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
Batch Number	4	4	4	4	4	4	4	4	4				
Date of Receipt	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016				
Arsenic #M	4.5	453.6$_{AC}$	668.3$_{AC}$	50.7	19.0	523.3$_{AC}$	24.9	13.5	10.6		<0.5	mg/kg	TM30/PM15
Arsenic	-	-	-	-	-	-	-	-	-		<0.5	mg/kg	TM30/PM62
Cadmium #M	<0.1	4.6	7.1	1.1	0.2	5.9	4.4	0.3	0.1		<0.1	mg/kg	TM30/PM15
Cadmium	-	-	-	-	-	-	-	-	-		<0.1	mg/kg	TM30/PM62
Chromium #M	28.5	38.5	47.1	82.1	63.1	211.0	53.9	46.8	32.1		<0.5	mg/kg	TM30/PM15
Chromium	-	-	-	-	-	-	-	-	-		<0.5	mg/kg	TM30/PM62
Copper #M	84	477$_{AC}$	564$_{AC}$	113	22	396$_{AC}$	66	29	5		<1	mg/kg	TM30/PM15
Copper	-	-	-	-	-	-	-	-	-		<1	mg/kg	TM30/PM62
Lead #M	20	11720$_{AC}$	13650$_{AC}$	570	145	14270$_{AC}$	183	191	15		<5	mg/kg	TM30/PM15
Lead	-	-	-	-	-	-	-	-	-		<5	mg/kg	TM30/PM62
Mercury #M	<0.1	0.6	1.3	0.6	<0.1	2.8	<0.1	<0.1	<0.1		<0.1	mg/kg	TM30/PM15
Mercury	-	-	-	-	-	-	-	-	-		<0.1	mg/kg	TM30/PM62
Nickel #M	16.9	65.7	55.6	28.6	6.7	42.9	42.8	19.8	6.0		<0.7	mg/kg	TM30/PM15
Nickel	-	-	-	-	-	-	-	-	-		<0.7	mg/kg	TM30/PM62
Selenium #M	<1	2	4	2	<1	7	<1	<1	<1		<1	mg/kg	TM30/PM15
Selenium	-	-	-	-	-	-	-	-	-		<1	mg/kg	TM30/PM62
Water Soluble Boron #M	0.3	1.2	1.3	1.1	0.2	1.4	0.4	0.6	0.1		<0.1	mg/kg	TM74/PM32
Water Soluble Boron	-	-	-	-	-	-	-	-	-		<0.1	mg/kg	TM74/PM61
Zinc #M	92	23320$_{AC}$	31560$_{AC}$	1079	274	14330$_{AC}$	2282	329	58		<5	mg/kg	TM30/PM15
Zinc	-	-	-	-	-	-	-	-	-		<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene #M	0.25	1.04$_{AB}$	0.50	5.58	<0.04	0.24	<0.04	<0.20$_{AA}$	<0.04		<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	0.81$_{AB}$	0.26	2.40	<0.03	0.29	<0.03	<0.15$_{AA}$	<0.03		<0.03	mg/kg	TM4/PM8
Acenaphthene #M	0.15	3.39$_{AB}$	0.20	0.52	<0.05	0.07	<0.05	<0.25$_{AA}$	<0.05		<0.05	mg/kg	TM4/PM8
Fluorene #M	0.21	3.04$_{AB}$	0.35	0.56	<0.04	0.10	<0.04	<0.20$_{AA}$	<0.04		<0.04	mg/kg	TM4/PM8
Phenanthrene #M	0.85	27.28$_{AB}$	5.22	3.75	<0.03	1.46	0.04	0.19$_{AA}$	<0.03		<0.03	mg/kg	TM4/PM8
Anthracene #	0.23	4.45$_{AB}$	1.62	6.74	<0.04	0.78	<0.04	<0.20$_{AA}$	<0.04		<0.04	mg/kg	TM4/PM8
Fluoranthene #M	0.93	31.38$_{AB}$	9.89	11.22	0.04	4.84	0.10	0.24$_{AA}$	<0.03		<0.03	mg/kg	TM4/PM8
Pyrene #	0.67	22.47$_{AB}$	8.65	10.04	0.05	4.25	0.09	0.33$_{AA}$	<0.03		<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	0.44	14.98$_{AB}$	5.90	5.34	<0.06	2.68	0.09	<0.30$_{AA}$	<0.06		<0.06	mg/kg	TM4/PM8
Chrysene #M	0.43	17.58$_{AB}$	5.63	8.03	0.03	2.81	0.09	0.32$_{AA}$	<0.02		<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	0.63	27.22$_{AB}$	10.62	16.96	0.07	6.16	0.15	0.41$_{AA}$	<0.07		<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	0.30	13.86$_{AB}$	6.67	6.21	<0.04	2.88	0.08	0.25$_{AA}$	<0.04		<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	0.18	8.37$_{AB}$	4.42	4.89	<0.04	2.00	0.06	<0.20$_{AA}$	<0.04		<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04	1.44$_{AB}$	0.66	1.36	<0.04	0.26	<0.04	<0.20$_{AA}$	<0.04		<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	0.15	6.92$_{AB}$	3.68	3.73	<0.04	1.81	0.07	0.23$_{AA}$	<0.04		<0.04	mg/kg	TM4/PM8
PAH 16 Total	5.4	184.2$_{AB}$	64.3	87.3	<0.6	30.6	0.8	<3.0$_{AA}$	<0.6		<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.45	19.60$_{AB}$	7.65	12.21	0.05	4.44	0.11	0.30$_{AA}$	<0.05		<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.18	7.62$_{AB}$	2.97	4.75	<0.02	1.72	0.04	0.11$_{AA}$	<0.02		<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	120	113$_{AB}$	121	121	110	107	116	111$_{AA}$	129		<0	%	TM4/PM8
Methyl Tertiary Butyl Ether #M	<6	-	-	-	-	-	-	-	<6		<6	ug/kg	TM15/PM10
Benzene #M	548	-	-	-	-	-	-	-	<5		<5	ug/kg	TM15/PM10

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	340-342	343-344	345-346	350-352	353-355	356-358	359-361	362-364	368-370		LOD/LOR	Units	Method No.
Sample ID	WS14	TP9	TP9	TP10	TP10	TP11	TP11	TP19	TP19				
Depth	4.00	0.20	0.50	0.50	1.50	0.30	0.50	0.30	1.00				
COC No / misc													
Containers	V J T	V J	V J	V J T	V J T	V J T	V J T	V J T	V J T				
Sample Date	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016				
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
Batch Number	4	4	4	4	4	4	4	4	4				
Date of Receipt	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016				
Toluene #M	35	-	-	-	-	-	-	-	<3		<3	ug/kg	TM15/PM10
Ethylbenzene #M	85	-	-	-	-	-	-	-	<3		<3	ug/kg	TM15/PM10
p/m-Xylene #M	134	-	-	-	-	-	-	-	<4		<4	ug/kg	TM15/PM10
o-Xylene #M	13	-	-	-	-	-	-	-	<4		<4	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	100	-	-	-	-	-	-	-	101		<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	107	-	-	-	-	-	-	-	125		<0	%	TM15/PM10
EPH >C8-C10 #M	39	<5	<5	<5	<5	<5	<5	<5	<5		<5	mg/kg	TM5/PM8
EPH >C10-C12 #M	14	<10	<10	<10	<10	<10	<10	<10	<10		<10	mg/kg	TM5/PM8
EPH >C12-C16 #M	21	13	<10	22	<10	13	<10	16	<10		<10	mg/kg	TM5/PM8
EPH >C16-C21 #M	57	160	43	162	<10	122	<10	183	<10		<10	mg/kg	TM5/PM8
EPH >C21-C40	220	415	167	654	<10	475	<10	2865	<10		<10	mg/kg	TM5/PM8
EPH >C8-C40	351	588	210	838	<30	610	<30	3064	<30		<30	mg/kg	TM5/PM8
TPH CWG													
Aliphatics													
>C5-C6 #M	0.4	-	-	-	-	-	-	-	<0.1		<0.1	mg/kg	TM36/PM12
>C6-C8 #M	1.9	-	-	-	-	-	-	-	<0.1		<0.1	mg/kg	TM36/PM12
>C8-C10	2.0	-	-	-	-	-	-	-	<0.1		<0.1	mg/kg	TM36/PM12
>C10-C12 #M	<0.2	-	-	-	-	-	-	-	<0.2		<0.2	mg/kg	TM5/PM16
>C12-C16 #M	<4	-	-	-	-	-	-	-	<4		<4	mg/kg	TM5/PM16
>C16-C21 #M	<7	-	-	-	-	-	-	-	<7		<7	mg/kg	TM5/PM16
>C21-C35 #M	15	-	-	-	-	-	-	-	11		<7	mg/kg	TM5/PM16
Total aliphatics C5-35	19	-	-	-	-	-	-	-	<19		<19	mg/kg	TM5/TM36/PM12/PM16
Aromatics													
>C5-EC7 #	0.8	-	-	-	-	-	-	-	<0.1		<0.1	mg/kg	TM36/PM12
>EC7-EC8 #	<0.1	-	-	-	-	-	-	-	<0.1		<0.1	mg/kg	TM36/PM12
>EC8-EC10 #M	0.3	-	-	-	-	-	-	-	<0.1		<0.1	mg/kg	TM36/PM12
>EC10-EC12 #	5.9	-	-	-	-	-	-	-	<0.2		<0.2	mg/kg	TM5/PM16
>EC12-EC16 #	<4	-	-	-	-	-	-	-	<4		<4	mg/kg	TM5/PM16
>EC16-EC21 #	12	-	-	-	-	-	-	-	<7		<7	mg/kg	TM5/PM16
>EC21-EC35 #	57	-	-	-	-	-	-	-	<7		<7	mg/kg	TM5/PM16
Total aromatics C5-35 #	76	-	-	-	-	-	-	-	<19		<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	95	-	-	-	-	-	-	-	<38		<38	mg/kg	TM5/TM36/PM12/PM16
PCB 77	-	-	-	-	-	-	-	-	<5		<5	ug/kg	TM16/PM8
PCB 81	-	-	-	-	-	-	-	-	<5		<5	ug/kg	TM16/PM8
PCB 105	-	-	-	-	-	-	-	-	<5		<5	ug/kg	TM16/PM8
PCB 114	-	-	-	-	-	-	-	-	<5		<5	ug/kg	TM16/PM8
PCB 118	-	-	-	-	-	-	-	-	<5		<5	ug/kg	TM16/PM8
PCB 123	-	-	-	-	-	-	-	-	<5		<5	ug/kg	TM16/PM8
PCB 126	-	-	-	-	-	-	-	-	<5		<5	ug/kg	TM16/PM8
PCB 156	-	-	-	-	-	-	-	-	<5		<5	ug/kg	TM16/PM8
PCB 157	-	-	-	-	-	-	-	-	<5		<5	ug/kg	TM16/PM8

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	340-342	343-344	345-346	350-352	353-355	356-358	359-361	362-364	368-370		LOD/LOR	Units	Method No.
Sample ID	WS14	TP9	TP9	TP10	TP10	TP11	TP11	TP19	TP19				
Depth	4.00	0.20	0.50	0.50	1.50	0.30	0.50	0.30	1.00				
COC No / misc													
Containers	V J T	V J	V J	V J T	V J T	V J T	V J T	V J T	V J T				
Sample Date	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016	15/11/2016				
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
Batch Number	4	4	4	4	4	4	4	4	4				
Date of Receipt	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016				
PCB 167	-	-	-	-	-	-	-	-	<5		<5	ug/kg	TM16/PM8
PCB 169	-	-	-	-	-	-	-	-	<5		<5	ug/kg	TM16/PM8
PCB 189	-	-	-	-	-	-	-	-	<5		<5	ug/kg	TM16/PM8
Total 12 PCBs	-	-	-	-	-	-	-	-	<60		<60	ug/kg	TM16/PM8
Total Phenols HPLC	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15		<0.15	mg/kg	TM26/PM21
Natural Moisture Content	8.8	18.2	17.7	11.7	5.6	15.6	10.9	6.5	5.7		<0.1	%	PM4/PM0
Natural Moisture Content	-	-	-	-	-	-	-	-	-		<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3		<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #M	0.1051	0.0384	0.0727	0.0355	0.0043	0.0344	0.0119	0.1156	0.0096		<0.0015	g/l	TM38/PM20
Sulphate as SO4 (2:1 Ext)	-	-	-	-	-	-	-	-	-		<0.0015	g/l	TM38/PM60
Free Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	mg/kg	TM89/PM45
Total Cyanide #M	<0.5	<0.5	<0.5	1.4	<0.5	<0.5	<0.5	0.8	<0.5		<0.5	mg/kg	TM89/PM45
Fraction Organic Carbon	0.009	0.198	0.198	0.078	0.022	0.205	0.008	0.006	<0.001		<0.001	None	TM21/PM24
pH #M	10.54	8.31	8.21	8.60	9.08	8.13	8.68	8.70	8.97		<0.01	pH units	TM73/PM11
Sample Type	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand			None	PM13/PM0
Sample Colour	Dark Brown	Dark Brown	Dark Brown	Dark Brown	Medium Brown	Dark Brown	Medium Brown	Medium Brown	Medium Brown			None	PM13/PM0
Other Items	stones	stones, clay, vegetation, clinker	stones, clay	stones	clay	stones, clay, vegetation	stones	stones, silt, brick	NA			None	PM13/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

SVOC Report : **Solid**

J E Sample No.	285-287	314-315	340-342	368-370									
Sample ID	BH4	WS16	WS14	TP19									
Depth	3.00	3.50	4.00	1.00							Please see attached notes for all abbreviations and acronyms		
COC No / misc													
Containers	V J T	V J	V J T	V J T									
Sample Date	15/11/2016	15/11/2016	15/11/2016	15/11/2016									
Sample Type	Soil	Soil	Soil	Soil									
Batch Number	4	4	4	4									
Date of Receipt	17/11/2016	17/11/2016	17/11/2016	17/11/2016									
SVOC MS											LOD/LOR	Units	Method No.
Phenols													
2-Chlorophenol #M	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
2-Methylphenol	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
2,4-Dichlorophenol #M	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Methylphenol	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Phenol #M	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene #M	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
2-Methylnaphthalene #M	<10	<10	257	<10							<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	<100	<100	<100	<100							<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<100	<100	<100							<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<100	<100	<100	<100							<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<100	<100	<100							<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<100	<100	<100							<100	ug/kg	TM16/PM8
Dimethyl phthalate #M	<100	<100	<100	<100							<100	ug/kg	TM16/PM8
Other SVOCs													
1,2-Dichlorobenzene	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #M	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #M	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Azobenzene	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Carbazole	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Dibenzofuran #M	<10	<10	63	<10							<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Hexachlorobutadiene #M	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Isophorone #M	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #M	<10	<10	<10	<10							<10	ug/kg	TM16/PM8
Nitrobenzene #M	<10	<10	<10	<10							<10	ug/kg	TM16/PM8

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

VOC Report : **Solid**

J E Sample No.	285-287	314-315	340-342	368-370									
Sample ID	BH4	WS16	WS14	TP19									
Depth	3.00	3.50	4.00	1.00							Please see attached notes for all abbreviations and acronyms		
COC No / misc													
Containers	V J T	V J	V J T	V J T									
Sample Date	15/11/2016	15/11/2016	15/11/2016	15/11/2016									
Sample Type	Soil	Soil	Soil	Soil									
Batch Number	4	4	4	4									
Date of Receipt	17/11/2016	17/11/2016	17/11/2016	17/11/2016									
VOC MS											LOD/LOR	Units	Method No.
Dichlorodifluoromethane	<2	<2	<2	<2							<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #	<2	<2	<2	<2							<2	ug/kg	TM15/PM10
Chloromethane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	<2	<2							<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1	<1							<1	ug/kg	TM15/PM10
Chloroethane #	<2	<2	<2	<2							<2	ug/kg	TM15/PM10
Trichlorofluoromethane #	<2	<2	<2	<2							<2	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<6	<6	<6	<6							<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	56	169	<30	<30							<30	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
1,1-Dichloroethane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
Bromochloromethane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
Chloroform #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
1,1,1-Trichloroethane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
Carbon tetrachloride #	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
1,2-Dichloroethane #	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
Benzene #	6	11	548	<3							<3	ug/kg	TM15/PM10
Trichloroethene (TCE) #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
1,2-Dichloropropane #	<6	<6	<6	<6							<6	ug/kg	TM15/PM10
Dibromomethane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
Bromodichloromethane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
Toluene #	6	6	35	<3							<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
1,3-Dichloropropane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
Dibromochloromethane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
Chlorobenzene #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
Ethylbenzene #	<3	4	85	<3							<3	ug/kg	TM15/PM10
p/m-Xylene #	10	<5	134	<5							<5	ug/kg	TM15/PM10
o-Xylene #	<3	<3	13	<3							<3	ug/kg	TM15/PM10
Styrene	<3	<3	<3	<3							<3	ug/kg	TM15_A/PM10
Bromoform	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
Isopropylbenzene #	<3	6	59	<3							<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2	<2							<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
Propylbenzene #	<4	<4	230	<4							<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	<3	<3	7	<3							<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3	<3							<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5	<5	<5	<5							<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	<6	<6	46	<6							<6	ug/kg	TM15/PM10
sec-Butylbenzene #	<4	<4	29	<4							<4	ug/kg	TM15/PM10
4-Isopropyltoluene #	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
n-Butylbenzene #	<4	<4	38	<4							<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane #	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene #	<7	<7	<7	<7							<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4	<4							<4	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene #	<7	<7	<7	<7							<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	103	100	100	101							<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	100	102	107	125							<0	%	TM15/PM10

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

Signed on behalf of Jones Environmental Laboratory:



Ryan Butterworth
Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	4	BH4	0.50	280	23/11/2016	**General Description (Bulk Analysis)**	soil/stones
					23/11/2016	**Asbestos Fibres**	NAD
					23/11/2016	**Asbestos Fibres (2)**	NAD
					23/11/2016	**Asbestos ACM**	NAD
					23/11/2016	**Asbestos ACM (2)**	NAD
					23/11/2016	**Asbestos Type**	NAD
					23/11/2016	**Asbestos Type (2)**	NAD
					23/11/2016	**Asbestos Level Screen**	NAD
16/16961	4	BH4	3.00	286	23/11/2016	**General Description (Bulk Analysis)**	soil/stones
					23/11/2016	**Asbestos Fibres**	NAD
					23/11/2016	**Asbestos Fibres (2)**	NAD
					23/11/2016	**Asbestos ACM**	NAD
					23/11/2016	**Asbestos ACM (2)**	NAD
					23/11/2016	**Asbestos Type**	NAD
					23/11/2016	**Asbestos Type (2)**	NAD
					23/11/2016	**Asbestos Level Screen**	NAD
16/16961	4	BH3	1.00	292	23/11/2016	**General Description (Bulk Analysis)**	soil/stones
					23/11/2016	**Asbestos Fibres**	NAD
					23/11/2016	**Asbestos Fibres (2)**	NAD
					23/11/2016	**Asbestos ACM**	NAD
					23/11/2016	**Asbestos ACM (2)**	NAD
					23/11/2016	**Asbestos Type**	NAD
					23/11/2016	**Asbestos Type (2)**	NAD
					23/11/2016	**Asbestos Level Screen**	NAD
16/16961	4	BH3	5.00	301	23/11/2016	**General Description (Bulk Analysis)**	soil/stones
					23/11/2016	**Asbestos Fibres**	NAD
					23/11/2016	**Asbestos Fibres (2)**	NAD
					23/11/2016	**Asbestos ACM**	NAD
					23/11/2016	**Asbestos ACM (2)**	NAD
					23/11/2016	**Asbestos Type**	NAD
					23/11/2016	**Asbestos Type (2)**	NAD
					23/11/2016	**Asbestos Level Screen**	NAD
16/16961	4	BH3	7.00	304	23/11/2016	**General Description (Bulk Analysis)**	soil/stones
					23/11/2016	**Asbestos Fibres**	NAD
					23/11/2016	**Asbestos Fibres (2)**	NAD

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	4	BH3	7.00	304	23/11/2016	**Asbestos ACM**	NAD
					23/11/2016	**Asbestos ACM (2)**	NAD
					23/11/2016	**Asbestos Type**	NAD
					23/11/2016	**Asbestos Type (2)**	NAD
					23/11/2016	**Asbestos Level Screen**	NAD
16/16961	4	WS16	0.30	307	23/11/2016	**General Description (Bulk Analysis)**	soil/stones
					23/11/2016	**Asbestos Fibres**	NAD
					23/11/2016	**Asbestos Fibres (2)**	NAD
					23/11/2016	**Asbestos ACM**	NAD
					23/11/2016	**Asbestos ACM (2)**	NAD
					23/11/2016	**Asbestos Type**	NAD
					23/11/2016	**Asbestos Type (2)**	NAD
					23/11/2016	**Asbestos Level Screen**	NAD
16/16961	4	WS16	1.50	311	23/11/2016	**General Description (Bulk Analysis)**	soil/stones
					23/11/2016	**Asbestos Fibres**	NAD
					23/11/2016	**Asbestos Fibres (2)**	NAD
					23/11/2016	**Asbestos ACM**	NAD
					23/11/2016	**Asbestos ACM (2)**	NAD
					23/11/2016	**Asbestos Type**	NAD
					23/11/2016	**Asbestos Type (2)**	NAD
					23/11/2016	**Asbestos Level Screen**	NAD
16/16961	4	WS16	3.50	315	23/11/2016	**General Description (Bulk Analysis)**	soil/stones
					23/11/2016	**Asbestos Fibres**	NAD
					23/11/2016	**Asbestos Fibres (2)**	NAD
					23/11/2016	**Asbestos ACM**	NAD
					23/11/2016	**Asbestos ACM (2)**	NAD
					23/11/2016	**Asbestos Type**	NAD
					23/11/2016	**Asbestos Type (2)**	NAD
					23/11/2016	**Asbestos Level Screen**	NAD
16/16961	4	WS12	0.30	317	23/11/2016	**General Description (Bulk Analysis)**	soil/stones
					23/11/2016	**Asbestos Fibres**	NAD
					23/11/2016	**Asbestos Fibres (2)**	NAD
					23/11/2016	**Asbestos ACM**	NAD
					23/11/2016	**Asbestos ACM (2)**	NAD
					23/11/2016	**Asbestos Type**	NAD
					23/11/2016	**Asbestos Type (2)**	NAD
					23/11/2016	**Asbestos Level Screen**	NAD
16/16961	4	WS14	0.50	332	24/11/2016	**General Description (Bulk Analysis)**	Soil/Stones
					24/11/2016	**Asbestos Fibres**	Fibre Bundles
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos Type**	Chrysotile
					24/11/2016	**Asbestos Level Screen**	<0.1%
					13/12/2016	**Asbestos Gravimetric Quantification**	<0.001 (mass %)
					13/12/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					13/12/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)
16/16961	4	WS14	4.00	341	24/11/2016	**General Description (Bulk Analysis)**	Soil/Stone
					24/11/2016	**Asbestos Fibres**	NAD

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	4	WS14	4.00	341	24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	4	TP9	0.20	344	23/11/2016	**General Description (Bulk Analysis)**	soil/stones
					23/11/2016	**Asbestos Fibres**	NAD
					23/11/2016	**Asbestos Fibres (2)**	NAD
					23/11/2016	**Asbestos ACM**	NAD
					23/11/2016	**Asbestos ACM (2)**	NAD
					23/11/2016	**Asbestos Type**	NAD
					23/11/2016	**Asbestos Type (2)**	NAD
					23/11/2016	**Asbestos Level Screen**	NAD
16/16961	4	TP9	0.50	346	23/11/2016	**General Description (Bulk Analysis)**	soil/stones
					23/11/2016	**Asbestos Fibres**	NAD
					23/11/2016	**Asbestos Fibres (2)**	NAD
					23/11/2016	**Asbestos ACM**	NAD
					23/11/2016	**Asbestos ACM (2)**	NAD
					23/11/2016	**Asbestos Type**	NAD
					23/11/2016	**Asbestos Type (2)**	NAD
					23/11/2016	**Asbestos Level Screen**	NAD
16/16961	4	TP10	0.50	351	23/11/2016	**General Description (Bulk Analysis)**	soil/stones
					23/11/2016	**Asbestos Fibres**	NAD
					23/11/2016	**Asbestos Fibres (2)**	NAD
					23/11/2016	**Asbestos ACM**	NAD
					23/11/2016	**Asbestos ACM (2)**	NAD
					23/11/2016	**Asbestos Type**	NAD
					23/11/2016	**Asbestos Type (2)**	NAD
					23/11/2016	**Asbestos Level Screen**	NAD
16/16961	4	TP10	1.50	354	23/11/2016	**General Description (Bulk Analysis)**	soil/stones
					23/11/2016	**Asbestos Fibres**	NAD
					23/11/2016	**Asbestos Fibres (2)**	NAD
					23/11/2016	**Asbestos ACM**	NAD
					23/11/2016	**Asbestos ACM (2)**	NAD
					23/11/2016	**Asbestos Type**	NAD
					23/11/2016	**Asbestos Type (2)**	NAD
					23/11/2016	**Asbestos Level Screen**	NAD
16/16961	4	TP11	0.30	357	23/11/2016	**General Description (Bulk Analysis)**	soil/stones
					23/11/2016	**Asbestos Fibres**	NAD
					23/11/2016	**Asbestos Fibres (2)**	NAD
					23/11/2016	**Asbestos ACM**	NAD
					23/11/2016	**Asbestos ACM (2)**	NAD
					23/11/2016	**Asbestos Type**	NAD
					23/11/2016	**Asbestos Type (2)**	NAD
					23/11/2016	**Asbestos Level Screen**	NAD

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	4	TP11	0.50	360	24/11/2016	**General Description (Bulk Analysis)**	Soil/Stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	4	TP19	0.30	363	24/11/2016	**General Description (Bulk Analysis)**	Soil/Stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	4	TP19	1.00	369	24/11/2016	**General Description (Bulk Analysis)**	Sand/Stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD

Client Name: WYG **Matrix : Solid**
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	NDP Reason
16/16961	4	WS14	0.50	331-333	Asbestos detected in sample

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
No deviating sample report results for job 16/16961						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.
Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 16/16961

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
SA	ISO17025 (SANAS) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x5 Dilution
AB	x10 Dilution
AC	x50 Dilution

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.			AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.	Yes	Yes	AD	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM60	As received solid samples are extracted with deionised water in a 2:1 ratio of water to solid.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM61	As received solid samples are extracted with hot water in a 20:1 ratio of water to soil ready for analysis by ICP.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.	Yes	Yes	AR	Yes
TM15_A	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds, Vinyl Chloride & Styrene by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

Exova Jones Environmental

Registered Address : Exova (UK) Ltd, Lochend Industrial Estate, Newbridge, Midlothian, EH28 8PL

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WYG
5th Floor
Longcross Court
47 Newport Road
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CF24 0AD

Attention :	Nicholas Bool
Date :	13th December, 2016
Your reference :	A095973-2
Our reference :	Test Report 16/16961 Batch 5
Location :	Tidal Lagoon
Date samples received :	18th November, 2016
Status :	Final report
Issue :	1

Forty one samples were received for analysis on 18th November, 2016 of which twenty three were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Phil Sommerton BSc
Project Manager

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	371-373	374-376	386-388	389-391	392-394	401-403	404-405	409-410	416-418	422-424	LOD/LOR	Units	Method No.
Sample ID	WS06	WS06	WS07	WS07	WS07	WS07	WS15	WS15	HP8	HP8			
Depth	0.30	1.00	0.30	1.00	1.50	4.50	0.30	2.00	0.50	2.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J	V J	V J T	V J T			
Sample Date	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	5	5	5	5	5	5	5	5	5	5			
Date of Receipt	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016			
Arsenic #M	-	532.1 AC	249.2	12.6	13.1	7.7	13.9	9.7	53.3	55.7	<0.5	mg/kg	TM30/PM15
Arsenic	589.1 AC	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Cadmium #M	-	5.1	2.9	1.3	0.9	0.9	0.7	0.4	<0.1	2.9	<0.1	mg/kg	TM30/PM15
Cadmium	13.0	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Chromium #M	-	47.6	71.0	51.6	43.3	70.7	44.1	45.8	37.5	35.8	<0.5	mg/kg	TM30/PM15
Chromium	17.0	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Copper #M	-	639 AC	587 AC	11	5	13	57	20	316 AC	554 AC	<1	mg/kg	TM30/PM15
Copper	513 AC	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Lead #M	-	10700 AC	2943 AC	38	11	16	72	34	111	477	<5	mg/kg	TM30/PM15
Lead	11157 AC	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62
Mercury #M	-	0.3	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	0.2	<0.1	mg/kg	TM30/PM15
Mercury	0.4	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Nickel #M	-	78.3	59.0	7.0	6.8	7.2	14.9	11.3	34.5	63.9	<0.7	mg/kg	TM30/PM15
Nickel	71.7	-	-	-	-	-	-	-	-	-	<0.7	mg/kg	TM30/PM62
Selenium #M	-	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	mg/kg	TM30/PM15
Selenium	1	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Water Soluble Boron #M	-	2.3	0.3	0.1	0.1	0.4	0.2	0.4	0.2	1.2	<0.1	mg/kg	TM74/PM32
Water Soluble Boron	1.7	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM74/PM61
Zinc #M	-	19570 AC	4563 AC	523	449	199	212	138	204	1010	<5	mg/kg	TM30/PM15
Zinc	22012 AC	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene #M	<0.20 AA	1.76 AA	0.38 AA	<0.04	<0.04	<0.04	0.10	0.05	5.69 AA	7.44	<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.19 AA	0.23 AA	0.49 AA	<0.03	<0.03	1.12	<0.03	<0.03	2.55 AA	1.74	<0.03	mg/kg	TM4/PM8
Acenaphthene #M	<0.25 AA	0.45 AA	<0.25 AA	<0.05	<0.05	0.87	<0.05	<0.05	<0.25 AA	0.77	<0.05	mg/kg	TM4/PM8
Fluorene #M	<0.20 AA	0.40 AA	<0.20 AA	<0.04	<0.04	1.41	<0.04	<0.04	0.79 AA	1.10	<0.04	mg/kg	TM4/PM8
Phenanthrene #M	2.81 AA	6.36 AA	1.00 AA	<0.03	<0.03	2.60	0.42	0.17	14.97 AA	12.77	<0.03	mg/kg	TM4/PM8
Anthracene #	0.74 AA	1.34 AA	0.43 AA	<0.04	<0.04	0.42	0.09	0.05	10.98 AA	4.29	<0.04	mg/kg	TM4/PM8
Fluoranthene #M	4.53 AA	11.03 AA	2.62 AA	<0.03	<0.03	0.77	0.58	0.31	48.96 AA	18.53	<0.03	mg/kg	TM4/PM8
Pyrene #	3.60 AA	9.06 AA	2.26 AA	<0.03	<0.03	0.89	0.51	0.28	39.71 AA	14.98	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	2.46 AA	6.35 AA	1.48 AA	<0.06	<0.06	0.29	0.27	0.19	20.99 AA	8.93	<0.06	mg/kg	TM4/PM8
Chrysene #M	2.61 AA	5.41 AA	1.71 AA	<0.02	<0.02	0.31	0.28	0.19	28.01 AA	9.84	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	4.02 AA	9.56 AA	2.13 AA	<0.07	<0.07	0.40	0.42	0.31	51.30 AA	14.60	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	1.97 AA	5.48 AA	0.96 AA	<0.04	<0.04	0.19	0.23	0.17	25.13 AA	7.32	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	1.14 AA	3.53 AA	0.85 AA	<0.04	<0.04	0.08	0.13	0.09	15.90 AA	5.31	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.20 AA	0.60 AA	<0.20 AA	<0.04	<0.04	<0.04	<0.04	<0.04	4.20 AA	0.89	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	1.09 AA	3.25 AA	0.67 AA	<0.04	<0.04	0.14	0.15	0.09	14.56 AA	3.45	<0.04	mg/kg	TM4/PM8
PAH 16 Total	25.2 AA	64.8 AA	15.0 AA	<0.6	<0.6	9.5	3.2	1.9	283.7 AA	112.0	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	2.89 AA	6.88 AA	1.53 AA	<0.05	<0.05	0.29	0.30	0.22	36.94 AA	10.51	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	1.13 AA	2.68 AA	0.60 AA	<0.02	<0.02	0.11	0.12	0.09	14.36 AA	4.09	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	115 AA	111 AA	113 AA	105	108	98	116	128	88 AA	97	<0	%	TM4/PM8
Methyl Tertiary Butyl Ether #M	-	-	-	-	-	<6	-	<6	-	<6	<6	ug/kg	TM15/PM10
Benzene #M	-	-	-	-	-	<5	-	<5	-	<5	<5	ug/kg	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	371-373	374-376	386-388	389-391	392-394	401-403	404-405	409-410	416-418	422-424	LOD/LOR	Units	Method No.
Sample ID	WS06	WS06	WS07	WS07	WS07	WS07	WS15	WS15	HP8	HP8			
Depth	0.30	1.00	0.30	1.00	1.50	4.50	0.30	2.00	0.50	2.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J	V J	V J T	V J T			
Sample Date	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	5	5	5	5	5	5	5	5	5	5			
Date of Receipt	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016			
Toluene [#M]	-	-	-	-	-	<3	-	<3	-	14	<3	ug/kg	TM15/PM10
Ethylbenzene [#M]	-	-	-	-	-	<3	-	<3	-	5	<3	ug/kg	TM15/PM10
p/m-Xylene [#M]	-	-	-	-	-	<4	-	<4	-	26	<4	ug/kg	TM15/PM10
o-Xylene [#M]	-	-	-	-	-	70	-	<4	-	9	<4	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	-	-	-	-	-	73	-	103	-	94	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	-	-	-	-	-	66	-	119	-	60	<0	%	TM15/PM10
EPH >C8-C10 [#M]	<5	<5	<5	<5	<5	1414	<5	<5	<5	<5	<5	mg/kg	TM5/PM8
EPH >C10-C12 [#M]	<10	<10	<10	<10	<10	1664	<10	<10	<10	<10	<10	mg/kg	TM5/PM8
EPH >C12-C16 [#M]	<10	<10	<10	<10	<10	4155	<10	<10	<10	23	<10	mg/kg	TM5/PM8
EPH >C16-C21 [#M]	48	77	23	<10	<10	2879	<10	<10	336	291	<10	mg/kg	TM5/PM8
EPH >C21-C40	341	460	552	<10	<10	1446	<10	<10	1162	823	<10	mg/kg	TM5/PM8
EPH >C8-C40	389	537	575	<30	<30	11558	<30	<30	1498	1137	<30	mg/kg	TM5/PM8
TPH CWG													
Aliphatics													
>C5-C6 [#M]	-	-	-	-	-	6.7 AB	-	<0.1	-	<1.0 AB	<0.1	mg/kg	TM36/PM12
>C6-C8 [#M]	-	-	-	-	-	65.9 AB	-	<0.1	-	<1.0 AB	<0.1	mg/kg	TM36/PM12
>C8-C10	-	-	-	-	-	587.2 ++ AB	-	<0.1	-	<1.0 AB	<0.1	mg/kg	TM36/PM12
>C10-C12 [#M]	-	-	-	-	-	742.9	-	<0.2	-	<0.2	<0.2	mg/kg	TM5/PM16
>C12-C16 [#M]	-	-	-	-	-	1528	-	<4	-	<4	<4	mg/kg	TM5/PM16
>C16-C21 [#M]	-	-	-	-	-	857	-	<7	-	<7	<7	mg/kg	TM5/PM16
>C21-C35 [#M]	-	-	-	-	-	200	-	<7	-	<7	<7	mg/kg	TM5/PM16
Total aliphatics C5-35	-	-	-	-	-	3988	-	<19	-	<19	<19	mg/kg	TM5/TM36/PM12/PM16
Aromatics													
>C5-EC7 [#]	-	-	-	-	-	<1.0 AB	-	<0.1	-	<1.0 AB	<0.1	mg/kg	TM36/PM12
>EC7-EC8 [#]	-	-	-	-	-	<1.0 AB	-	<0.1	-	<1.0 AB	<0.1	mg/kg	TM36/PM12
>EC8-EC10 [#M]	-	-	-	-	-	6.7 AB	-	<0.1	-	<1.0 AB	<0.1	mg/kg	TM36/PM12
>EC10-EC12 [#]	-	-	-	-	-	172.5	-	<0.2	-	3.3	<0.2	mg/kg	TM5/PM16
>EC12-EC16 [#]	-	-	-	-	-	709	-	<4	-	22	<4	mg/kg	TM5/PM16
>EC16-EC21 [#]	-	-	-	-	-	622	-	<7	-	188	<7	mg/kg	TM5/PM16
>EC21-EC35 [#]	-	-	-	-	-	344	-	<7	-	454	<7	mg/kg	TM5/PM16
Total aromatics C5-35 [#]	-	-	-	-	-	1854	-	<19	-	667	<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	-	-	-	-	-	5842	-	<38	-	667	<38	mg/kg	TM5/TM36/PM12/PM16
PCB 77	-	-	-	-	-	-	-	<5	-	-	<5	ug/kg	TM16/PM8
PCB 81	-	-	-	-	-	-	-	<5	-	-	<5	ug/kg	TM16/PM8
PCB 105	-	-	-	-	-	-	-	<5	-	-	<5	ug/kg	TM16/PM8
PCB 114	-	-	-	-	-	-	-	<5	-	-	<5	ug/kg	TM16/PM8
PCB 118	-	-	-	-	-	-	-	<5	-	-	<5	ug/kg	TM16/PM8
PCB 123	-	-	-	-	-	-	-	<5	-	-	<5	ug/kg	TM16/PM8
PCB 126	-	-	-	-	-	-	-	<5	-	-	<5	ug/kg	TM16/PM8
PCB 156	-	-	-	-	-	-	-	<5	-	-	<5	ug/kg	TM16/PM8
PCB 157	-	-	-	-	-	-	-	<5	-	-	<5	ug/kg	TM16/PM8

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	371-373	374-376	386-388	389-391	392-394	401-403	404-405	409-410	416-418	422-424	LOD/LOR	Units	Method No.
Sample ID	WS06	WS06	WS07	WS07	WS07	WS07	WS15	WS15	HP8	HP8			
Depth	0.30	1.00	0.30	1.00	1.50	4.50	0.30	2.00	0.50	2.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J	V J	V J T	V J T			
Sample Date	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	5	5	5	5	5	5	5	5	5	5			
Date of Receipt	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016			
PCB 167	-	-	-	-	-	-	-	<5	-	-	<5	ug/kg	TM16/PM8
PCB 169	-	-	-	-	-	-	-	<5	-	-	<5	ug/kg	TM16/PM8
PCB 189	-	-	-	-	-	-	-	<5	-	-	<5	ug/kg	TM16/PM8
Total 12 PCBs	-	-	-	-	-	-	-	<60	-	-	<60	ug/kg	TM16/PM8
Total Phenols HPLC	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	mg/kg	TM26/PM21
Natural Moisture Content	-	19.7	9.8	5.3	5.1	19.6	12.9	25.7	25.7	21.0	<0.1	%	PM4/PM0
Natural Moisture Content	19.5	-	-	-	-	-	-	-	-	-	<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #M	-	0.0652	0.0704	0.0043	0.0033	0.1078	0.0189	0.0695	0.0213	0.1259	<0.0015	g/l	TM38/PM20
Sulphate as SO4 (2:1 Ext)	0.0240	-	-	-	-	-	-	-	-	-	<0.0015	g/l	TM38/PM60
Free Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Total Cyanide #M	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	mg/kg	TM89/PM45
Fraction Organic Carbon	NDP	0.199	0.092	0.002	<0.001	0.003	0.010	0.005	0.333	0.246	<0.001	None	TM21/PM24
pH #M	8.68	8.43	8.05	9.12	9.05	8.08	8.64	8.31	8.30	7.84	<0.01	pH units	TM73/PM11
Sample Type	NDP	Sand	Sand	Sand	Sand	Sand	Clayey Sand	Sand	Sand	Clay		None	PM13/PM0
Sample Colour	NDP	Medium Brown	Dark Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Dark Brown	Dark Brown		None	PM13/PM0
Other Items	NDP	stones	Stones and root	stones	stones	Chemical odour	Root	NA	Root, stones and clinker	stones, sand		None	PM13/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	428-430	434-436	443-445	449-451	452-454	458-460	461-463	467-469	470-472	476-478	LOD/LOR	Units	Method No.
Sample ID	HP9	HP9	HP10	HP11	HP11	HP12	HP12	HP13	HP13	HP14			
Depth	0.50	2.00	1.00	0.50	1.00-1.50	0.50	1.00	0.50	1.50	0.50			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	5	5	5	5	5	5	5	5	5	5			
Date of Receipt	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016			
Arsenic #M	10.2	-	33.2	18.8	-	-	-	-	85.7	43.0	<0.5	mg/kg	TM30/PM15
Arsenic	-	26.3	-	-	45.5	82.5	60.2	71.9	-	-	<0.5	mg/kg	TM30/PM62
Cadmium #M	<0.1	-	0.2	0.4	-	-	-	-	1.5	0.4	<0.1	mg/kg	TM30/PM15
Cadmium	-	0.7	-	-	1.3	1.9	1.4	5.2	-	-	<0.1	mg/kg	TM30/PM62
Chromium #M	42.3	-	29.9	68.6	-	-	-	-	46.5	32.3	<0.5	mg/kg	TM30/PM15
Chromium	-	15.7	-	-	14.5	16.8	12.9	14.9	-	-	<0.5	mg/kg	TM30/PM62
Copper #M	12	-	104	30	-	-	-	-	307$_{AA}$	169	<1	mg/kg	TM30/PM15
Copper	-	188$_{AC}$	-	-	198	175	272$_{AC}$	156	-	-	<1	mg/kg	TM30/PM62
Lead #M	22	-	167	202	-	-	-	-	1176	120	<5	mg/kg	TM30/PM15
Lead	-	132	-	-	347	909	360	951	-	-	<5	mg/kg	TM30/PM62
Mercury #M	<0.1	-	0.1	<0.1	-	-	-	-	0.5	0.4	<0.1	mg/kg	TM30/PM15
Mercury	-	<0.1	-	-	1.0	<0.1	0.3	<0.1	-	-	<0.1	mg/kg	TM30/PM62
Nickel #M	27.8	-	21.9	51.1	-	-	-	-	32.2	24.9	<0.7	mg/kg	TM30/PM15
Nickel	-	26.8	-	-	25.8	40.1	19.7	37.2	-	-	<0.7	mg/kg	TM30/PM62
Selenium #M	<1	-	<1	<1	-	-	-	-	1	1	<1	mg/kg	TM30/PM15
Selenium	-	<1	-	-	<1	<1	<1	<1	-	-	<1	mg/kg	TM30/PM62
Water Soluble Boron #M	0.4	-	0.4	2.2	-	-	-	-	0.9	0.8	<0.1	mg/kg	TM74/PM32
Water Soluble Boron	-	0.6	-	-	0.7	1.2	0.6	0.5	-	-	<0.1	mg/kg	TM74/PM61
Zinc #M	93	-	139	471	-	-	-	-	1848	251	<5	mg/kg	TM30/PM15
Zinc	-	279	-	-	605	2124	507	2513	-	-	<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene #M	0.04	4.36	8.55$_{AA}$	0.11	10.65$_{AA}$	0.55	4.03	0.79	2.28	31.74$_{AA}$	<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	0.58	4.19$_{AA}$	<0.03	8.23$_{AA}$	0.26	0.99	0.20	0.82	13.18$_{AA}$	<0.03	mg/kg	TM4/PM8
Acenaphthene #M	<0.05	0.14	0.33$_{AA}$	<0.05	1.19$_{AA}$	0.09	0.66	0.28	0.29	0.75$_{AA}$	<0.05	mg/kg	TM4/PM8
Fluorene #M	<0.04	0.42	1.44$_{AA}$	<0.04	2.25$_{AA}$	0.11	1.16	0.28	0.54	3.42$_{AA}$	<0.04	mg/kg	TM4/PM8
Phenanthrene #M	0.11	5.42	31.50$_{AA}$	0.38	25.89$_{AA}$	1.84	15.36	3.44	8.39	53.55$_{AA}$	<0.03	mg/kg	TM4/PM8
Anthracene #	<0.04	1.69	13.14$_{AA}$	0.09	15.78$_{AA}$	0.55	5.30	0.78	2.28	14.01$_{AA}$	<0.04	mg/kg	TM4/PM8
Fluoranthene #M	0.15	6.39	51.72$_{AA}$	0.48	58.30$_{AA}$	3.37	20.66	5.56	11.85	90.57$_{AA}$	<0.03	mg/kg	TM4/PM8
Pyrene #	0.13	5.13	40.64$_{AA}$	0.41	48.16$_{AA}$	2.87	15.93	4.41	9.17	73.81$_{AA}$	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	0.11	2.70	25.87$_{AA}$	0.20	33.73$_{AA}$	1.83	9.77	2.81	4.60	42.82$_{AA}$	<0.06	mg/kg	TM4/PM8
Chrysene #M	0.11	2.76	23.02$_{AA}$	0.26	28.85$_{AA}$	2.01	10.20	2.99	5.69	37.24$_{AA}$	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	0.14	4.15	40.12$_{AA}$	0.36	52.62$_{AA}$	3.28	15.80	4.94	9.88	65.70$_{AA}$	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	0.07	1.90	19.93$_{AA}$	0.19	28.80$_{AA}$	1.84	8.85	2.63	5.19	30.31$_{AA}$	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	<0.04	0.87	13.37$_{AA}$	0.13	17.23$_{AA}$	0.94	5.30	1.84	4.16	21.69$_{AA}$	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04	0.15	3.65$_{AA}$	<0.04	3.70$_{AA}$	0.17	1.08	0.34	1.03	5.94$_{AA}$	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	<0.04	0.80	10.04$_{AA}$	0.11	14.41$_{AA}$	0.85	4.24	1.39	2.94	16.87$_{AA}$	<0.04	mg/kg	TM4/PM8
PAH 16 Total	0.9	37.5	287.5$_{AA}$	2.7	349.8$_{AA}$	20.6	119.3	32.7	69.1	501.6$_{AA}$	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.10	2.99	28.89$_{AA}$	0.26	37.89$_{AA}$	2.36	11.38	3.56	7.11	47.30$_{AA}$	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.04	1.16	11.23$_{AA}$	0.10	14.73$_{AA}$	0.92	4.42	1.38	2.77	18.40$_{AA}$	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	127	107	107$_{AA}$	97	108$_{AA}$	108	99	101	99	109$_{AA}$	<0	%	TM4/PM8
Methyl Tertiary Butyl Ether #M	-	-	-	<6	-	-	-	-	-	-	<6	ug/kg	TM15/PM10
Benzene #M	-	-	-	<5	-	-	-	-	-	-	<5	ug/kg	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	428-430	434-436	443-445	449-451	452-454	458-460	461-463	467-469	470-472	476-478	LOD/LOR	Units	Method No.
Sample ID	HP9	HP9	HP10	HP11	HP11	HP12	HP12	HP13	HP13	HP14			
Depth	0.50	2.00	1.00	0.50	1.00-1.50	0.50	1.00	0.50	1.50	0.50			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	5	5	5	5	5	5	5	5	5	5			
Date of Receipt	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016			
Toluene #M	-	-	-	12	-	-	-	-	-	-	<3	ug/kg	TM15/PM10
Ethylbenzene #M	-	-	-	<3	-	-	-	-	-	-	<3	ug/kg	TM15/PM10
p/m-Xylene #M	-	-	-	12	-	-	-	-	-	-	<4	ug/kg	TM15/PM10
o-Xylene #M	-	-	-	<4	-	-	-	-	-	-	<4	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	-	-	-	95	-	-	-	-	-	-	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	-	-	-	74	-	-	-	-	-	-	<0	%	TM15/PM10
EPH >C8-C10 #M	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	mg/kg	TM5/PM8
EPH >C10-C12 #M	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	mg/kg	TM5/PM8
EPH >C12-C16 #M	<10	18	<10	<10	31	<10	34	16	<10	52	<10	mg/kg	TM5/PM8
EPH >C16-C21 #M	<10	93	139	<10	404	70	360	126	125	274	<10	mg/kg	TM5/PM8
EPH >C21-C40	<10	174	523	<10	1633	444	1229	463	525	540	<10	mg/kg	TM5/PM8
EPH >C8-C40	<30	285	662	<30	2068	514	1623	605	650	866	<30	mg/kg	TM5/PM8
TPH CWG													
Aliphatics													
>C5-C6 #M	-	-	-	<0.1	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
>C6-C8 #M	-	-	-	<0.1	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
>C8-C10	-	-	-	<0.1	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
>C10-C12 #M	-	-	-	<0.2	-	-	-	-	-	-	<0.2	mg/kg	TM5/PM16
>C12-C16 #M	-	-	-	<4	-	-	-	-	-	-	<4	mg/kg	TM5/PM16
>C16-C21 #M	-	-	-	<7	-	-	-	-	-	-	<7	mg/kg	TM5/PM16
>C21-C35 #M	-	-	-	<7	-	-	-	-	-	-	<7	mg/kg	TM5/PM16
Total aliphatics C5-35	-	-	-	<19	-	-	-	-	-	-	<19	mg/kg	TM5/TM36/PM12/PM16
Aromatics													
>C5-EC7 #	-	-	-	<0.1	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
>EC7-EC8 #	-	-	-	<0.1	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
>EC8-EC10 #M	-	-	-	<0.1	-	-	-	-	-	-	<0.1	mg/kg	TM36/PM12
>EC10-EC12 #	-	-	-	<0.2	-	-	-	-	-	-	<0.2	mg/kg	TM5/PM16
>EC12-EC16 #	-	-	-	<4	-	-	-	-	-	-	<4	mg/kg	TM5/PM16
>EC16-EC21 #	-	-	-	<7	-	-	-	-	-	-	<7	mg/kg	TM5/PM16
>EC21-EC35 #	-	-	-	39	-	-	-	-	-	-	<7	mg/kg	TM5/PM16
Total aromatics C5-35 #	-	-	-	39	-	-	-	-	-	-	<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	-	-	-	39	-	-	-	-	-	-	<38	mg/kg	TM5/TM36/PM12/PM16
PCB 77	-	-	-	<5	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 81	-	-	-	<5	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 105	-	-	-	<5	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 114	-	-	-	<5	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 118	-	-	-	<5	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 123	-	-	-	<5	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 126	-	-	-	<5	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 156	-	-	-	<5	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 157	-	-	-	<5	-	-	-	-	-	-	<5	ug/kg	TM16/PM8

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	428-430	434-436	443-445	449-451	452-454	458-460	461-463	467-469	470-472	476-478	LOD/LOR	Units	Method No.
Sample ID	HP9	HP9	HP10	HP11	HP11	HP12	HP12	HP13	HP13	HP14			
Depth	0.50	2.00	1.00	0.50	1.00-1.50	0.50	1.00	0.50	1.50	0.50			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	5	5	5	5	5	5	5	5	5	5			
Date of Receipt	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016			
PCB 167	-	-	-	<5	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 169	-	-	-	<5	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 189	-	-	-	<5	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
Total 12 PCBs	-	-	-	<60	-	-	-	-	-	-	<60	ug/kg	TM16/PM8
Total Phenols HPLC	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	mg/kg	TM26/PM21
Natural Moisture Content	10.3	-	18.1	9.4	-	-	-	-	17.9	22.8	<0.1	%	PM4/PM0
Natural Moisture Content	-	14.4	-	-	19.1	18.0	12.5	15.8	-	-	<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #M	0.0240	-	0.0219	0.2082	-	-	-	-	0.0735	0.0488	<0.0015	g/l	TM38/PM20
Sulphate as SO4 (2:1 Ext)	-	0.0482	-	-	0.0490	0.0918	0.0446	0.0205	-	-	<0.0015	g/l	TM38/PM60
Free Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Total Cyanide #M	<0.5	<0.5	<0.5	<0.5	2.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Fraction Organic Carbon	0.010	NDP	0.245	0.013	NDP	NDP	NDP	NDP	0.149	0.349	<0.001	None	TM21/PM24
pH #M	7.86	8.17	8.32	10.05	8.22	9.52	8.46	8.34	8.21	8.36	<0.01	pH units	TM73/PM11
Sample Type	Clay	NDP	Sand	Sand	NDP	NDP	NDP	NDP	Sand	Sand		None	PM13/PM0
Sample Colour	Medium Brown	NDP	Dark Brown	Medium Brown	NDP	NDP	NDP	NDP	Dark Brown	Dark Brown		None	PM13/PM0
Other Items	stones	NDP	stones, clay	stones	NDP	NDP	NDP	NDP	stones, clay	stones, clay		None	PM13/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	479-481	484-485	486-488									
Sample ID	HP14	HP15	WS06									
Depth	1.00	0.50-1.00	4.50									
COC No / misc												
Containers	V J T	V J	V J T									
Sample Date	14/11/2016	14/11/2016	14/11/2016									
Sample Type	Soil	Soil	Soil									
Batch Number	5	5	5									
Date of Receipt	18/11/2016	18/11/2016	18/11/2016									

Please see attached notes for all abbreviations and acronyms

				LOD/LOR	Units	Method No.
Arsenic #M	41.0	22.2	18.8	<0.5	mg/kg	TM30/PM15
Arsenic	-	-	-	<0.5	mg/kg	TM30/PM62
Cadmium #M	0.7	0.3	0.3	<0.1	mg/kg	TM30/PM15
Cadmium	-	-	-	<0.1	mg/kg	TM30/PM62
Chromium #M	38.9	27.4	40.2	<0.5	mg/kg	TM30/PM15
Chromium	-	-	-	<0.5	mg/kg	TM30/PM62
Copper #M	158	65	6	<1	mg/kg	TM30/PM15
Copper	-	-	-	<1	mg/kg	TM30/PM62
Lead #M	166	63	10	<5	mg/kg	TM30/PM15
Lead	-	-	-	<5	mg/kg	TM30/PM62
Mercury #M	0.5	<0.1	<0.1	<0.1	mg/kg	TM30/PM15
Mercury	-	-	-	<0.1	mg/kg	TM30/PM62
Nickel #M	28.0	9.6	5.4	<0.7	mg/kg	TM30/PM15
Nickel	-	-	-	<0.7	mg/kg	TM30/PM62
Selenium #M	<1	<1	<1	<1	mg/kg	TM30/PM15
Selenium	-	-	-	<1	mg/kg	TM30/PM62
Water Soluble Boron #M	1.1	0.6	0.2	<0.1	mg/kg	TM74/PM32
Water Soluble Boron	-	-	-	<0.1	mg/kg	TM74/PM61
Zinc #M	474	131	262	<5	mg/kg	TM30/PM15
Zinc	-	-	-	<5	mg/kg	TM30/PM62
PAH MS						
Naphthalene #M	35.01 AA	2.03	<0.04	<0.04	mg/kg	TM4/PM8
Acenaphthylene	11.87 AA	0.39	0.06	<0.03	mg/kg	TM4/PM8
Acenaphthene #M	1.80 AA	0.12	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene #M	10.37 AA	0.26	<0.04	<0.04	mg/kg	TM4/PM8
Phenanthrene #M	70.79 AA	2.20	0.06	<0.03	mg/kg	TM4/PM8
Anthracene #	16.59 AA	0.78	<0.04	<0.04	mg/kg	TM4/PM8
Fluoranthene #M	67.37 AA	3.61	0.04	<0.03	mg/kg	TM4/PM8
Pyrene #	51.07 AA	2.85	0.04	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	27.28 AA	2.00	<0.06	<0.06	mg/kg	TM4/PM8
Chrysene #M	21.77 AA	1.83	<0.02	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	39.81 AA	3.28	<0.07	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	19.36 AA	1.62	<0.04	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	13.03 AA	1.18	<0.04	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	3.14 AA	0.41	<0.04	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	9.67 AA	0.86	<0.04	<0.04	mg/kg	TM4/PM8
PAH 16 Total	398.9 AA	23.4	<0.6	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	28.66 AA	2.36	<0.05	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	11.15 AA	0.92	<0.02	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	120 AA	107	101	<0	%	TM4/PM8
Methyl Tertiary Butyl Ether #M	-	-	<6	<6	ug/kg	TM15/PM10
Benzene #M	-	-	<5	<5	ug/kg	TM15/PM10

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	479-481	484-485	486-488								LOD/LOR	Units	Method No.
Sample ID	HP14	HP15	WS06										
Depth	1.00	0.50-1.00	4.50										
COC No / misc													
Containers	V J T	V J	V J T										
Sample Date	14/11/2016	14/11/2016	14/11/2016										
Sample Type	Soil	Soil	Soil										
Batch Number	5	5	5										
Date of Receipt	18/11/2016	18/11/2016	18/11/2016										
Toluene #M	-	-	<3								<3	ug/kg	TM15/PM10
Ethylbenzene #M	-	-	<3								<3	ug/kg	TM15/PM10
p/m-Xylene #M	-	-	<4								<4	ug/kg	TM15/PM10
o-Xylene #M	-	-	<4								<4	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	-	-	96								<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	-	-	97								<0	%	TM15/PM10
EPH >C8-C10 #M	<5	<5	307								<5	mg/kg	TM5/PM8
EPH >C10-C12 #M	<10	<10	402								<10	mg/kg	TM5/PM8
EPH >C12-C16 #M	23	26	818								<10	mg/kg	TM5/PM8
EPH >C16-C21 #M	204	65	244								<10	mg/kg	TM5/PM8
EPH >C21-C40	524	295	426								<10	mg/kg	TM5/PM8
EPH >C8-C40	751	386	2197								<30	mg/kg	TM5/PM8
TPH CWG													
Aliphatics													
>C5-C6 #M	-	-	<0.1								<0.1	mg/kg	TM36/PM12
>C6-C8 #M	-	-	1.3								<0.1	mg/kg	TM36/PM12
>C8-C10	-	-	52.3++								<0.1	mg/kg	TM36/PM12
>C10-C12 #M	-	-	363.5								<0.2	mg/kg	TM5/PM16
>C12-C16 #M	-	-	716								<4	mg/kg	TM5/PM16
>C16-C21 #M	-	-	166								<7	mg/kg	TM5/PM16
>C21-C35 #M	-	-	100								<7	mg/kg	TM5/PM16
Total aliphatics C5-35	-	-	1399								<19	mg/kg	TM5/TM36/PM12/PM16
Aromatics													
>C5-EC7 #	-	-	<0.1								<0.1	mg/kg	TM36/PM12
>EC7-EC8 #	-	-	<0.1								<0.1	mg/kg	TM36/PM12
>EC8-EC10 #M	-	-	0.8++								<0.1	mg/kg	TM36/PM12
>EC10-EC12 #	-	-	65.7								<0.2	mg/kg	TM5/PM16
>EC12-EC16 #	-	-	226								<4	mg/kg	TM5/PM16
>EC16-EC21 #	-	-	109								<7	mg/kg	TM5/PM16
>EC21-EC35 #	-	-	157								<7	mg/kg	TM5/PM16
Total aromatics C5-35 #	-	-	559								<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	-	-	1958								<38	mg/kg	TM5/TM36/PM12/PM16
PCB 77	<25AA	-	<5								<5	ug/kg	TM16/PM8
PCB 81	<25AA	-	<5								<5	ug/kg	TM16/PM8
PCB 105	<25AA	-	<5								<5	ug/kg	TM16/PM8
PCB 114	<25AA	-	<5								<5	ug/kg	TM16/PM8
PCB 118	<25AA	-	<5								<5	ug/kg	TM16/PM8
PCB 123	<25AA	-	<5								<5	ug/kg	TM16/PM8
PCB 126	<25AA	-	<5								<5	ug/kg	TM16/PM8
PCB 156	<25AA	-	<5								<5	ug/kg	TM16/PM8
PCB 157	<25AA	-	<5								<5	ug/kg	TM16/PM8

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	479-481	484-485	486-488										
Sample ID	HP14	HP15	WS06										
Depth	1.00	0.50-1.00	4.50										
COC No / misc													
Containers	V J T	V J	V J T										
Sample Date	14/11/2016	14/11/2016	14/11/2016										
Sample Type	Soil	Soil	Soil										
Batch Number	5	5	5										
Date of Receipt	18/11/2016	18/11/2016	18/11/2016										

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
PCB 167	<25 AA	-	<5								<5	ug/kg	TM16/PM8
PCB 169	<25 AA	-	<5								<5	ug/kg	TM16/PM8
PCB 189	<25 AA	-	<5								<5	ug/kg	TM16/PM8
Total 12 PCBs	<300 AA	-	<60								<60	ug/kg	TM16/PM8
Total Phenols HPLC	<0.15	<0.15	<0.15								<0.15	mg/kg	TM26/PM21
Natural Moisture Content	12.8	6.3	21.8								<0.1	%	PM4/PM0
Natural Moisture Content	-	-	-								<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3								<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #M	0.1521	0.0944	0.1939								<0.0015	g/l	TM38/PM20
Sulphate as SO4 (2:1 Ext)	-	-	-								<0.0015	g/l	TM38/PM60
Free Cyanide	<0.5	<0.5	<0.5								<0.5	mg/kg	TM89/PM45
Total Cyanide #M	<0.5	<0.5	<0.5								<0.5	mg/kg	TM89/PM45
Fraction Organic Carbon	0.140	0.031	<0.001								<0.001	None	TM21/PM24
pH #M	8.33	8.88	8.15								<0.01	pH units	TM73/PM11
Sample Type	Clayey Loam	Clayey Sand	Sand									None	PM13/PM0
Sample Colour	Dark Brown	Dark Brown	Dark Brown									None	PM13/PM0
Other Items	Stones, vegetation, brick, sand and clinker	Stones	Chemical odour									None	PM13/PM0

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

SVOC Report : **Solid**

J E Sample No.	401-403	409-410	422-424	449-451	486-488								
Sample ID	WS07	WS15	HP8	HP11	WS06								
Depth	4.50	2.00	2.00	0.50	4.50						Please see attached notes for all abbreviations and acronyms		
COC No / misc													
Containers	V J T	V J	V J T	V J T	V J T								
Sample Date	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016								
Sample Type	Soil	Soil	Soil	Soil	Soil								
Batch Number	5	5	5	5	5						LOD/LOR	Units	Method No.
Date of Receipt	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016								
SVOC MS													
Phenols													
2-Chlorophenol #M	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
2-Methylphenol	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
2,4-Dichlorophenol #M	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
4-Methylphenol	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
Phenol #M	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene #M	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
2-Methylnaphthalene #M	<10	<10	2144 AA	<10	<10						<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	<100	<100	<500 AA	<100	<100						<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<100	<500 AA	<100	<100						<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<100	<100	<500 AA	<100	<100						<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<100	<500 AA	<100	<100						<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<100	<500 AA	<100	<100						<100	ug/kg	TM16/PM8
Dimethyl phthalate #M	<100	<100	<500 AA	<100	<100						<100	ug/kg	TM16/PM8
Other SVOCs													
1,2-Dichlorobenzene	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #M	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #M	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
Azobenzene	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
Carbazole	<10	<10	1294 AA	<10	<10						<10	ug/kg	TM16/PM8
Dibenzofuran #M	<10	<10	4119 AA	75	<10						<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
Hexachlorobutadiene #M	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
Isophorone #M	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #M	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8
Nitrobenzene #M	<10	<10	<50 AA	<10	<10						<10	ug/kg	TM16/PM8

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

VOC Report : **Solid**

J E Sample No.	401-403	409-410	422-424	449-451	486-488						LOD/LOR	Units	Method No.
Sample ID	WS07	WS15	HP8	HP11	WS06								
Depth	4.50	2.00	2.00	0.50	4.50								
COC No / misc													
Containers	V J T	V J	V J T	V J T	V J T								
Sample Date	14/11/2016	14/11/2016	14/11/2016	14/11/2016	14/11/2016								
Sample Type	Soil	Soil	Soil	Soil	Soil								
Batch Number	5	5	5	5	5								
Date of Receipt	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016								
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2	<2						<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #M	<6	<6	<6	<6	<6						<6	ug/kg	TM15/PM10
Chloromethane #	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	<2	<2	<2						<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1	<1	<1						<1	ug/kg	TM15/PM10
Chloroethane #M	<6	<6	<6	<6	<6						<6	ug/kg	TM15/PM10
Trichlorofluoromethane #M	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #M	<6	<6	<6	<6	<6						<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	<30	<30	242	245	<30						<30	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
1,1-Dichloroethane #M	<6	<6	<6	<6	<6						<6	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #M	<7	<7	<7	<7	<7						<7	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Bromochloromethane #M	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Chloroform #M	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
1,1,1-Trichloroethane #M	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
Carbon tetrachloride #M	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,2-Dichloroethane #M	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
Benzene #M	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
Trichloroethene (TCE) #M	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
1,2-Dichloropropane #M	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Dibromomethane #M	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Bromodichloromethane #M	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Toluene #M	<3	<3	14	12	<3						<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #M	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
1,3-Dichloropropane #M	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Dibromochloromethane #M	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
Chlorobenzene #M	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #M	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
Ethylbenzene #M	<3	<3	5	<3	<3						<3	ug/kg	TM15/PM10
p/m-Xylene #M	<4	<4	26	12	<4						<4	ug/kg	TM15/PM10
o-Xylene #M	70	<4	9	<4	<4						<4	ug/kg	TM15/PM10
Styrene	<3	<3	<3	<3	<3						<3	ug/kg	TM15_A/PM10
Bromoform	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Isopropylbenzene #	1286	<3	<3	<3	96						<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #M	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2	<2	<2						<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #M	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Propylbenzene #	2798++	<4	<4	<4	224						<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	70	<6	<6	<6	<6						<6	ug/kg	TM15/PM10
sec-Butylbenzene #	3153++	<4	<4	<4	290						<4	ug/kg	TM15/PM10
4-Isopropyltoluene #	38	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #M	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
n-Butylbenzene #	2386	<4	<4	<4	174						<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #M	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane #	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene #	<7	<7	<7	<7	<7						<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene #	<7	<7	<7	<7	<7						<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	73	103	94	95	96						<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	66	119	60	74	97						<0	%	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

Signed on behalf of Jones Environmental Laboratory:



Ryan Butterworth
Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	5	WS06	0.30	372	24/11/2016	**General Description (Bulk Analysis)**	Soil/Stones
					24/11/2016	**Asbestos Fibres**	Fibre Bundles
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos Type**	Chrysotile
					24/11/2016	**Asbestos Level Screen**	<0.1%
					13/12/2016	**Asbestos Gravimetric Quantification**	<0.001 (mass %)
					13/12/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					13/12/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)
16/16961	5	WS06	1.00	375	24/11/2016	**General Description (Bulk Analysis)**	Soil/Stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	5	WS07	0.30	387	24/11/2016	**General Description (Bulk Analysis)**	Soil/Stone
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	5	WS07	1.00	390	24/11/2016	**General Description (Bulk Analysis)**	Soil/Sand
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	5	WS07	1.50	393	24/11/2016	**General Description (Bulk Analysis)**	Soil/Sand
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	5	WS07	1.50	393	24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	5	WS07	4.50	402	24/11/2016	**General Description (Bulk Analysis)**	soil/stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	5	WS15	0.30	405	24/11/2016	**General Description (Bulk Analysis)**	soil/stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	5	WS15	2.00	410	24/11/2016	**General Description (Bulk Analysis)**	soil/stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	5	HP8	0.50	417	24/11/2016	**General Description (Bulk Analysis)**	soil/stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	5	HP8	2.00	423	24/11/2016	**General Description (Bulk Analysis)**	Soil/Stone
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	5	HP9	0.50	429	24/11/2016	**General Description (Bulk Analysis)**	Soil/Stone
					24/11/2016	**Asbestos Fibres**	NAD

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	5	HP9	0.50	429	24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	5	HP9	2.00	435	24/11/2016	**General Description (Bulk Analysis)**	soil/stones
					24/11/2016	**Asbestos Fibres**	Fibre Bundles
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos Type**	Chrysotile
					24/11/2016	**Asbestos Level Screen**	<0.1%
					13/12/2016	**Asbestos Gravimetric Quantification**	<0.001 (mass %)
					13/12/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					13/12/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)
16/16961	5	HP10	1.00	444	24/11/2016	**General Description (Bulk Analysis)**	Soil/Stone
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	5	HP11	0.50	450	24/11/2016	**General Description (Bulk Analysis)**	Soil/Stone
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	5	HP11	1.00-1.50	453	24/11/2016	**General Description (Bulk Analysis)**	Soil/Stone/Silt
					24/11/2016	**Asbestos Fibres**	Fibre Bundles
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos Type**	Chrysotile
					24/11/2016	**Asbestos Level Screen**	<0.1%
16/16961	5	HP12	0.50	459	24/11/2016	**General Description (Bulk Analysis)**	soil/stones
					24/11/2016	**Asbestos Fibres**	Fibre Bundles
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos Type**	Chrysotile
					24/11/2016	**Asbestos Level Screen**	<0.1%
					13/12/2016	**Asbestos Gravimetric Quantification**	<0.001 (mass %)
					13/12/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					13/12/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)
16/16961	5	HP12	1.00	462	24/11/2016	**General Description (Bulk Analysis)**	Soil/Stone
					24/11/2016	**Asbestos Fibres**	Fibre Bundles
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos Type**	Chrysotile

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	5	HP12	1.00	462	24/11/2016	**Asbestos Level Screen**	<0.1%
					13/12/2016	**Asbestos Gravimetric Quantification**	<0.001 (mass %)
					13/12/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					13/12/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)
16/16961	5	HP13	0.50	468	23/11/2016	**General Description (Bulk Analysis)**	Soil/Stone
					23/11/2016	**Asbestos Fibres**	Fibre Bundles
					23/11/2016	**Asbestos ACM**	NAD
					23/11/2016	**Asbestos Type**	Chrysotile
					23/11/2016	**Asbestos Level Screen**	<0.1%
					13/12/2016	**Asbestos Gravimetric Quantification**	<0.001 (mass %)
					13/12/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					13/12/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)
16/16961	5	HP13	1.50	471	23/11/2016	**General Description (Bulk Analysis)**	Soil/Stone/Silt
					23/11/2016	**Asbestos Fibres**	NAD
					23/11/2016	**Asbestos Fibres (2)**	NAD
					23/11/2016	**Asbestos ACM**	NAD
					23/11/2016	**Asbestos ACM (2)**	NAD
					23/11/2016	**Asbestos Type**	NAD
					23/11/2016	**Asbestos Type (2)**	NAD
					23/11/2016	**Asbestos Level Screen**	NAD
16/16961	5	HP14	0.50	477	23/11/2016	**General Description (Bulk Analysis)**	Soil/Stone/Silt
					23/11/2016	**Asbestos Fibres**	NAD
					23/11/2016	**Asbestos Fibres (2)**	NAD
					23/11/2016	**Asbestos ACM**	NAD
					23/11/2016	**Asbestos ACM (2)**	NAD
					23/11/2016	**Asbestos Type**	NAD
					23/11/2016	**Asbestos Type (2)**	NAD
					23/11/2016	**Asbestos Level Screen**	NAD
16/16961	5	HP14	1.00	480	24/11/2016	**General Description (Bulk Analysis)**	soil/stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	5	HP15	0.50-1.00	485	24/11/2016	**General Description (Bulk Analysis)**	soil/stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	5	WS06	4.50	487	24/11/2016	**General Description (Bulk Analysis)**	soil/stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	5	WS06	4.50	487	24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD

Client Name: WYG **Matrix : Solid**
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	NDP Reason
16/16961	5	WS06	0.30	371-373	Asbestos detected in sample
16/16961	5	HP9	2.00	434-436	Asbestos detected in sample
16/16961	5	HP11	1.00-1.50	452-454	Asbestos detected in sample
16/16961	5	HP12	0.50	458-460	Asbestos detected in sample
16/16961	5	HP12	1.00	461-463	Asbestos detected in sample
16/16961	5	HP13	0.50	467-469	Asbestos detected in sample

Client Name: WYG

Matrix : Solid

Reference: A095973-2

Location: Tidal Lagoon

Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
16/16961	5	HP8	2.00	422-424	VOC	Sample holding time exceeded

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.

Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 16/16961

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
SA	ISO17025 (SANAS) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x5 Dilution
AB	x10 Dilution
AC	x50 Dilution

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.			AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.	Yes	Yes	AD	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM60	As received solid samples are extracted with deionised water in a 2:1 ratio of water to solid.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM61	As received solid samples are extracted with hot water in a 20:1 ratio of water to soil ready for analysis by ICP.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.	Yes	Yes	AR	Yes
TM15_A	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds, Vinyl Chloride & Styrene by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

Exova Jones Environmental

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Attention :	Nicholas Bool
Date :	13th December, 2016
Your reference :	A095973-2
Our reference :	Test Report 16/16961 Batch 6
Location :	Tidal Lagoon
Date samples received :	18th November, 2016
Status :	Final report
Issue :	2

Forty one samples were received for analysis on 18th November, 2016 of which twenty one were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Phil Sommerton BSc
Project Manager

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	489-491	492-494	495-497	507-509	510-512	516-518	525-527	528-530	534-536	543-545	LOD/LOR	Units	Method No.
Sample ID	BH10	BH10	BH10	BH10	BH8	BH8	BH8	TP20	TP20	TP20			
Depth	0.50	1.00	2.00	8.00	0.30	2.50	7.50	0.20	1.00	3.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	6	6	6	6	6	6	6	6	6	6			
Date of Receipt	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016			
Arsenic #M	-	62.1	-	9.9	12.1	8.1	-	62.8	-	-	<0.5	mg/kg	TM30/PM15
Arsenic	19.7	-	102.6	-	-	-	18.7	-	36.9	262.6	<0.5	mg/kg	TM30/PM62
Cadmium #M	-	1.7	-	<0.1	0.4	0.2	-	3.3	-	-	<0.1	mg/kg	TM30/PM15
Cadmium	0.6	-	4.1	-	-	-	1.2	-	1.6	6.3	<0.1	mg/kg	TM30/PM62
Chromium #M	-	27.1	-	41.5	23.3	39.6	-	34.4	-	-	<0.5	mg/kg	TM30/PM15
Chromium	20.8	-	11.5	-	-	-	11.5	-	9.9	15.2	<0.5	mg/kg	TM30/PM62
Copper #M	-	103	-	6	17	11	-	250$_{AB}$	-	-	<1	mg/kg	TM30/PM15
Copper	73	-	262	-	-	-	66	-	80	382$_{AB}$	<1	mg/kg	TM30/PM62
Lead #M	-	1632	-	21	37	26	-	1540	-	-	<5	mg/kg	TM30/PM15
Lead	244	-	6537$_{AA}$	-	-	-	109	-	779	2947	<5	mg/kg	TM30/PM62
Mercury #M	-	0.1	-	<0.1	<0.1	<0.1	-	0.9	-	-	<0.1	mg/kg	TM30/PM15
Mercury	<0.1	-	<0.1	-	-	-	0.5	-	0.2	0.4	<0.1	mg/kg	TM30/PM62
Nickel #M	-	14.3	-	6.8	11.2	9.2	-	34.8	-	-	<0.7	mg/kg	TM30/PM15
Nickel	16.3	-	46.6	-	-	-	15.1	-	12.6	29.2	<0.7	mg/kg	TM30/PM62
Selenium #M	-	<1	-	<1	<1	<1	-	2	-	-	<1	mg/kg	TM30/PM15
Selenium	<1	-	<1	-	-	-	<1	-	<1	<1	<1	mg/kg	TM30/PM62
Water Soluble Boron #M	-	0.4	-	0.4	0.2	0.5	-	0.8	-	-	<0.1	mg/kg	TM74/PM32
Water Soluble Boron	0.2	-	0.2	-	-	-	1.5	-	0.7	0.4	<0.1	mg/kg	TM74/PM61
Zinc #M	-	2292	-	154	127	105	-	2469	-	-	<5	mg/kg	TM30/PM15
Zinc	525	-	8552$_{AA}$	-	-	-	381	-	1486	5501$_{AB}$	<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene #M	0.08	0.11	2.47	<0.04	<0.04	<0.04	0.27	0.20	0.26	0.79	<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	0.13	<0.03	<0.03	<0.03	<0.03	<0.03	0.12	0.32	<0.03	mg/kg	TM4/PM8
Acenaphthene #M	<0.05	<0.05	0.07	<0.05	<0.05	<0.05	0.11	0.11	0.08	0.15	<0.05	mg/kg	TM4/PM8
Fluorene #M	<0.04	<0.04	0.19	<0.04	<0.04	<0.04	0.11	0.16	0.17	0.32	<0.04	mg/kg	TM4/PM8
Phenanthrene #M	0.11	0.06	0.36	0.05	0.07	0.17	0.83	1.83	0.39	2.43	<0.03	mg/kg	TM4/PM8
Anthracene #	0.05	<0.04	0.08	<0.04	<0.04	0.09	0.24	0.43	0.11	0.87	<0.04	mg/kg	TM4/PM8
Fluoranthene #M	0.46	0.06	0.30	0.08	0.13	0.40	1.42	2.84	0.64	4.67	<0.03	mg/kg	TM4/PM8
Pyrene #	0.42	0.06	0.26	0.06	0.11	0.32	1.25	2.20	0.64	3.74	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	0.28	<0.06	0.35	<0.06	0.08	0.22	0.54	1.14	0.26	1.95	<0.06	mg/kg	TM4/PM8
Chrysene #M	0.37	0.05	0.34	0.04	0.08	0.26	0.79	1.75	0.44	2.67	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	0.56	<0.07	0.52	<0.07	0.12	0.33	1.19	2.44	0.60	4.47	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	0.29	<0.04	0.26	<0.04	0.07	0.17	0.71	1.27	0.39	2.50	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	0.29	<0.04	0.20	<0.04	0.05	0.11	0.45	0.80	0.24	1.94	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	0.06	<0.04	<0.04	<0.04	<0.04	<0.04	0.05	0.14	0.06	0.40	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	0.28	<0.04	0.16	<0.04	<0.04	0.09	0.33	0.61	0.25	1.45	<0.04	mg/kg	TM4/PM8
PAH 16 Total	3.3	<0.6	5.7	<0.6	0.7	2.2	8.3	15.9	4.7	28.7	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.40	<0.05	0.37	<0.05	0.09	0.24	0.86	1.76	0.43	3.22	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.16	<0.02	0.15	<0.02	0.03	0.09	0.33	0.68	0.17	1.25	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	101	98	101	91	103	102	97	107	105	104	<0	%	TM4/PM8
Methyl Tertiary Butyl Ether #M	-	<6	<6	-	-	-	-	<6	<6	<6	<6	ug/kg	TM15/PM10
Benzene #M	-	72	633	-	-	-	-	16	43	1261	<5	ug/kg	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	489-491	492-494	495-497	507-509	510-512	516-518	525-527	528-530	534-536	543-545	LOD/LOR	Units	Method No.
Sample ID	BH10	BH10	BH10	BH10	BH8	BH8	BH8	TP20	TP20	TP20			
Depth	0.50	1.00	2.00	8.00	0.30	2.50	7.50	0.20	1.00	3.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	6	6	6	6	6	6	6	6	6	6			
Date of Receipt	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016			
Toluene #M	-	29	99	-	-	-	-	24	18	97	<3	ug/kg	TM15/PM10
Ethylbenzene #M	-	83	948	-	-	-	-	24	51	151	<3	ug/kg	TM15/PM10
p/m-Xylene #M	-	125	486	-	-	-	-	81	81	221	<4	ug/kg	TM15/PM10
o-Xylene #M	-	20	84	-	-	-	-	48	17	31	<4	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	-	95	89	-	-	-	-	93	80	88	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	-	84	72	-	-	-	-	62	76	78	<0	%	TM15/PM10
EPH >C8-C10 #M	<5	90	579	<5	<5	<5	<5	15	158	3394	<5	mg/kg	TM5/PM8
EPH >C10-C12 #M	<10	136	482	<10	<10	<10	<10	<10	245	2131	<10	mg/kg	TM5/PM8
EPH >C12-C16 #M	40	491	903	<10	<10	<10	<10	32	980	2395	<10	mg/kg	TM5/PM8
EPH >C16-C21 #M	257	589	617	<10	<10	<10	72	71	1217	757	<10	mg/kg	TM5/PM8
EPH >C21-C40	1864	903	699	<10	<10	<10	370	176	3311	238	<10	mg/kg	TM5/PM8
EPH >C8-C40	2161	2209	3280	<30	<30	<30	442	294	5911	8915	<30	mg/kg	TM5/PM8
TPH CWG													
Aliphatics													
>C5-C6 #M	-	0.4	3.6	-	-	-	-	<1.0 AA	<0.1	29.0	<0.1	mg/kg	TM36/PM12
>C6-C8 #M	-	0.8	40.2	-	-	-	-	<1.0 AA	0.2	238.2 ++	<0.1	mg/kg	TM36/PM12
>C8-C10	-	6.3	78.7 ++	-	-	-	-	<1.0 AA	7.4	420.7 ++	<0.1	mg/kg	TM36/PM12
>C10-C12 #M	-	76.8	67.1	-	-	-	-	6.9	103.5	566.0	<0.2	mg/kg	TM5/PM16
>C12-C16 #M	-	257	113	-	-	-	-	29	420	663	<4	mg/kg	TM5/PM16
>C16-C21 #M	-	262	53	-	-	-	-	47	527	196	<7	mg/kg	TM5/PM16
>C21-C35 #M	-	297	8	-	-	-	-	51	1270	56	<7	mg/kg	TM5/PM16
Total aliphatics C5-35	-	900	364	-	-	-	-	134	2328	2169	<19	mg/kg	TM5/TM36/PM12/PM16
Aromatics													
>C5-EC7 #	-	0.2	0.4	-	-	-	-	<1.0 AA	<0.1	1.8	<0.1	mg/kg	TM36/PM12
>EC7-EC8 #	-	<0.1	0.6	-	-	-	-	<1.0 AA	<0.1	1.5	<0.1	mg/kg	TM36/PM12
>EC8-EC10 #M	-	0.7	1.8	-	-	-	-	<1.0 AA	0.2	3.6	<0.1	mg/kg	TM36/PM12
>EC10-EC12 #	-	14.2	28.5	-	-	-	-	<0.2	20.3	143.8	<0.2	mg/kg	TM5/PM16
>EC12-EC16 #	-	76	48	-	-	-	-	6	150	226	<4	mg/kg	TM5/PM16
>EC16-EC21 #	-	146	34	-	-	-	-	40	323	120	<7	mg/kg	TM5/PM16
>EC21-EC35 #	-	153	<7	-	-	-	-	116	430	136	<7	mg/kg	TM5/PM16
Total aromatics C5-35 #	-	390	113	-	-	-	-	162	924	633	<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	-	1290	477	-	-	-	-	296	3252	2802	<38	mg/kg	TM5/TM36/PM12/PM16
PCB 77	-	-	<5	-	-	-	-	-	-	<5	<5	ug/kg	TM16/PM8
PCB 81	-	-	<5	-	-	-	-	-	-	<5	<5	ug/kg	TM16/PM8
PCB 105	-	-	<5	-	-	-	-	-	-	21	<5	ug/kg	TM16/PM8
PCB 114	-	-	<5	-	-	-	-	-	-	<5	<5	ug/kg	TM16/PM8
PCB 118	-	-	<5	-	-	-	-	-	-	54	<5	ug/kg	TM16/PM8
PCB 123	-	-	<5	-	-	-	-	-	-	<5	<5	ug/kg	TM16/PM8
PCB 126	-	-	<5	-	-	-	-	-	-	<5	<5	ug/kg	TM16/PM8
PCB 156	-	-	<5	-	-	-	-	-	-	9	<5	ug/kg	TM16/PM8
PCB 157	-	-	<5	-	-	-	-	-	-	<5	<5	ug/kg	TM16/PM8

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	489-491	492-494	495-497	507-509	510-512	516-518	525-527	528-530	534-536	543-545	LOD/LOR	Units	Method No.
Sample ID	BH10	BH10	BH10	BH10	BH8	BH8	BH8	TP20	TP20	TP20			
Depth	0.50	1.00	2.00	8.00	0.30	2.50	7.50	0.20	1.00	3.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	6	6	6	6	6	6	6	6	6	6			
Date of Receipt	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016			
PCB 167	-	-	<5	-	-	-	-	-	-	<5	<5	ug/kg	TM16/PM8
PCB 169	-	-	<5	-	-	-	-	-	-	<5	<5	ug/kg	TM16/PM8
PCB 189	-	-	<5	-	-	-	-	-	-	<5	<5	ug/kg	TM16/PM8
Total 12 PCBs	-	-	<60	-	-	-	-	-	-	84	<60	ug/kg	TM16/PM8
Total Phenols HPLC	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	mg/kg	TM26/PM21
Natural Moisture Content	-	19.7	-	22.3	18.4	63.6	-	14.8	-	-	<0.1	%	PM4/PM0
Natural Moisture Content	14.7	-	20.3	-	-	-	35.7	-	12.5	22.7	<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #M	-	0.0988	-	0.0717	0.0101	0.0608	-	0.0814	-	-	<0.0015	g/l	TM38/PM20
Sulphate as SO4 (2:1 Ext)	0.0159	-	0.3284	-	-	-	0.1809	-	0.5156	0.3053	<0.0015	g/l	TM38/PM60
Free Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Total Cyanide #M	0.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Fraction Organic Carbon	NDP	0.027	NDP	0.004	0.005	0.004	NDP	0.154	NDP	NDP	<0.001	None	TM21/PM24
pH #M	7.92	8.01	7.60	8.45	9.02	8.68	8.86	8.11	7.67	7.81	<0.01	pH units	TM73/PM11
Sample Type	NDP	Sand	NDP	Sand	Sand	Sand	NDP	Sand	NDP	NDP		None	PM13/PM0
Sample Colour	NDP	Dark Brown	NDP	Dark Brown	Medium Brown	Dark Brown	NDP	Dark Brown	NDP	NDP		None	PM13/PM0
Other Items	NDP	stones, clinker	NDP	stones, clinker	NA	wet	NDP	stones, clinker	NDP	NDP		None	PM13/PM0

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Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	546-548	549-551	555-557	570-572	576-578	585-587	591-593	594-596	600-602	603-605	LOD/LOR	Units	Method No.
Sample ID	TP22	TP22	TP22	WS13	WS13	WS13	WS19	WS19	WS19	WS21			
Depth	0.10	0.50	2.10	0.30	2.00	4.00	0.30	1.00	3.00	0.30			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	6	6	6	6	6	6	6	6	6	6			
Date of Receipt	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016			
Arsenic #M	-	20.8	41.7	-	106.6	42.5	22.4	21.2	42.6	-	<0.5	mg/kg	TM30/PM15
Arsenic	24.9	-	-	99.2	-	-	-	-	-	40.5	<0.5	mg/kg	TM30/PM62
Cadmium #M	-	0.3	2.8	-	31.6AB	7.9	0.5	0.3	3.8	-	<0.1	mg/kg	TM30/PM15
Cadmium	0.4	-	-	12.2	-	-	-	-	-	0.9	<0.1	mg/kg	TM30/PM62
Chromium #M	-	57.1	38.5	-	41.6	46.1	36.9	33.8	45.4	-	<0.5	mg/kg	TM30/PM15
Chromium	27.5	-	-	19.1	-	-	-	-	-	10.2	<0.5	mg/kg	TM30/PM62
Copper #M	-	61	118	-	1246AB	103	42	39	115	-	<1	mg/kg	TM30/PM15
Copper	78	-	-	502AA	-	-	-	-	-	115	<1	mg/kg	TM30/PM62
Lead #M	-	140	873	-	15870AB	499	137	173	591	-	<5	mg/kg	TM30/PM15
Lead	269	-	-	5715AA	-	-	-	-	-	171	<5	mg/kg	TM30/PM62
Mercury #M	-	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	mg/kg	TM30/PM15
Mercury	<0.1	-	-	1.0	-	-	-	-	-	<0.1	<0.1	mg/kg	TM30/PM62
Nickel #M	-	86.6	23.9	-	27.2	10.7	10.0	9.1	13.3	-	<0.7	mg/kg	TM30/PM15
Nickel	130.5	-	-	46.2	-	-	-	-	-	56.7	<0.7	mg/kg	TM30/PM62
Selenium #M	-	<1	<1	-	5	<1	<1	<1	<1	-	<1	mg/kg	TM30/PM15
Selenium	1	-	-	2	-	-	-	-	-	<1	<1	mg/kg	TM30/PM62
Water Soluble Boron #M	-	0.2	0.2	-	0.7	0.3	0.2	0.2	0.3	-	<0.1	mg/kg	TM74/PM32
Water Soluble Boron	0.5	-	-	0.2	-	-	-	-	-	0.1	<0.1	mg/kg	TM74/PM61
Zinc #M	-	304	2409	-	19880AB	2390	303	234	2318	-	<5	mg/kg	TM30/PM15
Zinc	391	-	-	6917AA	-	-	-	-	-	542	<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene #M	0.08	0.19	<0.04	0.24	<0.04	<0.04	<0.04	<0.04	0.32	0.12	<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	<0.03	0.05	<0.03	<0.03	<0.03	<0.03	<0.03	0.65	<0.03	mg/kg	TM4/PM8
Acenaphthene #M	<0.05	0.07	<0.05	0.10	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene #M	<0.04	0.07	<0.04	0.10	<0.04	<0.04	<0.04	<0.04	0.06	0.12	<0.04	mg/kg	TM4/PM8
Phenanthrene #M	0.39	0.81	0.21	1.83	0.16	0.10	0.05	<0.03	0.32	1.27	<0.03	mg/kg	TM4/PM8
Anthracene #	0.07	0.10	0.05	0.41	<0.04	<0.04	<0.04	<0.04	0.09	0.78	<0.04	mg/kg	TM4/PM8
Fluoranthene #M	0.72	1.15	0.23	3.22	0.25	0.12	<0.03	<0.03	0.30	4.65	<0.03	mg/kg	TM4/PM8
Pyrene #	0.58	1.06	0.20	2.64	0.20	0.11	<0.03	<0.03	0.23	5.21	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	0.26	0.53	0.11	1.29	0.11	<0.06	<0.06	<0.06	0.12	3.81	<0.06	mg/kg	TM4/PM8
Chrysene #M	0.40	0.78	0.12	2.01	0.13	0.07	<0.02	<0.02	0.15	5.46	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	0.62	0.98	0.13	3.03	0.19	<0.07	<0.07	<0.07	0.16	9.25	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	0.33	0.51	0.08	1.62	0.09	0.05	<0.04	<0.04	0.09	6.08	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	0.27	0.35	<0.04	1.24	0.09	<0.04	<0.04	<0.04	0.05	4.18	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	0.05	0.05	<0.04	0.23	<0.04	<0.04	<0.04	<0.04	<0.04	0.95	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	0.24	0.28	<0.04	0.93	0.08	<0.04	<0.04	<0.04	<0.04	2.87	<0.04	mg/kg	TM4/PM8
PAH 16 Total	4.0	6.9	1.1	18.9	1.3	<0.6	<0.6	<0.6	1.9	45.4	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.45	0.71	0.09	2.18	0.14	<0.05	<0.05	<0.05	0.12	6.66	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.17	0.27	0.04	0.85	0.05	<0.02	<0.02	<0.02	0.04	2.59	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	100	105	104	101	105	98	102	105	102	99	<0	%	TM4/PM8
Methyl Tertiary Butyl Ether #M	-	<6	<6	-	-	<6	-	-	<6	-	<6	ug/kg	TM15/PM10
Benzene #M	-	<5	18	-	-	<5	-	-	66	-	<5	ug/kg	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	546-548	549-551	555-557	570-572	576-578	585-587	591-593	594-596	600-602	603-605	LOD/LOR	Units	Method No.
Sample ID	TP22	TP22	TP22	WS13	WS13	WS13	WS19	WS19	WS19	WS21			
Depth	0.10	0.50	2.10	0.30	2.00	4.00	0.30	1.00	3.00	0.30			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	6	6	6	6	6	6	6	6	6	6			
Date of Receipt	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016			
Toluene #M	-	<3	14	-	-	10	-	-	17	-	<3	ug/kg	TM15/PM10
Ethylbenzene #M	-	<3	14	-	-	<3	-	-	30	-	<3	ug/kg	TM15/PM10
p/m-Xylene #M	-	<4	6	-	-	6	-	-	16	-	<4	ug/kg	TM15/PM10
o-Xylene #M	-	<4	<4	-	-	<4	-	-	6	-	<4	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	-	100	98	-	-	99	-	-	99	-	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	-	112	102	-	-	91	-	-	103	-	<0	%	TM15/PM10
EPH >C8-C10 #M	<5	<5	<5	<5	19	<5	<5	<5	42	<5	<5	mg/kg	TM5/PM8
EPH >C10-C12 #M	<10	<10	<10	<10	62	<10	<10	<10	60	<10	<10	mg/kg	TM5/PM8
EPH >C12-C16 #M	<10	<10	<10	<10	195	<10	<10	<10	<10	<10	<10	mg/kg	TM5/PM8
EPH >C16-C21 #M	75	79	<10	75	122	<10	<10	<10	<10	57	<10	mg/kg	TM5/PM8
EPH >C21-C40	853	861	<10	435	424	<10	<10	<10	<10	851	<10	mg/kg	TM5/PM8
EPH >C8-C40	928	940	<30	510	822	<30	<30	<30	102	908	<30	mg/kg	TM5/PM8
TPH CWG													
Aliphatics													
>C5-C6 #M	-	<0.1	<0.1	-	-	<1.0$_{AA}$	-	-	0.4	-	<0.1	mg/kg	TM36/PM12
>C6-C8 #M	-	<0.1	0.2	-	-	<1.0$_{AA}$	-	-	0.4	-	<0.1	mg/kg	TM36/PM12
>C8-C10	-	<0.1	0.4	-	-	<1.0$_{AA}$	-	-	0.5	-	<0.1	mg/kg	TM36/PM12
>C10-C12 #M	-	<0.2	<0.2	-	-	<0.2	-	-	19.7	-	<0.2	mg/kg	TM5/PM16
>C12-C16 #M	-	<4	<4	-	-	<4	-	-	<4	-	<4	mg/kg	TM5/PM16
>C16-C21 #M	-	<7	<7	-	-	<7	-	-	<7	-	<7	mg/kg	TM5/PM16
>C21-C35 #M	-	<7	<7	-	-	<7	-	-	<7	-	<7	mg/kg	TM5/PM16
Total aliphatics C5-35	-	<19	<19	-	-	<19	-	-	21	-	<19	mg/kg	TM5/TM36/PM12/PM16
Aromatics													
>C5-EC7 #	-	<0.1	<0.1	-	-	<1.0$_{AA}$	-	-	<0.1	-	<0.1	mg/kg	TM36/PM12
>EC7-EC8 #	-	<0.1	<0.1	-	-	<1.0$_{AA}$	-	-	<0.1	-	<0.1	mg/kg	TM36/PM12
>EC8-EC10 #M	-	<0.1	<0.1	-	-	<1.0$_{AA}$	-	-	<0.1	-	<0.1	mg/kg	TM36/PM12
>EC10-EC12 #	-	<0.2	<0.2	-	-	<0.2	-	-	6.0	-	<0.2	mg/kg	TM5/PM16
>EC12-EC16 #	-	<4	<4	-	-	<4	-	-	<4	-	<4	mg/kg	TM5/PM16
>EC16-EC21 #	-	<7	<7	-	-	<7	-	-	<7	-	<7	mg/kg	TM5/PM16
>EC21-EC35 #	-	<7	<7	-	-	<7	-	-	<7	-	<7	mg/kg	TM5/PM16
Total aromatics C5-35 #	-	<19	<19	-	-	<19	-	-	<19	-	<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	-	<38	<38	-	-	<38	-	-	<38	-	<38	mg/kg	TM5/TM36/PM12/PM16
PCB 77	-	-	<5	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 81	-	-	<5	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 105	-	-	<5	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 114	-	-	<5	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 118	-	-	<5	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 123	-	-	<5	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 126	-	-	<5	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 156	-	-	<5	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 157	-	-	<5	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	546-548	549-551	555-557	570-572	576-578	585-587	591-593	594-596	600-602	603-605	LOD/LOR	Units	Method No.
Sample ID	TP22	TP22	TP22	WS13	WS13	WS13	WS19	WS19	WS19	WS21			
Depth	0.10	0.50	2.10	0.30	2.00	4.00	0.30	1.00	3.00	0.30			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	6	6	6	6	6	6	6	6	6	6			
Date of Receipt	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016			
PCB 167	-	-	<5	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 169	-	-	<5	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
PCB 189	-	-	<5	-	-	-	-	-	-	-	<5	ug/kg	TM16/PM8
Total 12 PCBs	-	-	<60	-	-	-	-	-	-	-	<60	ug/kg	TM16/PM8
Total Phenols HPLC	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	mg/kg	TM26/PM21
Natural Moisture Content	-	8.2	19.6	-	32.6	23.5	6.3	6.3	23.7	-	<0.1	%	PM4/PM0
Natural Moisture Content	18.6	-	-	13.4	-	-	-	-	-	9.5	<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #M	-	0.0092	0.0386	-	0.0683	0.0357	0.0038	0.0017	0.0443	-	<0.0015	g/l	TM38/PM20
Sulphate as SO4 (2:1 Ext)	0.0187	-	-	0.0242	-	-	-	-	-	<0.0015	<0.0015	g/l	TM38/PM60
Free Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Total Cyanide #M	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Fraction Organic Carbon	NDP	0.014	0.029	NDP	0.260	0.027	0.004	0.004	0.073	NDP	<0.001	None	TM21/PM24
pH #M	8.20	8.79	8.26	8.19	7.59	8.60	8.58	8.58	7.91	8.13	<0.01	pH units	TM73/PM11
Sample Type	NDP	Sand	Sand	NDP	Sand	Sand	Sand	Sand	Sand	NDP		None	PM13/PM0
Sample Colour	NDP	Medium Brown	Medium Brown	NDP	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Dark Brown	NDP		None	PM13/PM0
Other Items	NDP	NA	Stones	NDP	stones	stones	NA	stones	stones, clay	NDP		None	PM13/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

J E Sample No.	609-611												
Sample ID	WS21												
Depth	2.00												
COC No / misc													
Containers	V J T												
Sample Date	16/11/2016												
Sample Type	Soil												
Batch Number	6												
Date of Receipt	18/11/2016												
												LOD/LOR	Units	Method No.
Arsenic #M	25.3											<0.5	mg/kg	TM30/PM15
Arsenic	-											<0.5	mg/kg	TM30/PM62
Cadmium #M	1.2											<0.1	mg/kg	TM30/PM15
Cadmium	-											<0.1	mg/kg	TM30/PM62
Chromium #M	28.9											<0.5	mg/kg	TM30/PM15
Chromium	-											<0.5	mg/kg	TM30/PM62
Copper #M	64											<1	mg/kg	TM30/PM15
Copper	-											<1	mg/kg	TM30/PM62
Lead #M	366											<5	mg/kg	TM30/PM15
Lead	-											<5	mg/kg	TM30/PM62
Mercury #M	<0.1											<0.1	mg/kg	TM30/PM15
Mercury	-											<0.1	mg/kg	TM30/PM62
Nickel #M	8.9											<0.7	mg/kg	TM30/PM15
Nickel	-											<0.7	mg/kg	TM30/PM62
Selenium #M	<1											<1	mg/kg	TM30/PM15
Selenium	-											<1	mg/kg	TM30/PM62
Water Soluble Boron #M	<0.1											<0.1	mg/kg	TM74/PM32
Water Soluble Boron	-											<0.1	mg/kg	TM74/PM61
Zinc #M	1394											<5	mg/kg	TM30/PM15
Zinc	-											<5	mg/kg	TM30/PM62
PAH MS														
Naphthalene #M	<0.04											<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03											<0.03	mg/kg	TM4/PM8
Acenaphthene #M	<0.05											<0.05	mg/kg	TM4/PM8
Fluorene #M	<0.04											<0.04	mg/kg	TM4/PM8
Phenanthrene #M	<0.03											<0.03	mg/kg	TM4/PM8
Anthracene #	<0.04											<0.04	mg/kg	TM4/PM8
Fluoranthene #M	<0.03											<0.03	mg/kg	TM4/PM8
Pyrene #	<0.03											<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	<0.06											<0.06	mg/kg	TM4/PM8
Chrysene #M	<0.02											<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	<0.07											<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	<0.04											<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	<0.04											<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04											<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	<0.04											<0.04	mg/kg	TM4/PM8
PAH 16 Total	<0.6											<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	<0.05											<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	<0.02											<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	99											<0	%	TM4/PM8
Methyl Tertiary Butyl Ether #M	<6											<6	ug/kg	TM15/PM10
Benzene #M	<5											<5	ug/kg	TM15/PM10

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

J E Sample No.	609-611												
Sample ID	WS21												
Depth	2.00												
COC No / misc													
Containers	V J T												
Sample Date	16/11/2016												
Sample Type	Soil												
Batch Number	6												
Date of Receipt	18/11/2016												
Toluene #M	<3										<3	ug/kg	TM15/PM10
Ethylbenzene #M	<3										<3	ug/kg	TM15/PM10
p/m-Xylene #M	<4										<4	ug/kg	TM15/PM10
o-Xylene #M	<4										<4	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	104										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	116										<0	%	TM15/PM10
EPH >C8-C10 #M	<5										<5	mg/kg	TM5/PM8
EPH >C10-C12 #M	<10										<10	mg/kg	TM5/PM8
EPH >C12-C16 #M	<10										<10	mg/kg	TM5/PM8
EPH >C16-C21 #M	<10										<10	mg/kg	TM5/PM8
EPH >C21-C40	<10										<10	mg/kg	TM5/PM8
EPH >C8-C40	<30										<30	mg/kg	TM5/PM8
TPH CWG													
Aliphatics													
>C5-C6 #M	<0.1										<0.1	mg/kg	TM36/PM12
>C6-C8 #M	<0.1										<0.1	mg/kg	TM36/PM12
>C8-C10	<0.1										<0.1	mg/kg	TM36/PM12
>C10-C12 #M	<0.2										<0.2	mg/kg	TM5/PM16
>C12-C16 #M	<4										<4	mg/kg	TM5/PM16
>C16-C21 #M	<7										<7	mg/kg	TM5/PM16
>C21-C35 #M	<7										<7	mg/kg	TM5/PM16
Total aliphatics C5-35	<19										<19	mg/kg	TM5/TM36/PM12/PM16
Aromatics													
>C5-EC7 #	<0.1										<0.1	mg/kg	TM36/PM12
>EC7-EC8 #	<0.1										<0.1	mg/kg	TM36/PM12
>EC8-EC10 #M	<0.1										<0.1	mg/kg	TM36/PM12
>EC10-EC12 #	<0.2										<0.2	mg/kg	TM5/PM16
>EC12-EC16 #	<4										<4	mg/kg	TM5/PM16
>EC16-EC21 #	<7										<7	mg/kg	TM5/PM16
>EC21-EC35 #	<7										<7	mg/kg	TM5/PM16
Total aromatics C5-35 #	<19										<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	<38										<38	mg/kg	TM5/TM36/PM12/PM16
PCB 77	-										<5	ug/kg	TM16/PM8
PCB 81	-										<5	ug/kg	TM16/PM8
PCB 105	-										<5	ug/kg	TM16/PM8
PCB 114	-										<5	ug/kg	TM16/PM8
PCB 118	-										<5	ug/kg	TM16/PM8
PCB 123	-										<5	ug/kg	TM16/PM8
PCB 126	-										<5	ug/kg	TM16/PM8
PCB 156	-										<5	ug/kg	TM16/PM8
PCB 157	-										<5	ug/kg	TM16/PM8

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

J E Sample No.	609-611												
Sample ID	WS21												
Depth	2.00												
COC No / misc													
Containers	V J T												
Sample Date	16/11/2016												
Sample Type	Soil												
Batch Number	6												
Date of Receipt	18/11/2016												
												LOD/LOR	Units	Method No.
PCB 167	-											<5	ug/kg	TM16/PM8
PCB 169	-											<5	ug/kg	TM16/PM8
PCB 189	-											<5	ug/kg	TM16/PM8
Total 12 PCBs	-											<60	ug/kg	TM16/PM8
Total Phenols HPLC	<0.15											<0.15	mg/kg	TM26/PM21
Natural Moisture Content	23.2											<0.1	%	PM4/PM0
Natural Moisture Content	-											<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3											<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #M	0.0113											<0.0015	g/l	TM38/PM20
Sulphate as SO4 (2:1 Ext)	-											<0.0015	g/l	TM38/PM60
Free Cyanide	<0.5											<0.5	mg/kg	TM89/PM45
Total Cyanide #M	<0.5											<0.5	mg/kg	TM89/PM45
Fraction Organic Carbon	0.020											<0.001	None	TM21/PM24
pH #M	8.58											<0.01	pH units	TM73/PM11
Sample Type	Sand												None	PM13/PM0
Sample Colour	Medium Brown												None	PM13/PM0
Other Items	stones												None	PM13/PM0

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

SVOC Report : **Solid**

J E Sample No.	492-494	495-497	528-530	534-536	543-545	549-551	555-557	585-587	600-602	609-611			
Sample ID	BH10	BH10	TP20	TP20	TP20	TP22	TP22	WS13	WS19	WS21			
Depth	1.00	2.00	0.20	1.00	3.00	0.50	2.10	4.00	3.00	2.00	Please see attached notes for all abbreviations and acronyms		
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	6	6	6	6	6	6	6	6	6	6			
Date of Receipt	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	LOD/LOR	Units	Method No.
SVOC MS													
Phenols													
2-Chlorophenol #M	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Methylphenol	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dichlorophenol #M	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Methylphenol	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Phenol #M	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene #M	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Methylnaphthalene #M	<10	573	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	<100	<100	<1000 AA	<1000 AA	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<100	<1000 AA	<1000 AA	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<100	<100	<1000 AA	<1000 AA	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<100	<1000 AA	<1000 AA	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<100	<1000 AA	<1000 AA	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Dimethyl phthalate #M	<100	<100	<1000 AA	<1000 AA	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Other SVOCs													
1,2-Dichlorobenzene	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #M	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #M	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Azobenzene	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Carbazole	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	153	<10	<10	ug/kg	TM16/PM8
Dibenzofuran #M	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	68	<10	<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorobutadiene #M	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Isophorone #M	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #M	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Nitrobenzene #M	<10	<10	<100 AA	<100 AA	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Surrogate Recovery 2-Fluorobiphenyl	71	100	88 AA	89 AA	102	121	105	73	86	90	<0	%	TM16/PM8
Surrogate Recovery p-Terphenyl-d14	70	95	103 AA	112 AA	123	99	122	109	124	120	<0	%	TM16/PM8

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

VOC Report : **Solid**

J E Sample No.	492-494	495-497	528-530	534-536	543-545	549-551	555-557	585-587	600-602	609-611	LOD/LOR	Units	Method No.
Sample ID	BH10	BH10	TP20	TP20	TP20	TP22	TP22	WS13	WS19	WS21			
Depth	1.00	2.00	0.20	1.00	3.00	0.50	2.10	4.00	3.00	2.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016	16/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	6	6	6	6	6	6	6	6	6	6			
Date of Receipt	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016			
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #M	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Chloromethane #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/kg	TM15/PM10
Chloroethane #M	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Trichlorofluoromethane #M	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #M	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	58	<30	404	181	<30	51	84	262	91	86	<30	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloroethane #M	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #M	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Bromochloromethane #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Chloroform #M	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,1,1-Trichloroethane #M	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Carbon tetrachloride #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichloroethane #M	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
Benzene #M	72	633	16	43	1261	<5	18	<5	66	<5	<5	ug/kg	TM15/PM10
Trichloroethene (TCE) #M	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2-Dichloropropane #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Dibromomethane #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Bromodichloromethane #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Toluene #M	29	99	24	18	97	<3	14	10	17	<3	<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3-Dichloropropane #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Dibromochloromethane #M	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Chlorobenzene #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #M	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
Ethylbenzene #M	83	948	24	51	151	<3	14	<3	30	<3	<3	ug/kg	TM15/PM10
p/m-Xylene #M	125	486	81	81	221	<4	6	6	16	<4	<4	ug/kg	TM15/PM10
o-Xylene #M	20	84	48	17	31	<4	<4	<4	6	<4	<4	ug/kg	TM15/PM10
Styrene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15_A/PM10
Bromoform	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Isopropylbenzene #	5	652	4	<3	1606	<3	10	<3	57	<3	<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #M	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Propylbenzene #	18	1805++	6	12	3245++	<4	<4	<4	21	<4	<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	30	149	15	215	31	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5	<5	<5	<5	178	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	77	5048++	368	97	91	<6	<6	<6	9	<6	<6	ug/kg	TM15/PM10
sec-Butylbenzene #	<4	759	<4	<4	3555++	<4	15	<4	<4	<4	<4	ug/kg	TM15/PM10
4-Isopropyltoluene #	<4	231	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
n-Butylbenzene #	<4	985	<4	<4	4378++	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane #	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene #	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene #	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	95	89	93	80	88	100	98	99	99	104	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	84	72	62	76	78	112	102	91	103	116	<0	%	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

Signed on behalf of Jones Environmental Laboratory:



Ryan Butterworth
Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	6	BH10	0.50	490	24/11/2016	**General Description (Bulk Analysis)**	sand-stones
					24/11/2016	**Asbestos Fibres**	Fibre Bundles
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos Type**	Chrysotile
					24/11/2016	**Asbestos Level Screen**	<0.1%
					13/12/2016	**Asbestos Gravimetric Quantification**	<0.001 (mass %)
					13/12/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					13/12/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)
16/16961	6	BH10	1.00	493	24/11/2016	**General Description (Bulk Analysis)**	sand-stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	6	BH10	2.00	496	24/11/2016	**General Description (Bulk Analysis)**	soil-stones
					24/11/2016	**Asbestos Fibres**	Fibre Bundles
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos Type**	Chrysotile
					24/11/2016	**Asbestos Level Screen**	<0.1%
					13/12/2016	**Asbestos Gravimetric Quantification**	<0.001 (mass %)
					13/12/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					13/12/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)
16/16961	6	BH10	8.00	508	24/11/2016	**General Description (Bulk Analysis)**	Soil/Sand
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	6	BH8	0.30	511	24/11/2016	**General Description (Bulk Analysis)**	Soil/Sand
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	6	BH8	0.30	511	24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	6	BH8	2.50	517	24/11/2016	**General Description (Bulk Analysis)**	Soil/Sand
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	6	BH8	7.50	526	24/11/2016	**General Description (Bulk Analysis)**	soil/stones
					24/11/2016	**Asbestos Fibres**	Fibre Bundles
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos Type**	Chrysotile
					24/11/2016	**Asbestos Level Screen**	<0.1%
					13/12/2016	**Asbestos Gravimetric Quantification**	<0.001 (mass %)
					13/12/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					13/12/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)
16/16961	6	TP20	0.20	529	24/11/2016	**General Description (Bulk Analysis)**	soil/stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	6	TP20	1.00	535	24/11/2016	**General Description (Bulk Analysis)**	soil/stones
					24/11/2016	**Asbestos Fibres**	Fibre Bundles
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos Type**	Chrysotile
					24/11/2016	**Asbestos Level Screen**	<0.1%
					13/12/2016	**Asbestos Gravimetric Quantification**	<0.001 (mass %)
					13/12/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					13/12/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)
16/16961	6	TP20	3.00	544	24/11/2016	**General Description (Bulk Analysis)**	Soil/Stones
					24/11/2016	**Asbestos Fibres**	Fibre Bundles
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos Type**	Chrysotile
					24/11/2016	**Asbestos Level Screen**	<0.1%
					13/12/2016	**Asbestos Gravimetric Quantification**	<0.001 (mass %)
					13/12/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					13/12/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)
16/16961	6	TP22	0.10	547	24/11/2016	**General Description (Bulk Analysis)**	Soil/Stones
					24/11/2016	**Asbestos Fibres**	Fibre Bundles

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	6	TP22	0.10	547	24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos Type**	Chrysotile
					24/11/2016	**Asbestos Level Screen**	<0.1%
					13/12/2016	**Asbestos Gravimetric Quantification**	<0.001 (mass %)
					13/12/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					13/12/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)
16/16961	6	TP22	0.50	550	24/11/2016	**General Description (Bulk Analysis)**	Sand/Stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	6	TP22	2.10	556	24/11/2016	**General Description (Bulk Analysis)**	soil/stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	6	WS13	0.30	571	24/11/2016	**General Description (Bulk Analysis)**	soil/stones
					24/11/2016	**Asbestos Fibres**	Fibre Bundles
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos Type**	Chrysotile
					24/11/2016	**Asbestos Level Screen**	<0.1%
					13/12/2016	**Asbestos Gravimetric Quantification**	<0.001 (mass %)
					13/12/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					13/12/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)
16/16961	6	WS13	2.00	577	24/11/2016	**General Description (Bulk Analysis)**	soil/stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	6	WS13	4.00	586	24/11/2016	**General Description (Bulk Analysis)**	soil/stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	6	WS19	0.30	592	24/11/2016	**General Description (Bulk Analysis)**	soil/stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	6	WS19	1.00	595	24/11/2016	**General Description (Bulk Analysis)**	soil/stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	6	WS19	3.00	601	24/11/2016	**General Description (Bulk Analysis)**	Soil-Silt/Stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	6	WS21	0.30	604	24/11/2016	**General Description (Bulk Analysis)**	soil/stones
					24/11/2016	**Asbestos Fibres**	Fibre Bundles
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos Type**	Chrysotile
					24/11/2016	**Asbestos Level Screen**	<0.1%
					13/12/2016	**Asbestos Gravimetric Quantification**	<0.001 (mass %)
					13/12/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					13/12/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)
16/16961	6	WS21	2.00	610	24/11/2016	**General Description (Bulk Analysis)**	Soil/Sand
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD

Client Name: WYG **Matrix : Solid**
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	NDP Reason
16/16961	6	BH10	0.50	489-491	Asbestos detected in sample
16/16961	6	BH10	2.00	495-497	Asbestos detected in sample
16/16961	6	BH8	7.50	525-527	Asbestos detected in sample
16/16961	6	TP20	1.00	534-536	Asbestos detected in sample
16/16961	6	TP20	3.00	543-545	Asbestos detected in sample
16/16961	6	TP22	0.10	546-548	Asbestos detected in sample
16/16961	6	WS13	0.30	570-572	Asbestos detected in sample
16/16961	6	WS21	0.30	603-605	Asbestos detected in sample

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
No deviating sample report results for job 16/16961						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.
Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 16/16961

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
SA	ISO17025 (SANAS) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x10 Dilution
AB	x50 Dilution

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.			AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.	Yes	Yes	AD	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM60	As received solid samples are extracted with deionised water in a 2:1 ratio of water to solid.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM61	As received solid samples are extracted with hot water in a 20:1 ratio of water to soil ready for analysis by ICP.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.	Yes	Yes	AR	Yes
TM15_A	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds, Vinyl Chloride & Styrene by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

Exova Jones Environmental

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Longcross Court
47 Newport Road
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CF24 0AD

Attention :	Nicholas Bool
Date :	13th December, 2016
Your reference :	A095973-2
Our reference :	Test Report 16/16961 Batch 7
Location :	Tidal Lagoon
Date samples received :	19th November, 2016
Status :	Final report
Issue :	2

Forty five samples were received for analysis on 19th November, 2016 of which sixteen were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Bruce Leslie
Project Co-ordinator

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	618-620	624-626	633-635	642-644	648-650	657-659	663-665	672-674	678-680	690-691	LOD/LOR	Units	Method No.
Sample ID	BH11	BH11	BH9	BH9	WS20	WS20	WS18	WS18	WS08	WS08			
Depth	2.00	4.00	0.50	3.50	0.30	4.00	1.00	4.00	1.00	5.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J			
Sample Date	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	7	7	7	7	7	7	7	7	7	7			
Date of Receipt	19/11/2016	19/11/2016	19/11/2016	19/11/2016	19/11/2016	19/11/2016	19/11/2016	19/11/2016	19/11/2016	19/11/2016			
Arsenic #M	31.1	13.5	11.5	27.0	23.5	26.2	18.9	11.0	77.5	75.3	<0.5	mg/kg	TM30/PM15
Arsenic	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Cadmium #M	1.1	0.2	2.3	3.4	0.2	<0.1	0.3	<0.1	10.6	<5.0 AC	<0.1	mg/kg	TM30/PM15
Cadmium	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Chromium #M	54.5	52.7	68.7	72.0	47.2	43.1	35.3	46.4	37.8	43.8	<0.5	mg/kg	TM30/PM15
Chromium	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Copper #M	106	19	40	613 AC	69	38	22	18	165	96 AC	<1	mg/kg	TM30/PM15
Copper	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Lead #M	711	77	170	311	145	65	40	40	5711 AB	676 AC	<5	mg/kg	TM30/PM15
Lead	-	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62
Mercury #M	0.2	0.4	<0.1	3.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM30/PM15
Mercury	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Nickel #M	15.2	8.9	22.6	22.3	17.0	11.8	9.2	14.9	89.5	32.3	<0.7	mg/kg	TM30/PM15
Nickel	-	-	-	-	-	-	-	-	-	-	<0.7	mg/kg	TM30/PM62
Selenium #M	<1	<1	<1	<1	<1	<1	<1	<1	<1	2	<1	mg/kg	TM30/PM15
Selenium	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Water Soluble Boron #M	0.3	0.3	0.1	0.4	0.3	0.3	0.3	0.4	0.2	0.2	<0.1	mg/kg	TM74/PM32
Water Soluble Boron	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM74/PM61
Zinc #M	1157	267	556	1149	387	197	143	154	7718 AB	1035 AC	<5	mg/kg	TM30/PM15
Zinc	-	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene #M	0.31	0.06	<0.40 AB	0.22	<0.04	<0.04	<0.04	0.13	0.31	<0.04	<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.10	0.06	<0.30 AB	0.14	<0.03	<0.03	<0.03	0.56	0.13	<0.03	<0.03	mg/kg	TM4/PM8
Acenaphthene #M	<0.05	<0.05	<0.50 AB	0.30	<0.05	<0.05	<0.05	0.45	0.09	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene #M	0.10	0.10	<0.40 AB	0.49	<0.04	<0.04	<0.04	0.83	0.11	<0.04	<0.04	mg/kg	TM4/PM8
Phenanthrene #M	0.30	0.23	0.42 AB	2.30	0.04	0.14	<0.03	1.91	1.55	<0.03	<0.03	mg/kg	TM4/PM8
Anthracene #	0.06	<0.04	<0.40 AB	0.54	<0.04	<0.04	<0.04	0.55	0.98	<0.04	<0.04	mg/kg	TM4/PM8
Fluoranthene #M	0.31	0.16	<0.30 AB	3.46	0.04	0.20	0.03	0.36	3.23	<0.03	<0.03	mg/kg	TM4/PM8
Pyrene #	0.39	0.15	1.09 AB	2.86	0.03	0.29	<0.03	0.30	2.91	<0.03	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	0.13	0.08	<0.60 AB	1.24	<0.06	0.13	<0.06	0.08	1.26	<0.06	<0.06	mg/kg	TM4/PM8
Chrysene #M	0.25	0.10	1.11 AB	1.82	0.02	0.23	<0.02	0.16	2.18	<0.02	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	0.33	0.13	<0.70 AB	2.72	<0.07	0.21	<0.07	0.10	2.90	<0.07	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	0.21	0.07	0.62 AB	1.44	<0.04	0.12	<0.04	0.04	1.38	<0.04	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	0.13	0.06	<0.40 AB	1.12	<0.04	0.09	<0.04	<0.04	1.02	<0.04	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04	<0.04	<0.40 AB	0.18	<0.04	<0.04	<0.04	<0.04	0.15	<0.04	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	0.13	<0.04	0.52 AB	0.76	<0.04	0.09	<0.04	<0.04	0.67	<0.04	<0.04	mg/kg	TM4/PM8
PAH 16 Total	2.8	1.2	<6.0 AB	19.6	<0.6	1.5	<0.6	5.5	18.9	<0.6	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.24	0.09	<0.50 AB	1.96	<0.05	0.15	<0.05	0.07	2.09	<0.05	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.09	0.04	<0.20 AB	0.76	<0.02	0.06	<0.02	0.03	0.81	<0.02	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	98	96	94 AB	100	100	100	93	100	98	93	<0	%	TM4/PM8
Methyl Tertiary Butyl Ether #M	<6	-	-	<6	-	-	-	<6	-	-	<6	ug/kg	TM15/PM10
Benzene #M	178	-	-	7	-	-	-	24	-	-	<5	ug/kg	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	618-620	624-626	633-635	642-644	648-650	657-659	663-665	672-674	678-680	690-691	LOD/LOR	Units	Method No.
Sample ID	BH11	BH11	BH9	BH9	WS20	WS20	WS18	WS18	WS08	WS08			
Depth	2.00	4.00	0.50	3.50	0.30	4.00	1.00	4.00	1.00	5.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J			
Sample Date	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	7	7	7	7	7	7	7	7	7	7			
Date of Receipt	19/11/2016	19/11/2016	19/11/2016	19/11/2016	19/11/2016	19/11/2016	19/11/2016	19/11/2016	19/11/2016	19/11/2016			
Toluene #M	41	-	-	10	-	-	-	44	-	-	<3	ug/kg	TM15/PM10
Ethylbenzene #M	155	-	-	<3	-	-	-	18	-	-	<3	ug/kg	TM15/PM10
p/m-Xylene #M	204	-	-	14	-	-	-	54	-	-	<4	ug/kg	TM15/PM10
o-Xylene #M	69	-	-	<4	-	-	-	9	-	-	<4	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	88	-	-	96	-	-	-	102	-	-	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	77	-	-	74	-	-	-	106	-	-	<0	%	TM15/PM10
EPH >C8-C10 #M	258	80	22++	<5	<5	347	<5	605	<5	<5	<5	mg/kg	TM5/PM8
EPH >C10-C12 #M	185	52	68++	13	<10	535	<10	433	<10	<10	<10	mg/kg	TM5/PM8
EPH >C12-C16 #M	776	210	569++	200	<10	1926	<10	1486	<10	<10	<10	mg/kg	TM5/PM8
EPH >C16-C21 #M	1054	289	1815++	428	<10	2263	<10	1390	24	<10	<10	mg/kg	TM5/PM8
EPH >C21-C40	820	240	10414++	728	<10	1673	<10	555	213	<10	<10	mg/kg	TM5/PM8
EPH >C8-C40	3093	871	12888++	1369	<30	6744	<30	4469	237	<30	<30	mg/kg	TM5/PM8
TPH CWG													
Aliphatics													
>C5-C6 #M	0.8	-	-	<1.0AB	-	-	-	0.1	-	-	<0.1	mg/kg	TM36/PM12
>C6-C8 #M	9.6	-	-	<1.0AB	-	-	-	3.3	-	-	<0.1	mg/kg	TM36/PM12
>C8-C10	31.6++	-	-	<1.0AB	-	-	-	23.7	-	-	<0.1	mg/kg	TM36/PM12
>C10-C12 #M	115.2	-	-	0.3	-	-	-	278.6	-	-	<0.2	mg/kg	TM5/PM16
>C12-C16 #M	462	-	-	18	-	-	-	783	-	-	<4	mg/kg	TM5/PM16
>C16-C21 #M	549	-	-	32	-	-	-	677	-	-	<7	mg/kg	TM5/PM16
>C21-C35 #M	212	-	-	9	-	-	-	134	-	-	<7	mg/kg	TM5/PM16
Total aliphatics C5-35	1380	-	-	59	-	-	-	1900	-	-	<19	mg/kg	TM5/TM36/PM12/PM16
Aromatics													
>C5-EC7 #	0.1	-	-	<1.0AB	-	-	-	<0.1	-	-	<0.1	mg/kg	TM36/PM12
>EC7-EC8 #	0.1	-	-	<1.0AB	-	-	-	<0.1	-	-	<0.1	mg/kg	TM36/PM12
>EC8-EC10 #M	0.8++	-	-	<1.0AB	-	-	-	0.4	-	-	<0.1	mg/kg	TM36/PM12
>EC10-EC12 #	24.2	-	-	<0.2	-	-	-	75.7	-	-	<0.2	mg/kg	TM5/PM16
>EC12-EC16 #	128	-	-	13	-	-	-	398	-	-	<4	mg/kg	TM5/PM16
>EC16-EC21 #	311	-	-	32	-	-	-	486	-	-	<7	mg/kg	TM5/PM16
>EC21-EC35 #	328	-	-	64	-	-	-	245	-	-	<7	mg/kg	TM5/PM16
Total aromatics C5-35 #	792	-	-	109	-	-	-	1205	-	-	<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	2172	-	-	168	-	-	-	3105	-	-	<38	mg/kg	TM5/TM36/PM12/PM16
PCB 77	-	-	-	-	-	-	-	<5	-	-	<5	ug/kg	TM16/PM8
PCB 81	-	-	-	-	-	-	-	<5	-	-	<5	ug/kg	TM16/PM8
PCB 105	-	-	-	-	-	-	-	<5	-	-	<5	ug/kg	TM16/PM8
PCB 114	-	-	-	-	-	-	-	<5	-	-	<5	ug/kg	TM16/PM8
PCB 118	-	-	-	-	-	-	-	<5	-	-	<5	ug/kg	TM16/PM8
PCB 123	-	-	-	-	-	-	-	<5	-	-	<5	ug/kg	TM16/PM8
PCB 126	-	-	-	-	-	-	-	<5	-	-	<5	ug/kg	TM16/PM8
PCB 156	-	-	-	-	-	-	-	<5	-	-	<5	ug/kg	TM16/PM8
PCB 157	-	-	-	-	-	-	-	<5	-	-	<5	ug/kg	TM16/PM8

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	618-620	624-626	633-635	642-644	648-650	657-659	663-665	672-674	678-680	690-691	LOD/LOR	Units	Method No.
Sample ID	BH11	BH11	BH9	BH9	WS20	WS20	WS18	WS18	WS08	WS08			
Depth	2.00	4.00	0.50	3.50	0.30	4.00	1.00	4.00	1.00	5.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J			
Sample Date	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	7	7	7	7	7	7	7	7	7	7			
Date of Receipt	19/11/2016	19/11/2016	19/11/2016	19/11/2016	19/11/2016	19/11/2016	19/11/2016	19/11/2016	19/11/2016	19/11/2016			
PCB 167	-	-	-	-	-	-	-	<5	-	-	<5	ug/kg	TM16/PM8
PCB 169	-	-	-	-	-	-	-	<5	-	-	<5	ug/kg	TM16/PM8
PCB 189	-	-	-	-	-	-	-	<5	-	-	<5	ug/kg	TM16/PM8
Total 12 PCBs	-	-	-	-	-	-	-	<60	-	-	<60	ug/kg	TM16/PM8
Total Phenols HPLC	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	mg/kg	TM26/PM21
Natural Moisture Content	21.3	21.6	14.8	20.0	6.0	19.5	10.0	12.0	11.8	18.1	<0.1	%	PM4/PM0
Natural Moisture Content	-	-	-	-	-	-	-	-	-	-	<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #M	0.1324	0.0439	0.0466	0.0385	0.0061	0.1720	0.0038	0.0489	0.0224	0.0581	<0.0015	g/l	TM38/PM20
Sulphate as SO4 (2:1 Ext)	-	-	-	-	-	-	-	-	-	-	<0.0015	g/l	TM38/PM60
Free Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Total Cyanide #M	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	<0.5	mg/kg	TM89/PM45
Fraction Organic Carbon	0.021	0.003	0.041	0.052	0.006	0.007	0.008	0.006	0.084	0.060	<0.001	None	TM21/PM24
pH #M	8.05	8.42	8.26	8.15	8.97	8.35	9.16	7.92	8.30	8.03	<0.01	pH units	TM73/PM11
Sample Type	Sand	Sand	Clayey Sand	Clayey Sand	Sand	Sand	Sand	Sand	Clayey Sand	Sand		None	PM13/PM0
Sample Colour	Dark Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Dark Brown	Light Brown	Dark Brown	Dark Brown	Dark Brown		None	PM13/PM0
Other Items	Stones	Chemical odour	Stones and root	Stones and root	Stones and brick	Stones and chemical odour	Stones	Stones and vegetation	Stones	Stones, brick and vegetation		None	PM13/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	698-700	701-703	713-715	716-718	719-721	731-733					LOD/LOR	Units	Method No.
Sample ID	TP18	TP18	TP24	TP24	TP23	TP23							
Depth	1.00	1.90	2.50	3.20	0.30	3.10							
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T							
Sample Date	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016							
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil							
Batch Number	7	7	7	7	7	7							
Date of Receipt	19/11/2016	19/11/2016	19/11/2016	19/11/2016	19/11/2016	19/11/2016							
Arsenic #M	-	-	17.1	15.9	30.4	12.6					<0.5	mg/kg	TM30/PM15
Arsenic	23.9	21.7	-	-	-	-					<0.5	mg/kg	TM30/PM62
Cadmium #M	-	-	0.1	0.2	0.4	<0.1					<0.1	mg/kg	TM30/PM15
Cadmium	0.6	1.4	-	-	-	-					<0.1	mg/kg	TM30/PM62
Chromium #M	-	-	40.0	47.1	41.5	38.3					<0.5	mg/kg	TM30/PM15
Chromium	15.0	15.3	-	-	-	-					<0.5	mg/kg	TM30/PM62
Copper #M	-	-	22	36	148	18					<1	mg/kg	TM30/PM15
Copper	464$_{AB}$	460$_{AB}$	-	-	-	-					<1	mg/kg	TM30/PM62
Lead #M	-	-	43	81	67	33					<5	mg/kg	TM30/PM15
Lead	522	494	-	-	-	-					<5	mg/kg	TM30/PM62
Mercury #M	-	-	<0.1	<0.1	<0.1	<0.1					<0.1	mg/kg	TM30/PM15
Mercury	37.7$_{AB}$	30.2$_{AB}$	-	-	-	-					<0.1	mg/kg	TM30/PM62
Nickel #M	-	-	13.3	18.0	11.4	9.3					<0.7	mg/kg	TM30/PM15
Nickel	44.6	40.4	-	-	-	-					<0.7	mg/kg	TM30/PM62
Selenium #M	-	-	<1	<1	<1	<1					<1	mg/kg	TM30/PM15
Selenium	3	2	-	-	-	-					<1	mg/kg	TM30/PM62
Water Soluble Boron #M	-	-	0.2	1.1	0.4	0.2					<0.1	mg/kg	TM74/PM32
Water Soluble Boron	0.6	0.5	-	-	-	-					<0.1	mg/kg	TM74/PM61
Zinc #M	-	-	145	226	442	120					<5	mg/kg	TM30/PM15
Zinc	1262	1157	-	-	-	-					<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene #M	0.53$_{AA}$	0.73$_{AA}$	0.10	0.07	<0.04	<0.04					<0.04	mg/kg	TM4/PM8
Acenaphthylene	1.36$_{AA}$	0.32$_{AA}$	0.32	0.41	<0.03	0.30					<0.03	mg/kg	TM4/PM8
Acenaphthene #M	<0.25$_{AA}$	<0.25$_{AA}$	0.12	0.17	<0.05	0.19					<0.05	mg/kg	TM4/PM8
Fluorene #M	<0.20$_{AA}$	<0.20$_{AA}$	0.51	0.57	<0.04	<0.04					<0.04	mg/kg	TM4/PM8
Phenanthrene #M	0.80$_{AA}$	0.68$_{AA}$	0.90	1.02	<0.03	1.55					<0.03	mg/kg	TM4/PM8
Anthracene #	0.88$_{AA}$	0.35$_{AA}$	<0.04	<0.04	<0.04	0.06					<0.04	mg/kg	TM4/PM8
Fluoranthene #M	3.07$_{AA}$	1.19$_{AA}$	0.07	0.10	0.03	0.19					<0.03	mg/kg	TM4/PM8
Pyrene #	3.56$_{AA}$	1.97$_{AA}$	0.13	0.14	0.03	0.19					<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	2.53$_{AA}$	0.80$_{AA}$	<0.06	<0.06	<0.06	0.08					<0.06	mg/kg	TM4/PM8
Chrysene #M	5.20$_{AA}$	1.45$_{AA}$	0.12	0.09	0.02	0.11					<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	18.14$_{AA}$	3.82$_{AA}$	<0.07	<0.07	<0.07	<0.07					<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	9.47$_{AA}$	2.36$_{AA}$	<0.04	<0.04	<0.04	<0.04					<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	7.92$_{AA}$	2.16$_{AA}$	<0.04	<0.04	<0.04	<0.04					<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	1.21$_{AA}$	0.41$_{AA}$	<0.04	<0.04	<0.04	<0.04					<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	6.47$_{AA}$	1.80$_{AA}$	<0.04	<0.04	<0.04	<0.04					<0.04	mg/kg	TM4/PM8
PAH 16 Total	61.1$_{AA}$	18.0$_{AA}$	2.3	2.6	<0.6	2.7					<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	13.06$_{AA}$	2.75$_{AA}$	<0.05	<0.05	<0.05	<0.05					<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	5.08$_{AA}$	1.07$_{AA}$	<0.02	<0.02	<0.02	<0.02					<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	92$_{AA}$	99$_{AA}$	100	99	100	100					<0	%	TM4/PM8
Methyl Tertiary Butyl Ether #M	-	<6	-	<6	-	<6					<6	ug/kg	TM15/PM10
Benzene #M	-	104	-	<5	-	<5					<5	ug/kg	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	698-700	701-703	713-715	716-718	719-721	731-733					LOD/LOR	Units	Method No.
Sample ID	TP18	TP18	TP24	TP24	TP23	TP23							
Depth	1.00	1.90	2.50	3.20	0.30	3.10							
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T							
Sample Date	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016							
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil							
Batch Number	7	7	7	7	7	7							
Date of Receipt	19/11/2016	19/11/2016	19/11/2016	19/11/2016	19/11/2016	19/11/2016							
Toluene #M	-	61	-	<3	-	<3					<3	ug/kg	TM15/PM10
Ethylbenzene #M	-	50	-	<3	-	<3					<3	ug/kg	TM15/PM10
p/m-Xylene #M	-	163	-	<4	-	<4					<4	ug/kg	TM15/PM10
o-Xylene #M	-	11	-	49	-	<4					<4	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	-	79	-	102	-	86					<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	-	64	-	81	-	73					<0	%	TM15/PM10
EPH >C8-C10 #M	43	167	288	836	<5	143					<5	mg/kg	TM5/PM8
EPH >C10-C12 #M	26	489	267	535	<10	313					<10	mg/kg	TM5/PM8
EPH >C12-C16 #M	41	1435	1010	1764	<10	1234					<10	mg/kg	TM5/PM8
EPH >C16-C21 #M	116	1159	1073	1549	<10	1689					<10	mg/kg	TM5/PM8
EPH >C21-C40	631	1300	920	719	<10	661					<10	mg/kg	TM5/PM8
EPH >C8-C40	857	4550	3558	5403	<30	4040					<30	mg/kg	TM5/PM8
TPH CWG													
Aliphatics													
>C5-C6 #M	-	<1.0 AB	-	5.5	-	<0.1					<0.1	mg/kg	TM36/PM12
>C6-C8 #M	-	<1.0 AB	-	159.5 ++	-	0.9					<0.1	mg/kg	TM36/PM12
>C8-C10	-	44.0 ++ AB	-	191.3 ++	-	36.5 ++					<0.1	mg/kg	TM36/PM12
>C10-C12 #M	-	239.9	-	269.6	-	179.2					<0.2	mg/kg	TM5/PM16
>C12-C16 #M	-	723	-	653	-	610					<4	mg/kg	TM5/PM16
>C16-C21 #M	-	453	-	522	-	672					<7	mg/kg	TM5/PM16
>C21-C35 #M	-	276	-	87	-	175					<7	mg/kg	TM5/PM16
Total aliphatics C5-35	-	1736	-	1888	-	1674					<19	mg/kg	TM5/TM36/PM12/PM16
Aromatics													
>C5-EC7 #	-	<1.0 AB	-	0.4	-	<0.1					<0.1	mg/kg	TM36/PM12
>EC7-EC8 #	-	<1.0 AB	-	0.5	-	<0.1					<0.1	mg/kg	TM36/PM12
>EC8-EC10 #M	-	<1.0 AB	-	3.1 ++	-	0.8 ++					<0.1	mg/kg	TM36/PM12
>EC10-EC12 #	-	34.8	-	66.4	-	28.0					<0.2	mg/kg	TM5/PM16
>EC12-EC16 #	-	186	-	289	-	260					<4	mg/kg	TM5/PM16
>EC16-EC21 #	-	349	-	297	-	518					<7	mg/kg	TM5/PM16
>EC21-EC35 #	-	502	-	116	-	192					<7	mg/kg	TM5/PM16
Total aromatics C5-35 #	-	1072	-	772	-	999					<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	-	2808	-	2660	-	2673					<38	mg/kg	TM5/TM36/PM12/PM16
PCB 77	-	-	-	-	-	-					<5	ug/kg	TM16/PM8
PCB 81	-	-	-	-	-	-					<5	ug/kg	TM16/PM8
PCB 105	-	-	-	-	-	-					<5	ug/kg	TM16/PM8
PCB 114	-	-	-	-	-	-					<5	ug/kg	TM16/PM8
PCB 118	-	-	-	-	-	-					<5	ug/kg	TM16/PM8
PCB 123	-	-	-	-	-	-					<5	ug/kg	TM16/PM8
PCB 126	-	-	-	-	-	-					<5	ug/kg	TM16/PM8
PCB 156	-	-	-	-	-	-					<5	ug/kg	TM16/PM8
PCB 157	-	-	-	-	-	-					<5	ug/kg	TM16/PM8

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	698-700	701-703	713-715	716-718	719-721	731-733					LOD/LOR	Units	Method No.
Sample ID	TP18	TP18	TP24	TP24	TP23	TP23							
Depth	1.00	1.90	2.50	3.20	0.30	3.10							
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T							
Sample Date	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016							
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil							
Batch Number	7	7	7	7	7	7							
Date of Receipt	19/11/2016	19/11/2016	19/11/2016	19/11/2016	19/11/2016	19/11/2016							
PCB 167	-	-	-	-	-	-					<5	ug/kg	TM16/PM8
PCB 169	-	-	-	-	-	-					<5	ug/kg	TM16/PM8
PCB 189	-	-	-	-	-	-					<5	ug/kg	TM16/PM8
Total 12 PCBs	-	-	-	-	-	-					<60	ug/kg	TM16/PM8
Total Phenols HPLC	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15					<0.15	mg/kg	TM26/PM21
Natural Moisture Content	-	-	18.9	20.7	7.1	20.3					<0.1	%	PM4/PM0
Natural Moisture Content	25.7	19.9	-	-	-	-					<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3					<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #M	-	-	0.0534	0.0838	0.0081	0.1089					<0.0015	g/l	TM38/PM20
Sulphate as SO4 (2:1 Ext)	0.0424	0.0556	-	-	-	-					<0.0015	g/l	TM38/PM60
Free Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					<0.5	mg/kg	TM89/PM45
Total Cyanide #M	0.8	0.8	<0.5	<0.5	<0.5	<0.5					<0.5	mg/kg	TM89/PM45
Fraction Organic Carbon	NDP	NDP	0.034	0.007	0.005	0.004					<0.001	None	TM21/PM24
pH #M	8.03	7.87	7.86	7.90	9.25	7.48					<0.01	pH units	TM73/PM11
Sample Type	NDP	NDP	Sand	Sand	Sand	Sand						None	PM13/PM0
Sample Colour	NDP	NDP	Medium Brown	Medium Brown	Light Brown	Medium Brown						None	PM13/PM0
Other Items	NDP	NDP	Stones, root and shell	Stones, root and chemical odour	Stones, root, brick and chemical odour	Stones, root and chemical odour						None	PM13/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

SVOC Report : **Solid**

J E Sample No.	618-620	642-644	672-674	701-703	716-718	731-733							
Sample ID	BH11	BH9	WS18	TP18	TP24	TP23							
Depth	2.00	3.50	4.00	1.90	3.20	3.10							
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T							
Sample Date	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016							
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil							
Batch Number	7	7	7	7	7	7							
Date of Receipt	19/11/2016	19/11/2016	19/11/2016	19/11/2016	19/11/2016	19/11/2016							
SVOC MS													
Phenols													
2-Chlorophenol #M	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
2-Methylphenol	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
2,4-Dichlorophenol #M	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
4-Methylphenol	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
Phenol #M	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene #M	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
2-Methylnaphthalene #M	528	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	<100	<500 AA	<100	<1000 AB	<100	<100					<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<500 AA	<100	<1000 AB	<100	<100					<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<100	<500 AA	<100	<1000 AB	<100	<100					<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<500 AA	<100	<1000 AB	<100	<100					<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<500 AA	<100	<1000 AB	<100	<100					<100	ug/kg	TM16/PM8
Dimethyl phthalate #M	<100	<500 AA	<100	<1000 AB	<100	<100					<100	ug/kg	TM16/PM8
Other SVOCs													
1,2-Dichlorobenzene	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #M	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #M	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
Azobenzene	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
Carbazole	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
Dibenzofuran #M	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
Hexachlorobutadiene #M	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
Isophorone #M	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #M	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8
Nitrobenzene #M	<10	<50 AA	<10	<100 AB	<10	<10					<10	ug/kg	TM16/PM8

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

VOC Report : **Solid**

J E Sample No.	618-620	642-644	672-674	701-703	716-718	731-733					LOD/LOR	Units	Method No.
Sample ID	BH11	BH9	WS18	TP18	TP24	TP23							
Depth	2.00	3.50	4.00	1.90	3.20	3.10							
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T							
Sample Date	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016	17/11/2016							
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil							
Batch Number	7	7	7	7	7	7							
Date of Receipt	19/11/2016	19/11/2016	19/11/2016	19/11/2016	19/11/2016	19/11/2016							
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2	<2	<2					<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #M	<6	<6	<6	<6	<6	<6					<6	ug/kg	TM15/PM10
Chloromethane #	<3	<3	<3	<3	<3	<3					<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	<2	<2	<2	<2					<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1	<1	<1	<1					<1	ug/kg	TM15/PM10
Chloroethane #M	<6	<6	<6	<6	<6	<6					<6	ug/kg	TM15/PM10
Trichlorofluoromethane #M	<3	<3	<3	<3	<3	<3					<3	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #M	<6	<6	<6	<6	<6	<6					<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	<30	35	<30	<30	<30	<30					<30	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3	<3	<3	<3	<3					<3	ug/kg	TM15/PM10
1,1-Dichloroethane #M	<6	<6	<6	<6	<6	<6					<6	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #M	<7	<7	<7	<7	<7	<7					<7	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
Bromochloromethane #M	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
Chloroform #M	<5	<5	<5	<5	<5	<5					<5	ug/kg	TM15/PM10
1,1,1-Trichloroethane #M	<5	<5	<5	<5	<5	<5					<5	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3	<3	<3	<3	<3	<3					<3	ug/kg	TM15/PM10
Carbon tetrachloride #M	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
1,2-Dichloroethane #M	<5	<5	<5	<5	<5	<5					<5	ug/kg	TM15/PM10
Benzene #M	178	7	24	104	<5	<5					<5	ug/kg	TM15/PM10
Trichloroethene (TCE) #M	<5	<5	<5	<5	<5	<5					<5	ug/kg	TM15/PM10
1,2-Dichloropropane #M	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
Dibromomethane #M	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
Bromodichloromethane #M	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
Toluene #M	41	10	44	61	<3	<3					<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3	<3	<3	<3					<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #M	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3	<3	<3	<3	<3					<3	ug/kg	TM15/PM10
1,3-Dichloropropane #M	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
Dibromochloromethane #M	<5	<5	<5	<5	<5	<5					<5	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3	<3	<3	<3	36	<3					<3	ug/kg	TM15/PM10
Chlorobenzene #M	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #M	<5	<5	<5	<5	<5	<5					<5	ug/kg	TM15/PM10
Ethylbenzene #M	155	<3	18	50	<3	<3					<3	ug/kg	TM15/PM10
p/m-Xylene #M	204	14	54	163	<4	<4					<4	ug/kg	TM15/PM10
o-Xylene #M	69	<4	9	11	49	<4					<4	ug/kg	TM15/PM10
Styrene	<3	<3	<3	<3	<3	<3					<3	ug/kg	TM15_A/PM10
Bromoform	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
Isopropylbenzene #	48	6	86	11	1357	55					<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #M	<3	<3	<3	<3	<3	<3					<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2	<2	<2	<2					<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #M	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
Propylbenzene #	160	10	201	34	2033++	57					<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3	<3	<3	<3					<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	204	<3	<3	12	<3	<3					<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3	<3	<3	<3					<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5	<5	<5	<5	<5	<5					<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	415	<6	12	114	22	<6					<6	ug/kg	TM15/PM10
sec-Butylbenzene #	82	58	178	<4	1864++	299					<4	ug/kg	TM15/PM10
4-Isopropyltoluene #	19	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #M	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
n-Butylbenzene #	62	69	85	<4	2110++	161					<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #M	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane #	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene #	<7	<7	<7	<7	<7	<7					<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene #	<7	<7	<7	<7	<7	<7					<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	88	96	102	79	102	86					<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	77	74	106	64	81	73					<0	%	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

Signed on behalf of Jones Environmental Laboratory:



Ryan Butterworth
Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	7	BH11	2.00	619	24/11/2016	**General Description (Bulk Analysis)**	soil/stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	7	BH11	4.00	625	24/11/2016	**General Description (Bulk Analysis)**	soil/stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	7	BH9	0.50	634	24/11/2016	**General Description (Bulk Analysis)**	soil/stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	7	BH9	3.50	643	24/11/2016	**General Description (Bulk Analysis)**	soil/stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	7	WS20	0.30	649	24/11/2016	**General Description (Bulk Analysis)**	soil/stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	7	WS20	0.30	649	24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	7	WS20	4.00	658	24/11/2016	**General Description (Bulk Analysis)**	soil/stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	7	WS18	1.00	664	24/11/2016	**General Description (Bulk Analysis)**	Sand/Stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	7	WS18	4.00	673	24/11/2016	**General Description (Bulk Analysis)**	Soil/Stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	7	WS08	1.00	679	24/11/2016	**General Description (Bulk Analysis)**	soil/stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	7	WS08	5.00	691	24/11/2016	**General Description (Bulk Analysis)**	soil/stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	7	TP18	1.00	699	24/11/2016	**General Description (Bulk Analysis)**	soil/stones
					24/11/2016	**Asbestos Fibres**	Fibre Bundles

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	7	TP18	1.00	699	24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos Type**	Crocidolite
					24/11/2016	**Asbestos Level Screen**	<0.1%
					13/12/2016	**Asbestos Gravimetric Quantification**	<0.001 (mass %)
					13/12/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					13/12/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)
16/16961	7	TP18	1.90	702	24/11/2016	**General Description (Bulk Analysis)**	soil/stones
					24/11/2016	**Asbestos Fibres**	Fibre Bundles
					24/11/2016	**Asbestos ACM**	Insulation Debris
					24/11/2016	**Asbestos Type**	Chrysotile
					24/11/2016	**Asbestos Level Screen**	Asbestos level cannot be determined at this stage of analysis
					13/12/2016	**Asbestos Gravimetric Quantification**	2.898 (mass %)
					13/12/2016	**Asbestos PCOM Quantification (Fibres)**	0.004 (mass %)
					13/12/2016	**Asbestos Gravimetric & PCOM Total**	2.902 (mass %)
16/16961	7	TP24	2.50	714	24/11/2016	**General Description (Bulk Analysis)**	Soil/Stone
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	7	TP24	3.20	717	24/11/2016	**General Description (Bulk Analysis)**	Soil/Sand
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	7	TP23	0.30	720	24/11/2016	**General Description (Bulk Analysis)**	Soil/Sand
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	7	TP23	3.10	732	24/11/2016	**General Description (Bulk Analysis)**	Soil/Stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD

Client Name: WYG **Matrix : Solid**
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	NDP Reason
16/16961	7	TP18	1.00	698-700	Asbestos detected in sample
16/16961	7	TP18	1.90	701-703	Asbestos detected in sample

Client Name: WYG

Matrix : Solid

Reference: A095973-2

Location: Tidal Lagoon

Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
16/16961	7	BH11	2.00	618-620	GRO, VOC	Solid Samples were received at a temperature above 9°C.
16/16961	7	BH9	3.50	642-644	GRO, VOC	Solid Samples were received at a temperature above 9°C.
16/16961	7	WS18	4.00	672-674	GRO, VOC	Solid Samples were received at a temperature above 9°C.
16/16961	7	TP18	1.90	701-703	GRO, VOC	Solid Samples were received at a temperature above 9°C.
16/16961	7	TP24	3.20	716-718	GRO, VOC	Solid Samples were received at a temperature above 9°C.
16/16961	7	TP23	3.10	731-733	GRO, VOC	Solid Samples were received at a temperature above 9°C.

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.

Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 16/16961

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
SA	ISO17025 (SANAS) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x5 Dilution
AB	x10 Dilution
AC	x50 Dilution

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.			AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.	Yes	Yes	AD	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM60	As received solid samples are extracted with deionised water in a 2:1 ratio of water to solid.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM61	As received solid samples are extracted with hot water in a 20:1 ratio of water to soil ready for analysis by ICP.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.	Yes	Yes	AR	Yes
TM15_A	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds, Vinyl Chloride & Styrene by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

Exova Jones Environmental

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WYG
5th Floor
Longcross Court
47 Newport Road
Cardiff
CF24 0AD

Attention :	Nicholas Bool
Date :	13th December, 2016
Your reference :	A095973-2
Our reference :	Test Report 16/16961 Batch 8
Location :	Tidal Lagoon
Date samples received :	22nd November, 2016
Status :	Final report
Issue :	2

Twenty nine samples were received for analysis on 22nd November, 2016 of which fifteen were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Phil Sommerton BSc
Project Manager

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	746-748	752-754	758-760	764-766	770-772	773-775	779-781	785-787	793-794	795-797	LOD/LOR	Units	Method No.
Sample ID	TP14	TP14	TP13	TP13	TP15	TP15	WS09	WS09	WS10	WS10			
Depth	0.50	2.00	0.50	2.00	0.50	1.50	0.50	2.00	0.30	0.50			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	J T	V J T			
Sample Date	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	8	8	8	8	8	8	8	8	8	8			
Date of Receipt	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016			
Arsenic #M	468.0 AC	614.7 AC	53.2	13.2	15.7	125.8	561.8 AC	143.2	58.6	69.4	<0.5	mg/kg	TM30/PM15
Arsenic	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Cadmium #M	25.8 AC	31.2 AC	2.3	1.5	0.8	15.6	41.6 AC	86.7 AC	10.0	5.4	<0.1	mg/kg	TM30/PM15
Cadmium	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Chromium #M	32.2	39.1	43.2	48.2	55.7	32.6	42.7	32.5	53.8	47.0	<0.5	mg/kg	TM30/PM15
Chromium	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Copper #M	823 AC	744 AC	308 AC	28	18	149 AB	691 AC	687 AC	163	137	<1	mg/kg	TM30/PM15
Copper	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Lead #M	38190 AC	43240 AC	426	138	249	3290 AB	29730 AC	8750 AC	2003	1027	<5	mg/kg	TM30/PM15
Lead	-	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62
Mercury #M	1.4	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM30/PM15
Mercury	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Nickel #M	44.6	26.3	24.5	13.2	10.3	28.4	84.6	48.8	51.5	18.0	<0.7	mg/kg	TM30/PM15
Nickel	-	-	-	-	-	-	-	-	-	-	<0.7	mg/kg	TM30/PM62
Selenium #M	14	9	<1	<1	<1	<1	2	2	<1	<1	<1	mg/kg	TM30/PM15
Selenium	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Water Soluble Boron #M	0.2	0.2	0.8	0.3	<0.1	0.3	0.1	0.3	0.3	0.2	<0.1	mg/kg	TM74/PM32
Water Soluble Boron	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM74/PM61
Zinc #M	47470 AC	59230 AC	889	418	470	6362 AB	72700 AC	49690 AC	4990 AC	3420 AC	<5	mg/kg	TM30/PM15
Zinc	-	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene #M	<0.04	<0.04	0.19	<0.04	<0.04	0.10	0.19	<0.04	0.37	0.06	<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	0.04	<0.03	<0.03	<0.03	0.07	<0.03	0.05	<0.03	<0.03	mg/kg	TM4/PM8
Acenaphthene #M	<0.05	<0.05	0.09	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene #M	<0.04	<0.04	0.08	<0.04	<0.04	<0.04	0.06	<0.04	0.06	<0.04	<0.04	mg/kg	TM4/PM8
Phenanthrene #M	<0.03	<0.03	0.99	0.18	0.03	0.22	1.34	<0.03	1.03	0.37	<0.03	mg/kg	TM4/PM8
Anthracene #	<0.04	<0.04	0.22	<0.04	<0.04	<0.04	0.67	<0.04	0.28	0.09	<0.04	mg/kg	TM4/PM8
Fluoranthene #M	<0.03	<0.03	1.25	0.21	0.04	0.26	1.94	<0.03	1.67	0.46	<0.03	mg/kg	TM4/PM8
Pyrene #	<0.03	<0.03	0.99	0.17	0.04	0.22	1.60	<0.03	1.38	0.38	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	<0.06	<0.06	0.57	0.12	<0.06	0.14	0.90	<0.06	0.79	0.24	<0.06	mg/kg	TM4/PM8
Chrysene #M	<0.02	<0.02	0.64	0.11	0.03	0.14	1.18	<0.02	0.97	0.25	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	<0.07	<0.07	0.91	0.13	<0.07	0.18	1.71	<0.07	1.48	0.31	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	<0.04	<0.04	0.53	0.08	<0.04	0.11	0.85	<0.04	0.85	0.19	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	<0.04	<0.04	0.27	0.04	<0.04	0.06	0.47	<0.04	0.59	0.10	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04	<0.04	0.06	<0.04	<0.04	<0.04	0.08	<0.04	0.08	<0.04	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	<0.04	<0.04	0.24	<0.04	<0.04	0.06	0.42	<0.04	0.46	0.09	<0.04	mg/kg	TM4/PM8
PAH 16 Total	<0.6	<0.6	7.1	1.0	<0.6	1.5	11.5	<0.6	10.1	2.5	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	<0.05	<0.05	0.66	0.09	<0.05	0.13	1.23	<0.05	1.07	0.22	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	<0.02	<0.02	0.25	0.04	<0.02	0.05	0.48	<0.02	0.41	0.09	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	100	100	101	100	103	101	105	101	104	103	<0	%	TM4/PM8
Methyl Tertiary Butyl Ether #M	-	-	-	-	<6	-	<6	-	-	-	<6	ug/kg	TM15/PM10
Benzene #M	-	-	-	-	<5	-	<5	-	-	-	<5	ug/kg	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	746-748	752-754	758-760	764-766	770-772	773-775	779-781	785-787	793-794	795-797	LOD/LOR	Units	Method No.
Sample ID	TP14	TP14	TP13	TP13	TP15	TP15	WS09	WS09	WS10	WS10			
Depth	0.50	2.00	0.50	2.00	0.50	1.50	0.50	2.00	0.30	0.50			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	J T	V J T			
Sample Date	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	8	8	8	8	8	8	8	8	8	8			
Date of Receipt	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016			
Toluene #M	-	-	-	-	<3	-	21	-	-	-	<3	ug/kg	TM15/PM10
Ethylbenzene #M	-	-	-	-	<3	-	4	-	-	-	<3	ug/kg	TM15/PM10
p/m-Xylene #M	-	-	-	-	<4	-	15	-	-	-	<4	ug/kg	TM15/PM10
o-Xylene #M	-	-	-	-	<4	-	4	-	-	-	<4	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	-	-	-	-	103	-	101	-	-	-	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	-	-	-	-	128	-	78	-	-	-	<0	%	TM15/PM10
EPH >C8-C10 #M	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	mg/kg	TM5/PM8
EPH >C10-C12 #M	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	mg/kg	TM5/PM8
EPH >C12-C16 #M	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	mg/kg	TM5/PM8
EPH >C16-C21 #M	<10	<10	<10	<10	<10	<10	83	<10	16	<10	<10	mg/kg	TM5/PM8
EPH >C21-C40	<10	<10	94	<10	<10	<10	689	<10	144	<10	<10	mg/kg	TM5/PM8
EPH >C8-C40	<30	<30	94	<30	<30	<30	772	<30	160	<30	<30	mg/kg	TM5/PM8
TPH CWG													
Aliphatics													
>C5-C6 #M	-	-	-	-	<0.1	-	<1.0 AB	-	-	-	<0.1	mg/kg	TM36/PM12
>C6-C8 #M	-	-	-	-	<0.1	-	<1.0 AB	-	-	-	<0.1	mg/kg	TM36/PM12
>C8-C10	-	-	-	-	<0.1	-	<1.0 AB	-	-	-	<0.1	mg/kg	TM36/PM12
>C10-C12 #M	-	-	-	-	<0.2	-	<0.2	-	-	-	<0.2	mg/kg	TM5/PM16
>C12-C16 #M	-	-	-	-	<4	-	<4	-	-	-	<4	mg/kg	TM5/PM16
>C16-C21 #M	-	-	-	-	<7	-	<7	-	-	-	<7	mg/kg	TM5/PM16
>C21-C35 #M	-	-	-	-	<7	-	<7	-	-	-	<7	mg/kg	TM5/PM16
Total aliphatics C5-35	-	-	-	-	<19	-	<19	-	-	-	<19	mg/kg	TM5/TM36/PM12/PM16
Aromatics													
>C5-EC7 #	-	-	-	-	<0.1	-	<1.0 AB	-	-	-	<0.1	mg/kg	TM36/PM12
>EC7-EC8 #	-	-	-	-	<0.1	-	<1.0 AB	-	-	-	<0.1	mg/kg	TM36/PM12
>EC8-EC10 #M	-	-	-	-	<0.1	-	<1.0 AB	-	-	-	<0.1	mg/kg	TM36/PM12
>EC10-EC12 #	-	-	-	-	<0.2	-	<0.2	-	-	-	<0.2	mg/kg	TM5/PM16
>EC12-EC16 #	-	-	-	-	<4	-	<4	-	-	-	<4	mg/kg	TM5/PM16
>EC16-EC21 #	-	-	-	-	<7	-	13	-	-	-	<7	mg/kg	TM5/PM16
>EC21-EC35 #	-	-	-	-	<7	-	77	-	-	-	<7	mg/kg	TM5/PM16
Total aromatics C5-35 #	-	-	-	-	<19	-	90	-	-	-	<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	-	-	-	-	<38	-	90	-	-	-	<38	mg/kg	TM5/TM36/PM12/PM16
PCB 77	-	-	-	-	-	-	<5	-	-	-	<5	ug/kg	TM16/PM8
PCB 81	-	-	-	-	-	-	<5	-	-	-	<5	ug/kg	TM16/PM8
PCB 105	-	-	-	-	-	-	<5	-	-	-	<5	ug/kg	TM16/PM8
PCB 114	-	-	-	-	-	-	<5	-	-	-	<5	ug/kg	TM16/PM8
PCB 118	-	-	-	-	-	-	<5	-	-	-	<5	ug/kg	TM16/PM8
PCB 123	-	-	-	-	-	-	<5	-	-	-	<5	ug/kg	TM16/PM8
PCB 126	-	-	-	-	-	-	<5	-	-	-	<5	ug/kg	TM16/PM8
PCB 156	-	-	-	-	-	-	<5	-	-	-	<5	ug/kg	TM16/PM8
PCB 157	-	-	-	-	-	-	<5	-	-	-	<5	ug/kg	TM16/PM8

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	746-748	752-754	758-760	764-766	770-772	773-775	779-781	785-787	793-794	795-797	LOD/LOR	Units	Method No.
Sample ID	TP14	TP14	TP13	TP13	TP15	TP15	WS09	WS09	WS10	WS10			
Depth	0.50	2.00	0.50	2.00	0.50	1.50	0.50	2.00	0.30	0.50			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	J T	V J T			
Sample Date	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016	18/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	8	8	8	8	8	8	8	8	8	8			
Date of Receipt	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016			
PCB 167	-	-	-	-	-	-	<5	-	-	-	<5	ug/kg	TM16/PM8
PCB 169	-	-	-	-	-	-	<5	-	-	-	<5	ug/kg	TM16/PM8
PCB 189	-	-	-	-	-	-	<5	-	-	-	<5	ug/kg	TM16/PM8
Total 12 PCBs	-	-	-	-	-	-	<60	-	-	-	<60	ug/kg	TM16/PM8
Total Phenols HPLC	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	mg/kg	TM26/PM21
Natural Moisture Content	15.1	14.0	20.2	10.6	6.2	20.0	12.4	17.1	12.5	14.9	<0.1	%	PM4/PM0
Natural Moisture Content	-	-	-	-	-	-	-	-	-	-	<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #M	1.2911	1.3918	0.0667	0.0162	0.0064	0.0413	0.1154	1.3388	0.0188	0.0091	<0.0015	g/l	TM38/PM20
Sulphate as SO4 (2:1 Ext)	-	-	-	-	-	-	-	-	-	-	<0.0015	g/l	TM38/PM60
Free Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Total Cyanide #M	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Fraction Organic Carbon	0.175	0.222	0.051	0.011	0.004	0.345	0.085	0.258	0.048	0.072	<0.001	None	TM21/PM24
pH #M	7.08	6.48	7.94	8.55	9.07	8.54	7.95	7.53	8.26	8.53	<0.01	pH units	TM73/PM11
Sample Type	Sand	Sand	Clayey Sand	Sand	Sand	Sand	Sand	Sand	Loamy Sand	Sand		None	PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Dark Brown	Medium Brown	Light Brown	Dark Brown	Medium Brown	Dark Brown	Medium Brown	Medium Brown		None	PM13/PM0
Other Items	Stones and root	Stones, root and clinker	Stones and clinker	Stones, vegetation and shell	Root	Stones and clinker	Stones, root and clinker	Stones and clinker	Stones and vegetation	Stones and vegetation		None	PM13/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	801-803	810-812	813-815	816-818	819-821						LOD/LOR	Units	Method No.
Sample ID	WS10	TP25	TP26	TP27	TP28								
Depth	2.00	0.50	0.50	1.00	1.50								
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T								
Sample Date	18/11/2016	21/11/2016	21/11/2016	21/11/2016	21/11/2016								
Sample Type	Soil	Soil	Soil	Soil	Soil								
Batch Number	8	8	8	8	8								
Date of Receipt	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016								
Arsenic #M	-	268.5 AB	27.8	-	30.2						<0.5	mg/kg	TM30/PM15
Arsenic	69.2	-	-	30.6	-						<0.5	mg/kg	TM30/PM62
Cadmium #M	-	3.3	0.9	-	1.2						<0.1	mg/kg	TM30/PM15
Cadmium	11.8	-	-	2.4	-						<0.1	mg/kg	TM30/PM62
Chromium #M	-	31.1	55.8	-	35.3						<0.5	mg/kg	TM30/PM15
Chromium	28.1	-	-	19.9	-						<0.5	mg/kg	TM30/PM62
Copper #M	-	201	79	-	191						<1	mg/kg	TM30/PM15
Copper	226 AB	-	-	311 AB	-						<1	mg/kg	TM30/PM62
Lead #M	-	635	201	-	336						<5	mg/kg	TM30/PM15
Lead	4136 AB	-	-	1246	-						<5	mg/kg	TM30/PM62
Mercury #M	-	0.1	<0.1	-	0.2						<0.1	mg/kg	TM30/PM15
Mercury	3.4	-	-	0.8	-						<0.1	mg/kg	TM30/PM62
Nickel #M	-	22.8	17.3	-	31.4						<0.7	mg/kg	TM30/PM15
Nickel	52.3	-	-	34.9	-						<0.7	mg/kg	TM30/PM62
Selenium #M	-	<1	<1	-	<1						<1	mg/kg	TM30/PM15
Selenium	2	-	-	3	-						<1	mg/kg	TM30/PM62
Water Soluble Boron #M	-	0.4	0.5	-	0.5						<0.1	mg/kg	TM74/PM32
Water Soluble Boron	0.1	-	-	0.8	-						<0.1	mg/kg	TM74/PM61
Zinc #M	-	1886	395	-	639						<5	mg/kg	TM30/PM15
Zinc	6578 AB	-	-	2315	-						<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene #M	2.67 AA	0.16	0.09	2.79 AA	1.08						<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.22 AA	<0.03	<0.03	0.75 AA	0.30						<0.03	mg/kg	TM4/PM8
Acenaphthene #M	3.11 AA	0.08	<0.05	1.77 AA	0.56						<0.05	mg/kg	TM4/PM8
Fluorene #M	1.32 AA	0.10	<0.04	1.97 AA	0.58						<0.04	mg/kg	TM4/PM8
Phenanthrene #M	18.03 AA	1.15	0.55	22.12 AA	5.03						<0.03	mg/kg	TM4/PM8
Anthracene #	4.42 AA	0.21	0.12	4.60 AA	1.18						<0.04	mg/kg	TM4/PM8
Fluoranthene #M	26.28 AA	1.68	0.90	29.91 AA	7.29						<0.03	mg/kg	TM4/PM8
Pyrene #	22.45 AA	1.31	0.75	22.63 AA	5.65						<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	11.37 AA	0.74	0.46	15.18 AA	3.65						<0.06	mg/kg	TM4/PM8
Chrysene #M	12.58 AA	0.92	0.50	17.16 AA	4.04						<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	20.19 AA	1.30	0.77	28.23 AA	6.85						<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	12.88 AA	0.71	0.45	16.00 AA	3.97						<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	8.07 AA	0.42	0.25	11.93 AA	2.88						<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	0.86 AA	0.07	<0.04	1.63 AA	0.39						<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	6.73 AA	0.34	0.21	10.45 AA	2.19						<0.04	mg/kg	TM4/PM8
PAH 16 Total	151.2 AA	9.2	5.1	187.1 AA	45.6						<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	14.54 AA	0.94	0.55	20.33 AA	4.93						<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	5.65 AA	0.36	0.22	7.90 AA	1.92						<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	107 AA	101	103	79 AA	105						<0	%	TM4/PM8
Methyl Tertiary Butyl Ether #M	<6	-	-	-	-						<6	ug/kg	TM15/PM10
Benzene #M	14	-	-	-	-						<5	ug/kg	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

J E Sample No.	801-803	810-812	813-815	816-818	819-821						LOD/LOR	Units	Method No.
Sample ID	WS10	TP25	TP26	TP27	TP28								
Depth	2.00	0.50	0.50	1.00	1.50								
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T								
Sample Date	18/11/2016	21/11/2016	21/11/2016	21/11/2016	21/11/2016								
Sample Type	Soil	Soil	Soil	Soil	Soil								
Batch Number	8	8	8	8	8								
Date of Receipt	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016								
Toluene #M	45	-	-	-	-						<3	ug/kg	TM15/PM10
Ethylbenzene #M	40	-	-	-	-						<3	ug/kg	TM15/PM10
p/m-Xylene #M	60	-	-	-	-						<4	ug/kg	TM15/PM10
o-Xylene #M	22	-	-	-	-						<4	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	91	-	-	-	-						<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	56	-	-	-	-						<0	%	TM15/PM10
EPH >C8-C10 #M	<5	<5	<5	<5	<5						<5	mg/kg	TM5/PM8
EPH >C10-C12 #M	<10	<10	<10	<10	<10						<10	mg/kg	TM5/PM8
EPH >C12-C16 #M	48	<10	<10	23	<10						<10	mg/kg	TM5/PM8
EPH >C16-C21 #M	418	13	54	232	92						<10	mg/kg	TM5/PM8
EPH >C21-C40	1238	292	303	1255	363						<10	mg/kg	TM5/PM8
EPH >C8-C40	1704	305	357	1510	455						<30	mg/kg	TM5/PM8
TPH CWG													
Aliphatics													
>C5-C6 #M	<1.0 AB	-	-	-	-						<0.1	mg/kg	TM36/PM12
>C6-C8 #M	<1.0 AB	-	-	-	-						<0.1	mg/kg	TM36/PM12
>C8-C10	<1.0 AB	-	-	-	-						<0.1	mg/kg	TM36/PM12
>C10-C12 #M	<0.2	-	-	-	-						<0.2	mg/kg	TM5/PM16
>C12-C16 #M	<4	-	-	-	-						<4	mg/kg	TM5/PM16
>C16-C21 #M	<7	-	-	-	-						<7	mg/kg	TM5/PM16
>C21-C35 #M	61	-	-	-	-						<7	mg/kg	TM5/PM16
Total aliphatics C5-35	61	-	-	-	-						<19	mg/kg	TM5/TM36/PM12/PM16
Aromatics													
>C5-EC7 #	<1.0 AB	-	-	-	-						<0.1	mg/kg	TM36/PM12
>EC7-EC8 #	<1.0 AB	-	-	-	-						<0.1	mg/kg	TM36/PM12
>EC8-EC10 #M	<1.0 AB	-	-	-	-						<0.1	mg/kg	TM36/PM12
>EC10-EC12 #	1.3	-	-	-	-						<0.2	mg/kg	TM5/PM16
>EC12-EC16 #	10	-	-	-	-						<4	mg/kg	TM5/PM16
>EC16-EC21 #	118	-	-	-	-						<7	mg/kg	TM5/PM16
>EC21-EC35 #	373	-	-	-	-						<7	mg/kg	TM5/PM16
Total aromatics C5-35 #	502	-	-	-	-						<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	563	-	-	-	-						<38	mg/kg	TM5/TM36/PM12/PM16
PCB 77	-	-	-	-	-						<5	ug/kg	TM16/PM8
PCB 81	-	-	-	-	-						<5	ug/kg	TM16/PM8
PCB 105	-	-	-	-	-						<5	ug/kg	TM16/PM8
PCB 114	-	-	-	-	-						<5	ug/kg	TM16/PM8
PCB 118	-	-	-	-	-						<5	ug/kg	TM16/PM8
PCB 123	-	-	-	-	-						<5	ug/kg	TM16/PM8
PCB 126	-	-	-	-	-						<5	ug/kg	TM16/PM8
PCB 156	-	-	-	-	-						<5	ug/kg	TM16/PM8
PCB 157	-	-	-	-	-						<5	ug/kg	TM16/PM8

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

J E Sample No.	801-803	810-812	813-815	816-818	819-821						LOD/LOR	Units	Method No.
Sample ID	WS10	TP25	TP26	TP27	TP28								
Depth	2.00	0.50	0.50	1.00	1.50								
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T								
Sample Date	18/11/2016	21/11/2016	21/11/2016	21/11/2016	21/11/2016								
Sample Type	Soil	Soil	Soil	Soil	Soil								
Batch Number	8	8	8	8	8								
Date of Receipt	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016								
PCB 167	-	-	-	-	-						<5	ug/kg	TM16/PM8
PCB 169	-	-	-	-	-						<5	ug/kg	TM16/PM8
PCB 189	-	-	-	-	-						<5	ug/kg	TM16/PM8
Total 12 PCBs	-	-	-	-	-						<60	ug/kg	TM16/PM8
Total Phenols HPLC	<0.15	<0.15	<0.15	0.20	<0.15						<0.15	mg/kg	TM26/PM21
Natural Moisture Content	-	14.7	11.7	-	16.1						<0.1	%	PM4/PM0
Natural Moisture Content	14.5	-	-	27.0	-						<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	<0.3						<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #M	-	0.0334	0.0112	-	0.0242						<0.0015	g/l	TM38/PM20
Sulphate as SO4 (2:1 Ext)	0.0110	-	-	0.0815	-						<0.0015	g/l	TM38/PM60
Free Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5						<0.5	mg/kg	TM89/PM45
Total Cyanide #M	<0.5	<0.5	<0.5	<0.5	<0.5						<0.5	mg/kg	TM89/PM45
Fraction Organic Carbon	NDP	0.058	0.030	NDP	0.073						<0.001	None	TM21/PM24
pH #M	8.21	8.79	8.71	6.78	8.21						<0.01	pH units	TM73/PM11
Sample Type	NDP	Sand	Sand	NDP	Loamy Sand							None	PM13/PM0
Sample Colour	NDP	Dark Brown	Medium Brown	NDP	Dark Brown							None	PM13/PM0
Other Items	NDP	Brick, stones and vegetation	Stones and root	NDP	Stones and vegetation							None	PM13/PM0

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

SVOC Report : **Solid**

J E Sample No.	770-772	779-781	801-803									
Sample ID	TP15	WS09	WS10									
Depth	0.50	0.50	2.00							Please see attached notes for all abbreviations and acronyms		
COC No / misc												
Containers	V J T	V J T	V J T									
Sample Date	18/11/2016	18/11/2016	18/11/2016									
Sample Type	Soil	Soil	Soil									
Batch Number	8	8	8									
Date of Receipt	22/11/2016	22/11/2016	22/11/2016							LOD/LOR	Units	Method No.
SVOC MS												
Phenols												
2-Chlorophenol #M	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
2-Methylphenol	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
2,4-Dichlorophenol #M	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
4-Methylphenol	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
Phenol #M	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
PAHs												
2-Chloronaphthalene #M	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
2-Methylnaphthalene #M	<10	136	890 AB							<10	ug/kg	TM16/PM8
Phthalates												
Bis(2-ethylhexyl) phthalate	<100	<100	<1000 AB							<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<100	<1000 AB							<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<100	<100	<1000 AB							<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<100	<1000 AB							<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<100	<1000 AB							<100	ug/kg	TM16/PM8
Dimethyl phthalate #M	<100	<100	<1000 AB							<100	ug/kg	TM16/PM8
Other SVOCs												
1,2-Dichlorobenzene	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #M	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #M	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
Azobenzene	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
Carbazole	<10	573	1745 AB							<10	ug/kg	TM16/PM8
Dibenzofuran #M	<10	160	1230 AB							<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
Hexachlorobutadiene #M	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
Isophorone #M	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #M	<10	<10	<100 AB							<10	ug/kg	TM16/PM8
Nitrobenzene #M	<10	<10	<100 AB							<10	ug/kg	TM16/PM8

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

VOC Report : **Solid**

J E Sample No.	770-772	779-781	801-803									
Sample ID	TP15	WS09	WS10									
Depth	0.50	0.50	2.00									
COC No / misc												
Containers	V J T	V J T	V J T									
Sample Date	18/11/2016	18/11/2016	18/11/2016									
Sample Type	Soil	Soil	Soil									
Batch Number	8	8	8									
Date of Receipt	22/11/2016	22/11/2016	22/11/2016									

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2	<2	<2								<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #M	<6	<6	<6								<6	ug/kg	TM15/PM10
Chloromethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	<2								<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1								<1	ug/kg	TM15/PM10
Chloroethane #M	<6	<6	<6								<6	ug/kg	TM15/PM10
Trichlorofluoromethane #M	<3	<3	<3								<3	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #M	<6	<6	<6								<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	<30	68	95								<30	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3	<3								<3	ug/kg	TM15/PM10
1,1-Dichloroethane #M	<6	<6	<6								<6	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #M	<7	<7	<7								<7	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4								<4	ug/kg	TM15/PM10
Bromochloromethane #M	<4	<4	<4								<4	ug/kg	TM15/PM10
Chloroform #M	<5	<5	<5								<5	ug/kg	TM15/PM10
1,1,1-Trichloroethane #M	<5	<5	<5								<5	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3	<3	<3								<3	ug/kg	TM15/PM10
Carbon tetrachloride #M	<4	<4	<4								<4	ug/kg	TM15/PM10
1,2-Dichloroethane #M	<5	<5	<5								<5	ug/kg	TM15/PM10
Benzene #M	<5	<5	14								<5	ug/kg	TM15/PM10
Trichloroethene (TCE) #M	<5	9	<5								<5	ug/kg	TM15/PM10
1,2-Dichloropropane #M	<4	<4	<4								<4	ug/kg	TM15/PM10
Dibromomethane #M	<4	<4	<4								<4	ug/kg	TM15/PM10
Bromodichloromethane #M	<4	<4	<4								<4	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4								<4	ug/kg	TM15/PM10
Toluene #M	<3	21	45								<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3								<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #M	<4	<4	<4								<4	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3	<3								<3	ug/kg	TM15/PM10
1,3-Dichloropropane #M	<4	<4	<4								<4	ug/kg	TM15/PM10
Dibromochloromethane #M	<5	<5	<5								<5	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
Chlorobenzene #M	<4	<4	<4								<4	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #M	<5	<5	<5								<5	ug/kg	TM15/PM10
Ethylbenzene #M	<3	4	40								<3	ug/kg	TM15/PM10
p/m-Xylene #M	<4	15	60								<4	ug/kg	TM15/PM10
o-Xylene #M	<4	4	22								<4	ug/kg	TM15/PM10
Styrene	<3	<3	<3								<3	ug/kg	TM15_A/PM10
Bromoform	<4	<4	<4								<4	ug/kg	TM15/PM10
Isopropylbenzene #	<3	<3	<3								<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #M	<3	<3	<3								<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2								<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #M	<4	<4	<4								<4	ug/kg	TM15/PM10
Propylbenzene #	<4	<4	<4								<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3								<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	<3	<3	11								<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3								<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5	<5	<5								<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	<6	<6	<6								<6	ug/kg	TM15/PM10
sec-Butylbenzene #	<4	<4	<4								<4	ug/kg	TM15/PM10
4-Isopropyltoluene #	<4	<4	<4								<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #M	<4	<4	<4								<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4	<4	<4								<4	ug/kg	TM15/PM10
n-Butylbenzene #	<4	<4	<4								<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #M	<4	<4	<4								<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane #	<4	<4	<4								<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene #	<7	<7	<7								<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4								<4	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene #	<7	<7	<7								<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	103	101	91								<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	128	78	56								<0	%	TM15/PM10

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

Signed on behalf of Jones Environmental Laboratory:



Ryan Butterworth
Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	8	TP14	0.50	747	24/11/2016	**General Description (Bulk Analysis)**	Soil/Stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	8	TP14	2.00	753	24/11/2016	**General Description (Bulk Analysis)**	Soil/Stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	8	TP13	0.50	759	24/11/2016	**General Description (Bulk Analysis)**	Soil/Stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	8	TP13	2.00	765	24/11/2016	**General Description (Bulk Analysis)**	Soil/Stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	8	TP15	0.50	771	24/11/2016	**General Description (Bulk Analysis)**	Soil/Stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	8	TP15	0.50	771	24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	8	TP15	1.50	774	24/11/2016	**General Description (Bulk Analysis)**	Soil/Stone/Sand
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	8	WS09	0.50	780	24/11/2016	**General Description (Bulk Analysis)**	Soil/Stone
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	8	WS09	2.00	786	24/11/2016	**General Description (Bulk Analysis)**	Soil/Stone/Silt
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	8	WS10	0.30	793	24/11/2016	**General Description (Bulk Analysis)**	soil/stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	8	WS10	0.50	796	24/11/2016	**General Description (Bulk Analysis)**	soil/stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	8	WS10	2.00	802	24/11/2016	**General Description (Bulk Analysis)**	soil/stones
					24/11/2016	**Asbestos Fibres**	Fibre Bundles

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	8	WS10	2.00	802	24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos Type**	Chrysotile
					24/11/2016	**Asbestos Level Screen**	<0.1%
					13/12/2016	**Asbestos Gravimetric Quantification**	<0.001 (mass %)
					13/12/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					13/12/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)
16/16961	8	TP25	0.50	811	24/11/2016	**General Description (Bulk Analysis)**	Soil/Stone
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	8	TP26	0.50	814	24/11/2016	**General Description (Bulk Analysis)**	Soil/Stone
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD
16/16961	8	TP27	1.00	817	24/11/2016	**General Description (Bulk Analysis)**	Soil/Stone/Silt
					24/11/2016	**Asbestos Fibres**	Fibre Bundles
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos Type**	Chrysotile
					24/11/2016	**Asbestos Level Screen**	<0.1%
					13/12/2016	**Asbestos Gravimetric Quantification**	<0.001 (mass %)
					13/12/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					13/12/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)
16/16961	8	TP28	1.50	820	24/11/2016	**General Description (Bulk Analysis)**	Soil/Stones
					24/11/2016	**Asbestos Fibres**	NAD
					24/11/2016	**Asbestos Fibres (2)**	NAD
					24/11/2016	**Asbestos ACM**	NAD
					24/11/2016	**Asbestos ACM (2)**	NAD
					24/11/2016	**Asbestos Type**	NAD
					24/11/2016	**Asbestos Type (2)**	NAD
					24/11/2016	**Asbestos Level Screen**	NAD

Client Name: WYG **Matrix : Solid**
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	NDP Reason
16/16961	8	WS10	2.00	801-803	Asbestos detected in sample
16/16961	8	TP27	1.00	816-818	Asbestos detected in sample

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
No deviating sample report results for job 16/16961						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.
Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 16/16961

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
SA	ISO17025 (SANAS) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x5 Dilution
AB	x10 Dilution
AC	x50 Dilution

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.			AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.	Yes	Yes	AD	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM60	As received solid samples are extracted with deionised water in a 2:1 ratio of water to solid.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM61	As received solid samples are extracted with hot water in a 20:1 ratio of water to soil ready for analysis by ICP.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.	Yes	Yes	AR	Yes
TM15_A	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds, Vinyl Chloride & Styrene by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

Exova Jones Environmental

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WYG
5th Floor
Longcross Court
47 Newport Road
Cardiff
CF24 0AD

Attention :	Nicholas Bool
Date :	8th December, 2016
Your reference :	A095973-2
Our reference :	Test Report 16/16961 Batch 9
Location :	Tidal Lagoon
Date samples received :	23rd November, 2016
Status :	Final report
Issue :	1

One sample was received for analysis on 23rd November, 2016 of which one were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Phil Sommerton BSc
Project Manager

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	867-869										Please see attached notes for all abbreviations and acronyms		
Sample ID	WS24												
Depth	3.50												
COC No / misc													
Containers	V J T												
Sample Date	21/11/2016												
Sample Type	Soil												
Batch Number	9										LOD/LOR	Units	Method No.
Date of Receipt	23/11/2016												
Arsenic #M	15.3										<0.5	mg/kg	TM30/PM15
Cadmium #M	1.4										<0.1	mg/kg	TM30/PM15
Chromium #M	38.2										<0.5	mg/kg	TM30/PM15
Copper #M	40										<1	mg/kg	TM30/PM15
Lead #M	22										<5	mg/kg	TM30/PM15
Mercury #M	<0.1										<0.1	mg/kg	TM30/PM15
Nickel #M	5.6										<0.7	mg/kg	TM30/PM15
Selenium #M	<1										<1	mg/kg	TM30/PM15
Water Soluble Boron #M	0.6										<0.1	mg/kg	TM74/PM32
Zinc #M	67										<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene #M	<0.04										<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.14										<0.03	mg/kg	TM4/PM8
Acenaphthene #M	<0.05										<0.05	mg/kg	TM4/PM8
Fluorene #M	0.06										<0.04	mg/kg	TM4/PM8
Phenanthrene #M	0.10										<0.03	mg/kg	TM4/PM8
Anthracene #	<0.04										<0.04	mg/kg	TM4/PM8
Fluoranthene #M	0.11										<0.03	mg/kg	TM4/PM8
Pyrene #	0.16										<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	<0.06										<0.06	mg/kg	TM4/PM8
Chrysene #M	0.05										<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	0.11										<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	<0.04										<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	0.05										<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04										<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	<0.04										<0.04	mg/kg	TM4/PM8
PAH 16 Total	0.8										<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.08										<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.03										<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	99										<0	%	TM4/PM8
Methyl Tertiary Butyl Ether #M	<6										<6	ug/kg	TM15/PM10
Benzene #M	<5										<5	ug/kg	TM15/PM10
Toluene #M	<3										<3	ug/kg	TM15/PM10
Ethylbenzene #M	<3										<3	ug/kg	TM15/PM10
p/m-Xylene #M	<4										<4	ug/kg	TM15/PM10
o-Xylene #M	<4										<4	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	74										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	68										<0	%	TM15/PM10
EPH >C8-C10 #M	423										<5	mg/kg	TM5/PM8
EPH >C10-C12 #M	297										<10	mg/kg	TM5/PM8
EPH >C12-C16 #M	891										<10	mg/kg	TM5/PM8

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	867-869												
Sample ID	WS24												
Depth	3.50												
COC No / misc													
Containers	V J T												
Sample Date	21/11/2016												
Sample Type	Soil												
Batch Number	9												
Date of Receipt	23/11/2016												

Please see attached notes for all abbreviations and acronyms

		LOD/LOR	Units	Method No.
EPH >C16-C21 #M	540	<10	mg/kg	TM5/PM8
EPH >C21-C40	634	<10	mg/kg	TM5/PM8
EPH >C8-C40	2785	<30	mg/kg	TM5/PM8
TPH CWG				
Aliphatics				
>C5-C6 #M	<0.1	<0.1	mg/kg	TM36/PM12
>C6-C8 #M	2.5	<0.1	mg/kg	TM36/PM12
>C8-C10	55.4	<0.1	mg/kg	TM36/PM12
>C10-C12 #M	105.3	<0.2	mg/kg	TM5/PM16
>C12-C16 #M	258	<4	mg/kg	TM5/PM16
>C16-C21 #M	91	<7	mg/kg	TM5/PM16
>C21-C35 #M	30	<7	mg/kg	TM5/PM16
Total aliphatics C5-35	542	<19	mg/kg	TM5/TM36/PM12/PM16
Aromatics				
>C5-EC7 #	<0.1	<0.1	mg/kg	TM36/PM12
>EC7-EC8 #	<0.1	<0.1	mg/kg	TM36/PM12
>EC8-EC10 #M	0.6	<0.1	mg/kg	TM36/PM12
>EC10-EC12 #	27.1	<0.2	mg/kg	TM5/PM16
>EC12-EC16 #	103	<4	mg/kg	TM5/PM16
>EC16-EC21 #	71	<7	mg/kg	TM5/PM16
>EC21-EC35 #	96	<7	mg/kg	TM5/PM16
Total aromatics C5-35 #	298	<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	840	<38	mg/kg	TM5/TM36/PM12/PM16
Total Phenols HPLC	<0.15	<0.15	mg/kg	TM26/PM21
Natural Moisture Content	19.6	<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #M	0.7996	<0.0015	g/l	TM38/PM20
Free Cyanide	<0.5	<0.5	mg/kg	TM89/PM45
Total Cyanide #M	<0.5	<0.5	mg/kg	TM89/PM45
Fraction Organic Carbon	0.002	<0.001	None	TM21/PM24
pH #M	7.64	<0.01	pH units	TM73/PM11
Sample Type	Sand		None	PM13/PM0
Sample Colour	Medium Brown		None	PM13/PM0
Other Items	Chemical odour		None	PM13/PM0

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

SVOC Report : **Solid**

J E Sample No.	867-869												
Sample ID	WS24												
Depth	3.50										Please see attached notes for all abbreviations and acronyms		
COC No / misc													
Containers	V J T												
Sample Date	21/11/2016												
Sample Type	Soil												
Batch Number	9												
Date of Receipt	23/11/2016										LOD/LOR	Units	Method No.
SVOC MS													
Phenols													
2-Chlorophenol #M	<10										<10	ug/kg	TM16/PM8
2-Methylphenol	<10										<10	ug/kg	TM16/PM8
2-Nitrophenol	<10										<10	ug/kg	TM16/PM8
2,4-Dichlorophenol #M	<10										<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10										<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10										<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10										<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10										<10	ug/kg	TM16/PM8
4-Methylphenol	<10										<10	ug/kg	TM16/PM8
4-Nitrophenol	<10										<10	ug/kg	TM16/PM8
Pentachlorophenol	<10										<10	ug/kg	TM16/PM8
Phenol #M	<10										<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene #M	<10										<10	ug/kg	TM16/PM8
2-Methylnaphthalene #M	<10										<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	<100										<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100										<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<100										<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100										<100	ug/kg	TM16/PM8
Diethyl phthalate	<100										<100	ug/kg	TM16/PM8
Dimethyl phthalate #M	<100										<100	ug/kg	TM16/PM8
Other SVOCs													
1,2-Dichlorobenzene	<10										<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #M	<10										<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10										<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10										<10	ug/kg	TM16/PM8
2-Nitroaniline	<10										<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10										<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10										<10	ug/kg	TM16/PM8
3-Nitroaniline	<10										<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #M	<10										<10	ug/kg	TM16/PM8
4-Chloroaniline	<10										<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10										<10	ug/kg	TM16/PM8
4-Nitroaniline	<10										<10	ug/kg	TM16/PM8
Azobenzene	<10										<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10										<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10										<10	ug/kg	TM16/PM8
Carbazole	<10										<10	ug/kg	TM16/PM8
Dibenzofuran #M	<10										<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10										<10	ug/kg	TM16/PM8
Hexachlorobutadiene #M	<10										<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10										<10	ug/kg	TM16/PM8
Hexachloroethane	<10										<10	ug/kg	TM16/PM8
Isophorone #M	<10										<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #M	<10										<10	ug/kg	TM16/PM8
Nitrobenzene #M	<10										<10	ug/kg	TM16/PM8
Surrogate Recovery 2-Fluorobiphenyl	105										<0	%	TM16/PM8
Surrogate Recovery p-Terphenyl-d14	101										<0	%	TM16/PM8

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

VOC Report : **Solid**

J E Sample No.	867-869												
Sample ID	WS24												
Depth	3.50										Please see attached notes for all abbreviations and acronyms		
COC No / misc													
Containers	V J T												
Sample Date	21/11/2016												
Sample Type	Soil												
Batch Number	9												
Date of Receipt	23/11/2016										LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2										<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #M	<6										<6	ug/kg	TM15/PM10
Chloromethane #	<3										<3	ug/kg	TM15/PM10
Vinyl Chloride	<2										<2	ug/kg	TM15_A/PM10
Bromomethane	<1										<1	ug/kg	TM15/PM10
Chloroethane #M	<6										<6	ug/kg	TM15/PM10
Trichlorofluoromethane #M	<3										<3	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #M	<6										<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	<30										<30	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3										<3	ug/kg	TM15/PM10
1,1-Dichloroethane #M	<6										<6	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #M	<7										<7	ug/kg	TM15/PM10
2,2-Dichloropropane	<4										<4	ug/kg	TM15/PM10
Bromochloromethane #M	<4										<4	ug/kg	TM15/PM10
Chloroform #M	<5										<5	ug/kg	TM15/PM10
1,1,1-Trichloroethane #M	<5										<5	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3										<3	ug/kg	TM15/PM10
Carbon tetrachloride #M	<4										<4	ug/kg	TM15/PM10
1,2-Dichloroethane #M	<5										<5	ug/kg	TM15/PM10
Benzene #M	<5										<5	ug/kg	TM15/PM10
Trichloroethene (TCE) #M	<5										<5	ug/kg	TM15/PM10
1,2-Dichloropropane #M	<4										<4	ug/kg	TM15/PM10
Dibromomethane #M	<4										<4	ug/kg	TM15/PM10
Bromodichloromethane #M	<4										<4	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4										<4	ug/kg	TM15/PM10
Toluene #M	<3										<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3										<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #M	<4										<4	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3										<3	ug/kg	TM15/PM10
1,3-Dichloropropane #M	<4										<4	ug/kg	TM15/PM10
Dibromochloromethane #M	<5										<5	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3										<3	ug/kg	TM15/PM10
Chlorobenzene #M	<4										<4	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #M	<5										<5	ug/kg	TM15/PM10
Ethylbenzene #M	<3										<3	ug/kg	TM15/PM10
p/m-Xylene #M	<4										<4	ug/kg	TM15/PM10
o-Xylene #M	<4										<4	ug/kg	TM15/PM10
Styrene	<3										<3	ug/kg	TM15_A/PM10
Bromoform	<4										<4	ug/kg	TM15/PM10
Isopropylbenzene #	126										<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #M	<3										<3	ug/kg	TM15/PM10
Bromobenzene	<2										<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #M	<4										<4	ug/kg	TM15/PM10
Propylbenzene #	38										<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3										<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	<3										<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3										<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5										<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	<6										<6	ug/kg	TM15/PM10
sec-Butylbenzene #	502										<4	ug/kg	TM15/PM10
4-Isopropyltoluene #	<4										<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #M	<4										<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4										<4	ug/kg	TM15/PM10
n-Butylbenzene #	<4										<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #M	<4										<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane #	<4										<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene #	<7										<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4										<4	ug/kg	TM15/PM10
Naphthalene	<27										<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene #	<7										<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	74										<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	68										<0	%	TM15/PM10

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

Signed on behalf of Jones Environmental Laboratory:

Ryan Butterworth
Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	9	WS24	3.50	868	02/12/2016	**General Description (Bulk Analysis)**	Soil-Silt/Stones
					02/12/2016	**Asbestos Fibres**	NAD
					02/12/2016	**Asbestos Fibres (2)**	NAD
					02/12/2016	**Asbestos ACM**	NAD
					02/12/2016	**Asbestos ACM (2)**	NAD
					02/12/2016	**Asbestos Type**	NAD
					02/12/2016	**Asbestos Type (2)**	NAD
					02/12/2016	**Asbestos Level Screen**	NAD

Client Name: WYG

Matrix : Solid

Reference: A095973-2

Location: Tidal Lagoon

Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
16/16961	9	WS24	3.50	867-869	GRO	Sample holding time exceeded

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.

Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 16/16961

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
SA	ISO17025 (SANAS) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.			AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.	Yes	Yes	AD	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.	Yes		AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.	Yes	Yes	AR	Yes

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM15_A	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds, Vinyl Chloride & Styrene by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

Exova Jones Environmental

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WYG
5th Floor
Longcross Court
47 Newport Road
Cardiff
CF24 0AD

Attention :	Nicholas Bool
Date :	19th December, 2016
Your reference :	A095973-2
Our reference :	Test Report 16/16961 Batch 10
Location :	Tidal Lagoon
Date samples received :	24th November, 2016
Status :	Final report
Issue :	1

Fifty eight samples were received for analysis on 24th November, 2016 of which twenty eight were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Phil Sommerton BSc
Project Manager

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	891-893	906-908	918-920	930-932	948-950	957-959	966-968	969-971	972-974	981-983	LOD/LOR	Units	Method No.
Sample ID	BH6	BH6	TP17	TP29	TP30	TP31	WS29	WS29	WS26	WS26			
Depth	1.50	7.50	0.30	0.60	1.50	1.00	2.00	3.00	0.50	4.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	10	10	10	10	10	10	10	10	10	10			
Date of Receipt	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016			
Arsenic #M	-	27.5	-	-	16.8	112.5	12.0	-	96.9	-	<0.5	mg/kg	TM30/PM15
Arsenic	40.0	-	159.9	26.2	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Cadmium #M	-	4.9	-	-	0.5	3.2	1.0	-	1.8	-	<0.1	mg/kg	TM30/PM15
Cadmium	2.7	-	7.3	1.6	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Chromium #M	-	30.0	-	-	31.3	53.0	33.8	-	42.2	-	<0.5	mg/kg	TM30/PM15
Chromium	9.0	-	28.4	9.6	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Copper #M	-	74	-	-	75	352_{AA}	6	-	165	-	<1	mg/kg	TM30/PM15
Copper	112	-	1843_{AB}	243	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Lead #M	-	467	-	-	24	2076	11	-	1971	-	<5	mg/kg	TM30/PM15
Lead	1382	-	61746_{AC}	306	-	-	-	-	-	-	<5	mg/kg	TM30/PM62
Mercury #M	-	0.4	-	-	<0.1	0.3	<0.1	-	<0.1	-	<0.1	mg/kg	TM30/PM15
Mercury	0.2	-	1.3	0.1	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Nickel #M	-	11.1	-	-	12.9	47.8	5.9	-	37.0	-	<0.7	mg/kg	TM30/PM15
Nickel	20.9	-	40.7	33.5	-	-	-	-	-	-	<0.7	mg/kg	TM30/PM62
Selenium #M	-	<1	-	-	<1	1	<1	-	<1	-	<1	mg/kg	TM30/PM15
Selenium	3	-	<1	1	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Water Soluble Boron #M	-	0.5	-	-	0.3	2.0	0.1	-	0.5	-	<0.1	mg/kg	TM74/PM32
Water Soluble Boron	0.8	-	0.4	0.9	-	-	-	-	-	-	<0.1	mg/kg	TM74/PM61
Zinc #M	-	2364	-	-	149	3955_{AA}	339	-	2427	-	<5	mg/kg	TM30/PM15
Zinc	1046	-	6293_{AB}	1443	-	-	-	-	-	-	<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene #M	0.71_{AA}	0.15	0.11	0.31_{AA}	<0.04	1.30_{AA}	<0.04	-	0.07	-	<0.04	mg/kg	TM4/PM8
Acenaphthylene	$<0.15_{AA}$	0.89	0.05	$<0.15_{AA}$	<0.03	1.09_{AA}	<0.03	-	0.03	-	<0.03	mg/kg	TM4/PM8
Acenaphthene #M	0.30_{AA}	0.12	0.08	$<0.25_{AA}$	<0.05	1.83_{AA}	<0.05	-	0.08	-	<0.05	mg/kg	TM4/PM8
Fluorene #M	0.41_{AA}	0.47	0.06	$<0.20_{AA}$	<0.04	2.46_{AA}	<0.04	-	0.07	-	<0.04	mg/kg	TM4/PM8
Phenanthrene #M	4.16_{AA}	2.14	1.04	1.72_{AA}	0.04	18.19_{AA}	<0.03	-	1.04	-	<0.03	mg/kg	TM4/PM8
Anthracene #	1.00_{AA}	1.55	0.23	0.34_{AA}	<0.04	5.92_{AA}	<0.04	-	0.19	-	<0.04	mg/kg	TM4/PM8
Fluoranthene #M	5.47_{AA}	7.41	1.64	1.93_{AA}	<0.03	33.35_{AA}	<0.03	-	1.60	-	<0.03	mg/kg	TM4/PM8
Pyrene #	4.29_{AA}	4.48	1.39	1.52_{AA}	<0.03	24.72_{AA}	<0.03	-	1.25	-	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	3.04_{AA}	4.04	1.06	1.17_{AA}	<0.06	21.79_{AA}	<0.06	-	0.86	-	<0.06	mg/kg	TM4/PM8
Chrysene #M	3.01_{AA}	4.40	0.87	1.18_{AA}	<0.02	16.45_{AA}	<0.02	-	0.91	-	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	4.51_{AA}	5.71	1.48	1.56_{AA}	<0.07	29.14_{AA}	<0.07	-	1.41	-	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	1.91_{AA}	2.69	0.68	0.80_{AA}	<0.04	14.92_{AA}	<0.04	-	0.55	-	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	1.47_{AA}	1.76	0.54	0.40_{AA}	<0.04	10.37_{AA}	<0.04	-	0.40	-	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	0.26_{AA}	0.45	0.08	$<0.20_{AA}$	<0.04	1.72_{AA}	<0.04	-	0.06	-	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	1.36_{AA}	1.07	0.46	0.39_{AA}	<0.04	7.75_{AA}	<0.04	-	0.34	-	<0.04	mg/kg	TM4/PM8
PAH 16 Total	31.9_{AA}	37.3	9.8	11.3_{AA}	<0.6	191.0_{AA}	<0.6	-	8.9	-	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	3.25_{AA}	4.11	1.07	1.12_{AA}	<0.05	20.98_{AA}	<0.05	-	1.02	-	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	1.26_{AA}	1.60	0.41	0.44_{AA}	<0.02	8.16_{AA}	<0.02	-	0.39	-	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	97_{AA}	94	107	104_{AA}	89	124_{AA}	109	-	110	-	<0	%	TM4/PM8
Methyl Tertiary Butyl Ether #M	-	-	-	-	-	-	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Benzene #M	-	-	-	-	-	-	<5	<5	<5	<5	<5	ug/kg	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	891-893	906-908	918-920	930-932	948-950	957-959	966-968	969-971	972-974	981-983	LOD/LOR	Units	Method No.
Sample ID	BH6	BH6	TP17	TP29	TP30	TP31	WS29	WS29	WS26	WS26			
Depth	1.50	7.50	0.30	0.60	1.50	1.00	2.00	3.00	0.50	4.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	10	10	10	10	10	10	10	10	10	10			
Date of Receipt	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016			
Toluene #M	-	-	-	-	-	-	<3	<3	10	<3	<3	ug/kg	TM15/PM10
Ethylbenzene #M	-	-	-	-	-	-	<3	<3	3	<3	<3	ug/kg	TM15/PM10
p/m-Xylene #M	-	-	-	-	-	-	<4	<4	14	<4	<4	ug/kg	TM15/PM10
o-Xylene #M	-	-	-	-	-	-	<4	<4	5	<4	<4	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	-	-	-	-	-	-	102	101	95	102	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	-	-	-	-	-	-	122	126	66	122	<0	%	TM15/PM10
EPH >C8-C10 #M	60	<5	<5	<5	<5	<5	<5	-	<5	-	<5	mg/kg	TM5/PM8
EPH >C10-C12 #M	43	<10	<10	<10	<10	<10	<10	-	<10	-	<10	mg/kg	TM5/PM8
EPH >C12-C16 #M	58	<10	28	<10	<10	36	<10	-	<10	-	<10	mg/kg	TM5/PM8
EPH >C16-C21 #M	91	71	23	19	<10	272	<10	-	15	-	<10	mg/kg	TM5/PM8
EPH >C21-C40	502	231	154	133	<10	1466	<10	-	76	-	<10	mg/kg	TM5/PM8
EPH >C8-C40	754	302	205	152	<30	1774	<30	-	91	-	<30	mg/kg	TM5/PM8
TPH CWG													
Aliphatics													
>C5-C6 #M	-	-	-	-	-	-	<0.1	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>C6-C8 #M	-	-	-	-	-	-	<0.1	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>C8-C10	-	-	-	-	-	-	<0.1	<0.1	<0.1 SV	0.8	<0.1	mg/kg	TM36/PM12
>C10-C12 #M	-	-	-	-	-	-	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM16
>C12-C16 #M	-	-	-	-	-	-	<4	<4	<4	11	<4	mg/kg	TM5/PM16
>C16-C21 #M	-	-	-	-	-	-	<7	<7	<7	<7	<7	mg/kg	TM5/PM16
>C21-C35 #M	-	-	-	-	-	-	<7	<7	<7	<7	<7	mg/kg	TM5/PM16
Total aliphatics C5-35	-	-	-	-	-	-	<19	<19	<19	<19	<19	mg/kg	TM5/TM36/PM12/PM16
Aromatics													
>C5-EC7 #	-	-	-	-	-	-	<0.1	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>EC7-EC8 #	-	-	-	-	-	-	<0.1	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>EC8-EC10 #M	-	-	-	-	-	-	<0.1	<0.1	<0.1 SV	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC12 #	-	-	-	-	-	-	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM16
>EC12-EC16 #	-	-	-	-	-	-	<4	<4	<4	<4	<4	mg/kg	TM5/PM16
>EC16-EC21 #	-	-	-	-	-	-	<7	<7	9	<7	<7	mg/kg	TM5/PM16
>EC21-EC35 #	-	-	-	-	-	-	<7	<7	49	<7	<7	mg/kg	TM5/PM16
Total aromatics C5-35 #	-	-	-	-	-	-	<19	<19	58	<19	<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	-	-	-	-	-	-	<38	<38	58	<38	<38	mg/kg	TM5/TM36/PM12/PM16
Total Phenols HPLC	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	-	<0.15	-	<0.15	mg/kg	TM26/PM21
Natural Moisture Content	-	21.9	-	-	5.7	9.1	6.1	6.1	12.3	26.0	<0.1	%	PM4/PM0
Natural Moisture Content	16.3	-	26.4	24.4	-	-	-	-	-	-	<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	-	<0.3	-	<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #M	-	0.0791	-	-	0.0875	0.2329	0.0029	-	0.0296	-	<0.0015	g/l	TM38/PM20
Sulphate as SO4 (2:1 Ext)	0.1056	-	0.0143	0.1122	-	-	-	-	-	-	<0.0015	g/l	TM38/PM60

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	891-893	906-908	918-920	930-932	948-950	957-959	966-968	969-971	972-974	981-983	LOD/LOR	Units	Method No.
Sample ID	BH6	BH6	TP17	TP29	TP30	TP31	WS29	WS29	WS26	WS26			
Depth	1.50	7.50	0.30	0.60	1.50	1.00	2.00	3.00	0.50	4.00			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	10	10	10	10	10	10	10	10	10	10			
Date of Receipt	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016			
Free Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	-	<0.5	mg/kg	TM89/PM45
Total Cyanide [#M]	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5	-	<0.5	-	<0.5	mg/kg	TM89/PM45
Fraction Organic Carbon	NDP	0.021	NDP	NDP	0.028	0.046	0.002	-	0.077	-	<0.001	None	TM21/PM24
pH [#M]	7.93	8.41	7.90	9.46	9.36	8.79	8.98	-	8.35	-	<0.01	pH units	TM73/PM11
Sample Type	NDP	Sand	NDP	NDP	Sand	Loamy Sand	Sand	Sand	Loamy Sand	Sand		None	PM13/PM0
Sample Colour	NDP	Medium Brown	NDP	NDP	Light Brown	Medium Brown	Light Brown	Light Brown	Medium Brown	Dark Brown		None	PM13/PM0
Other Items	NDP	stones	NDP	NDP	stones	stones	none	NA	stones and roots	NA		None	PM13/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	987-989	999-1001	1011-1013	1014-1016	1026-1028	1029-1031	1032-1034	1035-1037	1038-1040	1041-1043	LOD/LOR	Units	Method No.
Sample ID	WS28	WS27	WS27	WS27	HP16	HP17	HP18	HP19	HP20	HP21			
Depth	1.50	0.30	3.50	4.80	0.50	0.50	0.50	0.50	0.50	0.50			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	22/11/2016	22/11/2016	22/11/2016	22/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	10	10	10	10	10	10	10	10	10	10			
Date of Receipt	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016			
Arsenic #M	13.8	394.3 AA	-	12.6	-	15.8	-	-	-	-	<0.5	mg/kg	TM30/PM15
Arsenic	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Cadmium #M	0.5	10.7	-	<0.1	-	<0.1	-	-	-	-	<0.1	mg/kg	TM30/PM15
Cadmium	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Chromium #M	32.1	59.9	-	5.8	-	23.8	-	-	-	-	<0.5	mg/kg	TM30/PM15
Chromium	-	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Copper #M	13	436 AA	-	7	-	15	-	-	-	-	<1	mg/kg	TM30/PM15
Copper	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Lead #M	11	17700 AB	-	10	-	38	-	-	-	-	<5	mg/kg	TM30/PM15
Lead	-	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62
Mercury #M	<0.1	0.1	-	<0.1	-	<0.1	-	-	-	-	<0.1	mg/kg	TM30/PM15
Mercury	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Nickel #M	6.0	50.3	-	5.6	-	9.1	-	-	-	-	<0.7	mg/kg	TM30/PM15
Nickel	-	-	-	-	-	-	-	-	-	-	<0.7	mg/kg	TM30/PM62
Selenium #M	<1	1	-	<1	-	<1	-	-	-	-	<1	mg/kg	TM30/PM15
Selenium	-	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Water Soluble Boron #M	0.1	0.3	-	1.1	-	2.1	-	-	-	-	<0.1	mg/kg	TM74/PM32
Water Soluble Boron	-	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM74/PM61
Zinc #M	129	24080 AB	-	146	-	87	-	-	-	-	<5	mg/kg	TM30/PM15
Zinc	-	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene #M	<0.04	0.35	-	<0.04	-	<0.04	-	-	-	-	<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	0.07	-	<0.03	-	<0.03	-	-	-	-	<0.03	mg/kg	TM4/PM8
Acenaphthene #M	<0.05	0.18	-	<0.05	-	<0.05	-	-	-	-	<0.05	mg/kg	TM4/PM8
Fluorene #M	<0.04	0.18	-	<0.04	-	<0.04	-	-	-	-	<0.04	mg/kg	TM4/PM8
Phenanthrene #M	<0.03	2.75	-	<0.03	-	0.08	-	-	-	-	<0.03	mg/kg	TM4/PM8
Anthracene #	<0.04	0.61	-	<0.04	-	<0.04	-	-	-	-	<0.04	mg/kg	TM4/PM8
Fluoranthene #M	<0.03	3.50	-	<0.03	-	0.19	-	-	-	-	<0.03	mg/kg	TM4/PM8
Pyrene #	<0.03	2.90	-	<0.03	-	0.16	-	-	-	-	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	<0.06	1.53	-	<0.06	-	0.13	-	-	-	-	<0.06	mg/kg	TM4/PM8
Chrysene #M	<0.02	1.66	-	<0.02	-	0.11	-	-	-	-	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	<0.07	2.62	-	<0.07	-	0.12	-	-	-	-	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	<0.04	1.29	-	<0.04	-	0.08	-	-	-	-	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	<0.04	0.79	-	<0.04	-	<0.04	-	-	-	-	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04	0.11	-	<0.04	-	<0.04	-	-	-	-	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	<0.04	0.69	-	<0.04	-	<0.04	-	-	-	-	<0.04	mg/kg	TM4/PM8
PAH 16 Total	<0.6	19.2	-	<0.6	-	0.9	-	-	-	-	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	<0.05	1.89	-	<0.05	-	0.09	-	-	-	-	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	<0.02	0.73	-	<0.02	-	0.03	-	-	-	-	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	109	107	-	86	-	106	-	-	-	-	<0	%	TM4/PM8
Methyl Tertiary Butyl Ether #M	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Benzene #M	<5	7	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	987-989	999-1001	1011-1013	1014-1016	1026-1028	1029-1031	1032-1034	1035-1037	1038-1040	1041-1043	LOD/LOR	Units	Method No.
Sample ID	WS28	WS27	WS27	WS27	HP16	HP17	HP18	HP19	HP20	HP21			
Depth	1.50	0.30	3.50	4.80	0.50	0.50	0.50	0.50	0.50	0.50			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	22/11/2016	22/11/2016	22/11/2016	22/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	10	10	10	10	10	10	10	10	10	10			
Date of Receipt	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016			
Toluene #M	<3	16	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Ethylbenzene #M	<3	6	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
p/m-Xylene #M	<4	22	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
o-Xylene #M	<4	6	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	99	92	98	103	98	100	101	102	100	101	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	117	56	118	123	116	121	118	120	120	114	<0	%	TM15/PM10
EPH >C8-C10 #M	<5	<5	-	<5	-	<5	-	-	-	-	<5	mg/kg	TM5/PM8
EPH >C10-C12 #M	<10	<10	-	<10	-	<10	-	-	-	-	<10	mg/kg	TM5/PM8
EPH >C12-C16 #M	<10	<10	-	<10	-	<10	-	-	-	-	<10	mg/kg	TM5/PM8
EPH >C16-C21 #M	<10	33	-	<10	-	<10	-	-	-	-	<10	mg/kg	TM5/PM8
EPH >C21-C40	<10	257	-	<10	-	<10	-	-	-	-	<10	mg/kg	TM5/PM8
EPH >C8-C40	<30	290	-	<30	-	<30	-	-	-	-	<30	mg/kg	TM5/PM8
TPH CWG													
Aliphatics													
>C5-C6 #M	<0.1	<1.0 AB	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C6-C8 #M	<0.1	<1.0 AB	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C8-C10	<0.1	<1.0 AB	<0.1	1.0	<0.1	<0.1	0.5	<0.1	0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C12 #M	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM16
>C12-C16 #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM16
>C16-C21 #M	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM16
>C21-C35 #M	<7	78	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM16
Total aliphatics C5-35	<19	78	<19	<19	<19	<19	<19	<19	<19	<19	<19	mg/kg	TM5/TM36/PM12/PM16
Aromatics													
>C5-EC7 #	<0.1	<1.0 AB	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC7-EC8 #	<0.1	<1.0 AB	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC8-EC10 #M	<0.1	<1.0 AB	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC12 #	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM16
>EC12-EC16 #	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	mg/kg	TM5/PM16
>EC16-EC21 #	<7	16	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM16
>EC21-EC35 #	<7	105	<7	<7	<7	<7	<7	<7	<7	<7	<7	mg/kg	TM5/PM16
Total aromatics C5-35 #	<19	121	<19	<19	<19	<19	<19	<19	<19	<19	<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	<38	199	<38	<38	<38	<38	<38	<38	<38	<38	<38	mg/kg	TM5/TM36/PM12/PM16
Total Phenols HPLC	<0.15	<0.15	-	<0.15	-	<0.15	-	-	-	-	<0.15	mg/kg	TM26/PM21
Natural Moisture Content	6.7	24.7	18.8	20.9	16.5	18.5	14.6	3.7	26.8	26.4	<0.1	%	PM4/PM0
Natural Moisture Content	-	-	-	-	-	-	-	-	-	-	<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	-	<0.3	-	<0.3	-	-	-	-	<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #M	0.0023	0.0663	-	0.6335	-	0.2158	-	-	-	-	<0.0015	g/l	TM38/PM20
Sulphate as SO4 (2:1 Ext)	-	-	-	-	-	-	-	-	-	-	<0.0015	g/l	TM38/PM60

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	987-989	999-1001	1011-1013	1014-1016	1026-1028	1029-1031	1032-1034	1035-1037	1038-1040	1041-1043	LOD/LOR	Units	Method No.
Sample ID	WS28	WS27	WS27	WS27	HP16	HP17	HP18	HP19	HP20	HP21			
Depth	1.50	0.30	3.50	4.80	0.50	0.50	0.50	0.50	0.50	0.50			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	22/11/2016	22/11/2016	22/11/2016	22/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	10	10	10	10	10	10	10	10	10	10			
Date of Receipt	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016			
Free Cyanide	<0.5	<0.5	-	<0.5	-	<0.5	-	-	-	-	<0.5	mg/kg	TM89/PM45
Total Cyanide #M	<0.5	<0.5	-	<0.5	-	<0.5	-	-	-	-	<0.5	mg/kg	TM89/PM45
Fraction Organic Carbon	0.001	0.330	-	<0.001	-	0.003	-	-	-	-	<0.001	None	TM21/PM24
pH #M	9.12	8.19	-	8.67	-	8.52	-	-	-	-	<0.01	pH units	TM73/PM11
Sample Type	Sand	Loamy Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand		None	PM13/PM0
Sample Colour	Light Brown	Dark Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Dark Grey	Dark Brown	Medium Brown	Medium Brown		None	PM13/PM0
Other Items	none	stones and clinker	NA	none	stones, shell	stones	stones, shell	stones, shell	stones, shell	stones		None	PM13/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

J E Sample No.	1044-1046	1047-1049	1050-1052	1053-1055	1056-1058	1059-1061					LOD/LOR	Units	Method No.
Sample ID	HP22	HP23	HP24	HP25	HP26	HP27							
Depth	0.50	0.50	0.50	0.50	0.50	0.50							
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T							
Sample Date	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016							
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil							
Batch Number	10	10	10	10	10	10							
Date of Receipt	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016							
Arsenic #M	-	-	-	12.9	-	12.4					<0.5	mg/kg	TM30/PM15
Arsenic	-	-	-	-	-	-					<0.5	mg/kg	TM30/PM62
Cadmium #M	-	-	-	<0.1	-	<0.1					<0.1	mg/kg	TM30/PM15
Cadmium	-	-	-	-	-	-					<0.1	mg/kg	TM30/PM62
Chromium #M	-	-	-	5.3	-	33.6					<0.5	mg/kg	TM30/PM15
Chromium	-	-	-	-	-	-					<0.5	mg/kg	TM30/PM62
Copper #M	-	-	-	4	-	7					<1	mg/kg	TM30/PM15
Copper	-	-	-	-	-	-					<1	mg/kg	TM30/PM62
Lead #M	-	-	-	14	-	13					<5	mg/kg	TM30/PM15
Lead	-	-	-	-	-	-					<5	mg/kg	TM30/PM62
Mercury #M	-	-	-	<0.1	-	<0.1					<0.1	mg/kg	TM30/PM15
Mercury	-	-	-	-	-	-					<0.1	mg/kg	TM30/PM62
Nickel #M	-	-	-	6.7	-	11.5					<0.7	mg/kg	TM30/PM15
Nickel	-	-	-	-	-	-					<0.7	mg/kg	TM30/PM62
Selenium #M	-	-	-	<1	-	<1					<1	mg/kg	TM30/PM15
Selenium	-	-	-	-	-	-					<1	mg/kg	TM30/PM62
Water Soluble Boron #M	-	-	-	0.9	-	1.4					<0.1	mg/kg	TM74/PM32
Water Soluble Boron	-	-	-	-	-	-					<0.1	mg/kg	TM74/PM61
Zinc #M	-	-	-	57	-	66					<5	mg/kg	TM30/PM15
Zinc	-	-	-	-	-	-					<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene #M	-	-	-	<0.04	-	<0.04					<0.04	mg/kg	TM4/PM8
Acenaphthylene	-	-	-	<0.03	-	<0.03					<0.03	mg/kg	TM4/PM8
Acenaphthene #M	-	-	-	<0.05	-	<0.05					<0.05	mg/kg	TM4/PM8
Fluorene #M	-	-	-	<0.04	-	<0.04					<0.04	mg/kg	TM4/PM8
Phenanthrene #M	-	-	-	<0.03	-	0.05					<0.03	mg/kg	TM4/PM8
Anthracene #	-	-	-	<0.04	-	<0.04					<0.04	mg/kg	TM4/PM8
Fluoranthene #M	-	-	-	0.04	-	0.07					<0.03	mg/kg	TM4/PM8
Pyrene #	-	-	-	<0.03	-	0.06					<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	-	-	-	<0.06	-	<0.06					<0.06	mg/kg	TM4/PM8
Chrysene #M	-	-	-	<0.02	-	0.04					<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	-	-	-	<0.07	-	<0.07					<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	-	-	-	<0.04	-	<0.04					<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	-	-	-	<0.04	-	<0.04					<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	-	-	-	<0.04	-	<0.04					<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	-	-	-	<0.04	-	<0.04					<0.04	mg/kg	TM4/PM8
PAH 16 Total	-	-	-	<0.6	-	<0.6					<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	-	-	-	<0.05	-	<0.05					<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	-	-	-	<0.02	-	<0.02					<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	-	-	-	89	-	108					<0	%	TM4/PM8
Methyl Tertiary Butyl Ether #M	<6	<6	<6	<6	<6	<6					<6	ug/kg	TM15/PM10
Benzene #M	<5	<5	<5	<5	<5	<5					<5	ug/kg	TM15/PM10

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1044-1046	1047-1049	1050-1052	1053-1055	1056-1058	1059-1061					LOD/LOR	Units	Method No.
Sample ID	HP22	HP23	HP24	HP25	HP26	HP27							
Depth	0.50	0.50	0.50	0.50	0.50	0.50							
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T							
Sample Date	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016							
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil							
Batch Number	10	10	10	10	10	10							
Date of Receipt	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016							
Toluene #M	<3	<3	<3	<3	<3	<3					<3	ug/kg	TM15/PM10
Ethylbenzene #M	<3	<3	<3	<3	<3	<3					<3	ug/kg	TM15/PM10
p/m-Xylene #M	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
o-Xylene #M	<4	<4	<4	<4	<4	<4					<4	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	101	101	101	101	103	101					<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	120	125	115	119	120	118					<0	%	TM15/PM10
EPH >C8-C10 #M	-	-	-	<5	-	<5					<5	mg/kg	TM5/PM8
EPH >C10-C12 #M	-	-	-	<10	-	<10					<10	mg/kg	TM5/PM8
EPH >C12-C16 #M	-	-	-	<10	-	<10					<10	mg/kg	TM5/PM8
EPH >C16-C21 #M	-	-	-	<10	-	<10					<10	mg/kg	TM5/PM8
EPH >C21-C40	-	-	-	<10	-	<10					<10	mg/kg	TM5/PM8
EPH >C8-C40	-	-	-	<30	-	<30					<30	mg/kg	TM5/PM8
TPH CWG													
Aliphatics													
>C5-C6 #M	<0.1	<0.1 SV	<0.1	<0.1	<0.1	<0.1					<0.1	mg/kg	TM36/PM12
>C6-C8 #M	<0.1	<0.1 SV	<0.1	<0.1	<0.1	<0.1					<0.1	mg/kg	TM36/PM12
>C8-C10	<0.1	<0.1 SV	<0.1	<0.1	<0.1	<0.1					<0.1	mg/kg	TM36/PM12
>C10-C12 #M	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2					<0.2	mg/kg	TM5/PM16
>C12-C16 #M	<4	<4	<4	<4	<4	<4					<4	mg/kg	TM5/PM16
>C16-C21 #M	<7	<7	<7	<7	<7	<7					<7	mg/kg	TM5/PM16
>C21-C35 #M	<7	<7	<7	<7	<7	<7					<7	mg/kg	TM5/PM16
Total aliphatics C5-35	<19	<19	<19	<19	<19	<19					<19	mg/kg	TM5/TM36/PM12/PM16
Aromatics													
>C5-EC7 #	<0.1	<0.1 SV	<0.1	<0.1	<0.1	<0.1					<0.1	mg/kg	TM36/PM12
>EC7-EC8 #	<0.1	<0.1 SV	<0.1	<0.1	<0.1	<0.1					<0.1	mg/kg	TM36/PM12
>EC8-EC10 #M	<0.1	<0.1 SV	<0.1	<0.1	<0.1	<0.1					<0.1	mg/kg	TM36/PM12
>EC10-EC12 #	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2					<0.2	mg/kg	TM5/PM16
>EC12-EC16 #	<4	<4	<4	<4	<4	<4					<4	mg/kg	TM5/PM16
>EC16-EC21 #	<7	<7	<7	<7	<7	<7					<7	mg/kg	TM5/PM16
>EC21-EC35 #	<7	<7	<7	<7	<7	<7					<7	mg/kg	TM5/PM16
Total aromatics C5-35 #	<19	<19	<19	<19	<19	<19					<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	<38	<38	<38	<38	<38	<38					<38	mg/kg	TM5/TM36/PM12/PM16
Total Phenols HPLC	-	-	-	<0.15	-	<0.15					<0.15	mg/kg	TM26/PM21
Natural Moisture Content	24.3	21.7	25.0	22.6	20.9	18.8					<0.1	%	PM4/PM0
Natural Moisture Content	-	-	-	-	-	-					<0.1	%	PM4/PM0
Hexavalent Chromium #	-	-	-	<0.3	-	<0.3					<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #M	-	-	-	0.1323	-	0.0900					<0.0015	g/l	TM38/PM20
Sulphate as SO4 (2:1 Ext)	-	-	-	-	-	-					<0.0015	g/l	TM38/PM60

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

Please see attached notes for all abbreviations and acronyms

J E Sample No.	1044-1046	1047-1049	1050-1052	1053-1055	1056-1058	1059-1061					LOD/LOR	Units	Method No.
Sample ID	HP22	HP23	HP24	HP25	HP26	HP27							
Depth	0.50	0.50	0.50	0.50	0.50	0.50							
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T							
Sample Date	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016							
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil							
Batch Number	10	10	10	10	10	10							
Date of Receipt	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016							
Free Cyanide	-	-	-	<0.5	-	<0.5					<0.5	mg/kg	TM89/PM45
Total Cyanide #M	-	-	-	<0.5	-	<0.5					<0.5	mg/kg	TM89/PM45
Fraction Organic Carbon	-	-	-	0.002	-	0.008					<0.001	None	TM21/PM24
pH #M	-	-	-	8.40	-	8.54					<0.01	pH units	TM73/PM11
Sample Type	Sand	Sand	Sand	Sand	Sand	Sand						None	PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown						None	PM13/PM0
Other Items	stones	stones	NA	none	stones	stones						None	PM13/PM0

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, $HN=HN0_3$

J E Sample No.	1017-1021	1022-1025											
Sample ID	SW1	SW2											
Depth	0.50	0.00									Please see attached notes for all abbreviations and acronyms		
COC No / misc													
Containers	V P G	V P G											
Sample Date	23/11/2016	23/11/2016											
Sample Type	Surface Water	Surface Water											
Batch Number	10	10									LOD/LOR	Units	Method No.
Date of Receipt	24/11/2016	24/11/2016											
Dissolved Arsenic #	3.0	10.4									<0.9	ug/l	TM30/PM14
Dissolved Boron	2005	1100									<12	ug/l	TM30/PM14
Dissolved Cadmium #	<0.5	<0.5									<0.5	ug/l	TM30/PM14
Total Dissolved Chromium #	<0.2	0.2									<0.2	ug/l	TM30/PM14
Dissolved Copper #	<3	<3									<3	ug/l	TM30/PM14
Dissolved Lead #	<0.4	<0.4									<0.4	ug/l	TM30/PM14
Dissolved Nickel #	<0.2	<0.2									<0.2	ug/l	TM30/PM14
Dissolved Selenium #	<1.2	<1.2									<1.2	ug/l	TM30/PM14
Dissolved Zinc #	<3	<3									<3	ug/l	TM30/PM14
Mercury Dissolved by CVAF #	<0.01	<0.01									<0.01	ug/l	TM61/PM38
PAH MS													
Naphthalene	<10.0 AD	<0.1 B									<0.1	ug/l	TM4/PM30
Acenaphthylene	<1.00 AD	0.09									<0.01	ug/l	TM4/PM30
Acenaphthene	<1.00 AD	0.07									<0.01	ug/l	TM4/PM30
Fluorene	<1.00 AD	<0.01									<0.01	ug/l	TM4/PM30
Phenanthrene	<1.00 AD	0.03									<0.01	ug/l	TM4/PM30
Anthracene	<1.00 AD	0.05									<0.01	ug/l	TM4/PM30
Fluoranthene	<1.00 AD	0.07									<0.01	ug/l	TM4/PM30
Pyrene	<1.00 AD	0.05									<0.01	ug/l	TM4/PM30
Benzo(a)anthracene	<1.00 AD	0.05									<0.01	ug/l	TM4/PM30
Chrysene	<1.00 AD	0.05									<0.01	ug/l	TM4/PM30
Benzo(bk)fluoranthene	<1.00 AD	0.04									<0.01	ug/l	TM4/PM30
Benzo(a)pyrene	<1.00 AD	0.02									<0.01	ug/l	TM4/PM30
Indeno(123cd)pyrene	<1.00 AD	<0.01									<0.01	ug/l	TM4/PM30
Dibenzo(ah)anthracene	<1.00 AD	<0.01									<0.01	ug/l	TM4/PM30
Benzo(ghi)perylene	<1.00 AD	<0.01									<0.01	ug/l	TM4/PM30
PAH 16 Total	<10.0 AD	0.5									<0.1	ug/l	TM4/PM30
Benzo(b)fluoranthene	<1.00 AD	0.03									<0.01	ug/l	TM4/PM30
Benzo(k)fluoranthene	<1.00 AD	0.01									<0.01	ug/l	TM4/PM30
PAH Surrogate % Recovery	92 AD	81									<0	%	TM4/PM30
EPH >C10-C12 #	<10	280									<10	ug/l	TM5/PM30
EPH >C12-C16 #	420	330									<10	ug/l	TM5/PM30
EPH >C16-C21 #	790	60									<10	ug/l	TM5/PM30
EPH >C21-C28	<10	<10									<10	ug/l	TM5/PM30
EPH >C28-C35	<10	<10									<10	ug/l	TM5/PM30
EPH >C35-C40 #	<10	<10									<10	ug/l	TM5/PM30
EPH >C10-C40 #	1210	670									<10	ug/l	TM5/PM30
Phenol	<0.5	<0.5									<0.5	ug/l	TM26/PM0
Sulphate #	696.8	419.1									<0.5	mg/l	TM38/PM0
Chloride #	10742.6	4834.4									<0.3	mg/l	TM38/PM0

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, $HN=HN0_3$

Please see attached notes for all abbreviations and acronyms

J E Sample No.	1017-1021	1022-1025									LOD/LOR	Units	Method No.
Sample ID	SW1	SW2											
Depth	0.50	0.00											
COC No / misc													
Containers	V P G	V P G											
Sample Date	23/11/2016	23/11/2016											
Sample Type	Surface Water	Surface Water											
Batch Number	10	10											
Date of Receipt	24/11/2016	24/11/2016											
Total Cyanide	5	4									<1	ug/l	TM89/PM0
Ammoniacal Nitrogen as N #	2.05	0.56									<0.03	mg/l	TM38/PM0
Hexavalent Chromium	<0.006	<0.006									<0.006	mg/l	TM38/PM0
Total Alkalinity as CaCO3 #	1186	636									<1	mg/l	TM75/PM0
pH #	7.61	8.36									<0.01	pH units	TM73/PM0

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

SVOC Report : **Solid**

J E Sample No.	966-968	969-971	972-974	981-983	987-989	999-1001	1011-1013	1014-1016	1026-1028	1029-1031			
Sample ID	WS29	WS29	WS26	WS26	WS28	WS27	WS27	WS27	HP16	HP17			
Depth	2.00	3.00	0.50	4.00	1.50	0.30	3.50	4.80	0.50	0.50	Please see attached notes for all abbreviations and acronyms		
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	23/11/2016	23/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	10	10	10	10	10	10	10	10	10	10			
Date of Receipt	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	LOD/LOR	Units	Method No.
SVOC MS													
Phenols													
2-Chlorophenol #M	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Methylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dichlorophenol #M	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Methylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Phenol #M	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene #M	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Methylnaphthalene #M	<10	<10	72	14	<10	274	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Naphthalene	-	<10	-	<10	-	-	<10	-	<10	-	<10	ug/kg	TM16/PM8
Acenaphthylene	-	<10	-	<10	-	-	<10	-	<10	-	<10	ug/kg	TM16/PM8
Acenaphthene	-	<10	-	<10	-	-	<10	-	<10	-	<10	ug/kg	TM16/PM8
Fluorene	-	<10	-	21	-	-	<10	-	<10	-	<10	ug/kg	TM16/PM8
Phenanthrene #M	-	<10	-	13	-	-	<10	-	<10	-	<10	ug/kg	TM16/PM8
Anthracene	-	<10	-	<10	-	-	<10	-	<10	-	<10	ug/kg	TM16/PM8
Fluoranthene #M	-	<10	-	<10	-	-	<10	-	<10	-	<10	ug/kg	TM16/PM8
Pyrene #M	-	<10	-	<10	-	-	<10	-	<10	-	<10	ug/kg	TM16/PM8
Benzo(a)anthracene	-	<10	-	40	-	-	<10	-	<10	-	<10	ug/kg	TM16/PM8
Chrysene	-	<10	-	42	-	-	<10	-	<10	-	<10	ug/kg	TM16/PM8
Benzo(bk)fluoranthene	-	<10	-	35	-	-	<10	-	<10	-	<10	ug/kg	TM16/PM8
Benzo(a)pyrene	-	<10	-	37	-	-	<10	-	<10	-	<10	ug/kg	TM16/PM8
Indeno(123cd)pyrene	-	<10	-	<10	-	-	<10	-	<10	-	<10	ug/kg	TM16/PM8
Dibenzo(ah)anthracene	-	<10	-	<10	-	-	<10	-	<10	-	<10	ug/kg	TM16/PM8
Benzo(ghi)perylene	-	<10	-	<10	-	-	<10	-	<10	-	<10	ug/kg	TM16/PM8
Benzo(b)fluoranthene	-	<10	-	25	-	-	<10	-	<10	-	<10	ug/kg	TM16/PM8
Benzo(k)fluoranthene	-	<10	-	<10	-	-	<10	-	<10	-	<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Dimethyl phthalate #M	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

SVOC Report : **Solid**

J E Sample No.	966-968	969-971	972-974	981-983	987-989	999-1001	1011-1013	1014-1016	1026-1028	1029-1031			
Sample ID	WS29	WS29	WS26	WS26	WS28	WS27	WS27	WS27	HP16	HP17			
Depth	2.00	3.00	0.50	4.00	1.50	0.30	3.50	4.80	0.50	0.50	Please see attached notes for all abbreviations and acronyms		
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	23/11/2016	23/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	10	10	10	10	10	10	10	10	10	10	LOD/LOR	Units	Method No.
Date of Receipt	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016			
SVOC MS													
Other SVOCs													
1,2-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #M	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #M	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Azobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Carbazole	<10	<10	104	<10	<10	449	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Dibenzofuran #M	<10	<10	53	<10	<10	266	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorobutadiene #M	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Isophorone #M	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #M	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Nitrobenzene #M	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

SVOC Report : **Solid**

J E Sample No.	1032-1034	1035-1037	1038-1040	1041-1043	1044-1046	1047-1049	1050-1052	1053-1055	1056-1058	1059-1061			
Sample ID	HP18	HP19	HP20	HP21	HP22	HP23	HP24	HP25	HP26	HP27			
Depth	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	Please see attached notes for all abbreviations and acronyms		
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	10	10	10	10	10	10	10	10	10	10			
Date of Receipt	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	LOD/LOR	Units	Method No.
SVOC MS													
Phenols													
2-Chlorophenol #M	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Methylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dichlorophenol #M	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Methylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Phenol #M	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene #M	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Methylnaphthalene #M	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Naphthalene	<10	<10	<10	<10	<10	<10	<10	-	<10	-	<10	ug/kg	TM16/PM8
Acenaphthylene	<10	<10	<10	<10	<10	<10	<10	-	<10	-	<10	ug/kg	TM16/PM8
Acenaphthene	<10	<10	<10	<10	<10	<10	<10	-	<10	-	<10	ug/kg	TM16/PM8
Fluorene	<10	<10	<10	<10	<10	<10	<10	-	<10	-	<10	ug/kg	TM16/PM8
Phenanthrene #M	<10	<10	<10	<10	<10	<10	<10	-	<10	-	<10	ug/kg	TM16/PM8
Anthracene	<10	<10	<10	<10	<10	<10	<10	-	<10	-	<10	ug/kg	TM16/PM8
Fluoranthene #M	<10	<10	<10	<10	<10	<10	<10	-	<10	-	<10	ug/kg	TM16/PM8
Pyrene #M	<10	<10	<10	<10	<10	<10	<10	-	<10	-	<10	ug/kg	TM16/PM8
Benzo(a)anthracene	<10	<10	<10	<10	<10	<10	<10	-	<10	-	<10	ug/kg	TM16/PM8
Chrysene	<10	<10	<10	<10	<10	<10	<10	-	<10	-	<10	ug/kg	TM16/PM8
Benzo(bk)fluoranthene	<10	<10	<10	<10	<10	<10	<10	-	<10	-	<10	ug/kg	TM16/PM8
Benzo(a)pyrene	<10	<10	<10	<10	<10	<10	<10	-	<10	-	<10	ug/kg	TM16/PM8
Indeno(123cd)pyrene	<10	<10	<10	<10	<10	<10	<10	-	<10	-	<10	ug/kg	TM16/PM8
Dibenzo(ah)anthracene	<10	<10	<10	<10	<10	<10	<10	-	<10	-	<10	ug/kg	TM16/PM8
Benzo(ghi)perylene	<10	<10	<10	<10	<10	<10	<10	-	<10	-	<10	ug/kg	TM16/PM8
Benzo(b)fluoranthene	<10	<10	<10	<10	<10	<10	<10	-	<10	-	<10	ug/kg	TM16/PM8
Benzo(k)fluoranthene	<10	<10	<10	<10	<10	<10	<10	-	<10	-	<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8
Dimethyl phthalate #M	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	ug/kg	TM16/PM8

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

SVOC Report : **Solid**

J E Sample No.	1032-1034	1035-1037	1038-1040	1041-1043	1044-1046	1047-1049	1050-1052	1053-1055	1056-1058	1059-1061			
Sample ID	HP18	HP19	HP20	HP21	HP22	HP23	HP24	HP25	HP26	HP27			
Depth	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	Please see attached notes for all abbreviations and acronyms		
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	10	10	10	10	10	10	10	10	10	10	LOD/LOR	Units	Method No.
Date of Receipt	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016			
SVOC MS													
Other SVOCs													
1,2-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #M	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #M	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Azobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Carbazole	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Dibenzofuran #M	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorobutadiene #M	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Isophorone #M	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #M	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8
Nitrobenzene #M	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	ug/kg	TM16/PM8

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

VOC Report : **Solid**

J E Sample No.	966-968	969-971	972-974	981-983	987-989	999-1001	1011-1013	1014-1016	1026-1028	1029-1031	LOD/LOR	Units	Method No.
Sample ID	WS29	WS29	WS26	WS26	WS28	WS27	WS27	WS27	HP16	HP17			
Depth	2.00	3.00	0.50	4.00	1.50	0.30	3.50	4.80	0.50	0.50			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	22/11/2016	23/11/2016	23/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	10	10	10	10	10	10	10	10	10	10			
Date of Receipt	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016			
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #M	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Chloromethane #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/kg	TM15/PM10
Chloroethane #M	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Trichlorofluoromethane #M	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #M	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	<30	<30	339	<30	<30	247	<30	<30	<30	<30	<30	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloroethane #M	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #M	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Bromochloromethane #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Chloroform #M	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,1,1-Trichloroethane #M	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Carbon tetrachloride #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichloroethane #M	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
Benzene #M	<5	<5	<5	<5	<5	7	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
Trichloroethene (TCE) #M	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2-Dichloropropane #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Dibromomethane #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Bromodichloromethane #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Toluene #M	<3	<3	10	<3	<3	16	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3-Dichloropropane #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Dibromochloromethane #M	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Chlorobenzene #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #M	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
Ethylbenzene #M	<3	<3	3	<3	<3	6	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
p/m-Xylene #M	<4	<4	14	<4	<4	22	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
o-Xylene #M	<4	<4	5	<4	<4	6	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Styrene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15_A/PM10
Bromoform	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Isopropylbenzene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #M	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Propylbenzene #	<4	<4	<4	<4	<4	<4	<4	<4	8	<4	<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	<6	<6	<6	<6	<6	37	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
sec-Butylbenzene #	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
4-Isopropyltoluene #	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
n-Butylbenzene #	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane #	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene #	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene #	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	102	101	95	102	99	92	98	103	98	100	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	122	126	66	122	117	56	118	123	116	121	<0	%	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

VOC Report : **Solid**

J E Sample No.	1032-1034	1035-1037	1038-1040	1041-1043	1044-1046	1047-1049	1050-1052	1053-1055	1056-1058	1059-1061			
Sample ID	HP18	HP19	HP20	HP21	HP22	HP23	HP24	HP25	HP26	HP27			
Depth	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	Please see attached notes for all abbreviations and acronyms		
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	10	10	10	10	10	10	10	10	10	10			
Date of Receipt	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #M	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Chloromethane #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	ug/kg	TM15/PM10
Chloroethane #M	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Trichlorofluoromethane #M	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #M	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1-Dichloroethane #M	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #M	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Bromochloromethane #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Chloroform #M	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,1,1-Trichloroethane #M	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Carbon tetrachloride #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichloroethane #M	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
Benzene #M	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
Trichloroethene (TCE) #M	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2-Dichloropropane #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Dibromomethane #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Bromodichloromethane #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Toluene #M	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3-Dichloropropane #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Dibromochloromethane #M	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Chlorobenzene #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #M	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
Ethylbenzene #M	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
p/m-Xylene #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
o-Xylene #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Styrene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15_A/PM10
Bromoform	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Isopropylbenzene #	<3	<3	5	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #M	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
Propylbenzene #	<4	<4	15	6	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	ug/kg	TM15/PM10
sec-Butylbenzene #	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
4-Isopropyltoluene #	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
n-Butylbenzene #	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #M	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane #	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene #	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene #	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	101	102	100	101	101	101	101	101	103	101	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	118	120	120	114	120	125	115	119	120	118	<0	%	TM15/PM10

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

Signed on behalf of Jones Environmental Laboratory:



Ryan Butterworth
Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	10	BH6	1.50	892	02/12/2016	**General Description (Bulk Analysis)**	soil-stones
					02/12/2016	**Asbestos Fibres**	Fibre Bundles
					02/12/2016	**Asbestos Fibres (2)**	Free Fibres
					02/12/2016	**Asbestos ACM**	NAD
					02/12/2016	**Asbestos ACM (2)**	NAD
					02/12/2016	**Asbestos Type**	Chrysotile
					02/12/2016	**Asbestos Type (2)**	Amosite
					02/12/2016	**Asbestos Level Screen**	<0.1%
					19/12/2016	**Asbestos Gravimetric Quantification**	<0.001 (mass %)
					19/12/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					19/12/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)
16/16961	10	BH6	7.50	907	02/12/2016	**General Description (Bulk Analysis)**	sand-stones
					02/12/2016	**Asbestos Fibres**	NAD
					02/12/2016	**Asbestos Fibres (2)**	NAD
					02/12/2016	**Asbestos ACM**	NAD
					02/12/2016	**Asbestos ACM (2)**	NAD
					02/12/2016	**Asbestos Type**	NAD
					02/12/2016	**Asbestos Type (2)**	NAD
					02/12/2016	**Asbestos Level Screen**	NAD
16/16961	10	TP17	0.30	919	02/12/2016	**General Description (Bulk Analysis)**	soil-stones
					02/12/2016	**Asbestos Fibres**	Fibre Bundles
					02/12/2016	**Asbestos ACM**	NAD
					02/12/2016	**Asbestos Type**	Amosite
					02/12/2016	**Asbestos Level Screen**	<0.1%
					19/12/2016	**Asbestos Gravimetric Quantification**	<0.001 (mass %)
					19/12/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					19/12/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)
16/16961	10	TP29	0.60	931	02/12/2016	**General Description (Bulk Analysis)**	soil-stones
					02/12/2016	**Asbestos Fibres**	Fibre Bundles
					02/12/2016	**Asbestos ACM**	NAD
					02/12/2016	**Asbestos Type**	Chrysotile
					02/12/2016	**Asbestos Level Screen**	<0.1%
					19/12/2016	**Asbestos Gravimetric Quantification**	<0.001 (mass %)
					19/12/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					19/12/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	10	TP30	1.50	949	02/12/2016	**General Description (Bulk Analysis)**	soil/stones
					02/12/2016	**Asbestos Fibres**	NAD
					02/12/2016	**Asbestos Fibres (2)**	NAD
					02/12/2016	**Asbestos ACM**	NAD
					02/12/2016	**Asbestos ACM (2)**	NAD
					02/12/2016	**Asbestos Type**	NAD
					02/12/2016	**Asbestos Type (2)**	NAD
					02/12/2016	**Asbestos Level Screen**	NAD
16/16961	10	TP31	1.00	958	02/12/2016	**General Description (Bulk Analysis)**	soil/stones
					02/12/2016	**Asbestos Fibres**	NAD
					02/12/2016	**Asbestos Fibres (2)**	NAD
					02/12/2016	**Asbestos ACM**	NAD
					02/12/2016	**Asbestos ACM (2)**	NAD
					02/12/2016	**Asbestos Type**	NAD
					02/12/2016	**Asbestos Type (2)**	NAD
					02/12/2016	**Asbestos Level Screen**	NAD
16/16961	10	WS29	2.00	967	02/12/2016	**General Description (Bulk Analysis)**	soil/stones
					02/12/2016	**Asbestos Fibres**	NAD
					02/12/2016	**Asbestos Fibres (2)**	NAD
					02/12/2016	**Asbestos ACM**	NAD
					02/12/2016	**Asbestos ACM (2)**	NAD
					02/12/2016	**Asbestos Type**	NAD
					02/12/2016	**Asbestos Type (2)**	NAD
					02/12/2016	**Asbestos Level Screen**	NAD
16/16961	10	WS26	0.50	973	02/12/2016	**General Description (Bulk Analysis)**	soil-stones
					02/12/2016	**Asbestos Fibres**	NAD
					02/12/2016	**Asbestos Fibres (2)**	NAD
					02/12/2016	**Asbestos ACM**	NAD
					02/12/2016	**Asbestos ACM (2)**	NAD
					02/12/2016	**Asbestos Type**	NAD
					02/12/2016	**Asbestos Type (2)**	NAD
					02/12/2016	**Asbestos Level Screen**	NAD
16/16961	10	WS28	1.50	988	02/12/2016	**General Description (Bulk Analysis)**	sand-stones
					02/12/2016	**Asbestos Fibres**	NAD
					02/12/2016	**Asbestos Fibres (2)**	NAD
					02/12/2016	**Asbestos ACM**	NAD
					02/12/2016	**Asbestos ACM (2)**	NAD
					02/12/2016	**Asbestos Type**	NAD
					02/12/2016	**Asbestos Type (2)**	NAD
					02/12/2016	**Asbestos Level Screen**	NAD
16/16961	10	WS27	0.30	1000	02/12/2016	**General Description (Bulk Analysis)**	soil-stones
					02/12/2016	**Asbestos Fibres**	NAD
					02/12/2016	**Asbestos Fibres (2)**	NAD
					02/12/2016	**Asbestos ACM**	NAD
					02/12/2016	**Asbestos ACM (2)**	NAD
					02/12/2016	**Asbestos Type**	NAD
					02/12/2016	**Asbestos Type (2)**	NAD
					02/12/2016	**Asbestos Level Screen**	NAD

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	10	WS27	4.80	1015	02/12/2016	**General Description (Bulk Analysis)**	sand-stones
					02/12/2016	**Asbestos Fibres**	NAD
					02/12/2016	**Asbestos Fibres (2)**	NAD
					02/12/2016	**Asbestos ACM**	NAD
					02/12/2016	**Asbestos ACM (2)**	NAD
					02/12/2016	**Asbestos Type**	NAD
					02/12/2016	**Asbestos Type (2)**	NAD
					02/12/2016	**Asbestos Level Screen**	NAD
16/16961	10	HP17	0.50	1030	02/12/2016	**General Description (Bulk Analysis)**	Sand/Stones
					02/12/2016	**Asbestos Fibres**	NAD
					02/12/2016	**Asbestos Fibres (2)**	NAD
					02/12/2016	**Asbestos ACM**	NAD
					02/12/2016	**Asbestos ACM (2)**	NAD
					02/12/2016	**Asbestos Type**	NAD
					02/12/2016	**Asbestos Type (2)**	NAD
					02/12/2016	**Asbestos Level Screen**	NAD
16/16961	10	HP25	0.50	1054	02/12/2016	**General Description (Bulk Analysis)**	Sand/Stones
					02/12/2016	**Asbestos Fibres**	NAD
					02/12/2016	**Asbestos Fibres (2)**	NAD
					02/12/2016	**Asbestos ACM**	NAD
					02/12/2016	**Asbestos ACM (2)**	NAD
					02/12/2016	**Asbestos Type**	NAD
					02/12/2016	**Asbestos Type (2)**	NAD
					02/12/2016	**Asbestos Level Screen**	NAD
16/16961	10	HP27	0.50	1060	02/12/2016	**General Description (Bulk Analysis)**	Sand/Stones
					02/12/2016	**Asbestos Fibres**	NAD
					02/12/2016	**Asbestos Fibres (2)**	NAD
					02/12/2016	**Asbestos ACM**	NAD
					02/12/2016	**Asbestos ACM (2)**	NAD
					02/12/2016	**Asbestos Type**	NAD
					02/12/2016	**Asbestos Type (2)**	NAD
					02/12/2016	**Asbestos Level Screen**	NAD

Client Name: WYG **Matrix : Solid**
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	NDP Reason
16/16961	10	BH6	1.50	891-893	Asbestos detected in sample
16/16961	10	TP17	0.30	918-920	Asbestos detected in sample
16/16961	10	TP29	0.60	930-932	Asbestos detected in sample

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
No deviating sample report results for job 16/16961						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.
Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 16/16961

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
SA	ISO17025 (SANAS) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x5 Dilution
AB	x10 Dilution
AC	x20 Dilution
AD	x100 Dilution

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.				
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM30	Water samples are extracted with solvent using a magnetic stirrer to create a vortex.	Yes			

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM0	No preparation is required.				
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.			AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM14	Analysis of waters and leachates for metals by ICP OES. Samples are filtered for dissolved metals and acidified if required.				
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM14	Analysis of waters and leachates for metals by ICP OES. Samples are filtered for dissolved metals and acidified if required.	Yes			
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM0	No preparation is required.				
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM0	No preparation is required.	Yes			
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.	Yes	Yes	AD	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM60	As received solid samples are extracted with deionised water in a 2:1 ratio of water to solid.			AR	Yes
TM61	Modified US EPA methods 245.7 and 200.7. Determination of Mercury by Cold Vapour Atomic Fluorescence.	PM38	Samples are brominated to reduce all mercury compounds to Mercury (II) which is analysed using method TM061.	Yes			
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM0	No preparation is required.	Yes			

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM61	As received solid samples are extracted with hot water in a 20:1 ratio of water to soil ready for analysis by ICP.			AR	Yes
TM75	Modified US EPA method 310.1. Determination of Alkalinity by Metrohm automated titration analyser.	PM0	No preparation is required.	Yes			
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM0	No preparation is required.				
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.	Yes	Yes	AR	Yes
TM15_A	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds, Vinyl Chloride & Styrene by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

Exova Jones Environmental

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WYG
5th Floor
Longcross Court
47 Newport Road
Cardiff
CF24 0AD

Attention :	Nicholas Bool
Date :	16th December, 2016
Your reference :	A095973-2
Our reference :	Test Report 16/16961 Batch 11
Location :	Tidal Lagoon
Date samples received :	26th November, 2016
Status :	Final report
Issue :	1

Twenty nine samples were received for analysis on 26th November, 2016 of which fourteen were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Phil Sommerton BSc
Project Manager

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1063-1065	1072-1074	1084-1086	1087-1089	1093-1095	1096-1098	1099-1101	1108-1110	1114-1116	1120-1122	LOD/LOR	Units	Method No.
Sample ID	WS34	WS34	WS33	WS33	WS33	WS33	WS2	WS2	BH12	BH12			
Depth	0.4	3.0	1.2	2.0	3.5	4.5	0.7	4.5	0.3	2.6			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	25/11/2016	25/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	11	11	11	11	11	11	11	11	11	11			
Date of Receipt	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016			
Arsenic #M	-	11.8	14.5	15.2	-	-	14.4	12.9	113.2	83.0	<0.5	mg/kg	TM30/PM15
Arsenic	188.2	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Cadmium #M	-	0.9	2.4	0.8	-	-	1.0	0.1	1.8	2.6	<0.1	mg/kg	TM30/PM15
Cadmium	3.2	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Chromium #M	-	5.3	4.6	4.5	-	-	31.2	38.1	55.9	40.5	<0.5	mg/kg	TM30/PM15
Chromium	11.7	-	-	-	-	-	-	-	-	-	<0.5	mg/kg	TM30/PM62
Copper #M	-	17	13	20	-	-	40	7	924$_{AB}$	184	<1	mg/kg	TM30/PM15
Copper	203	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Lead #M	-	12	34	19	-	-	35	8	968	697	<5	mg/kg	TM30/PM15
Lead	1340	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62
Mercury #M	-	<0.1	<0.1	<0.1	-	-	<0.1	<0.1	0.2	<0.1	<0.1	mg/kg	TM30/PM15
Mercury	0.1	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM30/PM62
Nickel #M	-	5.6	5.1	5.3	-	-	19.1	5.3	40.5	11.9	<0.7	mg/kg	TM30/PM15
Nickel	21.4	-	-	-	-	-	-	-	-	-	<0.7	mg/kg	TM30/PM62
Selenium #M	-	<1	<1	<1	-	-	<1	<1	<1	<1	<1	mg/kg	TM30/PM15
Selenium	<1	-	-	-	-	-	-	-	-	-	<1	mg/kg	TM30/PM62
Water Soluble Boron #M	-	0.1	<0.1	0.1	-	-	0.4	0.1	0.8	0.3	<0.1	mg/kg	TM74/PM32
Water Soluble Boron	0.2	-	-	-	-	-	-	-	-	-	<0.1	mg/kg	TM74/PM61
Zinc #M	-	421	708	448	-	-	338	24	1858	1905	<5	mg/kg	TM30/PM15
Zinc	2875$_{AA}$	-	-	-	-	-	-	-	-	-	<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene #M	0.10	<0.04	<0.04	<0.04	-	-	0.15	<0.04	0.30$_{AA}$	0.06	<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.04	<0.03	<0.03	<0.03	-	-	<0.03	<0.03	<0.15$_{AA}$	<0.03	<0.03	mg/kg	TM4/PM8
Acenaphthene #M	0.08	<0.05	<0.05	<0.05	-	-	<0.05	<0.05	<0.25$_{AA}$	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene #M	0.06	<0.04	<0.04	<0.04	-	-	<0.04	<0.04	<0.20$_{AA}$	<0.04	<0.04	mg/kg	TM4/PM8
Phenanthrene #M	0.77	<0.03	<0.03	<0.03	-	-	0.39	<0.03	0.49$_{AA}$	0.33	<0.03	mg/kg	TM4/PM8
Anthracene #	0.17	<0.04	<0.04	<0.04	-	-	0.08	<0.04	<0.20$_{AA}$	0.07	<0.04	mg/kg	TM4/PM8
Fluoranthene #M	1.98	<0.03	<0.03	<0.03	-	-	0.58	<0.03	0.59$_{AA}$	0.29	<0.03	mg/kg	TM4/PM8
Pyrene #	1.58	<0.03	<0.03	<0.03	-	-	0.51	<0.03	0.51$_{AA}$	0.23	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	1.20	<0.06	<0.06	<0.06	-	-	0.27	<0.06	0.37$_{AA}$	0.12	<0.06	mg/kg	TM4/PM8
Chrysene #M	1.16	<0.02	<0.02	<0.02	-	-	0.27	<0.02	0.38$_{AA}$	0.11	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	2.30	<0.07	<0.07	<0.07	-	-	0.38	<0.07	0.57$_{AA}$	0.12	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	1.05	<0.04	<0.04	<0.04	-	-	0.18	<0.04	<0.20$_{AA}$	0.07	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	0.68	<0.04	<0.04	<0.04	-	-	0.10	<0.04	0.25$_{AA}$	<0.04	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	0.13	<0.04	<0.04	<0.04	-	-	<0.04	<0.04	<0.20$_{AA}$	<0.04	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	0.57	<0.04	<0.04	<0.04	-	-	0.13	<0.04	0.29$_{AA}$	<0.04	<0.04	mg/kg	TM4/PM8
PAH 16 Total	11.9	<0.6	<0.6	<0.6	-	-	3.0	<0.6	3.8$_{AA}$	1.4	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	1.66	<0.05	<0.05	<0.05	-	-	0.27	<0.05	0.41$_{AA}$	0.09	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.64	<0.02	<0.02	<0.02	-	-	0.11	<0.02	0.16$_{AA}$	0.03	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	110	112	106	106	-	-	103	104	116$_{AA}$	103	<0	%	TM4/PM8
Methyl Tertiary Butyl Ether #M	-	<6	-	<6	<6	<60$_{AB}$	-	<6	-	<6	<6	ug/kg	TM15/PM10
Benzene #M	-	<5	-	<5	28	<50$_{AB}$	-	<5	-	<5	<5	ug/kg	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1063-1065	1072-1074	1084-1086	1087-1089	1093-1095	1096-1098	1099-1101	1108-1110	1114-1116	1120-1122	LOD/LOR	Units	Method No.
Sample ID	WS34	WS34	WS33	WS33	WS33	WS33	WS2	WS2	BH12	BH12			
Depth	0.4	3.0	1.2	2.0	3.5	4.5	0.7	4.5	0.3	2.6			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	25/11/2016	25/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	11	11	11	11	11	11	11	11	11	11			
Date of Receipt	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016			
Toluene #M	-	<3	-	<3	41	<30 AB	-	<3	-	<3	<3	ug/kg	TM15/PM10
Ethylbenzene #M	-	5	-	5	83	1959 AB	-	<3	-	<3	<3	ug/kg	TM15/PM10
p/m-Xylene #M	-	9	-	9	164	<40 AB	-	5	-	<4	<4	ug/kg	TM15/PM10
o-Xylene #M	-	<4	-	<4	<4	<40 AB	-	<4	-	<4	<4	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	-	101	-	102	88	102 AB	-	104	-	109	<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	-	111	-	118	92	90 AB	-	120	-	114	<0	%	TM15/PM10
EPH >C8-C10 #M	<5	<5	<5	<5	-	-	<5	<5	<5	<5	<5	mg/kg	TM5/PM8
EPH >C10-C12 #M	<10	<10	<10	<10	-	-	<10	<10	<10	13	<10	mg/kg	TM5/PM8
EPH >C12-C16 #M	<10	<10	<10	<10	-	-	<10	<10	84	43	<10	mg/kg	TM5/PM8
EPH >C16-C21 #M	<10	<10	<10	<10	-	-	<10	<10	711	43	<10	mg/kg	TM5/PM8
EPH >C21-C40	159	<10	<10	<10	-	-	28	<10	2740	<10	<10	mg/kg	TM5/PM8
EPH >C8-C40	159	<30	<30	<30	-	-	<30	<30	3535	99	<30	mg/kg	TM5/PM8
TPH CWG													
Aliphatics													
>C5-C6 #M	-	<0.1	-	<0.1	1.5	237.4 ++	-	<0.1	-	<0.1	<0.1	mg/kg	TM36/PM12
>C6-C8 #M	-	<0.1	-	<0.1	249.0 ++	1617.9 ++	-	<0.1	-	<0.1	<0.1	mg/kg	TM36/PM12
>C8-C10	-	<0.1	-	<0.1	1713.9 ++	2668.3 ++	-	<0.1	-	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C12 #M	-	<0.2	-	<0.2	258.5	612.5	-	<0.2	-	8.9	<0.2	mg/kg	TM5/PM16
>C12-C16 #M	-	<4	-	<4	120	147	-	<4	-	34	<4	mg/kg	TM5/PM16
>C16-C21 #M	-	<7	-	<7	13	<7	-	<7	-	38	<7	mg/kg	TM5/PM16
>C21-C35 #M	-	<7	-	<7	<7	<7	-	<7	-	<7	<7	mg/kg	TM5/PM16
Total aliphatics C5-35	-	<19	-	<19	2356	5283	-	<19	-	81	<19	mg/kg	TM5/TM36/PM12/PM16
Aromatics													
>C5-EC7 #	-	<0.1	-	<0.1	<0.1	<0.1	-	<0.1	-	<0.1	<0.1	mg/kg	TM36/PM12
>EC7-EC8 #	-	<0.1	-	<0.1	1.2	10.8	-	<0.1	-	<0.1	<0.1	mg/kg	TM36/PM12
>EC8-EC10 #M	-	<0.1	-	<0.1	43.2	70.0	-	<0.1	-	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC12 #	-	<0.2	-	<0.2	37.7	295.6	-	<0.2	-	<0.2	<0.2	mg/kg	TM5/PM16
>EC12-EC16 #	-	<4	-	<4	56	60	-	<4	-	15	<4	mg/kg	TM5/PM16
>EC16-EC21 #	-	<7	-	<7	26	<7	-	<7	-	22	<7	mg/kg	TM5/PM16
>EC21-EC35 #	-	<7	-	<7	<7	<7	-	<7	-	<7	<7	mg/kg	TM5/PM16
Total aromatics C5-35 #	-	<19	-	<19	164	436	-	<19	-	37	<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	-	<38	-	<38	2520	5719	-	<38	-	118	<38	mg/kg	TM5/TM36/PM12/PM16
Total Phenols HPLC	<0.15	<0.15	<0.15	<0.15	-	-	<0.15	<0.15	<0.15	<0.15	<0.15	mg/kg	TM26/PM21
Natural Moisture Content	-	6.9	5.7	6.4	17.3	20.2	11.2	4.0	16.0	20.4	<0.1	%	PM4/PM0
Natural Moisture Content	11.8	-	-	-	-	-	-	-	-	-	<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	-	-	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #M	-	0.0024	0.0022	<0.0015	-	-	0.0325	0.0056	0.0244	0.0522	<0.0015	g/l	TM38/PM20
Sulphate as SO4 (2:1 Ext)	0.0023	-	-	-	-	-	-	-	-	-	<0.0015	g/l	TM38/PM60

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1063-1065	1072-1074	1084-1086	1087-1089	1093-1095	1096-1098	1099-1101	1108-1110	1114-1116	1120-1122	LOD/LOR	Units	Method No.
Sample ID	WS34	WS34	WS33	WS33	WS33	WS33	WS2	WS2	BH12	BH12			
Depth	0.4	3.0	1.2	2.0	3.5	4.5	0.7	4.5	0.3	2.6			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T			
Sample Date	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	25/11/2016	25/11/2016			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	11	11	11	11	11	11	11	11	11	11			
Date of Receipt	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016			
Free Cyanide	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Total Cyanide [#M]	<0.5	<0.5	<0.5	<0.5	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	mg/kg	TM89/PM45
Fraction Organic Carbon	NDP	0.002	<0.001	0.002	-	-	0.008	<0.001	0.059	0.025	<0.001	None	TM21/PM24
pH [#M]	8.57	8.82	8.77	8.98	-	-	8.71	9.34	8.23	8.62	<0.01	pH units	TM73/PM11
Sample Type	NDP	Sand	Sand	Sand	Loamy Sand	Loamy Sand	Sand	Sand	Loamy Sand	Sand		None	PM13/PM0
Sample Colour	NDP	Light Brown	Light Brown	Light Brown	Dark Grey	Dark Grey	Light Brown	Light Brown	Medium Brown	Medium Brown		None	PM13/PM0
Other Items	NDP	none	none	none	NA	NA	none	none	stones and roots	shells		None	PM13/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1126-1128	1135-1137	1144-1146	1147-1149							LOD/LOR	Units	Method No.
Sample ID	BH12	WS17	WS17	WS23 HP									
Depth	6.6	1.5	4.0	0.2									
COC No / misc													
Containers	V J T	V J T	V J T	V J T									
Sample Date	25/11/2016	25/11/2016	25/11/2016	25/11/2016									
Sample Type	Soil	Soil	Soil	Soil									
Batch Number	11	11	11	11									
Date of Receipt	26/11/2016	26/11/2016	26/11/2016	26/11/2016									
Arsenic #M	7.2	51.0	23.3	79.9							<0.5	mg/kg	TM30/PM15
Arsenic	-	-	-	-							<0.5	mg/kg	TM30/PM62
Cadmium #M	<0.1	1.0	1.2	2.0							<0.1	mg/kg	TM30/PM15
Cadmium	-	-	-	-							<0.1	mg/kg	TM30/PM62
Chromium #M	33.4	43.1	38.4	40.2							<0.5	mg/kg	TM30/PM15
Chromium	-	-	-	-							<0.5	mg/kg	TM30/PM62
Copper #M	<1	311 AA	47	181							<1	mg/kg	TM30/PM15
Copper	-	-	-	-							<1	mg/kg	TM30/PM62
Lead #M	12	234	300	1275							<5	mg/kg	TM30/PM15
Lead	-	-	-	-							<5	mg/kg	TM30/PM62
Mercury #M	<0.1	<0.1	<0.1	0.1							<0.1	mg/kg	TM30/PM15
Mercury	-	-	-	-							<0.1	mg/kg	TM30/PM62
Nickel #M	4.8	35.3	10.5	38.5							<0.7	mg/kg	TM30/PM15
Nickel	-	-	-	-							<0.7	mg/kg	TM30/PM62
Selenium #M	<1	<1	<1	<1							<1	mg/kg	TM30/PM15
Selenium	-	-	-	-							<1	mg/kg	TM30/PM62
Water Soluble Boron #M	0.2	0.3	0.3	1.3							<0.1	mg/kg	TM74/PM32
Water Soluble Boron	-	-	-	-							<0.1	mg/kg	TM74/PM61
Zinc #M	22	724	694	2492							<5	mg/kg	TM30/PM15
Zinc	-	-	-	-							<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene #M	<0.04	0.19	<0.04	0.40							<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	0.08	<0.03	1.18							<0.03	mg/kg	TM4/PM8
Acenaphthene #M	<0.05	<0.05	<0.05	0.23							<0.05	mg/kg	TM4/PM8
Fluorene #M	<0.04	0.06	<0.04	0.43							<0.04	mg/kg	TM4/PM8
Phenanthrene #M	<0.03	0.90	<0.03	5.97							<0.03	mg/kg	TM4/PM8
Anthracene #	<0.04	0.30	<0.04	2.15							<0.04	mg/kg	TM4/PM8
Fluoranthene #M	<0.03	2.16	<0.03	15.13							<0.03	mg/kg	TM4/PM8
Pyrene #	<0.03	1.75	<0.03	10.52							<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	<0.06	1.54	<0.06	9.70							<0.06	mg/kg	TM4/PM8
Chrysene #M	<0.02	1.17	<0.02	10.11							<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	<0.07	2.01	<0.07	16.07							<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	<0.04	1.14	<0.04	6.97							<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	<0.04	0.71	<0.04	4.73							<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04	0.07	<0.04	0.95							<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	<0.04	0.62	<0.04	3.39							<0.04	mg/kg	TM4/PM8
PAH 16 Total	<0.6	12.7	<0.6	87.9							<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	<0.05	1.45	<0.05	11.57							<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	<0.02	0.56	<0.02	4.50							<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	106	101	108	111							<0	%	TM4/PM8
Methyl Tertiary Butyl Ether #M	<6	<6	<6	-							<6	ug/kg	TM15/PM10
Benzene #M	<5	9	<5	-							<5	ug/kg	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1126-1128	1135-1137	1144-1146	1147-1149							LOD/LOR	Units	Method No.
Sample ID	BH12	WS17	WS17	WS23 HP									
Depth	6.6	1.5	4.0	0.2									
COC No / misc													
Containers	V J T	V J T	V J T	V J T									
Sample Date	25/11/2016	25/11/2016	25/11/2016	25/11/2016									
Sample Type	Soil	Soil	Soil	Soil									
Batch Number	11	11	11	11									
Date of Receipt	26/11/2016	26/11/2016	26/11/2016	26/11/2016									
Toluene #M	<3	4	<3	-							<3	ug/kg	TM15/PM10
Ethylbenzene #M	<3	82	17	-							<3	ug/kg	TM15/PM10
p/m-Xylene #M	<4	101	20	-							<4	ug/kg	TM15/PM10
o-Xylene #M	<4	8	<4	-							<4	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	100	97	98	-							<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	127	78	101	-							<0	%	TM15/PM10
EPH >C8-C10 #M	<5	<5	<5	<5							<5	mg/kg	TM5/PM8
EPH >C10-C12 #M	<10	<10	<10	<10							<10	mg/kg	TM5/PM8
EPH >C12-C16 #M	<10	<10	<10	<10							<10	mg/kg	TM5/PM8
EPH >C16-C21 #M	<10	19	<10	54							<10	mg/kg	TM5/PM8
EPH >C21-C40	<10	143	<10	304							<10	mg/kg	TM5/PM8
EPH >C8-C40	<30	162	<30	358							<30	mg/kg	TM5/PM8
TPH CWG													
Aliphatics													
>C5-C6 #M	<0.1	<0.1	<0.1	-							<0.1	mg/kg	TM36/PM12
>C6-C8 #M	<0.1	0.2	<0.1	-							<0.1	mg/kg	TM36/PM12
>C8-C10	<0.1	0.7	<0.1	-							<0.1	mg/kg	TM36/PM12
>C10-C12 #M	<0.2	<0.2	<0.2	-							<0.2	mg/kg	TM5/PM16
>C12-C16 #M	<4	<4	<4	-							<4	mg/kg	TM5/PM16
>C16-C21 #M	<7	<7	<7	-							<7	mg/kg	TM5/PM16
>C21-C35 #M	<7	<7	<7	-							<7	mg/kg	TM5/PM16
Total aliphatics C5-35	<19	<19	<19	-							<19	mg/kg	TM5/TM36/PM12/PM16
Aromatics													
>C5-EC7 #	<0.1	<0.1	<0.1	-							<0.1	mg/kg	TM36/PM12
>EC7-EC8 #	<0.1	<0.1	<0.1	-							<0.1	mg/kg	TM36/PM12
>EC8-EC10 #M	<0.1	<0.1	<0.1	-							<0.1	mg/kg	TM36/PM12
>EC10-EC12 #	<0.2	<0.2	<0.2	-							<0.2	mg/kg	TM5/PM16
>EC12-EC16 #	<4	<4	<4	-							<4	mg/kg	TM5/PM16
>EC16-EC21 #	<7	<7	<7	-							<7	mg/kg	TM5/PM16
>EC21-EC35 #	<7	23	<7	-							<7	mg/kg	TM5/PM16
Total aromatics C5-35 #	<19	23	<19	-							<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	<38	<38	<38	-							<38	mg/kg	TM5/TM36/PM12/PM16
Total Phenols HPLC	<0.15	<0.15	<0.15	<0.15							<0.15	mg/kg	TM26/PM21
Natural Moisture Content	22.6	8.9	19.7	11.7							<0.1	%	PM4/PM0
Natural Moisture Content	-	-	-	-							<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3							<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #M	0.0089	0.0193	0.0653	0.0230							<0.0015	g/l	TM38/PM20
Sulphate as SO4 (2:1 Ext)	-	-	-	-							<0.0015	g/l	TM38/PM60

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1126-1128	1135-1137	1144-1146	1147-1149							LOD/LOR	Units	Method No.
Sample ID	BH12	WS17	WS17	WS23 HP									
Depth	6.6	1.5	4.0	0.2									
COC No / misc													
Containers	V J T	V J T	V J T	V J T									
Sample Date	25/11/2016	25/11/2016	25/11/2016	25/11/2016									
Sample Type	Soil	Soil	Soil	Soil									
Batch Number	11	11	11	11									
Date of Receipt	26/11/2016	26/11/2016	26/11/2016	26/11/2016									
Free Cyanide	<0.5	<0.5	<0.5	<0.5							<0.5	mg/kg	TM89/PM45
Total Cyanide #M	<0.5	0.8	<0.5	0.6							<0.5	mg/kg	TM89/PM45
Fraction Organic Carbon	0.001	0.034	0.013	0.082							<0.001	None	TM21/PM24
pH #M	9.17	8.80	8.84	9.11							<0.01	pH units	TM73/PM11
Sample Type	Sand	Sand	Sand	Loamy Sand								None	PM13/PM0
Sample Colour	Light Brown	Medium Brown	Light Brown	Dark Brown								None	PM13/PM0
Other Items	stones	stones	none	stones								None	PM13/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

SVOC Report : **Solid**

J E Sample No.	1072-1074	1087-1089	1093-1095	1096-1098	1108-1110	1120-1122	1126-1128	1135-1137	1144-1146		LOD/LOR	Units	Method No.
Sample ID	WS34	WS33	WS33	WS33	WS2	BH12	BH12	WS17	WS17				
Depth	3.0	2.0	3.5	4.5	4.5	2.6	6.6	1.5	4.0				
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T				
Sample Date	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	25/11/2016	25/11/2016	25/11/2016	25/11/2016				
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
Batch Number	11	11	11	11	11	11	11	11	11				
Date of Receipt	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016				
SVOC MS													
Phenols													
2-Chlorophenol #M	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
2-Methylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
2,4-Dichlorophenol #M	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
4-Methylphenol	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
Phenol #M	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene #M	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
2-Methylnaphthalene #M	<10	<10	96	<10	<10	<10	<10	74	19		<10	ug/kg	TM16/PM8
Naphthalene	-	-	178	<10	-	-	-	-	-		<10	ug/kg	TM16/PM8
Acenaphthylene	-	-	<10	<10	-	-	-	-	-		<10	ug/kg	TM16/PM8
Acenaphthene	-	-	19	254	-	-	-	-	-		<10	ug/kg	TM16/PM8
Fluorene	-	-	20	341	-	-	-	-	-		<10	ug/kg	TM16/PM8
Phenanthrene #M	-	-	67	255	-	-	-	-	-		<10	ug/kg	TM16/PM8
Anthracene	-	-	76	49	-	-	-	-	-		<10	ug/kg	TM16/PM8
Fluoranthene #M	-	-	436	183	-	-	-	-	-		<10	ug/kg	TM16/PM8
Pyrene #M	-	-	367	153	-	-	-	-	-		<10	ug/kg	TM16/PM8
Benzo(a)anthracene	-	-	155	89	-	-	-	-	-		<10	ug/kg	TM16/PM8
Chrysene	-	-	150	69	-	-	-	-	-		<10	ug/kg	TM16/PM8
Benzo(bk)fluoranthene	-	-	221	154	-	-	-	-	-		<10	ug/kg	TM16/PM8
Benzo(a)pyrene	-	-	93	71	-	-	-	-	-		<10	ug/kg	TM16/PM8
Indeno(123cd)pyrene	-	-	52	47	-	-	-	-	-		<10	ug/kg	TM16/PM8
Dibenzo(ah)anthracene	-	-	29	23	-	-	-	-	-		<10	ug/kg	TM16/PM8
Benzo(ghi)perylene	-	-	57	54	-	-	-	-	-		<10	ug/kg	TM16/PM8
Benzo(b)fluoranthene	-	-	159	111	-	-	-	-	-		<10	ug/kg	TM16/PM8
Benzo(k)fluoranthene	-	-	62	43	-	-	-	-	-		<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100		<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100		<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100		<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100		<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<100	<100	<100	<100	<100	<100	<100	<100		<100	ug/kg	TM16/PM8
Dimethyl phthalate #M	<100	<100	<100	<100	<100	<100	<100	<100	<100		<100	ug/kg	TM16/PM8

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

SVOC Report : **Solid**

J E Sample No.	1072-1074	1087-1089	1093-1095	1096-1098	1108-1110	1120-1122	1126-1128	1135-1137	1144-1146		LOD/LOR	Units	Method No.
Sample ID	WS34	WS33	WS33	WS33	WS2	BH12	BH12	WS17	WS17				
Depth	3.0	2.0	3.5	4.5	4.5	2.6	6.6	1.5	4.0				
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T				
Sample Date	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	25/11/2016	25/11/2016	25/11/2016	25/11/2016				
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
Batch Number	11	11	11	11	11	11	11	11	11				
Date of Receipt	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016				
SVOC MS													
Other SVOCs													
1,2-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #M	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #M	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
Azobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
Carbazole	<10	<10	<10	<10	<10	<10	<10	69	18		<10	ug/kg	TM16/PM8
Dibenzofuran #M	<10	<10	28	123	<10	<10	<10	55	18		<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
Hexachlorobutadiene #M	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
Isophorone #M	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #M	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8
Nitrobenzene #M	<10	<10	<10	<10	<10	<10	<10	<10	<10		<10	ug/kg	TM16/PM8

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

VOC Report : **Solid**

J E Sample No.	1072-1074	1087-1089	1093-1095	1096-1098	1108-1110	1120-1122	1126-1128	1135-1137	1144-1146				
Sample ID	WS34	WS33	WS33	WS33	WS2	BH12	BH12	WS17	WS17				
Depth	3.0	2.0	3.5	4.5	4.5	2.6	6.6	1.5	4.0	Please see attached notes for all abbreviations and acronyms			
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T				
Sample Date	24/11/2016	24/11/2016	24/11/2016	24/11/2016	24/11/2016	25/11/2016	25/11/2016	25/11/2016	25/11/2016				
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil				
Batch Number	11	11	11	11	11	11	11	11	11				
Date of Receipt	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016		LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<20$_{AB}$	<2	<2	<2	<2	<2		<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #M	<6	<6	<6	<60$_{AB}$	<6	<6	<6	<6	<6		<6	ug/kg	TM15/PM10
Chloromethane #	<3	<3	<3	<30$_{AB}$	<3	<3	<3	<3	<3		<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	<2	<20$_{AB}$	<2	<2	<2	<2	<2		<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1	<10$_{AB}$	<1	<1	<1	<1	<1		<1	ug/kg	TM15/PM10
Chloroethane #M	<6	<6	12	<60$_{AB}$	<6	<6	<6	<6	<6		<6	ug/kg	TM15/PM10
Trichlorofluoromethane #M	<3	<3	<3	<30$_{AB}$	<3	<3	<3	<3	<3		<3	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #M	<6	<6	<6	<60$_{AB}$	<6	<6	<6	<6	<6		<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	<30	<30	<30	<300$_{AB}$	<30	<30	<30	76	<30		<30	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3	<3	<30$_{AB}$	<3	<3	<3	<3	<3		<3	ug/kg	TM15/PM10
1,1-Dichloroethane #M	<6	<6	<6	<60$_{AB}$	<6	<6	<6	<6	<6		<6	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #M	<7	<7	<7	<70$_{AB}$	<7	<7	<7	<7	<7		<7	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4	<40$_{AB}$	<4	<4	<4	<4	<4		<4	ug/kg	TM15/PM10
Bromochloromethane #M	<4	<4	<4	<40$_{AB}$	<4	<4	<4	<4	<4		<4	ug/kg	TM15/PM10
Chloroform #M	<5	<5	<5	<50$_{AB}$	<5	<5	<5	<5	<5		<5	ug/kg	TM15/PM10
1,1,1-Trichloroethane #M	<5	<5	<5	<50$_{AB}$	<5	<5	<5	<5	<5		<5	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3	<3	<3	<30$_{AB}$	<3	<3	<3	<3	<3		<3	ug/kg	TM15/PM10
Carbon tetrachloride #M	<4	<4	<4	<40$_{AB}$	<4	<4	<4	<4	<4		<4	ug/kg	TM15/PM10
1,2-Dichloroethane #M	<5	<5	<5	<50$_{AB}$	<5	<5	<5	<5	<5		<5	ug/kg	TM15/PM10
Benzene #M	<5	<5	28	<50$_{AB}$	<5	<5	<5	9	<5		<5	ug/kg	TM15/PM10
Trichloroethene (TCE) #M	<5	<5	<5	<50$_{AB}$	<5	<5	<5	<5	<5		<5	ug/kg	TM15/PM10
1,2-Dichloropropane #M	<4	<4	<4	<40$_{AB}$	<4	<4	<4	<4	<4		<4	ug/kg	TM15/PM10
Dibromomethane #M	<4	<4	<4	<40$_{AB}$	<4	<4	<4	<4	<4		<4	ug/kg	TM15/PM10
Bromodichloromethane #M	<4	<4	<4	<40$_{AB}$	<4	<4	<4	<4	<4		<4	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4	<40$_{AB}$	<4	<4	<4	<4	<4		<4	ug/kg	TM15/PM10
Toluene #M	<3	<3	41	<30$_{AB}$	<3	<3	<3	4	<3		<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3	<30$_{AB}$	<3	<3	<3	<3	<3		<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #M	<4	<4	<4	<40$_{AB}$	<4	<4	<4	<4	<4		<4	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3	<3	<30$_{AB}$	<3	<3	<3	<3	<3		<3	ug/kg	TM15/PM10
1,3-Dichloropropane #M	<4	<4	<4	<40$_{AB}$	<4	<4	<4	<4	<4		<4	ug/kg	TM15/PM10
Dibromochloromethane #M	<5	<5	<5	<50$_{AB}$	<5	<5	<5	<5	<5		<5	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3	<3	<3	<30$_{AB}$	<3	<3	<3	<3	<3		<3	ug/kg	TM15/PM10
Chlorobenzene #M	<4	<4	<4	<40$_{AB}$	<4	<4	<4	<4	<4		<4	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #M	<5	<5	<5	<50$_{AB}$	<5	<5	<5	<5	<5		<5	ug/kg	TM15/PM10
Ethylbenzene #M	5	5	83	1959$_{AB}$	<3	<3	<3	82	17		<3	ug/kg	TM15/PM10
p/m-Xylene #M	9	9	164	<40$_{AB}$	5	<4	<4	101	20		<4	ug/kg	TM15/PM10
o-Xylene #M	<4	<4	<4	<40$_{AB}$	<4	<4	<4	8	<4		<4	ug/kg	TM15/PM10
Styrene	<3	<3	<3	<30$_{AB}$	<3	<3	<3	<3	<3		<3	ug/kg	TM15_A/PM10
Bromoform	<4	<4	<4	<40$_{AB}$	<4	<4	<4	<4	<4		<4	ug/kg	TM15/PM10
Isopropylbenzene #	3	<3	55	10471$_{AB}$	<3	<3	<3	50	6		<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #M	<3	<3	<3	<30$_{AB}$	<3	<3	<3	<3	<3		<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2	<20$_{AB}$	<2	<2	<2	<2	<2		<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #M	<4	<4	<4	<40$_{AB}$	<4	<4	<4	<4	<4		<4	ug/kg	TM15/PM10
Propylbenzene #	<4	<4	60	7093$_{AB}$	<4	<4	<4	31	6		<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3	<30$_{AB}$	<3	<3	<3	<3	<3		<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	<3	<3	<3	83$_{AB}$	<3	<3	<3	7	<3		<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3	<30$_{AB}$	<3	<3	<3	<3	<3		<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5	<5	<5	410$_{AB}$	<5	<5	<5	<5	<5		<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	<6	<6	56	2197$_{AB}$	<6	<6	<6	38	<6		<6	ug/kg	TM15/PM10
sec-Butylbenzene #	<4	<4	358	13347$_{AB}$	<4	7	<4	33	<4		<4	ug/kg	TM15/PM10
4-Isopropyltoluene #	<4	<4	57	16431$_{AB}$	<4	9	<4	29	<4		<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #M	<4	<4	<4	<40$_{AB}$	<4	<4	<4	<4	<4		<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4	<4	<4	<40$_{AB}$	<4	<4	<4	<4	<4		<4	ug/kg	TM15/PM10
n-Butylbenzene #	<4	<4	<4	8330$_{AB}$	<4	<4	<4	11	<4		<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #M	<4	<4	<4	<40$_{AB}$	<4	<4	<4	<4	<4		<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane #	<4	<4	<4	<40$_{AB}$	<4	<4	<4	<4	<4		<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene #	<7	<7	<7	<70$_{AB}$	<7	<7	<7	<7	<7		<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4	<40$_{AB}$	<4	<4	<4	<4	<4		<4	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene #	<7	<7	<7	<70$_{AB}$	<7	<7	<7	<7	<7		<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	101	102	88	102$_{AB}$	104	109	100	97	98		<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	111	118	92	90$_{AB}$	120	114	127	78	101		<0	%	TM15/PM10

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

Signed on behalf of Jones Environmental Laboratory:



Ryan Butterworth
Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	11	WS34	0.4	1064	02/12/2016	**General Description (Bulk Analysis)**	soil-stones
					02/12/2016	**Asbestos Fibres**	Free Fibres
					02/12/2016	**Asbestos ACM**	NAD
					02/12/2016	**Asbestos Type**	Chrysotile
					02/12/2016	**Asbestos Level Screen**	<0.1%
					16/12/2016	**Asbestos Gravimetric Quantification**	<0.001 (mass %)
					16/12/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					16/12/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)
16/16961	11	WS34	3.0	1073	02/12/2016	**General Description (Bulk Analysis)**	sand-stones
					02/12/2016	**Asbestos Fibres**	NAD
					02/12/2016	**Asbestos Fibres (2)**	NAD
					02/12/2016	**Asbestos ACM**	NAD
					02/12/2016	**Asbestos ACM (2)**	NAD
					02/12/2016	**Asbestos Type**	NAD
					02/12/2016	**Asbestos Type (2)**	NAD
					02/12/2016	**Asbestos Level Screen**	NAD
16/16961	11	WS33	1.2	1085	02/12/2016	**General Description (Bulk Analysis)**	sand-stones
					02/12/2016	**Asbestos Fibres**	NAD
					02/12/2016	**Asbestos Fibres (2)**	NAD
					02/12/2016	**Asbestos ACM**	NAD
					02/12/2016	**Asbestos ACM (2)**	NAD
					02/12/2016	**Asbestos Type**	NAD
					02/12/2016	**Asbestos Type (2)**	NAD
					02/12/2016	**Asbestos Level Screen**	NAD
16/16961	11	WS33	2.0	1088	02/12/2016	**General Description (Bulk Analysis)**	Sand/Stones
					02/12/2016	**Asbestos Fibres**	NAD
					02/12/2016	**Asbestos Fibres (2)**	NAD
					02/12/2016	**Asbestos ACM**	NAD
					02/12/2016	**Asbestos ACM (2)**	NAD
					02/12/2016	**Asbestos Type**	NAD
					02/12/2016	**Asbestos Type (2)**	NAD
					02/12/2016	**Asbestos Level Screen**	NAD
16/16961	11	WS2	0.7	1100	02/12/2016	**General Description (Bulk Analysis)**	Sand/Stones
					02/12/2016	**Asbestos Fibres**	NAD
					02/12/2016	**Asbestos Fibres (2)**	NAD

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	11	WS2	0.7	1100	02/12/2016	**Asbestos ACM**	NAD
					02/12/2016	**Asbestos ACM (2)**	NAD
					02/12/2016	**Asbestos Type**	NAD
					02/12/2016	**Asbestos Type (2)**	NAD
					02/12/2016	**Asbestos Level Screen**	NAD
16/16961	11	WS2	4.5	1109	05/12/2016	**General Description (Bulk Analysis)**	Sand/Stones
					05/12/2016	**Asbestos Fibres**	NAD
					05/12/2016	**Asbestos Fibres (2)**	NAD
					05/12/2016	**Asbestos ACM**	NAD
					05/12/2016	**Asbestos ACM (2)**	NAD
					05/12/2016	**Asbestos Type**	NAD
					05/12/2016	**Asbestos Type (2)**	NAD
					05/12/2016	**Asbestos Level Screen**	NAD
16/16961	11	BH12	0.3	1115	05/12/2016	**General Description (Bulk Analysis)**	Soil/Stones
					05/12/2016	**Asbestos Fibres**	NAD
					05/12/2016	**Asbestos Fibres (2)**	NAD
					05/12/2016	**Asbestos ACM**	NAD
					05/12/2016	**Asbestos ACM (2)**	NAD
					05/12/2016	**Asbestos Type**	NAD
					05/12/2016	**Asbestos Type (2)**	NAD
					05/12/2016	**Asbestos Level Screen**	NAD
16/16961	11	BH12	2.6	1121	05/12/2016	**General Description (Bulk Analysis)**	Sand/Stones
					05/12/2016	**Asbestos Fibres**	NAD
					05/12/2016	**Asbestos Fibres (2)**	NAD
					05/12/2016	**Asbestos ACM**	NAD
					05/12/2016	**Asbestos ACM (2)**	NAD
					05/12/2016	**Asbestos Type**	NAD
					05/12/2016	**Asbestos Type (2)**	NAD
					05/12/2016	**Asbestos Level Screen**	NAD
16/16961	11	BH12	6.6	1127	05/12/2016	**General Description (Bulk Analysis)**	Sand/Stones
					05/12/2016	**Asbestos Fibres**	NAD
					05/12/2016	**Asbestos Fibres (2)**	NAD
					05/12/2016	**Asbestos ACM**	NAD
					05/12/2016	**Asbestos ACM (2)**	NAD
					05/12/2016	**Asbestos Type**	NAD
					05/12/2016	**Asbestos Type (2)**	NAD
					05/12/2016	**Asbestos Level Screen**	NAD
16/16961	11	WS17	1.5	1136	05/12/2016	**General Description (Bulk Analysis)**	Soil/Stones
					05/12/2016	**Asbestos Fibres**	NAD
					05/12/2016	**Asbestos Fibres (2)**	NAD
					05/12/2016	**Asbestos ACM**	NAD
					05/12/2016	**Asbestos ACM (2)**	NAD
					05/12/2016	**Asbestos Type**	NAD
					05/12/2016	**Asbestos Type (2)**	NAD
					05/12/2016	**Asbestos Level Screen**	NAD
16/16961	11	WS17	4.0	1145	05/12/2016	**General Description (Bulk Analysis)**	Sand/Stones
					05/12/2016	**Asbestos Fibres**	NAD

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	11	WS17	4.0	1145	05/12/2016	**Asbestos Fibres (2)**	NAD
					05/12/2016	**Asbestos ACM**	NAD
					05/12/2016	**Asbestos ACM (2)**	NAD
					05/12/2016	**Asbestos Type**	NAD
					05/12/2016	**Asbestos Type (2)**	NAD
					05/12/2016	**Asbestos Level Screen**	NAD
16/16961	11	WS23 HP	0.2	1148	05/12/2016	**General Description (Bulk Analysis)**	Soil/Stones
					05/12/2016	**Asbestos Fibres**	NAD
					05/12/2016	**Asbestos Fibres (2)**	NAD
					05/12/2016	**Asbestos ACM**	NAD
					05/12/2016	**Asbestos ACM (2)**	NAD
					05/12/2016	**Asbestos Type**	NAD
					05/12/2016	**Asbestos Type (2)**	NAD
					05/12/2016	**Asbestos Level Screen**	NAD

Client Name: WYG **Matrix : Solid**
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	NDP Reason
16/16961	11	WS34	0.4	1063-1065	Asbestos detected in sample

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
No deviating sample report results for job 16/16961						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.
Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 16/16961

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
SA	ISO17025 (SANAS) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x5 Dilution
AB	x10 Dilution

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.			AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.	Yes	Yes	AD	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM60	As received solid samples are extracted with deionised water in a 2:1 ratio of water to solid.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM61	As received solid samples are extracted with hot water in a 20:1 ratio of water to soil ready for analysis by ICP.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.	Yes	Yes	AR	Yes
TM15_A	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds, Vinyl Chloride & Styrene by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

Exova Jones Environmental

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WYG
5th Floor
Longcross Court
47 Newport Road
Cardiff
CF24 0AD

Attention :	Nicholas Bool
Date :	16th December, 2016
Your reference :	A095973-2
Our reference :	Test Report 16/16961 Batch 12
Location :	Tidal Lagoon
Date samples received :	26th November, 2016
Status :	Final report
Issue :	1

Thirty six samples were received for analysis on 26th November, 2016 of which eight were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Phil Sommerton BSc
Project Manager

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1156-1158	1183-1185	1201-1203	1210-1212	1216-1218	1219-1221	1228-1230	1243-1245			LOD/LOR	Units	Method No.
Sample ID	BH5	BH7	WS30	WS30	WS30	WS31	WS31	WS32					
Depth	2.50	5.50	1.00	4.00	5.00	0.50	2.60	2.50					
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T					
Sample Date	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016					
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil					
Batch Number	12	12	12	12	12	12	12	12					
Date of Receipt	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016					
Arsenic #M	175.1	-	16.2	20.7	9.1	246.0	8.4	13.0			<0.5	mg/kg	TM30/PM15
Arsenic	-	18.9	-	-	-	-	-	-			<0.5	mg/kg	TM30/PM62
Cadmium #M	66.1 AA	-	1.4	0.1	<0.1	8.1	0.2	<0.1			<0.1	mg/kg	TM30/PM15
Cadmium	-	2.8	-	-	-	-	-	-			<0.1	mg/kg	TM30/PM62
Chromium #M	42.8	-	40.6	45.2	39.6	40.5	34.1	36.4			<0.5	mg/kg	TM30/PM15
Chromium	-	6.2	-	-	-	-	-	-			<0.5	mg/kg	TM30/PM62
Copper #M	1825 AB	-	16	10	8	506 AA	5	11			<1	mg/kg	TM30/PM15
Copper	-	57	-	-	-	-	-	-			<1	mg/kg	TM30/PM62
Lead #M	45220 AC	-	36	12	41	12180 AA	13	8			<5	mg/kg	TM30/PM15
Lead	-	486	-	-	-	-	-	-			<5	mg/kg	TM30/PM62
Mercury #M	<0.1	-	<0.1	<0.1	<0.1	0.2	<0.1	<0.1			<0.1	mg/kg	TM30/PM15
Mercury	-	<0.1	-	-	-	-	-	-			<0.1	mg/kg	TM30/PM62
Nickel #M	80.4	-	6.5	6.7	7.2	42.8	4.9	4.7			<0.7	mg/kg	TM30/PM15
Nickel	-	8.2	-	-	-	-	-	-			<0.7	mg/kg	TM30/PM62
Selenium #M	4	-	<1	<1	<1	<1	<1	<1			<1	mg/kg	TM30/PM15
Selenium	-	<1	-	-	-	-	-	-			<1	mg/kg	TM30/PM62
Water Soluble Boron #M	0.6	-	0.2	0.1	0.2	0.7	0.1	0.2			<0.1	mg/kg	TM74/PM32
Water Soluble Boron	-	0.2	-	-	-	-	-	-			<0.1	mg/kg	TM74/PM61
Zinc #M	27940 AC	-	200	193	122	8517 AA	28	23			<5	mg/kg	TM30/PM15
Zinc	-	1501	-	-	-	-	-	-			<5	mg/kg	TM30/PM62
PAH MS													
Naphthalene #M	0.34 AA	0.06	<0.04	<0.04	<0.04	0.13	0.13	<0.04			<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.15 AA	<0.03	<0.03	0.39	<0.03	0.13	0.06	<0.03			<0.03	mg/kg	TM4/PM8
Acenaphthene #M	<0.25 AA	<0.05	<0.05	0.15	<0.05	0.11	<0.05	<0.05			<0.05	mg/kg	TM4/PM8
Fluorene #M	<0.20 AA	<0.04	<0.04	0.47	<0.04	0.10	0.06	<0.04			<0.04	mg/kg	TM4/PM8
Phenanthrene #M	0.75 AA	0.23	0.14	0.52	<0.03	1.34	0.17	<0.03			<0.03	mg/kg	TM4/PM8
Anthracene #	<0.20 AA	<0.04	<0.04	<0.04	<0.04	0.35	<0.04	<0.04			<0.04	mg/kg	TM4/PM8
Fluoranthene #M	0.35 AA	0.29	0.34	<0.03	<0.03	2.87	0.09	0.11			<0.03	mg/kg	TM4/PM8
Pyrene #	0.25 AA	0.24	0.27	<0.03	<0.03	2.18	0.09	0.11			<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	<0.30 AA	0.17	0.19	<0.06	<0.06	1.80	<0.06	<0.06			<0.06	mg/kg	TM4/PM8
Chrysene #M	<0.10 AA	0.15	0.17	<0.02	<0.02	2.25	0.04	0.05			<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	<0.35 AA	0.21	0.23	<0.07	<0.07	3.33	<0.07	<0.07			<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	<0.20 AA	0.12	0.12	<0.04	<0.04	1.50	<0.04	<0.04			<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	<0.20 AA	0.06	0.05	<0.04	<0.04	0.97	<0.04	<0.04			<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.20 AA	<0.04	<0.04	<0.04	<0.04	0.19	<0.04	<0.04			<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	<0.20 AA	0.06	0.05	<0.04	<0.04	0.91	<0.04	<0.04			<0.04	mg/kg	TM4/PM8
PAH 16 Total	<3.0 AA	1.6	1.6	1.5	<0.6	18.2	0.6	<0.6			<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	<0.25 AA	0.15	0.17	<0.05	<0.05	2.40	<0.05	<0.05			<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	<0.10 AA	0.06	0.06	<0.02	<0.02	0.93	<0.02	<0.02			<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	103 AA	112	112	111	108	103	102	101			<0	%	TM4/PM8
Methyl Tertiary Butyl Ether #M	-	-	<6	<6	<6	-	<6	<6			<6	ug/kg	TM15/PM10
Benzene #M	-	-	<5	9	<5	-	<5	<5			<5	ug/kg	TM15/PM10

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1156-1158	1183-1185	1201-1203	1210-1212	1216-1218	1219-1221	1228-1230	1243-1245			LOD/LOR	Units	Method No.
Sample ID	BH5	BH7	WS30	WS30	WS30	WS31	WS31	WS32					
Depth	2.50	5.50	1.00	4.00	5.00	0.50	2.60	2.50					
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T					
Sample Date	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016					
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil					
Batch Number	12	12	12	12	12	12	12	12					
Date of Receipt	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016					
Toluene #M	-	-	<3	<3	<3	-	<3	<3			<3	ug/kg	TM15/PM10
Ethylbenzene #M	-	-	<3	<3	<3	-	6	<3			<3	ug/kg	TM15/PM10
p/m-Xylene #M	-	-	<4	<4	<4	-	5	<4			<4	ug/kg	TM15/PM10
o-Xylene #M	-	-	<4	<4	<4	-	<4	<4			<4	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	-	-	98	68	102	-	93	93			<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	-	-	115	61	109	-	92	91			<0	%	TM15/PM10
EPH >C8-C10 #M	<5	12	<5	1116	<5	<5	184	69			<5	mg/kg	TM5/PM8
EPH >C10-C12 #M	<10	12	<10	987	<10	<10	212	175			<10	mg/kg	TM5/PM8
EPH >C12-C16 #M	<10	23	<10	1640	<10	<10	427	496			<10	mg/kg	TM5/PM8
EPH >C16-C21 #M	<10	<10	<10	753	<10	22	145	108			<10	mg/kg	TM5/PM8
EPH >C21-C40	54	30	<10	17	<10	253	53	51			<10	mg/kg	TM5/PM8
EPH >C8-C40	54	77	<30	4513	<30	275	1021	899			<30	mg/kg	TM5/PM8
TPH CWG													
Aliphatics													
>C5-C6 #M	-	-	<0.1	<0.1	<0.1	-	<0.1	<0.1			<0.1	mg/kg	TM36/PM12
>C6-C8 #M	-	-	<0.1	1.5	<0.1	-	<0.1	0.1			<0.1	mg/kg	TM36/PM12
>C8-C10	-	-	<0.1	159.8++	0.2	-	4.2	10.2			<0.1	mg/kg	TM36/PM12
>C10-C12 #M	-	-	<0.2	666.0	<0.2	-	140.3	124.7			<0.2	mg/kg	TM5/PM16
>C12-C16 #M	-	-	<4	980	<4	-	271	345			<4	mg/kg	TM5/PM16
>C16-C21 #M	-	-	<7	435	<7	-	70	63			<7	mg/kg	TM5/PM16
>C21-C35 #M	-	-	<7	11	<7	-	11	<7			<7	mg/kg	TM5/PM16
Total aliphatics C5-35	-	-	<19	2253	<19	-	497	543			<19	mg/kg	TM5/TM36/PM12/PM16
Aromatics													
>C5-EC7 #	-	-	<0.1	<0.1	<0.1	-	<0.1	<0.1			<0.1	mg/kg	TM36/PM12
>EC7-EC8 #	-	-	<0.1	<0.1	<0.1	-	<0.1	<0.1			<0.1	mg/kg	TM36/PM12
>EC8-EC10 #M	-	-	<0.1	2.7++	<0.1	-	<0.1	<0.1			<0.1	mg/kg	TM36/PM12
>EC10-EC12 #	-	-	<0.2	115.8	<0.2	-	29.5	19.0			<0.2	mg/kg	TM5/PM16
>EC12-EC16 #	-	-	<4	274	<4	-	65	69			<4	mg/kg	TM5/PM16
>EC16-EC21 #	-	-	<7	150	<7	-	29	25			<7	mg/kg	TM5/PM16
>EC21-EC35 #	-	-	<7	<7	<7	-	<7	<7			<7	mg/kg	TM5/PM16
Total aromatics C5-35 #	-	-	<19	543	<19	-	124	113			<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	-	-	<38	2796	<38	-	621	656			<38	mg/kg	TM5/TM36/PM12/PM16
Total Phenols HPLC	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15			<0.15	mg/kg	TM26/PM21
Natural Moisture Content	20.2	-	5.5	20.1	21.1	17.7	6.4	5.4			<0.1	%	PM4/PM0
Natural Moisture Content	-	21.9	-	-	-	-	-	-			<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3			<0.3	mg/kg	TM38/PM20
Sulphate as SO4 (2:1 Ext) #M	0.2798	-	0.0027	0.1179	0.0198	0.0518	0.0067	0.0092			<0.0015	g/l	TM38/PM20
Sulphate as SO4 (2:1 Ext)	-	0.0219	-	-	-	-	-	-			<0.0015	g/l	TM38/PM60

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

J E Sample No.	1156-1158	1183-1185	1201-1203	1210-1212	1216-1218	1219-1221	1228-1230	1243-1245			LOD/LOR	Units	Method No.
Sample ID	BH5	BH7	WS30	WS30	WS30	WS31	WS31	WS32					
Depth	2.50	5.50	1.00	4.00	5.00	0.50	2.60	2.50					
COC No / misc													
Containers	V J T	V J T	V J T	V J T	V J T	V J T	V J T	V J T					
Sample Date	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016					
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil					
Batch Number	12	12	12	12	12	12	12	12					
Date of Receipt	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016					
Free Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	mg/kg	TM89/PM45
Total Cyanide #M	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	mg/kg	TM89/PM45
Fraction Organic Carbon	0.194	NDP	0.004	0.002	<0.001	0.140	0.002	0.002			<0.001	None	TM21/PM24
pH #M	8.01	8.25	9.13	8.18	8.68	7.83	8.31	8.33			<0.01	pH units	TM73/PM11
Sample Type	Sand	NDP	Sand	Sand	Sand	Sand	Sand	Sand				None	PM13/PM0
Sample Colour	Medium Brown	NDP	Light Brown	Medium Brown	Light Brown	Medium Brown	Light Brown	Light Brown				None	PM13/PM0
Other Items	stones	NDP	none	Chemical odour	NA	Stones, loam and root	Chemical odour	Chemical odour				None	PM13/PM0

Please see attached notes for all abbreviations and acronyms

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

SVOC Report : **Solid**

J E Sample No.	1201-1203	1210-1212	1216-1218	1228-1230	1243-1245							
Sample ID	WS30	WS30	WS30	WS31	WS32							
Depth	1.00	4.00	5.00	2.60	2.50							
COC No / misc												
Containers	V J T	V J T	V J T	V J T	V J T							
Sample Date	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016							
Sample Type	Soil	Soil	Soil	Soil	Soil							
Batch Number	12	12	12	12	12							
Date of Receipt	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016							

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
SVOC MS													
Phenols													
2-Chlorophenol #M	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
2-Methylphenol	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
2-Nitrophenol	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
2,4-Dichlorophenol #M	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
4-Methylphenol	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
4-Nitrophenol	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
Pentachlorophenol	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
Phenol #M	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene #M	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
2-Methylnaphthalene #M	<10	7673	<10	<10	<10						<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	<100	<100	<100	<100	<100						<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100	<100	<100	<100	<100						<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<100	<100	<100	<100	<100						<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100	<100	<100	<100	<100						<100	ug/kg	TM16/PM8
Diethyl phthalate	<100	<100	<100	<100	<100						<100	ug/kg	TM16/PM8
Dimethyl phthalate #M	<100	<100	<100	<100	<100						<100	ug/kg	TM16/PM8
Other SVOCs													
1,2-Dichlorobenzene	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #M	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
2-Nitroaniline	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
3-Nitroaniline	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #M	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
4-Chloroaniline	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
4-Nitroaniline	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
Azobenzene	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
Carbazole	15	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
Dibenzofuran #M	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
Hexachlorobutadiene #M	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
Hexachloroethane	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
Isophorone #M	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #M	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8
Nitrobenzene #M	<10	<10	<10	<10	<10						<10	ug/kg	TM16/PM8

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool
JE Job No.: 16/16961

VOC Report : **Solid**

J E Sample No.	1201-1203	1210-1212	1216-1218	1228-1230	1243-1245							
Sample ID	WS30	WS30	WS30	WS31	WS32							
Depth	1.00	4.00	5.00	2.60	2.50							
COC No / misc												
Containers	V J T	V J T	V J T	V J T	V J T							
Sample Date	23/11/2016	23/11/2016	23/11/2016	23/11/2016	23/11/2016							
Sample Type	Soil	Soil	Soil	Soil	Soil							
Batch Number	12	12	12	12	12							
Date of Receipt	26/11/2016	26/11/2016	26/11/2016	26/11/2016	26/11/2016							

Please see attached notes for all abbreviations and acronyms

											LOD/LOR	Units	Method No.
VOC MS													
Dichlorodifluoromethane	<2	<2	<2	<2	<2						<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #M	<6	<6	<6	<6	<6						<6	ug/kg	TM15/PM10
Chloromethane #	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	<2	<2	<2						<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1	<1	<1						<1	ug/kg	TM15/PM10
Chloroethane #M	<6	<6	<6	<6	<6						<6	ug/kg	TM15/PM10
Trichlorofluoromethane #M	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #M	<6	<6	<6	<6	<6						<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	<30	<30	<30	<30	<30						<30	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
1,1-Dichloroethane #M	<6	<6	<6	<6	<6						<6	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #M	<7	<7	<7	<7	<7						<7	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Bromochloromethane #M	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Chloroform #M	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
1,1,1-Trichloroethane #M	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
Carbon tetrachloride #M	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,2-Dichloroethane #M	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
Benzene #M	<5	9	<5	<5	<5						<5	ug/kg	TM15/PM10
Trichloroethene (TCE) #M	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
1,2-Dichloropropane #M	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Dibromomethane #M	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Bromodichloromethane #M	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Toluene #M	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #M	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
1,3-Dichloropropane #M	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Dibromochloromethane #M	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
Chlorobenzene #M	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #M	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
Ethylbenzene #M	<3	<3	<3	6	<3						<3	ug/kg	TM15/PM10
p/m-Xylene #M	<4	<4	<4	5	<4						<4	ug/kg	TM15/PM10
o-Xylene #M	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Styrene	<3	<3	<3	<3	<3						<3	ug/kg	TM15_A/PM10
Bromoform	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Isopropylbenzene #	<3	1423	<3	12	<3						<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #M	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2	<2	<2						<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #M	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
Propylbenzene #	<4	3478++	<4	86	5						<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	<3	<3	<3	4	<3						<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3	<3	<3						<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5	<5	<5	<5	<5						<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	<6	<6	<6	1027	<6						<6	ug/kg	TM15/PM10
sec-Butylbenzene #	<4	4999++	<4	95	<4						<4	ug/kg	TM15/PM10
4-Isopropyltoluene #	<4	<4	<4	15	<4						<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #M	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
n-Butylbenzene #	<4	3881++	<4	203	<4						<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #M	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane #	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene #	<7	<7	<7	<7	<7						<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4	<4	<4						<4	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene #	<7	<7	<7	<7	<7						<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	98	68	102	93	93						<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	115	61	109	92	91						<0	%	TM15/PM10

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

Note:

Analysis was carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions, including ACM type and Asbestos level, lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

Signed on behalf of Jones Environmental Laboratory:



Ryan Butterworth
Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	12	BH5	2.50	1157	05/12/2016	**General Description (Bulk Analysis)**	soil-stones
					05/12/2016	**Asbestos Fibres**	NAD
					05/12/2016	**Asbestos Fibres (2)**	NAD
					05/12/2016	**Asbestos ACM**	NAD
					05/12/2016	**Asbestos ACM (2)**	NAD
					05/12/2016	**Asbestos Type**	NAD
					05/12/2016	**Asbestos Type (2)**	NAD
					05/12/2016	**Asbestos Level Screen**	NAD
16/16961	12	BH7	5.50	1184	05/12/2016	**General Description (Bulk Analysis)**	sand-stones
					05/12/2016	**Asbestos Fibres**	Free Fibres
					05/12/2016	**Asbestos ACM**	NAD
					05/12/2016	**Asbestos Type**	Chrysotile
					05/12/2016	**Asbestos Level Screen**	<0.1%
					16/12/2016	**Asbestos Gravimetric Quantification**	<0.001 (mass %)
					16/12/2016	**Asbestos PCOM Quantification (Fibres)**	<0.001 (mass %)
					16/12/2016	**Asbestos Gravimetric & PCOM Total**	<0.001 (mass %)
16/16961	12	WS30	1.00	1202	05/12/2016	**General Description (Bulk Analysis)**	sand-stones
					05/12/2016	**Asbestos Fibres**	NAD
					05/12/2016	**Asbestos Fibres (2)**	NAD
					05/12/2016	**Asbestos ACM**	NAD
					05/12/2016	**Asbestos ACM (2)**	NAD
					05/12/2016	**Asbestos Type**	NAD
					05/12/2016	**Asbestos Type (2)**	NAD
					05/12/2016	**Asbestos Level Screen**	NAD
16/16961	12	WS30	4.00	1211	05/12/2016	**General Description (Bulk Analysis)**	sand-stones
					05/12/2016	**Asbestos Fibres**	NAD
					05/12/2016	**Asbestos Fibres (2)**	NAD
					05/12/2016	**Asbestos ACM**	NAD
					05/12/2016	**Asbestos ACM (2)**	NAD
					05/12/2016	**Asbestos Type**	NAD
					05/12/2016	**Asbestos Type (2)**	NAD
					05/12/2016	**Asbestos Level Screen**	NAD
16/16961	12	WS30	5.00	1217	05/12/2016	**General Description (Bulk Analysis)**	Sand/Stones
					05/12/2016	**Asbestos Fibres**	NAD
					05/12/2016	**Asbestos Fibres (2)**	NAD

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Analysis	Result
16/16961	12	WS30	5.00	1217	05/12/2016	**Asbestos ACM**	NAD
					05/12/2016	**Asbestos ACM (2)**	NAD
					05/12/2016	**Asbestos Type**	NAD
					05/12/2016	**Asbestos Type (2)**	NAD
					05/12/2016	**Asbestos Level Screen**	NAD
16/16961	12	WS31	0.50	1220	05/12/2016	**General Description (Bulk Analysis)**	soil-stones
					05/12/2016	**Asbestos Fibres**	NAD
					05/12/2016	**Asbestos Fibres (2)**	NAD
					05/12/2016	**Asbestos ACM**	NAD
					05/12/2016	**Asbestos ACM (2)**	NAD
					05/12/2016	**Asbestos Type**	NAD
					05/12/2016	**Asbestos Type (2)**	NAD
					05/12/2016	**Asbestos Level Screen**	NAD
16/16961	12	WS31	2.60	1229	05/12/2016	**General Description (Bulk Analysis)**	Sand/Stones
					05/12/2016	**Asbestos Fibres**	NAD
					05/12/2016	**Asbestos Fibres (2)**	NAD
					05/12/2016	**Asbestos ACM**	NAD
					05/12/2016	**Asbestos ACM (2)**	NAD
					05/12/2016	**Asbestos Type**	NAD
					05/12/2016	**Asbestos Type (2)**	NAD
					05/12/2016	**Asbestos Level Screen**	NAD
16/16961	12	WS32	2.50	1244	05/12/2016	**General Description (Bulk Analysis)**	sand-stones
					05/12/2016	**Asbestos Fibres**	NAD
					05/12/2016	**Asbestos Fibres (2)**	NAD
					05/12/2016	**Asbestos ACM**	NAD
					05/12/2016	**Asbestos ACM (2)**	NAD
					05/12/2016	**Asbestos Type**	NAD
					05/12/2016	**Asbestos Type (2)**	NAD
					05/12/2016	**Asbestos Level Screen**	NAD

Client Name: WYG **Matrix : Solid**
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	NDP Reason
16/16961	12	BH7	5.50	1183-1185	Asbestos detected in sample

Client Name: WYG
Reference: A095973-2
Location: Tidal Lagoon
Contact: Nicholas Bool

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
No deviating sample report results for job 16/16961						

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating.
Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 16/16961

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
SA	ISO17025 (SANAS) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range
AA	x5 Dilution
AB	x10 Dilution
AC	x20 Dilution

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.				
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465 and BS1377.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM4	Modified USEPA 8270 method for the solvent extraction and determination of 16 PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM16	Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes	Yes	AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM5	Modified USEPA 8015B method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) with carbon banding within the range C8-C40 GC-FID.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.			AR	Yes

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM5/TM36	TM005: Modified USEPA 8015B. Determination of solvent Extractable Petroleum Hydrocarbons (EPH) including column fractionation in the carbon range of C10-35 into aliphatic and aromatic fractions by GC-FID. TM036: Modified USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-10 by headspace GC-FID. Including determination of	PM12/PM16	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis./Fractionation into aliphatic and aromatic fractions using a Rapid Trace SPE.	Yes		AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM15	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM16	Modified USEPA 8270. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes	Yes	AR	Yes
TM21	Modified USEPA 415.1. Determination of Total Organic Carbon or Total Carbon by combustion in an Eltra TOC furnace/analyser in the presence of oxygen. The CO2 generated is quantified using infra-red detection.	PM24	Dried and ground solid samples are washed with hydrochloric acid, then rinsed with deionised water to remove the mineral carbon before TOC analysis.			AD	Yes
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21	As received solid or water samples are extracted in Methanol: Sodium Hydroxide (0.1M NaOH) (60:40) by orbital shaker.			AR	Yes
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes	Yes	AD	Yes

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM30	Determination of Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry). Modified US EPA Method 200.7 and 6010B	PM62	Acid digestion of as received solid samples using Aqua Regia refluxed at 112.5 °C.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM36	Modified US EPA method 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C4-12 by headspace GC-FID.	PM12	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.	Yes	Yes	AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.	Yes	Yes	AD	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM20	Extraction of dried and ground samples with deionised water in a 2:1 water to solid ratio for anions. Extraction of as received samples with deionised water in a 2:1 water to solid ratio for ammoniacal nitrogen and hydrazine. Samples are extracted using an orbital shaker.	Yes		AR	Yes
TM38	Soluble Ion analysis using the Thermo Aquakem Photometric Automatic Analyser. Modified US EPA methods 325.2, 375.4, 365.2, 353.1, 354.1	PM60	As received solid samples are extracted with deionised water in a 2:1 ratio of water to solid.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.			AR	
TM65	Asbestos Bulk Identification method based on HSG 248.	PM42	Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	

JE Job No: 16/16961

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM73	Modified US EPA methods 150.1 and 9045D. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes	Yes	AR	No
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM32	Hot water soluble boron is extracted from dried and ground samples using a 20:1 ratio.	Yes	Yes	AD	Yes
TM74	Analysis of water soluble boron (20:1 extract) by ICP-OES.	PM61	As received solid samples are extracted with hot water in a 20:1 ratio of water to soil ready for analysis by ICP.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.			AR	Yes
TM89	Modified USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide and Thiocyanate analysis.	Yes	Yes	AR	Yes
TM15_A	Modified USEPA 8260. Quantitative Determination of Volatile Organic Compounds, Vinyl Chloride & Styrene by Headspace GC-MS.	PM10	Modified US EPA method 5021. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

Exova Jones Environmental

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WYG
5th Floor
Longcross Court
47 Newport Road
Cardiff
CF24 0AD

Attention :	Simon Johnson
Date :	18th January, 2017
Your reference :	A095973-2
Our reference :	Test Report 17/2301 Batch 1
Location :	STL
Date samples received :	12th January, 2017
Status :	Final report
Issue :	1

Nine samples were received for analysis on 12th January, 2017 of which nine were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.
All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Compiled By:

Paul Lee-Boden BSc
Project Manager

Client Name: WYG
Reference: A095973-2
Location: STL
Contact: Simon Johnson
JE Job No.: 17/2301

Report : Gas

J E Sample No.	1-2	3-4	5	6-7	8-9	10-11	12-13	14-15	16-17		LOD/LOR	Units	Method No.
Sample ID	WS01	WS05	WS10	WS12	WS14	WS16	WS25	WS31	WS34				
Depth													
COC No / misc													
Containers	TB	TB	TB	TB	TB	TB	TB	TB	TB				
Sample Date	11/01/2017	11/01/2017	11/01/2017	11/01/2017	11/01/2017	11/01/2017	11/01/2017	11/01/2017	11/01/2017				
Sample Type	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas				
Batch Number	1	1	1	1	1	1	1	1	1				
Date of Receipt	12/01/2017	12/01/2017	12/01/2017	12/01/2017	12/01/2017	12/01/2017	12/01/2017	12/01/2017	12/01/2017				
Carbon Dioxide	1.13	0.08	2.65	0.94	4.13	0.34	4.40	13.66	0.84		<0.05	%	TM69/PM0
Carbon Monoxide	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05		<0.05	%	TM69/PM0
Methane	<0.05	<0.05	<0.05	<0.05	0.25	<0.05	2.02	<0.05	<0.05		<0.05	%	TM69/PM0
Methane	<5	<5	<5	75	2330	<5	19562^{++}	<5	<5		<5	ppmV	TM69/PM0
Nitrogen	81.3	78.9	81.9	78.4	81.9	78.9	80.1	82.7	79.6		<0.5	%	TM69/PM0
Oxygen	17.6	21.0	15.5	20.6	13.7	20.8	13.5	3.6	19.5		<0.5	%	TM69/PM0

Please see attached notes for all abbreviations and acronyms

Exova Jones Environmental

Client Name: WYG
Reference: A095973-2
Location: STL
Contact: Simon Johnson

Sample Date: 11 Jan 2017
Date of Receipt: 12 Jan 2017
Date Analysed: 13 Jan 2017

Sample ID: WS01
Depth:
JE Job No: 17/2301
JE Sample No: 1
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: -
Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m³	RL ppbv	MDL ppbv	RL ug/m³	MDL ug/m³
75-01-4	62.5	# Vinyl Chloride		**<1.5**	**<3.8**	<1.5	<1.5	<3.8	<3.8
75-71-8	120.91	Dichlorodifluoromethane (F-12)		**<2.5**	**<12.4**	<2.5	<2.5	<12.4	<12.4
74-87-3	50.49	Chloromethane		**<1.5**	**<3.1**	<1.5	<1.5	<3.1	<3.1
74-83-9	94.95	Bromomethane		**<1.5**	**<5.8**	<1.5	<1.5	<5.8	<5.8
75-00-3	64.52	# Chloroethane		**<1.5**	**<4.0**	<1.5	<1.5	<4.0	<4.0
75-69-4	137.36	# Trichlorofluoromethane (F-11)		**<1.5**	**<8.4**	<1.5	<1.5	<8.4	<8.4
75-35-4	96.95	1,1-Dichloroethene (1,1 DCE)		**<1.5**	**<5.9**	<1.5	<1.5	<5.9	<5.9
75-09-2	84.93	Dichloromethane (DCM)		**<14.4**	**<50**	<14.4	<14.4	<50	<50
156-60-5	96.94	Trans-1,2-Dichloroethene		**<1.5**	**<5.9**	<1.5	<1.5	<5.9	<5.9
75-34-3	98.97	# 1,1-Dichloroethane		**<1.5**	**<6.1**	<1.5	<1.5	<6.1	<6.1
156-59-2	96.94	# cis-1,2-Dichloroethene		**<1**	**<4**	<1	<1	<4	<4
594-20-7	112.99	2,2-Dichloropropane		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
74-97-5	129.38	Bromochloromethane (Int Std)		**NA**	**NA**	<1.5	<1.5	<7.9	<7.9
67-66-3	119.39	# Chloroform		**<1.5**	**<7.3**	<1.5	<1.5	<7.3	<7.3
71-55-6	133.42	# 1,1,1-Trichloroethane		**2.6**	**14.2**	<1.5	<1.5	<8.2	<8.2
563-58-6	110.97	1,1-Dichloropropene		**<1.5**	**<6.8**	<1.5	<1.5	<6.8	<6.8
56-23-5	153.84	# Carbon Tetrachloride		**<1.5**	**<9.4**	<1.5	<1.5	<9.4	<9.4
107-06-2	98.96	# 1,2-Dichloroethane		**<1.5**	**<6.1**	<1.5	<1.5	<6.1	<6.1
71-43-2	78.11	# Benzene		**1.7**	**5.4**	<1.5	<1.5	<4.8	<4.8
79-01-6	131.4	# Trichloroethene (TCE)		**<1.5**	**<8.1**	<1.5	<1.5	<8.1	<8.1
78-87-5	112.99	# 1,2-Dichloropropane		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
74-95-3	173.83	Dibromomethane		**<1.5**	**<10.7**	<1.5	<1.5	<10.7	<10.7
75-27-4	163.83	Bromodichloromethane		**<1.5**	**<10.1**	<1.5	<1.5	<10.1	<10.1
10061-01-5	110.97	# cis-1,3-Dichloropropene		**<1.5**	**<6.8**	<1.5	<1.5	<6.8	<6.8
108-88-3	92.13	# Toluene		**6.5**	**24.5**	<1.5	<1.5	<5.7	<5.7
10061-02-6	110.97	trans-1,3-Dichloropropene		**<1.5**	**<6.8**	<1.5	<1.5	<6.8	<6.8
79-00-5	133.4	# 1,1,2-Trichloroethane		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
127-18-4	165.85	# Tetrachloroethene (PCE)		**1.9**	**12.9**	<1.5	<1.5	<10.2	<10.2
142-28-9	112.99	1,3-Dichloropropane		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
124-48-1	208.28	Dibromochloromethane		**<1.5**	**<12.8**	<1.5	<1.5	<12.8	<12.8
106-93-4	187.86	# 1,2-Dibromoethane		**<1.5**	**<11.5**	<1.5	<1.5	<11.5	<11.5
108-90-7	112.56	# Chlorobenzene		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
630-20-6	167.85	1,1,1,2-Tetrachloroethane		**<1.5**	**<10.3**	<1.5	<1.5	<10.3	<10.3
100-41-4	106.16	# Ethylbenzene		**3**	**13**	<1.5	<1.5	<6.5	<6.5
	106.17	# m&p - Xylenes		**8.9**	**38.6**	<1.5	<1.5	<6.5	<6.5
95-47-6	106.17	# o-Xylene		**3.6**	**15.6**	<1.5	<1.5	<6.5	<6.5
100-42-5	104.14	# Styrene		**3.3**	**14.1**	<1.5	<1.5	<6.4	<6.4
75-25-2	252.77	Bromoform		**<1.5**	**<15.5**	<1.5	<1.5	<15.5	<15.5
98-82-8	120.19	Isopropylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4

Exova Jones Environmental

Client Name: WYG
Reference: A095973-2
Location: STL
Contact: Simon Johnson

Sample Date: 11 Jan 2017
Date of Receipt: 12 Jan 2017
Date Analysed: 13 Jan 2017

Sample ID: WS01
Depth:
JE Job No: 17/2301
JE Sample No: 1
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: -
Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m^3	RL ppbv	MDL ppbv	RL ug/m^3	MDL ug/m^3
79-34-5	167.85	# 1,1,2,2-Tetrachloroethane		**<1.5**	**<10.3**	<1.5	<1.5	<10.3	<10.3
108-86-1	157.01	Bromobenzene		**<1.5**	**<9.6**	<1.5	<1.5	<9.6	<9.6
96-18-4	147.43	1,2,3-Trichloropropane		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
103-65-1	120.19	Propylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4
95-49-8	126.58	2-Chlorotoluene		**<1.5**	**<7.8**	<1.5	<1.5	<7.8	<7.8
108-67-8	120.2	# 1,3,5-Trimethylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4
106-43-4	126.58	4-Chlorotoluene		**<1.5**	**<7.8**	<1.5	<1.5	<7.8	<7.8
98-06-6	134.22	Tert-Butylbenzene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
95-63-6	120.19	# 1,2,4-Trimethylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4
135-98-8	134.22	Sec-Butylbenzene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
99-87-6	134.22	4-Isopropyltoluene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
106-46-7	147.01	# 1,4-Dichlorobenzene		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
541-73-1	147.01	# 1,3-Dichlorobenzene		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
104-51-8	134.22	n-Butylbenzene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
95-50-1	147	# 1,2-Dichlorobenzene		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
96-12-8	236.33	1,2-Dibromo-3-chloropropane		**<1.5**	**<14.5**	<1.5	<1.5	<14.5	<14.5
120-82-1	181.46	1,2,4-Trichlorobenzene		**<1.5**	**<11.1**	<1.5	<1.5	<11.1	<11.1
87-68-3	260.76	Hexachlorobutadiene		**<1.5**	**<16.0**	<1.5	<1.5	<16.0	<16.0
91-20-3	128.17	Naphthalene		**<0.32**	**<1.7**	<0.32	<0.32	<1.7	<1.7
87-61-6	181.45	1,2,3-Trichlorobenzene		**<1.5**	**<11.1**	<1.5	<1.5	<11.1	<11.1
1634-04-4	88.15	Methyl tertiary butyl ether		**<1.5**	**<5.4**	<1.5	<1.5	<5.4	<5.4
		Sum of VOC USEPA compounds		**31.5**	**138.3**				
460-00-4		4-Bromofluorobenzene Surrogate Recovery		**106%**		0%	0%		
	81	Aliphatic >C4-C6		**<10**	**<33**	<10	<10	<33	<33
	100	Aliphatic >C6-C8		**24**	**98**	<10	<10	<41	<41
	130	Aliphatic >C8-C10		**161**	**856**	<10	<10	<53	<53
	160	Aliphatic >C10-C12		**70**	**458**	<10	<10	<65	<65
	78.11	Aromatic >C5-EC7 (Benzene)		**1.7**	**5.4**	<1.5	<1.5	<4.8	<4.8
	92.13	Aromatic >EC7-EC8 (Toluene)		**6.5**	**24.5**	<1.5	<1.5	<5.7	<5.7
	120	Aromatic >EC8-EC10		**19**	**93**	<10	<10	<49	<49
	130	Aromatic >EC10-EC12		**<10**	**<53**	<10	<10	<53	<53

Exova Jones Environmental

Client Name: WYG
Reference: A095973-2
Location: STL
Contact: Simon Johnson

Sample Date: 11 Jan 2017
Date of Receipt: 12 Jan 2017
Date Analysed: 13 Jan 2017

Sample ID: WS05
Depth:
JE Job No: 17/2301
JE Sample No: 3
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: -
Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m^3	RL ppbv	MDL ppbv	RL ug/m^3	MDL ug/m^3
75-01-4	62.5	# Vinyl Chloride		**<1.5**	**<3.8**	<1.5	<1.5	<3.8	<3.8
75-71-8	120.91	Dichlorodifluoromethane (F-12)		**<2.5**	**<12.4**	<2.5	<2.5	<12.4	<12.4
74-87-3	50.49	Chloromethane		**<1.5**	**<3.1**	<1.5	<1.5	<3.1	<3.1
74-83-9	94.95	Bromomethane		**<1.5**	**<5.8**	<1.5	<1.5	<5.8	<5.8
75-00-3	64.52	# Chloroethane		**<1.5**	**<4.0**	<1.5	<1.5	<4.0	<4.0
75-69-4	137.36	# Trichlorofluoromethane (F-11)		**<1.5**	**<8.4**	<1.5	<1.5	<8.4	<8.4
75-35-4	96.95	1,1-Dichloroethene (1,1 DCE)		**<1.5**	**<5.9**	<1.5	<1.5	<5.9	<5.9
75-09-2	84.93	Dichloromethane (DCM)		**<14.4**	**<50**	<14.4	<14.4	<50	<50
156-60-5	96.94	Trans-1,2-Dichloroethene		**<1.5**	**<5.9**	<1.5	<1.5	<5.9	<5.9
75-34-3	98.97	# 1,1-Dichloroethane		**<1.5**	**<6.1**	<1.5	<1.5	<6.1	<6.1
156-59-2	96.94	# cis-1,2-Dichloroethene		**<1**	**<4**	<1	<1	<4	<4
594-20-7	112.99	2,2-Dichloropropane		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
74-97-5	129.38	Bromochloromethane (Int Std)		**NA**	**NA**	<1.5	<1.5	<7.9	<7.9
67-66-3	119.39	# Chloroform		**<1.5**	**<7.3**	<1.5	<1.5	<7.3	<7.3
71-55-6	133.42	# 1,1,1-Trichloroethane		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
563-58-6	110.97	1,1-Dichloropropene		**<1.5**	**<6.8**	<1.5	<1.5	<6.8	<6.8
56-23-5	153.84	# Carbon Tetrachloride		**<1.5**	**<9.4**	<1.5	<1.5	<9.4	<9.4
107-06-2	98.96	# 1,2-Dichloroethane		**<1.5**	**<6.1**	<1.5	<1.5	<6.1	<6.1
71-43-2	78.11	# Benzene		**<1.5**	**<4.8**	<1.5	<1.5	<4.8	<4.8
79-01-6	131.4	# Trichloroethene (TCE)		**<1.5**	**<8.1**	<1.5	<1.5	<8.1	<8.1
78-87-5	112.99	# 1,2-Dichloropropane		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
74-95-3	173.83	Dibromomethane		**<1.5**	**<10.7**	<1.5	<1.5	<10.7	<10.7
75-27-4	163.83	Bromodichloromethane		**<1.5**	**<10.1**	<1.5	<1.5	<10.1	<10.1
10061-01-5	110.97	# cis-1,3-Dichloropropene		**<1.5**	**<6.8**	<1.5	<1.5	<6.8	<6.8
108-88-3	92.13	# Toluene		**7.9**	**29.8**	<1.5	<1.5	<5.7	<5.7
10061-02-6	110.97	trans-1,3-Dichloropropene		**<1.5**	**<6.8**	<1.5	<1.5	<6.8	<6.8
79-00-5	133.4	# 1,1,2-Trichloroethane		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
127-18-4	165.85	# Tetrachloroethene (PCE)		**13.2**	**89.5**	<1.5	<1.5	<10.2	<10.2
142-28-9	112.99	1,3-Dichloropropane		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
124-48-1	208.28	Dibromochloromethane		**<1.5**	**<12.8**	<1.5	<1.5	<12.8	<12.8
106-93-4	187.86	# 1,2-Dibromoethane		**<1.5**	**<11.5**	<1.5	<1.5	<11.5	<11.5
108-90-7	112.56	# Chlorobenzene		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
630-20-6	167.85	1,1,1,2-Tetrachloroethane		**<1.5**	**<10.3**	<1.5	<1.5	<10.3	<10.3
100-41-4	106.16	# Ethylbenzene		**3**	**13**	<1.5	<1.5	<6.5	<6.5
	106.17	# m&p - Xylenes		**5.5**	**23.9**	<1.5	<1.5	<6.5	<6.5
95-47-6	106.17	# o-Xylene		**3.1**	**13.5**	<1.5	<1.5	<6.5	<6.5
100-42-5	104.14	# Styrene		**3.3**	**14.1**	<1.5	<1.5	<6.4	<6.4
75-25-2	252.77	Bromoform		**<1.5**	**<15.5**	<1.5	<1.5	<15.5	<15.5
98-82-8	120.19	Isopropylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4

Exova Jones Environmental

Client Name: WYG
Reference: A095973-2
Location: STL
Contact: Simon Johnson

Sample Date: 11 Jan 2017
Date of Receipt: 12 Jan 2017
Date Analysed: 13 Jan 2017

Sample ID: WS05
Depth:
JE Job No: 17/2301
JE Sample No: 3
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: -
Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m^3	RL ppbv	MDL ppbv	RL ug/m^3	MDL ug/m^3
79-34-5	167.85	# 1,1,2,2-Tetrachloroethane		**<1.5**	**<10.3**	<1.5	<1.5	<10.3	<10.3
108-86-1	157.01	Bromobenzene		**<1.5**	**<9.6**	<1.5	<1.5	<9.6	<9.6
96-18-4	147.43	1,2,3-Trichloropropane		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
103-65-1	120.19	Propylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4
95-49-8	126.58	2-Chlorotoluene		**<1.5**	**<7.8**	<1.5	<1.5	<7.8	<7.8
108-67-8	120.2	# 1,3,5-Trimethylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4
106-43-4	126.58	4-Chlorotoluene		**<1.5**	**<7.8**	<1.5	<1.5	<7.8	<7.8
98-06-6	134.22	Tert-Butylbenzene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
95-63-6	120.19	# 1,2,4-Trimethylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4
135-98-8	134.22	Sec-Butylbenzene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
99-87-6	134.22	4-Isopropyltoluene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
106-46-7	147.01	# 1,4-Dichlorobenzene		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
541-73-1	147.01	# 1,3-Dichlorobenzene		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
104-51-8	134.22	n-Butylbenzene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
95-50-1	147	# 1,2-Dichlorobenzene		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
96-12-8	236.33	1,2-Dibromo-3-chloropropane		**<1.5**	**<14.5**	<1.5	<1.5	<14.5	<14.5
120-82-1	181.46	1,2,4-Trichlorobenzene		**<1.5**	**<11.1**	<1.5	<1.5	<11.1	<11.1
87-68-3	260.76	Hexachlorobutadiene		**<1.5**	**<16.0**	<1.5	<1.5	<16.0	<16.0
91-20-3	128.17	Naphthalene		**<0.32**	**<1.7**	<0.32	<0.32	<1.7	<1.7
87-61-6	181.45	1,2,3-Trichlorobenzene		**<1.5**	**<11.1**	<1.5	<1.5	<11.1	<11.1
1634-04-4	88.15	Methyl tertiary butyl ether		**<1.5**	**<5.4**	<1.5	<1.5	<5.4	<5.4
		Sum of VOC USEPA compounds		**36**	**183.8**				
460-00-4		4-Bromofluorobenzene Surrogate Recovery		**105%**		0%	0%		
	81	Aliphatic >C4-C6		**18**	**60**	<10	<10	<33	<33
	100	Aliphatic >C6-C8		**402**	**1644**	<10	<10	<41	<41
	130	Aliphatic >C8-C10		**835**	**4440**	<10	<10	<53	<53
	160	Aliphatic >C10-C12		**122**	**798**	<10	<10	<65	<65
	78.11	Aromatic >C5-EC7 (Benzene)		**<1.5**	**<4.8**	<1.5	<1.5	<4.8	<4.8
	92.13	Aromatic >EC7-EC8 (Toluene)		**7.9**	**29.8**	<1.5	<1.5	<5.7	<5.7
	120	Aromatic >EC8-EC10		**15**	**74**	<10	<10	<49	<49
	130	Aromatic >EC10-EC12		**<10**	**<53**	<10	<10	<53	<53

Exova Jones Environmental

Client Name: WYG
Reference: A095973-2
Location: STL
Contact: Simon Johnson

Sample Date: 11 Jan 2017
Date of Receipt: 12 Jan 2017
Date Analysed: 13 Jan 2017

Sample ID: WS10
Depth:
JE Job No: 17/2301
JE Sample No: 5
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: -
Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m^3	RL ppbv	MDL ppbv	RL ug/m^3	MDL ug/m^3
75-01-4	62.5	# Vinyl Chloride		**<1.5**	**<3.8**	<1.5	<1.5	<3.8	<3.8
75-71-8	120.91	Dichlorodifluoromethane (F-12)		**<2.5**	**<12.4**	<2.5	<2.5	<12.4	<12.4
74-87-3	50.49	Chloromethane		**<1.5**	**<3.1**	<1.5	<1.5	<3.1	<3.1
74-83-9	94.95	Bromomethane		**<1.5**	**<5.8**	<1.5	<1.5	<5.8	<5.8
75-00-3	64.52	# Chloroethane		**<1.5**	**<4.0**	<1.5	<1.5	<4.0	<4.0
75-69-4	137.36	# Trichlorofluoromethane (F-11)		**<1.5**	**<8.4**	<1.5	<1.5	<8.4	<8.4
75-35-4	96.95	1,1-Dichloroethene (1,1 DCE)		**<1.5**	**<5.9**	<1.5	<1.5	<5.9	<5.9
75-09-2	84.93	Dichloromethane (DCM)		**<14.4**	**<50**	<14.4	<14.4	<50	<50
156-60-5	96.94	Trans-1,2-Dichloroethene		**<1.5**	**<5.9**	<1.5	<1.5	<5.9	<5.9
75-34-3	98.97	# 1,1-Dichloroethane		**<1.5**	**<6.1**	<1.5	<1.5	<6.1	<6.1
156-59-2	96.94	# cis-1,2-Dichloroethene		**<1**	**<4**	<1	<1	<4	<4
594-20-7	112.99	2,2-Dichloropropane		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
74-97-5	129.38	Bromochloromethane (Int Std)		**NA**	**NA**	<1.5	<1.5	<7.9	<7.9
67-66-3	119.39	# Chloroform		**<1.5**	**<7.3**	<1.5	<1.5	<7.3	<7.3
71-55-6	133.42	# 1,1,1-Trichloroethane		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
563-58-6	110.97	1,1-Dichloropropene		**<1.5**	**<6.8**	<1.5	<1.5	<6.8	<6.8
56-23-5	153.84	# Carbon Tetrachloride		**<1.5**	**<9.4**	<1.5	<1.5	<9.4	<9.4
107-06-2	98.96	# 1,2-Dichloroethane		**<1.5**	**<6.1**	<1.5	<1.5	<6.1	<6.1
71-43-2	78.11	# Benzene		**10.1**	**32.3**	<1.5	<1.5	<4.8	<4.8
79-01-6	131.4	# Trichloroethene (TCE)		**<1.5**	**<8.1**	<1.5	<1.5	<8.1	<8.1
78-87-5	112.99	# 1,2-Dichloropropane		**4.5**	**20.8**	<1.5	<1.5	<6.9	<6.9
74-95-3	173.83	Dibromomethane		**<1.5**	**<10.7**	<1.5	<1.5	<10.7	<10.7
75-27-4	163.83	Bromodichloromethane		**<1.5**	**<10.1**	<1.5	<1.5	<10.1	<10.1
10061-01-5	110.97	# cis-1,3-Dichloropropene		**<1.5**	**<6.8**	<1.5	<1.5	<6.8	<6.8
108-88-3	92.13	# Toluene		**10.2**	**38.4**	<1.5	<1.5	<5.7	<5.7
10061-02-6	110.97	trans-1,3-Dichloropropene		**<1.5**	**<6.8**	<1.5	<1.5	<6.8	<6.8
79-00-5	133.4	# 1,1,2-Trichloroethane		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
127-18-4	165.85	# Tetrachloroethene (PCE)		**<1.5**	**<10.2**	<1.5	<1.5	<10.2	<10.2
142-28-9	112.99	1,3-Dichloropropane		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
124-48-1	208.28	Dibromochloromethane		**<1.5**	**<12.8**	<1.5	<1.5	<12.8	<12.8
106-93-4	187.86	# 1,2-Dibromoethane		**<1.5**	**<11.5**	<1.5	<1.5	<11.5	<11.5
108-90-7	112.56	# Chlorobenzene		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
630-20-6	167.85	1,1,1,2-Tetrachloroethane		**<1.5**	**<10.3**	<1.5	<1.5	<10.3	<10.3
100-41-4	106.16	# Ethylbenzene		**17.8**	**77.3**	<1.5	<1.5	<6.5	<6.5
	106.17	# m&p - Xylenes		**12.8**	**55.6**	<1.5	<1.5	<6.5	<6.5
95-47-6	106.17	# o-Xylene		**6.1**	**26.5**	<1.5	<1.5	<6.5	<6.5
100-42-5	104.14	# Styrene		**3.4**	**14.5**	<1.5	<1.5	<6.4	<6.4
75-25-2	252.77	Bromoform		**<1.5**	**<15.5**	<1.5	<1.5	<15.5	<15.5
98-82-8	120.19	Isopropylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4

Exova Jones Environmental

Client Name: WYG
Reference: A095973-2
Location: STL
Contact: Simon Johnson

Sample Date: 11 Jan 2017
Date of Receipt: 12 Jan 2017
Date Analysed: 13 Jan 2017

Sample ID: WS10
Depth:
JE Job No: 17/2301
JE Sample No: 5
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: -
Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m^3	RL ppbv	MDL ppbv	RL ug/m^3	MDL ug/m^3
79-34-5	167.85	# 1,1,2,2-Tetrachloroethane		**<1.5**	**<10.3**	<1.5	<1.5	<10.3	<10.3
108-86-1	157.01	Bromobenzene		**<1.5**	**<9.6**	<1.5	<1.5	<9.6	<9.6
96-18-4	147.43	1,2,3-Trichloropropane		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
103-65-1	120.19	Propylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4
95-49-8	126.58	2-Chlorotoluene		**<1.5**	**<7.8**	<1.5	<1.5	<7.8	<7.8
108-67-8	120.2	# 1,3,5-Trimethylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4
106-43-4	126.58	4-Chlorotoluene		**<1.5**	**<7.8**	<1.5	<1.5	<7.8	<7.8
98-06-6	134.22	Tert-Butylbenzene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
95-63-6	120.19	# 1,2,4-Trimethylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4
135-98-8	134.22	Sec-Butylbenzene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
99-87-6	134.22	4-Isopropyltoluene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
106-46-7	147.01	# 1,4-Dichlorobenzene		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
541-73-1	147.01	# 1,3-Dichlorobenzene		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
104-51-8	134.22	n-Butylbenzene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
95-50-1	147	# 1,2-Dichlorobenzene		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
96-12-8	236.33	1,2-Dibromo-3-chloropropane		**<1.5**	**<14.5**	<1.5	<1.5	<14.5	<14.5
120-82-1	181.46	1,2,4-Trichlorobenzene		**<1.5**	**<11.1**	<1.5	<1.5	<11.1	<11.1
87-68-3	260.76	Hexachlorobutadiene		**<1.5**	**<16.0**	<1.5	<1.5	<16.0	<16.0
91-20-3	128.17	Naphthalene		**<0.32**	**<1.7**	<0.32	<0.32	<1.7	<1.7
87-61-6	181.45	1,2,3-Trichlorobenzene		**<1.5**	**<11.1**	<1.5	<1.5	<11.1	<11.1
1634-04-4	88.15	Methyl tertiary butyl ether		**<1.5**	**<5.4**	<1.5	<1.5	<5.4	<5.4
		Sum of VOC USEPA compounds		**64.9**	**265.4**				
460-00-4		4-Bromofluorobenzene Surrogate Recovery		**101%**		0%	0%		
	81	Aliphatic >C4-C6		**<10**	**<33**	<10	<10	<33	<33
	100	Aliphatic >C6-C8		**528**	**2159**	<10	<10	<41	<41
	130	Aliphatic >C8-C10		**2257**	**12000**	<10	<10	<53	<53
	160	Aliphatic >C10-C12		**503**	**3291**	<10	<10	<65	<65
	78.11	Aromatic >C5-EC7 (Benzene)		**10.1**	**32.3**	<1.5	<1.5	<4.8	<4.8
	92.13	Aromatic >EC7-EC8 (Toluene)		**10.2**	**38.4**	<1.5	<1.5	<5.7	<5.7
	120	Aromatic >EC8-EC10		**40**	**196**	<10	<10	<49	<49
	130	Aromatic >EC10-EC12		**21**	**112**	<10	<10	<53	<53

Exova Jones Environmental

Client Name: WYG
Reference: A095973-2
Location: STL
Contact: Simon Johnson

Sample Date: 11 Jan 2017
Date of Receipt: 12 Jan 2017
Date Analysed: 13 Jan 2017

Sample ID: WS12
Depth:
JE Job No: 17/2301
JE Sample No: 6
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: -
Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m³	RL ppbv	MDL ppbv	RL ug/m³	MDL ug/m³
75-01-4	62.5	# Vinyl Chloride		**<1.5**	**<3.8**	<1.5	<1.5	<3.8	<3.8
75-71-8	120.91	Dichlorodifluoromethane (F-12)		**<2.5**	**<12.4**	<2.5	<2.5	<12.4	<12.4
74-87-3	50.49	Chloromethane		**<1.5**	**<3.1**	<1.5	<1.5	<3.1	<3.1
74-83-9	94.95	Bromomethane		**<1.5**	**<5.8**	<1.5	<1.5	<5.8	<5.8
75-00-3	64.52	# Chloroethane		**<1.5**	**<4.0**	<1.5	<1.5	<4.0	<4.0
75-69-4	137.36	# Trichlorofluoromethane (F-11)		**<1.5**	**<8.4**	<1.5	<1.5	<8.4	<8.4
75-35-4	96.95	1,1-Dichloroethene (1,1 DCE)		**<1.5**	**<5.9**	<1.5	<1.5	<5.9	<5.9
75-09-2	84.93	Dichloromethane (DCM)		**<14.4**	**<50**	<14.4	<14.4	<50	<50
156-60-5	96.94	Trans-1,2-Dichloroethene		**<1.5**	**<5.9**	<1.5	<1.5	<5.9	<5.9
75-34-3	98.97	# 1,1-Dichloroethane		**<1.5**	**<6.1**	<1.5	<1.5	<6.1	<6.1
156-59-2	96.94	# cis-1,2-Dichloroethene		**<1**	**<4**	<1	<1	<4	<4
594-20-7	112.99	2,2-Dichloropropane		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
74-97-5	129.38	Bromochloromethane (Int Std)		**NA**	**NA**	<1.5	<1.5	<7.9	<7.9
67-66-3	119.39	# Chloroform		**<1.5**	**<7.3**	<1.5	<1.5	<7.3	<7.3
71-55-6	133.42	# 1,1,1-Trichloroethane		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
563-58-6	110.97	1,1-Dichloropropene		**<1.5**	**<6.8**	<1.5	<1.5	<6.8	<6.8
56-23-5	153.84	# Carbon Tetrachloride		**<1.5**	**<9.4**	<1.5	<1.5	<9.4	<9.4
107-06-2	98.96	# 1,2-Dichloroethane		**<1.5**	**<6.1**	<1.5	<1.5	<6.1	<6.1
71-43-2	78.11	# Benzene		**<1.5**	**<4.8**	<1.5	<1.5	<4.8	<4.8
79-01-6	131.4	# Trichloroethene (TCE)		**<1.5**	**<8.1**	<1.5	<1.5	<8.1	<8.1
78-87-5	112.99	# 1,2-Dichloropropane		**9.4**	**43.4**	<1.5	<1.5	<6.9	<6.9
74-95-3	173.83	Dibromomethane		**<1.5**	**<10.7**	<1.5	<1.5	<10.7	<10.7
75-27-4	163.83	Bromodichloromethane		**<1.5**	**<10.1**	<1.5	<1.5	<10.1	<10.1
10061-01-5	110.97	# cis-1,3-Dichloropropene		**<1.5**	**<6.8**	<1.5	<1.5	<6.8	<6.8
108-88-3	92.13	# Toluene		**4.2**	**15.8**	<1.5	<1.5	<5.7	<5.7
10061-02-6	110.97	trans-1,3-Dichloropropene		**<1.5**	**<6.8**	<1.5	<1.5	<6.8	<6.8
79-00-5	133.4	# 1,1,2-Trichloroethane		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
127-18-4	165.85	# Tetrachloroethene (PCE)		**1.9**	**12.9**	<1.5	<1.5	<10.2	<10.2
142-28-9	112.99	1,3-Dichloropropane		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
124-48-1	208.28	Dibromochloromethane		**<1.5**	**<12.8**	<1.5	<1.5	<12.8	<12.8
106-93-4	187.86	# 1,2-Dibromoethane		**<1.5**	**<11.5**	<1.5	<1.5	<11.5	<11.5
108-90-7	112.56	# Chlorobenzene		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
630-20-6	167.85	1,1,1,2-Tetrachloroethane		**<1.5**	**<10.3**	<1.5	<1.5	<10.3	<10.3
100-41-4	106.16	# Ethylbenzene		**2.1**	**9.1**	<1.5	<1.5	<6.5	<6.5
	106.17	# m&p - Xylenes		**5.1**	**22.1**	<1.5	<1.5	<6.5	<6.5
95-47-6	106.17	# o-Xylene		**2.2**	**9.6**	<1.5	<1.5	<6.5	<6.5
100-42-5	104.14	# Styrene		**2.2**	**9.4**	<1.5	<1.5	<6.4	<6.4
75-25-2	252.77	Bromoform		**<1.5**	**<15.5**	<1.5	<1.5	<15.5	<15.5
98-82-8	120.19	Isopropylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4

Exova Jones Environmental

Client Name: WYG
Reference: A095973-2
Location: STL
Contact: Simon Johnson

Sample Date: 11 Jan 2017
Date of Receipt: 12 Jan 2017
Date Analysed: 13 Jan 2017

Sample ID: WS12
Depth:
JE Job No: 17/2301
JE Sample No: 6
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: -
Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m^3	RL ppbv	MDL ppbv	RL ug/m^3	MDL ug/m^3
79-34-5	167.85	# 1,1,2,2-Tetrachloroethane		**<1.5**	**<10.3**	<1.5	<1.5	<10.3	<10.3
108-86-1	157.01	Bromobenzene		**<1.5**	**<9.6**	<1.5	<1.5	<9.6	<9.6
96-18-4	147.43	1,2,3-Trichloropropane		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
103-65-1	120.19	Propylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4
95-49-8	126.58	2-Chlorotoluene		**<1.5**	**<7.8**	<1.5	<1.5	<7.8	<7.8
108-67-8	120.2	# 1,3,5-Trimethylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4
106-43-4	126.58	4-Chlorotoluene		**<1.5**	**<7.8**	<1.5	<1.5	<7.8	<7.8
98-06-6	134.22	Tert-Butylbenzene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
95-63-6	120.19	# 1,2,4-Trimethylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4
135-98-8	134.22	Sec-Butylbenzene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
99-87-6	134.22	4-Isopropyltoluene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
106-46-7	147.01	# 1,4-Dichlorobenzene		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
541-73-1	147.01	# 1,3-Dichlorobenzene		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
104-51-8	134.22	n-Butylbenzene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
95-50-1	147	# 1,2-Dichlorobenzene		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
96-12-8	236.33	1,2-Dibromo-3-chloropropane		**<1.5**	**<14.5**	<1.5	<1.5	<14.5	<14.5
120-82-1	181.46	1,2,4-Trichlorobenzene		**<1.5**	**<11.1**	<1.5	<1.5	<11.1	<11.1
87-68-3	260.76	Hexachlorobutadiene		**<1.5**	**<16.0**	<1.5	<1.5	<16.0	<16.0
91-20-3	128.17	Naphthalene		**<0.32**	**<1.7**	<0.32	<0.32	<1.7	<1.7
87-61-6	181.45	1,2,3-Trichlorobenzene		**<1.5**	**<11.1**	<1.5	<1.5	<11.1	<11.1
1634-04-4	88.15	Methyl tertiary butyl ether		**<1.5**	**<5.4**	<1.5	<1.5	<5.4	<5.4
		Sum of VOC USEPA compounds		**27.1**	**122.3**				
460-00-4		4-Bromofluorobenzene Surrogate Recovery		**98%**		0%	0%		
	81	Aliphatic >C4-C6		**<10**	**<33**	<10	<10	<33	<33
	100	Aliphatic >C6-C8		**61**	**249**	<10	<10	<41	<41
	130	Aliphatic >C8-C10		**280**	**1489**	<10	<10	<53	<53
	160	Aliphatic >C10-C12		**34**	**222**	<10	<10	<65	<65
	78.11	Aromatic >C5-EC7 (Benzene)		**<1.5**	**<4.8**	<1.5	<1.5	<4.8	<4.8
	92.13	Aromatic >EC7-EC8 (Toluene)		**4.2**	**15.8**	<1.5	<1.5	<5.7	<5.7
	120	Aromatic >EC8-EC10		**11**	**54**	<10	<10	<49	<49
	130	Aromatic >EC10-EC12		**<10**	**<53**	<10	<10	<53	<53

Exova Jones Environmental

Client Name: WYG
Reference: A095973-2
Location: STL
Contact: Simon Johnson

Sample Date: 11 Jan 2017
Date of Receipt: 12 Jan 2017
Date Analysed: 13 Jan 2017

Sample ID: WS14
Depth:
JE Job No: 17/2301
JE Sample No: 8
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: -
Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m^3	RL ppbv	MDL ppbv	RL ug/m^3	MDL ug/m^3
75-01-4	62.5	# Vinyl Chloride		**<1.5**	**<3.8**	<1.5	<1.5	<3.8	<3.8
75-71-8	120.91	Dichlorodifluoromethane (F-12)		**<2.5**	**<12.4**	<2.5	<2.5	<12.4	<12.4
74-87-3	50.49	Chloromethane		**<1.5**	**<3.1**	<1.5	<1.5	<3.1	<3.1
74-83-9	94.95	Bromomethane		**<1.5**	**<5.8**	<1.5	<1.5	<5.8	<5.8
75-00-3	64.52	# Chloroethane		**<1.5**	**<4.0**	<1.5	<1.5	<4.0	<4.0
75-69-4	137.36	# Trichlorofluoromethane (F-11)		**<1.5**	**<8.4**	<1.5	<1.5	<8.4	<8.4
75-35-4	96.95	1,1-Dichloroethene (1,1 DCE)		**<1.5**	**<5.9**	<1.5	<1.5	<5.9	<5.9
75-09-2	84.93	Dichloromethane (DCM)		**<14.4**	**<50**	<14.4	<14.4	<50	<50
156-60-5	96.94	Trans-1,2-Dichloroethene		**<1.5**	**<5.9**	<1.5	<1.5	<5.9	<5.9
75-34-3	98.97	# 1,1-Dichloroethane		**<1.5**	**<6.1**	<1.5	<1.5	<6.1	<6.1
156-59-2	96.94	# cis-1,2-Dichloroethene		**<1**	**<4**	<1	<1	<4	<4
594-20-7	112.99	2,2-Dichloropropane		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
74-97-5	129.38	Bromochloromethane (Int Std)		**NA**	**NA**	<1.5	<1.5	<7.9	<7.9
67-66-3	119.39	# Chloroform		**<1.5**	**<7.3**	<1.5	<1.5	<7.3	<7.3
71-55-6	133.42	# 1,1,1-Trichloroethane		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
563-58-6	110.97	1,1-Dichloropropene		**<1.5**	**<6.8**	<1.5	<1.5	<6.8	<6.8
56-23-5	153.84	# Carbon Tetrachloride		**<1.5**	**<9.4**	<1.5	<1.5	<9.4	<9.4
107-06-2	98.96	# 1,2-Dichloroethane		**<1.5**	**<6.1**	<1.5	<1.5	<6.1	<6.1
71-43-2	78.11	# Benzene		**890.7**	**2845.4**	<1.5	<1.5	<4.8	<4.8
79-01-6	131.4	# Trichloroethene (TCE)		**<1.5**	**<8.1**	<1.5	<1.5	<8.1	<8.1
78-87-5	112.99	# 1,2-Dichloropropane		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
74-95-3	173.83	Dibromomethane		**<1.5**	**<10.7**	<1.5	<1.5	<10.7	<10.7
75-27-4	163.83	Bromodichloromethane		**<1.5**	**<10.1**	<1.5	<1.5	<10.1	<10.1
10061-01-5	110.97	# cis-1,3-Dichloropropene		**<1.5**	**<6.8**	<1.5	<1.5	<6.8	<6.8
108-88-3	92.13	# Toluene		**11.6**	**43.7**	<1.5	<1.5	<5.7	<5.7
10061-02-6	110.97	trans-1,3-Dichloropropene		**<1.5**	**<6.8**	<1.5	<1.5	<6.8	<6.8
79-00-5	133.4	# 1,1,2-Trichloroethane		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
127-18-4	165.85	# Tetrachloroethene (PCE)		**<1.5**	**<10.2**	<1.5	<1.5	<10.2	<10.2
142-28-9	112.99	1,3-Dichloropropane		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
124-48-1	208.28	Dibromochloromethane		**<1.5**	**<12.8**	<1.5	<1.5	<12.8	<12.8
106-93-4	187.86	# 1,2-Dibromoethane		**<1.5**	**<11.5**	<1.5	<1.5	<11.5	<11.5
108-90-7	112.56	# Chlorobenzene		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
630-20-6	167.85	1,1,1,2-Tetrachloroethane		**<1.5**	**<10.3**	<1.5	<1.5	<10.3	<10.3
100-41-4	106.16	# Ethylbenzene		**<1.5**	**<6.5**	<1.5	<1.5	<6.5	<6.5
	106.17	# m&p - Xylenes		**<1.5**	**<6.5**	<1.5	<1.5	<6.5	<6.5
95-47-6	106.17	# o-Xylene		**2.3**	**10**	<1.5	<1.5	<6.5	<6.5
100-42-5	104.14	# Styrene		**2.1**	**8.9**	<1.5	<1.5	<6.4	<6.4
75-25-2	252.77	Bromoform		**<1.5**	**<15.5**	<1.5	<1.5	<15.5	<15.5
98-82-8	120.19	Isopropylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4

Exova Jones Environmental

Client Name: WYG
Reference: A095973-2
Location: STL
Contact: Simon Johnson

Sample Date: 11 Jan 2017
Date of Receipt: 12 Jan 2017
Date Analysed: 13 Jan 2017

Sample ID: WS14
Depth:
JE Job No: 17/2301
JE Sample No: 8
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: -
Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m^3	RL ppbv	MDL ppbv	RL ug/m^3	MDL ug/m^3
79-34-5	167.85	# 1,1,2,2-Tetrachloroethane		**<1.5**	**<10.3**	<1.5	<1.5	<10.3	<10.3
108-86-1	157.01	Bromobenzene		**<1.5**	**<9.6**	<1.5	<1.5	<9.6	<9.6
96-18-4	147.43	1,2,3-Trichloropropane		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
103-65-1	120.19	Propylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4
95-49-8	126.58	2-Chlorotoluene		**<1.5**	**<7.8**	<1.5	<1.5	<7.8	<7.8
108-67-8	120.2	# 1,3,5-Trimethylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4
106-43-4	126.58	4-Chlorotoluene		**<1.5**	**<7.8**	<1.5	<1.5	<7.8	<7.8
98-06-6	134.22	Tert-Butylbenzene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
95-63-6	120.19	# 1,2,4-Trimethylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4
135-98-8	134.22	Sec-Butylbenzene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
99-87-6	134.22	4-Isopropyltoluene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
106-46-7	147.01	# 1,4-Dichlorobenzene		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
541-73-1	147.01	# 1,3-Dichlorobenzene		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
104-51-8	134.22	n-Butylbenzene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
95-50-1	147	# 1,2-Dichlorobenzene		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
96-12-8	236.33	1,2-Dibromo-3-chloropropane		**<1.5**	**<14.5**	<1.5	<1.5	<14.5	<14.5
120-82-1	181.46	1,2,4-Trichlorobenzene		**<1.5**	**<11.1**	<1.5	<1.5	<11.1	<11.1
87-68-3	260.76	Hexachlorobutadiene		**<1.5**	**<16.0**	<1.5	<1.5	<16.0	<16.0
91-20-3	128.17	Naphthalene		**<0.32**	**<1.7**	<0.32	<0.32	<1.7	<1.7
87-61-6	181.45	1,2,3-Trichlorobenzene		**<1.5**	**<11.1**	<1.5	<1.5	<11.1	<11.1
1634-04-4	88.15	Methyl tertiary butyl ether		**<1.5**	**<5.4**	<1.5	<1.5	<5.4	<5.4
		Sum of VOC USEPA compounds		**906.7**	**2908**				
460-00-4		4-Bromofluorobenzene Surrogate Recovery		**117%**		0%	0%		
	81	Aliphatic >C4-C6		**1401**	**4641**	<10	<10	<33	<33
	100	Aliphatic >C6-C8		**13347**	**54587**	<10	<10	<41	<41
	130	Aliphatic >C8-C10		**7280**	**38706**	<10	<10	<53	<53
	160	Aliphatic >C10-C12		**73**	**478**	<10	<10	<65	<65
	78.11	Aromatic >C5-EC7 (Benzene)		**890.7**	**2845.4**	<1.5	<1.5	<4.8	<4.8
	92.13	Aromatic >EC7-EC8 (Toluene)		**11.6**	**43.7**	<1.5	<1.5	<5.7	<5.7
	120	Aromatic >EC8-EC10		**48**	**236**	<10	<10	<49	<49
	130	Aromatic >EC10-EC12		**<10**	**<53**	<10	<10	<53	<53

Exova Jones Environmental

Client Name: WYG
Reference: A095973-2
Location: STL
Contact: Simon Johnson

Sample Date: 11 Jan 2017
Date of Receipt: 12 Jan 2017
Date Analysed: 13 Jan 2017

Sample ID: WS16
Depth:
JE Job No: 17/2301
JE Sample No: 10
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: -
Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m^3	RL ppbv	MDL ppbv	RL ug/m^3	MDL ug/m^3
75-01-4	62.5	# Vinyl Chloride		**<1.5**	**<3.8**	<1.5	<1.5	<3.8	<3.8
75-71-8	120.91	Dichlorodifluoromethane (F-12)		**<2.5**	**<12.4**	<2.5	<2.5	<12.4	<12.4
74-87-3	50.49	Chloromethane		**<1.5**	**<3.1**	<1.5	<1.5	<3.1	<3.1
74-83-9	94.95	Bromomethane		**<1.5**	**<5.8**	<1.5	<1.5	<5.8	<5.8
75-00-3	64.52	# Chloroethane		**<1.5**	**<4.0**	<1.5	<1.5	<4.0	<4.0
75-69-4	137.36	# Trichlorofluoromethane (F-11)		**<1.5**	**<8.4**	<1.5	<1.5	<8.4	<8.4
75-35-4	96.95	1,1-Dichloroethene (1,1 DCE)		**<1.5**	**<5.9**	<1.5	<1.5	<5.9	<5.9
75-09-2	84.93	Dichloromethane (DCM)		**<14.4**	**<50**	<14.4	<14.4	<50	<50
156-60-5	96.94	Trans-1,2-Dichloroethene		**<1.5**	**<5.9**	<1.5	<1.5	<5.9	<5.9
75-34-3	98.97	# 1,1-Dichloroethane		**<1.5**	**<6.1**	<1.5	<1.5	<6.1	<6.1
156-59-2	96.94	# cis-1,2-Dichloroethene		**<1**	**<4**	<1	<1	<4	<4
594-20-7	112.99	2,2-Dichloropropane		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
74-97-5	129.38	Bromochloromethane (Int Std)		**NA**	**NA**	<1.5	<1.5	<7.9	<7.9
67-66-3	119.39	# Chloroform		**<1.5**	**<7.3**	<1.5	<1.5	<7.3	<7.3
71-55-6	133.42	# 1,1,1-Trichloroethane		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
563-58-6	110.97	1,1-Dichloropropene		**<1.5**	**<6.8**	<1.5	<1.5	<6.8	<6.8
56-23-5	153.84	# Carbon Tetrachloride		**<1.5**	**<9.4**	<1.5	<1.5	<9.4	<9.4
107-06-2	98.96	# 1,2-Dichloroethane		**<1.5**	**<6.1**	<1.5	<1.5	<6.1	<6.1
71-43-2	78.11	# Benzene		**18.7**	**59.7**	<1.5	<1.5	<4.8	<4.8
79-01-6	131.4	# Trichloroethene (TCE)		**<1.5**	**<8.1**	<1.5	<1.5	<8.1	<8.1
78-87-5	112.99	# 1,2-Dichloropropane		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
74-95-3	173.83	Dibromomethane		**<1.5**	**<10.7**	<1.5	<1.5	<10.7	<10.7
75-27-4	163.83	Bromodichloromethane		**<1.5**	**<10.1**	<1.5	<1.5	<10.1	<10.1
10061-01-5	110.97	# cis-1,3-Dichloropropene		**<1.5**	**<6.8**	<1.5	<1.5	<6.8	<6.8
108-88-3	92.13	# Toluene		**3.2**	**12.1**	<1.5	<1.5	<5.7	<5.7
10061-02-6	110.97	trans-1,3-Dichloropropene		**<1.5**	**<6.8**	<1.5	<1.5	<6.8	<6.8
79-00-5	133.4	# 1,1,2-Trichloroethane		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
127-18-4	165.85	# Tetrachloroethene (PCE)		**<1.5**	**<10.2**	<1.5	<1.5	<10.2	<10.2
142-28-9	112.99	1,3-Dichloropropane		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
124-48-1	208.28	Dibromochloromethane		**<1.5**	**<12.8**	<1.5	<1.5	<12.8	<12.8
106-93-4	187.86	# 1,2-Dibromoethane		**<1.5**	**<11.5**	<1.5	<1.5	<11.5	<11.5
108-90-7	112.56	# Chlorobenzene		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
630-20-6	167.85	1,1,1,2-Tetrachloroethane		**<1.5**	**<10.3**	<1.5	<1.5	<10.3	<10.3
100-41-4	106.16	# Ethylbenzene		**2.1**	**9.1**	<1.5	<1.5	<6.5	<6.5
	106.17	# m&p - Xylenes		**6**	**26.1**	<1.5	<1.5	<6.5	<6.5
95-47-6	106.17	# o-Xylene		**2.4**	**10.4**	<1.5	<1.5	<6.5	<6.5
100-42-5	104.14	# Styrene		**<1.5**	**<6.4**	<1.5	<1.5	<6.4	<6.4
75-25-2	252.77	Bromoform		**<1.5**	**<15.5**	<1.5	<1.5	<15.5	<15.5
98-82-8	120.19	Isopropylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4

Exova Jones Environmental

Client Name: WYG
Reference: A095973-2
Location: STL
Contact: Simon Johnson

Sample Date: 11 Jan 2017
Date of Receipt: 12 Jan 2017
Date Analysed: 13 Jan 2017

Sample ID: WS16
Depth:
JE Job No: 17/2301
JE Sample No: 10
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: -
Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m^3	RL ppbv	MDL ppbv	RL ug/m^3	MDL ug/m^3
79-34-5	167.85	# 1,1,2,2-Tetrachloroethane		**<1.5**	**<10.3**	<1.5	<1.5	<10.3	<10.3
108-86-1	157.01	Bromobenzene		**<1.5**	**<9.6**	<1.5	<1.5	<9.6	<9.6
96-18-4	147.43	1,2,3-Trichloropropane		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
103-65-1	120.19	Propylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4
95-49-8	126.58	2-Chlorotoluene		**<1.5**	**<7.8**	<1.5	<1.5	<7.8	<7.8
108-67-8	120.2	# 1,3,5-Trimethylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4
106-43-4	126.58	4-Chlorotoluene		**<1.5**	**<7.8**	<1.5	<1.5	<7.8	<7.8
98-06-6	134.22	Tert-Butylbenzene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
95-63-6	120.19	# 1,2,4-Trimethylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4
135-98-8	134.22	Sec-Butylbenzene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
99-87-6	134.22	4-Isopropyltoluene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
106-46-7	147.01	# 1,4-Dichlorobenzene		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
541-73-1	147.01	# 1,3-Dichlorobenzene		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
104-51-8	134.22	n-Butylbenzene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
95-50-1	147	# 1,2-Dichlorobenzene		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
96-12-8	236.33	1,2-Dibromo-3-chloropropane		**<1.5**	**<14.5**	<1.5	<1.5	<14.5	<14.5
120-82-1	181.46	1,2,4-Trichlorobenzene		**<1.5**	**<11.1**	<1.5	<1.5	<11.1	<11.1
87-68-3	260.76	Hexachlorobutadiene		**<1.5**	**<16.0**	<1.5	<1.5	<16.0	<16.0
91-20-3	128.17	Naphthalene		**<0.32**	**<1.7**	<0.32	<0.32	<1.7	<1.7
87-61-6	181.45	1,2,3-Trichlorobenzene		**<1.5**	**<11.1**	<1.5	<1.5	<11.1	<11.1
1634-04-4	88.15	Methyl tertiary butyl ether		**<1.5**	**<5.4**	<1.5	<1.5	<5.4	<5.4
		Sum of VOC USEPA compounds		**32.4**	**117.4**				
460-00-4		4-Bromofluorobenzene Surrogate Recovery		**100%**		0%	0%		
	81	Aliphatic >C4-C6		**<10**	**<33**	<10	<10	<33	<33
	100	Aliphatic >C6-C8		**798**	**3264**	<10	<10	<41	<41
	130	Aliphatic >C8-C10		**1882**	**10006**	<10	<10	<53	<53
	160	Aliphatic >C10-C12		**228**	**1492**	<10	<10	<65	<65
	78.11	Aromatic >C5-EC7 (Benzene)		**18.7**	**59.7**	<1.5	<1.5	<4.8	<4.8
	92.13	Aromatic >EC7-EC8 (Toluene)		**3.2**	**12.1**	<1.5	<1.5	<5.7	<5.7
	120	Aromatic >EC8-EC10		**10**	**49**	<10	<10	<49	<49
	130	Aromatic >EC10-EC12		**<10**	**<53**	<10	<10	<53	<53

Exova Jones Environmental

Client Name: WYG
Reference: A095973-2
Location: STL
Contact: Simon Johnson

Sample Date: 11 Jan 2017
Date of Receipt: 12 Jan 2017
Date Analysed: 13 Jan 2017

Sample ID: WS25
Depth:
JE Job No: 17/2301
JE Sample No: 12
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: -
Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m³	RL ppbv	MDL ppbv	RL ug/m³	MDL ug/m³
75-01-4	62.5	# Vinyl Chloride		**<1.5**	**<3.8**	<1.5	<1.5	<3.8	<3.8
75-71-8	120.91	Dichlorodifluoromethane (F-12)		**<2.5**	**<12.4**	<2.5	<2.5	<12.4	<12.4
74-87-3	50.49	Chloromethane		**<1.5**	**<3.1**	<1.5	<1.5	<3.1	<3.1
74-83-9	94.95	Bromomethane		**<1.5**	**<5.8**	<1.5	<1.5	<5.8	<5.8
75-00-3	64.52	# Chloroethane		**<1.5**	**<4.0**	<1.5	<1.5	<4.0	<4.0
75-69-4	137.36	# Trichlorofluoromethane (F-11)		**<1.5**	**<8.4**	<1.5	<1.5	<8.4	<8.4
75-35-4	96.95	1,1-Dichloroethene (1,1 DCE)		**<1.5**	**<5.9**	<1.5	<1.5	<5.9	<5.9
75-09-2	84.93	Dichloromethane (DCM)		**<14.4**	**<50**	<14.4	<14.4	<50	<50
156-60-5	96.94	Trans-1,2-Dichloroethene		**<1.5**	**<5.9**	<1.5	<1.5	<5.9	<5.9
75-34-3	98.97	# 1,1-Dichloroethane		**<1.5**	**<6.1**	<1.5	<1.5	<6.1	<6.1
156-59-2	96.94	# cis-1,2-Dichloroethene		**<1**	**<4**	<1	<1	<4	<4
594-20-7	112.99	2,2-Dichloropropane		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
74-97-5	129.38	Bromochloromethane (Int Std)		**NA**	**NA**	<1.5	<1.5	<7.9	<7.9
67-66-3	119.39	# Chloroform		**<1.5**	**<7.3**	<1.5	<1.5	<7.3	<7.3
71-55-6	133.42	# 1,1,1-Trichloroethane		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
563-58-6	110.97	1,1-Dichloropropene		**<1.5**	**<6.8**	<1.5	<1.5	<6.8	<6.8
56-23-5	153.84	# Carbon Tetrachloride		**<1.5**	**<9.4**	<1.5	<1.5	<9.4	<9.4
107-06-2	98.96	# 1,2-Dichloroethane		**<1.5**	**<6.1**	<1.5	<1.5	<6.1	<6.1
71-43-2	78.11	# Benzene		**9.2**	**29.4**	<1.5	<1.5	<4.8	<4.8
79-01-6	131.4	# Trichloroethene (TCE)		**<1.5**	**<8.1**	<1.5	<1.5	<8.1	<8.1
78-87-5	112.99	# 1,2-Dichloropropane		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
74-95-3	173.83	Dibromomethane		**<1.5**	**<10.7**	<1.5	<1.5	<10.7	<10.7
75-27-4	163.83	Bromodichloromethane		**<1.5**	**<10.1**	<1.5	<1.5	<10.1	<10.1
10061-01-5	110.97	# cis-1,3-Dichloropropene		**<1.5**	**<6.8**	<1.5	<1.5	<6.8	<6.8
108-88-3	92.13	# Toluene		**3.1**	**11.7**	<1.5	<1.5	<5.7	<5.7
10061-02-6	110.97	trans-1,3-Dichloropropene		**<1.5**	**<6.8**	<1.5	<1.5	<6.8	<6.8
79-00-5	133.4	# 1,1,2-Trichloroethane		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
127-18-4	165.85	# Tetrachloroethene (PCE)		**<1.5**	**<10.2**	<1.5	<1.5	<10.2	<10.2
142-28-9	112.99	1,3-Dichloropropane		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
124-48-1	208.28	Dibromochloromethane		**<1.5**	**<12.8**	<1.5	<1.5	<12.8	<12.8
106-93-4	187.86	# 1,2-Dibromoethane		**<1.5**	**<11.5**	<1.5	<1.5	<11.5	<11.5
108-90-7	112.56	# Chlorobenzene		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
630-20-6	167.85	1,1,1,2-Tetrachloroethane		**<1.5**	**<10.3**	<1.5	<1.5	<10.3	<10.3
100-41-4	106.16	# Ethylbenzene		**3.2**	**13.9**	<1.5	<1.5	<6.5	<6.5
	106.17	# m&p - Xylenes		**6.7**	**29.1**	<1.5	<1.5	<6.5	<6.5
95-47-6	106.17	# o-Xylene		**3.5**	**15.2**	<1.5	<1.5	<6.5	<6.5
100-42-5	104.14	# Styrene		**1.9**	**8.1**	<1.5	<1.5	<6.4	<6.4
75-25-2	252.77	Bromoform		**<1.5**	**<15.5**	<1.5	<1.5	<15.5	<15.5
98-82-8	120.19	Isopropylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4

Exova Jones Environmental

Client Name: WYG
Reference: A095973-2
Location: STL
Contact: Simon Johnson

Sample Date: 11 Jan 2017
Date of Receipt: 12 Jan 2017
Date Analysed: 13 Jan 2017

Sample ID: WS25
Depth:
JE Job No: 17/2301
JE Sample No: 12
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: -
Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m^3	RL ppbv	MDL ppbv	RL ug/m^3	MDL ug/m^3
79-34-5	167.85	# 1,1,2,2-Tetrachloroethane		**<1.5**	**<10.3**	<1.5	<1.5	<10.3	<10.3
108-86-1	157.01	Bromobenzene		**<1.5**	**<9.6**	<1.5	<1.5	<9.6	<9.6
96-18-4	147.43	1,2,3-Trichloropropane		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
103-65-1	120.19	Propylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4
95-49-8	126.58	2-Chlorotoluene		**<1.5**	**<7.8**	<1.5	<1.5	<7.8	<7.8
108-67-8	120.2	# 1,3,5-Trimethylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4
106-43-4	126.58	4-Chlorotoluene		**<1.5**	**<7.8**	<1.5	<1.5	<7.8	<7.8
98-06-6	134.22	Tert-Butylbenzene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
95-63-6	120.19	# 1,2,4-Trimethylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4
135-98-8	134.22	Sec-Butylbenzene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
99-87-6	134.22	4-Isopropyltoluene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
106-46-7	147.01	# 1,4-Dichlorobenzene		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
541-73-1	147.01	# 1,3-Dichlorobenzene		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
104-51-8	134.22	n-Butylbenzene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
95-50-1	147	# 1,2-Dichlorobenzene		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
96-12-8	236.33	1,2-Dibromo-3-chloropropane		**<1.5**	**<14.5**	<1.5	<1.5	<14.5	<14.5
120-82-1	181.46	1,2,4-Trichlorobenzene		**<1.5**	**<11.1**	<1.5	<1.5	<11.1	<11.1
87-68-3	260.76	Hexachlorobutadiene		**<1.5**	**<16.0**	<1.5	<1.5	<16.0	<16.0
91-20-3	128.17	Naphthalene		**<0.32**	**<1.7**	<0.32	<0.32	<1.7	<1.7
87-61-6	181.45	1,2,3-Trichlorobenzene		**<1.5**	**<11.1**	<1.5	<1.5	<11.1	<11.1
1634-04-4	88.15	Methyl tertiary butyl ether		**<1.5**	**<5.4**	<1.5	<1.5	<5.4	<5.4
		Sum of VOC USEPA compounds		**27.6**	**107.4**				
460-00-4		4-Bromofluorobenzene Surrogate Recovery		**107%**		0%	0%		
	81	Aliphatic >C4-C6		**692**	**2292**	<10	<10	<33	<33
	100	Aliphatic >C6-C8		**1954**	**7992**	<10	<10	<41	<41
	130	Aliphatic >C8-C10		**4671**	**24835**	<10	<10	<53	<53
	160	Aliphatic >C10-C12		**331**	**2166**	<10	<10	<65	<65
	78.11	Aromatic >C5-EC7 (Benzene)		**9.2**	**29.4**	<1.5	<1.5	<4.8	<4.8
	92.13	Aromatic >EC7-EC8 (Toluene)		**3.1**	**11.7**	<1.5	<1.5	<5.7	<5.7
	120	Aromatic >EC8-EC10		**28**	**137**	<10	<10	<49	<49
	130	Aromatic >EC10-EC12		**<10**	**<53**	<10	<10	<53	<53

Exova Jones Environmental

Client Name: WYG
Reference: A095973-2
Location: STL
Contact: Simon Johnson

Sample Date: 11 Jan 2017
Date of Receipt: 12 Jan 2017
Date Analysed: 13 Jan 2017

Sample ID: WS31
Depth:
JE Job No: 17/2301
JE Sample No: 14
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: -
Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m³	RL ppbv	MDL ppbv	RL ug/m³	MDL ug/m³
75-01-4	62.5	# Vinyl Chloride		**<1.5**	**<3.8**	<1.5	<1.5	<3.8	<3.8
75-71-8	120.91	Dichlorodifluoromethane (F-12)		**<2.5**	**<12.4**	<2.5	<2.5	<12.4	<12.4
74-87-3	50.49	Chloromethane		**<1.5**	**<3.1**	<1.5	<1.5	<3.1	<3.1
74-83-9	94.95	Bromomethane		**<1.5**	**<5.8**	<1.5	<1.5	<5.8	<5.8
75-00-3	64.52	# Chloroethane		**<1.5**	**<4.0**	<1.5	<1.5	<4.0	<4.0
75-69-4	137.36	# Trichlorofluoromethane (F-11)		**<1.5**	**<8.4**	<1.5	<1.5	<8.4	<8.4
75-35-4	96.95	1,1-Dichloroethene (1,1 DCE)		**<1.5**	**<5.9**	<1.5	<1.5	<5.9	<5.9
75-09-2	84.93	Dichloromethane (DCM)		**<14.4**	**<50**	<14.4	<14.4	<50	<50
156-60-5	96.94	Trans-1,2-Dichloroethene		**<1.5**	**<5.9**	<1.5	<1.5	<5.9	<5.9
75-34-3	98.97	# 1,1-Dichloroethane		**<1.5**	**<6.1**	<1.5	<1.5	<6.1	<6.1
156-59-2	96.94	# cis-1,2-Dichloroethene		**<1**	**<4**	<1	<1	<4	<4
594-20-7	112.99	2,2-Dichloropropane		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
74-97-5	129.38	Bromochloromethane (Int Std)		**NA**	**NA**	<1.5	<1.5	<7.9	<7.9
67-66-3	119.39	# Chloroform		**<1.5**	**<7.3**	<1.5	<1.5	<7.3	<7.3
71-55-6	133.42	# 1,1,1-Trichloroethane		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
563-58-6	110.97	1,1-Dichloropropene		**<1.5**	**<6.8**	<1.5	<1.5	<6.8	<6.8
56-23-5	153.84	# Carbon Tetrachloride		**<1.5**	**<9.4**	<1.5	<1.5	<9.4	<9.4
107-06-2	98.96	# 1,2-Dichloroethane		**<1.5**	**<6.1**	<1.5	<1.5	<6.1	<6.1
71-43-2	78.11	# Benzene		**<1.5**	**<4.8**	<1.5	<1.5	<4.8	<4.8
79-01-6	131.4	# Trichloroethene (TCE)		**<1.5**	**<8.1**	<1.5	<1.5	<8.1	<8.1
78-87-5	112.99	# 1,2-Dichloropropane		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
74-95-3	173.83	Dibromomethane		**<1.5**	**<10.7**	<1.5	<1.5	<10.7	<10.7
75-27-4	163.83	Bromodichloromethane		**<1.5**	**<10.1**	<1.5	<1.5	<10.1	<10.1
10061-01-5	110.97	# cis-1,3-Dichloropropene		**<1.5**	**<6.8**	<1.5	<1.5	<6.8	<6.8
108-88-3	92.13	# Toluene		**13.8**	**52**	<1.5	<1.5	<5.7	<5.7
10061-02-6	110.97	trans-1,3-Dichloropropene		**<1.5**	**<6.8**	<1.5	<1.5	<6.8	<6.8
79-00-5	133.4	# 1,1,2-Trichloroethane		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
127-18-4	165.85	# Tetrachloroethene (PCE)		**<1.5**	**<10.2**	<1.5	<1.5	<10.2	<10.2
142-28-9	112.99	1,3-Dichloropropane		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
124-48-1	208.28	Dibromochloromethane		**<1.5**	**<12.8**	<1.5	<1.5	<12.8	<12.8
106-93-4	187.86	# 1,2-Dibromoethane		**<1.5**	**<11.5**	<1.5	<1.5	<11.5	<11.5
108-90-7	112.56	# Chlorobenzene		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
630-20-6	167.85	1,1,1,2-Tetrachloroethane		**<1.5**	**<10.3**	<1.5	<1.5	<10.3	<10.3
100-41-4	106.16	# Ethylbenzene		**11.4**	**49.5**	<1.5	<1.5	<6.5	<6.5
	106.17	# m&p - Xylenes		**8.9**	**38.6**	<1.5	<1.5	<6.5	<6.5
95-47-6	106.17	# o-Xylene		**3.1**	**13.5**	<1.5	<1.5	<6.5	<6.5
100-42-5	104.14	# Styrene		**2.1**	**8.9**	<1.5	<1.5	<6.4	<6.4
75-25-2	252.77	Bromoform		**<1.5**	**<15.5**	<1.5	<1.5	<15.5	<15.5
98-82-8	120.19	Isopropylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4

Exova Jones Environmental

Client Name: WYG
Reference: A095973-2
Location: STL
Contact: Simon Johnson

Sample Date: 11 Jan 2017
Date of Receipt: 12 Jan 2017
Date Analysed: 13 Jan 2017

Sample ID: WS31
Depth:
JE Job No: 17/2301
JE Sample No: 14
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: -
Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m^3	RL ppbv	MDL ppbv	RL ug/m^3	MDL ug/m^3
79-34-5	167.85	# 1,1,2,2-Tetrachloroethane		**<1.5**	**<10.3**	<1.5	<1.5	<10.3	<10.3
108-86-1	157.01	Bromobenzene		**<1.5**	**<9.6**	<1.5	<1.5	<9.6	<9.6
96-18-4	147.43	1,2,3-Trichloropropane		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
103-65-1	120.19	Propylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4
95-49-8	126.58	2-Chlorotoluene		**<1.5**	**<7.8**	<1.5	<1.5	<7.8	<7.8
108-67-8	120.2	# 1,3,5-Trimethylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4
106-43-4	126.58	4-Chlorotoluene		**<1.5**	**<7.8**	<1.5	<1.5	<7.8	<7.8
98-06-6	134.22	Tert-Butylbenzene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
95-63-6	120.19	# 1,2,4-Trimethylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4
135-98-8	134.22	Sec-Butylbenzene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
99-87-6	134.22	4-Isopropyltoluene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
106-46-7	147.01	# 1,4-Dichlorobenzene		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
541-73-1	147.01	# 1,3-Dichlorobenzene		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
104-51-8	134.22	n-Butylbenzene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
95-50-1	147	# 1,2-Dichlorobenzene		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
96-12-8	236.33	1,2-Dibromo-3-chloropropane		**<1.5**	**<14.5**	<1.5	<1.5	<14.5	<14.5
120-82-1	181.46	1,2,4-Trichlorobenzene		**<1.5**	**<11.1**	<1.5	<1.5	<11.1	<11.1
87-68-3	260.76	Hexachlorobutadiene		**<1.5**	**<16.0**	<1.5	<1.5	<16.0	<16.0
91-20-3	128.17	Naphthalene		**<0.32**	**<1.7**	<0.32	<0.32	<1.7	<1.7
87-61-6	181.45	1,2,3-Trichlorobenzene		**<1.5**	**<11.1**	<1.5	<1.5	<11.1	<11.1
1634-04-4	88.15	Methyl tertiary butyl ether		**<1.5**	**<5.4**	<1.5	<1.5	<5.4	<5.4
		Sum of VOC USEPA compounds		**39.3**	**162.5**				
460-00-4		4-Bromofluorobenzene Surrogate Recovery		**111%**		0%	0%		
	81	Aliphatic >C4-C6		**2071**	**6861**	<10	<10	<33	<33
	100	Aliphatic >C6-C8		**12742**	**52113**	<10	<10	<41	<41
	130	Aliphatic >C8-C10		**6518**	**34655**	<10	<10	<53	<53
	160	Aliphatic >C10-C12		**609**	**3985**	<10	<10	<65	<65
	78.11	Aromatic >C5-EC7 (Benzene)		**<1.5**	**<4.8**	<1.5	<1.5	<4.8	<4.8
	92.13	Aromatic >EC7-EC8 (Toluene)		**13.8**	**52**	<1.5	<1.5	<5.7	<5.7
	120	Aromatic >EC8-EC10		**38**	**186**	<10	<10	<49	<49
	130	Aromatic >EC10-EC12		**53**	**282**	<10	<10	<53	<53

Exova Jones Environmental

Client Name: WYG
Reference: A095973-2
Location: STL
Contact: Simon Johnson

Sample Date: 11 Jan 2017
Date of Receipt: 12 Jan 2017
Date Analysed: 13 Jan 2017

Sample ID: WS34
Depth:
JE Job No: 17/2301
JE Sample No: 16
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: -
Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m^3	RL ppbv	MDL ppbv	RL ug/m^3	MDL ug/m^3
75-01-4	62.5	# Vinyl Chloride		**<1.5**	**<3.8**	<1.5	<1.5	<3.8	<3.8
75-71-8	120.91	Dichlorodifluoromethane (F-12)		**<2.5**	**<12.4**	<2.5	<2.5	<12.4	<12.4
74-87-3	50.49	Chloromethane		**<1.5**	**<3.1**	<1.5	<1.5	<3.1	<3.1
74-83-9	94.95	Bromomethane		**<1.5**	**<5.8**	<1.5	<1.5	<5.8	<5.8
75-00-3	64.52	# Chloroethane		**<1.5**	**<4.0**	<1.5	<1.5	<4.0	<4.0
75-69-4	137.36	# Trichlorofluoromethane (F-11)		**<1.5**	**<8.4**	<1.5	<1.5	<8.4	<8.4
75-35-4	96.95	1,1-Dichloroethene (1,1 DCE)		**<1.5**	**<5.9**	<1.5	<1.5	<5.9	<5.9
75-09-2	84.93	Dichloromethane (DCM)		**<14.4**	**<50**	<14.4	<14.4	<50	<50
156-60-5	96.94	Trans-1,2-Dichloroethene		**<1.5**	**<5.9**	<1.5	<1.5	<5.9	<5.9
75-34-3	98.97	# 1,1-Dichloroethane		**<1.5**	**<6.1**	<1.5	<1.5	<6.1	<6.1
156-59-2	96.94	# cis-1,2-Dichloroethene		**<1**	**<4**	<1	<1	<4	<4
594-20-7	112.99	2,2-Dichloropropane		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
74-97-5	129.38	Bromochloromethane (Int Std)		**NA**	**NA**	<1.5	<1.5	<7.9	<7.9
67-66-3	119.39	# Chloroform		**<1.5**	**<7.3**	<1.5	<1.5	<7.3	<7.3
71-55-6	133.42	# 1,1,1-Trichloroethane		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
563-58-6	110.97	1,1-Dichloropropene		**<1.5**	**<6.8**	<1.5	<1.5	<6.8	<6.8
56-23-5	153.84	# Carbon Tetrachloride		**<1.5**	**<9.4**	<1.5	<1.5	<9.4	<9.4
107-06-2	98.96	# 1,2-Dichloroethane		**<1.5**	**<6.1**	<1.5	<1.5	<6.1	<6.1
71-43-2	78.11	# Benzene		**18**	**57.5**	<1.5	<1.5	<4.8	<4.8
79-01-6	131.4	# Trichloroethene (TCE)		**<1.5**	**<8.1**	<1.5	<1.5	<8.1	<8.1
78-87-5	112.99	# 1,2-Dichloropropane		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
74-95-3	173.83	Dibromomethane		**<1.5**	**<10.7**	<1.5	<1.5	<10.7	<10.7
75-27-4	163.83	Bromodichloromethane		**<1.5**	**<10.1**	<1.5	<1.5	<10.1	<10.1
10061-01-5	110.97	# cis-1,3-Dichloropropene		**<1.5**	**<6.8**	<1.5	<1.5	<6.8	<6.8
108-88-3	92.13	# Toluene		**7.2**	**27.1**	<1.5	<1.5	<5.7	<5.7
10061-02-6	110.97	trans-1,3-Dichloropropene		**<1.5**	**<6.8**	<1.5	<1.5	<6.8	<6.8
79-00-5	133.4	# 1,1,2-Trichloroethane		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
127-18-4	165.85	# Tetrachloroethene (PCE)		**<1.5**	**<10.2**	<1.5	<1.5	<10.2	<10.2
142-28-9	112.99	1,3-Dichloropropane		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
124-48-1	208.28	Dibromochloromethane		**<1.5**	**<12.8**	<1.5	<1.5	<12.8	<12.8
106-93-4	187.86	# 1,2-Dibromoethane		**<1.5**	**<11.5**	<1.5	<1.5	<11.5	<11.5
108-90-7	112.56	# Chlorobenzene		**<1.5**	**<6.9**	<1.5	<1.5	<6.9	<6.9
630-20-6	167.85	1,1,1,2-Tetrachloroethane		**<1.5**	**<10.3**	<1.5	<1.5	<10.3	<10.3
100-41-4	106.16	# Ethylbenzene		**1.8**	**7.8**	<1.5	<1.5	<6.5	<6.5
	106.17	# m&p - Xylenes		**6.7**	**29.1**	<1.5	<1.5	<6.5	<6.5
95-47-6	106.17	# o-Xylene		**2.7**	**11.7**	<1.5	<1.5	<6.5	<6.5
100-42-5	104.14	# Styrene		**1.7**	**7.2**	<1.5	<1.5	<6.4	<6.4
75-25-2	252.77	Bromoform		**<1.5**	**<15.5**	<1.5	<1.5	<15.5	<15.5
98-82-8	120.19	Isopropylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4

Exova Jones Environmental

Client Name: WYG
Reference: A095973-2
Location: STL
Contact: Simon Johnson

Sample Date: 11 Jan 2017
Date of Receipt: 12 Jan 2017
Date Analysed: 13 Jan 2017

Sample ID: WS34
Depth:
JE Job No: 17/2301
JE Sample No: 16
Matrix: Air
Method: TM68 VOCs in gases (GC-MS)

Canister Serial number: -
Sample Train Serial number: -

Q* - Qualifiers

B Indicates analyte found in associated method blank
++ Indicates value exceeds calibration range

Key

MDL Method Detection Limit
RL Reporting Limit
ISO 17025 (UKAS) accredited

Cas No	Molecular Weight	Compound	Q*	RESULT ppbv	RESULT ug/m^3	RL ppbv	MDL ppbv	RL ug/m^3	MDL ug/m^3
79-34-5	167.85	# 1,1,2,2-Tetrachloroethane		**<1.5**	**<10.3**	<1.5	<1.5	<10.3	<10.3
108-86-1	157.01	Bromobenzene		**<1.5**	**<9.6**	<1.5	<1.5	<9.6	<9.6
96-18-4	147.43	1,2,3-Trichloropropane		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
103-65-1	120.19	Propylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4
95-49-8	126.58	2-Chlorotoluene		**<1.5**	**<7.8**	<1.5	<1.5	<7.8	<7.8
108-67-8	120.2	# 1,3,5-Trimethylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4
106-43-4	126.58	4-Chlorotoluene		**<1.5**	**<7.8**	<1.5	<1.5	<7.8	<7.8
98-06-6	134.22	Tert-Butylbenzene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
95-63-6	120.19	# 1,2,4-Trimethylbenzene		**<1.5**	**<7.4**	<1.5	<1.5	<7.4	<7.4
135-98-8	134.22	Sec-Butylbenzene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
99-87-6	134.22	4-Isopropyltoluene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
106-46-7	147.01	# 1,4-Dichlorobenzene		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
541-73-1	147.01	# 1,3-Dichlorobenzene		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
104-51-8	134.22	n-Butylbenzene		**<1.5**	**<8.2**	<1.5	<1.5	<8.2	<8.2
95-50-1	147	# 1,2-Dichlorobenzene		**<1.5**	**<9.0**	<1.5	<1.5	<9.0	<9.0
96-12-8	236.33	1,2-Dibromo-3-chloropropane		**<1.5**	**<14.5**	<1.5	<1.5	<14.5	<14.5
120-82-1	181.46	1,2,4-Trichlorobenzene		**<1.5**	**<11.1**	<1.5	<1.5	<11.1	<11.1
87-68-3	260.76	Hexachlorobutadiene		**<1.5**	**<16.0**	<1.5	<1.5	<16.0	<16.0
91-20-3	128.17	Naphthalene		**<0.32**	**<1.7**	<0.32	<0.32	<1.7	<1.7
87-61-6	181.45	1,2,3-Trichlorobenzene		**<1.5**	**<11.1**	<1.5	<1.5	<11.1	<11.1
1634-04-4	88.15	Methyl tertiary butyl ether		**<1.5**	**<5.4**	<1.5	<1.5	<5.4	<5.4
		Sum of VOC USEPA compounds		**38.1**	**140.4**				
460-00-4		4-Bromofluorobenzene Surrogate Recovery		**102%**		0%	0%		
	81	Aliphatic >C4-C6		**14**	**46**	<10	<10	<33	<33
	100	Aliphatic >C6-C8		**740**	**3026**	<10	<10	<41	<41
	130	Aliphatic >C8-C10		**2162**	**11495**	<10	<10	<53	<53
	160	Aliphatic >C10-C12		**193**	**1263**	<10	<10	<65	<65
	78.11	Aromatic >C5-EC7 (Benzene)		**18**	**57.5**	<1.5	<1.5	<4.8	<4.8
	92.13	Aromatic >EC7-EC8 (Toluene)		**7.2**	**27.1**	<1.5	<1.5	<5.7	<5.7
	120	Aromatic >EC8-EC10		**31**	**152**	<10	<10	<49	<49
	130	Aromatic >EC10-EC12		**<10**	**<53**	<10	<10	<53	<53

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

JE Job No.: 17/2301

SOILS

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.
Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS) accredited - UK.
SA	ISO17025 (SANAS) accredited - South Africa.
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

JE Job No: 17/2301

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/SANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM68	Modified TO-15 method. Volatile Organic Compounds (VOCs) sampled using Gas Canisters, BottleVacs or Tedlar bags and analysed using Entech GC-MS.	PM0	No preparation is required.				
TM68	Modified TO-15 method. Volatile Organic Compounds (VOCs) sampled using Gas Canisters, BottleVacs or Tedlar bags and analysed using Entech GC-MS.	PM0	No preparation is required.	Yes			
TM69	Analysis of gas samples by direct injection onto a Gas Chromatography (GC) column and analysed using a Flame Ionisation Detector (FID) or a Thermocouple Detector (TD)	PM0	No preparation is required.				

Appendix G – Landgas and groundwater monitoring results

WYG Environmental Planning and Transport

LANDGAS AND GROUNDWATER MONITORING RESULTS

5th Floor, Longcross Court, 47 Newport Road, Cardiff, CF24 0AD

Site Name: Swansea Tidal Lagoon
Job No.: A095973-2
Client: Tidal Lagoon Power

Date Monitored: 01.12.2016
Monitoring Engineer: CW
Weather: Sunny, clear and cold

EQUIPMENT USED

Type	Make	Serial	Last Calibrated
Gas Analyser	**Landtec GA5000**	**G502044**	**May-16**
Interface Meter	**Solinst**	**122-004988-1**	**n/a**

LANDGAS CONCENTRATIONS - INSTALLATION CONDITIONS

Exploratory Hole No	Peak		Steady								
	CH_4 (% vol)	CO_2 (% vol)	CH_4 (% vol)	CO_2 (% vol)	O_2 (% vol)	BAL (%)	PID (ppm)	H_2S (ppm)	HCN (ppm)	CO (ppm)	Time
WS01	0.1	1.0	0.1	1.0	18.9	80	nt	0	nt	0	10:19:00
WS02	0.1	0.2	0.1	0.1	22.0	77.8	nt	0	nt	0	10:04:00
WS03	0.1	1.8	0.1	1.8	19.8	78.3	nt	0	nt	0	10:44:00
WS04	0.1	1.5	0.1	1.5	18.1	80.3	nt	0	nt	0	11:10:00
WS05	0.3	1.1	0.2	0.9	20.4	78.5	nt	0	nt	0	11:50:00
WS06	0.3	0.3	0.3	0.2	21.1	78.4	nt	0	nt	0	12:10:00
WS07	0.3	0.2	0.1	0.2	21.4	78.3	nt	0	nt	0	14:11:00
WS28	0.1	1.3	0.1	1.1	20.5	78.3	nt	0	nt	0	14:22:00
WS29	0.1	1.9	0.1	1.9	19.4	78.6	nt	0	nt	0	14:34:00
WS31	0.1	15.9	0.1	15.9	2.1	81.9	nt	0	nt	0	14:51:00

LANDGAS - PHYSICAL PARAMETERS

Exploratory Hole No	Atmos Pressure (m bar)	Atmos Temp (^oC)	BH Flow		BH Pressure		Remarks
			Peak (L/hr)	Steady (L/hr)	Peak (mbar)	Steady (mbar)	
WS01	1032	nt	0.0	0.0	-0.3	-0.3	
WS02	1031	nt	0.0	0.0	0.1	0.1	
WS03	1031	nt	0.0	0.0	0.1	0.1	
WS04	1031	nt	0.0	0.0	0.0	0.0	
WS05	1030	nt	0.0	0.0	0.0	0.0	
WS06	1031	nt	0.0	0.0	0.3	0.3	
WS07	1029	nt	0.0	0.0	0.1	0.1	
WS28	1029	nt	0.0	0.0	-0.1	-0.1	
WS29	1029	nt	-0.1	-0.1	0.1	0.1	
WS31	1029	nt	-0.1	-0.1	-0.1	-0.1	

AMBIENT ATMOSPHERIC CONDITIONS

Parameter	Before Monitoring	After Monitoring
CH_4 (% vol)	0.2	0.2
CO_2 (% vol)	0.1	<0.1
O_2 (% vol)	20.6	20.3
PID (ppm)	0.0	0.0
Atmos Press. (m bar)	1032	1029

ATMOSPHERIC PRESSURE CONDITIONS

3 days prior (m bar)	1028
2 days prior (m bar)	1034
1 day prior (m bar)	1035
during (m bar) am,midday,pm	1032, 1030, 1029
1 day post (m bar)	1027

GROUNDWATER / NAPL - PHYSIO-CHEMICAL PARAMETERS

Exploratory Hole No	Water Surface (mbgl)	Base Depth (mbgl)	LNAPL Surface (mbgl)	DNAPL Surface (mbgl)	Water Quality Indicators						Remarks
					ORP (mV)	SPC (µs/cm)	C (µs/cm)	Ph (value)	DO (mg/L)	Temp (^oC)	
WS01	3.54	4.05	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS02	Dry	4.07	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS03	Dry	4.05	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS04	3.37	3.65	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS05	3.16	3.82	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS06	2.77	3.70	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS07	2.97	3.51	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS28	3.40	4.13	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS29	3.37	3.67	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS31	3.6	4.2	nd	nd	nt	nt	nt	nt	nt	nt	nt

Notes
nt = not tested
nd = not detected

Data Compiled by: CW
Data Checked by: SJ

WYG Environmental Planning and Transport

LANDGAS AND GROUNDWATER MONITORING RESULTS

5th Floor, Longcross Court, 47 Newport Road, Cardiff, CF24 0AD

Site Name: Swansea Tidal Lagoon
Job No.: A095973-2
Client: Tidal Lagoon Power

Date Monitored: 01.12.2016
Monitoring Engineer: CW
Weather: Sunny, clear and cold

EQUIPMENT USED

Type	Make	Serial	Last Calibrated
Gas Analyser	**Landtec GA5000**	**G502044**	**May-16**
Interface Meter	**Solinst**	**122-004988-1**	**n/a**

LANDGAS CONCENTRATIONS - INSTALLATION CONDITIONS

Exploratory Hole No	Peak		Steady								
	CH_4 (% vol)	CO_2 (% vol)	CH_4 (% vol)	CO_2 (% vol)	O_2 (% vol)	BAL (%)	PID (ppm)	H_2S (ppm)	HCN (ppm)	CO (ppm)	Time
WS34	0.1	2.8	0.1	2.8	16.5	80.6	nt	0	nt	0	15:01:00
WS12	0.2	0.7	0.1	0.3	21.5	78.1	nt	0	nt	0	15:51:00
WS14	5.0	11.8	5.0	11.8	1.5	81.7	nt	0	nt	3	16:07:00

LANDGAS - PHYSICAL PARAMETERS

Exploratory Hole No	Atmos Pressure (m bar)	Atmos Temp (^oC)	BH Flow		BH Pressure		Remarks
			Peak (L/hr)	Steady (L/hr)	Peak (mbar)	Steady (mbar)	
WS34	1029	nt	-0.1	-0.1	0.0	0.0	
WS12	1029	nt	-0.1	-0.1	0.0	0.0	
WS14	1026	nt	0.0	0.0	0.0	0.0	

AMBIENT ATMOSPHERIC CONDITIONS

Parameter	Before Monitoring	After Monitoring
CH_4 (% vol)	0.2	0.2
CO_2 (% vol)	0.1	<0.1
O_2 (% vol)	20.6	20.3
PID (ppm)	0.0	0.0
Atmos Press. (m bar)	1032	1029

ATMOSPHERIC PRESSURE CONDITIONS

3 days prior (m bar)	1028
2 days prior (m bar)	1034
1 day prior (m bar)	1035
during (m bar) am,midday,pm	1032, 1030, 1029
1 day post (m bar)	1027

GROUNDWATER / NAPL - PHYSIO-CHEMICAL PARAMETERS

Exploratory Hole No	Water Surface (mbgl)	Base Depth (mbgl)	LNAPL Surface (mbgl)	DNAPL Surface (mbgl)	Water Quality Indicators						Remarks
					ORP (mV)	SPC (µs/cm)	C (µs/cm)	Ph (value)	DO (mg/L)	Temp (^oC)	
WS34	3.54	4.12	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS12	1.40	3.50	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS14	1.88	3.45	nd	nd	nt	nt	nt	nt	nt	nt	nt

Notes
nt = not tested
nd = not detected

Data Compiled by: CW
Data Checked by: SJ

WYG Environmental Planning and Transport

LANDGAS AND GROUNDWATER MONITORING RESULTS

5th Floor, Longcross Court, 47 Newport Road, Cardiff, CF24 0AD

Site Name: Swansea Tidal Lagoon
Job No.: A095973-2
Client: Tidal Lagoon Power

Date Monitored: 02.12.2016
Monitoring Engineer: CW
Weather: Sunny, clear and cold

EQUIPMENT USED

Type	Make	Serial	Last Calibrated
Gas Analyser	**Landtec GA5000**	**G502044**	**May-16**
Interface Meter	**Solinst**	**122-004988-1**	**n/a**

LANDGAS CONCENTRATIONS - INSTALLATION CONDITIONS

Exploratory Hole No	Peak		Steady								
	CH_4 (% vol)	CO_2 (% vol)	CH_4 (% vol)	CO_2 (% vol)	O_2 (% vol)	BAL (%)	PID (ppm)	H_2S (ppm)	HCN (ppm)	CO (ppm)	Time
WS09	0.2	1.1	0.2	1.1	20.6	78.1	0	0	nt	0	08:45:00
WS10	0.2	2.9	0.2	2.9	15.4	81.5	0	0	nt	0	09:14:00
WS16	0.2	2.5	0.1	2.5	19.1	78.3	0	0	nt	0	10:28:00
WS15	0.1	2.0	0.1	2.0	17.1	80.8	0	0	nt	0	11:13:00
WS19	0.1	0.6	0.1	0.6	21.3	78	7.1	0	nt	0	12:29:00
WS20	0.1	1.4	0.1	1.4	20.3	78.2	3.4	0	nt	0	12:53:00

LANDGAS - PHYSICAL PARAMETERS

Exploratory Hole No	Atmos Pressure (m bar)	Atmos Temp (^oC)	BH Flow		BH Pressure		Remarks
			Peak (L/hr)	Steady (L/hr)	Peak (mbar)	Steady (mbar)	
WS09	1026	nt	0.0	0.0	0.0	0.0	
WS10	1027	nt	-0.1	-0.1	0.1	0.1	
WS16	1027	nt	0.1	0.1	0.0	0.0	
WS15	1026	nt	0.1	0.1	0.0	0.0	
WS19	1025	nt	0.0	0.0	0.0	0.0	
WS20	1026	nt	0.0	0.0	0.1	0.1	

AMBIENT ATMOSPHERIC CONDITIONS

Parameter	Before Monitoring	After Monitoring
CH_4 (% vol)	0.2	0.2
CO_2 (% vol)	0.1	<0.1
O_2 (% vol)	20.6	20.3
PID (ppm)	0.0	0.0
Atmos Press. (m bar)	1032	1029

ATMOSPHERIC PRESSURE CONDITIONS

3 days prior (m bar)	1028
2 days prior (m bar)	1034
1 day prior (m bar)	1035
during (m bar) am,midday,pm	1032, 1030, 1029
1 day post (m bar)	1027

GROUNDWATER / NAPL - PHYSIO-CHEMICAL PARAMETERS

Exploratory Hole No	Water Surface (mbgl)	Base Depth (mbgl)	LNAPL Surface (mbgl)	DNAPL Surface (mbgl)	Water Quality Indicators						Remarks
					ORP (mV)	SPC (µs/cm)	C (µs/cm)	Ph (value)	DO (mg/L)	Temp (^oC)	
WS09	Dry	3.36	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS10	Dry	2.93	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS16	2.18	3.15	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS15	2.07	2.70	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS19	1.87	2.50	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS20	2.81	3.59	nd	nd	nt	nt	nt	nt	nt	nt	nt

Notes
nt = not tested
nd = not detected

Data Compiled by: CW
Data Checked by: SJ

WYG Environmental Planning and Transport

LANDGAS AND GROUNDWATER MONITORING RESULTS

5th Floor, Longcross Court, 47 Newport Road, Cardiff, CF24 0AD

Site Name: Swansea Tidal Lagoon
Job No.: A095973-2
Client: Tidal Lagoon Power

Date Monitored: 02.12.2016
Monitoring Engineer: CW
Weather: Sunny, clear and cold

EQUIPMENT USED			
Type	Make	Serial	Last Calibrated
Gas Analyser	**Landtec GA5000**	**G502044**	**May-16**
Interface Meter	**Solinst**	**122-004988-1**	**n/a**

LANDGAS CONCENTRATIONS - INSTALLATION CONDITIONS

Exploratory Hole No	Peak		Steady								
	CH_4 (% vol)	CO_2 (% vol)	CH_4 (% vol)	CO_2 (% vol)	O_2 (% vol)	BAL (%)	PID (ppm)	H_2S (ppm)	HCN (ppm)	CO (ppm)	Time
BH1	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt
BH2	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt
BH3	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt
BH4	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt
BH5	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt
BH6	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt
BH7	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt
BH8	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt
BH9	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt
BH10	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt
BH11	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt
BH12	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt

LANDGAS - PHYSICAL PARAMETERS

Exploratory Hole No	Atmos Pressure (m bar)	Atmos Temp (°C)	BH Flow		BH Pressure		Remarks
			Peak (L/hr)	Steady (L/hr)	Peak (mbar)	Steady (mbar)	
BH1	nt	nt	nt	nt	nt	nt	
BH2	nt	nt	nt	nt	nt	nt	
BH3	nt	nt	nt	nt	nt	nt	
BH4	nt	nt	nt	nt	nt	nt	
BH5	nt	nt	nt	nt	nt	nt	
BH6	nt	nt	nt	nt	nt	nt	
BH7	nt	nt	nt	nt	nt	nt	
BH8	nt	nt	nt	nt	nt	nt	
BH9	nt	nt	nt	nt	nt	nt	
BH10	nt	nt	nt	nt	nt	nt	
BH11	nt	nt	nt	nt	nt	nt	
BH12	nt	nt	nt	nt	nt	nt	

AMBIENT ATMOSPHERIC CONDITIONS		
Parameter	Before Monitoring	After Monitoring
CH_4 (% vol)	nt	nt
CO_2 (% vol)	nt	nt
O_2 (% vol)	nt	nt
PID (ppm)	nt	nt
Atmos Press. (m bar)	nt	nt

ATMOSPHERIC PRESSURE CONDITIONS	
3 days prior (m bar)	nt
2 days prior (m bar)	nt
1 day prior (m bar)	nt
during (m bar) am,midday,pm	nt
1 day post (m bar)	nt

GROUNDWATER / NAPL - PHYSIO-CHEMICAL PARAMETERS

Exploratory Hole No	Water Surface (mbgl)	Base Depth (mbgl)	LNAPL Surface (mbgl)	DNAPL Surface (mbgl)	Water Quality Indicators						Remarks
					ORP (mV)	SPC (µs/cm)	C (µs/cm)	Ph (value)	DO (mg/L)	Temp (°C)	
BH1	4.46	9.22	nd	nd	-522.0	20409.0	nt	7.6	5.1	12.7	None
BH2	4.89	11.27	nd	nd	-539.0	21010.0	nt	7.6	4.7	12.9	None
BH3	3.37	8.86	nd	nd	-240.2	34448	nt	7.9	1.8	13.9	None
BH4	2.67	3.39	nd	nd	nt	nt	nt	nt	nt	nt	None
BH5	2.09	8.42	nd	nd	-18.1	393.6	nt	8.0	1.9	13.9	None
BH6	1.87	8.81	nd	nd	-121.9	725.0	nt	7.8	3.0	13.3	None
BH7	1.97	8.11	nd	nd	-20.9	467.1	nt	8.1	2.1	13.3	None
BH8	2.57	11.35	nd	nd	-39.9	512.4	nt	8.0	1.9	13.4	None
BH9	2.07	6.45	nd	nd	-87.2	561.7	nt	7.9	0.8	13.5	None
BH10	1.96	8.79	nd	nd	-45.3	498.5	nt	8.0	1.2	13.7	None
BH11	2.69	8.46	nd	nd	-101.2	612.6	nt	8.1	1.4	13.8	None
BH12	1.4	4.9	nd	nd	-498.6	19423.0	nt	8.2	0.9	12.9	None

Notes
nt = not tested
nd = not detected

Data Compiled by: CW
Data Checked by: SJ

WYG Environmental Planning and Transport

LANDGAS AND GROUNDWATER MONITORING RESULTS

5th Floor, Longcross Court, 47 Newport Road, Cardiff, CF24 0AD

Site Name: Swansea Tidal Lagoon
Job No.: A095973-2
Client: Tidal Lagoon Power

Date Monitored: 12.12.2016
Monitoring Engineer: CW
Weather: Cloudy and raining

EQUIPMENT USED

Type	Make	Serial	Last Calibrated
Gas Analyser	**Landtec GA5000**	**G502044**	**May-16**
Interface Meter	**Solinst**	**122-004988-1**	**n/a**

LANDGAS CONCENTRATIONS - INSTALLATION CONDITIONS

Exploratory Hole No	Peak		Steady								
	CH_4 (% vol)	CO_2 (% vol)	CH_4 (% vol)	CO_2 (% vol)	O_2 (% vol)	BAL (%)	PID (ppm)	H_2S (ppm)	HCN (ppm)	CO (ppm)	Time
WS01	0.0	1.3	0.0	1.3	18.4	80.3	0	0	nt	0	08:55:00
WS02	0.1	1.6	0.1	0.6	18.3	80	0	0	nt	0	08:43:00
WS03	0.1	1.5	0.1	1.5	19.3	79.1	0	0	nt	0	09:05:00
WS04	0.1	1.4	0.1	1.4	18.1	80.4	0	0	nt	0	09:13:00
WS05	0.2	3.3	0.2	3.3	17.0	79.5	7.9	0	nt	0	09:23:00
WS06	0.3	0.7	0.2	0.5	20.5	78.8	8.1	0	nt	0	09:34:00
WS07	0.1	0.3	0.1	0.2	21.3	78.4	11.1	0	nt	0	10:19:00
WS28	0.1	0.3	0.1	0.1	21.2	78.6	31.1	0	nt	0	10:46:00
WS29	0.1	1.7	0.1	1.7	19.6	78.6	39.8	0	nt	0	11:00:00
WS31	0.2	15.2	0.1	15.2	2.6	82.1	71.9	0	nt	0	11:10:00

LANDGAS - PHYSICAL PARAMETERS

Exploratory Hole No	Atmos Pressure (m bar)	Atmos Temp (^oC)	BH Flow		BH Pressure		Remarks
			Peak (L/hr)	Steady (L/hr)	Peak (mbar)	Steady (mbar)	
WS01	1017	nt	-0.1	-0.1	-0.9	-0.9	
WS02	1017	nt	0.0	0.0	0.0	0.0	
WS03	1018	nt	-0.1	-0.1	0.0	0.0	
WS04	1018	nt	-0.1	-0.1	0.0	0.0	
WS05	1018	nt	-0.1	-0.1	0.0	0.0	
WS06	1018	nt	-0.1	-0.2	0.1	0.1	
WS07	1018	nt	-0.1	-0.1	0.0	0.0	
WS28	1018	nt	-0.3	-0.3	0.1	0.1	
WS29	1018	nt	-0.2	-0.2	0.1	0.1	
WS31	1019	nt	-0.3	-0.3	0.0	0.0	

AMBIENT ATMOSPHERIC CONDITIONS

Parameter	Before Monitoring	After Monitoring
CH_4 (% vol)	0.2	0.2
CO_2 (% vol)	0.1	<0.1
O_2 (% vol)	20.5	20.4
PID (ppm)	0.0	0.0
Atmos Press. (m bar)	1017	1017

ATMOSPHERIC PRESSURE CONDITIONS

3 days prior (m bar)	1022
2 days prior (m bar)	1021
1 day prior (m bar)	1025
during (m bar) am,midday,pm	1017, 1017, 1017
1 day post (m bar)	1019

GROUNDWATER / NAPL - PHYSIO-CHEMICAL PARAMETERS

Exploratory Hole No	Water Surface (mbgl)	Base Depth (mbgl)	LNAPL Surface (mbgl)	DNAPL Surface (mbgl)	Water Quality Indicators						Remarks
					ORP (mV)	SPC (µs/cm)	C (µs/cm)	Ph (value)	DO (mg/L)	Temp (^oC)	
WS01	3.60	4.05	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS02	Dry	4.06	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS03	Dry	4.06	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS04	3.40	3.65	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS05	3.13	3.82	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS06	2.76	3.70	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS07	2.92	3.50	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS28	3.45	4.12	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS29	3.41	3.68	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS31	3.7	4.2	nd	nd	nt	nt	nt	nt	nt	nt	nt

Notes
nt = not tested
nd = not detected

Data Compiled by: CW
Data Checked by: SJ

WYG Environmental Planning and Transport

LANDGAS AND GROUNDWATER MONITORING RESULTS

5th Floor, Longcross Court, 47 Newport Road, Cardiff, CF24 0AD

Site Name: Swansea Tidal Lagoon
Job No.: A095973-2
Client: Tidal Lagoon Power

Date Monitored: 12.12.2016
Monitoring Engineer: CW
Weather: Cloudy and raining

EQUIPMENT USED			
Type	Make	Serial	Last Calibrated
Gas Analyser	**Landtec GA5000**	**G502044**	**May-16**
Interface Meter	**Solinst**	**122-004988-1**	**n/a**

LANDGAS CONCENTRATIONS - INSTALLATION CONDITIONS

Exploratory Hole No	Peak		Steady								
	CH_4 (% vol)	CO_2 (% vol)	CH_4 (% vol)	CO_2 (% vol)	O_2 (% vol)	BAL (%)	PID (ppm)	H_2S (ppm)	HCN (ppm)	CO (ppm)	Time
WS34	0.1	0.7	0.1	0.7	18.5	80.7	61.2	0	nt	0	11:27:00
WS12	0.4	0.9	0.3	0.9	21.3	77.5	19.5	0	nt	0	12:21:00
WS14	6.4	11.9	6.4	11.9	0.5	81.2	105.4	0	nt	3	12:04:00
WS09	0.2	1.3	0.2	1.1	20.3	77.8	0	0	nt	0	12:28:00
WS10	0.2	4.1	0.2	4.0	16.1	81.2	0	0	nt	0	12:37:00
WS16	0.2	4.8	0.1	4.8	15.4	79.7	0	0	nt	0	13:00:00
WS15	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt
WS19	0.2	0.8	0.1	0.0.7	20.9	78.3	5.8	0	nt	0	14:00:00
WS20	0.2	1.7	0.1	1.5	20.8	80.1	2.5	0	nt	0	14:13:00
WS17	0.1	0.3	0.1	0.3	21.3	78.3	0	0	nt	0	11:33:00
WS08	0.1	5.1	0.1	5.1	12.6	82.2	0	0	nt	0	12:15:00
WS25	0.2	0.2	0.2	0.5	20.7	78.6	204.1	0	nt	0	10:08:00

LANDGAS - PHYSICAL PARAMETERS

Exploratory Hole No	Atmos Pressure (m bar)	Atmos Temp (°C)	BH Flow		BH Pressure		Remarks
			Peak (L/hr)	Steady (L/hr)	Peak (mbar)	Steady (mbar)	
WS34	1018	nt	-0.2	-0.3	0.0	0.0	
WS12	1018	nt	-0.2	-0.2	-0.1	-0.1	
WS14	1018	nt	-0.3	-0.3	-0.1	-0.1	
WS09	1017	nt	-0.1	-0.1	0.0	0.0	
WS10	1017	nt	-0.1	-0.2	0.0	0.0	
WS16	1017	nt	-0.1	-0.1	0.1	0.1	
WS15	nt	nt	nt	nt	nt	nt	
WS19	1017	nt	-0.1	-0.1	0.0	0.0	
WS20	1017	nt	-0.1	-0.1	0.0	0.0	
WS17	1018	nt	-0.2	-0.2	0.1	0.1	
WS08	1018	nt	-0.2	-0.2	0.1	0.1	
WS25	1018	nt	-0.1	-0.1	0.1	0.1	Freed product (diesel smell) Faulty Dip meter?

AMBIENT ATMOSPHERIC CONDITIONS			ATMOSPHERIC PRESSURE CONDITIONS	
Parameter	Before Monitoring	After Monitoring		
CH_4 (% vol)	0.2	0.2	3 days prior (m bar)	1022
CO_2 (% vol)	0.1	<0.1	2 days prior (m bar)	1021
O_2 (% vol)	20.5	20.4	1 day prior (m bar)	1025
PID (ppm)	0.0	0.0	during (m bar) am,midday,pm	1017, 1017, 1017
Atmos Press. (m bar)	1017	1017	1 day post (m bar)	1019

GROUNDWATER / NAPL - PHYSIO-CHEMICAL PARAMETERS

Exploratory Hole No	Water Surface (mbgl)	Base Depth (mbgl)	LNAPL Surface (mbgl)	DNAPL Surface (mbgl)	Water Quality Indicators						Remarks
					ORP (mV)	SPC (µs/cm)	C (µs/cm)	Ph (value)	DO (mg/L)	Temp (°C)	
WS34	3.61	4.11	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS12	1.51	3.48	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS14	1.90	3.42	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS09	Dry	3.80	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS10	Dry	2.94	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS16	2.17	3.14	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS15	2.15	2.69	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS19	1.91	2.50	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS20	2.78	3.60	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS17	3.16	3.63	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS25	2.7	3.3	nd	nd	nt	nt	nt	nt	nt	nt	nt

Notes nt = not tested
nd = not detected

Data Compiled by: CW
Data Checked by: SJ

WYG Environmental Planning and Transport

LANDGAS AND GROUNDWATER MONITORING RESULTS

5th Floor, Longcross Court, 47 Newport Road, Cardiff, CF24 0AD

Site Name: Swansea Tidal Lagoon
Job No.: A095973-2
Client: Tidal Lagoon Power

Date Monitored: 09.12.2016
Monitoring Engineer: JB/CW
Weather: Cold and clear

EQUIPMENT USED			
Type	Make	Serial	Last Calibrated
Gas Analyser	**Landtec GA5000**	**G502044**	**May-16**
Interface Meter	**Solinst**	**122-004988-1**	**n/a**

LANDGAS CONCENTRATIONS - INSTALLATION CONDITIONS

Exploratory Hole No	Peak		Steady								
	CH_4 (% vol)	CO_2 (% vol)	CH_4 (% vol)	CO_2 (% vol)	O_2 (% vol)	BAL (%)	PID (ppm)	H_2S (ppm)	HCN (ppm)	CO (ppm)	Time
BH1	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt
BH2	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt
BH3	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt
BH4	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt
BH5	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt
BH6	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt
BH7	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt
BH8	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt
BH9	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt
BH10	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt
BH11	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt
BH12	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt	nt

LANDGAS - PHYSICAL PARAMETERS

Exploratory Hole No	Atmos Pressure (m bar)	Atmos Temp (°C)	BH Flow		BH Pressure		Remarks
			Peak (L/hr)	Steady (L/hr)	Peak (mbar)	Steady (mbar)	
BH1	nt	nt	nt	nt	nt	nt	
BH2	nt	nt	nt	nt	nt	nt	
BH3	nt	nt	nt	nt	nt	nt	
BH4	nt	nt	nt	nt	nt	nt	
BH5	nt	nt	nt	nt	nt	nt	
BH6	nt	nt	nt	nt	nt	nt	
BH7	nt	nt	nt	nt	nt	nt	
BH8	nt	nt	nt	nt	nt	nt	
BH9	nt	nt	nt	nt	nt	nt	
BH10	nt	nt	nt	nt	nt	nt	
BH11	nt	nt	nt	nt	nt	nt	
BH12	nt	nt	nt	nt	nt	nt	

AMBIENT ATMOSPHERIC CONDITIONS			ATMOSPHERIC PRESSURE CONDITIONS	
Parameter	Before Monitoring	After Monitoring		
CH_4 (% vol)	nt	nt	3 days prior (m bar)	nt
CO_2 (% vol)	nt	nt	2 days prior (m bar)	nt
O_2 (% vol)	nt	nt	1 day prior (m bar)	nt
PID (ppm)	nt	nt	during (m bar) am,midday,pm	nt
Atmos Press. (m bar)	nt	nt	1 day post (m bar)	nt

GROUNDWATER / NAPL - PHYSIO-CHEMICAL PARAMETERS

Exploratory Hole No	Water Surface (mbgl)	Base Depth (mbgl)	LNAPL Surface (mbgl)	DNAPL Surface (mbgl)	Water Quality Indicators						Remarks
					ORP (mV)	SPC (µs/cm)	C (µs/cm)	Ph (value)	DO (mg/L)	Temp (°C)	
BH1	4.50	9.22	nd	nd	nt	nt	nt	nt	nt	nt	None
BH2	4.91	11.27	nd	nd	nt	nt	nt	nt	nt	nt	None
BH3	3.41	8.86	nd	nd	nt	nt	nt	nt	nt	nt	None
BH4	2.68	3.39	nd	nd	nt	nt	nt	nt	nt	nt	None
BH5	2.18	8.42	nd	nd	nt	nt	nt	nt	nt	nt	None
BH6	1.80	8.81	nd	nd	nt	nt	nt	nt	nt	nt	None
BH7	2.02	8.11	nd	nd	nt	nt	nt	nt	nt	nt	None
BH8	2.62	11.35	nd	nd	nt	nt	nt	nt	nt	nt	None
BH9	2.11	6.45	nd	nd	nt	nt	nt	nt	nt	nt	None
BH10	2.04	8.79	nd	nd	nt	nt	nt	nt	nt	nt	None
BH11	2.71	8.46	nd	nd	nt	nt	nt	nt	nt	nt	None
BH12	1.4	4.9	nd	nd	nt	nt	nt	nt	nt	nt	None

Notes
nt = not tested
nd = not detected

Data Compiled by: CW
Data Checked by: SJ

WYG Environmental Planning and Transport

LANDGAS AND GROUNDWATER MONITORING RESULTS

5th Floor, Longcross Court, 47 Newport Road, Cardiff, CF24 0AD

Site Name: Swansea Tidal Lagoon
Job No.: A095973-2
Client: Tidal Lagoon Power

Date Monitored: 15/16.12.2016
Monitoring Engineer: CW
Weather: Cloudy and raining

EQUIPMENT USED

Type	Make	Serial	Last Calibrated
Gas Analyser	**Landtec GA5000**	**G502044**	**May-16**
Interface Meter	**Solinst**	**122-004988-1**	**n/a**

LANDGAS CONCENTRATIONS - INSTALLATION CONDITIONS

Exploratory Hole No	Peak		Steady								
	CH_4 (% vol)	CO_2 (% vol)	CH_4 (% vol)	CO_2 (% vol)	O_2 (% vol)	BAL (%)	PID (ppm)	H_2S (ppm)	HCN (ppm)	CO (ppm)	Time
WS01	0.1	1.2	0.1	1.2	18.1	80.6	0	0	nt	0	13:04:00
WS02	0.2	1.6	0.1	1.6	18.3	80	0	0	nt	0	13:45:00
WS03	0.1	1.6	0.1	1.6	19.4	78.9	0	0	nt	0	13:57:00
WS04	0.1	1.6	0.1	1.6	17.4	80.9	0	0	nt	0	08:34:00
WS05	0.2	4.6	0.1	4.6	14.7	80.6	133.4	0	nt	0	08:46:00
WS06	0.2	1.0	0.2	0.9	20.3	78.6	263.1	0	nt	0	08:57:00
WS07	0.1	0.4	0.1	0.3	21.3	78.3	0	0	nt	0	09:09:00
WS28	0.1	1.3	0.1	1.3	20.4	78.2	0	0	nt	0	09:20:00
WS29	0.1	1.8	0.1	1.8	19.5	78.6	0	0	nt	0	09:16:00
WS31	0.3	11.6	0.1	11.6	6.9	81.4	0	0	nt	0	10:02:00

LANDGAS - PHYSICAL PARAMETERS

Exploratory Hole No	Atmos Pressure (m bar)	Atmos Temp (^oC)	BH Flow		BH Pressure		Remarks
			Peak (L/hr)	Steady (L/hr)	Peak (mbar)	Steady (mbar)	
WS01	1014	nt	-0.3	-0.3	0.0	0.0	
WS02	1013	nt	-0.3	-0.3	0.1	0.1	
WS03	1013	nt	-0.3	-0.3	-0.1	-0.1	
WS04	1020	nt	-0.1	-0.1	-0.1	-0.1	
WS05	1020	nt	-0.1	-0.1	0.1	0.1	
WS06	1020	nt	-0.1	-0.1	0.1	0.1	
WS07	1020	nt	-0.1	-0.2	0.0	0.0	
WS28	1020	nt	-0.1	-0.1	0.0	0.0	
WS29	1021	nt	-0.2	-0.2	-0.1	-0.1	
WS31	1021	nt	-0.2	-0.2	-0.2	-0.2	

AMBIENT ATMOSPHERIC CONDITIONS (16/12 in itallics)

Parameter	Before Monitoring	After Monitoring
CH_4 (% vol)	0.2	0.2
CO_2 (% vol)	0.1	<0.1
O_2 (% vol)	20.7	20.5
PID (ppm)	0.0	0.0
Atmos Press. (m bar)	1014 (1020)	1013 (1022)

ATMOSPHERIC PRESSURE CONDITIONS (16/12 in itallics)

3 days prior (m bar)	1019 *(1016)*
2 days prior (m bar)	1016 *(1015)*
1 day prior (m bar)	1015 *(1014)*
during (m bar) am,midday,pm	1014, 1013, 1013 *(1020, 1021,*
1 day post (m bar)	1023 *(1037)*

GROUNDWATER / NAPL - PHYSIO-CHEMICAL PARAMETERS

Exploratory Hole No	Water Surface (mbgl)	Base Depth (mbgl)	LNAPL Surface (mbgl)	DNAPL Surface (mbgl)	Water Quality Indicators						Remarks
					ORP (mV)	SPC (µs/cm)	C (µs/cm)	Ph (value)	DO (mg/L)	Temp (^oC)	
WS01	3.56	4.03	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS02	Dry	4.05	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS03	Dry	4.05	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS04	3.10	3.65	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS05	3.01	3.82	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS06	2.70	3.70	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS07	2.88	3.50	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS28	3.14	4.12	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS29	3.38	3.68	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS31	3.6	4.2	nd	nd	nt	nt	nt	nt	nt	nt	nt

Notes
nt = not tested
nd = not detected

Data Compiled by: CW
Data Checked by: SJ

WYG Environmental Planning and Transport

LANDGAS AND GROUNDWATER MONITORING RESULTS

5th Floor, Longcross Court, 47 Newport Road, Cardiff, CF24 0AD

Site Name: Swansea Tidal Lagoon
Job No.: A095973-2
Client: Tidal Lagoon Power

Date Monitored: 15/16.12.2016
Monitoring Engineer: CW
Weather: Cloudy and raining

EQUIPMENT USED

Type	Make	Serial	Last Calibrated
Gas Analyser	**Landtec GA5000**	**G502044**	**May-16**
Interface Meter	**Solinst**	**122-004988-1**	**n/a**

LANDGAS CONCENTRATIONS - INSTALLATION CONDITIONS

Exploratory Hole No	Peak		Steady								
	CH_4 (% vol)	CO_2 (% vol)	CH_4 (% vol)	CO_2 (% vol)	O_2 (% vol)	BAL (%)	PID (ppm)	H_2S (ppm)	HCN (ppm)	CO (ppm)	Time
WS34	0.1	4.5	0.1	4.5	12.6	82.8	0	0	nt	0	10:11:00
WS12	0.1	0.5	0.1	0.4	21.4	78.1	0	0	nt	0	12:09:00
WS14	1.7	7.9	1.7	7.9	6.7	83.7	350.2	0	nt	0	12:38:00
WS09	0.1	1.4	0.1	1.4	19.8	78.7	0	0	nt	0	14:42:00
WS10	0.1	4.3	0.1	4.2	16.3	81.3	0	0	nt	0	10:31:00
WS16	0.1	6.9	0.1	6.9	10.3	82.7	0	0	nt	0	11:37:00
WS15	0.1	2.5	0.1	2.5	16.0	81.4	0	0	nt	0	11:22:00
WS19	0.1	0.3	0.1	0.3	21.3	78.3	2.1	0	nt	0	10:31:00
WS20	0.1	2.8	0.1	2.6	18.8	78.5	1.9	0	nt	0	14:13:00
WS17	0.1	1.9	0.1	1.9	19.2	78.8	0	0	nt	0	10:17:00
WS08	0.1	4.9	0.1	4.9	12.8	82.2	0	0	nt	0	14:28:00
WS25	0.1	0.2	0.1	0.2	21.1	78.6	290.7	0	nt	0	08:17:00

LANDGAS - PHYSICAL PARAMETERS

Exploratory Hole No	Atmos Pressure (m bar)	Atmos Temp (^oC)	BH Flow		BH Pressure		Remarks
			Peak (L/hr)	Steady (L/hr)	Peak (mbar)	Steady (mbar)	
WS34	1021	nt	-0.3	-0.3	-0.2	-0.2	
WS12	1014	nt	-0.3	-0.3	0.0	0.0	
WS14	1014	nt	-0.3	-0.3	0.2	0.2	
WS09	1013	nt	-0.2	-0.2	-0.1	-0.1	
WS10	1021	nt	-0.1	-0.1	0.1	0.1	
WS16	1014	nt	-0.2	-0.2	-0.1	-0.1	
WS15	1014	nt	-0.2	-0.2	0.1	0.1	
WS19	1022	nt	-0.2	-0.2	0.0	0.0	
WS20	1022	nt	0.0	-0.2	0.1	0.1	
WS17	1022	nt	-0.2	-0.2	0.0	0.0	
WS08	1013	nt	-0.3	-0.3	0.0	0.0	
WS25	1019	nt	-0.1	-0.1	-0.1	-0.1	

AMBIENT ATMOSPHERIC CONDITIONS

Parameter	Before Monitoring	After Monitoring
CH_4 (% vol)	0.2	0.2
CO_2 (% vol)	0.1	<0.1
O_2 (% vol)	20.7	20.5
PID (ppm)	0.0	0.0
Atmos Press. (m bar)	1014 (1020)	1013 (1022)

ATMOSPHERIC PRESSURE CONDITIONS

3 days prior (m bar)	1019 *(1016)*
2 days prior (m bar)	1016 *(1015)*
1 day prior (m bar)	1015 *(1014)*
during (m bar) am,midday,pm	1014, 1013, 1013 *(1020, 1021, 1022)*
1 day post (m bar)	1023 *(1037)*

GROUNDWATER / NAPL - PHYSIO-CHEMICAL PARAMETERS

Exploratory Hole No	Water Surface (mbgl)	Base Depth (mbgl)	LNAPL Surface (mbgl)	DNAPL Surface (mbgl)	Water Quality Indicators						Remarks
					ORP (mV)	SPC (µs/cm)	C (µs/cm)	Ph (value)	DO (mg/L)	Temp (^oC)	
WS34	3.17	4.11	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS12	1.38	3.48	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS14	1.88	3.42	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS09	3.35	3.80	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS10	Dry	2.94	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS16	2.17	3.15	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS15	2.09	2.62	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS19	1.89	2.50	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS20	2.65	3.60	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS17	2.94	3.63	nd	nd	nd	nd	nd	nd	nd	nd	nd
WS08	3.38	3.80	nd	nd	nd	nd	nd	nd	nd	nd	nd
WS25	2.88	3.36	2.66	nd	nt	nt	nt	nt	nt	nt	nt

Notes
nt = not tested
nd = not detected

Data Compiled by: CW
Data Checked by: SJ

WYG Environmental Planning and Transport

LANDGAS AND GROUNDWATER MONITORING RESULTS

5th Floor, Longcross Court, 47 Newport Road, Cardiff, CF24 0AD

Site Name: Swansea Tidal Lagoon
Job No.: A095973-2
Client: Tidal Lagoon Power

Date Monitored: 20/22.12.2016
Monitoring Engineer: JB
Weather: Cloudy and raining

EQUIPMENT USED

Type	Make	Serial	Last Calibrated
Gas Analyser	**Landtec GA5000**	**G502044**	**May-16**
Interface Meter	**Solinst**	**122-004988-1**	**n/a**

LANDGAS CONCENTRATIONS - INSTALLATION CONDITIONS

Exploratory Hole No	Peak		Steady								
	CH_4 (% vol)	CO_2 (% vol)	CH_4 (% vol)	CO_2 (% vol)	O_2 (% vol)	BAL (%)	PID (ppm)	H_2S (ppm)	HCN (ppm)	CO (ppm)	Time
WS01	0.1	1.4	0.1	1.4	18.1	80.4	0	0	nt	0	08:45:00
WS02	0.1	1.3	0.1	1.3	18.9	79.8	0	0	nt	0	09:37:00
WS03	0.1	0.7	0.1	0.7	20.8	78.4	0	0	nt	0	09:55:00
WS04	0.1	1.7	0.1	1.7	17.6	80.6	0	0	nt	0	10:17:00
WS05	0.2	3.2	0.2	2.4	19.1	78.3	*	0	nt	0	10:09:00
WS28	0.1	1.4	0.1	1.4	20.2	78.3	0	0	nt	0	10:07:00
WS29	0.1	2.0	0.1	2.0	19.5	78.4	0	0	nt	0	10:10:00
WS31	0.1	8.4	0.1	8.4	11.5	80	0	0	nt	0	10:43:00

LANDGAS - PHYSICAL PARAMETERS

Exploratory Hole No	Atmos Pressure (m bar)	Atmos Temp (^oC)	BH Flow		BH Pressure		Remarks
			Peak (L/hr)	Steady (L/hr)	Peak (mbar)	Steady (mbar)	
WS01	1019	nt	0.1	0.1	0.1	0.1	*Fault with PID
WS02	1018	nt	0.1	0.1	0.1	0.1	
WS03	1019	nt	0.1	0.1	0.1	0.1	
WS04	1019	nt	0.0	0.0	-0.1	-0.1	
WS05	1025	nt	-0.1	-0.1	-0.1	-0.1	
WS28	1018	nt	0.0	0.0	0.0	0.0	
WS29	1019	nt	0.0	0.0	0.0	0.0	
WS31	1018	nt	0.0	0.0	0.0	0.0	

AMBIENT ATMOSPHERIC CONDITIONS

Parameter	Before Monitoring	After Monitoring
CH_4 (% vol)	0.1	0.2
CO_2 (% vol)	0.1	<0.1
O_2 (% vol)	20.4	20.3
PID (ppm)	0.0	0.0
Atmos Press. (m bar)	1019 (1025)	1017 (1025)

ATMOSPHERIC PRESSURE CONDITIONS

3 days prior (m bar)	1037 *(1027)*
2 days prior (m bar)	1036 *(1018)*
1 day prior (m bar)	1027 *(1018)*
during (m bar) am,midday,pm	1019, 1018, 1017 *(1025, 1025, 1025)*
1 day post (m bar)	1018 *(1023)*

GROUNDWATER / NAPL - PHYSIO-CHEMICAL PARAMETERS

Exploratory Hole No	Water Surface (mbgl)	Base Depth (mbgl)	LNAPL Surface (mbgl)	DNAPL Surface (mbgl)	Water Quality Indicators						Remarks
					ORP (mV)	SPC (µs/cm)	C (µs/cm)	Ph (value)	DO (mg/L)	Temp (^oC)	
WS01	3.55	4.03	nd	nd	nd	nd	nd	nd	nd	nd	nd
WS02	Dry	4.05	nd	nd	nd	nd	nd	nd	nd	nd	nd
WS03	Dry	4.05	nd	nd	nd	nd	nd	nd	nd	nd	nd
WS04	3.16	3.65	nd	nd	nd	nd	nd	nd	nd	nd	nd
WS05	3.10	3.80	nd	nd	nd	nd	nd	nd	nd	nd	nd
WS28	3.29	4.13	nd	nd	nd	nd	nd	nd	nd	nd	nd
WS29	3.2	3.66	nd	nd	nd	nd	nd	nd	nd	nd	nd
WS31	3.6	4.2	nd	nd	nd	nd	nd	nd	nd	nd	nd

Notes
nt = not tested
nd = not detected

Data Compiled by: CW
Data Checked by: SJ

WYG Environmental Planning and Transport

LANDGAS AND GROUNDWATER MONITORING RESULTS

5th Floor, Longcross Court, 47 Newport Road, Cardiff, CF24 0AD

Site Name: Swansea Tidal Lagoon
Job No.: A095973-2
Client: Tidal Lagoon Power

Date Monitored: 15/16.12.2016
Monitoring Engineer: JB
Weather: Cloudy and raining

EQUIPMENT USED

Type	Make	Serial	Last Calibrated
Gas Analyser	**Landtec GA5000**	**G502044**	**May-16**
Interface Meter	**Solinst**	**122-004988-1**	**n/a**

LANDGAS CONCENTRATIONS - INSTALLATION CONDITIONS

Exploratory Hole No	Peak		Steady								
	CH_4 (% vol)	CO_2 (% vol)	CH_4 (% vol)	CO_2 (% vol)	O_2 (% vol)	BAL (%)	PID (ppm)	H_2S (ppm)	HCN (ppm)	CO (ppm)	Time
WS34	0.1	4.5	0.1	4.5	13.8	81.6	0	0	nt	0	10:59:00
WS12	0.1	1.3	0.1	0.8	21.0	78.1	0	0	nt	0	11:41:00
WS14	0.6	3.8	0.6	3.8	14.7	80.9	345.4	0	nt	0	11:52:00
WS09	0.1	1.2	0.1	1.2	20.3	78.4	0	0	nt	0	13:02:00
WS10	0.1	3.6	0.1	3.6	14.0	82.3	0	0	nt	0	13:23:00
WS16	0.1	5.5	0.1	5.5	12.8	81.6	0	0	nt	0	12:30:00
WS15	0.1	1.7	0.1	1.7	18.5	79.7	0	0	nt	0	12:09:00
WS19	0.2	0.5	0.1	0.5	21.9	77.5	*	0	nt	0	09:13:00
WS20	0.3	1.8	0.3	1.8	19.2	78.7	40.8	0	nt	0	08:56:00
WS17	0.1	2.6	0.1	2.6	18.8	78.5	*	0	nt	0	09:27:00
WS08	0.2	3.8	0.1	3.8	15.3	80.8	0	0	nt	0	12:51:00
WS25	0.2	3.1	0.2	3.1	16.9	79.8	*	0	nt	0	10:29:00

LANDGAS - PHYSICAL PARAMETERS

Exploratory Hole No	Atmos Pressure (m bar)	Atmos Temp (^oC)	BH Flow		BH Pressure		Remarks
			Peak (L/hr)	Steady (L/hr)	Peak (mbar)	Steady (mbar)	
WS34	1018	nt	0.0	0.0	0.0	0.0	*Fault with PID
WS12	1018	nt	0.0	0.0	0.0	0.0	
WS14	1018	nt	0.0	0.0	0.0	0.0	
WS09	1017	nt	-0.2	-0.2	-0.1	-0.1	
WS10	1017	nt	0.1	0.1	-0.2	-0.2	
WS16	1018	nt	-0.1	-0.1	0.1	0.1	
WS15	1018	nt	0.0	0.0	-0.1	-0.1	
WS19	1026	nt	-0.1	-0.1	0.0	0.0	
WS20	1025	nt	-0.2	-0.2	0.0	0.0	
WS17	1025	nt	-0.1	-0.1	0.0	0.0	
WS08	1017	nt	-0.1	-0.1	0.0	0.0	
WS25	1025	nt	-0.1	-0.1	-0.1	-0.1	

AMBIENT ATMOSPHERIC CONDITIONS

Parameter	Before Monitoring	After Monitoring
CH_4 (% vol)	0.1	0.2
CO_2 (% vol)	0.1	<0.1
O_2 (% vol)	20.4	20.3
PID (ppm)	0.0	0.0
Atmos Press. (m bar)	1019 (1025)	1017 (1025)

ATMOSPHERIC PRESSURE CONDITIONS

3 days prior (m bar)	1037 *(1027)*
2 days prior (m bar)	1036 *(1018)*
1 day prior (m bar)	1027 *(1018)*
during (m bar) am,midday,pm	1019, 1018, 1017 *(1025, 1025, 1025)*
1 day post (m bar)	1018 *(1023)*

GROUNDWATER / NAPL - PHYSIO-CHEMICAL PARAMETERS

Exploratory Hole No	Water Surface (mbgl)	Base Depth (mbgl)	LNAPL Surface (mbgl)	DNAPL Surface (mbgl)	Water Quality Indicators						Remarks
					ORP (mV)	SPC (µs/cm)	C (µs/cm)	Ph (value)	DO (mg/L)	Temp (^oC)	
WS34	3.30	4.10	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS12	1.41	3.50	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS14	1.88	3.42	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS09	3.37	3.80	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS10	2.60	2.95	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS16	2.16	3.14	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS15	2.10	2.60	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS19	1.95	2.50	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS20	2.87	3.60	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS17	3.10	3.65	nd	nd	nd	nd	nd	nd	nd	nd	nd
WS08	3.40	3.80	nd	nd	nd	nd	nd	nd	nd	nd	nd
WS25	2.60	3.35	2.49	nd	nt	nt	nt	nt	nt	nt	nt

Notes
nt = not tested
nd = not detected

Data Compiled by: CW
Data Checked by: SJ

WYG Environmental Planning and Transport

LANDGAS AND GROUNDWATER MONITORING RESULTS

5th Floor, Longcross Court, 47 Newport Road, Cardiff, CF24 0AD

Site Name: Swansea Tidal Lagoon
Job No.: A095973-2
Client: Tidal Lagoon Power

Date Monitored: 11.01.2017
Monitoring Engineer: CW
Weather: Sunny and cold

EQUIPMENT USED			
Type	Make	Serial	Last Calibrated
Gas Analyser	**Landtec GA5000**	**G502044**	**May-16**
Interface Meter	**Solinst**	**122-004988-1**	**n/a**

LANDGAS CONCENTRATIONS - INSTALLATION CONDITIONS

Exploratory Hole No	Peak		Steady								
	CH_4 (% vol)	CO_2 (% vol)	CH_4 (% vol)	CO_2 (% vol)	O_2 (% vol)	BAL (%)	PID (ppm)	H_2S (ppm)	HCN (ppm)	CO (ppm)	Time
WS01	0.1	1.6	0.1	1.6	17.5	80.8	0	0	nt	0	08:35:00
WS02	0.1	0.2	0.1	0.2	20.9	78.8	0	0	nt	0	08:21:00
WS03	0.2	0.6	0.1	0.5	20.9	78.5	0	0	nt	0	12:20:00
WS04	0.3	2.4	0.1	2.4	16.0	81.5	0	0	nt	0	13:52:00
WS05	0.2	1.7	0.1	0.6	21.0	78.3	50.1	0	nt	0	09:06:00
WS06	0.1	0.2	0.1	0.1	21.5	78.3	53.4	0	nt	0	14:12:00
WS07	0.2	0.4	0.2	0.3	21.1	78.4	0	0	nt	0	14:22:00
WS28	0.1	0.4	0.1	0.2	21.4	78.3	0	0	nt	0	14:31:00
WS29	0.1	0.1	0.1	0.1	21.6	78.2	0	0	nt	0	14:39:00
WS31	0.5	15.6	0.5	15.4	1.9	82.2	58.3	0	nt	0	11:46:00

LANDGAS - PHYSICAL PARAMETERS

Exploratory Hole No	Atmos Pressure (m bar)	Atmos Temp (°C)	BH Flow		BH Pressure		Remarks
			Peak (L/hr)	Steady (L/hr)	Peak (mbar)	Steady (mbar)	
WS01	1011	nt	-0.1	-0.1	0.0	0.1	
WS02	1011	nt	-0.2	-0.2	0.0	0.0	
WS03	1013	nt	-0.3	-0.3	0.0	0.0	
WS04	1013	nt	-0.3	-0.3	0.1	0.1	
WS05	1011	nt	-0.1	-0.1	-0.1	-0.1	
WS06	1015	nt	-0.3	-0.3	-0.1	-0.1	
WS07	1015	nt	-0.2	-0.2	0.0	0.0	
WS28	1015	nt	-0.2	-0.2	0.1	0.1	
WS29	1015	nt	-0.2	-0.2	0.0	0.0	
WS31	1014	nt	-0.3	-0.4	0.0	0.0	

AMBIENT ATMOSPHERIC CONDITIONS		
Parameter	Before Monitoring	After Monitoring
CH_4 (% vol)	0.1	0.1
CO_2 (% vol)	0.1	0.1
O_2 (% vol)	21.1	21.0
PID (ppm)	0.0	0.0
Atmos Press. (m bar)	1011	1015

ATMOSPHERIC PRESSURE CONDITIONS	
3 days prior (m bar)	1032
2 days prior (m bar)	1019
1 day prior (m bar)	1013
during (m bar) am,midday,pm	1011, 1013, 1015
1 day post (m bar)	1007

GROUNDWATER / NAPL - PHYSIO-CHEMICAL PARAMETERS

Exploratory Hole No	Water Surface (mbgl)	Base Depth (mbgl)	LNAPL Surface (mbgl)	DNAPL Surface (mbgl)	Water Quality Indicators						Remarks
					ORP (mV)	SPC (µs/cm)	C (µs/cm)	Ph (value)	DO (mg/L)	Temp (°C)	
WS01	3.65	4.03	nd	nd	nd	nd	nd	nd	nd	nd	nd
WS02	Dry	4.05	nd	nd	nd	nd	nd	nd	nd	nd	nd
WS03	Dry	4.05	nd	nd	nd	nd	nd	nd	nd	nd	nd
WS04	3.48	3.65	nd	nd	nd	nd	nd	nd	nd	nd	nd
WS05	3.22	3.80	nd	nd	nd	nd	nd	nd	nd	nd	nd
WS06	2.91	3.70	nd	nd	nd	nd	nd	nd	nd	nd	nd
WS07	3.01	3.50	nd	nd	nd	nd	nd	nd	nd	nd	nd
WS28	3.58	4.13	nd	nd	nd	nd	nd	nd	nd	nd	nd
WS29	3.44	3.66	nd	nd	nd	nd	nd	nd	nd	nd	nd
WS31	3.68	4.2	nd	nd	nd	nd	nd	nd	nd	nd	nd

Notes nt = not tested
nd = not detected

Data Compiled by: CW
Data Checked by: SJ

WYG Environmental Planning and Transport

LANDGAS AND GROUNDWATER MONITORING RESULTS

5th Floor, Longcross Court, 47 Newport Road, Cardiff, CF24 0AD

Site Name: Swansea Tidal Lagoon
Job No.: A095973-2
Client: Tidal Lagoon Power

Date Monitored: 11.01.2017
Monitoring Engineer: CW
Weather: Sunny and cold

EQUIPMENT USED

Type	Make	Serial	Last Calibrated
Gas Analyser	**Landtec GA5000**	**G502044**	**May-16**
Interface Meter	**Solinst**	**122-004988-1**	**n/a**

LANDGAS CONCENTRATIONS - INSTALLATION CONDITIONS

Exploratory Hole No	Peak		Steady								
	CH_4 (% vol)	CO_2 (% vol)	CH_4 (% vol)	CO_2 (% vol)	O_2 (% vol)	BAL (%)	PID (ppm)	H_2S (ppm)	HCN (ppm)	CO (ppm)	Time
WS34	0.2	1.3	0.1	1.3	20.3	78.4	0	0	nt	0	11:01:00
WS12	0.1	1.6	0.1	1.0	21.2	77.7	0	0	nt	0	09:41:00
WS14	5.8	12.4	5.8	12.4	0.5	81.3	129.8	0	nt	0	10:04:00
WS09	0.2	0.6	0.1	0.6	21.1	78.2	0	0	nt	0	13:40:00
WS10	0.2	3.3	0.1	2.6	17.2	80.1	0	0	nt	0	12:52:00
WS16	0.4	1.3	0.1	0.4	21.3	78.2	0	0	nt	0	10:34:00
WS15	0.3	2.4	0.1	2.4	16.0	81.5	0	0	nt	0	13:52:00
WS19	0.1	0.5	0.1	0.5	21.3	78.1	0	0	nt	0	15:11:00
WS20	0.1	1.6	0.1	1.6	19.7	78.6	0	0	nt	0	15:19:00
WS17	0.1	1.7	0.1	1.7	19.7	78.5	0	0	nt	0	14:48:00
WS08	0.2	0.4	0.1	0.4	21.2	78.3	0	0	nt	0	13:16:00
WS25	3.4	5.5	3.1	5.0	12.9	79	79.4	0	nt	0	11:25:00

LANDGAS - PHYSICAL PARAMETERS

Exploratory Hole No	Atmos Pressure (m bar)	Atmos Temp (°C)	BH Flow		BH Pressure		Remarks
			Peak (L/hr)	Steady (L/hr)	Peak (mbar)	Steady (mbar)	
WS34	1012	nt	-0.3	-0.3	0.0	0.0	? Fault with Dipmeter - free porduct on dipmeter but
WS12	1012	nt	-0.3	-0.3	-0.6	-0.6	
WS14	1012	nt	-0.2	-0.2	0.1	0.1	
WS09	1014	nt	-0.2	-0.2	0.1	0.1	
WS10	1014	nt	-0.3	-0.3	0.0	0.0	
WS16	1012	nt	-0.3	-0.3	0.0	0.0	
WS15	1013	nt	-0.3	-0.3	0.1	0.1	
WS19	1015	nt	-0.3	-0.3	0.0	0.0	
WS20	1016	nt	-0.3	-0.3	0.1	0.1	
WS17	1015	nt	-0.3	-0.3	0.0	0.0	
WS08	1014	nt	-0.3	-0.3	-0.1	-0.1	
WS25	1013	nt	-0.3	-0.3	0.0	0.0	

AMBIENT ATMOSPHERIC CONDITIONS

Parameter	Before Monitoring	After Monitoring
CH_4 (% vol)	0.1	0.1
CO_2 (% vol)	0.1	0.1
O_2 (% vol)	21.1	21.0
PID (ppm)	0.0	0.0
Atmos Press. (m bar)	1011	1015

ATMOSPHERIC PRESSURE CONDITIONS

3 days prior (m bar)	1032
2 days prior (m bar)	1019
1 day prior (m bar)	1013
during (m bar) am,midday,pm	1011, 1013, 1015
1 day post (m bar)	1007

GROUNDWATER / NAPL - PHYSIO-CHEMICAL PARAMETERS

Exploratory Hole No	Water Surface (mbgl)	Base Depth (mbgl)	LNAPL Surface (mbgl)	DNAPL Surface (mbgl)	Water Quality Indicators						Remarks
					ORP (mV)	SPC (µs/cm)	C (µs/cm)	Ph (value)	DO (mg/L)	Temp (°C)	
WS34	3.61	4.10	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS12	1.45	3.50	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS14	2.02	3.42	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS09	Dry	3.80	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS10	Dry	2.95	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS16	2.20	3.14	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS15	2.14	2.60	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS19	2.08	2.50	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS20	3.01	3.60	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS17	3.24	3.65	nd	nd	nd	nd	nd	nd	nd	nd	nd
WS08	3.57	3.80	nd	nd	nd	nd	nd	nd	nd	nd	nd
WS25	2.89	3.35	? (see above)	nd	nt	nt	nt	nt	nt	nt	nt

Notes
nt = not tested
nd = not detected

Data Compiled by: CW
Data Checked by: SJ

WYG Environmental Planning and Transport

LANDGAS AND GROUNDWATER MONITORING RESULTS

5th Floor, Longcross Court, 47 Newport Road, Cardiff, CF24 0AD

Site Name: Swansea Tidal Lagoon
Job No.: A095973-2
Client: Tidal Lagoon Power

Date Monitored: 19.01.2017
Monitoring Engineer: CW
Weather: Cloudy and cold

EQUIPMENT USED			
Type	Make	Serial	Last Calibrated
Gas Analyser	**Landtec GA5000**	**G502044**	**May-16**
Interface Meter	**Solinst**	**122-004988-1**	**n/a**

LANDGAS CONCENTRATIONS - INSTALLATION CONDITIONS

Exploratory Hole No	Peak		Steady								
	CH_4 (% vol)	CO_2 (% vol)	CH_4 (% vol)	CO_2 (% vol)	O_2 (% vol)	BAL (%)	PID (ppm)	H_2S (ppm)	HCN (ppm)	CO (ppm)	Time
WS01	0.1	1.6	0.0	1.6	17.6	80.8	0	0	nt	0	09:50:00
WS02	0.1	1.4	0.1	1.4	19.7	78.8	0	0	nt	0	09:39:00
WS03	0.0	0.8	0.0	0.8	20.8	78.4	0	0	nt	0	10:01:00
WS04	0.0	0.4	0.0	0.4	20.8	81.5	0	0	nt	0	10:11:00
WS05	0.2	2.1	0.1	1.6	19.7	78.6	38.8	0	nt	0	10:20:00
WS06	0.2	0.3	0.1	0.2	21.4	78.3	55.1	0	nt	0	10:31:00
WS07	0.1	0.3	0.1	0.2	21.6	78.1	30.1	0	nt	0	10:52:00
WS28	0.1	0.9	0.1	0.8	21.0	78.1	0	0	nt	0	11:01:00
WS29	0.1	1.7	0.1	1.7	20.0	78.2	0	0	nt	0	11:08:00
WS31	0.4	15.6	0.4	15.6	2.2	81.8	24.4	0	nt	0	11:18:00

LANDGAS - PHYSICAL PARAMETERS

Exploratory Hole No	Atmos Pressure (m bar)	Atmos Temp (°C)	BH Flow		BH Pressure		Remarks
			Peak (L/hr)	Steady (L/hr)	Peak (mbar)	Steady (mbar)	
WS01	1037	nt	0.3	0.3	0.0	0.0	
WS02	1036	nt	0.0	0.0	0.1	0.1	
WS03	1038	nt	0.0	0.0	0.1	0.1	
WS04	1038	nt	0.1	0.1	0.1	0.1	
WS05	1038	nt	0.2	0.2	0.0	0.0	
WS06	1038	nt	-1.7	-1.7	-0.3	-0.3	
WS07	1038	nt	0.1	0.1	-0.2	-0.2	
WS28	1038	nt	0.2	0.2	-0.1	-0.1	
WS29	1037	nt	0.2	0.2	0.1	0.1	
WS31	1038	nt	0.1	0.1	0.0	0.0	

AMBIENT ATMOSPHERIC CONDITIONS		
Parameter	Before Monitoring	After Monitoring
CH_4 (% vol)	<0.1	0.1
CO_2 (% vol)	0.1	0.2
O_2 (% vol)	21.4	21.3
PID (ppm)	0.0	0.0
Atmos Press. (m bar)	1037	1038

ATMOSPHERIC PRESSURE CONDITIONS	
3 days prior (m bar)	1029
2 days prior (m bar)	1034
1 day prior (m bar)	1037
during (m bar) am,midday,pm	1037, 1038, 1038
1 day post (m bar)	1032

GROUNDWATER / NAPL - PHYSIO-CHEMICAL PARAMETERS

Exploratory Hole No	Water Surface (mbgl)	Base Depth (mbgl)	LNAPL Surface (mbgl)	DNAPL Surface (mbgl)	Water Quality Indicators						Remarks
					ORP (mV)	SPC (µs/cm)	C (µs/cm)	Ph (value)	DO (mg/L)	Temp (°C)	
WS01	3.59	4.03	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS02	Dry	4.05	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS03	Dry	4.05	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS04	3.11	3.65	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS05	3.09	3.80	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS06	2.84	3.70	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS07	2.95	3.50	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS28	3.21	4.13	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS29	3.08	3.66	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS31	3.55	4.17	3.43	nd	nt	nt	nt	nt	nt	nt	nt

Notes nt = not tested
nd = not detected

Data Compiled by: CW
Data Checked by: SJ

WYG Environmental Planning and Transport

LANDGAS AND GROUNDWATER MONITORING RESULTS

5th Floor, Longcross Court, 47 Newport Road, Cardiff, CF24 0AD

Site Name: Swansea Tidal Lagoon
Job No.: A095973-2
Client: Tidal Lagoon Power

Date Monitored: 19.01.2017
Monitoring Engineer: CW
Weather: Coudy and cold

EQUIPMENT USED

Type	Make	Serial	Last Calibrated
Gas Analyser	**Landtec GA5000**	**G502044**	**May-16**
Interface Meter	**Solinst**	**122-004988-1**	**n/a**

LANDGAS CONCENTRATIONS - INSTALLATION CONDITIONS

Exploratory Hole No	Peak		Steady								
	CH_4 (% vol)	CO_2 (% vol)	CH_4 (% vol)	CO_2 (% vol)	O_2 (% vol)	BAL (%)	PID (ppm)	H_2S (ppm)	HCN (ppm)	CO (ppm)	Time
WS34	0.1	2.1	0.1	2.1	18.4	79.4	34.8	0	nt	0	11:26:00
WS12	0.1	0.8	0.1	0.8	21.3	77.8	12.1	0	nt	0	12:25:00
WS14	4.5	12.0	4.5	12.0	0.3	83.2	89.5	4	nt	0	12:39:00
WS09	0.1	1.2	0.1	1.2	20.2	78.5	0	0	nt	0	11:53:00
WS10	0.1	1.5	0.1	1.5	18.5	79.9	0	0	nt	0	12:04:00
WS16	0.3	3.2	0.1	3.2	17.8	78.9	61.1	0	nt	0	13:03:00
WS15	0.6	2.3	0.2	2.1	15.9	81.8	81.2	0	nt	0	12:50:00
WS19	0.3	0.7	0.2	0.4	21.4	78.1	59.1	0	nt	0	13:31:00
WS20	0.2	1.9	0.1	1.9	19.1	78.9	41.3	0	nt	0	13:40:00
WS17	0.1	2.7	0.1	2.7	19.2	78	0	0	nt	0	11:32:00
WS08	0.1	2.9	0.1	2.9	15.8	81.2	0	0	nt	0	11:45:00
WS25	0.2	0.8	0.2	0.8	20.5	78.5	66.9	0	nt	0	10:42:00

LANDGAS - PHYSICAL PARAMETERS

Exploratory Hole No	Atmos Pressure (m bar)	Atmos Temp (°C)	BH Flow		BH Pressure		Remarks
			Peak (L/hr)	Steady (L/hr)	Peak (mbar)	Steady (mbar)	
WS34	1038	nt	0.1	0.1	-0.1	-0.1	
WS12	1036	nt	-2.7	-2.7	0.1	0.1	
WS14	1037	nt	0.0	0.0	0.0	0.0	
WS09	1036	nt	0.1	0.1	0.1	0.1	
WS10	1036	nt	0.0	0.0	0.2	0.2	
WS16	1038	nt	0.1	0.1	0.0	0.0	
WS15	1038	nt	-0.1	-0.1	-0.2	-0.2	
WS19	1037	nt	0.2	0.2	0.1	0.1	
WS20	1038	nt	0.2	0.2	0.0	0.0	
WS17	1038	nt	0.0	0.0	0.1	0.1	
WS08	1036	nt	0.1	0.1	0.0	0.0	
WS25	1038	nt	0.2	0.2	0.1	0.1	

AMBIENT ATMOSPHERIC CONDITIONS

Parameter	Before Monitoring	After Monitoring
CH_4 (% vol)	<0.1	0.1
CO_2 (% vol)	0.1	0.2
O_2 (% vol)	21.4	21.3
PID (ppm)	0.0	0.0
Atmos Press. (m bar)	1037	1038

ATMOSPHERIC PRESSURE CONDITIONS

3 days prior (m bar)	1029
2 days prior (m bar)	1034
1 day prior (m bar)	1037
during (m bar) am,midday,pm	1037, 1038, 1038
1 day post (m bar)	1032

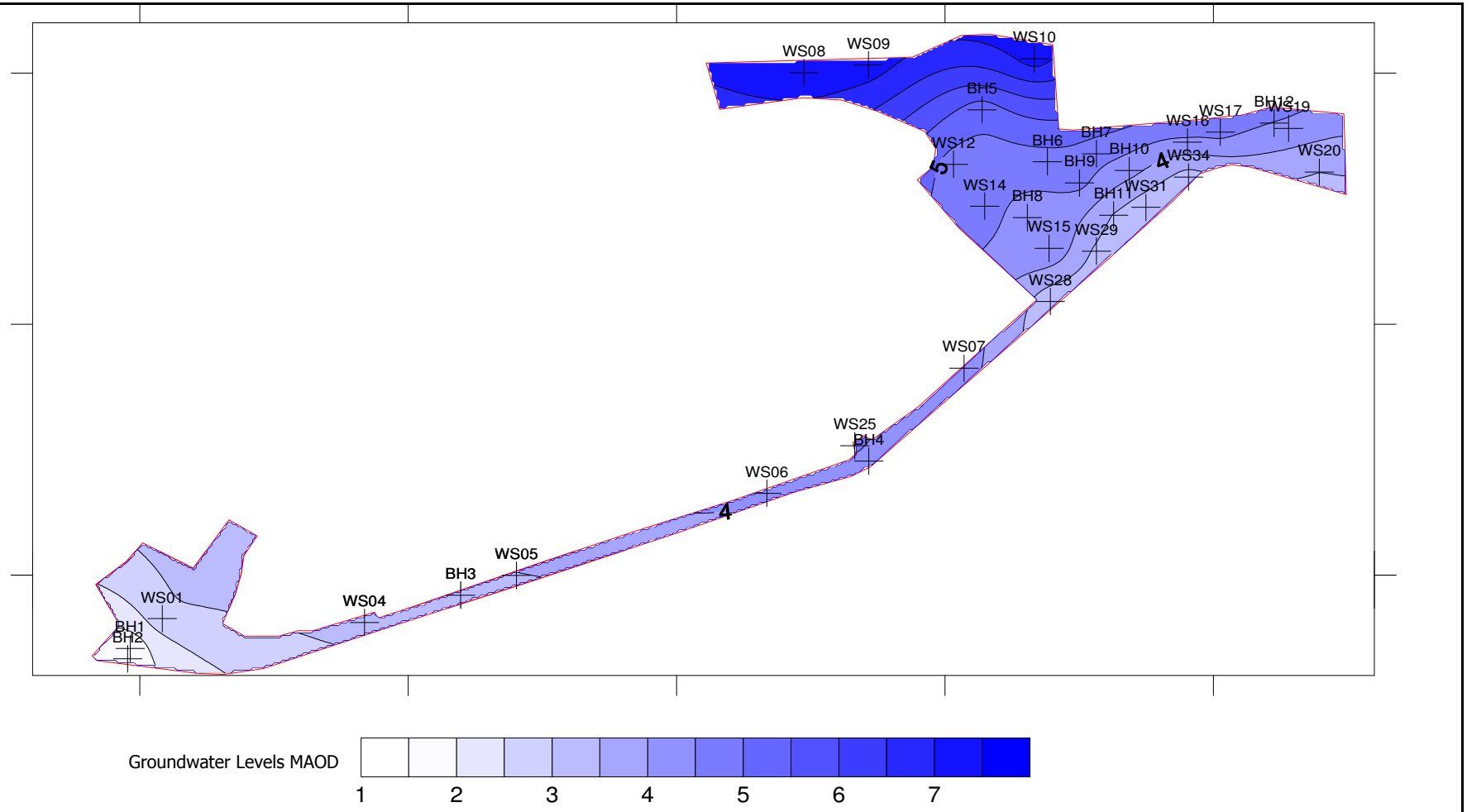
GROUNDWATER / NAPL - PHYSIO-CHEMICAL PARAMETERS

Exploratory Hole No	Water Surface (mbgl)	Base Depth (mbgl)	LNAPL Surface (mbgl)	DNAPL Surface (mbgl)	Water Quality Indicators						Remarks
					ORP (mV)	SPC (µs/cm)	C (µs/cm)	Ph (value)	DO (mg/L)	Temp (°C)	
WS34	3.22	4.10	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS12	1.39	3.50	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS14	1.79	3.42	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS09	3.31	3.80	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS10	2.54	2.95	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS16	2.09	3.14	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS15	2.04	2.60	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS19	1.82	2.50	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS20	2.80	3.60	nd	nd	nt	nt	nt	nt	nt	nt	nt
WS17	3.02	3.65	nd	nd	nd	nd	nd	nd	nd	nd	nd
WS08	3.33	3.80	nd	nd	nd	nd	nd	nd	nd	nd	nd
WS25	2.53	3.35	? (see above)	nd	nt	nt	nt	nt	nt	nt	nt

Notes
nt = not tested
nd = not detected

Data Compiled by: CW
Data Checked by: SJ

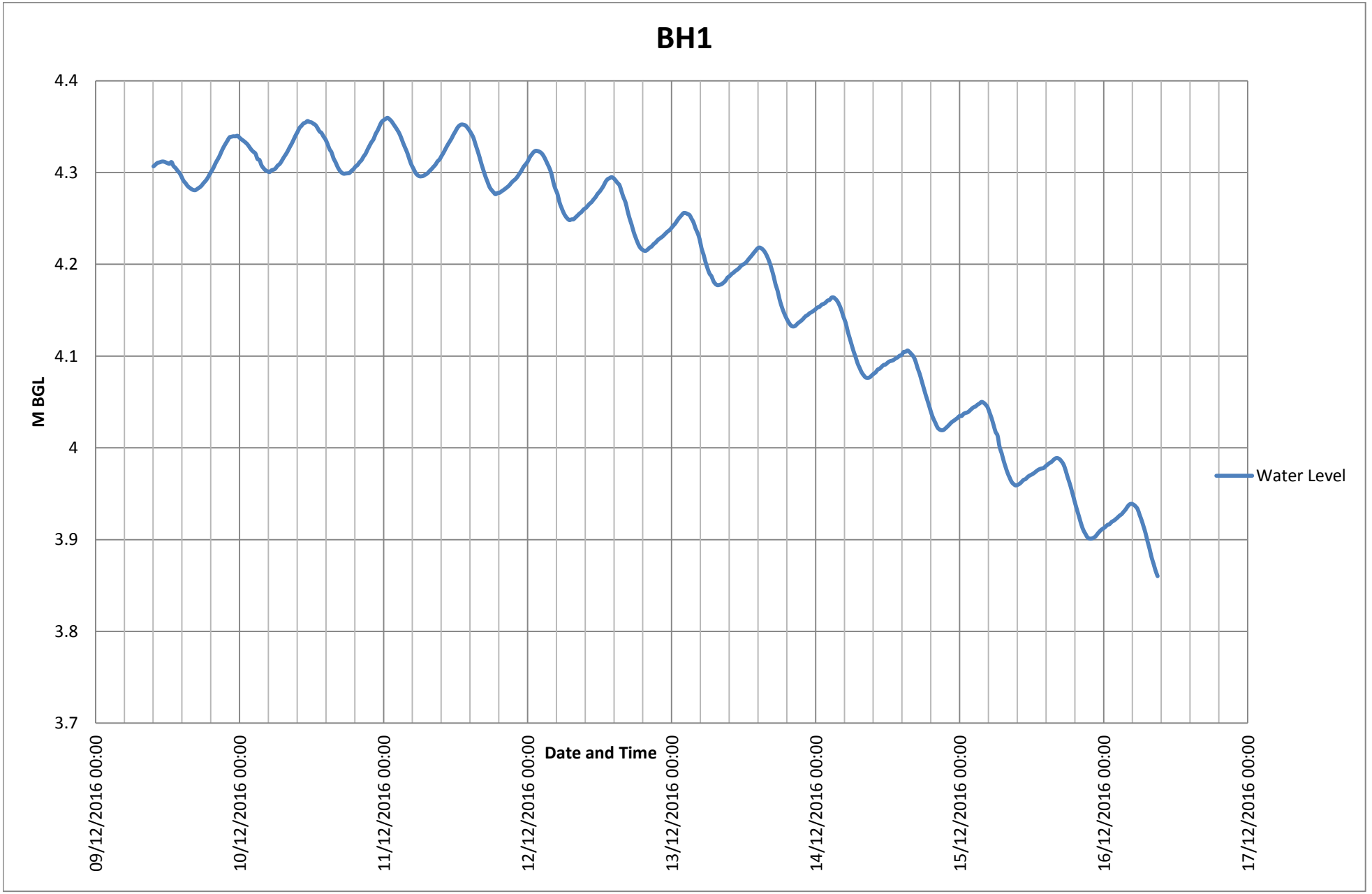
Appendix H – Modelled Groundwater Levels

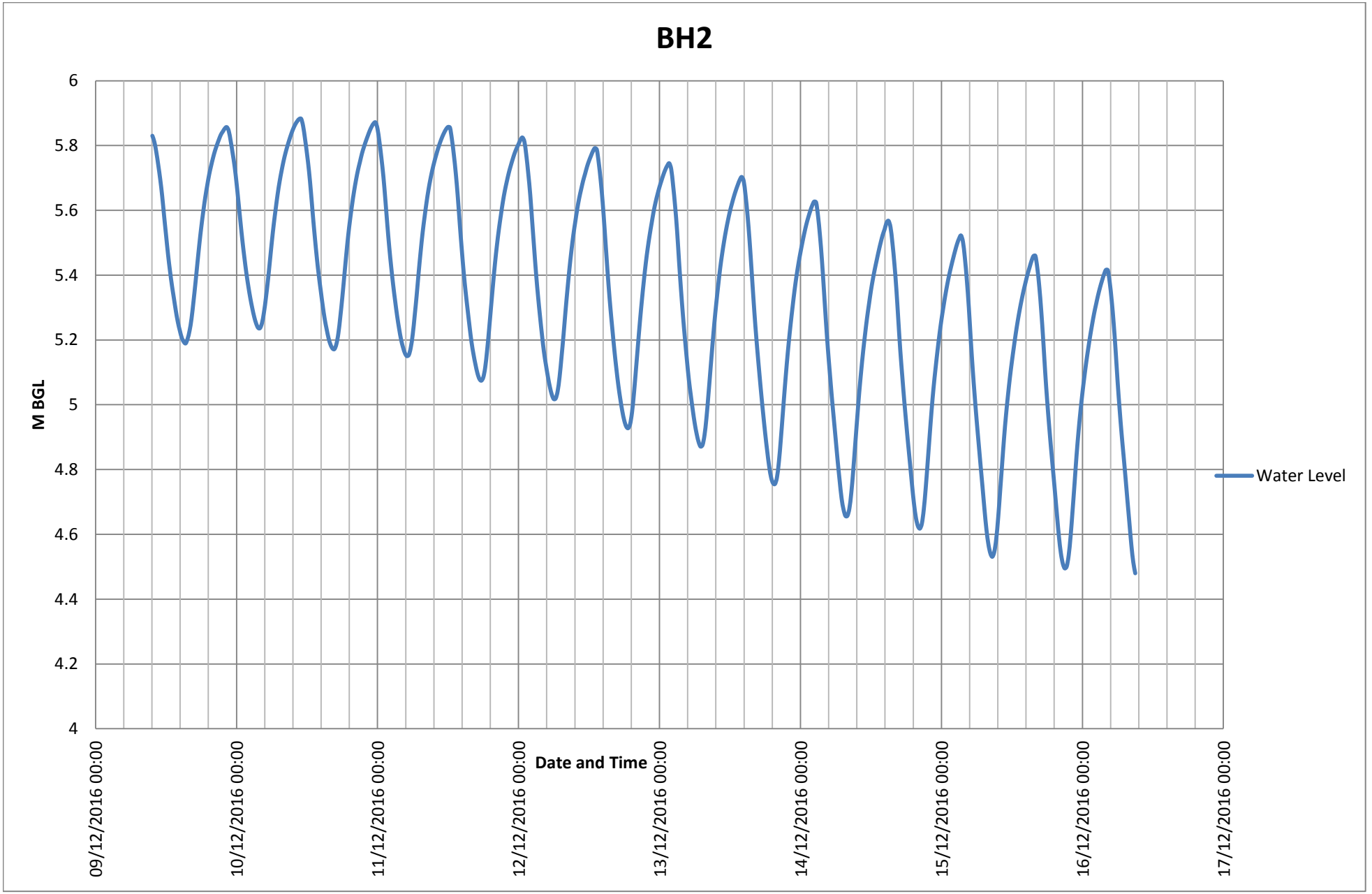


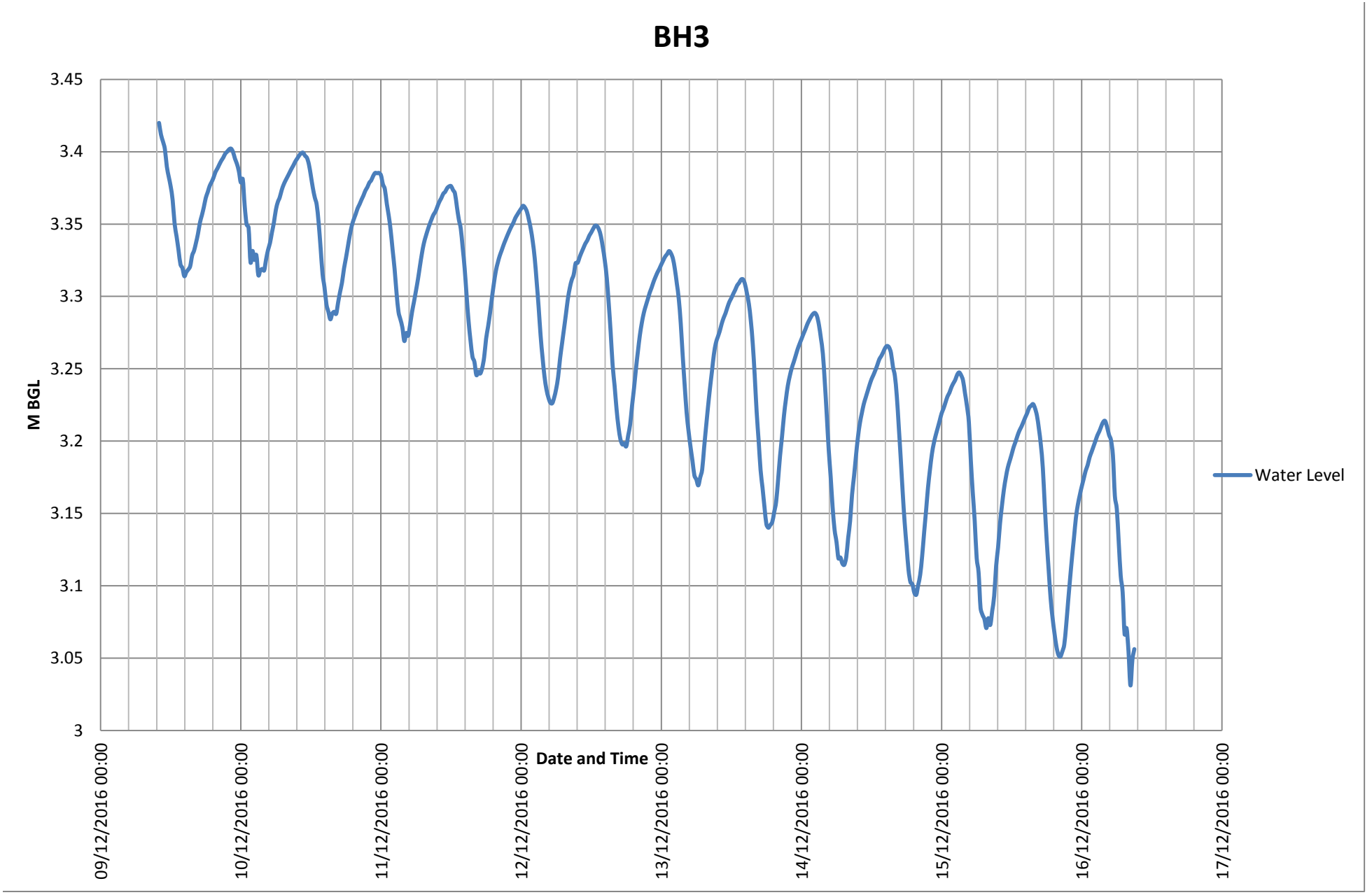
WYG Environment
5th Floor, Longcross Court, 47 Newport Road, Cardiff
Tel: 02920 829200
Fax: 02920 455321
Environmental Consultancy
Ground Engineering Services

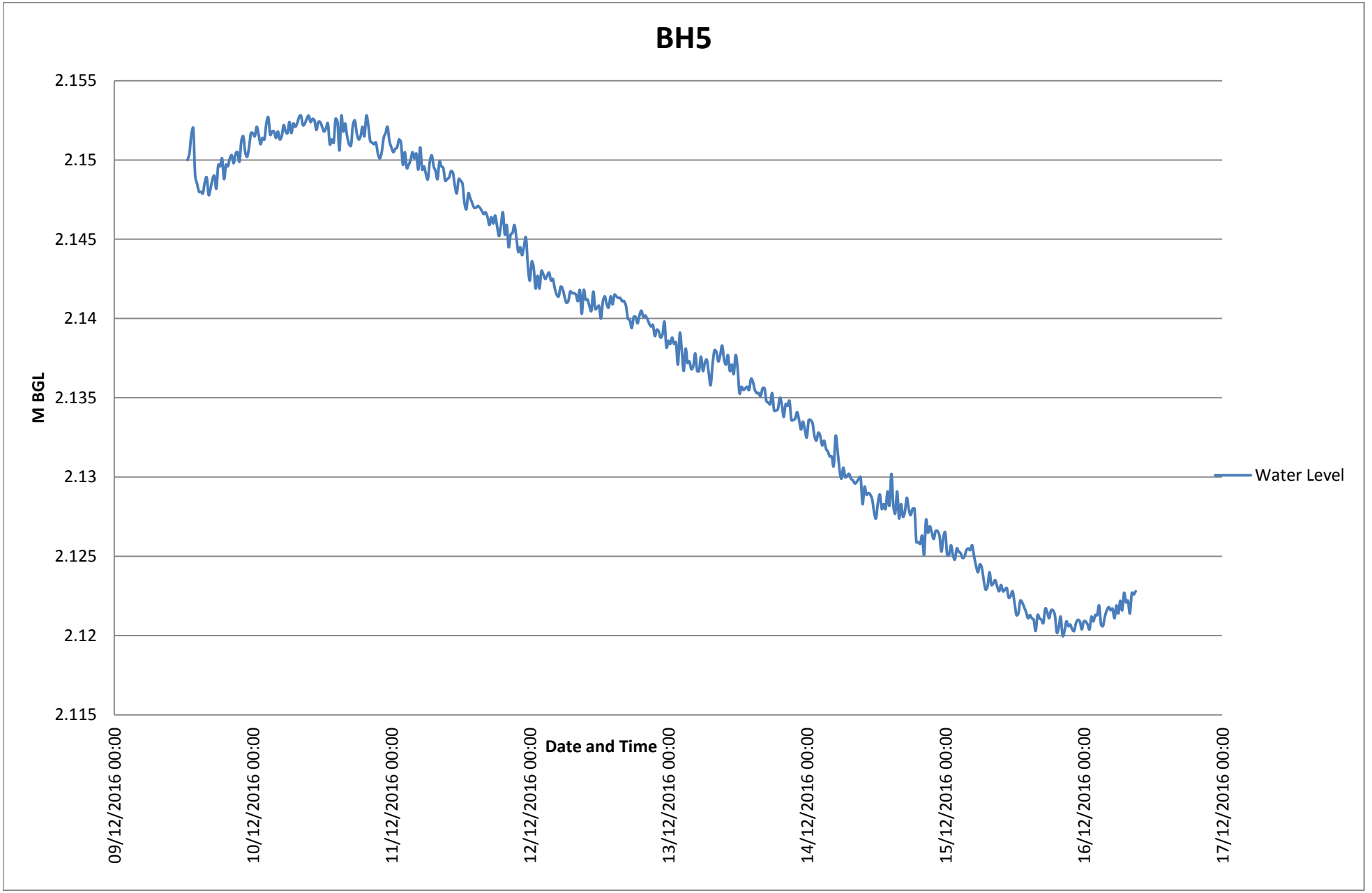
Project: Tidal Lagoon Swansea Bay		Drawing Title: Modelled Groundwater Levels (mAOD)	
Client: Tidal Lagoon (Swansea Bay) Plc		Checked by: SJ	Drawing No.: FIGURE 6

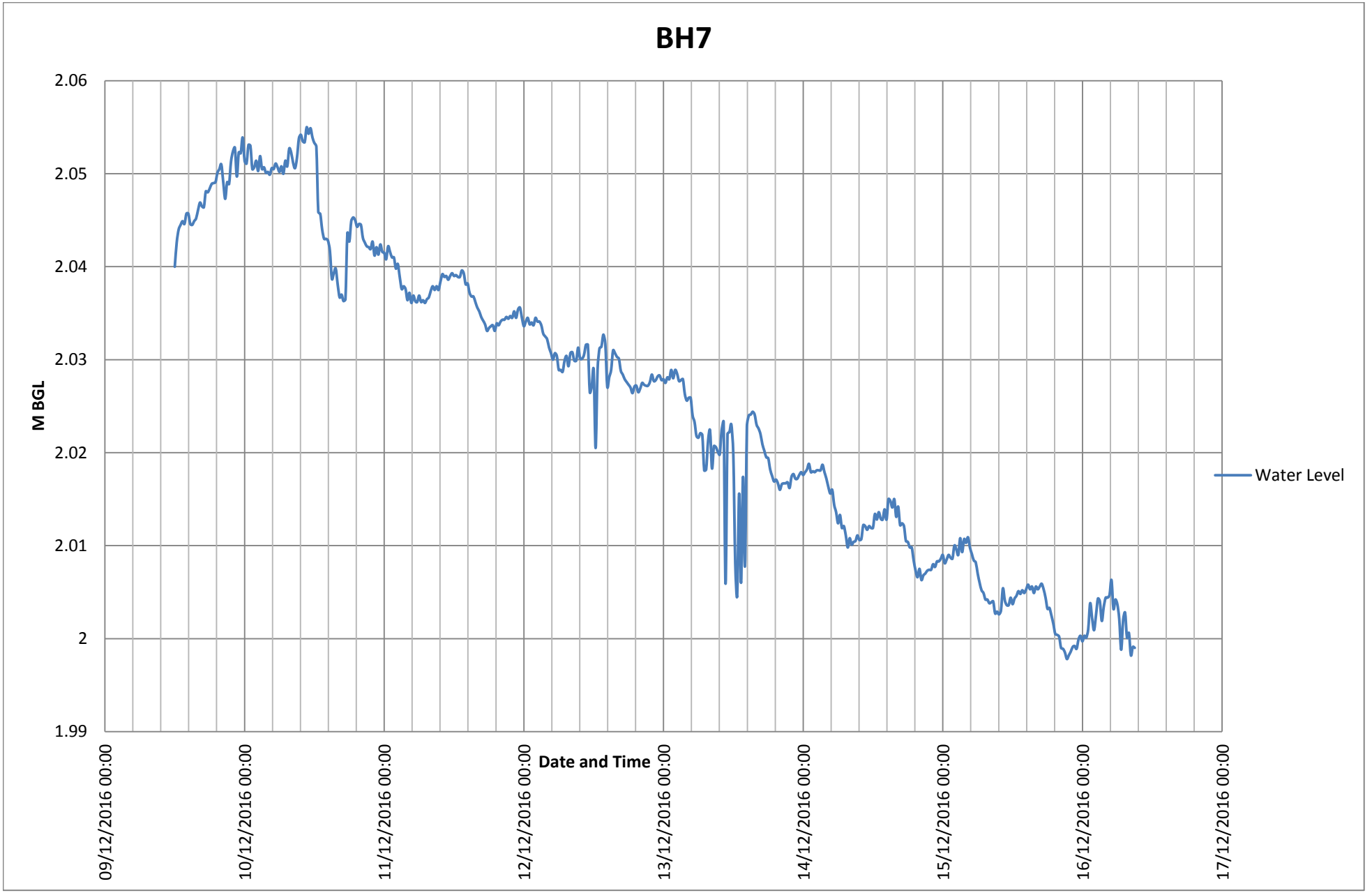
Appendix I – Level Logger Continuous Monitoring Plots

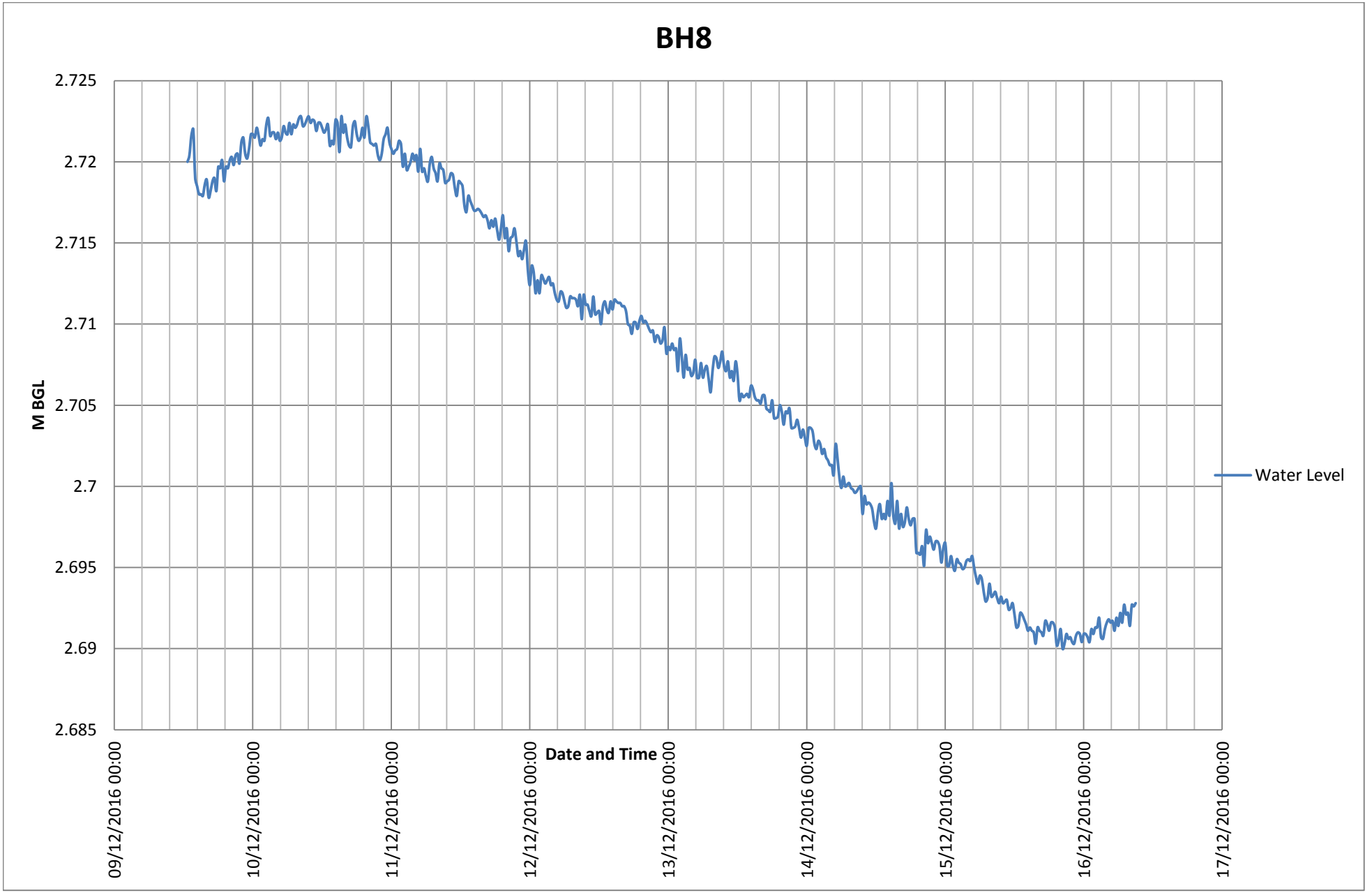

BH1
4.4
4.3
4.2
4.1
4
3.9
3.8
3.7
M BGL
09/12/2016 00:00
10/12/2016 00:00
11/12/2016 00:00
12/12/2016 00:00
13/12/2016 00:00
14/12/2016 00:00
15/12/2016 00:00
16/12/2016 00:00
17/12/2016 00:00
Date and Time
Water Level

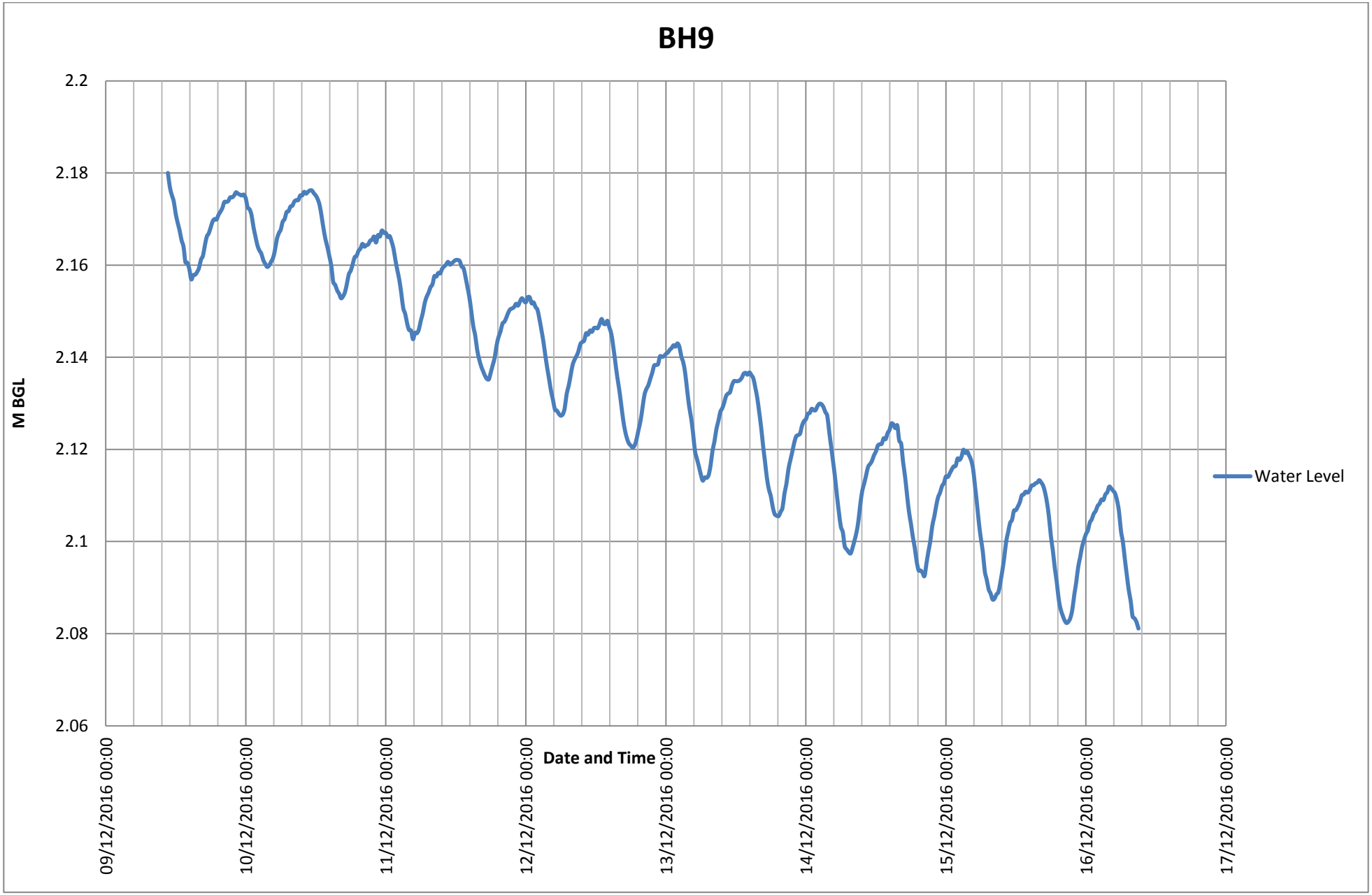

BH2
6
5.8
5.6
5.4
5.2
5
4.8
4.6
4.4
4.2
4
M BGL
09/12/2016 00:00
10/12/2016 00:00
11/12/2016 00:00
12/12/2016 00:00
13/12/2016 00:00
14/12/2016 00:00
15/12/2016 00:00
16/12/2016 00:00
17/12/2016 00:00
Date and Time
Water Level

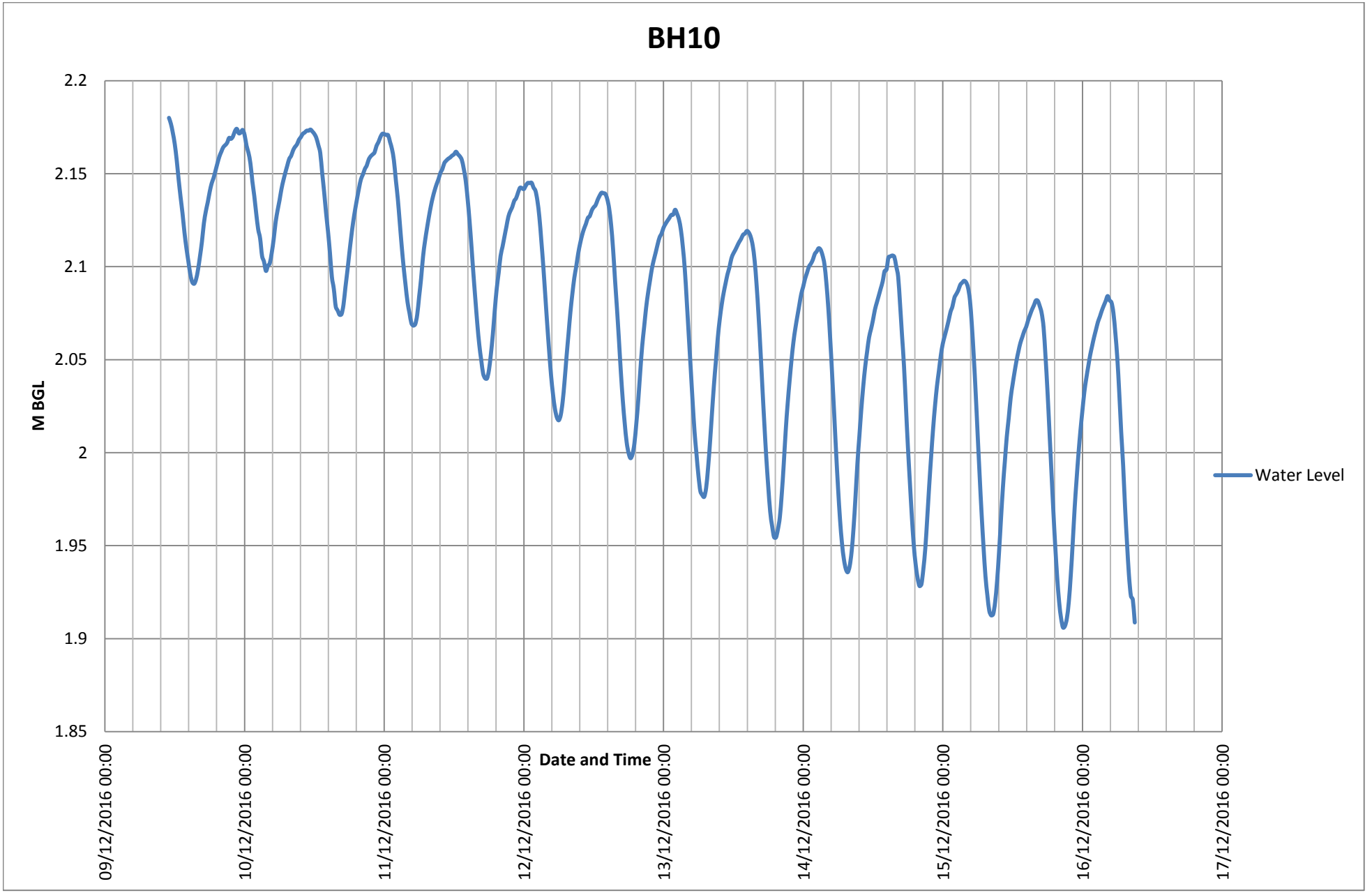

BH3
3.45
3.4
3.35
3.3
3.25
3.2
3.15
3.1
3.05
3
M BGL
09/12/2016 00:00
10/12/2016 00:00
11/12/2016 00:00
12/12/2016 00:00
13/12/2016 00:00
14/12/2016 00:00
15/12/2016 00:00
16/12/2016 00:00
17/12/2016 00:00
Date and Time
Water Level

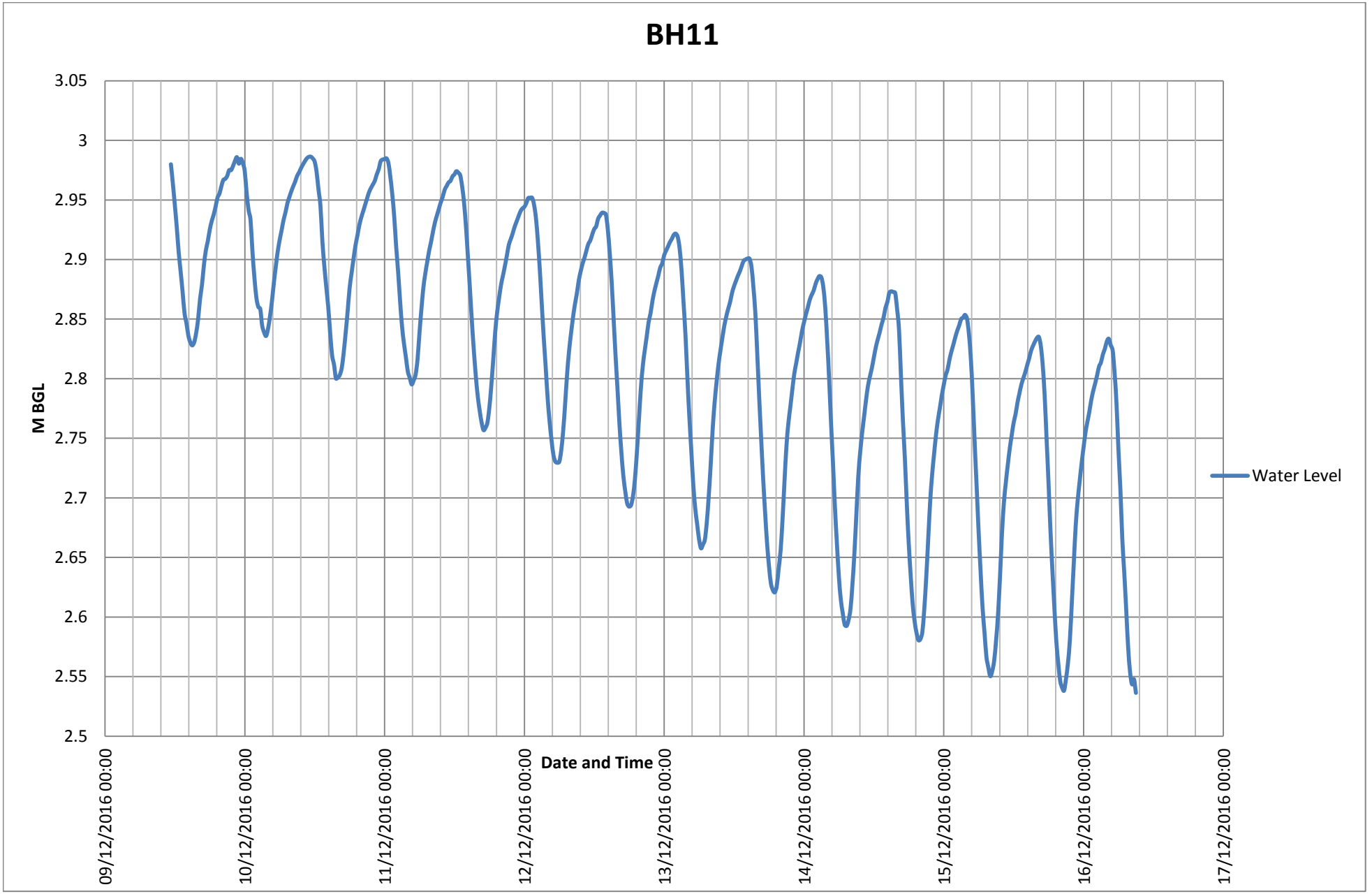

BH5
2.155
2.15
2.145
2.14
2.135
2.13
2.125
2.12
2.115
M BGL
09/12/2016 00:00
10/12/2016 00:00
11/12/2016 00:00
12/12/2016 00:00
13/12/2016 00:00
14/12/2016 00:00
15/12/2016 00:00
16/12/2016 00:00
17/12/2016 00:00
Date and Time
Water Level

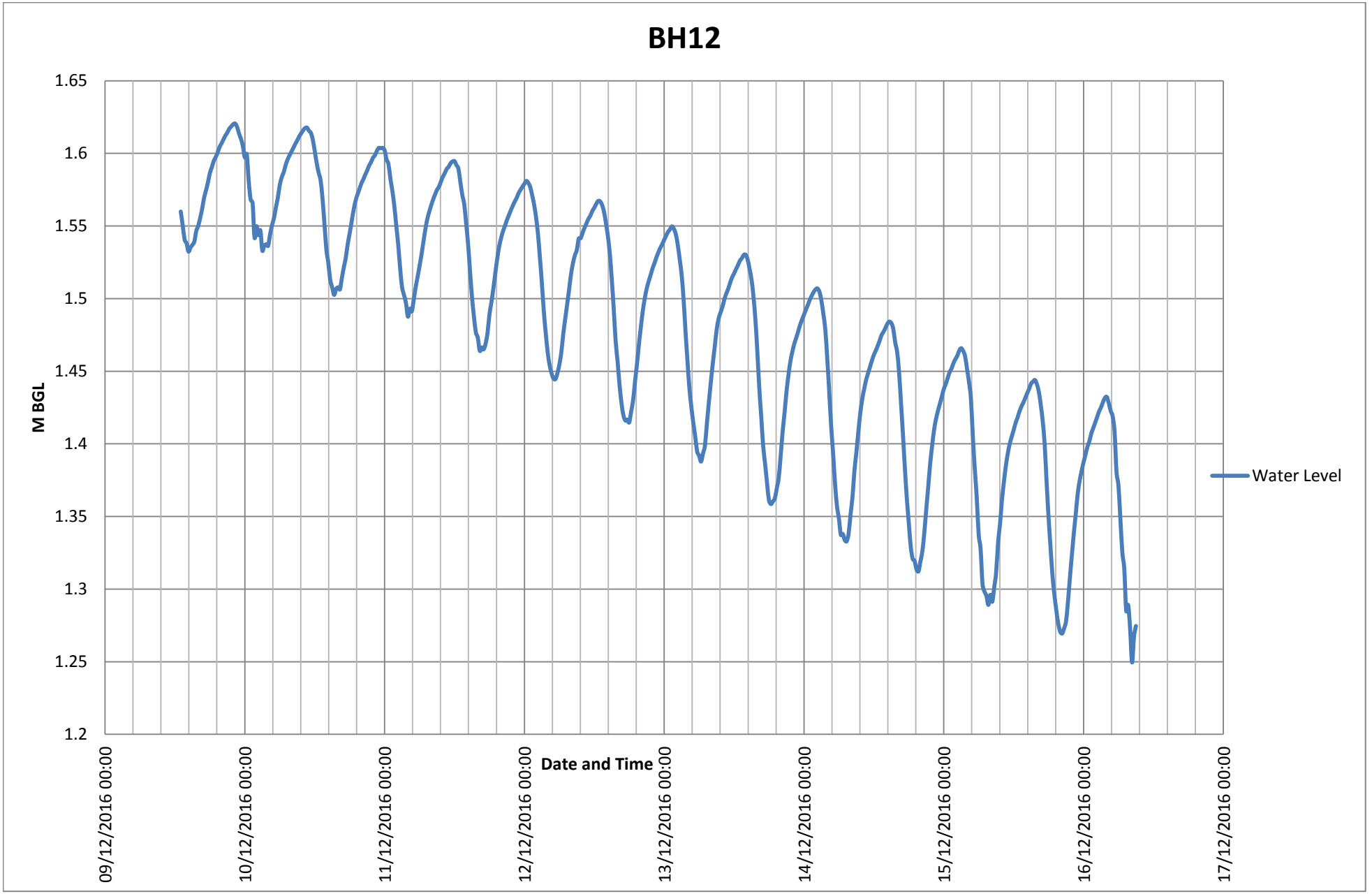

BH7
2.06
2.05
2.04
2.03
2.02
2.01
2
1.99
M BGL
09/12/2016 00:00
10/12/2016 00:00
11/12/2016 00:00
12/12/2016 00:00
13/12/2016 00:00
14/12/2016 00:00
15/12/2016 00:00
16/12/2016 00:00
17/12/2016 00:00
Date and Time
Water Level


BH8
2.725
2.72
2.715
2.71
2.705
2.7
2.695
2.69
2.685
M BGL
09/12/2016 00:00
10/12/2016 00:00
11/12/2016 00:00
12/12/2016 00:00
13/12/2016 00:00
14/12/2016 00:00
15/12/2016 00:00
16/12/2016 00:00
17/12/2016 00:00
Date and Time
Water Level


BH9
2.2
2.18
2.16
2.14
2.12
2.1
2.08
2.06
M BGL
09/12/2016 00:00
10/12/2016 00:00
11/12/2016 00:00
12/12/2016 00:00
13/12/2016 00:00
14/12/2016 00:00
15/12/2016 00:00
16/12/2016 00:00
17/12/2016 00:00
Date and Time
Water Level


BH10
2.2
2.15
2.1
2.05
2
1.95
1.9
1.85
M BGL
09/12/2016 00:00
10/12/2016 00:00
11/12/2016 00:00
12/12/2016 00:00
13/12/2016 00:00
14/12/2016 00:00
15/12/2016 00:00
16/12/2016 00:00
17/12/2016 00:00
Date and Time
Water Level


BH11
3.05
3
2.95
2.9
2.85
2.8
2.75
2.7
2.65
2.6
2.55
2.5
M BGL
09/12/2016 00:00
10/12/2016 00:00
11/12/2016 00:00
12/12/2016 00:00
13/12/2016 00:00
14/12/2016 00:00
15/12/2016 00:00
16/12/2016 00:00
17/12/2016 00:00
Date and Time
Water Level


BH12
1.65
1.6
1.55
1.5
1.45
1.4
1.35
1.3
1.25
1.2
M BGL
09/12/2016 00:00
10/12/2016 00:00
11/12/2016 00:00
12/12/2016 00:00
13/12/2016 00:00
14/12/2016 00:00
15/12/2016 00:00
16/12/2016 00:00
17/12/2016 00:00
Date and Time
Water Level

Appendix J – Screened Chemical Analysis Results

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	BH1	BH1	WS3	WS3	TP4	TP4	TP3	TP3	TP2	TP2	TP1
		Depth	1.0	5.0	1.00	5.00	0.00-0.30	2.00	0.30	0.00-1.00	0.00-0.20	1.00-1.50	0.50
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Metals and Inorganics													
pH	pH units	<5, >9	8.86	9.09	9.1	9.36	8.43	9.22	8.49	9.27	8.17	8.72	7.79
Fraction Organic Carbon	None		0.02	<0.001									
Free Cyanide	mg/kg	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Cyanide	mg/kg	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	9.1	0.5	<0.5
Sulphate as SO4 (2:1 Ext)	g/l		0.0047	0.0075	0.0246	0.004	0.0813	0.0265	0.0148	0.0068	0.0101	0.0046	0.0696
Total Phenols HPLC	mg/kg	440	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	0.79	<0.15	<0.15
Arsenic	mg/kg	640	21.6	14	21.6	34.3	1417	24.7	99.7	18.6	55.1	27	31
Cadmium	mg/kg	410	0.8	<0.1	1.7	<0.1	5.8	3	2.3	0.1	2.6	0.7	1.1
Chromium	mg/kg	8600	34.1	40.1	48.6	39.3	36.4	37.2	49.1	35.7	40	39.6	34
Hexavalent Chromium	mg/kg	49	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Copper	mg/kg	68000	18	16	80	21	858	35	153	39	107	74	149
Lead	mg/kg	2300	167	8	76	25	22580	130	1106	73	588	112	118
Mercury	mg/kg	1100	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
Nickel	mg/kg	980	8.8	5.6	27.2	6.5	73	7.7	38.6	11.7	42.3	11.4	27.2
Selenium	mg/kg	12000	<1	<1	<1	<1	3	<1	<1	<1	<1	<1	<1
Water Soluble Boron	mg/kg	240000	0.4	0.3	1.1	0.4	4.8	0.9	1.5	0.6	0.8	0.4	0.7
Zinc	mg/kg	730000	974	38	468	106	43230	1844	3423	199	2318	428	382
Asbestos Fibres	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Asbestos Fibres (2)	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Asbestos ACM	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Asbestos ACM (2)	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Asbestos Type	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Asbestos Type (2)	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Asbestos Level Screen	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Asbestos Gravimetric Quantification	mass %												
Asbestos PCOM Quantification (Fibres)	mass %												
Asbestos Gravimetric & PCOM Total	mass %												
PAH													
Acenaphthene	mg/kg	84000	<0.05	<0.05	<0.05	<0.05	0.26	<0.05	0.13	0.06	<0.05	<0.05	0.06
Acenaphthylene	mg/kg	83000	<0.03	<0.03	<0.03	<0.03	0.06	0.69	0.15	<0.03	<0.03	<0.03	0.08
Anthracene	mg/kg	520000	<0.04	<0.04	0.07	<0.04	0.76	1.53	0.44	0.07	0.05	0.1	0.18
Benzo(a)anthracene	mg/kg	170	0.09	<0.06	0.25	0.06	2.37	0.38	1.34	0.24	0.41	0.22	0.51
Benzo(a)pyrene	mg/kg	77	0.06	<0.04	0.14	<0.04	2.56	0.44	1.41	0.16	0.37	0.19	0.47
Benzo(b)fluoranthene	mg/kg	44	0.09	<0.05	0.24	<0.05	3.11	0.72	1.76	0.19	0.49	0.24	0.68
Benzo(ghi)perylene	mg/kg	3900	<0.04	<0.04	0.08	<0.04	1.4	0.15	0.84	0.07	0.24	0.11	0.36
Benzo(k)fluoranthene	mg/kg	1200	0.03	<0.02	0.09	<0.02	1.21	0.28	0.69	0.08	0.19	0.1	0.26
Chrysene	mg/kg	350	0.08	<0.02	0.26	0.03	2.62	0.46	1.69	0.2	0.44	0.24	0.52
Dibenzo(ah)anthracene	mg/kg	3.5	<0.04	<0.04	<0.04	<0.04	0.31	<0.04	0.18	<0.04	0.06	<0.04	0.08
Fluoranthene	mg/kg	23000	0.12	<0.03	0.41	0.06	6.12	0.82	2.74	0.4	0.74	0.56	0.96
Fluorene	mg/kg	63000	<0.04	<0.04	<0.04	<0.04	0.17	0.05	0.13	0.06	<0.04	<0.04	0.08

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	TP1	TP1	TP1	TP5	TP5	TP6	TP6	TP7	TP7	HP3	HP3
		Depth	1.00	2.00	2.60	0.30	1.20	0.30	2.00	0.30	0.50	0.50	1.00
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Metals and Inorganics													
pH	pH units	<5, >9	8.24	8.32	8.11	8.84	9.13	8.42	7.93	8.27	9.36	8.13	8.3
Fraction Organic Carbon	None											0.128	0.073
Free Cyanide	mg/kg	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Cyanide	mg/kg	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Sulphate as SO4 (2:1 Ext)	g/l		0.0293	0.0378	0.0384	0.0875	0.0117	0.2928	0.0366	0.0092	0.1149	0.0889	0.0563
Total Phenols HPLC	mg/kg	440	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
Arsenic	mg/kg	640	12.7	12.8	13.4	61.4	14.5	18.2	95.3	85.9	33.8	36.6	43.9
Cadmium	mg/kg	410	<0.1	0.2	<0.1	3.5	1.1	1.1	6	2.2	2	1.7	0.9
Chromium	mg/kg	8600	38.1	32.7	31.5	69	40.5	62.9	22.7	34.3	15	37.4	46.1
Hexavalent Chromium	mg/kg	49	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Copper	mg/kg	68000	41	35	20	311	20	113	281	1122	415	169	269
Lead	mg/kg	2300	21	30	20	1093	68	486	4901	1663	623	202	135
Mercury	mg/kg	1100	<0.1	<0.1	<0.1	1.4	<0.1	1.4	<0.1	0.5	<0.1	0.1	<0.1
Nickel	mg/kg	980	22.5	23.2	22.4	64	17.1	18	78.8	148.8	46.6	34.8	29.2
Selenium	mg/kg	12000	<1	<1	<1	2	<1	6	<1	4	5	2	1
Water Soluble Boron	mg/kg	240000	0.7	0.7	0.9	1.8	0.6	1.9	0.9	1.1	2.5	0.9	0.7
Zinc	mg/kg	730000	101	133	90	3064	518	581	7026	8505	2319	541	337
Asbestos Fibres	None		NAD	NAD	NAD	NAD	NAD	NAD	Fibre Bundles	Fibre Bundles	Fibre Bundles	NAD	NAD
Asbestos Fibres (2)	None		NAD	NAD	NAD	NAD	NAD	NAD				NAD	NAD
Asbestos ACM	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Asbestos ACM (2)	None		NAD	NAD	NAD	NAD	NAD	NAD				NAD	NAD
Asbestos Type	None		NAD	NAD	NAD	NAD	NAD	NAD	Chrysotile	Chrysotile	Chrysotile	NAD	NAD
Asbestos Type (2)	None		NAD	NAD	NAD	NAD	NAD	NAD				NAD	NAD
Asbestos Level Screen	None		NAD	NAD	NAD	NAD	NAD	NAD	<0.1%	<0.1%	<0.1%	NAD	NAD
Asbestos Gravimetric Quantification	mass %								<0.001	<0.001	<0.001		
Asbestos PCOM Quantification (Fibres)	mass %								<0.001	<0.001	<0.001		
Asbestos Gravimetric & PCOM Total	mass %								<0.001	<0.001	<0.001		
PAH													
Acenaphthene	mg/kg	84000	<0.05	<0.05	<0.05	0.88	<0.05	1.59	1.24	4.84	1.01	0.21	0.12
Acenaphthylene	mg/kg	83000	<0.03	<0.03	<0.03	0.67	<0.03	0.35	1.02	0.41	0.5	0.46	0.28
Anthracene	mg/kg	520000	<0.04	0.09	<0.04	3.16	<0.04	4.27	4.8	17.72	2.64	2.54	0.58
Benzo(a)anthracene	mg/kg	170	0.13	0.2	<0.06	10	0.07	12.04	16.05	64.99	6.74	6.77	1.5
Benzo(a)pyrene	mg/kg	77	0.11	0.14	<0.04	9.82	0.04	12.8	16.08	46.99	6.69	5.86	1.22
Benzo(b)fluoranthene	mg/kg	44	0.12	0.2	<0.05	13.35	0.05	16.22	21.3	72.87	8.29	8.33	1.84
Benzo(ghi)perylene	mg/kg	3900	0.09	0.13	<0.04	5.79	<0.04	7.7	9.58	23.55	3.97	3.35	0.58
Benzo(k)fluoranthene	mg/kg	1200	0.05	0.08	<0.02	5.19	<0.02	6.31	8.28	28.34	3.22	3.24	0.71
Chrysene	mg/kg	350	0.1	0.17	0.03	11.27	0.05	13.6	17.49	78.25	6.73	6.78	1.7
Dibenzo(ah)anthracene	mg/kg	3.5	<0.04	<0.04	<0.04	1.51	<0.04	1.67	1.99	7.53	0.6	0.93	0.2
Fluoranthene	mg/kg	23000	0.19	0.39	0.04	21.33	0.11	30.96	36.74	131	15.63	13.18	3.63
Fluorene	mg/kg	63000	<0.04	<0.04	<0.04	1.03	<0.04	0.96	1.08	7.32	1.04	0.25	0.16

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	HP2	HP2	HP1	HP1	HP4	HP4	HP5	HP5	HP6	HP6	HP7
		Depth	0.00-0.20	1.00	0.30	2.00	0.50	2.00	0.50	2.00	0.50	1.00	0.30
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Metals and Inorganics													
pH	pH units	<5, >9	7.92	7.86	8.14	7.91	7.81	7.65	7.94	7.84	7.79	7.65	8.29
Fraction Organic Carbon	None		0.159	NDP	NDP	NDP	NDP	NDP	0.195	0.156	NDP	NDP	0.085
Free Cyanide	mg/kg	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Cyanide	mg/kg	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Sulphate as SO4 (2:1 Ext)	g/l		0.0948	0.1666	0.0222	0.1207	0.1022	0.2297	0.1214	0.0645	0.0853	0.0915	0.0276
Total Phenols HPLC	mg/kg	440	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	0.15	<0.15	0.24	<0.15
Arsenic	mg/kg	640	33.2	140.6	83.7	92.8	98.2	257.9	139.7	62	93.5	108.2	34.2
Cadmium	mg/kg	410	0.9	20.5	8.2	2.4	31.4	7.2	14.8	1.3	9.4	24.2	0.8
Chromium	mg/kg	8600	35.5	21.9	20.1	24.5	19.1	23.2	45.6	37	17.7	12.4	42.4
Hexavalent Chromium	mg/kg	49	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Copper	mg/kg	68000	268	1077	536	294	576	577	753	334	525	625	167
Lead	mg/kg	2300	208	2026	647	1521	1080	6875	1777	320	1270	1320	124
Mercury	mg/kg	1100	0.4	0.8	0.2	<0.1	0.4	2.4	3.1	<0.1	0.4	<0.1	<0.1
Nickel	mg/kg	980	28.1	228.7	91.9	36.2	1860.2	99	816.2	50	58.7	205.8	33.3
Selenium	mg/kg	12000	2	1	1	1	2	2	2	2	<1	<1	1
Water Soluble Boron	mg/kg	240000	1.7	2.7	1.1	1.2	1.4	1.8	1.2	1.4	1.3	1.3	0.8
Zinc	mg/kg	730000	396	6451	1709	2532	8929	10125	4991	911	2678	4812	314
Asbestos Fibres	None		NAD	Fibre Bundles	Fibre Bundles	Fibre Bundles	Fibre Bundles	Fibre Bundles	NAD	NAD	Fibre Bundles	Fibre Bundles	NAD
Asbestos Fibres (2)	None		NAD						NAD	NAD			NAD
Asbestos ACM	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Asbestos ACM (2)	None		NAD						NAD	NAD			NAD
Asbestos Type	None		NAD	Chrysotile	Chrysotile	Chrysotile	Chrysotile	Chrysotile	NAD	NAD	Chrysotile	Chrysotile	NAD
Asbestos Type (2)	None		NAD						NAD	NAD			NAD
Asbestos Level Screen	None		NAD	<0.1%	<0.1%	NA	<0.1%	<0.1%	NAD	NAD	<0.1%	<0.1%	NAD
Asbestos Gravimetric Quantification	mass %			<0.001	<0.001	<0.001	<0.001	<0.001			<0.001	<0.001	
Asbestos PCOM Quantification (Fibres)	mass %			<0.001	<0.001	<0.001	<0.001	<0.001			<0.001	<0.001	
Asbestos Gravimetric & PCOM Total	mass %			<0.001	<0.001	<0.001	<0.001	<0.001			<0.001	<0.001	
PAH													
Acenaphthene	mg/kg	84000	0.1	1.66	1.01	0.34	0.17	<0.50	0.92	1.27	0.23	0.93	<0.05
Acenaphthylene	mg/kg	83000	0.13	1.19	0.26	0.09	0.19	<0.30	0.57	1.78	0.28	5.45	0.15
Anthracene	mg/kg	520000	0.45	5.3	2.81	0.97	0.73	1.28	3.31	4.57	0.87	8.93	0.55
Benzo(a)anthracene	mg/kg	170	1.31	14.42	8.19	3.32	2.94	3.44	10.97	8.53	2.53	25.89	2.76
Benzo(a)pyrene	mg/kg	77	1.12	12.39	7.63	3.68	2.75	2.96	11.92	6.43	2.48	21.75	2.59
Benzo(b)fluoranthene	mg/kg	44	1.64	17.6	10.01	4.6	3.67	3.66	15.47	9.22	3.62	32.23	3.63
Benzo(ghi)perylene	mg/kg	3900	0.56	6.6	3.76	1.93	1.65	1.63	7.81	3.07	1.35	9.98	1.18
Benzo(k)fluoranthene	mg/kg	1200	0.64	6.85	3.89	1.79	1.43	1.42	6.01	3.58	1.41	12.54	1.41
Chrysene	mg/kg	350	1.48	15.47	8.86	3.74	2.83	3.54	12.61	9.2	2.91	26.84	2.87
Dibenzo(ah)anthracene	mg/kg	3.5	0.17	2.26	1.05	0.51	0.42	<0.40	1.53	1.04	0.38	3.31	0.45
Fluoranthene	mg/kg	23000	2.87	35.17	18.2	5.77	4.97	7.4	27.68	22.74	5.38	62.68	3.97
Fluorene	mg/kg	63000	0.12	1.4	0.66	0.32	0.22	<0.40	0.83	1.67	0.25	1.32	<0.04

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	HP7	WS01	WS02	WS04	WS04	WS05	WS05	WS05	WS05	BH4	BH4
		Depth	1.00	1.00	0.05	0.30	5.00	1.00	3.00	4.00	5.00	0.50	3.00
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Metals and Inorganics													
pH	pH units	<5, >9	7.61	8.78		10.22	8.9	8.4	9.2	8.03	7.94	9.46	8.51
Fraction Organic Carbon	None		0.246	0.013		0.011	<0.001	0.161	<0.001	0.002	<0.001	0.065	0.003
Free Cyanide	mg/kg	40	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Cyanide	mg/kg	40	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Sulphate as SO4 (2:1 Ext)	g/l		0.0715	0.0081		0.1244	0.2143	0.3645	0.019	0.073	0.0344	0.0264	0.0592
Total Phenols HPLC	mg/kg	440	<0.15	<0.15		<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
Arsenic	mg/kg	640	56.3	52		5.9	14.3	169.2	10.7	11	6.5	99.1	13.4
Cadmium	mg/kg	410	1.7	1.4		0.2	<0.1	16.7	2.1	0.2	<0.1	2.6	1.8
Chromium	mg/kg	8600	34.7	59.6		49.3	59.1	39.5	51.6	62.6	68.3	80.2	57
Hexavalent Chromium	mg/kg	49	<0.3	<0.3		<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Copper	mg/kg	68000	336	676		22	37	269	3	6	12	143	39
Lead	mg/kg	2300	323	440		29	6	6195	7	8	18	1289	149
Mercury	mg/kg	1100	0.2	<0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	980	54.2	15.8		37.5	7.4	34.9	6.5	5.9	6.6	24.2	10
Selenium	mg/kg	12000	2	<1		<1	<1	1	<1	<1	<1	3	<1
Water Soluble Boron	mg/kg	240000	1.1	0.5		0.6	1.3	1.7	0.6	0.4	0.5	1.2	0.3
Zinc	mg/kg	730000	565	1186		127	59	26560	295	21	50	8275	398
Asbestos Fibres	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Asbestos Fibres (2)	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Asbestos ACM	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Asbestos ACM (2)	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Asbestos Type	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Asbestos Type (2)	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Asbestos Level Screen	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Asbestos Gravimetric Quantification	mass %												
Asbestos PCOM Quantification (Fibres)	mass %												
Asbestos Gravimetric & PCOM Total	mass %												
PAH													
Acenaphthene	mg/kg	84000	0.6	<0.05		<0.05	<0.05	0.11	<0.05	0.25	2.15	0.08	<0.05
Acenaphthylene	mg/kg	83000	1.84	<0.03		0.04	<0.03	0.28	<0.03	0.45	8.52	0.17	<0.03
Anthracene	mg/kg	520000	3.58	0.06		0.11	<0.04	1.06	<0.04	0.06	1.85	0.42	<0.04
Benzo(a)anthracene	mg/kg	170	8.33	0.24		0.38	<0.06	2.83	<0.06	0.07	1.88	1.53	0.12
Benzo(a)pyrene	mg/kg	77	5.03	0.17		0.27	<0.04	2.83	<0.04	<0.04	0.52	1.54	0.08
Benzo(b)fluoranthene	mg/kg	44	8.82	0.22		0.38	<0.05	3.65	<0.05	<0.05	0.89	2.27	0.12
Benzo(ghi)perylene	mg/kg	3900	2.32	0.1		0.13	<0.04	1.9	<0.04	<0.04	0.13	0.86	0.05
Benzo(k)fluoranthene	mg/kg	1200	3.43	0.08		0.15	<0.02	1.42	<0.02	<0.02	0.35	0.88	0.05
Chrysene	mg/kg	350	8.36	0.21		0.44	<0.02	2.98	<0.02	0.05	1.48	1.95	0.13
Dibenzo(ah)anthracene	mg/kg	3.5	0.8	<0.04		0.04	<0.04	0.44	<0.04	<0.04	<0.04	0.21	<0.04
Fluoranthene	mg/kg	23000	34.87	0.4		0.63	<0.03	6.27	<0.03	0.13	8.98	3.09	0.22
Fluorene	mg/kg	63000	0.9	<0.04		<0.04	<0.04	0.14	<0.04	0.51	2.93	0.08	<0.04

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	BH3	BH3	BH3	WS16	WS16	WS16	WS12	WS14	WS14	TP9	TP9
		Depth	1.00	5.00	7.00	0.30	1.50	3.50	0.30	0.50	4.00	0.20	0.50
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Metals and Inorganics													
pH	pH units	<5, >9	8.87	9.05	9.15	8.38	7.58	8.49	8.52	7.61	10.54	8.31	8.21
Fraction Organic Carbon	None		0.061	0.002	<0.001	0.037	0.325	0.007	0.018	NDP	0.009	0.198	0.198
Free Cyanide	mg/kg	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Cyanide	mg/kg	40	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	0.5	1.5	<0.5	<0.5	<0.5
Sulphate as SO4 (2:1 Ext)	g/l		0.0305	0.0827	0.0654	0.0724	0.1254	0.0538	0.0953	0.573	0.1051	0.0384	0.0727
Total Phenols HPLC	mg/kg	440	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
Arsenic	mg/kg	640	122.1	24.9	21.5	55.8	126.1	13.3	17.4	37.2	4.5	453.6	668.3
Cadmium	mg/kg	410	5.3	<0.1	<0.1	1.6	0.6	2.6	1.3	4.8	<0.1	4.6	7.1
Chromium	mg/kg	8600	41.2	31.4	68.7	57.6	104.8	56.5	15.8	29	28.5	38.5	47.1
Hexavalent Chromium	mg/kg	49	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Copper	mg/kg	68000	228	38	24	350	1100	32	59	1085	84	477	564
Lead	mg/kg	2300	3479	26	<5	735	2273	163	518	602	20	11720	13650
Mercury	mg/kg	1100	<0.1	<0.1	<0.1	<0.1	2.1	<0.1	<0.1	0.2	<0.1	0.6	1.3
Nickel	mg/kg	980	45.1	12.6	5.9	34.1	146	9	8.6	80.7	16.9	65.7	55.6
Selenium	mg/kg	12000	1	<1	<1	<1	9	<1	<1	<1	<1	2	4
Water Soluble Boron	mg/kg	240000	1.4	0.9	0.8	0.6	0.6	0.3	0.3	0.5	0.3	1.2	1.3
Zinc	mg/kg	730000	11790	123	57	1545	983	2301	765	1412	92	23320	31560
Asbestos Fibres	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	Fibre Bundles	NAD	NAD	NAD
Asbestos Fibres (2)	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD		NAD	NAD	NAD
Asbestos ACM	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Asbestos ACM (2)	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD		NAD	NAD	NAD
Asbestos Type	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	Chrysotile	NAD	NAD	NAD
Asbestos Type (2)	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD		NAD	NAD	NAD
Asbestos Level Screen	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	<0.1%	NAD	NAD	NAD
Asbestos Gravimetric Quantification	mass %									<0.001			
Asbestos PCOM Quantification (Fibres)	mass %									<0.001			
Asbestos Gravimetric & PCOM Total	mass %									<0.001			
PAH													
Acenaphthene	mg/kg	84000	0.65	<0.05	<0.05	0.14	<0.25	<0.05	<0.05	<0.50	0.15	3.39	0.2
Acenaphthylene	mg/kg	83000	<0.15	<0.03	<0.03	0.09	<0.15	<0.03	0.21	<0.30	<0.03	0.81	0.26
Anthracene	mg/kg	520000	1.91	<0.04	<0.04	0.48	<0.20	<0.04	0.09	2.63	0.23	4.45	1.62
Benzo(a)anthracene	mg/kg	170	4.27	0.08	<0.06	1.09	<0.30	<0.06	0.14	7	0.44	14.98	5.9
Benzo(a)pyrene	mg/kg	77	4.01	<0.04	<0.04	0.99	<0.20	<0.04	0.15	5.45	0.3	13.86	6.67
Benzo(b)fluoranthene	mg/kg	44	4.63	<0.05	<0.05	1.7	<0.25	<0.05	0.22	8.12	0.45	19.6	7.65
Benzo(ghi)perylene	mg/kg	3900	2.08	<0.04	<0.04	0.51	0.35	<0.04	0.2	3.07	0.15	6.92	3.68
Benzo(k)fluoranthene	mg/kg	1200	1.8	<0.02	<0.02	0.66	<0.10	<0.02	0.09	3.16	0.18	7.62	2.97
Chrysene	mg/kg	350	4.69	0.05	<0.02	1.56	0.26	<0.02	0.15	6.75	0.43	17.58	5.63
Dibenzo(ah)anthracene	mg/kg	3.5	0.38	<0.04	<0.04	0.1	<0.20	<0.04	<0.04	<0.40	<0.04	1.44	0.66
Fluoranthene	mg/kg	23000	9.21	0.08	<0.03	1.95	0.23	<0.03	0.19	13.12	0.93	31.38	9.89
Fluorene	mg/kg	63000	0.69	<0.04	<0.04	0.1	<0.20	<0.04	<0.04	1.15	0.21	3.04	0.35

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	TP10	TP10	TP11	TP11	TP19	TP19	WS06	WS06	WS07	WS07	WS07
		Depth	0.50	1.50	0.30	0.50	0.30	1.00	0.30	1.00	0.30	1.00	1.50
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Metals and Inorganics													
pH	pH units	<5, >9	8.6	9.08	8.13	8.68	8.7	8.97	8.68	8.43	8.05	9.12	9.05
Fraction Organic Carbon	None		0.078	0.022	0.205	0.008	0.006	<0.001	NDP	0.199	0.092	0.002	<0.001
Free Cyanide	mg/kg	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Cyanide	mg/kg	40	1.4	<0.5	<0.5	<0.5	0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Sulphate as SO4 (2:1 Ext)	g/l		0.0355	0.0043	0.0344	0.0119	0.1156	0.0096	0.024	0.0652	0.0704	0.0043	0.0033
Total Phenols HPLC	mg/kg	440	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
Arsenic	mg/kg	640	50.7	19	523.3	24.9	13.5	10.6	589.1	532.1	249.2	12.6	13.1
Cadmium	mg/kg	410	1.1	0.2	5.9	4.4	0.3	0.1	13	5.1	2.9	1.3	0.9
Chromium	mg/kg	8600	82.1	63.1	211	53.9	46.8	32.1	17	47.6	71	51.6	43.3
Hexavalent Chromium	mg/kg	49	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Copper	mg/kg	68000	113	22	396	66	29	5	513	639	587	11	5
Lead	mg/kg	2300	570	145	14270	183	191	15	11157	10700	2943	38	11
Mercury	mg/kg	1100	0.6	<0.1	2.8	<0.1	<0.1	<0.1	0.4	0.3	<0.1	<0.1	<0.1
Nickel	mg/kg	980	28.6	6.7	42.9	42.8	19.8	6	71.7	78.3	59	7	6.8
Selenium	mg/kg	12000	2	<1	7	<1	<1	<1	1	<1	<1	<1	<1
Water Soluble Boron	mg/kg	240000	1.1	0.2	1.4	0.4	0.6	0.1	1.7	2.3	0.3	0.1	0.1
Zinc	mg/kg	730000	1079	274	14330	2282	329	58	22012	19570	4563	523	449
Asbestos Fibres	None		NAD	NAD	NAD	NAD	NAD	NAD	Fibre Bundles	NAD	NAD	NAD	NAD
Asbestos Fibres (2)	None		NAD	NAD	NAD	NAD	NAD	NAD		NAD	NAD	NAD	NAD
Asbestos ACM	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Asbestos ACM (2)	None		NAD	NAD	NAD	NAD	NAD	NAD		NAD	NAD	NAD	NAD
Asbestos Type	None		NAD	NAD	NAD	NAD	NAD	NAD	Chrysotile	NAD	NAD	NAD	NAD
Asbestos Type (2)	None		NAD	NAD	NAD	NAD	NAD	NAD		NAD	NAD	NAD	NAD
Asbestos Level Screen	None		NAD	NAD	NAD	NAD	NAD	NAD	<0.1%	NAD	NAD	NAD	NAD
Asbestos Gravimetric Quantification	mass %								<0.001				
Asbestos PCOM Quantification (Fibres)	mass %								<0.001				
Asbestos Gravimetric & PCOM Total	mass %								<0.001				
PAH													
Acenaphthene	mg/kg	84000	0.52	<0.05	0.07	<0.05	<0.25	<0.05	<0.25	0.45	<0.25	<0.05	<0.05
Acenaphthylene	mg/kg	83000	2.4	<0.03	0.29	<0.03	<0.15	<0.03	0.19	0.23	0.49	<0.03	<0.03
Anthracene	mg/kg	520000	6.74	<0.04	0.78	<0.04	<0.20	<0.04	0.74	1.34	0.43	<0.04	<0.04
Benzo(a)anthracene	mg/kg	170	5.34	<0.06	2.68	0.09	<0.30	<0.06	2.46	6.35	1.48	<0.06	<0.06
Benzo(a)pyrene	mg/kg	77	6.21	<0.04	2.88	0.08	0.25	<0.04	1.97	5.48	0.96	<0.04	<0.04
Benzo(b)fluoranthene	mg/kg	44	12.21	0.05	4.44	0.11	0.3	<0.05	2.89	6.88	1.53	<0.05	<0.05
Benzo(ghi)perylene	mg/kg	3900	3.73	<0.04	1.81	0.07	0.23	<0.04	1.09	3.25	0.67	<0.04	<0.04
Benzo(k)fluoranthene	mg/kg	1200	4.75	<0.02	1.72	0.04	0.11	<0.02	1.13	2.68	0.6	<0.02	<0.02
Chrysene	mg/kg	350	8.03	0.03	2.81	0.09	0.32	<0.02	2.61	5.41	1.71	<0.02	<0.02
Dibenzo(ah)anthracene	mg/kg	3.5	1.36	<0.04	0.26	<0.04	<0.20	<0.04	<0.20	0.6	<0.20	<0.04	<0.04
Fluoranthene	mg/kg	23000	11.22	0.04	4.84	0.1	0.24	<0.03	4.53	11.03	2.62	<0.03	<0.03
Fluorene	mg/kg	63000	0.56	<0.04	0.1	<0.04	<0.20	<0.04	<0.20	0.4	<0.20	<0.04	<0.04

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	WS07	WS15	WS15	HP8	HP8	HP9	HP9	HP10	HP11	HP11	HP12
		Depth	4.50	0.30	2.00	0.50	2.00	0.50	2.00	1.00	0.50	1.00-1.50	0.50
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Metals and Inorganics													
pH	pH units	<5, >9	8.08	8.64	8.31	8.3	7.84	7.86	8.17	8.32	10.05	8.22	9.52
Fraction Organic Carbon	None		0.003	0.01	0.005	0.333	0.246	0.01	NDP	0.245	0.013	NDP	NDP
Free Cyanide	mg/kg	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Cyanide	mg/kg	40	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	2.3	<0.5
Sulphate as SO4 (2:1 Ext)	g/l		0.1078	0.0189	0.0695	0.0213	0.1259	0.024	0.0482	0.0219	0.2082	0.049	0.0918
Total Phenols HPLC	mg/kg	440	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
Arsenic	mg/kg	640	7.7	13.9	9.7	53.3	55.7	10.2	26.3	33.2	18.8	45.5	82.5
Cadmium	mg/kg	410	0.9	0.7	0.4	<0.1	2.9	<0.1	0.7	0.2	0.4	1.3	1.9
Chromium	mg/kg	8600	70.7	44.1	45.8	37.5	35.8	42.3	15.7	29.9	68.6	14.5	16.8
Hexavalent Chromium	mg/kg	49	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Copper	mg/kg	68000	13	57	20	316	554	12	188	104	30	198	175
Lead	mg/kg	2300	16	72	34	111	477	22	132	167	202	347	909
Mercury	mg/kg	1100	<0.1	0.2	<0.1	<0.1	0.2	<0.1	<0.1	0.1	<0.1	1	<0.1
Nickel	mg/kg	980	7.2	14.9	11.3	34.5	63.9	27.8	26.8	21.9	51.1	25.8	40.1
Selenium	mg/kg	12000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Water Soluble Boron	mg/kg	240000	0.4	0.2	0.4	0.2	1.2	0.4	0.6	0.4	2.2	0.7	1.2
Zinc	mg/kg	730000	199	212	138	204	1010	93	279	139	471	605	2124
Asbestos Fibres	None		NAD	NAD	NAD	NAD	NAD	NAD	Fibre Bundles	NAD	NAD	Fibre Bundles	Fibre Bundles
Asbestos Fibres (2)	None		NAD	NAD	NAD	NAD	NAD	NAD		NAD	NAD		
Asbestos ACM	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Asbestos ACM (2)	None		NAD	NAD	NAD	NAD	NAD	NAD		NAD	NAD		
Asbestos Type	None		NAD	NAD	NAD	NAD	NAD	NAD	Chrysotile	NAD	NAD	Chrysotile	Chrysotile
Asbestos Type (2)	None		NAD	NAD	NAD	NAD	NAD	NAD		NAD	NAD		
Asbestos Level Screen	None		NAD	NAD	NAD	NAD	NAD	NAD	<0.1%	NAD	NAD	<0.1%	<0.1%
Asbestos Gravimetric Quantification	mass %								<0.001				<0.001
Asbestos PCOM Quantification (Fibres)	mass %								<0.001				<0.001
Asbestos Gravimetric & PCOM Total	mass %								<0.001				<0.001
PAH													
Acenaphthene	mg/kg	84000	0.87	<0.05	<0.05	<0.25	0.77	<0.05	0.14	0.33	<0.05	1.19	0.09
Acenaphthylene	mg/kg	83000	1.12	<0.03	<0.03	2.55	1.74	<0.03	0.58	4.19	<0.03	8.23	0.26
Anthracene	mg/kg	520000	0.42	0.09	0.05	10.98	4.29	<0.04	1.69	13.14	0.09	15.78	0.55
Benzo(a)anthracene	mg/kg	170	0.29	0.27	0.19	20.99	8.93	0.11	2.7	25.87	0.2	33.73	1.83
Benzo(a)pyrene	mg/kg	77	0.19	0.23	0.17	25.13	7.32	0.07	1.9	19.93	0.19	28.8	1.84
Benzo(b)fluoranthene	mg/kg	44	0.29	0.3	0.22	36.94	10.51	0.1	2.99	28.89	0.26	37.89	2.36
Benzo(ghi)perylene	mg/kg	3900	0.14	0.15	0.09	14.56	3.45	<0.04	0.8	10.04	0.11	14.41	0.85
Benzo(k)fluoranthene	mg/kg	1200	0.11	0.12	0.09	14.36	4.09	0.04	1.16	11.23	0.1	14.73	0.92
Chrysene	mg/kg	350	0.31	0.28	0.19	28.01	9.84	0.11	2.76	23.02	0.26	28.85	2.01
Dibenzo(ah)anthracene	mg/kg	3.5	<0.04	<0.04	<0.04	4.2	0.89	<0.04	0.15	3.65	<0.04	3.7	0.17
Fluoranthene	mg/kg	23000	0.77	0.58	0.31	48.96	18.53	0.15	6.39	51.72	0.48	58.3	3.37
Fluorene	mg/kg	63000	1.41	<0.04	<0.04	0.79	1.1	<0.04	0.42	1.44	<0.04	2.25	0.11

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	HP12	HP13	HP13	HP14	HP14	HP15	WS06	BH10	BH10	BH10	BH10
		Depth	1.00	0.50	1.50	0.50	1.00	0.50-1.00	4.50	0.50	1.00	2.00	8.00
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Metals and Inorganics													
pH	pH units	<5, >9	8.46	8.34	8.21	8.36	8.33	8.88	8.15	7.92	8.01	7.6	8.45
Fraction Organic Carbon	None		NDP	NDP	0.149	0.349	0.14	0.031	<0.001	NDP	0.027	NDP	0.004
Free Cyanide	mg/kg	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Cyanide	mg/kg	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	<0.5
Sulphate as SO4 (2:1 Ext)	g/l		0.0446	0.0205	0.0735	0.0488	0.1521	0.0944	0.1939	0.0159	0.0988	0.3284	0.0717
Total Phenols HPLC	mg/kg	440	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
Arsenic	mg/kg	640	60.2	71.9	85.7	43	41	22.2	18.8	19.7	62.1	102.6	9.9
Cadmium	mg/kg	410	1.4	5.2	1.5	0.4	0.7	0.3	0.3	0.6	1.7	4.1	<0.1
Chromium	mg/kg	8600	12.9	14.9	46.5	32.3	38.9	27.4	40.2	20.8	27.1	11.5	41.5
Hexavalent Chromium	mg/kg	49	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Copper	mg/kg	68000	272	156	307	169	158	65	6	73	103	262	6
Lead	mg/kg	2300	360	951	1176	120	166	63	10	244	1632	6537	21
Mercury	mg/kg	1100	0.3	<0.1	0.5	0.4	0.5	<0.1	<0.1	<0.1	0.1	<0.1	<0.1
Nickel	mg/kg	980	19.7	37.2	32.2	24.9	28	9.6	5.4	16.3	14.3	46.6	6.8
Selenium	mg/kg	12000	<1	<1	1	1	<1	<1	<1	<1	<1	<1	<1
Water Soluble Boron	mg/kg	240000	0.6	0.5	0.9	0.8	1.1	0.6	0.2	0.2	0.4	0.2	0.4
Zinc	mg/kg	730000	507	2513	1848	251	474	131	262	525	2292	8552	154
Asbestos Fibres	None		Fibre Bundles	Fibre Bundles	NAD	NAD	NAD	NAD	NAD	Fibre Bundles	NAD	Fibre Bundles	NAD
Asbestos Fibres (2)	None				NAD	NAD	NAD	NAD	NAD		NAD		NAD
Asbestos ACM	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Asbestos ACM (2)	None				NAD	NAD	NAD	NAD	NAD		NAD		NAD
Asbestos Type	None		Chrysotile	Chrysotile	NAD	NAD	NAD	NAD	NAD	Chrysotile	NAD	Chrysotile	NAD
Asbestos Type (2)	None				NAD	NAD	NAD	NAD	NAD		NAD	NA	NAD
Asbestos Level Screen	None		<0.1%	<0.1%	NAD	NAD	NAD	NAD	NAD	<0.1%	NAD	<0.1%	NAD
Asbestos Gravimetric Quantification	mass %		<0.001	<0.001						<0.001	NA	<0.001	NA
Asbestos PCOM Quantification (Fibres)	mass %		<0.001	<0.001						<0.001	NA	<0.001	NA
Asbestos Gravimetric & PCOM Total	mass %		<0.001	<0.001						<0.001	NA	<0.001	NA
PAH													
Acenaphthene	mg/kg	84000	0.66	0.28	0.29	0.75	1.8	0.12	<0.05	<0.05	<0.05	0.07	<0.05
Acenaphthylene	mg/kg	83000	0.99	0.2	0.82	13.18	11.87	0.39	0.06	<0.03	<0.03	0.13	<0.03
Anthracene	mg/kg	520000	5.3	0.78	2.28	14.01	16.59	0.78	<0.04	0.05	<0.04	0.08	<0.04
Benzo(a)anthracene	mg/kg	170	9.77	2.81	4.6	42.82	27.28	2	<0.06	0.28	<0.06	0.35	<0.06
Benzo(a)pyrene	mg/kg	77	8.85	2.63	5.19	30.31	19.36	1.62	<0.04	0.29	<0.04	0.26	<0.04
Benzo(b)fluoranthene	mg/kg	44	11.38	3.56	7.11	47.3	28.66	2.36	<0.05	0.4	<0.05	0.37	<0.05
Benzo(ghi)perylene	mg/kg	3900	4.24	1.39	2.94	16.87	9.67	0.86	<0.04	0.28	<0.04	0.16	<0.04
Benzo(k)fluoranthene	mg/kg	1200	4.42	1.38	2.77	18.4	11.15	0.92	<0.02	0.16	<0.02	0.15	<0.02
Chrysene	mg/kg	350	10.2	2.99	5.69	37.24	21.77	1.83	<0.02	0.37	0.05	0.34	0.04
Dibenzo(ah)anthracene	mg/kg	3.5	1.08	0.34	1.03	5.94	3.14	0.41	<0.04	0.06	<0.04	<0.04	<0.04
Fluoranthene	mg/kg	23000	20.66	5.56	11.85	90.57	67.37	3.61	0.04	0.46	0.06	0.3	0.08
Fluorene	mg/kg	63000	1.16	0.28	0.54	3.42	10.37	0.26	<0.04	<0.04	<0.04	0.19	<0.04

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	BH8	BH8	BH8	TP20	TP20	TP20	TP22	TP22	TP22	WS13	WS13
		Depth	0.30	2.50	7.50	0.20	1.00	3.00	0.10	0.50	2.10	0.30	2.00
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Metals and Inorganics													
pH	pH units	<5, >9	9.02	8.68	8.86	8.11	7.67	7.81	8.2	8.79	8.26	8.19	7.59
Fraction Organic Carbon	None		0.005	0.004	NDP	0.154	NDP	NDP	NDP	0.014	0.029	NDP	0.26
Free Cyanide	mg/kg	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Cyanide	mg/kg	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Sulphate as SO4 (2:1 Ext)	g/l		0.0101	0.0608	0.1809	0.0814	0.5156	0.3053	0.0187	0.0092	0.0386	0.0242	0.0683
Total Phenols HPLC	mg/kg	440	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
Arsenic	mg/kg	640	12.1	8.1	18.7	62.8	36.9	262.6	24.9	20.8	41.7	99.2	106.6
Cadmium	mg/kg	410	0.4	0.2	1.2	3.3	1.6	6.3	0.4	0.3	2.8	12.2	31.6
Chromium	mg/kg	8600	23.3	39.6	11.5	34.4	9.9	15.2	27.5	57.1	38.5	19.1	41.6
Hexavalent Chromium	mg/kg	49	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Copper	mg/kg	68000	17	11	66	250	80	382	78	61	118	502	1246
Lead	mg/kg	2300	37	26	109	1540	779	2947	269	140	873	5715	15870
Mercury	mg/kg	1100	<0.1	<0.1	0.5	0.9	0.2	0.4	<0.1	<0.1	<0.1	1	<0.1
Nickel	mg/kg	980	11.2	9.2	15.1	34.8	12.6	29.2	130.5	86.6	23.9	46.2	27.2
Selenium	mg/kg	12000	<1	<1	<1	2	<1	<1	1	<1	<1	2	5
Water Soluble Boron	mg/kg	240000	0.2	0.5	1.5	0.8	0.7	0.4	0.5	0.2	0.2	0.2	0.7
Zinc	mg/kg	730000	127	105	381	2469	1486	5501	391	304	2409	6917	19880
Asbestos Fibres	None		NAD	NAD	Fibre Bundles	NAD	Fibre Bundles	Fibre Bundles	Fibre Bundles	NAD	NAD	Fibre Bundles	NAD
Asbestos Fibres (2)	None		NAD	NAD		NAD				NAD	NAD		NAD
Asbestos ACM	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Asbestos ACM (2)	None		NAD	NAD		NAD				NAD	NAD		NAD
Asbestos Type	None		NAD	NAD	Chrysotile	NAD	Chrysotile	Chrysotile	Chrysotile	NAD	NAD	Chrysotile	NAD
Asbestos Type (2)	None		NAD	NAD		NAD				NAD	NAD		NAD
Asbestos Level Screen	None		NAD	NAD	<0.1%	NAD	<0.1%	<0.1%	<0.1%	NAD	NAD	<0.1%	NAD
Asbestos Gravimetric Quantification	mass %		NA	NA	<0.001	NA	<0.001	<0.001	<0.001			<0.001	
Asbestos PCOM Quantification (Fibres)	mass %		NA	NA	<0.001	NA	<0.001	<0.001	<0.001			<0.001	
Asbestos Gravimetric & PCOM Total	mass %		NA	NA	<0.001	NA	<0.001	<0.001	<0.001			<0.001	
PAH													
Acenaphthene	mg/kg	84000	<0.05	<0.05	0.11	0.11	0.08	0.15	<0.05	0.07	<0.05	0.1	<0.05
Acenaphthylene	mg/kg	83000	<0.03	<0.03	<0.03	<0.03	0.12	0.32	<0.03	<0.03	<0.03	0.05	<0.03
Anthracene	mg/kg	520000	<0.04	0.09	0.24	0.43	0.11	0.87	0.07	0.1	0.05	0.41	<0.04
Benzo(a)anthracene	mg/kg	170	0.08	0.22	0.54	1.14	0.26	1.95	0.26	0.53	0.11	1.29	0.11
Benzo(a)pyrene	mg/kg	77	0.07	0.17	0.71	1.27	0.39	2.5	0.33	0.51	0.08	1.62	0.09
Benzo(b)fluoranthene	mg/kg	44	0.09	0.24	0.86	1.76	0.43	3.22	0.45	0.71	0.09	2.18	0.14
Benzo(ghi)perylene	mg/kg	3900	<0.04	0.09	0.33	0.61	0.25	1.45	0.24	0.28	<0.04	0.93	0.08
Benzo(k)fluoranthene	mg/kg	1200	0.03	0.09	0.33	0.68	0.17	1.25	0.17	0.27	0.04	0.85	0.05
Chrysene	mg/kg	350	0.08	0.26	0.79	1.75	0.44	2.67	0.4	0.78	0.12	2.01	0.13
Dibenzo(ah)anthracene	mg/kg	3.5	<0.04	<0.04	0.05	0.14	0.06	0.4	0.05	0.05	<0.04	0.23	<0.04
Fluoranthene	mg/kg	23000	0.13	0.4	1.42	2.84	0.64	4.67	0.72	1.15	0.23	3.22	0.25
Fluorene	mg/kg	63000	<0.04	<0.04	0.11	0.16	0.17	0.32	<0.04	0.07	<0.04	0.1	<0.04

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	WS13	WS19	WS19	WS19	WS21	WS21	BH11	BH11	BH9	BH9	WS20
		Depth	4.00	0.30	1.00	3.00	0.30	2.00	2.00	4.00	0.50	3.50	0.30
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Metals and Inorganics													
pH	pH units	<5, >9	8.6	8.58	8.58	7.91	8.13	8.58	8.05	8.42	8.26	8.15	8.97
Fraction Organic Carbon	None		0.027	0.004	0.004	0.073	NDP	0.02	0.021	0.003	0.041	0.052	0.006
Free Cyanide	mg/kg	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Cyanide	mg/kg	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Sulphate as SO4 (2:1 Ext)	g/l		0.0357	0.0038	0.0017	0.0443	<0.0014	0.0113	0.1324	0.0439	0.0466	0.0385	0.0061
Total Phenols HPLC	mg/kg	440	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
Arsenic	mg/kg	640	42.5	22.4	21.2	42.6	40.5	25.3	31.1	13.5	11.5	27	23.5
Cadmium	mg/kg	410	7.9	0.5	0.3	3.8	0.9	1.2	1.1	0.2	2.3	3.4	0.2
Chromium	mg/kg	8600	46.1	36.9	33.8	45.4	10.2	28.9	54.5	52.7	68.7	72	47.2
Hexavalent Chromium	mg/kg	49	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Copper	mg/kg	68000	103	42	39	115	115	64	106	19	40	613	69
Lead	mg/kg	2300	499	137	173	591	171	366	711	77	170	311	145
Mercury	mg/kg	1100	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.2	0.4	<0.1	3	<0.1
Nickel	mg/kg	980	10.7	10	9.1	13.3	56.7	8.9	15.2	8.9	22.6	22.3	17
Selenium	mg/kg	12000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Water Soluble Boron	mg/kg	240000	0.3	0.2	0.2	0.3	0.1	<0.1	0.3	0.3	0.1	0.4	0.3
Zinc	mg/kg	730000	2390	303	234	2318	542	1394	1157	267	556	1149	387
Asbestos Fibres	None		NAD	NAD	NAD	NAD	Fibre Bundles	NAD	NAD	NAD	NAD	NAD	NAD
Asbestos Fibres (2)	None		NAD	NAD	NAD	NAD		NAD	NAD	NAD	NAD	NAD	NAD
Asbestos ACM	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Asbestos ACM (2)	None		NAD	NAD	NAD	NAD		NAD	NAD	NAD	NAD	NAD	NAD
Asbestos Type	None		NAD	NAD	NAD	NAD	Chrysotile	NAD	NAD	NAD	NAD	NAD	NAD
Asbestos Type (2)	None		NAD	NAD	NAD	NAD		NAD	NAD	NAD	NAD	NAD	NAD
Asbestos Level Screen	None		NAD	NAD	NAD	NAD	<0.1%	NAD	NAD	NAD	NAD	NAD	NAD
Asbestos Gravimetric Quantification	mass %						<0.001						
Asbestos PCOM Quantification (Fibres)	mass %						<0.001						
Asbestos Gravimetric & PCOM Total	mass %						<0.001						
PAH													
Acenaphthene	mg/kg	84000	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.50	0.3	<0.05
Acenaphthylene	mg/kg	83000	<0.03	<0.03	<0.03	<0.03	0.65	<0.03	0.1	0.06	<0.30	0.14	<0.03
Anthracene	mg/kg	520000	<0.04	<0.04	<0.04	0.09	0.78	<0.04	0.06	<0.04	<0.40	0.54	<0.04
Benzo(a)anthracene	mg/kg	170	<0.06	<0.06	<0.06	0.12	3.81	<0.06	0.13	0.08	<0.60	1.24	<0.06
Benzo(a)pyrene	mg/kg	77	0.05	<0.04	<0.04	0.09	6.08	<0.04	0.21	0.07	0.62	1.44	<0.04
Benzo(b)fluoranthene	mg/kg	44	<0.05	<0.05	<0.05	0.12	6.66	<0.05	0.24	0.09	<0.50	1.96	<0.05
Benzo(ghi)perylene	mg/kg	3900	<0.04	<0.04	<0.04	<0.04	2.87	<0.04	0.13	<0.04	0.52	0.76	<0.04
Benzo(k)fluoranthene	mg/kg	1200	<0.02	<0.02	<0.02	0.04	2.59	<0.02	0.09	0.04	<0.20	0.76	<0.02
Chrysene	mg/kg	350	0.07	<0.02	<0.02	0.15	5.46	<0.02	0.25	0.1	1.11	1.82	0.02
Dibenzo(ah)anthracene	mg/kg	3.5	<0.04	<0.04	<0.04	<0.04	0.95	<0.04	<0.04	<0.04	<0.40	0.18	<0.04
Fluoranthene	mg/kg	23000	0.12	<0.03	<0.03	0.3	4.65	<0.03	0.31	0.16	<0.30	3.46	0.04
Fluorene	mg/kg	63000	<0.04	<0.04	<0.04	0.06	0.12	<0.04	0.1	0.1	<0.40	0.49	<0.04

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	WS20	WS18	WS18	WS08	WS08	TP18	TP18	TP24	TP24	TP23	TP23
		Depth	4.00	1.00	4.00	1.00	5.00	1.00	1.90	2.50	3.20	0.30	3.10
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Metals and Inorganics													
pH	pH units	<5, >9	8.35	9.16	7.92	8.3	8.03	8.03	7.87	7.86	7.9	9.25	7.48
Fraction Organic Carbon	None		0.007	0.008	0.006	0.084	0.06	NDP	NDP	0.034	0.007	0.005	0.004
Free Cyanide	mg/kg	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Cyanide	mg/kg	40	<0.5	<0.5	<0.5	1.1	<0.5	0.8	0.8	<0.5	<0.5	<0.5	<0.5
Sulphate as SO4 (2:1 Ext)	g/l		0.172	0.0038	0.0489	0.0224	0.0581	0.0424	0.0556	0.0534	0.0838	0.0081	0.1089
Total Phenols HPLC	mg/kg	440	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
Arsenic	mg/kg	640	26.2	18.9	11	77.5	75.3	23.9	21.7	17.1	15.9	30.4	12.6
Cadmium	mg/kg	410	<0.1	0.3	<0.1	10.6	<5.0	0.6	1.4	0.1	0.2	0.4	<0.1
Chromium	mg/kg	8600	43.1	35.3	46.4	37.8	43.8	15	15.3	40	47.1	41.5	38.3
Hexavalent Chromium	mg/kg	49	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Copper	mg/kg	68000	38	22	18	165	96	464	460	22	36	148	18
Lead	mg/kg	2300	65	40	40	5711	676	522	494	43	81	67	33
Mercury	mg/kg	1100	<0.1	<0.1	<0.1	<0.1	<0.1	37.7	30.2	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	980	11.8	9.2	14.9	89.5	32.3	44.6	40.4	13.3	18	11.4	9.3
Selenium	mg/kg	12000	<1	<1	<1	<1	2	3	2	<1	<1	<1	<1
Water Soluble Boron	mg/kg	240000	0.3	0.3	0.4	0.2	0.2	0.6	0.5	0.2	1.1	0.4	0.2
Zinc	mg/kg	730000	197	143	154	7718	1035	1262	1157	145	226	442	120
Asbestos Fibres	None		NAD	NAD	NAD	NAD	NAD	Fibre Bundles	Fibre Bundles	NAD	NAD	NAD	NAD
Asbestos Fibres (2)	None		NAD	NAD	NAD	NAD	NAD			NAD	NAD	NAD	NAD
Asbestos ACM	None		NAD	NAD	NAD	NAD	NAD	NAD	Insulation Debris	NAD	NAD	NAD	NAD
Asbestos ACM (2)	None		NAD	NAD	NAD	NAD	NAD			NAD	NAD	NAD	NAD
Asbestos Type	None		NAD	NAD	NAD	NAD	NAD	Crocidolite	Chrysotile	NAD	NAD	NAD	NAD
Asbestos Type (2)	None		NAD	NAD	NAD	NAD	NAD			NAD	NAD	NAD	NAD
Asbestos Level Screen	None		NAD	NAD	NAD	NAD	NAD	<0.1%	NDP	NAD	NAD	NAD	NAD
Asbestos Gravimetric Quantification	mass %							<0.001	2.898				
Asbestos PCOM Quantification (Fibres)	mass %							<0.001	0.004				
Asbestos Gravimetric & PCOM Total	mass %							<0.001	2.902				
PAH													
Acenaphthene	mg/kg	84000	<0.05	<0.05	0.45	0.09	<0.05	<0.25	<0.25	0.12	0.17	<0.05	0.19
Acenaphthylene	mg/kg	83000	<0.03	<0.03	0.56	0.13	<0.03	1.36	0.32	0.32	0.41	<0.03	0.3
Anthracene	mg/kg	520000	<0.04	<0.04	0.55	0.98	<0.04	0.88	0.35	<0.04	<0.04	<0.04	0.06
Benzo(a)anthracene	mg/kg	170	0.13	<0.06	0.08	1.26	<0.06	2.53	0.8	<0.06	<0.06	<0.06	0.08
Benzo(a)pyrene	mg/kg	77	0.12	<0.04	0.04	1.38	<0.04	9.47	2.36	<0.04	<0.04	<0.04	<0.04
Benzo(b)fluoranthene	mg/kg	44	0.15	<0.05	0.07	2.09	<0.05	13.06	2.75	<0.05	<0.05	<0.05	<0.05
Benzo(ghi)perylene	mg/kg	3900	0.09	<0.04	<0.04	0.67	<0.04	6.47	1.8	<0.04	<0.04	<0.04	<0.04
Benzo(k)fluoranthene	mg/kg	1200	0.06	<0.02	0.03	0.81	<0.02	5.08	1.07	<0.02	<0.02	<0.02	<0.02
Chrysene	mg/kg	350	0.23	<0.02	0.16	2.18	<0.02	5.2	1.45	0.12	0.09	0.02	0.11
Dibenzo(ah)anthracene	mg/kg	3.5	<0.04	<0.04	<0.04	0.15	<0.04	1.21	0.41	<0.04	<0.04	<0.04	<0.04
Fluoranthene	mg/kg	23000	0.2	0.03	0.36	3.23	<0.03	3.07	1.19	0.07	0.1	0.03	0.19
Fluorene	mg/kg	63000	<0.04	<0.04	0.83	0.11	<0.04	<0.20	<0.20	0.51	0.57	<0.04	<0.04

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	TP14	TP14	TP13	TP13	TP15	TP15	WS09	WS09	WS10	WS10	WS10
		Depth	0.50	2.00	0.50	2.00	0.50	1.50	0.50	2.00	0.30	0.50	2.00
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Metals and Inorganics													
pH	pH units	<5, >9	7.08	6.48	7.94	8.55	9.07	8.54	7.95	7.53	8.26	8.53	8.21
Fraction Organic Carbon	None		0.175	0.222	0.051	0.011	0.004	0.345	0.085	0.258	0.048	0.072	NDP
Free Cyanide	mg/kg	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Cyanide	mg/kg	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Sulphate as SO4 (2:1 Ext)	g/l		1.2911	1.3918	0.0667	0.0162	0.0064	0.0413	0.1154	1.3388	0.0188	0.0091	0.011
Total Phenols HPLC	mg/kg	440	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
Arsenic	mg/kg	640	468	614.7	53.2	13.2	15.7	125.8	561.8	143.2	58.6	69.4	69.2
Cadmium	mg/kg	410	25.8	31.2	2.3	1.5	0.8	15.6	41.6	86.7	10	5.4	11.8
Chromium	mg/kg	8600	32.2	39.1	43.2	48.2	55.7	32.6	42.7	32.5	53.8	47	28.1
Hexavalent Chromium	mg/kg	49	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Copper	mg/kg	68000	823	744	308	28	18	149	691	687	163	137	226
Lead	mg/kg	2300	38190	43240	426	138	249	3290	29730	8750	2003	1027	4136
Mercury	mg/kg	1100	1.4	0.5	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	3.4
Nickel	mg/kg	980	44.6	26.3	24.5	13.2	10.3	28.4	84.6	48.8	51.5	18	52.3
Selenium	mg/kg	12000	14	9	<1	<1	<1	<1	2	2	<1	<1	2
Water Soluble Boron	mg/kg	240000	0.2	0.2	0.8	0.3	<0.1	0.3	0.1	0.3	0.3	0.2	0.1
Zinc	mg/kg	730000	47470	59230	889	418	470	6362	72700	49690	4990	3420	6578
Asbestos Fibres	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	Fibre Bundles
Asbestos Fibres (2)	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	
Asbestos ACM	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Asbestos ACM (2)	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	
Asbestos Type	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	Chrysotile
Asbestos Type (2)	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	
Asbestos Level Screen	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	<0.1%
Asbestos Gravimetric Quantification	mass %												<0.001
Asbestos PCOM Quantification (Fibres)	mass %												<0.001
Asbestos Gravimetric & PCOM Total	mass %												<0.001
PAH													
Acenaphthene	mg/kg	84000	<0.05	<0.05	0.09	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	3.11
Acenaphthylene	mg/kg	83000	<0.03	<0.03	0.04	<0.03	<0.03	<0.03	0.07	<0.03	0.05	<0.03	0.22
Anthracene	mg/kg	520000	<0.04	<0.04	0.22	<0.04	<0.04	<0.04	0.67	<0.04	0.28	0.09	4.42
Benzo(a)anthracene	mg/kg	170	<0.06	<0.06	0.57	0.12	<0.06	0.14	0.9	<0.06	0.79	0.24	11.37
Benzo(a)pyrene	mg/kg	77	<0.04	<0.04	0.53	0.08	<0.04	0.11	0.85	<0.04	0.85	0.19	12.88
Benzo(b)fluoranthene	mg/kg	44	<0.05	<0.05	0.66	0.09	<0.05	0.13	1.23	<0.05	1.07	0.22	14.54
Benzo(ghi)perylene	mg/kg	3900	<0.04	<0.04	0.24	<0.04	<0.04	0.06	0.42	<0.04	0.46	0.09	6.73
Benzo(k)fluoranthene	mg/kg	1200	<0.02	<0.02	0.25	0.04	<0.02	0.05	0.48	<0.02	0.41	0.09	5.65
Chrysene	mg/kg	350	<0.02	<0.02	0.64	0.11	0.03	0.14	1.18	<0.02	0.97	0.25	12.58
Dibenzo(ah)anthracene	mg/kg	3.5	<0.04	<0.04	0.06	<0.04	<0.04	<0.04	0.08	<0.04	0.08	<0.04	0.86
Fluoranthene	mg/kg	23000	<0.03	<0.03	1.25	0.21	0.04	0.26	1.94	<0.03	1.67	0.46	26.28
Fluorene	mg/kg	63000	<0.04	<0.04	0.08	<0.04	<0.04	<0.04	0.06	<0.04	0.06	<0.04	1.32

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	TP25	TP26	TP27	TP28	BH9	BH9	WS22	WS24	WS25	WS25	BH6
		Depth	0.50	0.50	1.00	1.50	6.50	12.00	1.00	3.50	1.00	3.00	1.50
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Metals and Inorganics													
pH	pH units	<5, >9	8.79	8.71	6.78	8.21	7.81	8.21	8.62	7.64	7.96	7.93	7.93
Fraction Organic Carbon	None		0.058	0.03	NDP	0.073	0.008	0.002	0.117	0.002	0.418	0.224	NDP
Free Cyanide	mg/kg	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Cyanide	mg/kg	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Sulphate as SO4 (2:1 Ext)	g/l		0.0334	0.0112	0.0815	0.0242	0.087	0.0511	0.1421	0.7996	0.071	0.096	0.1056
Total Phenols HPLC	mg/kg	440	<0.15	<0.15	0.2	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
Arsenic	mg/kg	640	268.5	27.8	30.6	30.2	12.5	7.1	46	15.3	117.9	607.2	40
Cadmium	mg/kg	410	3.3	0.9	2.4	1.2	0.6	<0.1	1.6	1.4	20	80.5	2.7
Chromium	mg/kg	8600	31.1	55.8	19.9	35.3	31.9	23.2	45.2	38.2	30.7	29.7	9
Hexavalent Chromium	mg/kg	49	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	4.9	<0.3	<0.3
Copper	mg/kg	68000	201	79	311	191	37	2	150	40	392	1145	112
Lead	mg/kg	2300	635	201	1246	336	143	11	751	22	16980	42740	1382
Mercury	mg/kg	1100	0.1	<0.1	0.8	0.2	0.7	<0.1	<0.1	<0.1	<0.1	<0.1	0.2
Nickel	mg/kg	980	22.8	17.3	34.9	31.4	9.2	8.6	47.4	5.6	52.1	55.4	20.9
Selenium	mg/kg	12000	<1	<1	3	<1	<1	<1	1	<1	2	6	3
Water Soluble Boron	mg/kg	240000	0.4	0.5	0.8	0.5	0.6	0.5	1	0.6	0.6	1.7	0.8
Zinc	mg/kg	730000	1886	395	2315	639	396	44	1873	67	22070	77230	1046
Asbestos Fibres	None		NAD	NAD	Fibre Bundles	NAD	NAD		NAD	NAD	NAD	NAD	Fibre Bundles
Asbestos Fibres (2)	None		NAD	NAD		NAD	NAD		NAD	NAD	NAD	NAD	Free Fibres
Asbestos ACM	None		NAD	NAD	NAD	NAD	NAD		NAD	NAD	NAD	NAD	NAD
Asbestos ACM (2)	None		NAD	NAD		NAD	NAD		NAD	NAD	NAD	NAD	NAD
Asbestos Type	None		NAD	NAD	Chrysotile	NAD	NAD		NAD	NAD	NAD	NAD	Chrysotile
Asbestos Type (2)	None		NAD	NAD		NAD	NAD		NAD	NAD	NAD	NAD	Amosite
Asbestos Level Screen	None		NAD	NAD	<0.1%	NAD	NAD		NAD	NAD	NAD	NAD	<0.1%
Asbestos Gravimetric Quantification	mass %				<0.001								<0.001
Asbestos PCOM Quantification (Fibres)	mass %				<0.001								<0.001
Asbestos Gravimetric & PCOM Total	mass %				<0.001								<0.001
PAH													
Acenaphthene	mg/kg	84000	0.08	<0.05	1.77	0.56	<0.05	<0.05	0.19	<0.05	<0.05	1.39	0.3
Acenaphthylene	mg/kg	83000	<0.03	<0.03	0.75	0.3	<0.03	<0.03	0.42	0.14	<0.03	3.37	<0.15
Anthracene	mg/kg	520000	0.21	0.12	4.6	1.18	0.08	<0.04	1.31	<0.04	0.05	1.09	1
Benzo(a)anthracene	mg/kg	170	0.74	0.46	15.18	3.65	0.23	<0.06	4.77	<0.06	0.15	1.23	3.04
Benzo(a)pyrene	mg/kg	77	0.71	0.45	16	3.97	0.14	<0.04	4.71	<0.04	0.06	0.46	1.91
Benzo(b)fluoranthene	mg/kg	44	0.94	0.55	20.33	4.93	0.24	<0.05	7.29	0.08	0.12	0.89	3.25
Benzo(ghi)perylene	mg/kg	3900	0.34	0.21	10.45	2.19	0.09	<0.04	2.8	<0.04	<0.04	0.32	1.36
Benzo(k)fluoranthene	mg/kg	1200	0.36	0.22	7.9	1.92	0.09	<0.02	2.84	0.03	0.05	0.34	1.26
Chrysene	mg/kg	350	0.92	0.5	17.16	4.04	0.19	<0.02	5.93	0.05	0.12	1.04	3.01
Dibenzo(ah)anthracene	mg/kg	3.5	0.07	<0.04	1.63	0.39	<0.04	<0.04	0.63	<0.04	<0.04	0.06	0.26
Fluoranthene	mg/kg	23000	1.68	0.9	29.91	7.29	0.37	<0.03	10.21	0.11	0.24	2.77	5.47
Fluorene	mg/kg	63000	0.1	<0.04	1.97	0.58	<0.04	<0.04	0.23	0.06	<0.04	3.85	0.41

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	BH6	TP17	TP29	TP30	TP31	WS29	WS29	WS26	WS26	WS28	WS27
		Depth	7.50	0.30	0.60	1.50	1.00	2.00	3.00	0.50	4.00	1.50	0.30
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Metals and Inorganics													
pH	pH units	<5, >9	8.41	7.9	9.46	9.36	8.79	8.98		8.35		9.12	8.19
Fraction Organic Carbon	None		0.021	NDP	NDP	0.028	0.046	0.002		0.077		0.001	0.33
Free Cyanide	mg/kg	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5		<0.5	<0.5
Total Cyanide	mg/kg	40	<0.5	<0.5	<0.5	<0.5	0.7	<0.5		<0.5		<0.5	<0.5
Sulphate as SO4 (2:1 Ext)	g/l		0.0791	0.0143	0.1122	0.0875	0.2329	0.0029		0.0296		0.0023	0.0663
Total Phenols HPLC	mg/kg	440	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15		<0.15		<0.15	<0.15
Arsenic	mg/kg	640	27.5	159.9	26.2	16.8	112.5	12		96.9		13.8	394.3
Cadmium	mg/kg	410	4.9	7.3	1.6	0.5	3.2	1		1.8		0.5	10.7
Chromium	mg/kg	8600	30	28.4	9.6	31.3	53	33.8		42.2		32.1	59.9
Hexavalent Chromium	mg/kg	49	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3		<0.3		<0.3	<0.3
Copper	mg/kg	68000	74	1843	243	75	352	6		165		13	436
Lead	mg/kg	2300	467	61746	306	24	2076	11		1971		11	17700
Mercury	mg/kg	1100	0.4	1.3	0.1	<0.1	0.3	<0.1		<0.1		<0.1	0.1
Nickel	mg/kg	980	11.1	40.7	33.5	12.9	47.8	5.9		37		6	50.3
Selenium	mg/kg	12000	<1	<1	1	<1	1	<1		<1		<1	1
Water Soluble Boron	mg/kg	240000	0.5	0.4	0.9	0.3	2	0.1		0.5		0.1	0.3
Zinc	mg/kg	730000	2364	6293	1443	149	3955	339		2427		129	24080
Asbestos Fibres	None		NAD	Fibre Bundles	Fibre Bundles	NAD	NAD	NAD		NAD		NAD	NAD
Asbestos Fibres (2)	None		NAD			NAD	NAD	NAD		NAD		NAD	NAD
Asbestos ACM	None		NAD	NAD	NAD	NAD	NAD	NAD		NAD		NAD	NAD
Asbestos ACM (2)	None		NAD			NAD	NAD	NAD		NAD		NAD	NAD
Asbestos Type	None		NAD	Amosite	Chrysotile	NAD	NAD	NAD		NAD		NAD	NAD
Asbestos Type (2)	None		NAD			NAD	NAD	NAD		NAD		NAD	NAD
Asbestos Level Screen	None		NAD	<0.1%	<0.1%	NAD	NAD	NAD		NAD		NAD	NAD
Asbestos Gravimetric Quantification	mass %		NA	<0.001	<0.001								
Asbestos PCOM Quantification (Fibres)	mass %		NA	<0.001	<0.001								
Asbestos Gravimetric & PCOM Total	mass %		NA	<0.001	<0.001								
PAH													
Acenaphthene	mg/kg	84000	0.12	0.08	<0.25	<0.05	1.83	<0.05	<10	0.08	<10	<0.05	0.18
Acenaphthylene	mg/kg	83000	0.89	0.05	<0.15	<0.03	1.09	<0.03	<10	0.03	<10	<0.03	0.07
Anthracene	mg/kg	520000	1.55	0.23	0.34	<0.04	5.92	<0.04	<10	0.19	<10	<0.04	0.61
Benzo(a)anthracene	mg/kg	170	4.04	1.06	1.17	<0.06	21.79	<0.06	<10	0.86	40	<0.06	1.53
Benzo(a)pyrene	mg/kg	77	2.69	0.68	0.8	<0.04	14.92	<0.04	<10	0.55	37	<0.04	1.29
Benzo(b)fluoranthene	mg/kg	44	4.11	1.07	1.12	<0.05	20.98	<0.05	<10	1.02	25	<0.05	1.89
Benzo(ghi)perylene	mg/kg	3900	1.07	0.46	0.39	<0.04	7.75	<0.04	<10	0.34	<10	<0.04	0.69
Benzo(k)fluoranthene	mg/kg	1200	1.6	0.41	0.44	<0.02	8.16	<0.02	<10	0.39	<10	<0.02	0.73
Chrysene	mg/kg	350	4.4	0.87	1.18	<0.02	16.45	<0.02	<10	0.91	42	<0.02	1.66
Dibenzo(ah)anthracene	mg/kg	3.5	0.45	0.08	<0.20	<0.04	1.72	<0.04	<10	0.06	<10	<0.04	0.11
Fluoranthene	mg/kg	23000	7.41	1.64	1.93	<0.03	33.35	<0.03	<10	1.6	<10	<0.03	3.5
Fluorene	mg/kg	63000	0.47	0.06	<0.20	<0.04	2.46	<0.04	<10	0.07	21	<0.04	0.18

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	WS27	WS27	HP16	HP17	HP18	HP19	HP20	HP21	HP22	HP23	HP24
		Depth	3.50	4.80	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Metals and Inorganics													
pH	pH units	<5, >9		8.67		8.52							
Fraction Organic Carbon	None			<0.001		0.003							
Free Cyanide	mg/kg	40		<0.5		<0.5							
Total Cyanide	mg/kg	40		<0.5		<0.5							
Sulphate as SO4 (2:1 Ext)	g/l			0.6335		0.2158							
Total Phenols HPLC	mg/kg	440		<0.15		<0.15							
Arsenic	mg/kg	640		12.6		15.8							
Cadmium	mg/kg	410		<0.1		<0.1							
Chromium	mg/kg	8600		5.8		23.8							
Hexavalent Chromium	mg/kg	49		<0.3		<0.3							
Copper	mg/kg	68000		7		15							
Lead	mg/kg	2300		10		38							
Mercury	mg/kg	1100		<0.1		<0.1							
Nickel	mg/kg	980		5.6		9.1							
Selenium	mg/kg	12000		<1		<1							
Water Soluble Boron	mg/kg	240000		1.1		2.1							
Zinc	mg/kg	730000		146		87							
Asbestos Fibres	None			NAD		NAD							
Asbestos Fibres (2)	None			NAD		NAD							
Asbestos ACM	None			NAD		NAD							
Asbestos ACM (2)	None			NAD		NAD							
Asbestos Type	None			NAD		NAD							
Asbestos Type (2)	None			NAD		NAD							
Asbestos Level Screen	None			NAD		NAD							
Asbestos Gravimetric Quantification	mass %												
Asbestos PCOM Quantification (Fibres)	mass %												
Asbestos Gravimetric & PCOM Total	mass %												
PAH													
Acenaphthene	mg/kg	84000	<10	<0.05	<10	<0.05	<10	<10	<10	<10	<10	<10	<10
Acenaphthylene	mg/kg	83000	<10	<0.03	<10	<0.03	<10	<10	<10	<10	<10	<10	<10
Anthracene	mg/kg	520000	<10	<0.04	<10	<0.04	<10	<10	<10	<10	<10	<10	<10
Benzo(a)anthracene	mg/kg	170	<10	<0.06	<10	0.13	<10	<10	<10	<10	<10	<10	<10
Benzo(a)pyrene	mg/kg	77	<10	<0.04	<10	0.08	<10	<10	<10	<10	<10	<10	<10
Benzo(b)fluoranthene	mg/kg	44	<10	<0.05	<10	0.09	<10	<10	<10	<10	<10	<10	<10
Benzo(ghi)perylene	mg/kg	3900	<10	<0.04	<10	<0.04	<10	<10	<10	<10	<10	<10	<10
Benzo(k)fluoranthene	mg/kg	1200	<10	<0.02	<10	0.03	<10	<10	<10	<10	<10	<10	<10
Chrysene	mg/kg	350	<10	<0.02	<10	0.11	<10	<10	<10	<10	<10	<10	<10
Dibenzo(ah)anthracene	mg/kg	3.5	<10	<0.04	<10	<0.04	<10	<10	<10	<10	<10	<10	<10
Fluoranthene	mg/kg	23000	<10	<0.03	<10	0.19	<10	<10	<10	<10	<10	<10	<10
Fluorene	mg/kg	63000	<10	<0.04	<10	<0.04	<10	<10	<10	<10	<10	<10	<10

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	HP25	HP26	HP27	WS34	WS34	WS33	WS33	WS33	WS33	WS2	WS2
		Depth	0.50	0.50	0.50	0.4	3.0	1.2	2.0	3.5	4.5	0.7	4.5
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Metals and Inorganics													
pH	pH units	<5, >9	8.4		8.54	8.57	8.82	8.77	8.98			8.71	9.34
Fraction Organic Carbon	None		0.002		0.008	NDP	0.002	<0.001	0.002			0.008	<0.001
Free Cyanide	mg/kg	40	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	<0.5
Total Cyanide	mg/kg	40	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	<0.5
Sulphate as SO4 (2:1 Ext)	g/l		0.1323		0.09	0.0023	0.0024	0.0022	<0.0015			0.0325	0.0056
Total Phenols HPLC	mg/kg	440	<0.15		<0.15	<0.15	<0.15	<0.15	<0.15			<0.15	<0.15
Arsenic	mg/kg	640	12.9		12.4	188.2	11.8	14.5	15.2			14.4	12.9
Cadmium	mg/kg	410	<0.1		<0.1	3.2	0.9	2.4	0.8			1	0.1
Chromium	mg/kg	8600	5.3		33.6	11.7	5.3	4.6	4.5			31.2	38.1
Hexavalent Chromium	mg/kg	49	<0.3		<0.3	<0.3	<0.3	<0.3	<0.3			<0.3	<0.3
Copper	mg/kg	68000	4		7	203	17	13	20			40	7
Lead	mg/kg	2300	14		13	1340	12	34	19			35	8
Mercury	mg/kg	1100	<0.1		<0.1	0.1	<0.1	<0.1	<0.1			<0.1	<0.1
Nickel	mg/kg	980	6.7		11.5	21.4	5.6	5.1	5.3			19.1	5.3
Selenium	mg/kg	12000	<1		<1	<1	<1	<1	<1			<1	<1
Water Soluble Boron	mg/kg	240000	0.9		1.4	0.2	0.1	<0.1	0.1			0.4	0.1
Zinc	mg/kg	730000	57		66	2875	421	708	448			338	24
Asbestos Fibres	None		NAD		NAD	Free Fibres	NAD	NAD	NAD	NA	NA	NAD	NAD
Asbestos Fibres (2)	None		NAD		NAD	NA	NAD	NAD	NAD	NA	NA	NAD	NAD
Asbestos ACM	None		NAD		NAD	NAD	NAD	NAD	NAD	NA	NA	NAD	NAD
Asbestos ACM (2)	None		NAD		NAD		NAD	NAD	NAD	NA	NA	NAD	NAD
Asbestos Type	None		NAD		NAD	Chrysotile	NAD	NAD	NAD	NA	NA	NAD	NAD
Asbestos Type (2)	None		NAD		NAD		NAD	NAD	NAD	NA	NA	NAD	NAD
Asbestos Level Screen	None		NAD		NAD	<0.1%	NAD	NAD	NAD	NA	NA	NAD	NAD
Asbestos Gravimetric Quantification	mass %					<0.001							
Asbestos PCOM Quantification (Fibres)	mass %					<0.001							
Asbestos Gravimetric & PCOM Total	mass %					<0.001							
PAH													
Acenaphthene	mg/kg	84000	<0.05	<10	<0.05	0.08	<0.05	<0.05	<0.05	19	254	<0.05	<0.05
Acenaphthylene	mg/kg	83000	<0.03	<10	<0.03	0.04	<0.03	<0.03	<0.03	<10	<10	<0.03	<0.03
Anthracene	mg/kg	520000	<0.04	<10	<0.04	0.17	<0.04	<0.04	<0.04	76	49	0.08	<0.04
Benzo(a)anthracene	mg/kg	170	<0.06	<10	<0.06	1.2	<0.06	<0.06	<0.06	155	89	0.27	<0.06
Benzo(a)pyrene	mg/kg	77	<0.04	<10	<0.04	1.05	<0.04	<0.04	<0.04	93	71	0.18	<0.04
Benzo(b)fluoranthene	mg/kg	44	<0.05	<10	<0.05	1.66	<0.05	<0.05	<0.05	159	111	0.27	<0.05
Benzo(ghi)perylene	mg/kg	3900	<0.04	<10	<0.04	0.57	<0.04	<0.04	<0.04	57	54	0.13	<0.04
Benzo(k)fluoranthene	mg/kg	1200	<0.02	<10	<0.02	0.64	<0.02	<0.02	<0.02	62	43	0.11	<0.02
Chrysene	mg/kg	350	<0.02	<10	0.04	1.16	<0.02	<0.02	<0.02	150	69	0.27	<0.02
Dibenzo(ah)anthracene	mg/kg	3.5	<0.04	<10	<0.04	0.13	<0.04	<0.04	<0.04	29	23	<0.04	<0.04
Fluoranthene	mg/kg	23000	0.04	<10	0.07	1.98	<0.03	<0.03	<0.03	436	183	0.58	<0.03
Fluorene	mg/kg	63000	<0.04	<10	<0.04	0.06	<0.04	<0.04	<0.04	20	341	<0.04	<0.04

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	BH12	BH12	BH12	WS17	WS17	WS23 HP	BH5	BH7	WS30	WS30	WS30
		Depth	0.3	2.6	6.6	1.5	4.0	0.2	2.50	5.50	1.00	4.00	5.00
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Metals and Inorganics													
pH	pH units	<5, >9	8.23	8.62	9.17	8.8	8.84	9.11	8.01	8.25	9.13	8.18	8.68
Fraction Organic Carbon	None		0.059	0.025	0.001	0.034	0.013	0.082	0.194	NDP	0.004	0.002	<0.001
Free Cyanide	mg/kg	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Cyanide	mg/kg	40	<0.5	<0.5	<0.5	0.8	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5
Sulphate as SO4 (2:1 Ext)	g/l		0.0244	0.0522	0.0089	0.0193	0.0653	0.023	0.2798	0.0219	0.0027	0.1179	0.0198
Total Phenols HPLC	mg/kg	440	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15
Arsenic	mg/kg	640	113.2	83	7.2	51	23.3	79.9	175.1	18.9	16.2	20.7	9.1
Cadmium	mg/kg	410	1.8	2.6	<0.1	1	1.2	2	66.1	2.8	1.4	0.1	<0.1
Chromium	mg/kg	8600	55.9	40.5	33.4	43.1	38.4	40.2	42.8	6.2	40.6	45.2	39.6
Hexavalent Chromium	mg/kg	49	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Copper	mg/kg	68000	924	184	<1	311	47	181	1825	57	16	10	8
Lead	mg/kg	2300	968	697	12	234	300	1275	45220	486	36	12	41
Mercury	mg/kg	1100	0.2	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	980	40.5	11.9	4.8	35.3	10.5	38.5	80.4	8.2	6.5	6.7	7.2
Selenium	mg/kg	12000	<1	<1	<1	<1	<1	<1	4	<1	<1	<1	<1
Water Soluble Boron	mg/kg	240000	0.8	0.3	0.2	0.3	0.3	1.3	0.6	0.2	0.2	0.1	0.2
Zinc	mg/kg	730000	1858	1905	22	724	694	2492	27940	1501	200	193	122
Asbestos Fibres	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	Free Fibres	NAD	NAD	NAD
Asbestos Fibres (2)	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD		NAD	NAD	NAD
Asbestos ACM	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD	NAD
Asbestos ACM (2)	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD		NAD	NAD	NAD
Asbestos Type	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	Chrysotile	NAD	NAD	NAD
Asbestos Type (2)	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD		NAD	NAD	NAD
Asbestos Level Screen	None		NAD	NAD	NAD	NAD	NAD	NAD	NAD	<0.1%	NAD	NAD	NAD
Asbestos Gravimetric Quantification	mass %									<0.001			
Asbestos PCOM Quantification (Fibres)	mass %									<0.001			
Asbestos Gravimetric & PCOM Total	mass %									<0.001			
PAH													
Acenaphthene	mg/kg	84000	<0.25	<0.05	<0.05	<0.05	<0.05	0.23	<0.25	<0.05	<0.05	0.15	<0.05
Acenaphthylene	mg/kg	83000	<0.15	<0.03	<0.03	0.08	<0.03	1.18	<0.15	<0.03	<0.03	0.39	<0.03
Anthracene	mg/kg	520000	<0.20	0.07	<0.04	0.3	<0.04	2.15	<0.20	<0.04	<0.04	<0.04	<0.04
Benzo(a)anthracene	mg/kg	170	0.37	0.12	<0.06	1.54	<0.06	9.7	<0.30	0.17	0.19	<0.06	<0.06
Benzo(a)pyrene	mg/kg	77	<0.20	0.07	<0.04	1.14	<0.04	6.97	<0.20	0.12	0.12	<0.04	<0.04
Benzo(b)fluoranthene	mg/kg	44	0.41	0.09	<0.05	1.45	<0.05	11.57	<0.25	0.15	0.17	<0.05	<0.05
Benzo(ghi)perylene	mg/kg	3900	0.29	<0.04	<0.04	0.62	<0.04	3.39	<0.20	0.06	0.05	<0.04	<0.04
Benzo(k)fluoranthene	mg/kg	1200	0.16	0.03	<0.02	0.56	<0.02	4.5	<0.10	0.06	0.06	<0.02	<0.02
Chrysene	mg/kg	350	0.38	0.11	<0.02	1.17	<0.02	10.11	<0.10	0.15	0.17	<0.02	<0.02
Dibenzo(ah)anthracene	mg/kg	3.5	<0.20	<0.04	<0.04	0.07	<0.04	0.95	<0.20	<0.04	<0.04	<0.04	<0.04
Fluoranthene	mg/kg	23000	0.59	0.29	<0.03	2.16	<0.03	15.13	0.35	0.29	0.34	<0.03	<0.03
Fluorene	mg/kg	63000	<0.20	<0.04	<0.04	0.06	<0.04	0.43	<0.20	<0.04	<0.04	0.47	<0.04

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	WS31	WS31	WS32
		Depth	0.50	2.60	2.50
		Sample Type	Soil	Soil	Soil
Test	**Units**	**Screening Value**			
Metals and Inorganics					
pH	pH units	<5, >9	7.83	8.31	8.33
Fraction Organic Carbon	None		0.14	0.002	0.002
Free Cyanide	mg/kg	40	<0.5	<0.5	<0.5
Total Cyanide	mg/kg	40	<0.5	<0.5	<0.5
Sulphate as SO4 (2:1 Ext)	g/l		0.0518	0.0067	0.0092
Total Phenols HPLC	mg/kg	440	<0.15	<0.15	<0.15
Arsenic	mg/kg	640	246	8.4	13
Cadmium	mg/kg	410	8.1	0.2	<0.1
Chromium	mg/kg	8600	40.5	34.1	36.4
Hexavalent Chromium	mg/kg	49	<0.3	<0.3	<0.3
Copper	mg/kg	68000	506	5	11
Lead	mg/kg	2300	12180	13	8
Mercury	mg/kg	1100	0.2	<0.1	<0.1
Nickel	mg/kg	980	42.8	4.9	4.7
Selenium	mg/kg	12000	<1	<1	<1
Water Soluble Boron	mg/kg	240000	0.7	0.1	0.2
Zinc	mg/kg	730000	8517	28	23
Asbestos Fibres	None		NAD	NAD	NAD
Asbestos Fibres (2)	None		NAD	NAD	NAD
Asbestos ACM	None		NAD	NAD	NAD
Asbestos ACM (2)	None		NAD	NAD	NAD
Asbestos Type	None		NAD	NAD	NAD
Asbestos Type (2)	None		NAD	NAD	NAD
Asbestos Level Screen	None		NAD	NAD	NAD
Asbestos Gravimetric Quantification	mass %				
Asbestos PCOM Quantification (Fibres)	mass %				
Asbestos Gravimetric & PCOM Total	mass %				
PAH					
Acenaphthene	mg/kg	84000	0.11	<0.05	<0.05
Acenaphthylene	mg/kg	83000	0.13	0.06	<0.03
Anthracene	mg/kg	520000	0.35	<0.04	<0.04
Benzo(a)anthracene	mg/kg	170	1.8	<0.06	<0.06
Benzo(a)pyrene	mg/kg	77	1.5	<0.04	<0.04
Benzo(b)fluoranthene	mg/kg	44	2.4	<0.05	<0.05
Benzo(ghi)perylene	mg/kg	3900	0.91	<0.04	<0.04
Benzo(k)fluoranthene	mg/kg	1200	0.93	<0.02	<0.02
Chrysene	mg/kg	350	2.25	0.04	0.05
Dibenzo(ah)anthracene	mg/kg	3.5	0.19	<0.04	<0.04
Fluoranthene	mg/kg	23000	2.87	0.09	0.11
Fluorene	mg/kg	63000	0.1	0.06	<0.04

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	BH1	BH1	WS3	WS3	TP4	TP4	TP3	TP3	TP2	TP2	TP1
		Depth	1.0	5.0	1.00	5.00	0.00-0.30	2.00	0.30	0.00-1.00	0.00-0.20	1.00-1.50	0.50
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Indeno(123cd)pyrene	mg/kg	500	<0.04	<0.04	0.09	<0.04	1.7	0.23	0.99	0.1	0.3	0.13	0.38
Naphthalene	mg/kg	190	<0.04	<0.04	<0.04	<0.04	0.2	<0.04	0.44	0.26	0.07	<0.04	0.26
Phenanthrene	mg/kg	22000	0.06	<0.03	0.19	0.05	3.83	0.09	1.69	0.39	0.37	0.27	0.67
Pyrene	mg/kg	54000	0.13	<0.03	0.32	0.05	5.42	1.48	2.26	0.35	0.67	0.53	0.81
PAH 16 Total	mg/kg		0.7	<0.6	2.1	<0.6	32.1	7.3	16.9	2.6	4.4	2.7	6.4
TPH CWG													
Aliphatics													
>C5-C6	mg/kg	3200										<0.1	
>C6-C8	mg/kg	7800										<0.1	
>C8-C10	mg/kg	2000										<0.1	
>C10-C12	mg/kg	9700										<0.2	
>C12-C16	mg/kg	59000										<4	
>C16-C21	mg/kg	1000000										<7	
>C21-C35	mg/kg	1000000										<7	
Aromatics													
>C5-EC7	mg/kg	27										<0.1	
>EC7-EC8	mg/kg	56000										<0.1	
>EC8-EC10	mg/kg	3500										<0.1	
>EC10-EC12	mg/kg	16000										<0.2	
>EC12-EC16	mg/kg	36000										<4	
>EC16-EC21	mg/kg	28000										<7	
>EC21-EC35	mg/kg	28000										19	
EPH													
EPH >C8-C10	mg/kg	2000	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
EPH >C10-C12	mg/kg	9700	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
EPH >C12-C16	mg/kg	36000	<10	<10	<10	<10	<10	<10	<10	<10	25	<10	120
EPH >C16-C21	mg/kg	28000	<10	<10	<10	<10	43	16	58	<10	202	<10	748
EPH >C21-C40	mg/kg	28000	124	<10	<10	<10	250	174	422	<10	1609	<10	3057
BTEX/MTBE													
Methyl Tertiary Butyl Ether	ug/kg											<2	
Benzene	ug/kg	27000										<3	
Toluene	ug/kg	56000										<3	
Ethylbenzene	ug/kg	5700										<3	
p/m-Xylene	ug/kg	5900000										<5	
o-Xylene	ug/kg	6600000										<3	
SVOC													
2-Chlorophenol	ug/kg	3500000										<10	
2-Methylphenol	ug/kg											<10	
2-Nitrophenol	ug/kg											<10	
2,4-Dichlorophenol	ug/kg											<10	
2,4-Dimethylphenol	ug/kg											<10	

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	TP1	TP1	TP1	TP5	TP5	TP6	TP6	TP7	TP7	HP3	HP3
		Depth	1.00	2.00	2.60	0.30	1.20	0.30	2.00	0.30	0.50	0.50	1.00
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Indeno(123cd)pyrene	mg/kg	500	0.07	0.11	<0.04	7	<0.04	9.79	11.9	30.3	4.93	3.91	0.72
Naphthalene	mg/kg	190	<0.04	0.08	<0.04	1.28	<0.04	1.19	1.61	1.49	2.81	2.7	1.26
Phenanthrene	mg/kg	22000	0.1	0.31	0.04	12.37	0.06	17.83	19.43	100.51	10.47	7.48	2.22
Pyrene	mg/kg	54000	0.18	0.32	0.04	16.89	0.08	24.92	29.46	88.54	12.3	10.65	3.1
PAH 16 Total	mg/kg		1.1	2.2	<0.6	121.5	<0.6	162.2	198.1	704.7	87.6	76.6	19.8
TPH CWG													
Aliphatics													
>C5-C6	mg/kg	3200		<0.1	<0.1	<0.1							<0.1
>C6-C8	mg/kg	7800		<0.1	<0.1	<0.1							<0.1
>C8-C10	mg/kg	2000		<0.1	<0.1	<0.1							<0.1
>C10-C12	mg/kg	9700		<0.2	<0.2	<0.2							<0.2
>C12-C16	mg/kg	59000		9	11	<4							<4
>C16-C21	mg/kg	1000000		57	35	<7							<7
>C21-C35	mg/kg	1000000		125	52	56							<7
Aromatics													
>C5-EC7	mg/kg	27		<0.1	<0.1	<0.1							<0.1
>EC7-EC8	mg/kg	56000		<0.1	<0.1	<0.1							<0.1
>EC8-EC10	mg/kg	3500		<0.1	<0.1	<0.1							<0.1
>EC10-EC12	mg/kg	16000		<0.2	<0.2	0.6							0.8
>EC12-EC16	mg/kg	36000		<4	<4	11							8
>EC16-EC21	mg/kg	28000		16	22	116							84
>EC21-EC35	mg/kg	28000		128	89	449							202
EPH													
EPH >C8-C10	mg/kg	2000	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
EPH >C10-C12	mg/kg	9700	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
EPH >C12-C16	mg/kg	36000	21	52	40	32	<10	<10	20	18	<10	<10	<10
EPH >C16-C21	mg/kg	28000	152	249	177	235	<10	174	257	218	92	70	53
EPH >C21-C40	mg/kg	28000	866	987	667	1047	<10	1246	1290	946	414	326	103
BTEX/MTBE													
Methyl Tertiary Butyl Ether	ug/kg			<2	<2	<2							
Benzene	ug/kg	27000		<3	<3	<3							
Toluene	ug/kg	56000		<3	<3	7							
Ethylbenzene	ug/kg	5700		<3	<3	3							
p/m-Xylene	ug/kg	5900000		<5	<5	20							
o-Xylene	ug/kg	6600000		<3	<3	7							
SVOC													
2-Chlorophenol	ug/kg	3500000		<10	<10	<100							<10
2-Methylphenol	ug/kg			<10	<10	<100							<10
2-Nitrophenol	ug/kg			<10	<10	<100							<10
2,4-Dichlorophenol	ug/kg			<10	<10	<100							<10
2,4-Dimethylphenol	ug/kg			<10	<10	<100							<10

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	HP2	HP2	HP1	HP1	HP4	HP4	HP5	HP5	HP6	HP6	HP7
		Depth	0.00-0.20	1.00	0.30	2.00	0.50	2.00	0.50	2.00	0.50	1.00	0.30
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Indeno(123cd)pyrene	mg/kg	500	0.69	8.69	5.25	2.65	1.78	2.02	8.98	4.22	1.87	14.81	1.46
Naphthalene	mg/kg	190	0.91	6.6	2.77	1.27	0.49	<0.40	2.32	6.67	1.14	17.82	0.56
Phenanthrene	mg/kg	22000	1.8	22.84	13.59	3.81	2.71	5.02	14.94	16.28	3.01	21.07	1.1
Pyrene	mg/kg	54000	2.43	28.88	14.85	5.04	4.15	5.95	23.37	18.82	4.63	57.06	3.61
PAH 16 Total	mg/kg		16.4	187.3	102.8	39.8	31.1	38.3	149.2	119.1	32.3	322.6	26.3
TPH CWG													
Aliphatics													
>C5-C6	mg/kg	3200											<0.1
>C6-C8	mg/kg	7800											<0.1
>C8-C10	mg/kg	2000											<0.1
>C10-C12	mg/kg	9700											<0.2
>C12-C16	mg/kg	59000											<4
>C16-C21	mg/kg	1000000											<7
>C21-C35	mg/kg	1000000											<7
Aromatics													
>C5-EC7	mg/kg	27											<0.1
>EC7-EC8	mg/kg	56000											<0.1
>EC8-EC10	mg/kg	3500											<0.1
>EC10-EC12	mg/kg	16000											<0.2
>EC12-EC16	mg/kg	36000											<4
>EC16-EC21	mg/kg	28000											27
>EC21-EC35	mg/kg	28000											115
EPH													
EPH >C8-C10	mg/kg	2000	<5	<5	<5	52	<5	<5	21	<5	7	<5	<5
EPH >C10-C12	mg/kg	9700	<10	<10	<10	46	<10	<10	26	<10	<10	<10	<10
EPH >C12-C16	mg/kg	36000	<10	22	13	151	<10	<10	199	32	14	24	<10
EPH >C16-C21	mg/kg	28000	44	230	124	177	96	93	2036	287	96	256	64
EPH >C21-C40	mg/kg	28000	341	1021	600	5593	708	639	3971	744	565	837	254
BTEX/MTBE													
Methyl Tertiary Butyl Ether	ug/kg												
Benzene	ug/kg	27000											
Toluene	ug/kg	56000											
Ethylbenzene	ug/kg	5700											
p/m-Xylene	ug/kg	5900000											
o-Xylene	ug/kg	6600000											
SVOC													
2-Chlorophenol	ug/kg	3500000											<10
2-Methylphenol	ug/kg												<10
2-Nitrophenol	ug/kg												<10
2,4-Dichlorophenol	ug/kg												<10
2,4-Dimethylphenol	ug/kg												<10

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	HP7	WS01	WS02	WS04	WS04	WS05	WS05	WS05	WS05	BH4	BH4
		Depth	1.00	1.00	0.05	0.30	5.00	1.00	3.00	4.00	5.00	0.50	3.00
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Indeno(123cd)pyrene	mg/kg	500	3.48	0.12		0.17	<0.04	2.37	<0.04	<0.04	0.18	0.96	0.06
Naphthalene	mg/kg	190	6.64	<0.04		<0.04	<0.04	0.32	<0.04	0.51	23.03	0.13	<0.04
Phenanthrene	mg/kg	22000	19.81	0.25		0.23	<0.03	2.4	<0.03	0.83	4.49	1.6	0.12
Pyrene	mg/kg	54000	25.03	0.33		0.47	<0.03	5.23	<0.03	0.18	7.67	2.37	0.17
PAH 16 Total	mg/kg		133.8	2.2		3.4	<0.6	34.2	<0.6	3	65.1	18.1	1.1
TPH CWG													
Aliphatics													
>C5-C6	mg/kg	3200							<0.1	16.4	1.2		<0.1
>C6-C8	mg/kg	7800							<0.1	1055.2	11.3		0.6
>C8-C10	mg/kg	2000							<0.1	6341.8	48.3		17
>C10-C12	mg/kg	9700							<0.2	1296.7	1868.1		22.7
>C12-C16	mg/kg	59000							<4	824	1146		91
>C16-C21	mg/kg	1000000							<7	187	62		61
>C21-C35	mg/kg	1000000							<7	25	21		<7
Aromatics													
>C5-EC7	mg/kg	27							<0.1	1.3	<0.1		<0.1
>EC7-EC8	mg/kg	56000							<0.1	4.2	<0.1		<0.1
>EC8-EC10	mg/kg	3500							<0.1	120.8	0.7		0.2
>EC10-EC12	mg/kg	16000							<0.2	636.8	2440.5		0.5
>EC12-EC16	mg/kg	36000							<4	433	3321		38
>EC16-EC21	mg/kg	28000							<7	138	142		36
>EC21-EC35	mg/kg	28000							<7	23	61		<7
EPH													
EPH >C8-C10	mg/kg	2000	<5	<5		<5	<5	<5	<5	4471	9499	<5	50
EPH >C10-C12	mg/kg	9700	<10	<10		<10	<10	<10	<10	2460	4764	<10	38
EPH >C12-C16	mg/kg	36000	24	<10		<10	<10	<10	<10	1710	5170	17	190
EPH >C16-C21	mg/kg	28000	211	<10		<10	<10	74	<10	477	281	98	156
EPH >C21-C40	mg/kg	28000	653	92		136	<10	464	<10	161	211	384	58
BTEX/MTBE													
Methyl Tertiary Butyl Ether	ug/kg												
Benzene	ug/kg	27000											
Toluene	ug/kg	56000											
Ethylbenzene	ug/kg	5700											
p/m-Xylene	ug/kg	5900000											
o-Xylene	ug/kg	6600000											
SVOC													
2-Chlorophenol	ug/kg	3500000							<10	<50	<50		<10
2-Methylphenol	ug/kg								<10	<50	<50		<10
2-Nitrophenol	ug/kg								<10	<50	<50		<10
2,4-Dichlorophenol	ug/kg								<10	<50	<50		<10
2,4-Dimethylphenol	ug/kg								<10	<50	<50		<10

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	BH3	BH3	BH3	WS16	WS16	WS16	WS12	WS14	WS14	TP9	TP9
		Depth	1.00	5.00	7.00	0.30	1.50	3.50	0.30	0.50	4.00	0.20	0.50
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Indeno(123cd)pyrene	mg/kg	500	2.33	<0.04	<0.04	0.53	<0.20	<0.04	0.16	3.4	0.18	8.37	4.42
Naphthalene	mg/kg	190	0.4	<0.04	<0.04	0.25	1.25	<0.04	0.14	0.79	0.25	1.04	0.5
Phenanthrene	mg/kg	22000	7.79	0.08	<0.03	0.92	0.28	<0.03	0.19	9.63	0.85	27.28	5.22
Pyrene	mg/kg	54000	7.54	0.07	<0.03	2.3	0.22	<0.03	0.18	10.15	0.67	22.47	8.65
PAH 16 Total	mg/kg		52.4	<0.6	<0.6	13.4	<3.0	<0.6	2.1	74.4	5.4	184.2	64.3
TPH CWG													
Aliphatics													
>C5-C6	mg/kg	3200						<0.1			0.4		
>C6-C8	mg/kg	7800						<0.1			1.9		
>C8-C10	mg/kg	2000						<0.1			2		
>C10-C12	mg/kg	9700						<0.2			<0.2		
>C12-C16	mg/kg	59000						<4			<4		
>C16-C21	mg/kg	1000000						<7			<7		
>C21-C35	mg/kg	1000000						<7			15		
Aromatics													
>C5-EC7	mg/kg	27						<0.1			0.8		
>EC7-EC8	mg/kg	56000						<0.1			<0.1		
>EC8-EC10	mg/kg	3500						<0.1			0.3		
>EC10-EC12	mg/kg	16000						<0.2			5.9		
>EC12-EC16	mg/kg	36000						<4			<4		
>EC16-EC21	mg/kg	28000						<7			12		
>EC21-EC35	mg/kg	28000						<7			57		
EPH													
EPH >C8-C10	mg/kg	2000	<5	<5	<5	<5	55	<5	<5	438	39	<5	<5
EPH >C10-C12	mg/kg	9700	<10	<10	<10	<10	41	<10	<10	196	14	<10	<10
EPH >C12-C16	mg/kg	36000	<10	<10	<10	<10	108	<10	34	68	21	13	<10
EPH >C16-C21	mg/kg	28000	66	<10	<10	52	462	<10	247	331	57	160	43
EPH >C21-C40	mg/kg	28000	246	<10	<10	461	1843	<10	224	1829	220	415	167
BTEX/MTBE													
Methyl Tertiary Butyl Ether	ug/kg												
Benzene	ug/kg	27000											
Toluene	ug/kg	56000											
Ethylbenzene	ug/kg	5700											
p/m-Xylene	ug/kg	5900000											
o-Xylene	ug/kg	6600000											
SVOC													
2-Chlorophenol	ug/kg	3500000						<10			<10		
2-Methylphenol	ug/kg							<10			<10		
2-Nitrophenol	ug/kg							<10			<10		
2,4-Dichlorophenol	ug/kg							<10			<10		
2,4-Dimethylphenol	ug/kg							<10			<10		

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	TP10	TP10	TP11	TP11	TP19	TP19	WS06	WS06	WS07	WS07	WS07
		Depth	0.50	1.50	0.30	0.50	0.30	1.00	0.30	1.00	0.30	1.00	1.50
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Indeno(123cd)pyrene	mg/kg	500	4.89	<0.04	2	0.06	<0.20	<0.04	1.14	3.53	0.85	<0.04	<0.04
Naphthalene	mg/kg	190	5.58	<0.04	0.24	<0.04	<0.20	<0.04	<0.20	1.76	0.38	<0.04	<0.04
Phenanthrene	mg/kg	22000	3.75	<0.03	1.46	0.04	0.19	<0.03	2.81	6.36	1	<0.03	<0.03
Pyrene	mg/kg	54000	10.04	0.05	4.25	0.09	0.33	<0.03	3.6	9.06	2.26	<0.03	<0.03
PAH 16 Total	mg/kg		87.3	<0.6	30.6	0.8	<3.0	<0.6	25.2	64.8	15	<0.6	<0.6
TPH CWG													
Aliphatics													
>C5-C6	mg/kg	3200						<0.1					
>C6-C8	mg/kg	7800						<0.1					
>C8-C10	mg/kg	2000						<0.1					
>C10-C12	mg/kg	9700						<0.2					
>C12-C16	mg/kg	59000						<4					
>C16-C21	mg/kg	1000000						<7					
>C21-C35	mg/kg	1000000						11					
Aromatics													
>C5-EC7	mg/kg	27						<0.1					
>EC7-EC8	mg/kg	56000						<0.1					
>EC8-EC10	mg/kg	3500						<0.1					
>EC10-EC12	mg/kg	16000						<0.2					
>EC12-EC16	mg/kg	36000						<4					
>EC16-EC21	mg/kg	28000						<7					
>EC21-EC35	mg/kg	28000						<7					
EPH													
EPH >C8-C10	mg/kg	2000	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
EPH >C10-C12	mg/kg	9700	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
EPH >C12-C16	mg/kg	36000	22	<10	13	<10	16	<10	<10	<10	<10	<10	<10
EPH >C16-C21	mg/kg	28000	162	<10	122	<10	183	<10	48	77	23	<10	<10
EPH >C21-C40	mg/kg	28000	654	<10	475	<10	2865	<10	341	460	552	<10	<10
BTEX/MTBE													
Methyl Tertiary Butyl Ether	ug/kg												
Benzene	ug/kg	27000											
Toluene	ug/kg	56000											
Ethylbenzene	ug/kg	5700											
p/m-Xylene	ug/kg	5900000											
o-Xylene	ug/kg	6600000											
SVOC													
2-Chlorophenol	ug/kg	3500000						<10					
2-Methylphenol	ug/kg							<10					
2-Nitrophenol	ug/kg							<10					
2,4-Dichlorophenol	ug/kg							<10					
2,4-Dimethylphenol	ug/kg							<10					

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	WS07	WS15	WS15	HP8	HP8	HP9	HP9	HP10	HP11	HP11	HP12
		Depth	4.50	0.30	2.00	0.50	2.00	0.50	2.00	1.00	0.50	1.00-1.50	0.50
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Indeno(123cd)pyrene	mg/kg	500	0.08	0.13	0.09	15.9	5.31	<0.04	0.87	13.37	0.13	17.23	0.94
Naphthalene	mg/kg	190	<0.04	0.1	0.05	5.69	7.44	0.04	4.36	8.55	0.11	10.65	0.55
Phenanthrene	mg/kg	22000	2.6	0.42	0.17	14.97	12.77	0.11	5.42	31.5	0.38	25.89	1.84
Pyrene	mg/kg	54000	0.89	0.51	0.28	39.71	14.98	0.13	5.13	40.64	0.41	48.16	2.87
PAH 16 Total	mg/kg		9.5	3.2	1.9	283.7	112	0.9	37.5	287.5	2.7	349.8	20.6
TPH CWG													
Aliphatics													
>C5-C6	mg/kg	3200	6.7		<0.1		<1.0				<0.1		
>C6-C8	mg/kg	7800	65.9		<0.1		<1.0				<0.1		
>C8-C10	mg/kg	2000	587.2		<0.1		<1.0				<0.1		
>C10-C12	mg/kg	9700	742.9		<0.2		<0.2				<0.2		
>C12-C16	mg/kg	59000	1528		<4		<4				<4		
>C16-C21	mg/kg	1000000	857		<7		<7				<7		
>C21-C35	mg/kg	1000000	200		<7		<7				<7		
Aromatics													
>C5-EC7	mg/kg	27	<1.0		<0.1		<1.0				<0.1		
>EC7-EC8	mg/kg	56000	<1.0		<0.1		<1.0				<0.1		
>EC8-EC10	mg/kg	3500	6.7		<0.1		<1.0				<0.1		
>EC10-EC12	mg/kg	16000	172.5		<0.2		3.3				<0.2		
>EC12-EC16	mg/kg	36000	709		<4		22				<4		
>EC16-EC21	mg/kg	28000	622		<7		188				<7		
>EC21-EC35	mg/kg	28000	344		<7		454				39		
EPH													
EPH >C8-C10	mg/kg	2000	1414	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
EPH >C10-C12	mg/kg	9700	1664	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
EPH >C12-C16	mg/kg	36000	4155	<10	<10	<10	23	<10	18	<10	<10	31	<10
EPH >C16-C21	mg/kg	28000	2879	<10	<10	336	291	<10	93	139	<10	404	70
EPH >C21-C40	mg/kg	28000	1446	<10	<10	1162	823	<10	174	523	<10	1633	444
BTEX/MTBE													
Methyl Tertiary Butyl Ether	ug/kg												
Benzene	ug/kg	27000											
Toluene	ug/kg	56000											
Ethylbenzene	ug/kg	5700											
p/m-Xylene	ug/kg	5900000											
o-Xylene	ug/kg	6600000											
SVOC													
2-Chlorophenol	ug/kg	3500000	<10		<10		<50				<10		
2-Methylphenol	ug/kg		<10		<10		<50				<10		
2-Nitrophenol	ug/kg		<10		<10		<50				<10		
2,4-Dichlorophenol	ug/kg		<10		<10		<50				<10		
2,4-Dimethylphenol	ug/kg		<10		<10		<50				<10		

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	HP12	HP13	HP13	HP14	HP14	HP15	WS06	BH10	BH10	BH10	BH10
		Depth	1.00	0.50	1.50	0.50	1.00	0.50-1.00	4.50	0.50	1.00	2.00	8.00
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Indeno(123cd)pyrene	mg/kg	500	5.3	1.84	4.16	21.69	13.03	1.18	<0.04	0.29	<0.04	0.2	<0.04
Naphthalene	mg/kg	190	4.03	0.79	2.28	31.74	35.01	2.03	<0.04	0.08	0.11	2.47	<0.04
Phenanthrene	mg/kg	22000	15.36	3.44	8.39	53.55	70.79	2.2	0.06	0.11	0.06	0.36	0.05
Pyrene	mg/kg	54000	15.93	4.41	9.17	73.81	51.07	2.85	0.04	0.42	0.06	0.26	0.06
PAH 16 Total	mg/kg		119.3	32.7	69.1	501.6	398.9	23.4	<0.6	3.3	<0.6	5.7	<0.6
TPH CWG													
Aliphatics													
>C5-C6	mg/kg	3200							<0.1		0.4	3.6	
>C6-C8	mg/kg	7800							1.3		0.8	40.2	
>C8-C10	mg/kg	2000							52.3		6.3	78.7	
>C10-C12	mg/kg	9700							363.5		76.8	67.1	
>C12-C16	mg/kg	59000							716		257	113	
>C16-C21	mg/kg	1000000							166		262	53	
>C21-C35	mg/kg	1000000							100		297	8	
Aromatics													
>C5-EC7	mg/kg	27							<0.1		0.2	0.4	
>EC7-EC8	mg/kg	56000							<0.1		<0.1	0.6	
>EC8-EC10	mg/kg	3500							0.8		0.7	1.8	
>EC10-EC12	mg/kg	16000							65.7		14.2	28.5	
>EC12-EC16	mg/kg	36000							226		76	48	
>EC16-EC21	mg/kg	28000							109		146	34	
>EC21-EC35	mg/kg	28000							157		153	<7	
EPH													
EPH >C8-C10	mg/kg	2000	<5	<5	<5	<5	<5	<5	307	<5	90	579	<5
EPH >C10-C12	mg/kg	9700	<10	<10	<10	<10	<10	<10	402	<10	136	482	<10
EPH >C12-C16	mg/kg	36000	34	16	<10	52	23	26	818	40	491	903	<10
EPH >C16-C21	mg/kg	28000	360	126	125	274	204	65	244	257	589	617	<10
EPH >C21-C40	mg/kg	28000	1229	463	525	540	524	295	426	1864	903	699	<10
BTEX/MTBE													
Methyl Tertiary Butyl Ether	ug/kg												
Benzene	ug/kg	27000											
Toluene	ug/kg	56000											
Ethylbenzene	ug/kg	5700											
p/m-Xylene	ug/kg	5900000											
o-Xylene	ug/kg	6600000											
SVOC													
2-Chlorophenol	ug/kg	3500000							<10		<10	<10	
2-Methylphenol	ug/kg								<10		<10	<10	
2-Nitrophenol	ug/kg								<10		<10	<10	
2,4-Dichlorophenol	ug/kg								<10		<10	<10	
2,4-Dimethylphenol	ug/kg								<10		<10	<10	

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	BH8	BH8	BH8	TP20	TP20	TP20	TP22	TP22	TP22	WS13	WS13
		Depth	0.30	2.50	7.50	0.20	1.00	3.00	0.10	0.50	2.10	0.30	2.00
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Indeno(123cd)pyrene	mg/kg	500	0.05	0.11	0.45	0.8	0.24	1.94	0.27	0.35	<0.04	1.24	0.09
Naphthalene	mg/kg	190	<0.04	<0.04	0.27	0.2	0.26	0.79	0.08	0.19	<0.04	0.24	<0.04
Phenanthrene	mg/kg	22000	0.07	0.17	0.83	1.83	0.39	2.43	0.39	0.81	0.21	1.83	0.16
Pyrene	mg/kg	54000	0.11	0.32	1.25	2.2	0.64	3.74	0.58	1.06	0.2	2.64	0.2
PAH 16 Total	mg/kg		0.7	2.2	8.3	15.9	4.7	28.7	4	6.9	1.1	18.9	1.3
TPH CWG													
Aliphatics													
>C5-C6	mg/kg	3200				<1.0	<0.1	29		<0.1	<0.1		
>C6-C8	mg/kg	7800				<1.0	0.2	238.2		<0.1	0.2		
>C8-C10	mg/kg	2000				<1.0	7.4	420.7		<0.1	0.4		
>C10-C12	mg/kg	9700				6.9	103.5	566		<0.2	<0.2		
>C12-C16	mg/kg	59000				29	420	663		<4	<4		
>C16-C21	mg/kg	1000000				47	527	196		<7	<7		
>C21-C35	mg/kg	1000000				51	1270	56		<7	<7		
Aromatics													
>C5-EC7	mg/kg	27				<1.0	<0.1	1.8		<0.1	<0.1		
>EC7-EC8	mg/kg	56000				<1.0	<0.1	1.5		<0.1	<0.1		
>EC8-EC10	mg/kg	3500				<1.0	0.2	3.6		<0.1	<0.1		
>EC10-EC12	mg/kg	16000				<0.2	20.3	143.8		<0.2	<0.2		
>EC12-EC16	mg/kg	36000				6	150	226		<4	<4		
>EC16-EC21	mg/kg	28000				40	323	120		<7	<7		
>EC21-EC35	mg/kg	28000				116	430	136		<7	<7		
EPH													
EPH >C8-C10	mg/kg	2000	<5	<5	<5	15	158	3394	<5	<5	<5	<5	19
EPH >C10-C12	mg/kg	9700	<10	<10	<10	<10	245	2131	<10	<10	<10	<10	62
EPH >C12-C16	mg/kg	36000	<10	<10	<10	32	980	2395	<10	<10	<10	<10	195
EPH >C16-C21	mg/kg	28000	<10	<10	72	71	1217	757	75	79	<10	75	122
EPH >C21-C40	mg/kg	28000	<10	<10	370	176	3311	238	853	861	<10	435	424
BTEX/MTBE													
Methyl Tertiary Butyl Ether	ug/kg												
Benzene	ug/kg	27000											
Toluene	ug/kg	56000											
Ethylbenzene	ug/kg	5700											
p/m-Xylene	ug/kg	5900000											
o-Xylene	ug/kg	6600000											
SVOC													
2-Chlorophenol	ug/kg	3500000				<100	<100	<10		<10	<10		
2-Methylphenol	ug/kg					<100	<100	<10		<10	<10		
2-Nitrophenol	ug/kg					<100	<100	<10		<10	<10		
2,4-Dichlorophenol	ug/kg					<100	<100	<10		<10	<10		
2,4-Dimethylphenol	ug/kg					<100	<100	<10		<10	<10		

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	WS13	WS19	WS19	WS19	WS21	WS21	BH11	BH11	BH9	BH9	WS20
		Depth	4.00	0.30	1.00	3.00	0.30	2.00	2.00	4.00	0.50	3.50	0.30
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Indeno(123cd)pyrene	mg/kg	500	<0.04	<0.04	<0.04	0.05	4.18	<0.04	0.13	0.06	<0.40	1.12	<0.04
Naphthalene	mg/kg	190	<0.04	<0.04	<0.04	0.32	0.12	<0.04	0.31	0.06	<0.40	0.22	<0.04
Phenanthrene	mg/kg	22000	0.1	0.05	<0.03	0.32	1.27	<0.03	0.3	0.23	0.42	2.3	0.04
Pyrene	mg/kg	54000	0.11	<0.03	<0.03	0.23	5.21	<0.03	0.39	0.15	1.09	2.86	0.03
PAH 16 Total	mg/kg		<0.6	<0.6	<0.6	1.9	45.4	<0.6	2.8	1.2	<6.0	19.6	<0.6
TPH CWG													
Aliphatics													
>C5-C6	mg/kg	3200	<1.0			0.4		<0.1	0.8			<1.0	
>C6-C8	mg/kg	7800	<1.0			0.4		<0.1	9.6			<1.0	
>C8-C10	mg/kg	2000	<1.0			0.5		<0.1	31.6			<1.0	
>C10-C12	mg/kg	9700	<0.2			19.7		<0.2	115.2			0.3	
>C12-C16	mg/kg	59000	<4			<4		<4	462			18	
>C16-C21	mg/kg	1000000	<7			<7		<7	549			32	
>C21-C35	mg/kg	1000000	<7			<7		<7	212			9	
Aromatics													
>C5-EC7	mg/kg	27	<1.0			<0.1		<0.1	0.1			<1.0	
>EC7-EC8	mg/kg	56000	<1.0			<0.1		<0.1	0.1			<1.0	
>EC8-EC10	mg/kg	3500	<1.0			<0.1		<0.1	0.8			<1.0	
>EC10-EC12	mg/kg	16000	<0.2			6		<0.2	24.2			<0.2	
>EC12-EC16	mg/kg	36000	<4			<4		<4	128			13	
>EC16-EC21	mg/kg	28000	<7			<7		<7	311			32	
>EC21-EC35	mg/kg	28000	<7			<7		<7	328			64	
EPH													
EPH >C8-C10	mg/kg	2000	<5	<5	<5	42	<5	<5	258	80	22	<5	<5
EPH >C10-C12	mg/kg	9700	<10	<10	<10	60	<10	<10	185	52	68	13	<10
EPH >C12-C16	mg/kg	36000	<10	<10	<10	<10	<10	<10	776	210	569	200	<10
EPH >C16-C21	mg/kg	28000	<10	<10	<10	<10	57	<10	1054	289	1815	428	<10
EPH >C21-C40	mg/kg	28000	<10	<10	<10	<10	851	<10	820	240	10414	728	<10
BTEX/MTBE													
Methyl Tertiary Butyl Ether	ug/kg												
Benzene	ug/kg	27000											
Toluene	ug/kg	56000											
Ethylbenzene	ug/kg	5700											
p/m-Xylene	ug/kg	5900000											
o-Xylene	ug/kg	6600000											
SVOC													
2-Chlorophenol	ug/kg	3500000	<10			<10		<10	<10			<50	
2-Methylphenol	ug/kg		<10			<10		<10	<10			<50	
2-Nitrophenol	ug/kg		<10			<10		<10	<10			<50	
2,4-Dichlorophenol	ug/kg		<10			<10		<10	<10			<50	
2,4-Dimethylphenol	ug/kg		<10			<10		<10	<10			<50	

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	WS20	WS18	WS18	WS08	WS08	TP18	TP18	TP24	TP24	TP23	TP23
		Depth	4.00	1.00	4.00	1.00	5.00	1.00	1.90	2.50	3.20	0.30	3.10
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Indeno(123cd)pyrene	mg/kg	500	0.09	<0.04	<0.04	1.02	<0.04	7.92	2.16	<0.04	<0.04	<0.04	<0.04
Naphthalene	mg/kg	190	<0.04	<0.04	0.13	0.31	<0.04	0.53	0.73	0.1	0.07	<0.04	<0.04
Phenanthrene	mg/kg	22000	0.14	<0.03	1.91	1.55	<0.03	0.8	0.68	0.9	1.02	<0.03	1.55
Pyrene	mg/kg	54000	0.29	<0.03	0.3	2.91	<0.03	3.56	1.97	0.13	0.14	0.03	0.19
PAH 16 Total	mg/kg		1.5	<0.6	5.5	18.9	<0.6	61.1	18	2.3	2.6	<0.6	2.7
TPH CWG													
Aliphatics													
>C5-C6	mg/kg	3200			0.1				<1.0		5.5		<0.1
>C6-C8	mg/kg	7800			3.3				<1.0		159.5		0.9
>C8-C10	mg/kg	2000			23.7				44		191.3		36.5
>C10-C12	mg/kg	9700			278.6				239.9		269.6		179.2
>C12-C16	mg/kg	59000			783				723		653		610
>C16-C21	mg/kg	1000000			677				453		522		672
>C21-C35	mg/kg	1000000			134				276		87		175
Aromatics													
>C5-EC7	mg/kg	27			<0.1				<1.0		0.4		<0.1
>EC7-EC8	mg/kg	56000			<0.1				<1.0		0.5		<0.1
>EC8-EC10	mg/kg	3500			0.4				<1.0		3.1		0.8
>EC10-EC12	mg/kg	16000			75.7				34.8		66.4		28
>EC12-EC16	mg/kg	36000			398				186		289		260
>EC16-EC21	mg/kg	28000			486				349		297		518
>EC21-EC35	mg/kg	28000			245				502		116		192
EPH													
EPH >C8-C10	mg/kg	2000	347	<5	605	<5	<5	43	167	288	836	<5	143
EPH >C10-C12	mg/kg	9700	535	<10	433	<10	<10	26	489	267	535	<10	313
EPH >C12-C16	mg/kg	36000	1926	<10	1486	<10	<10	41	1435	1010	1764	<10	1234
EPH >C16-C21	mg/kg	28000	2263	<10	1390	24	<10	116	1159	1073	1549	<10	1689
EPH >C21-C40	mg/kg	28000	1673	<10	555	213	<10	631	1300	920	719	<10	661
BTEX/MTBE													
Methyl Tertiary Butyl Ether	ug/kg												
Benzene	ug/kg	27000											
Toluene	ug/kg	56000											
Ethylbenzene	ug/kg	5700											
p/m-Xylene	ug/kg	5900000											
o-Xylene	ug/kg	6600000											
SVOC													
2-Chlorophenol	ug/kg	3500000			<10				<100		<10		<10
2-Methylphenol	ug/kg				<10				<100		<10		<10
2-Nitrophenol	ug/kg				<10				<100		<10		<10
2,4-Dichlorophenol	ug/kg				<10				<100		<10		<10
2,4-Dimethylphenol	ug/kg				<10				<100		<10		<10

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	TP14	TP14	TP13	TP13	TP15	TP15	WS09	WS09	WS10	WS10	WS10
		Depth	0.50	2.00	0.50	2.00	0.50	1.50	0.50	2.00	0.30	0.50	2.00
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Indeno(123cd)pyrene	mg/kg	500	<0.04	<0.04	0.27	0.04	<0.04	0.06	0.47	<0.04	0.59	0.1	8.07
Naphthalene	mg/kg	190	<0.04	<0.04	0.19	<0.04	<0.04	0.1	0.19	<0.04	0.37	0.06	2.67
Phenanthrene	mg/kg	22000	<0.03	<0.03	0.99	0.18	0.03	0.22	1.34	<0.03	1.03	0.37	18.03
Pyrene	mg/kg	54000	<0.03	<0.03	0.99	0.17	0.04	0.22	1.6	<0.03	1.38	0.38	22.45
PAH 16 Total	mg/kg		<0.6	<0.6	7.1	1	<0.6	1.5	11.5	<0.6	10.1	2.5	151.2
TPH CWG													
Aliphatics													
>C5-C6	mg/kg	3200					<0.1		<1.0				<1.0
>C6-C8	mg/kg	7800					<0.1		<1.0				<1.0
>C8-C10	mg/kg	2000					<0.1		<1.0				<1.0
>C10-C12	mg/kg	9700					<0.2		<0.2				<0.2
>C12-C16	mg/kg	59000					<4		<4				<4
>C16-C21	mg/kg	1000000					<7		<7				<7
>C21-C35	mg/kg	1000000					<7		<7				61
Aromatics													
>C5-EC7	mg/kg	27					<0.1		<1.0				<1.0
>EC7-EC8	mg/kg	56000					<0.1		<1.0				<1.0
>EC8-EC10	mg/kg	3500					<0.1		<1.0				<1.0
>EC10-EC12	mg/kg	16000					<0.2		<0.2				1.3
>EC12-EC16	mg/kg	36000					<4		<4				10
>EC16-EC21	mg/kg	28000					<7		13				118
>EC21-EC35	mg/kg	28000					<7		77				373
EPH													
EPH >C8-C10	mg/kg	2000	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
EPH >C10-C12	mg/kg	9700	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
EPH >C12-C16	mg/kg	36000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	48
EPH >C16-C21	mg/kg	28000	<10	<10	<10	<10	<10	<10	83	<10	16	<10	418
EPH >C21-C40	mg/kg	28000	<10	<10	94	<10	<10	<10	689	<10	144	<10	1238
BTEX/MTBE													
Methyl Tertiary Butyl Ether	ug/kg												
Benzene	ug/kg	27000											
Toluene	ug/kg	56000											
Ethylbenzene	ug/kg	5700											
p/m-Xylene	ug/kg	5900000											
o-Xylene	ug/kg	6600000											
SVOC													
2-Chlorophenol	ug/kg	3500000					<10		<10				<100
2-Methylphenol	ug/kg						<10		<10				<100
2-Nitrophenol	ug/kg						<10		<10				<100
2,4-Dichlorophenol	ug/kg						<10		<10				<100
2,4-Dimethylphenol	ug/kg						<10		<10				<100

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	TP25	TP26	TP27	TP28	BH9	BH9	WS22	WS24	WS25	WS25	BH6
		Depth	0.50	0.50	1.00	1.50	6.50	12.00	1.00	3.50	1.00	3.00	1.50
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Indeno(123cd)pyrene	mg/kg	500	0.42	0.25	11.93	2.88	0.11	<0.04	4.15	0.05	0.05	0.42	1.47
Naphthalene	mg/kg	190	0.16	0.09	2.79	1.08	0.05	<0.04	0.27	<0.04	<0.04	0.48	0.71
Phenanthrene	mg/kg	22000	1.15	0.55	22.12	5.03	0.2	<0.03	3.64	0.1	0.22	7.41	4.16
Pyrene	mg/kg	54000	1.31	0.75	22.63	5.65	0.32	<0.03	8.13	0.16	0.21	2.87	4.29
PAH 16 Total	mg/kg		9.2	5.1	187.1	45.6	2.1	<0.6	57.5	0.8	1.3	28	31.9
TPH CWG													
Aliphatics													
>C5-C6	mg/kg	3200					<0.1			<0.1		<1.0	
>C6-C8	mg/kg	7800					<0.1			2.5		28.5	
>C8-C10	mg/kg	2000					<0.1			55.4		1466.4	
>C10-C12	mg/kg	9700					<0.2			105.3		4105.1	
>C12-C16	mg/kg	59000					<4			258		4353	
>C16-C21	mg/kg	1000000					<7			91		4408	
>C21-C35	mg/kg	1000000					<7			30		1069	
Aromatics													
>C5-EC7	mg/kg	27					<0.1			<0.1		<1.0	
>EC7-EC8	mg/kg	56000					<0.1			<0.1		1.7	
>EC8-EC10	mg/kg	3500					<0.1			0.6		21.2	
>EC10-EC12	mg/kg	16000					<0.2			27.1		1008.8	
>EC12-EC16	mg/kg	36000					<4			103		2379	
>EC16-EC21	mg/kg	28000					<7			71		2960	
>EC21-EC35	mg/kg	28000					<7			96		1135	
EPH													
EPH >C8-C10	mg/kg	2000	<5	<5	<5	<5	<5	<5	<5	423	12	11503	60
EPH >C10-C12	mg/kg	9700	<10	<10	<10	<10	<10	<10	<10	297	<10	5801	43
EPH >C12-C16	mg/kg	36000	<10	<10	23	<10	<10	<10	<10	891	23	7815	58
EPH >C16-C21	mg/kg	28000	13	54	232	92	<10	<10	66	540	39	8770	91
EPH >C21-C40	mg/kg	28000	292	303	1255	363	62	<10	391	634	65	2862	502
BTEX/MTBE													
Methyl Tertiary Butyl Ether	ug/kg												
Benzene	ug/kg	27000											
Toluene	ug/kg	56000											
Ethylbenzene	ug/kg	5700											
p/m-Xylene	ug/kg	5900000											
o-Xylene	ug/kg	6600000											
SVOC													
2-Chlorophenol	ug/kg	3500000					<10			<10		<10	
2-Methylphenol	ug/kg						<10			<10		<10	
2-Nitrophenol	ug/kg						<10			<10		<10	
2,4-Dichlorophenol	ug/kg						<10			<10		<10	
2,4-Dimethylphenol	ug/kg						<10			<10		<10	

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	BH6	TP17	TP29	TP30	TP31	WS29	WS29	WS26	WS26	WS28	WS27
		Depth	7.50	0.30	0.60	1.50	1.00	2.00	3.00	0.50	4.00	1.50	0.30
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Indeno(123cd)pyrene	mg/kg	500	1.76	0.54	0.4	<0.04	10.37	<0.04	<10	0.4	<10	<0.04	0.79
Naphthalene	mg/kg	190	0.15	0.11	0.31	<0.04	1.3	<0.04	<10	0.07	<10	<0.04	0.35
Phenanthrene	mg/kg	22000	2.14	1.04	1.72	0.04	18.19	<0.03	<10	1.04	13	<0.03	2.75
Pyrene	mg/kg	54000	4.48	1.39	1.52	<0.03	24.72	<0.03	<10	1.25	<10	<0.03	2.9
PAH 16 Total	mg/kg		37.3	9.8	11.3	<0.6	191	<0.6		8.9		<0.6	19.2
TPH CWG													
Aliphatics													
>C5-C6	mg/kg	3200						<0.1	<0.1	<0.1	<0.1	<0.1	<1.0
>C6-C8	mg/kg	7800						<0.1	<0.1	<0.1	<0.1	<0.1	<1.0
>C8-C10	mg/kg	2000						<0.1	<0.1	<0.1	0.8	<0.1	<1.0
>C10-C12	mg/kg	9700						<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
>C12-C16	mg/kg	59000						<4	<4	<4	11	<4	<4
>C16-C21	mg/kg	1000000						<7	<7	<7	<7	<7	<7
>C21-C35	mg/kg	1000000						<7	<7	<7	<7	<7	78
Aromatics													
>C5-EC7	mg/kg	27						<0.1	<0.1	<0.1	<0.1	<0.1	<1.0
>EC7-EC8	mg/kg	56000						<0.1	<0.1	<0.1	<0.1	<0.1	<1.0
>EC8-EC10	mg/kg	3500						<0.1	<0.1	<0.1	<0.1	<0.1	<1.0
>EC10-EC12	mg/kg	16000						<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
>EC12-EC16	mg/kg	36000						<4	<4	<4	<4	<4	<4
>EC16-EC21	mg/kg	28000						<7	<7	9	<7	<7	16
>EC21-EC35	mg/kg	28000						<7	<7	49	<7	<7	105
EPH													
EPH >C8-C10	mg/kg	2000	<5	<5	<5	<5	<5	<5		<5		<5	<5
EPH >C10-C12	mg/kg	9700	<10	<10	<10	<10	<10	<10		<10		<10	<10
EPH >C12-C16	mg/kg	36000	<10	28	<10	<10	36	<10		<10		<10	<10
EPH >C16-C21	mg/kg	28000	71	23	19	<10	272	<10		15		<10	33
EPH >C21-C40	mg/kg	28000	231	154	133	<10	1466	<10		76		<10	257
BTEX/MTBE													
Methyl Tertiary Butyl Ether	ug/kg												
Benzene	ug/kg	27000											
Toluene	ug/kg	56000											
Ethylbenzene	ug/kg	5700											
p/m-Xylene	ug/kg	5900000											
o-Xylene	ug/kg	6600000											
SVOC													
2-Chlorophenol	ug/kg	3500000						<10	<10	<10	<10	<10	<10
2-Methylphenol	ug/kg							<10	<10	<10	<10	<10	<10
2-Nitrophenol	ug/kg							<10	<10	<10	<10	<10	<10
2,4-Dichlorophenol	ug/kg							<10	<10	<10	<10	<10	<10
2,4-Dimethylphenol	ug/kg							<10	<10	<10	<10	<10	<10

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	WS27	WS27	HP16	HP17	HP18	HP19	HP20	HP21	HP22	HP23	HP24
		Depth	3.50	4.80	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Indeno(123cd)pyrene	mg/kg	500	<10	<0.04	<10	<0.04	<10	<10	<10	<10	<10	<10	<10
Naphthalene	mg/kg	190	<10	<0.04	<10	<0.04	<10	<10	<10	<10	<10	<10	<10
Phenanthrene	mg/kg	22000	<10	<0.03	<10	0.08	<10	<10	<10	<10	<10	<10	<10
Pyrene	mg/kg	54000	<10	<0.03	<10	0.16	<10	<10	<10	<10	<10	<10	<10
PAH 16 Total	mg/kg			<0.6		0.9							
TPH CWG													
Aliphatics													
>C5-C6	mg/kg	3200	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
>C6-C8	mg/kg	7800	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
>C8-C10	mg/kg	2000	<0.1	1	<0.1	<0.1	0.5	<0.1	0.1	<0.1	<0.1	<0.1	<0.1
>C10-C12	mg/kg	9700	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
>C12-C16	mg/kg	59000	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
>C16-C21	mg/kg	1000000	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7
>C21-C35	mg/kg	1000000	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7
Aromatics													
>C5-EC7	mg/kg	27	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
>EC7-EC8	mg/kg	56000	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
>EC8-EC10	mg/kg	3500	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
>EC10-EC12	mg/kg	16000	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
>EC12-EC16	mg/kg	36000	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
>EC16-EC21	mg/kg	28000	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7
>EC21-EC35	mg/kg	28000	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7
EPH													
EPH >C8-C10	mg/kg	2000		<5		<5							
EPH >C10-C12	mg/kg	9700		<10		<10							
EPH >C12-C16	mg/kg	36000		<10		<10							
EPH >C16-C21	mg/kg	28000		<10		<10							
EPH >C21-C40	mg/kg	28000		<10		<10							
BTEX/MTBE													
Methyl Tertiary Butyl Ether	ug/kg												
Benzene	ug/kg	27000											
Toluene	ug/kg	56000											
Ethylbenzene	ug/kg	5700											
p/m-Xylene	ug/kg	5900000											
o-Xylene	ug/kg	6600000											
SVOC													
2-Chlorophenol	ug/kg	3500000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
2-Methylphenol	ug/kg		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
2-Nitrophenol	ug/kg		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
2,4-Dichlorophenol	ug/kg		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
2,4-Dimethylphenol	ug/kg		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	HP25	HP26	HP27	WS34	WS34	WS33	WS33	WS33	WS33	WS2	WS2
		Depth	0.50	0.50	0.50	0.4	3.0	1.2	2.0	3.5	4.5	0.7	4.5
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Indeno(123cd)pyrene	mg/kg	500	<0.04	<10	<0.04	0.68	<0.04	<0.04	<0.04	52	47	0.1	<0.04
Naphthalene	mg/kg	190	<0.04	<10	<0.04	0.1	<0.04	<0.04	<0.04	178	<10	0.15	<0.04
Phenanthrene	mg/kg	22000	<0.03	<10	0.05	0.77	<0.03	<0.03	<0.03	67	255	0.39	<0.03
Pyrene	mg/kg	54000	<0.03	<10	0.06	1.58	<0.03	<0.03	<0.03	367	153	0.51	<0.03
PAH 16 Total	mg/kg		<0.6		<0.6	11.9	<0.6	<0.6	<0.6			3	<0.6
TPH CWG													
Aliphatics													
>C5-C6	mg/kg	3200	<0.1	<0.1	<0.1		<0.1		<0.1	1.5	237.4		<0.1
>C6-C8	mg/kg	7800	<0.1	<0.1	<0.1		<0.1		<0.1	249	1617.9		<0.1
>C8-C10	mg/kg	2000	<0.1	<0.1	<0.1		<0.1		<0.1	1713.9	2668.3		<0.1
>C10-C12	mg/kg	9700	<0.2	<0.2	<0.2		<0.2		<0.2	258.5	612.5		<0.2
>C12-C16	mg/kg	59000	<4	<4	<4		<4		<4	120	147		<4
>C16-C21	mg/kg	1000000	<7	<7	<7		<7		<7	13	<7		<7
>C21-C35	mg/kg	1000000	<7	<7	<7		<7		<7	<7	<7		<7
Aromatics													
>C5-EC7	mg/kg	27	<0.1	<0.1	<0.1		<0.1		<0.1	<0.1	<0.1		<0.1
>EC7-EC8	mg/kg	56000	<0.1	<0.1	<0.1		<0.1		<0.1	1.2	10.8		<0.1
>EC8-EC10	mg/kg	3500	<0.1	<0.1	<0.1		<0.1		<0.1	43.2	70		<0.1
>EC10-EC12	mg/kg	16000	<0.2	<0.2	<0.2		<0.2		<0.2	37.7	295.6		<0.2
>EC12-EC16	mg/kg	36000	<4	<4	<4		<4		<4	56	60		<4
>EC16-EC21	mg/kg	28000	<7	<7	<7		<7		<7	26	<7		<7
>EC21-EC35	mg/kg	28000	<7	<7	<7		<7		<7	<7	<7		<7
EPH													
EPH >C8-C10	mg/kg	2000	<5		<5	<5	<5	<5	<5			<5	<5
EPH >C10-C12	mg/kg	9700	<10		<10	<10	<10	<10	<10			<10	<10
EPH >C12-C16	mg/kg	36000	<10		<10	<10	<10	<10	<10			<10	<10
EPH >C16-C21	mg/kg	28000	<10		<10	<10	<10	<10	<10			<10	<10
EPH >C21-C40	mg/kg	28000	<10		<10	159	<10	<10	<10			28	<10
BTEX/MTBE													
Methyl Tertiary Butyl Ether	ug/kg												
Benzene	ug/kg	27000											
Toluene	ug/kg	56000											
Ethylbenzene	ug/kg	5700											
p/m-Xylene	ug/kg	5900000											
o-Xylene	ug/kg	6600000											
SVOC													
2-Chlorophenol	ug/kg	3500000	<10	<10	<10		<10		<10	<10	<10		<10
2-Methylphenol	ug/kg		<10	<10	<10		<10		<10	<10	<10		<10
2-Nitrophenol	ug/kg		<10	<10	<10		<10		<10	<10	<10		<10
2,4-Dichlorophenol	ug/kg		<10	<10	<10		<10		<10	<10	<10		<10
2,4-Dimethylphenol	ug/kg		<10	<10	<10		<10		<10	<10	<10		<10

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	BH12	BH12	BH12	WS17	WS17	WS23 HP	BH5	BH7	WS30	WS30	WS30
		Depth	0.3	2.6	6.6	1.5	4.0	0.2	2.50	5.50	1.00	4.00	5.00
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Indeno(123cd)pyrene	mg/kg	500	0.25	<0.04	<0.04	0.71	<0.04	4.73	<0.20	0.06	0.05	<0.04	<0.04
Naphthalene	mg/kg	190	0.3	0.06	<0.04	0.19	<0.04	0.4	0.34	0.06	<0.04	<0.04	<0.04
Phenanthrene	mg/kg	22000	0.49	0.33	<0.03	0.9	<0.03	5.97	0.75	0.23	0.14	0.52	<0.03
Pyrene	mg/kg	54000	0.51	0.23	<0.03	1.75	<0.03	10.52	0.25	0.24	0.27	<0.03	<0.03
PAH 16 Total	mg/kg		3.8	1.4	<0.6	12.7	<0.6	87.9	<3.0	1.6	1.6	1.5	<0.6
TPH CWG													
Aliphatics													
>C5-C6	mg/kg	3200		<0.1	<0.1	<0.1	<0.1				<0.1	<0.1	<0.1
>C6-C8	mg/kg	7800		<0.1	<0.1	0.2	<0.1				<0.1	1.5	<0.1
>C8-C10	mg/kg	2000		<0.1	<0.1	0.7	<0.1				<0.1	159.8	0.2
>C10-C12	mg/kg	9700		8.9	<0.2	<0.2	<0.2				<0.2	666	<0.2
>C12-C16	mg/kg	59000		34	<4	<4	<4				<4	980	<4
>C16-C21	mg/kg	1000000		38	<7	<7	<7				<7	435	<7
>C21-C35	mg/kg	1000000		<7	<7	<7	<7				<7	11	<7
Aromatics													
>C5-EC7	mg/kg	27		<0.1	<0.1	<0.1	<0.1				<0.1	<0.1	<0.1
>EC7-EC8	mg/kg	56000		<0.1	<0.1	<0.1	<0.1				<0.1	<0.1	<0.1
>EC8-EC10	mg/kg	3500		<0.1	<0.1	<0.1	<0.1				<0.1	2.7	<0.1
>EC10-EC12	mg/kg	16000		<0.2	<0.2	<0.2	<0.2				<0.2	115.8	<0.2
>EC12-EC16	mg/kg	36000		15	<4	<4	<4				<4	274	<4
>EC16-EC21	mg/kg	28000		22	<7	<7	<7				<7	150	<7
>EC21-EC35	mg/kg	28000		<7	<7	23	<7				<7	<7	<7
EPH													
EPH >C8-C10	mg/kg	2000	<5	<5	<5	<5	<5	<5	<5	12	<5	1116	<5
EPH >C10-C12	mg/kg	9700	<10	13	<10	<10	<10	<10	<10	12	<10	987	<10
EPH >C12-C16	mg/kg	36000	84	43	<10	<10	<10	<10	<10	23	<10	1640	<10
EPH >C16-C21	mg/kg	28000	711	43	<10	19	<10	54	<10	<10	<10	753	<10
EPH >C21-C40	mg/kg	28000	2740	<10	<10	143	<10	304	54	30	<10	17	<10
BTEX/MTBE													
Methyl Tertiary Butyl Ether	ug/kg												
Benzene	ug/kg	27000											
Toluene	ug/kg	56000											
Ethylbenzene	ug/kg	5700											
p/m-Xylene	ug/kg	5900000											
o-Xylene	ug/kg	6600000											
SVOC													
2-Chlorophenol	ug/kg	3500000		<10	<10	<10	<10				<10	<10	<10
2-Methylphenol	ug/kg			<10	<10	<10	<10				<10	<10	<10
2-Nitrophenol	ug/kg			<10	<10	<10	<10				<10	<10	<10
2,4-Dichlorophenol	ug/kg			<10	<10	<10	<10				<10	<10	<10
2,4-Dimethylphenol	ug/kg			<10	<10	<10	<10				<10	<10	<10

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	WS31	WS31	WS32
		Depth	0.50	2.60	2.50
		Sample Type	Soil	Soil	Soil
Test	**Units**	**Screening Value**			
Indeno(123cd)pyrene	mg/kg	500	0.97	<0.04	<0.04
Naphthalene	mg/kg	190	0.13	0.13	<0.04
Phenanthrene	mg/kg	22000	1.34	0.17	<0.03
Pyrene	mg/kg	54000	2.18	0.09	0.11
PAH 16 Total	mg/kg		18.2	0.6	<0.6
TPH CWG					
Aliphatics					
>C5-C6	mg/kg	3200		<0.1	<0.1
>C6-C8	mg/kg	7800		<0.1	0.1
>C8-C10	mg/kg	2000		4.2	10.2
>C10-C12	mg/kg	9700		140.3	124.7
>C12-C16	mg/kg	59000		271	345
>C16-C21	mg/kg	1000000		70	63
>C21-C35	mg/kg	1000000		11	<7
Aromatics					
>C5-EC7	mg/kg	27		<0.1	<0.1
>EC7-EC8	mg/kg	56000		<0.1	<0.1
>EC8-EC10	mg/kg	3500		<0.1	<0.1
>EC10-EC12	mg/kg	16000		29.5	19
>EC12-EC16	mg/kg	36000		65	69
>EC16-EC21	mg/kg	28000		29	25
>EC21-EC35	mg/kg	28000		<7	<7
EPH					
EPH >C8-C10	mg/kg	2000	<5	184	69
EPH >C10-C12	mg/kg	9700	<10	212	175
EPH >C12-C16	mg/kg	36000	<10	427	496
EPH >C16-C21	mg/kg	28000	22	145	108
EPH >C21-C40	mg/kg	28000	253	53	51
BTEX/MTBE					
Methyl Tertiary Butyl Ether	ug/kg				
Benzene	ug/kg	27000			
Toluene	ug/kg	56000			
Ethylbenzene	ug/kg	5700			
p/m-Xylene	ug/kg	5900000			
o-Xylene	ug/kg	6600000			
SVOC					
2-Chlorophenol	ug/kg	3500000		<10	<10
2-Methylphenol	ug/kg			<10	<10
2-Nitrophenol	ug/kg			<10	<10
2,4-Dichlorophenol	ug/kg			<10	<10
2,4-Dimethylphenol	ug/kg			<10	<10

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	BH1	BH1	WS3	WS3	TP4	TP4	TP3	TP3	TP2	TP2	TP1
		Depth	1.0	5.0	1.00	5.00	0.00-0.30	2.00	0.30	0.00-1.00	0.00-0.20	1.00-1.50	0.50
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
2,4,5-Trichlorophenol	ug/kg											<10	
2,4,6-Trichlorophenol	ug/kg											<10	
4-Chloro-3-methylphenol	ug/kg											<10	
4-Methylphenol	ug/kg											<10	
4-Nitrophenol	ug/kg											<10	
Pentachlorophenol	ug/kg	400000										<10	
Phenol	ug/kg	440										<10	
2-Chloronaphthalene	ug/kg											<10	
2-Methylnaphthalene	ug/kg											<10	
Bis(2-ethylhexyl) phthalate	ug/kg											<100	
Butylbenzyl phthalate	ug/kg											<100	
Di-n-butyl phthalate	ug/kg											<100	
Di-n-Octyl phthalate	ug/kg											<100	
Diethyl phthalate	ug/kg											<100	
Dimethyl phthalate	ug/kg											<100	
1,2-Dichlorobenzene	ug/kg	2000000										<10	
1,2,4-Trichlorobenzene	ug/kg	220000										<10	
1,3-Dichlorobenzene	ug/kg	30000										<10	
1,4-Dichlorobenzene	ug/kg	4400000										<10	
2-Nitroaniline	ug/kg											<10	
2,4-Dinitrotoluene	ug/kg											<10	
2,6-Dinitrotoluene	ug/kg											<10	
3-Nitroaniline	ug/kg											<10	
4-Bromophenylphenylether	ug/kg											<10	
4-Chloroaniline	ug/kg											<10	
4-Chlorophenylphenylether	ug/kg											<10	
4-Nitroaniline	ug/kg											<10	
Azobenzene	ug/kg											<10	
Bis(2-chloroethoxy)methane	ug/kg											<10	
Bis(2-chloroethyl)ether	ug/kg											<10	
Carbazole	ug/kg											23	
Dibenzofuran	ug/kg											<10	
Hexachlorobenzene	ug/kg	110000										<10	
Hexachlorobutadiene	ug/kg											<10	
Hexachlorocyclopentadiene	ug/kg											<10	
Hexachloroethane	ug/kg											<10	
Isophorone	ug/kg											<10	
N-nitrosodi-n-propylamine	ug/kg											<10	
Nitrobenzene	ug/kg											<10	
PCBs													
PCB 77	ug/kg												

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	TP1	TP1	TP1	TP5	TP5	TP6	TP6	TP7	TP7	HP3	HP3
		Depth	1.00	2.00	2.60	0.30	1.20	0.30	2.00	0.30	0.50	0.50	1.00
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
2,4,5-Trichlorophenol	ug/kg			<10	<10	<100							<10
2,4,6-Trichlorophenol	ug/kg			<10	<10	<100							<10
4-Chloro-3-methylphenol	ug/kg			<10	<10	<100							<10
4-Methylphenol	ug/kg			<10	<10	<100							<10
4-Nitrophenol	ug/kg			<10	<10	<100							<10
Pentachlorophenol	ug/kg	400000		<10	<10	<100							<10
Phenol	ug/kg	440		<10	<10	<100							<10
2-Chloronaphthalene	ug/kg			<10	<10	<100							<10
2-Methylnaphthalene	ug/kg			72	<10	19214							359
Bis(2-ethylhexyl) phthalate	ug/kg			<100	<100	<1000							<100
Butylbenzyl phthalate	ug/kg			<100	<100	<1000							<100
Di-n-butyl phthalate	ug/kg			<100	<100	<1000							<100
Di-n-Octyl phthalate	ug/kg			<100	<100	<1000							<100
Diethyl phthalate	ug/kg			<100	<100	<1000							<100
Dimethyl phthalate	ug/kg			<100	<100	<1000							<100
1,2-Dichlorobenzene	ug/kg	2000000		<10	<10	<100							<10
1,2,4-Trichlorobenzene	ug/kg	220000		<10	<10	<100							<10
1,3-Dichlorobenzene	ug/kg	30000		<10	<10	<100							<10
1,4-Dichlorobenzene	ug/kg	4400000		<10	<10	<100							<10
2-Nitroaniline	ug/kg			<10	<10	<100							<10
2,4-Dinitrotoluene	ug/kg			<10	<10	<100							<10
2,6-Dinitrotoluene	ug/kg			<10	<10	<100							<10
3-Nitroaniline	ug/kg			<10	<10	<100							<10
4-Bromophenylphenylether	ug/kg			<10	<10	<100							<10
4-Chloroaniline	ug/kg			<10	<10	<100							<10
4-Chlorophenylphenylether	ug/kg			<10	<10	<100							<10
4-Nitroaniline	ug/kg			<10	<10	<100							<10
Azobenzene	ug/kg			<10	<10	<100							<10
Bis(2-chloroethoxy)methane	ug/kg			<10	<10	<100							<10
Bis(2-chloroethyl)ether	ug/kg			<10	<10	<100							<10
Carbazole	ug/kg			30	<10	16509							404
Dibenzofuran	ug/kg			<10	<10	20578							558
Hexachlorobenzene	ug/kg	110000		<10	<10	<100							<10
Hexachlorobutadiene	ug/kg			<10	<10	<100							<10
Hexachlorocyclopentadiene	ug/kg			<10	<10	<100							<10
Hexachloroethane	ug/kg			<10	<10	<100							<10
Isophorone	ug/kg			<10	<10	<100							<10
N-nitrosodi-n-propylamine	ug/kg			<10	<10	<100							<10
Nitrobenzene	ug/kg			<10	<10	<100							<10
PCBs													
PCB 77	ug/kg												<5

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	HP2	HP2	HP1	HP1	HP4	HP4	HP5	HP5	HP6	HP6	HP7
		Depth	0.00-0.20	1.00	0.30	2.00	0.50	2.00	0.50	2.00	0.50	1.00	0.30
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
2,4,5-Trichlorophenol	ug/kg												<10
2,4,6-Trichlorophenol	ug/kg												<10
4-Chloro-3-methylphenol	ug/kg												<10
4-Methylphenol	ug/kg												<10
4-Nitrophenol	ug/kg												<10
Pentachlorophenol	ug/kg	400000											<10
Phenol	ug/kg	440											<10
2-Chloronaphthalene	ug/kg												<10
2-Methylnaphthalene	ug/kg												153
Bis(2-ethylhexyl) phthalate	ug/kg												<100
Butylbenzyl phthalate	ug/kg												<100
Di-n-butyl phthalate	ug/kg												<100
Di-n-Octyl phthalate	ug/kg												<100
Diethyl phthalate	ug/kg												<100
Dimethyl phthalate	ug/kg												<100
1,2-Dichlorobenzene	ug/kg	2000000											<10
1,2,4-Trichlorobenzene	ug/kg	220000											<10
1,3-Dichlorobenzene	ug/kg	30000											<10
1,4-Dichlorobenzene	ug/kg	4400000											<10
2-Nitroaniline	ug/kg												<10
2,4-Dinitrotoluene	ug/kg												<10
2,6-Dinitrotoluene	ug/kg												<10
3-Nitroaniline	ug/kg												<10
4-Bromophenylphenylether	ug/kg												<10
4-Chloroaniline	ug/kg												<10
4-Chlorophenylphenylether	ug/kg												<10
4-Nitroaniline	ug/kg												<10
Azobenzene	ug/kg												<10
Bis(2-chloroethoxy)methane	ug/kg												<10
Bis(2-chloroethyl)ether	ug/kg												<10
Carbazole	ug/kg												187
Dibenzofuran	ug/kg												244
Hexachlorobenzene	ug/kg	110000											<10
Hexachlorobutadiene	ug/kg												<10
Hexachlorocyclopentadiene	ug/kg												<10
Hexachloroethane	ug/kg												<10
Isophorone	ug/kg												<10
N-nitrosodi-n-propylamine	ug/kg												<10
Nitrobenzene	ug/kg												<10
PCBs													
PCB 77	ug/kg												<5

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	HP7	WS01	WS02	WS04	WS04	WS05	WS05	WS05	WS05	BH4	BH4
		Depth	1.00	1.00	0.05	0.30	5.00	1.00	3.00	4.00	5.00	0.50	3.00
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
2,4,5-Trichlorophenol	ug/kg								<10	<50	<50		<10
2,4,6-Trichlorophenol	ug/kg								<10	<50	<50		<10
4-Chloro-3-methylphenol	ug/kg								<10	<50	<50		<10
4-Methylphenol	ug/kg								<10	<50	<50		<10
4-Nitrophenol	ug/kg								<10	<50	<50		<10
Pentachlorophenol	ug/kg	400000							<10	<50	<50		<10
Phenol	ug/kg	440							<10	<50	<50		<10
2-Chloronaphthalene	ug/kg								<10	<50	<50		<10
2-Methylnaphthalene	ug/kg								<10	<50	<50		<10
Bis(2-ethylhexyl) phthalate	ug/kg								<100	<500	<500		<100
Butylbenzyl phthalate	ug/kg								<100	<500	<500		<100
Di-n-butyl phthalate	ug/kg								<100	<500	<500		<100
Di-n-Octyl phthalate	ug/kg								<100	<500	<500		<100
Diethyl phthalate	ug/kg								<100	<500	<500		<100
Dimethyl phthalate	ug/kg								<100	<500	<500		<100
1,2-Dichlorobenzene	ug/kg	2000000							<10	<50	<50		<10
1,2,4-Trichlorobenzene	ug/kg	220000							<10	<50	<50		<10
1,3-Dichlorobenzene	ug/kg	30000							<10	<50	<50		<10
1,4-Dichlorobenzene	ug/kg	4400000							<10	<50	<50		<10
2-Nitroaniline	ug/kg								<10	<50	<50		<10
2,4-Dinitrotoluene	ug/kg								<10	<50	<50		<10
2,6-Dinitrotoluene	ug/kg								<10	<50	<50		<10
3-Nitroaniline	ug/kg								<10	<50	<50		<10
4-Bromophenylphenylether	ug/kg								<10	<50	<50		<10
4-Chloroaniline	ug/kg								<10	<50	<50		<10
4-Chlorophenylphenylether	ug/kg								<10	<50	<50		<10
4-Nitroaniline	ug/kg								<10	<50	<50		<10
Azobenzene	ug/kg								<10	<50	<50		<10
Bis(2-chloroethoxy)methane	ug/kg								<10	<50	<50		<10
Bis(2-chloroethyl)ether	ug/kg								<10	<50	<50		<10
Carbazole	ug/kg								<10	<50	<50		<10
Dibenzofuran	ug/kg								<10	<50	<50		<10
Hexachlorobenzene	ug/kg	110000							<10	<50	<50		<10
Hexachlorobutadiene	ug/kg								<10	<50	<50		<10
Hexachlorocyclopentadiene	ug/kg								<10	<50	<50		<10
Hexachloroethane	ug/kg								<10	<50	<50		<10
Isophorone	ug/kg								<10	<50	<50		<10
N-nitrosodi-n-propylamine	ug/kg								<10	<50	<50		<10
Nitrobenzene	ug/kg								<10	<50	<50		<10
PCBs													
PCB 77	ug/kg												<5

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	BH3	BH3	BH3	WS16	WS16	WS16	WS12	WS14	WS14	TP9	TP9
		Depth	1.00	5.00	7.00	0.30	1.50	3.50	0.30	0.50	4.00	0.20	0.50
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
2,4,5-Trichlorophenol	ug/kg							<10			<10		
2,4,6-Trichlorophenol	ug/kg							<10			<10		
4-Chloro-3-methylphenol	ug/kg							<10			<10		
4-Methylphenol	ug/kg							<10			<10		
4-Nitrophenol	ug/kg							<10			<10		
Pentachlorophenol	ug/kg	400000						<10			<10		
Phenol	ug/kg	440						<10			<10		
2-Chloronaphthalene	ug/kg							<10			<10		
2-Methylnaphthalene	ug/kg							<10			257		
Bis(2-ethylhexyl) phthalate	ug/kg							<100			<100		
Butylbenzyl phthalate	ug/kg							<100			<100		
Di-n-butyl phthalate	ug/kg							<100			<100		
Di-n-Octyl phthalate	ug/kg							<100			<100		
Diethyl phthalate	ug/kg							<100			<100		
Dimethyl phthalate	ug/kg							<100			<100		
1,2-Dichlorobenzene	ug/kg	2000000						<10			<10		
1,2,4-Trichlorobenzene	ug/kg	220000						<10			<10		
1,3-Dichlorobenzene	ug/kg	30000						<10			<10		
1,4-Dichlorobenzene	ug/kg	4400000						<10			<10		
2-Nitroaniline	ug/kg							<10			<10		
2,4-Dinitrotoluene	ug/kg							<10			<10		
2,6-Dinitrotoluene	ug/kg							<10			<10		
3-Nitroaniline	ug/kg							<10			<10		
4-Bromophenylphenylether	ug/kg							<10			<10		
4-Chloroaniline	ug/kg							<10			<10		
4-Chlorophenylphenylether	ug/kg							<10			<10		
4-Nitroaniline	ug/kg							<10			<10		
Azobenzene	ug/kg							<10			<10		
Bis(2-chloroethoxy)methane	ug/kg							<10			<10		
Bis(2-chloroethyl)ether	ug/kg							<10			<10		
Carbazole	ug/kg							<10			<10		
Dibenzofuran	ug/kg							<10			63		
Hexachlorobenzene	ug/kg	110000						<10			<10		
Hexachlorobutadiene	ug/kg							<10			<10		
Hexachlorocyclopentadiene	ug/kg							<10			<10		
Hexachloroethane	ug/kg							<10			<10		
Isophorone	ug/kg							<10			<10		
N-nitrosodi-n-propylamine	ug/kg							<10			<10		
Nitrobenzene	ug/kg							<10			<10		
PCBs													
PCB 77	ug/kg												

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	TP10	TP10	TP11	TP11	TP19	TP19	WS06	WS06	WS07	WS07	WS07
		Depth	0.50	1.50	0.30	0.50	0.30	1.00	0.30	1.00	0.30	1.00	1.50
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
2,4,5-Trichlorophenol	ug/kg							<10					
2,4,6-Trichlorophenol	ug/kg							<10					
4-Chloro-3-methylphenol	ug/kg							<10					
4-Methylphenol	ug/kg							<10					
4-Nitrophenol	ug/kg							<10					
Pentachlorophenol	ug/kg	400000						<10					
Phenol	ug/kg	440						<10					
2-Chloronaphthalene	ug/kg							<10					
2-Methylnaphthalene	ug/kg							<10					
Bis(2-ethylhexyl) phthalate	ug/kg							<100					
Butylbenzyl phthalate	ug/kg							<100					
Di-n-butyl phthalate	ug/kg							<100					
Di-n-Octyl phthalate	ug/kg							<100					
Diethyl phthalate	ug/kg							<100					
Dimethyl phthalate	ug/kg							<100					
1,2-Dichlorobenzene	ug/kg	2000000						<10					
1,2,4-Trichlorobenzene	ug/kg	220000						<10					
1,3-Dichlorobenzene	ug/kg	30000						<10					
1,4-Dichlorobenzene	ug/kg	4400000						<10					
2-Nitroaniline	ug/kg							<10					
2,4-Dinitrotoluene	ug/kg							<10					
2,6-Dinitrotoluene	ug/kg							<10					
3-Nitroaniline	ug/kg							<10					
4-Bromophenylphenylether	ug/kg							<10					
4-Chloroaniline	ug/kg							<10					
4-Chlorophenylphenylether	ug/kg							<10					
4-Nitroaniline	ug/kg							<10					
Azobenzene	ug/kg							<10					
Bis(2-chloroethoxy)methane	ug/kg							<10					
Bis(2-chloroethyl)ether	ug/kg							<10					
Carbazole	ug/kg							<10					
Dibenzofuran	ug/kg							<10					
Hexachlorobenzene	ug/kg	110000						<10					
Hexachlorobutadiene	ug/kg							<10					
Hexachlorocyclopentadiene	ug/kg							<10					
Hexachloroethane	ug/kg							<10					
Isophorone	ug/kg							<10					
N-nitrosodi-n-propylamine	ug/kg							<10					
Nitrobenzene	ug/kg							<10					
PCBs													
PCB 77	ug/kg							<5					

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	WS07	WS15	WS15	HP8	HP8	HP9	HP9	HP10	HP11	HP11	HP12
		Depth	4.50	0.30	2.00	0.50	2.00	0.50	2.00	1.00	0.50	1.00-1.50	0.50
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
2,4,5-Trichlorophenol	ug/kg		<10		<10		<50				<10		
2,4,6-Trichlorophenol	ug/kg		<10		<10		<50				<10		
4-Chloro-3-methylphenol	ug/kg		<10		<10		<50				<10		
4-Methylphenol	ug/kg		<10		<10		<50				<10		
4-Nitrophenol	ug/kg		<10		<10		<50				<10		
Pentachlorophenol	ug/kg	400000	<10		<10		<50				<10		
Phenol	ug/kg	440	<10		<10		<50				<10		
2-Chloronaphthalene	ug/kg		<10		<10		<50				<10		
2-Methylnaphthalene	ug/kg		<10		<10		2144				<10		
Bis(2-ethylhexyl) phthalate	ug/kg		<100		<100		<500				<100		
Butylbenzyl phthalate	ug/kg		<100		<100		<500				<100		
Di-n-butyl phthalate	ug/kg		<100		<100		<500				<100		
Di-n-Octyl phthalate	ug/kg		<100		<100		<500				<100		
Diethyl phthalate	ug/kg		<100		<100		<500				<100		
Dimethyl phthalate	ug/kg		<100		<100		<500				<100		
1,2-Dichlorobenzene	ug/kg	2000000	<10		<10		<50				<10		
1,2,4-Trichlorobenzene	ug/kg	220000	<10		<10		<50				<10		
1,3-Dichlorobenzene	ug/kg	30000	<10		<10		<50				<10		
1,4-Dichlorobenzene	ug/kg	4400000	<10		<10		<50				<10		
2-Nitroaniline	ug/kg		<10		<10		<50				<10		
2,4-Dinitrotoluene	ug/kg		<10		<10		<50				<10		
2,6-Dinitrotoluene	ug/kg		<10		<10		<50				<10		
3-Nitroaniline	ug/kg		<10		<10		<50				<10		
4-Bromophenylphenylether	ug/kg		<10		<10		<50				<10		
4-Chloroaniline	ug/kg		<10		<10		<50				<10		
4-Chlorophenylphenylether	ug/kg		<10		<10		<50				<10		
4-Nitroaniline	ug/kg		<10		<10		<50				<10		
Azobenzene	ug/kg		<10		<10		<50				<10		
Bis(2-chloroethoxy)methane	ug/kg		<10		<10		<50				<10		
Bis(2-chloroethyl)ether	ug/kg		<10		<10		<50				<10		
Carbazole	ug/kg		<10		<10		1294				<10		
Dibenzofuran	ug/kg		<10		<10		4119				75		
Hexachlorobenzene	ug/kg	110000	<10		<10		<50				<10		
Hexachlorobutadiene	ug/kg		<10		<10		<50				<10		
Hexachlorocyclopentadiene	ug/kg		<10		<10		<50				<10		
Hexachloroethane	ug/kg		<10		<10		<50				<10		
Isophorone	ug/kg		<10		<10		<50				<10		
N-nitrosodi-n-propylamine	ug/kg		<10		<10		<50				<10		
Nitrobenzene	ug/kg		<10		<10		<50				<10		
PCBs													
PCB 77	ug/kg				<5						<5		

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	HP12	HP13	HP13	HP14	HP14	HP15	WS06	BH10	BH10	BH10	BH10
		Depth	1.00	0.50	1.50	0.50	1.00	0.50-1.00	4.50	0.50	1.00	2.00	8.00
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
2,4,5-Trichlorophenol	ug/kg								<10		<10	<10	
2,4,6-Trichlorophenol	ug/kg								<10		<10	<10	
4-Chloro-3-methylphenol	ug/kg								<10		<10	<10	
4-Methylphenol	ug/kg								<10		<10	<10	
4-Nitrophenol	ug/kg								<10		<10	<10	
Pentachlorophenol	ug/kg	400000							<10		<10	<10	
Phenol	ug/kg	440							<10		<10	<10	
2-Chloronaphthalene	ug/kg								<10		<10	<10	
2-Methylnaphthalene	ug/kg								<10		<10	573	
Bis(2-ethylhexyl) phthalate	ug/kg								<100		<100	<100	
Butylbenzyl phthalate	ug/kg								<100		<100	<100	
Di-n-butyl phthalate	ug/kg								<100		<100	<100	
Di-n-Octyl phthalate	ug/kg								<100		<100	<100	
Diethyl phthalate	ug/kg								<100		<100	<100	
Dimethyl phthalate	ug/kg								<100		<100	<100	
1,2-Dichlorobenzene	ug/kg	2000000							<10		<10	<10	
1,2,4-Trichlorobenzene	ug/kg	220000							<10		<10	<10	
1,3-Dichlorobenzene	ug/kg	30000							<10		<10	<10	
1,4-Dichlorobenzene	ug/kg	4400000							<10		<10	<10	
2-Nitroaniline	ug/kg								<10		<10	<10	
2,4-Dinitrotoluene	ug/kg								<10		<10	<10	
2,6-Dinitrotoluene	ug/kg								<10		<10	<10	
3-Nitroaniline	ug/kg								<10		<10	<10	
4-Bromophenylphenylether	ug/kg								<10		<10	<10	
4-Chloroaniline	ug/kg								<10		<10	<10	
4-Chlorophenylphenylether	ug/kg								<10		<10	<10	
4-Nitroaniline	ug/kg								<10		<10	<10	
Azobenzene	ug/kg								<10		<10	<10	
Bis(2-chloroethoxy)methane	ug/kg								<10		<10	<10	
Bis(2-chloroethyl)ether	ug/kg								<10		<10	<10	
Carbazole	ug/kg								<10		<10	<10	
Dibenzofuran	ug/kg								<10		<10	<10	
Hexachlorobenzene	ug/kg	110000							<10		<10	<10	
Hexachlorobutadiene	ug/kg								<10		<10	<10	
Hexachlorocyclopentadiene	ug/kg								<10		<10	<10	
Hexachloroethane	ug/kg								<10		<10	<10	
Isophorone	ug/kg								<10		<10	<10	
N-nitrosodi-n-propylamine	ug/kg								<10		<10	<10	
Nitrobenzene	ug/kg								<10		<10	<10	
PCBs													
PCB 77	ug/kg						<25		<5			<5	

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	BH8	BH8	BH8	TP20	TP20	TP20	TP22	TP22	TP22	WS13	WS13
		Depth	0.30	2.50	7.50	0.20	1.00	3.00	0.10	0.50	2.10	0.30	2.00
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
2,4,5-Trichlorophenol	ug/kg					<100	<100	<10		<10	<10		
2,4,6-Trichlorophenol	ug/kg					<100	<100	<10		<10	<10		
4-Chloro-3-methylphenol	ug/kg					<100	<100	<10		<10	<10		
4-Methylphenol	ug/kg					<100	<100	<10		<10	<10		
4-Nitrophenol	ug/kg					<100	<100	<10		<10	<10		
Pentachlorophenol	ug/kg	400000				<100	<100	<10		<10	<10		
Phenol	ug/kg	440				<100	<100	<10		<10	<10		
2-Chloronaphthalene	ug/kg					<100	<100	<10		<10	<10		
2-Methylnaphthalene	ug/kg					<100	<100	<10		<10	<10		
Bis(2-ethylhexyl) phthalate	ug/kg					<1000	<1000	<100		<100	<100		
Butylbenzyl phthalate	ug/kg					<1000	<1000	<100		<100	<100		
Di-n-butyl phthalate	ug/kg					<1000	<1000	<100		<100	<100		
Di-n-Octyl phthalate	ug/kg					<1000	<1000	<100		<100	<100		
Diethyl phthalate	ug/kg					<1000	<1000	<100		<100	<100		
Dimethyl phthalate	ug/kg					<1000	<1000	<100		<100	<100		
1,2-Dichlorobenzene	ug/kg	2000000				<100	<100	<10		<10	<10		
1,2,4-Trichlorobenzene	ug/kg	220000				<100	<100	<10		<10	<10		
1,3-Dichlorobenzene	ug/kg	30000				<100	<100	<10		<10	<10		
1,4-Dichlorobenzene	ug/kg	4400000				<100	<100	<10		<10	<10		
2-Nitroaniline	ug/kg					<100	<100	<10		<10	<10		
2,4-Dinitrotoluene	ug/kg					<100	<100	<10		<10	<10		
2,6-Dinitrotoluene	ug/kg					<100	<100	<10		<10	<10		
3-Nitroaniline	ug/kg					<100	<100	<10		<10	<10		
4-Bromophenylphenylether	ug/kg					<100	<100	<10		<10	<10		
4-Chloroaniline	ug/kg					<100	<100	<10		<10	<10		
4-Chlorophenylphenylether	ug/kg					<100	<100	<10		<10	<10		
4-Nitroaniline	ug/kg					<100	<100	<10		<10	<10		
Azobenzene	ug/kg					<100	<100	<10		<10	<10		
Bis(2-chloroethoxy)methane	ug/kg					<100	<100	<10		<10	<10		
Bis(2-chloroethyl)ether	ug/kg					<100	<100	<10		<10	<10		
Carbazole	ug/kg					<100	<100	<10		<10	<10		
Dibenzofuran	ug/kg					<100	<100	<10		<10	<10		
Hexachlorobenzene	ug/kg	110000				<100	<100	<10		<10	<10		
Hexachlorobutadiene	ug/kg					<100	<100	<10		<10	<10		
Hexachlorocyclopentadiene	ug/kg					<100	<100	<10		<10	<10		
Hexachloroethane	ug/kg					<100	<100	<10		<10	<10		
Isophorone	ug/kg					<100	<100	<10		<10	<10		
N-nitrosodi-n-propylamine	ug/kg					<100	<100	<10		<10	<10		
Nitrobenzene	ug/kg					<100	<100	<10		<10	<10		
PCBs													
PCB 77	ug/kg							<5			<5		

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	WS13	WS19	WS19	WS19	WS21	WS21	BH11	BH11	BH9	BH9	WS20
		Depth	4.00	0.30	1.00	3.00	0.30	2.00	2.00	4.00	0.50	3.50	0.30
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
2,4,5-Trichlorophenol	ug/kg		<10			<10		<10	<10			<50	
2,4,6-Trichlorophenol	ug/kg		<10			<10		<10	<10			<50	
4-Chloro-3-methylphenol	ug/kg		<10			<10		<10	<10			<50	
4-Methylphenol	ug/kg		<10			<10		<10	<10			<50	
4-Nitrophenol	ug/kg		<10			<10		<10	<10			<50	
Pentachlorophenol	ug/kg	400000	<10			<10		<10	<10			<50	
Phenol	ug/kg	440	<10			<10		<10	<10			<50	
2-Chloronaphthalene	ug/kg		<10			<10		<10	<10			<50	
2-Methylnaphthalene	ug/kg		<10			<10		<10	528			<50	
Bis(2-ethylhexyl) phthalate	ug/kg		<100			<100		<100	<100			<500	
Butylbenzyl phthalate	ug/kg		<100			<100		<100	<100			<500	
Di-n-butyl phthalate	ug/kg		<100			<100		<100	<100			<500	
Di-n-Octyl phthalate	ug/kg		<100			<100		<100	<100			<500	
Diethyl phthalate	ug/kg		<100			<100		<100	<100			<500	
Dimethyl phthalate	ug/kg		<100			<100		<100	<100			<500	
1,2-Dichlorobenzene	ug/kg	2000000	<10			<10		<10	<10			<50	
1,2,4-Trichlorobenzene	ug/kg	220000	<10			<10		<10	<10			<50	
1,3-Dichlorobenzene	ug/kg	30000	<10			<10		<10	<10			<50	
1,4-Dichlorobenzene	ug/kg	4400000	<10			<10		<10	<10			<50	
2-Nitroaniline	ug/kg		<10			<10		<10	<10			<50	
2,4-Dinitrotoluene	ug/kg		<10			<10		<10	<10			<50	
2,6-Dinitrotoluene	ug/kg		<10			<10		<10	<10			<50	
3-Nitroaniline	ug/kg		<10			<10		<10	<10			<50	
4-Bromophenylphenylether	ug/kg		<10			<10		<10	<10			<50	
4-Chloroaniline	ug/kg		<10			<10		<10	<10			<50	
4-Chlorophenylphenylether	ug/kg		<10			<10		<10	<10			<50	
4-Nitroaniline	ug/kg		<10			<10		<10	<10			<50	
Azobenzene	ug/kg		<10			<10		<10	<10			<50	
Bis(2-chloroethoxy)methane	ug/kg		<10			<10		<10	<10			<50	
Bis(2-chloroethyl)ether	ug/kg		<10			<10		<10	<10			<50	
Carbazole	ug/kg		<10			153		<10	<10			<50	
Dibenzofuran	ug/kg		<10			68		<10	<10			<50	
Hexachlorobenzene	ug/kg	110000	<10			<10		<10	<10			<50	
Hexachlorobutadiene	ug/kg		<10			<10		<10	<10			<50	
Hexachlorocyclopentadiene	ug/kg		<10			<10		<10	<10			<50	
Hexachloroethane	ug/kg		<10			<10		<10	<10			<50	
Isophorone	ug/kg		<10			<10		<10	<10			<50	
N-nitrosodi-n-propylamine	ug/kg		<10			<10		<10	<10			<50	
Nitrobenzene	ug/kg		<10			<10		<10	<10			<50	
PCBs													
PCB 77	ug/kg												

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	WS20	WS18	WS18	WS08	WS08	TP18	TP18	TP24	TP24	TP23	TP23
		Depth	4.00	1.00	4.00	1.00	5.00	1.00	1.90	2.50	3.20	0.30	3.10
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
2,4,5-Trichlorophenol	ug/kg				<10				<100		<10		<10
2,4,6-Trichlorophenol	ug/kg				<10				<100		<10		<10
4-Chloro-3-methylphenol	ug/kg				<10				<100		<10		<10
4-Methylphenol	ug/kg				<10				<100		<10		<10
4-Nitrophenol	ug/kg				<10				<100		<10		<10
Pentachlorophenol	ug/kg	400000			<10				<100		<10		<10
Phenol	ug/kg	440			<10				<100		<10		<10
2-Chloronaphthalene	ug/kg				<10				<100		<10		<10
2-Methylnaphthalene	ug/kg				<10				<100		<10		<10
Bis(2-ethylhexyl) phthalate	ug/kg				<100				<1000		<100		<100
Butylbenzyl phthalate	ug/kg				<100				<1000		<100		<100
Di-n-butyl phthalate	ug/kg				<100				<1000		<100		<100
Di-n-Octyl phthalate	ug/kg				<100				<1000		<100		<100
Diethyl phthalate	ug/kg				<100				<1000		<100		<100
Dimethyl phthalate	ug/kg				<100				<1000		<100		<100
1,2-Dichlorobenzene	ug/kg	2000000			<10				<100		<10		<10
1,2,4-Trichlorobenzene	ug/kg	220000			<10				<100		<10		<10
1,3-Dichlorobenzene	ug/kg	30000			<10				<100		<10		<10
1,4-Dichlorobenzene	ug/kg	4400000			<10				<100		<10		<10
2-Nitroaniline	ug/kg				<10				<100		<10		<10
2,4-Dinitrotoluene	ug/kg				<10				<100		<10		<10
2,6-Dinitrotoluene	ug/kg				<10				<100		<10		<10
3-Nitroaniline	ug/kg				<10				<100		<10		<10
4-Bromophenylphenylether	ug/kg				<10				<100		<10		<10
4-Chloroaniline	ug/kg				<10				<100		<10		<10
4-Chlorophenylphenylether	ug/kg				<10				<100		<10		<10
4-Nitroaniline	ug/kg				<10				<100		<10		<10
Azobenzene	ug/kg				<10				<100		<10		<10
Bis(2-chloroethoxy)methane	ug/kg				<10				<100		<10		<10
Bis(2-chloroethyl)ether	ug/kg				<10				<100		<10		<10
Carbazole	ug/kg				<10				<100		<10		<10
Dibenzofuran	ug/kg				<10				<100		<10		<10
Hexachlorobenzene	ug/kg	110000			<10				<100		<10		<10
Hexachlorobutadiene	ug/kg				<10				<100		<10		<10
Hexachlorocyclopentadiene	ug/kg				<10				<100		<10		<10
Hexachloroethane	ug/kg				<10				<100		<10		<10
Isophorone	ug/kg				<10				<100		<10		<10
N-nitrosodi-n-propylamine	ug/kg				<10				<100		<10		<10
Nitrobenzene	ug/kg				<10				<100		<10		<10
PCBs													
PCB 77	ug/kg				<5								

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	TP14	TP14	TP13	TP13	TP15	TP15	WS09	WS09	WS10	WS10	WS10
		Depth	0.50	2.00	0.50	2.00	0.50	1.50	0.50	2.00	0.30	0.50	2.00
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
2,4,5-Trichlorophenol	ug/kg						<10		<10				<100
2,4,6-Trichlorophenol	ug/kg						<10		<10				<100
4-Chloro-3-methylphenol	ug/kg						<10		<10				<100
4-Methylphenol	ug/kg						<10		<10				<100
4-Nitrophenol	ug/kg						<10		<10				<100
Pentachlorophenol	ug/kg	400000					<10		<10				<100
Phenol	ug/kg	440					<10		<10				<100
2-Chloronaphthalene	ug/kg						<10		<10				<100
2-Methylnaphthalene	ug/kg						<10		136				890
Bis(2-ethylhexyl) phthalate	ug/kg						<100		<100				<1000
Butylbenzyl phthalate	ug/kg						<100		<100				<1000
Di-n-butyl phthalate	ug/kg						<100		<100				<1000
Di-n-Octyl phthalate	ug/kg						<100		<100				<1000
Diethyl phthalate	ug/kg						<100		<100				<1000
Dimethyl phthalate	ug/kg						<100		<100				<1000
1,2-Dichlorobenzene	ug/kg	2000000					<10		<10				<100
1,2,4-Trichlorobenzene	ug/kg	220000					<10		<10				<100
1,3-Dichlorobenzene	ug/kg	30000					<10		<10				<100
1,4-Dichlorobenzene	ug/kg	4400000					<10		<10				<100
2-Nitroaniline	ug/kg						<10		<10				<100
2,4-Dinitrotoluene	ug/kg						<10		<10				<100
2,6-Dinitrotoluene	ug/kg						<10		<10				<100
3-Nitroaniline	ug/kg						<10		<10				<100
4-Bromophenylphenylether	ug/kg						<10		<10				<100
4-Chloroaniline	ug/kg						<10		<10				<100
4-Chlorophenylphenylether	ug/kg						<10		<10				<100
4-Nitroaniline	ug/kg						<10		<10				<100
Azobenzene	ug/kg						<10		<10				<100
Bis(2-chloroethoxy)methane	ug/kg						<10		<10				<100
Bis(2-chloroethyl)ether	ug/kg						<10		<10				<100
Carbazole	ug/kg						<10		573				1745
Dibenzofuran	ug/kg						<10		160				1230
Hexachlorobenzene	ug/kg	110000					<10		<10				<100
Hexachlorobutadiene	ug/kg						<10		<10				<100
Hexachlorocyclopentadiene	ug/kg						<10		<10				<100
Hexachloroethane	ug/kg						<10		<10				<100
Isophorone	ug/kg						<10		<10				<100
N-nitrosodi-n-propylamine	ug/kg						<10		<10				<100
Nitrobenzene	ug/kg						<10		<10				<100
PCBs													
PCB 77	ug/kg								<5				

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	TP25	TP26	TP27	TP28	BH9	BH9	WS22	WS24	WS25	WS25	BH6
		Depth	0.50	0.50	1.00	1.50	6.50	12.00	1.00	3.50	1.00	3.00	1.50
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
2,4,5-Trichlorophenol	ug/kg						<10			<10		<10	
2,4,6-Trichlorophenol	ug/kg						<10			<10		<10	
4-Chloro-3-methylphenol	ug/kg						<10			<10		<10	
4-Methylphenol	ug/kg						<10			<10		<10	
4-Nitrophenol	ug/kg						<10			<10		<10	
Pentachlorophenol	ug/kg	400000					<10			<10		<10	
Phenol	ug/kg	440					<10			<10		<10	
2-Chloronaphthalene	ug/kg						<10			<10		<10	
2-Methylnaphthalene	ug/kg						29			<10		<10	
Bis(2-ethylhexyl) phthalate	ug/kg						<100			<100		<100	
Butylbenzyl phthalate	ug/kg						<100			<100		<100	
Di-n-butyl phthalate	ug/kg						<100			<100		<100	
Di-n-Octyl phthalate	ug/kg						<100			<100		<100	
Diethyl phthalate	ug/kg						<100			<100		<100	
Dimethyl phthalate	ug/kg						<100			<100		<100	
1,2-Dichlorobenzene	ug/kg	2000000					<10			<10		<10	
1,2,4-Trichlorobenzene	ug/kg	220000					<10			<10		<10	
1,3-Dichlorobenzene	ug/kg	30000					<10			<10		<10	
1,4-Dichlorobenzene	ug/kg	4400000					<10			<10		<10	
2-Nitroaniline	ug/kg						<10			<10		<10	
2,4-Dinitrotoluene	ug/kg						<10			<10		<10	
2,6-Dinitrotoluene	ug/kg						<10			<10		<10	
3-Nitroaniline	ug/kg						<10			<10		<10	
4-Bromophenylphenylether	ug/kg						<10			<10		<10	
4-Chloroaniline	ug/kg						<10			<10		<10	
4-Chlorophenylphenylether	ug/kg						<10			<10		<10	
4-Nitroaniline	ug/kg						<10			<10		<10	
Azobenzene	ug/kg						<10			<10		<10	
Bis(2-chloroethoxy)methane	ug/kg						<10			<10		<10	
Bis(2-chloroethyl)ether	ug/kg						<10			<10		<10	
Carbazole	ug/kg						25			<10		<10	
Dibenzofuran	ug/kg						38			<10		<10	
Hexachlorobenzene	ug/kg	110000					<10			<10		<10	
Hexachlorobutadiene	ug/kg						<10			<10		<10	
Hexachlorocyclopentadiene	ug/kg						<10			<10		<10	
Hexachloroethane	ug/kg						<10			<10		<10	
Isophorone	ug/kg						<10			<10		<10	
N-nitrosodi-n-propylamine	ug/kg						<10			<10		<10	
Nitrobenzene	ug/kg						<10			<10		<10	
PCBs													
PCB 77	ug/kg												

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	BH6	TP17	TP29	TP30	TP31	WS29	WS29	WS26	WS26	WS28	WS27
		Depth	7.50	0.30	0.60	1.50	1.00	2.00	3.00	0.50	4.00	1.50	0.30
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
2,4,5-Trichlorophenol	ug/kg							<10	<10	<10	<10	<10	<10
2,4,6-Trichlorophenol	ug/kg							<10	<10	<10	<10	<10	<10
4-Chloro-3-methylphenol	ug/kg							<10	<10	<10	<10	<10	<10
4-Methylphenol	ug/kg							<10	<10	<10	<10	<10	<10
4-Nitrophenol	ug/kg							<10	<10	<10	<10	<10	<10
Pentachlorophenol	ug/kg	400000						<10	<10	<10	<10	<10	<10
Phenol	ug/kg	440						<10	<10	<10	<10	<10	<10
2-Chloronaphthalene	ug/kg							<10	<10	<10	<10	<10	<10
2-Methylnaphthalene	ug/kg							<10	<10	72	14	<10	274
Bis(2-ethylhexyl) phthalate	ug/kg							<100	<100	<100	<100	<100	<100
Butylbenzyl phthalate	ug/kg							<100	<100	<100	<100	<100	<100
Di-n-butyl phthalate	ug/kg							<100	<100	<100	<100	<100	<100
Di-n-Octyl phthalate	ug/kg							<100	<100	<100	<100	<100	<100
Diethyl phthalate	ug/kg							<100	<100	<100	<100	<100	<100
Dimethyl phthalate	ug/kg							<100	<100	<100	<100	<100	<100
1,2-Dichlorobenzene	ug/kg	2000000						<10	<10	<10	<10	<10	<10
1,2,4-Trichlorobenzene	ug/kg	220000						<10	<10	<10	<10	<10	<10
1,3-Dichlorobenzene	ug/kg	30000						<10	<10	<10	<10	<10	<10
1,4-Dichlorobenzene	ug/kg	4400000						<10	<10	<10	<10	<10	<10
2-Nitroaniline	ug/kg							<10	<10	<10	<10	<10	<10
2,4-Dinitrotoluene	ug/kg							<10	<10	<10	<10	<10	<10
2,6-Dinitrotoluene	ug/kg							<10	<10	<10	<10	<10	<10
3-Nitroaniline	ug/kg							<10	<10	<10	<10	<10	<10
4-Bromophenylphenylether	ug/kg							<10	<10	<10	<10	<10	<10
4-Chloroaniline	ug/kg							<10	<10	<10	<10	<10	<10
4-Chlorophenylphenylether	ug/kg							<10	<10	<10	<10	<10	<10
4-Nitroaniline	ug/kg							<10	<10	<10	<10	<10	<10
Azobenzene	ug/kg							<10	<10	<10	<10	<10	<10
Bis(2-chloroethoxy)methane	ug/kg							<10	<10	<10	<10	<10	<10
Bis(2-chloroethyl)ether	ug/kg							<10	<10	<10	<10	<10	<10
Carbazole	ug/kg							<10	<10	104	<10	<10	449
Dibenzofuran	ug/kg							<10	<10	53	<10	<10	266
Hexachlorobenzene	ug/kg	110000						<10	<10	<10	<10	<10	<10
Hexachlorobutadiene	ug/kg							<10	<10	<10	<10	<10	<10
Hexachlorocyclopentadiene	ug/kg							<10	<10	<10	<10	<10	<10
Hexachloroethane	ug/kg							<10	<10	<10	<10	<10	<10
Isophorone	ug/kg							<10	<10	<10	<10	<10	<10
N-nitrosodi-n-propylamine	ug/kg							<10	<10	<10	<10	<10	<10
Nitrobenzene	ug/kg							<10	<10	<10	<10	<10	<10
PCBs													
PCB 77	ug/kg												

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	WS27	WS27	HP16	HP17	HP18	HP19	HP20	HP21	HP22	HP23	HP24
		Depth	3.50	4.80	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
2,4,5-Trichlorophenol	ug/kg		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
2,4,6-Trichlorophenol	ug/kg		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
4-Chloro-3-methylphenol	ug/kg		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
4-Methylphenol	ug/kg		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
4-Nitrophenol	ug/kg		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Pentachlorophenol	ug/kg	400000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Phenol	ug/kg	440	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
2-Chloronaphthalene	ug/kg		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
2-Methylnaphthalene	ug/kg		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Bis(2-ethylhexyl) phthalate	ug/kg		<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Butylbenzyl phthalate	ug/kg		<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Di-n-butyl phthalate	ug/kg		<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Di-n-Octyl phthalate	ug/kg		<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Diethyl phthalate	ug/kg		<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
Dimethyl phthalate	ug/kg		<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
1,2-Dichlorobenzene	ug/kg	2000000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,2,4-Trichlorobenzene	ug/kg	220000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,3-Dichlorobenzene	ug/kg	30000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
1,4-Dichlorobenzene	ug/kg	4400000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
2-Nitroaniline	ug/kg		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
2,4-Dinitrotoluene	ug/kg		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
2,6-Dinitrotoluene	ug/kg		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
3-Nitroaniline	ug/kg		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
4-Bromophenylphenylether	ug/kg		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
4-Chloroaniline	ug/kg		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
4-Chlorophenylphenylether	ug/kg		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
4-Nitroaniline	ug/kg		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Azobenzene	ug/kg		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Bis(2-chloroethoxy)methane	ug/kg		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Bis(2-chloroethyl)ether	ug/kg		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Carbazole	ug/kg		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Dibenzofuran	ug/kg		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Hexachlorobenzene	ug/kg	110000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Hexachlorobutadiene	ug/kg		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Hexachlorocyclopentadiene	ug/kg		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Hexachloroethane	ug/kg		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Isophorone	ug/kg		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
N-nitrosodi-n-propylamine	ug/kg		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Nitrobenzene	ug/kg		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
PCBs													
PCB 77	ug/kg												

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	HP25	HP26	HP27	WS34	WS34	WS33	WS33	WS33	WS33	WS2	WS2
		Depth	0.50	0.50	0.50	0.4	3.0	1.2	2.0	3.5	4.5	0.7	4.5
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
2,4,5-Trichlorophenol	ug/kg		<10	<10	<10		<10		<10	<10	<10		<10
2,4,6-Trichlorophenol	ug/kg		<10	<10	<10		<10		<10	<10	<10		<10
4-Chloro-3-methylphenol	ug/kg		<10	<10	<10		<10		<10	<10	<10		<10
4-Methylphenol	ug/kg		<10	<10	<10		<10		<10	<10	<10		<10
4-Nitrophenol	ug/kg		<10	<10	<10		<10		<10	<10	<10		<10
Pentachlorophenol	ug/kg	400000	<10	<10	<10		<10		<10	<10	<10		<10
Phenol	ug/kg	440	<10	<10	<10		<10		<10	<10	<10		<10
2-Chloronaphthalene	ug/kg		<10	<10	<10		<10		<10	<10	<10		<10
2-Methylnaphthalene	ug/kg		<10	<10	<10		<10		<10	96	<10		<10
Bis(2-ethylhexyl) phthalate	ug/kg		<100	<100	<100		<100		<100	<100	<100		<100
Butylbenzyl phthalate	ug/kg		<100	<100	<100		<100		<100	<100	<100		<100
Di-n-butyl phthalate	ug/kg		<100	<100	<100		<100		<100	<100	<100		<100
Di-n-Octyl phthalate	ug/kg		<100	<100	<100		<100		<100	<100	<100		<100
Diethyl phthalate	ug/kg		<100	<100	<100		<100		<100	<100	<100		<100
Dimethyl phthalate	ug/kg		<100	<100	<100		<100		<100	<100	<100		<100
1,2-Dichlorobenzene	ug/kg	2000000	<10	<10	<10		<10		<10	<10	<10		<10
1,2,4-Trichlorobenzene	ug/kg	220000	<10	<10	<10		<10		<10	<10	<10		<10
1,3-Dichlorobenzene	ug/kg	30000	<10	<10	<10		<10		<10	<10	<10		<10
1,4-Dichlorobenzene	ug/kg	4400000	<10	<10	<10		<10		<10	<10	<10		<10
2-Nitroaniline	ug/kg		<10	<10	<10		<10		<10	<10	<10		<10
2,4-Dinitrotoluene	ug/kg		<10	<10	<10		<10		<10	<10	<10		<10
2,6-Dinitrotoluene	ug/kg		<10	<10	<10		<10		<10	<10	<10		<10
3-Nitroaniline	ug/kg		<10	<10	<10		<10		<10	<10	<10		<10
4-Bromophenylphenylether	ug/kg		<10	<10	<10		<10		<10	<10	<10		<10
4-Chloroaniline	ug/kg		<10	<10	<10		<10		<10	<10	<10		<10
4-Chlorophenylphenylether	ug/kg		<10	<10	<10		<10		<10	<10	<10		<10
4-Nitroaniline	ug/kg		<10	<10	<10		<10		<10	<10	<10		<10
Azobenzene	ug/kg		<10	<10	<10		<10		<10	<10	<10		<10
Bis(2-chloroethoxy)methane	ug/kg		<10	<10	<10		<10		<10	<10	<10		<10
Bis(2-chloroethyl)ether	ug/kg		<10	<10	<10		<10		<10	<10	<10		<10
Carbazole	ug/kg		<10	<10	<10		<10		<10	<10	<10		<10
Dibenzofuran	ug/kg		<10	<10	<10		<10		<10	28	123		<10
Hexachlorobenzene	ug/kg	110000	<10	<10	<10		<10		<10	<10	<10		<10
Hexachlorobutadiene	ug/kg		<10	<10	<10		<10		<10	<10	<10		<10
Hexachlorocyclopentadiene	ug/kg		<10	<10	<10		<10		<10	<10	<10		<10
Hexachloroethane	ug/kg		<10	<10	<10		<10		<10	<10	<10		<10
Isophorone	ug/kg		<10	<10	<10		<10		<10	<10	<10		<10
N-nitrosodi-n-propylamine	ug/kg		<10	<10	<10		<10		<10	<10	<10		<10
Nitrobenzene	ug/kg		<10	<10	<10		<10		<10	<10	<10		<10
PCBs													
PCB 77	ug/kg												

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	BH12	BH12	BH12	WS17	WS17	WS23 HP	BH5	BH7	WS30	WS30	WS30
		Depth	0.3	2.6	6.6	1.5	4.0	0.2	2.50	5.50	1.00	4.00	5.00
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
2,4,5-Trichlorophenol	ug/kg			<10	<10	<10	<10				<10	<10	<10
2,4,6-Trichlorophenol	ug/kg			<10	<10	<10	<10				<10	<10	<10
4-Chloro-3-methylphenol	ug/kg			<10	<10	<10	<10				<10	<10	<10
4-Methylphenol	ug/kg			<10	<10	<10	<10				<10	<10	<10
4-Nitrophenol	ug/kg			<10	<10	<10	<10				<10	<10	<10
Pentachlorophenol	ug/kg	400000		<10	<10	<10	<10				<10	<10	<10
Phenol	ug/kg	440		<10	<10	<10	<10				<10	<10	<10
2-Chloronaphthalene	ug/kg			<10	<10	<10	<10				<10	<10	<10
2-Methylnaphthalene	ug/kg			<10	<10	74	19				<10	7673	<10
Bis(2-ethylhexyl) phthalate	ug/kg			<100	<100	<100	<100				<100	<100	<100
Butylbenzyl phthalate	ug/kg			<100	<100	<100	<100				<100	<100	<100
Di-n-butyl phthalate	ug/kg			<100	<100	<100	<100				<100	<100	<100
Di-n-Octyl phthalate	ug/kg			<100	<100	<100	<100				<100	<100	<100
Diethyl phthalate	ug/kg			<100	<100	<100	<100				<100	<100	<100
Dimethyl phthalate	ug/kg			<100	<100	<100	<100				<100	<100	<100
1,2-Dichlorobenzene	ug/kg	2000000		<10	<10	<10	<10				<10	<10	<10
1,2,4-Trichlorobenzene	ug/kg	220000		<10	<10	<10	<10				<10	<10	<10
1,3-Dichlorobenzene	ug/kg	30000		<10	<10	<10	<10				<10	<10	<10
1,4-Dichlorobenzene	ug/kg	4400000		<10	<10	<10	<10				<10	<10	<10
2-Nitroaniline	ug/kg			<10	<10	<10	<10				<10	<10	<10
2,4-Dinitrotoluene	ug/kg			<10	<10	<10	<10				<10	<10	<10
2,6-Dinitrotoluene	ug/kg			<10	<10	<10	<10				<10	<10	<10
3-Nitroaniline	ug/kg			<10	<10	<10	<10				<10	<10	<10
4-Bromophenylphenylether	ug/kg			<10	<10	<10	<10				<10	<10	<10
4-Chloroaniline	ug/kg			<10	<10	<10	<10				<10	<10	<10
4-Chlorophenylphenylether	ug/kg			<10	<10	<10	<10				<10	<10	<10
4-Nitroaniline	ug/kg			<10	<10	<10	<10				<10	<10	<10
Azobenzene	ug/kg			<10	<10	<10	<10				<10	<10	<10
Bis(2-chloroethoxy)methane	ug/kg			<10	<10	<10	<10				<10	<10	<10
Bis(2-chloroethyl)ether	ug/kg			<10	<10	<10	<10				<10	<10	<10
Carbazole	ug/kg			<10	<10	69	18				15	<10	<10
Dibenzofuran	ug/kg			<10	<10	55	18				<10	<10	<10
Hexachlorobenzene	ug/kg	110000		<10	<10	<10	<10				<10	<10	<10
Hexachlorobutadiene	ug/kg			<10	<10	<10	<10				<10	<10	<10
Hexachlorocyclopentadiene	ug/kg			<10	<10	<10	<10				<10	<10	<10
Hexachloroethane	ug/kg			<10	<10	<10	<10				<10	<10	<10
Isophorone	ug/kg			<10	<10	<10	<10				<10	<10	<10
N-nitrosodi-n-propylamine	ug/kg			<10	<10	<10	<10				<10	<10	<10
Nitrobenzene	ug/kg			<10	<10	<10	<10				<10	<10	<10
PCBs													
PCB 77	ug/kg												

Screened Soils Data

		Sample ID	WS31	WS31	WS32
		Depth	0.50	2.60	2.50
		Sample Type	Soil	Soil	Soil
Test	**Units**	**Screening Value**			
2,4,5-Trichlorophenol	ug/kg			<10	<10
2,4,6-Trichlorophenol	ug/kg			<10	<10
4-Chloro-3-methylphenol	ug/kg			<10	<10
4-Methylphenol	ug/kg			<10	<10
4-Nitrophenol	ug/kg			<10	<10
Pentachlorophenol	ug/kg	400000		<10	<10
Phenol	ug/kg	440		<10	<10
2-Chloronaphthalene	ug/kg			<10	<10
2-Methylnaphthalene	ug/kg			<10	<10
Bis(2-ethylhexyl) phthalate	ug/kg			<100	<100
Butylbenzyl phthalate	ug/kg			<100	<100
Di-n-butyl phthalate	ug/kg			<100	<100
Di-n-Octyl phthalate	ug/kg			<100	<100
Diethyl phthalate	ug/kg			<100	<100
Dimethyl phthalate	ug/kg			<100	<100
1,2-Dichlorobenzene	ug/kg	2000000		<10	<10
1,2,4-Trichlorobenzene	ug/kg	220000		<10	<10
1,3-Dichlorobenzene	ug/kg	30000		<10	<10
1,4-Dichlorobenzene	ug/kg	4400000		<10	<10
2-Nitroaniline	ug/kg			<10	<10
2,4-Dinitrotoluene	ug/kg			<10	<10
2,6-Dinitrotoluene	ug/kg			<10	<10
3-Nitroaniline	ug/kg			<10	<10
4-Bromophenylphenylether	ug/kg			<10	<10
4-Chloroaniline	ug/kg			<10	<10
4-Chlorophenylphenylether	ug/kg			<10	<10
4-Nitroaniline	ug/kg			<10	<10
Azobenzene	ug/kg			<10	<10
Bis(2-chloroethoxy)methane	ug/kg			<10	<10
Bis(2-chloroethyl)ether	ug/kg			<10	<10
Carbazole	ug/kg			<10	<10
Dibenzofuran	ug/kg			<10	<10
Hexachlorobenzene	ug/kg	110000		<10	<10
Hexachlorobutadiene	ug/kg			<10	<10
Hexachlorocyclopentadiene	ug/kg			<10	<10
Hexachloroethane	ug/kg			<10	<10
Isophorone	ug/kg			<10	<10
N-nitrosodi-n-propylamine	ug/kg			<10	<10
Nitrobenzene	ug/kg			<10	<10
PCBs					
PCB 77	ug/kg				

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	BH1	BH1	WS3	WS3	TP4	TP4	TP3	TP3	TP2	TP2	TP1
		Depth	1.0	5.0	1.00	5.00	0.00-0.30	2.00	0.30	0.00-1.00	0.00-0.20	1.00-1.50	0.50
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
PCB 81	ug/kg												
PCB 105	ug/kg												
PCB 114	ug/kg												
PCB 118	ug/kg												
PCB 123	ug/kg												
PCB 126	ug/kg												
PCB 156	ug/kg												
PCB 157	ug/kg												
PCB 167	ug/kg												
PCB 169	ug/kg												
PCB 189	ug/kg												
Total 12 PCBs	ug/kg	240											
VOC													
Dichlorodifluoromethane	ug/kg											<2	
Methyl Tertiary Butyl Ether	ug/kg											<2	
Chloromethane	ug/kg											<3	
Vinyl Chloride	ug/kg	59										<2	
Bromomethane	ug/kg											<1	
Chloroethane	ug/kg											<2	
Trichlorofluoromethane	ug/kg											<2	
1,1-Dichloroethene (1,1 DCE)	ug/kg											<6	
Dichloromethane (DCM)	ug/kg											<7	
trans-1-2-Dichloroethene	ug/kg											<3	
1,1-Dichloroethane	ug/kg											<3	
cis-1-2-Dichloroethene	ug/kg											<3	
2,2-Dichloropropane	ug/kg											<4	
Bromochloromethane	ug/kg											<3	
Chloroform	ug/kg	99000.00										<3	
1,1,1-Trichloroethane	ug/kg	660000.00										<3	
1,1-Dichloropropene	ug/kg											<3	
Carbon tetrachloride	ug/kg	2900.00										<4	
1,2-Dichloroethane	ug/kg	670.00										<4	
Trichloroethene (TCE)	ug/kg	1200.00										11	
1,2-Dichloropropane	ug/kg											<6	
Dibromomethane	ug/kg											<3	
Bromodichloromethane	ug/kg											<3	
cis-1-3-Dichloropropene	ug/kg											<4	
trans-1-3-Dichloropropene	ug/kg											<3	
1,1,2-Trichloroethane	ug/kg											<3	
Tetrachloroethene (PCE)	ug/kg	19000.00										20	
1,3-Dichloropropane	ug/kg											<3	

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	TP1	TP1	TP1	TP5	TP5	TP6	TP6	TP7	TP7	HP3	HP3
		Depth	1.00	2.00	2.60	0.30	1.20	0.30	2.00	0.30	0.50	0.50	1.00
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
PCB 81	ug/kg												<5
PCB 105	ug/kg												<5
PCB 114	ug/kg												<5
PCB 118	ug/kg												<5
PCB 123	ug/kg												<5
PCB 126	ug/kg												<5
PCB 156	ug/kg												<5
PCB 157	ug/kg												<5
PCB 167	ug/kg												<5
PCB 169	ug/kg												<5
PCB 189	ug/kg												<5
Total 12 PCBs	ug/kg	240											<60
VOC													
Dichlorodifluoromethane	ug/kg			<2	<2	<2							<2
Methyl Tertiary Butyl Ether	ug/kg			<2	<2	<2							<6
Chloromethane	ug/kg			<3	<3	<3							<3
Vinyl Chloride	ug/kg	59		<2	<2	<2							<2
Bromomethane	ug/kg			<1	<1	<1							<1
Chloroethane	ug/kg			<2	<2	<2							<6
Trichlorofluoromethane	ug/kg			<2	<2	<2							<3
1,1-Dichloroethene (1,1 DCE)	ug/kg			<6	<6	<6							<6
Dichloromethane (DCM)	ug/kg			<7	<7	123							<7
trans-1-2-Dichloroethene	ug/kg			<3	<3	<3							<3
1,1-Dichloroethane	ug/kg			<3	<3	<3							<6
cis-1-2-Dichloroethene	ug/kg			<3	<3	<3							<7
2,2-Dichloropropane	ug/kg			<4	<4	<4							<4
Bromochloromethane	ug/kg			<3	<3	<3							<4
Chloroform	ug/kg	99000.00		<3	<3	<3							<5
1,1,1-Trichloroethane	ug/kg	660000.00		<3	<3	<3							<5
1,1-Dichloropropene	ug/kg			<3	<3	<3							<3
Carbon tetrachloride	ug/kg	2900.00		<4	<4	<4							<4
1,2-Dichloroethane	ug/kg	670.00		<4	<4	<4							<5
Trichloroethene (TCE)	ug/kg	1200.00		<3	47	<3							<5
1,2-Dichloropropane	ug/kg			<6	<6	<6							<4
Dibromomethane	ug/kg			<3	<3	<3							<4
Bromodichloromethane	ug/kg			<3	<3	<3							<4
cis-1-3-Dichloropropene	ug/kg			<4	<4	<4							<4
trans-1-3-Dichloropropene	ug/kg			<3	<3	<3							<3
1,1,2-Trichloroethane	ug/kg			<3	<3	<3							<4
Tetrachloroethene (PCE)	ug/kg	19000.00		<3	20	<3							<3
1,3-Dichloropropane	ug/kg			<3	<3	<3							<4

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	HP2	HP2	HP1	HP1	HP4	HP4	HP5	HP5	HP6	HP6	HP7
		Depth	0.00-0.20	1.00	0.30	2.00	0.50	2.00	0.50	2.00	0.50	1.00	0.30
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
PCB 81	ug/kg												<5
PCB 105	ug/kg												<5
PCB 114	ug/kg												<5
PCB 118	ug/kg												<5
PCB 123	ug/kg												<5
PCB 126	ug/kg												<5
PCB 156	ug/kg												<5
PCB 157	ug/kg												<5
PCB 167	ug/kg												<5
PCB 169	ug/kg												<5
PCB 189	ug/kg												<5
Total 12 PCBs	ug/kg	240											<60
VOC													
Dichlorodifluoromethane	ug/kg												<2
Methyl Tertiary Butyl Ether	ug/kg												<6
Chloromethane	ug/kg												<3
Vinyl Chloride	ug/kg	59											<2
Bromomethane	ug/kg												<1
Chloroethane	ug/kg												<6
Trichlorofluoromethane	ug/kg												<3
1,1-Dichloroethene (1,1 DCE)	ug/kg												<6
Dichloromethane (DCM)	ug/kg												<7
trans-1-2-Dichloroethene	ug/kg												<3
1,1-Dichloroethane	ug/kg												<6
cis-1-2-Dichloroethene	ug/kg												<7
2,2-Dichloropropane	ug/kg												<4
Bromochloromethane	ug/kg												<4
Chloroform	ug/kg	99000.00											<5
1,1,1-Trichloroethane	ug/kg	660000.00											<5
1,1-Dichloropropene	ug/kg												<3
Carbon tetrachloride	ug/kg	2900.00											<4
1,2-Dichloroethane	ug/kg	670.00											<5
Trichloroethene (TCE)	ug/kg	1200.00											<5
1,2-Dichloropropane	ug/kg												<4
Dibromomethane	ug/kg												<4
Bromodichloromethane	ug/kg												<4
cis-1-3-Dichloropropene	ug/kg												<4
trans-1-3-Dichloropropene	ug/kg												<3
1,1,2-Trichloroethane	ug/kg												<4
Tetrachloroethene (PCE)	ug/kg	19000.00											<3
1,3-Dichloropropane	ug/kg												<4

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	HP7	WS01	WS02	WS04	WS04	WS05	WS05	WS05	WS05	BH4	BH4
		Depth	1.00	1.00	0.05	0.30	5.00	1.00	3.00	4.00	5.00	0.50	3.00
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
PCB 81	ug/kg												<5
PCB 105	ug/kg												<5
PCB 114	ug/kg												<5
PCB 118	ug/kg												<5
PCB 123	ug/kg												<5
PCB 126	ug/kg												<5
PCB 156	ug/kg												<5
PCB 157	ug/kg												<5
PCB 167	ug/kg												<5
PCB 169	ug/kg												<5
PCB 189	ug/kg												<5
Total 12 PCBs	ug/kg	240											<60
VOC													
Dichlorodifluoromethane	ug/kg								<2	<4	<4		<2
Methyl Tertiary Butyl Ether	ug/kg								<6	<12	<12		<2
Chloromethane	ug/kg								<3	<6	<6		<3
Vinyl Chloride	ug/kg	59							<2	<4	<4		<2
Bromomethane	ug/kg								<1	<2	<2		<1
Chloroethane	ug/kg								<6	<12	<12		<2
Trichlorofluoromethane	ug/kg								<3	<6	<6		<2
1,1-Dichloroethene (1,1 DCE)	ug/kg								<6	<12	<12		<6
Dichloromethane (DCM)	ug/kg								<7	<14	<14		56
trans-1-2-Dichloroethene	ug/kg								<3	<6	<6		<3
1,1-Dichloroethane	ug/kg								<6	<12	<12		<3
cis-1-2-Dichloroethene	ug/kg								<7	<14	<14		<3
2,2-Dichloropropane	ug/kg								<4	<8	<8		<4
Bromochloromethane	ug/kg								<4	<8	<8		<3
Chloroform	ug/kg	99000.00							<5	<10	<10		<3
1,1,1-Trichloroethane	ug/kg	660000.00							<5	<10	<10		<3
1,1-Dichloropropene	ug/kg								<3	<6	<6		<3
Carbon tetrachloride	ug/kg	2900.00							<4	<8	<8		<4
1,2-Dichloroethane	ug/kg	670.00							<5	<10	<10		<4
Trichloroethene (TCE)	ug/kg	1200.00							<5	<10	<10		<3
1,2-Dichloropropane	ug/kg								<4	<8	<8		<6
Dibromomethane	ug/kg								<4	<8	<8		<3
Bromodichloromethane	ug/kg								<4	<8	<8		<3
cis-1-3-Dichloropropene	ug/kg								<4	<8	<8		<4
trans-1-3-Dichloropropene	ug/kg								<3	<6	<6		<3
1,1,2-Trichloroethane	ug/kg								<4	<8	<8		<3
Tetrachloroethene (PCE)	ug/kg	19000.00							<3	<6	<6		<3
1,3-Dichloropropane	ug/kg								<4	<8	<8		<3

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	BH3	BH3	BH3	WS16	WS16	WS16	WS12	WS14	WS14	TP9	TP9
		Depth	1.00	5.00	7.00	0.30	1.50	3.50	0.30	0.50	4.00	0.20	0.50
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
PCB 81	ug/kg												
PCB 105	ug/kg												
PCB 114	ug/kg												
PCB 118	ug/kg												
PCB 123	ug/kg												
PCB 126	ug/kg												
PCB 156	ug/kg												
PCB 157	ug/kg												
PCB 167	ug/kg												
PCB 169	ug/kg												
PCB 189	ug/kg												
Total 12 PCBs	ug/kg	240											
VOC													
Dichlorodifluoromethane	ug/kg							<2			<2		
Methyl Tertiary Butyl Ether	ug/kg							<2			<2		
Chloromethane	ug/kg							<3			<3		
Vinyl Chloride	ug/kg	59						<2			<2		
Bromomethane	ug/kg							<1			<1		
Chloroethane	ug/kg							<2			<2		
Trichlorofluoromethane	ug/kg							<2			<2		
1,1-Dichloroethene (1,1 DCE)	ug/kg							<6			<6		
Dichloromethane (DCM)	ug/kg							169			<30		
trans-1-2-Dichloroethene	ug/kg							<3			<3		
1,1-Dichloroethane	ug/kg							<3			<3		
cis-1-2-Dichloroethene	ug/kg							<3			<3		
2,2-Dichloropropane	ug/kg							<4			<4		
Bromochloromethane	ug/kg							<3			<3		
Chloroform	ug/kg	99000.00						<3			<3		
1,1,1-Trichloroethane	ug/kg	660000.00						<3			<3		
1,1-Dichloropropene	ug/kg							<3			<3		
Carbon tetrachloride	ug/kg	2900.00						<4			<4		
1,2-Dichloroethane	ug/kg	670.00						<4			<4		
Trichloroethene (TCE)	ug/kg	1200.00						<3			<3		
1,2-Dichloropropane	ug/kg							<6			<6		
Dibromomethane	ug/kg							<3			<3		
Bromodichloromethane	ug/kg							<3			<3		
cis-1-3-Dichloropropene	ug/kg							<4			<4		
trans-1-3-Dichloropropene	ug/kg							<3			<3		
1,1,2-Trichloroethane	ug/kg							<3			<3		
Tetrachloroethene (PCE)	ug/kg	19000.00						<3			<3		
1,3-Dichloropropane	ug/kg							<3			<3		

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	TP10	TP10	TP11	TP11	TP19	TP19	WS06	WS06	WS07	WS07	WS07
		Depth	0.50	1.50	0.30	0.50	0.30	1.00	0.30	1.00	0.30	1.00	1.50
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
PCB 81	ug/kg							<5					
PCB 105	ug/kg							<5					
PCB 114	ug/kg							<5					
PCB 118	ug/kg							<5					
PCB 123	ug/kg							<5					
PCB 126	ug/kg							<5					
PCB 156	ug/kg							<5					
PCB 157	ug/kg							<5					
PCB 167	ug/kg							<5					
PCB 169	ug/kg							<5					
PCB 189	ug/kg							<5					
Total 12 PCBs	ug/kg	240						<60					
VOC													
Dichlorodifluoromethane	ug/kg							<2					
Methyl Tertiary Butyl Ether	ug/kg							<2					
Chloromethane	ug/kg							<3					
Vinyl Chloride	ug/kg	59						<2					
Bromomethane	ug/kg							<1					
Chloroethane	ug/kg							<2					
Trichlorofluoromethane	ug/kg							<2					
1,1-Dichloroethene (1,1 DCE)	ug/kg							<6					
Dichloromethane (DCM)	ug/kg							<30					
trans-1-2-Dichloroethene	ug/kg							<3					
1,1-Dichloroethane	ug/kg							<3					
cis-1-2-Dichloroethene	ug/kg							<3					
2,2-Dichloropropane	ug/kg							<4					
Bromochloromethane	ug/kg							<3					
Chloroform	ug/kg	99000.00						<3					
1,1,1-Trichloroethane	ug/kg	660000.00						<3					
1,1-Dichloropropene	ug/kg							<3					
Carbon tetrachloride	ug/kg	2900.00						<4					
1,2-Dichloroethane	ug/kg	670.00						<4					
Trichloroethene (TCE)	ug/kg	1200.00						<3					
1,2-Dichloropropane	ug/kg							<6					
Dibromomethane	ug/kg							<3					
Bromodichloromethane	ug/kg							<3					
cis-1-3-Dichloropropene	ug/kg							<4					
trans-1-3-Dichloropropene	ug/kg							<3					
1,1,2-Trichloroethane	ug/kg							<3					
Tetrachloroethene (PCE)	ug/kg	19000.00						<3					
1,3-Dichloropropane	ug/kg							<3					

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	WS07	WS15	WS15	HP8	HP8	HP9	HP9	HP10	HP11	HP11	HP12
		Depth	4.50	0.30	2.00	0.50	2.00	0.50	2.00	1.00	0.50	1.00-1.50	0.50
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
PCB 81	ug/kg				<5						<5		
PCB 105	ug/kg				<5						<5		
PCB 114	ug/kg				<5						<5		
PCB 118	ug/kg				<5						<5		
PCB 123	ug/kg				<5						<5		
PCB 126	ug/kg				<5						<5		
PCB 156	ug/kg				<5						<5		
PCB 157	ug/kg				<5						<5		
PCB 167	ug/kg				<5						<5		
PCB 169	ug/kg				<5						<5		
PCB 189	ug/kg				<5						<5		
Total 12 PCBs	ug/kg	240			<60						<60		
VOC													
Dichlorodifluoromethane	ug/kg		<2		<2		<2				<2		
Methyl Tertiary Butyl Ether	ug/kg		<6		<6		<6				<6		
Chloromethane	ug/kg		<3		<3		<3				<3		
Vinyl Chloride	ug/kg	59	<2		<2		<2				<2		
Bromomethane	ug/kg		<1		<1		<1				<1		
Chloroethane	ug/kg		<6		<6		<6				<6		
Trichlorofluoromethane	ug/kg		<3		<3		<3				<3		
1,1-Dichloroethene (1,1 DCE)	ug/kg		<6		<6		<6				<6		
Dichloromethane (DCM)	ug/kg		<30		<30		242				245		
trans-1-2-Dichloroethene	ug/kg		<3		<3		<3				<3		
1,1-Dichloroethane	ug/kg		<6		<6		<6				<6		
cis-1-2-Dichloroethene	ug/kg		<7		<7		<7				<7		
2,2-Dichloropropane	ug/kg		<4		<4		<4				<4		
Bromochloromethane	ug/kg		<4		<4		<4				<4		
Chloroform	ug/kg	99000.00	<5		<5		<5				<5		
1,1,1-Trichloroethane	ug/kg	660000.00	<5		<5		<5				<5		
1,1-Dichloropropene	ug/kg		<3		<3		<3				<3		
Carbon tetrachloride	ug/kg	2900.00	<4		<4		<4				<4		
1,2-Dichloroethane	ug/kg	670.00	<5		<5		<5				<5		
Trichloroethene (TCE)	ug/kg	1200.00	<5		<5		<5				<5		
1,2-Dichloropropane	ug/kg		<4		<4		<4				<4		
Dibromomethane	ug/kg		<4		<4		<4				<4		
Bromodichloromethane	ug/kg		<4		<4		<4				<4		
cis-1-3-Dichloropropene	ug/kg		<4		<4		<4				<4		
trans-1-3-Dichloropropene	ug/kg		<3		<3		<3				<3		
1,1,2-Trichloroethane	ug/kg		<4		<4		<4				<4		
Tetrachloroethene (PCE)	ug/kg	19000.00	<3		<3		<3				<3		
1,3-Dichloropropane	ug/kg		<4		<4		<4				<4		

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	HP12	HP13	HP13	HP14	HP14	HP15	WS06	BH10	BH10	BH10	BH10
		Depth	1.00	0.50	1.50	0.50	1.00	0.50-1.00	4.50	0.50	1.00	2.00	8.00
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
PCB 81	ug/kg						<25		<5			<5	
PCB 105	ug/kg						<25		<5			<5	
PCB 114	ug/kg						<25		<5			<5	
PCB 118	ug/kg						<25		<5			<5	
PCB 123	ug/kg						<25		<5			<5	
PCB 126	ug/kg						<25		<5			<5	
PCB 156	ug/kg						<25		<5			<5	
PCB 157	ug/kg						<25		<5			<5	
PCB 167	ug/kg						<25		<5			<5	
PCB 169	ug/kg						<25		<5			<5	
PCB 189	ug/kg						<25		<5			<5	
Total 12 PCBs	ug/kg	240					<300		<60			<60	
VOC													
Dichlorodifluoromethane	ug/kg								<2		<2	<2	
Methyl Tertiary Butyl Ether	ug/kg								<6		<6	<6	
Chloromethane	ug/kg								<3		<3	<3	
Vinyl Chloride	ug/kg	59							<2		<2	<2	
Bromomethane	ug/kg								<1		<1	<1	
Chloroethane	ug/kg								<6		<6	<6	
Trichlorofluoromethane	ug/kg								<3		<3	<3	
1,1-Dichloroethene (1,1 DCE)	ug/kg								<6		<6	<6	
Dichloromethane (DCM)	ug/kg								<30		58	<30	
trans-1-2-Dichloroethene	ug/kg								<3		<3	<3	
1,1-Dichloroethane	ug/kg								<6		<6	<6	
cis-1-2-Dichloroethene	ug/kg								<7		<7	<7	
2,2-Dichloropropane	ug/kg								<4		<4	<4	
Bromochloromethane	ug/kg								<4		<4	<4	
Chloroform	ug/kg	99000.00							<5		<5	<5	
1,1,1-Trichloroethane	ug/kg	660000.00							<5		<5	<5	
1,1-Dichloropropene	ug/kg								<3		<3	<3	
Carbon tetrachloride	ug/kg	2900.00							<4		<4	<4	
1,2-Dichloroethane	ug/kg	670.00							<5		<5	<5	
Trichloroethene (TCE)	ug/kg	1200.00							<5		<5	<5	
1,2-Dichloropropane	ug/kg								<4		<4	<4	
Dibromomethane	ug/kg								<4		<4	<4	
Bromodichloromethane	ug/kg								<4		<4	<4	
cis-1-3-Dichloropropene	ug/kg								<4		<4	<4	
trans-1-3-Dichloropropene	ug/kg								<3		<3	<3	
1,1,2-Trichloroethane	ug/kg								<4		<4	<4	
Tetrachloroethene (PCE)	ug/kg	19000.00							<3		<3	<3	
1,3-Dichloropropane	ug/kg								<4		<4	<4	

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	BH8	BH8	BH8	TP20	TP20	TP20	TP22	TP22	TP22	WS13	WS13
		Depth	0.30	2.50	7.50	0.20	1.00	3.00	0.10	0.50	2.10	0.30	2.00
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
PCB 81	ug/kg							<5			<5		
PCB 105	ug/kg							21			<5		
PCB 114	ug/kg							<5			<5		
PCB 118	ug/kg							54			<5		
PCB 123	ug/kg							<5			<5		
PCB 126	ug/kg							<5			<5		
PCB 156	ug/kg							9			<5		
PCB 157	ug/kg							<5			<5		
PCB 167	ug/kg							<5			<5		
PCB 169	ug/kg							<5			<5		
PCB 189	ug/kg							<5			<5		
Total 12 PCBs	ug/kg	240						84			<60		
VOC													
Dichlorodifluoromethane	ug/kg					<2	<2	<2		<2	<2		
Methyl Tertiary Butyl Ether	ug/kg					<6	<6	<6		<6	<6		
Chloromethane	ug/kg					<3	<3	<3		<3	<3		
Vinyl Chloride	ug/kg	59				<2	<2	<2		<2	<2		
Bromomethane	ug/kg					<1	<1	<1		<1	<1		
Chloroethane	ug/kg					<6	<6	<6		<6	<6		
Trichlorofluoromethane	ug/kg					<3	<3	<3		<3	<3		
1,1-Dichloroethene (1,1 DCE)	ug/kg					<6	<6	<6		<6	<6		
Dichloromethane (DCM)	ug/kg					404	181	<30		51	84		
trans-1-2-Dichloroethene	ug/kg					<3	<3	<3		<3	<3		
1,1-Dichloroethane	ug/kg					<6	<6	<6		<6	<6		
cis-1-2-Dichloroethene	ug/kg					<7	<7	<7		<7	<7		
2,2-Dichloropropane	ug/kg					<4	<4	<4		<4	<4		
Bromochloromethane	ug/kg					<4	<4	<4		<4	<4		
Chloroform	ug/kg	99000.00				<5	<5	<5		<5	<5		
1,1,1-Trichloroethane	ug/kg	660000.00				<5	<5	<5		<5	<5		
1,1-Dichloropropene	ug/kg					<3	<3	<3		<3	<3		
Carbon tetrachloride	ug/kg	2900.00				<4	<4	<4		<4	<4		
1,2-Dichloroethane	ug/kg	670.00				<5	<5	<5		<5	<5		
Trichloroethene (TCE)	ug/kg	1200.00				<5	<5	<5		<5	<5		
1,2-Dichloropropane	ug/kg					<4	<4	<4		<4	<4		
Dibromomethane	ug/kg					<4	<4	<4		<4	<4		
Bromodichloromethane	ug/kg					<4	<4	<4		<4	<4		
cis-1-3-Dichloropropene	ug/kg					<4	<4	<4		<4	<4		
trans-1-3-Dichloropropene	ug/kg					<3	<3	<3		<3	<3		
1,1,2-Trichloroethane	ug/kg					<4	<4	<4		<4	<4		
Tetrachloroethene (PCE)	ug/kg	19000.00				<3	<3	<3		<3	<3		
1,3-Dichloropropane	ug/kg					<4	<4	<4		<4	<4		

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	WS13	WS19	WS19	WS19	WS21	WS21	BH11	BH11	BH9	BH9	WS20
		Depth	4.00	0.30	1.00	3.00	0.30	2.00	2.00	4.00	0.50	3.50	0.30
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
PCB 81	ug/kg												
PCB 105	ug/kg												
PCB 114	ug/kg												
PCB 118	ug/kg												
PCB 123	ug/kg												
PCB 126	ug/kg												
PCB 156	ug/kg												
PCB 157	ug/kg												
PCB 167	ug/kg												
PCB 169	ug/kg												
PCB 189	ug/kg												
Total 12 PCBs	ug/kg	240											
VOC													
Dichlorodifluoromethane	ug/kg		<2			<2		<2	<2			<2	
Methyl Tertiary Butyl Ether	ug/kg		<6			<6		<6	<6			<6	
Chloromethane	ug/kg		<3			<3		<3	<3			<3	
Vinyl Chloride	ug/kg	59	<2			<2		<2	<2			<2	
Bromomethane	ug/kg		<1			<1		<1	<1			<1	
Chloroethane	ug/kg		<6			<6		<6	<6			<6	
Trichlorofluoromethane	ug/kg		<3			<3		<3	<3			<3	
1,1-Dichloroethene (1,1 DCE)	ug/kg		<6			<6		<6	<6			<6	
Dichloromethane (DCM)	ug/kg		262			91		86	<30			35	
trans-1-2-Dichloroethene	ug/kg		<3			<3		<3	<3			<3	
1,1-Dichloroethane	ug/kg		<6			<6		<6	<6			<6	
cis-1-2-Dichloroethene	ug/kg		<7			<7		<7	<7			<7	
2,2-Dichloropropane	ug/kg		<4			<4		<4	<4			<4	
Bromochloromethane	ug/kg		<4			<4		<4	<4			<4	
Chloroform	ug/kg	99000.00	<5			<5		<5	<5			<5	
1,1,1-Trichloroethane	ug/kg	660000.00	<5			<5		<5	<5			<5	
1,1-Dichloropropene	ug/kg		<3			<3		<3	<3			<3	
Carbon tetrachloride	ug/kg	2900.00	<4			<4		<4	<4			<4	
1,2-Dichloroethane	ug/kg	670.00	<5			<5		<5	<5			<5	
Trichloroethene (TCE)	ug/kg	1200.00	<5			<5		<5	<5			<5	
1,2-Dichloropropane	ug/kg		<4			<4		<4	<4			<4	
Dibromomethane	ug/kg		<4			<4		<4	<4			<4	
Bromodichloromethane	ug/kg		<4			<4		<4	<4			<4	
cis-1-3-Dichloropropene	ug/kg		<4			<4		<4	<4			<4	
trans-1-3-Dichloropropene	ug/kg		<3			<3		<3	<3			<3	
1,1,2-Trichloroethane	ug/kg		<4			<4		<4	<4			<4	
Tetrachloroethene (PCE)	ug/kg	19000.00	<3			<3		<3	<3			<3	
1,3-Dichloropropane	ug/kg		<4			<4		<4	<4			<4	

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	WS20	WS18	WS18	WS08	WS08	TP18	TP18	TP24	TP24	TP23	TP23
		Depth	4.00	1.00	4.00	1.00	5.00	1.00	1.90	2.50	3.20	0.30	3.10
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
PCB 81	ug/kg				<5								
PCB 105	ug/kg				<5								
PCB 114	ug/kg				<5								
PCB 118	ug/kg				<5								
PCB 123	ug/kg				<5								
PCB 126	ug/kg				<5								
PCB 156	ug/kg				<5								
PCB 157	ug/kg				<5								
PCB 167	ug/kg				<5								
PCB 169	ug/kg				<5								
PCB 189	ug/kg				<5								
Total 12 PCBs	ug/kg	240			<60								
VOC													
Dichlorodifluoromethane	ug/kg				<2				<2		<2		<2
Methyl Tertiary Butyl Ether	ug/kg				<6				<6		<6		<6
Chloromethane	ug/kg				<3				<3		<3		<3
Vinyl Chloride	ug/kg	59			<2				<2		<2		<2
Bromomethane	ug/kg				<1				<1		<1		<1
Chloroethane	ug/kg				<6				<6		<6		<6
Trichlorofluoromethane	ug/kg				<3				<3		<3		<3
1,1-Dichloroethene (1,1 DCE)	ug/kg				<6				<6		<6		<6
Dichloromethane (DCM)	ug/kg				<30				<30		<30		<30
trans-1-2-Dichloroethene	ug/kg				<3				<3		<3		<3
1,1-Dichloroethane	ug/kg				<6				<6		<6		<6
cis-1-2-Dichloroethene	ug/kg				<7				<7		<7		<7
2,2-Dichloropropane	ug/kg				<4				<4		<4		<4
Bromochloromethane	ug/kg				<4				<4		<4		<4
Chloroform	ug/kg	99000.00			<5				<5		<5		<5
1,1,1-Trichloroethane	ug/kg	660000.00			<5				<5		<5		<5
1,1-Dichloropropene	ug/kg				<3				<3		<3		<3
Carbon tetrachloride	ug/kg	2900.00			<4				<4		<4		<4
1,2-Dichloroethane	ug/kg	670.00			<5				<5		<5		<5
Trichloroethene (TCE)	ug/kg	1200.00			<5				<5		<5		<5
1,2-Dichloropropane	ug/kg				<4				<4		<4		<4
Dibromomethane	ug/kg				<4				<4		<4		<4
Bromodichloromethane	ug/kg				<4				<4		<4		<4
cis-1-3-Dichloropropene	ug/kg				<4				<4		<4		<4
trans-1-3-Dichloropropene	ug/kg				<3				<3		<3		<3
1,1,2-Trichloroethane	ug/kg				<4				<4		<4		<4
Tetrachloroethene (PCE)	ug/kg	19000.00			<3				<3		<3		<3
1,3-Dichloropropane	ug/kg				<4				<4		<4		<4

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	TP14	TP14	TP13	TP13	TP15	TP15	WS09	WS09	WS10	WS10	WS10
		Depth	0.50	2.00	0.50	2.00	0.50	1.50	0.50	2.00	0.30	0.50	2.00
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
PCB 81	ug/kg								<5				
PCB 105	ug/kg								<5				
PCB 114	ug/kg								<5				
PCB 118	ug/kg								<5				
PCB 123	ug/kg								<5				
PCB 126	ug/kg								<5				
PCB 156	ug/kg								<5				
PCB 157	ug/kg								<5				
PCB 167	ug/kg								<5				
PCB 169	ug/kg								<5				
PCB 189	ug/kg								<5				
Total 12 PCBs	ug/kg	240							<60				
VOC													
Dichlorodifluoromethane	ug/kg						<2		<2				<2
Methyl Tertiary Butyl Ether	ug/kg						<6		<6				<6
Chloromethane	ug/kg						<3		<3				<3
Vinyl Chloride	ug/kg	59					<2		<2				<2
Bromomethane	ug/kg						<1		<1				<1
Chloroethane	ug/kg						<6		<6				<6
Trichlorofluoromethane	ug/kg						<3		<3				<3
1,1-Dichloroethene (1,1 DCE)	ug/kg						<6		<6				<6
Dichloromethane (DCM)	ug/kg						<30		68				95
trans-1-2-Dichloroethene	ug/kg						<3		<3				<3
1,1-Dichloroethane	ug/kg						<6		<6				<6
cis-1-2-Dichloroethene	ug/kg						<7		<7				<7
2,2-Dichloropropane	ug/kg						<4		<4				<4
Bromochloromethane	ug/kg						<4		<4				<4
Chloroform	ug/kg	99000.00					<5		<5				<5
1,1,1-Trichloroethane	ug/kg	660000.00					<5		<5				<5
1,1-Dichloropropene	ug/kg						<3		<3				<3
Carbon tetrachloride	ug/kg	2900.00					<4		<4				<4
1,2-Dichloroethane	ug/kg	670.00					<5		<5				<5
Trichloroethene (TCE)	ug/kg	1200.00					<5		9				<5
1,2-Dichloropropane	ug/kg						<4		<4				<4
Dibromomethane	ug/kg						<4		<4				<4
Bromodichloromethane	ug/kg						<4		<4				<4
cis-1-3-Dichloropropene	ug/kg						<4		<4				<4
trans-1-3-Dichloropropene	ug/kg						<3		<3				<3
1,1,2-Trichloroethane	ug/kg						<4		<4				<4
Tetrachloroethene (PCE)	ug/kg	19000.00					<3		<3				<3
1,3-Dichloropropane	ug/kg						<4		<4				<4

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	TP25	TP26	TP27	TP28	BH9	BH9	WS22	WS24	WS25	WS25	BH6
		Depth	0.50	0.50	1.00	1.50	6.50	12.00	1.00	3.50	1.00	3.00	1.50
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
PCB 81	ug/kg												
PCB 105	ug/kg												
PCB 114	ug/kg												
PCB 118	ug/kg												
PCB 123	ug/kg												
PCB 126	ug/kg												
PCB 156	ug/kg												
PCB 157	ug/kg												
PCB 167	ug/kg												
PCB 169	ug/kg												
PCB 189	ug/kg												
Total 12 PCBs	ug/kg	240											
VOC													
Dichlorodifluoromethane	ug/kg						<2			<2		<2	
Methyl Tertiary Butyl Ether	ug/kg						<6			<6		<6	
Chloromethane	ug/kg						<3			<3		<3	
Vinyl Chloride	ug/kg	59					<2			<2		<2	
Bromomethane	ug/kg						<1			<1		<1	
Chloroethane	ug/kg						<6			<6		<6	
Trichlorofluoromethane	ug/kg						<3			<3		<3	
1,1-Dichloroethene (1,1 DCE)	ug/kg						<6			<6		<6	
Dichloromethane (DCM)	ug/kg						<30			<30		<30	
trans-1-2-Dichloroethene	ug/kg						<3			<3		<3	
1,1-Dichloroethane	ug/kg						<6			<6		<6	
cis-1-2-Dichloroethene	ug/kg						<7			<7		<7	
2,2-Dichloropropane	ug/kg						<4			<4		<4	
Bromochloromethane	ug/kg						<4			<4		<4	
Chloroform	ug/kg	99000.00					<5			<5		<5	
1,1,1-Trichloroethane	ug/kg	660000.00					<5			<5		<5	
1,1-Dichloropropene	ug/kg						<3			<3		<3	
Carbon tetrachloride	ug/kg	2900.00					<4			<4		<4	
1,2-Dichloroethane	ug/kg	670.00					<5			<5		<5	
Trichloroethene (TCE)	ug/kg	1200.00					<5			<5		<5	
1,2-Dichloropropane	ug/kg						<4			<4		<4	
Dibromomethane	ug/kg						<4			<4		<4	
Bromodichloromethane	ug/kg						<4			<4		<4	
cis-1-3-Dichloropropene	ug/kg						<4			<4		<4	
trans-1-3-Dichloropropene	ug/kg						<3			<3		<3	
1,1,2-Trichloroethane	ug/kg						<4			<4		<4	
Tetrachloroethene (PCE)	ug/kg	19000.00					<3			<3		<3	
1,3-Dichloropropane	ug/kg						<4			<4		<4	

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	BH6	TP17	TP29	TP30	TP31	WS29	WS29	WS26	WS26	WS28	WS27
		Depth	7.50	0.30	0.60	1.50	1.00	2.00	3.00	0.50	4.00	1.50	0.30
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
PCB 81	ug/kg												
PCB 105	ug/kg												
PCB 114	ug/kg												
PCB 118	ug/kg												
PCB 123	ug/kg												
PCB 126	ug/kg												
PCB 156	ug/kg												
PCB 157	ug/kg												
PCB 167	ug/kg												
PCB 169	ug/kg												
PCB 189	ug/kg												
Total 12 PCBs	ug/kg	240											
VOC													
Dichlorodifluoromethane	ug/kg							<2	<2	<2	<2	<2	<2
Methyl Tertiary Butyl Ether	ug/kg							<6	<6	<6	<6	<6	<6
Chloromethane	ug/kg							<3	<3	<3	<3	<3	<3
Vinyl Chloride	ug/kg	59						<2	<2	<2	<2	<2	<2
Bromomethane	ug/kg							<1	<1	<1	<1	<1	<1
Chloroethane	ug/kg							<6	<6	<6	<6	<6	<6
Trichlorofluoromethane	ug/kg							<3	<3	<3	<3	<3	<3
1,1-Dichloroethene (1,1 DCE)	ug/kg							<6	<6	<6	<6	<6	<6
Dichloromethane (DCM)	ug/kg							<30	<30	339	<30	<30	247
trans-1-2-Dichloroethene	ug/kg							<3	<3	<3	<3	<3	<3
1,1-Dichloroethane	ug/kg							<6	<6	<6	<6	<6	<6
cis-1-2-Dichloroethene	ug/kg							<7	<7	<7	<7	<7	<7
2,2-Dichloropropane	ug/kg							<4	<4	<4	<4	<4	<4
Bromochloromethane	ug/kg							<4	<4	<4	<4	<4	<4
Chloroform	ug/kg	99000.00						<5	<5	<5	<5	<5	<5
1,1,1-Trichloroethane	ug/kg	660000.00						<5	<5	<5	<5	<5	<5
1,1-Dichloropropene	ug/kg							<3	<3	<3	<3	<3	<3
Carbon tetrachloride	ug/kg	2900.00						<4	<4	<4	<4	<4	<4
1,2-Dichloroethane	ug/kg	670.00						<5	<5	<5	<5	<5	<5
Trichloroethene (TCE)	ug/kg	1200.00						<5	<5	<5	<5	<5	<5
1,2-Dichloropropane	ug/kg							<4	<4	<4	<4	<4	<4
Dibromomethane	ug/kg							<4	<4	<4	<4	<4	<4
Bromodichloromethane	ug/kg							<4	<4	<4	<4	<4	<4
cis-1-3-Dichloropropene	ug/kg							<4	<4	<4	<4	<4	<4
trans-1-3-Dichloropropene	ug/kg							<3	<3	<3	<3	<3	<3
1,1,2-Trichloroethane	ug/kg							<4	<4	<4	<4	<4	<4
Tetrachloroethene (PCE)	ug/kg	19000.00						<3	<3	<3	<3	<3	<3
1,3-Dichloropropane	ug/kg							<4	<4	<4	<4	<4	<4

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	WS27	WS27	HP16	HP17	HP18	HP19	HP20	HP21	HP22	HP23	HP24
		Depth	3.50	4.80	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
PCB 81	ug/kg												
PCB 105	ug/kg												
PCB 114	ug/kg												
PCB 118	ug/kg												
PCB 123	ug/kg												
PCB 126	ug/kg												
PCB 156	ug/kg												
PCB 157	ug/kg												
PCB 167	ug/kg												
PCB 169	ug/kg												
PCB 189	ug/kg												
Total 12 PCBs	ug/kg	240											
VOC													
Dichlorodifluoromethane	ug/kg		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Methyl Tertiary Butyl Ether	ug/kg		<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
Chloromethane	ug/kg		<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Vinyl Chloride	ug/kg	59	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Bromomethane	ug/kg		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	ug/kg		<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
Trichlorofluoromethane	ug/kg		<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
1,1-Dichloroethene (1,1 DCE)	ug/kg		<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
Dichloromethane (DCM)	ug/kg		<30	<30	<30	<30	<30	<30	<30	<30	<30	<30	<30
trans-1-2-Dichloroethene	ug/kg		<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
1,1-Dichloroethane	ug/kg		<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
cis-1-2-Dichloroethene	ug/kg		<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7
2,2-Dichloropropane	ug/kg		<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Bromochloromethane	ug/kg		<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Chloroform	ug/kg	99000.00	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1,1-Trichloroethane	ug/kg	660000.00	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,1-Dichloropropene	ug/kg		<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Carbon tetrachloride	ug/kg	2900.00	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
1,2-Dichloroethane	ug/kg	670.00	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Trichloroethene (TCE)	ug/kg	1200.00	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dichloropropane	ug/kg		<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Dibromomethane	ug/kg		<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Bromodichloromethane	ug/kg		<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
cis-1-3-Dichloropropene	ug/kg		<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
trans-1-3-Dichloropropene	ug/kg		<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
1,1,2-Trichloroethane	ug/kg		<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Tetrachloroethene (PCE)	ug/kg	19000.00	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
1,3-Dichloropropane	ug/kg		<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	HP25	HP26	HP27	WS34	WS34	WS33	WS33	WS33	WS33	WS2	WS2
		Depth	0.50	0.50	0.50	0.4	3.0	1.2	2.0	3.5	4.5	0.7	4.5
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
PCB 81	ug/kg												
PCB 105	ug/kg												
PCB 114	ug/kg												
PCB 118	ug/kg												
PCB 123	ug/kg												
PCB 126	ug/kg												
PCB 156	ug/kg												
PCB 157	ug/kg												
PCB 167	ug/kg												
PCB 169	ug/kg												
PCB 189	ug/kg												
Total 12 PCBs	ug/kg	240											
VOC													
Dichlorodifluoromethane	ug/kg		<2	<2	<2		<2		<2	<2	<20		<2
Methyl Tertiary Butyl Ether	ug/kg		<6	<6	<6		<6		<6	<6	<60		<6
Chloromethane	ug/kg		<3	<3	<3		<3		<3	<3	<30		<3
Vinyl Chloride	ug/kg	59	<2	<2	<2		<2		<2	<2	<20		<2
Bromomethane	ug/kg		<1	<1	<1		<1		<1	<1	<10		<1
Chloroethane	ug/kg		<6	<6	<6		<6		<6	12	<60		<6
Trichlorofluoromethane	ug/kg		<3	<3	<3		<3		<3	<3	<30		<3
1,1-Dichloroethene (1,1 DCE)	ug/kg		<6	<6	<6		<6		<6	<6	<60		<6
Dichloromethane (DCM)	ug/kg		<30	<30	<30		<30		<30	<30	<300		<30
trans-1-2-Dichloroethene	ug/kg		<3	<3	<3		<3		<3	<3	<30		<3
1,1-Dichloroethane	ug/kg		<6	<6	<6		<6		<6	<6	<60		<6
cis-1-2-Dichloroethene	ug/kg		<7	<7	<7		<7		<7	<7	<70		<7
2,2-Dichloropropane	ug/kg		<4	<4	<4		<4		<4	<4	<40		<4
Bromochloromethane	ug/kg		<4	<4	<4		<4		<4	<4	<40		<4
Chloroform	ug/kg	99000.00	<5	<5	<5		<5		<5	<5	<50		<5
1,1,1-Trichloroethane	ug/kg	660000.00	<5	<5	<5		<5		<5	<5	<50		<5
1,1-Dichloropropene	ug/kg		<3	<3	<3		<3		<3	<3	<30		<3
Carbon tetrachloride	ug/kg	2900.00	<4	<4	<4		<4		<4	<4	<40		<4
1,2-Dichloroethane	ug/kg	670.00	<5	<5	<5		<5		<5	<5	<50		<5
Trichloroethene (TCE)	ug/kg	1200.00	<5	<5	<5		<5		<5	<5	<50		<5
1,2-Dichloropropane	ug/kg		<4	<4	<4		<4		<4	<4	<40		<4
Dibromomethane	ug/kg		<4	<4	<4		<4		<4	<4	<40		<4
Bromodichloromethane	ug/kg		<4	<4	<4		<4		<4	<4	<40		<4
cis-1-3-Dichloropropene	ug/kg		<4	<4	<4		<4		<4	<4	<40		<4
trans-1-3-Dichloropropene	ug/kg		<3	<3	<3		<3		<3	<3	<30		<3
1,1,2-Trichloroethane	ug/kg		<4	<4	<4		<4		<4	<4	<40		<4
Tetrachloroethene (PCE)	ug/kg	19000.00	<3	<3	<3		<3		<3	<3	<30		<3
1,3-Dichloropropane	ug/kg		<4	<4	<4		<4		<4	<4	<40		<4

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	BH12	BH12	BH12	WS17	WS17	WS23 HP	BH5	BH7	WS30	WS30	WS30
		Depth	0.3	2.6	6.6	1.5	4.0	0.2	2.50	5.50	1.00	4.00	5.00
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
PCB 81	ug/kg												
PCB 105	ug/kg												
PCB 114	ug/kg												
PCB 118	ug/kg												
PCB 123	ug/kg												
PCB 126	ug/kg												
PCB 156	ug/kg												
PCB 157	ug/kg												
PCB 167	ug/kg												
PCB 169	ug/kg												
PCB 189	ug/kg												
Total 12 PCBs	ug/kg	240											
VOC													
Dichlorodifluoromethane	ug/kg			<2	<2	<2	<2				<2	<2	<2
Methyl Tertiary Butyl Ether	ug/kg			<6	<6	<6	<6				<6	<6	<6
Chloromethane	ug/kg			<3	<3	<3	<3				<3	<3	<3
Vinyl Chloride	ug/kg	59		<2	<2	<2	<2				<2	<2	<2
Bromomethane	ug/kg			<1	<1	<1	<1				<1	<1	<1
Chloroethane	ug/kg			<6	<6	<6	<6				<6	<6	<6
Trichlorofluoromethane	ug/kg			<3	<3	<3	<3				<3	<3	<3
1,1-Dichloroethene (1,1 DCE)	ug/kg			<6	<6	<6	<6				<6	<6	<6
Dichloromethane (DCM)	ug/kg			<30	<30	76	<30				<30	<30	<30
trans-1-2-Dichloroethene	ug/kg			<3	<3	<3	<3				<3	<3	<3
1,1-Dichloroethane	ug/kg			<6	<6	<6	<6				<6	<6	<6
cis-1-2-Dichloroethene	ug/kg			<7	<7	<7	<7				<7	<7	<7
2,2-Dichloropropane	ug/kg			<4	<4	<4	<4				<4	<4	<4
Bromochloromethane	ug/kg			<4	<4	<4	<4				<4	<4	<4
Chloroform	ug/kg	99000.00		<5	<5	<5	<5				<5	<5	<5
1,1,1-Trichloroethane	ug/kg	660000.00		<5	<5	<5	<5				<5	<5	<5
1,1-Dichloropropene	ug/kg			<3	<3	<3	<3				<3	<3	<3
Carbon tetrachloride	ug/kg	2900.00		<4	<4	<4	<4				<4	<4	<4
1,2-Dichloroethane	ug/kg	670.00		<5	<5	<5	<5				<5	<5	<5
Trichloroethene (TCE)	ug/kg	1200.00		<5	<5	<5	<5				<5	<5	<5
1,2-Dichloropropane	ug/kg			<4	<4	<4	<4				<4	<4	<4
Dibromomethane	ug/kg			<4	<4	<4	<4				<4	<4	<4
Bromodichloromethane	ug/kg			<4	<4	<4	<4				<4	<4	<4
cis-1-3-Dichloropropene	ug/kg			<4	<4	<4	<4				<4	<4	<4
trans-1-3-Dichloropropene	ug/kg			<3	<3	<3	<3				<3	<3	<3
1,1,2-Trichloroethane	ug/kg			<4	<4	<4	<4				<4	<4	<4
Tetrachloroethene (PCE)	ug/kg	19000.00		<3	<3	<3	<3				<3	<3	<3
1,3-Dichloropropane	ug/kg			<4	<4	<4	<4				<4	<4	<4

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	WS31	WS31	WS32
		Depth	0.50	2.60	2.50
		Sample Type	Soil	Soil	Soil
Test	**Units**	**Screening Value**			
PCB 81	ug/kg				
PCB 105	ug/kg				
PCB 114	ug/kg				
PCB 118	ug/kg				
PCB 123	ug/kg				
PCB 126	ug/kg				
PCB 156	ug/kg				
PCB 157	ug/kg				
PCB 167	ug/kg				
PCB 169	ug/kg				
PCB 189	ug/kg				
Total 12 PCBs	ug/kg	240			
VOC					
Dichlorodifluoromethane	ug/kg			<2	<2
Methyl Tertiary Butyl Ether	ug/kg			<6	<6
Chloromethane	ug/kg			<3	<3
Vinyl Chloride	ug/kg	59		<2	<2
Bromomethane	ug/kg			<1	<1
Chloroethane	ug/kg			<6	<6
Trichlorofluoromethane	ug/kg			<3	<3
1,1-Dichloroethene (1,1 DCE)	ug/kg			<6	<6
Dichloromethane (DCM)	ug/kg			<30	<30
trans-1-2-Dichloroethene	ug/kg			<3	<3
1,1-Dichloroethane	ug/kg			<6	<6
cis-1-2-Dichloroethene	ug/kg			<7	<7
2,2-Dichloropropane	ug/kg			<4	<4
Bromochloromethane	ug/kg			<4	<4
Chloroform	ug/kg	99000.00		<5	<5
1,1,1-Trichloroethane	ug/kg	660000.00		<5	<5
1,1-Dichloropropene	ug/kg			<3	<3
Carbon tetrachloride	ug/kg	2900.00		<4	<4
1,2-Dichloroethane	ug/kg	670.00		<5	<5
Trichloroethene (TCE)	ug/kg	1200.00		<5	<5
1,2-Dichloropropane	ug/kg			<4	<4
Dibromomethane	ug/kg			<4	<4
Bromodichloromethane	ug/kg			<4	<4
cis-1-3-Dichloropropene	ug/kg			<4	<4
trans-1-3-Dichloropropene	ug/kg			<3	<3
1,1,2-Trichloroethane	ug/kg			<4	<4
Tetrachloroethene (PCE)	ug/kg	19000.00		<3	<3
1,3-Dichloropropane	ug/kg			<4	<4

Screened Soils Data

		Sample ID	BH1	BH1	WS3	WS3	TP4	TP4	TP3	TP3	TP2	TP2	TP1
		Depth	1.0	5.0	1.00	5.00	0.00-0.30	2.00	0.30	0.00-1.00	0.00-0.20	1.00-1.50	0.50
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Dibromochloromethane	ug/kg											<3	
1,2-Dibromoethane	ug/kg											<3	
Chlorobenzene	ug/kg											<3	
1,1,1,2-Tetrachloroethane	ug/kg	110000.00										<3	
Styrene	ug/kg											<3	
Bromoform	ug/kg											<3	
Isopropylbenzene	ug/kg											<3	
1,1,2,2-Tetrachloroethane	ug/kg	270000.00										<3	
Bromobenzene	ug/kg											<2	
1,2,3-Trichloropropane	ug/kg											<4	
Propylbenzene	ug/kg											<4	
2-Chlorotoluene	ug/kg											<3	
1,3,5-Trimethylbenzene	ug/kg											<3	
4-Chlorotoluene	ug/kg											<3	
tert-Butylbenzene	ug/kg											<5	
1,2,4-Trimethylbenzene	ug/kg											<6	
sec-Butylbenzene	ug/kg											<4	
4-Isopropyltoluene	ug/kg											<4	
1,3-Dichlorobenzene	ug/kg											<4	
1,4-Dichlorobenzene	ug/kg											<4	
n-Butylbenzene	ug/kg											<4	
1,2-Dichlorobenzene	ug/kg											<4	
1,2-Dibromo-3-chloropropane	ug/kg											<4	
1,2,4-Trichlorobenzene	ug/kg											<7	
Hexachlorobutadiene	ug/kg											<4	
1,2,3-Trichlorobenzene	ug/kg											<7	

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	TP1	TP1	TP1	TP5	TP5	TP6	TP6	TP7	TP7	HP3	HP3
		Depth	1.00	2.00	2.60	0.30	1.20	0.30	2.00	0.30	0.50	0.50	1.00
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Dibromochloromethane	ug/kg			<3	<3	<3							<5
1,2-Dibromoethane	ug/kg			<3	<3	<3							<3
Chlorobenzene	ug/kg			<3	<3	<3							<4
1,1,1,2-Tetrachloroethane	ug/kg	110000.00		<3	<3	<3							<5
Styrene	ug/kg			<3	<3	<3							<3
Bromoform	ug/kg			<3	<3	<3							<4
Isopropylbenzene	ug/kg			<3	<3	<3							<3
1,1,2,2-Tetrachloroethane	ug/kg	270000.00		<3	<3	<3							<3
Bromobenzene	ug/kg			<2	<2	<2							<2
1,2,3-Trichloropropane	ug/kg			<4	<4	<4							<4
Propylbenzene	ug/kg			<4	<4	<4							<4
2-Chlorotoluene	ug/kg			<3	<3	<3							<3
1,3,5-Trimethylbenzene	ug/kg			<3	<3	<3							<3
4-Chlorotoluene	ug/kg			<3	<3	<3							<3
tert-Butylbenzene	ug/kg			<5	<5	<5							<5
1,2,4-Trimethylbenzene	ug/kg			<6	<6	<6							<6
sec-Butylbenzene	ug/kg			<4	<4	<4							<4
4-Isopropyltoluene	ug/kg			<4	<4	<4							<4
1,3-Dichlorobenzene	ug/kg			<4	<4	<4							<4
1,4-Dichlorobenzene	ug/kg			<4	<4	<4							<4
n-Butylbenzene	ug/kg			<4	<4	<4							<4
1,2-Dichlorobenzene	ug/kg			<4	<4	<4							<4
1,2-Dibromo-3-chloropropane	ug/kg			<4	<4	<4							<4
1,2,4-Trichlorobenzene	ug/kg			<7	<7	<7							<7
Hexachlorobutadiene	ug/kg			<4	<4	<4							<4
1,2,3-Trichlorobenzene	ug/kg			<7	<7	<7							<7

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	HP2	HP2	HP1	HP1	HP4	HP4	HP5	HP5	HP6	HP6	HP7
		Depth	0.00-0.20	1.00	0.30	2.00	0.50	2.00	0.50	2.00	0.50	1.00	0.30
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Dibromochloromethane	ug/kg												<5
1,2-Dibromoethane	ug/kg												<3
Chlorobenzene	ug/kg												<4
1,1,1,2-Tetrachloroethane	ug/kg	110000.00											<5
Styrene	ug/kg												<3
Bromoform	ug/kg												<4
Isopropylbenzene	ug/kg												<3
1,1,2,2-Tetrachloroethane	ug/kg	270000.00											<3
Bromobenzene	ug/kg												<2
1,2,3-Trichloropropane	ug/kg												<4
Propylbenzene	ug/kg												<4
2-Chlorotoluene	ug/kg												<3
1,3,5-Trimethylbenzene	ug/kg												<3
4-Chlorotoluene	ug/kg												<3
tert-Butylbenzene	ug/kg												<5
1,2,4-Trimethylbenzene	ug/kg												<6
sec-Butylbenzene	ug/kg												<4
4-Isopropyltoluene	ug/kg												<4
1,3-Dichlorobenzene	ug/kg												<4
1,4-Dichlorobenzene	ug/kg												<4
n-Butylbenzene	ug/kg												<4
1,2-Dichlorobenzene	ug/kg												<4
1,2-Dibromo-3-chloropropane	ug/kg												<4
1,2,4-Trichlorobenzene	ug/kg												<7
Hexachlorobutadiene	ug/kg												<4
1,2,3-Trichlorobenzene	ug/kg												<7

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	HP7	WS01	WS02	WS04	WS04	WS05	WS05	WS05	WS05	BH4	BH4
		Depth	1.00	1.00	0.05	0.30	5.00	1.00	3.00	4.00	5.00	0.50	3.00
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Dibromochloromethane	ug/kg								<5	<10	<10		<3
1,2-Dibromoethane	ug/kg								<3	<6	<6		<3
Chlorobenzene	ug/kg								<4	<8	<8		<3
1,1,1,2-Tetrachloroethane	ug/kg	110000.00							<5	<10	<10		<3
Styrene	ug/kg								<3	<6	<6		<3
Bromoform	ug/kg								<4	<8	<8		<3
Isopropylbenzene	ug/kg								<3	9340	11519		<3
1,1,2,2-Tetrachloroethane	ug/kg	270000.00							<3	<6	<6		<3
Bromobenzene	ug/kg								<2	<4	<4		<2
1,2,3-Trichloropropane	ug/kg								<4	<8	<8		<4
Propylbenzene	ug/kg								<4	33148	25660		<4
2-Chlorotoluene	ug/kg								<3	<6	<6		<3
1,3,5-Trimethylbenzene	ug/kg								<3	<6	<6		<3
4-Chlorotoluene	ug/kg								<3	<6	<6		<3
tert-Butylbenzene	ug/kg								<5	<10	<10		<5
1,2,4-Trimethylbenzene	ug/kg								<6	225400	201803		<6
sec-Butylbenzene	ug/kg								<4	<8	24260		<4
4-Isopropyltoluene	ug/kg								<4	4932	651		<4
1,3-Dichlorobenzene	ug/kg								<4	<8	<8		<4
1,4-Dichlorobenzene	ug/kg								<4	<8	<8		<4
n-Butylbenzene	ug/kg								<4	30713	27499		<4
1,2-Dichlorobenzene	ug/kg								<4	<8	<8		<4
1,2-Dibromo-3-chloropropane	ug/kg								<4	<8	<8		<4
1,2,4-Trichlorobenzene	ug/kg								<7	<14	<14		<7
Hexachlorobutadiene	ug/kg								<4	<8	<8		<4
1,2,3-Trichlorobenzene	ug/kg								<7	<14	<14		<7

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	BH3	BH3	BH3	WS16	WS16	WS16	WS12	WS14	WS14	TP9	TP9
		Depth	1.00	5.00	7.00	0.30	1.50	3.50	0.30	0.50	4.00	0.20	0.50
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Dibromochloromethane	ug/kg							<3			<3		
1,2-Dibromoethane	ug/kg							<3			<3		
Chlorobenzene	ug/kg							<3			<3		
1,1,1,2-Tetrachloroethane	ug/kg	110000.00						<3			<3		
Styrene	ug/kg							<3			<3		
Bromoform	ug/kg							<3			<3		
Isopropylbenzene	ug/kg							6			59		
1,1,2,2-Tetrachloroethane	ug/kg	270000.00						<3			<3		
Bromobenzene	ug/kg							<2			<2		
1,2,3-Trichloropropane	ug/kg							<4			<4		
Propylbenzene	ug/kg							<4			230		
2-Chlorotoluene	ug/kg							<3			<3		
1,3,5-Trimethylbenzene	ug/kg							<3			7		
4-Chlorotoluene	ug/kg							<3			<3		
tert-Butylbenzene	ug/kg							<5			<5		
1,2,4-Trimethylbenzene	ug/kg							<6			46		
sec-Butylbenzene	ug/kg							<4			29		
4-Isopropyltoluene	ug/kg							<4			<4		
1,3-Dichlorobenzene	ug/kg							<4			<4		
1,4-Dichlorobenzene	ug/kg							<4			<4		
n-Butylbenzene	ug/kg							<4			38		
1,2-Dichlorobenzene	ug/kg							<4			<4		
1,2-Dibromo-3-chloropropane	ug/kg							<4			<4		
1,2,4-Trichlorobenzene	ug/kg							<7			<7		
Hexachlorobutadiene	ug/kg							<4			<4		
1,2,3-Trichlorobenzene	ug/kg							<7			<7		

Screened Soils Data

		Sample ID	TP10	TP10	TP11	TP11	TP19	TP19	WS06	WS06	WS07	WS07	WS07
		Depth	0.50	1.50	0.30	0.50	0.30	1.00	0.30	1.00	0.30	1.00	1.50
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Dibromochloromethane	ug/kg							<3					
1,2-Dibromoethane	ug/kg							<3					
Chlorobenzene	ug/kg							<3					
1,1,1,2-Tetrachloroethane	ug/kg	110000.00						<3					
Styrene	ug/kg							<3					
Bromoform	ug/kg							<3					
Isopropylbenzene	ug/kg							<3					
1,1,2,2-Tetrachloroethane	ug/kg	270000.00						<3					
Bromobenzene	ug/kg							<2					
1,2,3-Trichloropropane	ug/kg							<4					
Propylbenzene	ug/kg							<4					
2-Chlorotoluene	ug/kg							<3					
1,3,5-Trimethylbenzene	ug/kg							<3					
4-Chlorotoluene	ug/kg							<3					
tert-Butylbenzene	ug/kg							<5					
1,2,4-Trimethylbenzene	ug/kg							<6					
sec-Butylbenzene	ug/kg							<4					
4-Isopropyltoluene	ug/kg							<4					
1,3-Dichlorobenzene	ug/kg							<4					
1,4-Dichlorobenzene	ug/kg							<4					
n-Butylbenzene	ug/kg							<4					
1,2-Dichlorobenzene	ug/kg							<4					
1,2-Dibromo-3-chloropropane	ug/kg							<4					
1,2,4-Trichlorobenzene	ug/kg							<7					
Hexachlorobutadiene	ug/kg							<4					
1,2,3-Trichlorobenzene	ug/kg							<7					

Screened Soils Data

		Sample ID	WS07	WS15	WS15	HP8	HP8	HP9	HP9	HP10	HP11	HP11	HP12
		Depth	4.50	0.30	2.00	0.50	2.00	0.50	2.00	1.00	0.50	1.00-1.50	0.50
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Dibromochloromethane	ug/kg		<5		<5		<5				<5		
1,2-Dibromoethane	ug/kg		<3		<3		<3				<3		
Chlorobenzene	ug/kg		<4		<4		<4				<4		
1,1,1,2-Tetrachloroethane	ug/kg	110000.00	<5		<5		<5				<5		
Styrene	ug/kg		<3		<3		<3				<3		
Bromoform	ug/kg		<4		<4		<4				<4		
Isopropylbenzene	ug/kg		1286		<3		<3				<3		
1,1,2,2-Tetrachloroethane	ug/kg	270000.00	<3		<3		<3				<3		
Bromobenzene	ug/kg		<2		<2		<2				<2		
1,2,3-Trichloropropane	ug/kg		<4		<4		<4				<4		
Propylbenzene	ug/kg		2798		<4		<4				<4		
2-Chlorotoluene	ug/kg		<3		<3		<3				<3		
1,3,5-Trimethylbenzene	ug/kg		<3		<3		<3				<3		
4-Chlorotoluene	ug/kg		<3		<3		<3				<3		
tert-Butylbenzene	ug/kg		<5		<5		<5				<5		
1,2,4-Trimethylbenzene	ug/kg		70		<6		<6				<6		
sec-Butylbenzene	ug/kg		3153		<4		<4				<4		
4-Isopropyltoluene	ug/kg		38		<4		<4				<4		
1,3-Dichlorobenzene	ug/kg		<4		<4		<4				<4		
1,4-Dichlorobenzene	ug/kg		<4		<4		<4				<4		
n-Butylbenzene	ug/kg		2386		<4		<4				<4		
1,2-Dichlorobenzene	ug/kg		<4		<4		<4				<4		
1,2-Dibromo-3-chloropropane	ug/kg		<4		<4		<4				<4		
1,2,4-Trichlorobenzene	ug/kg		<7		<7		<7				<7		
Hexachlorobutadiene	ug/kg		<4		<4		<4				<4		
1,2,3-Trichlorobenzene	ug/kg		<7		<7		<7				<7		

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	HP12	HP13	HP13	HP14	HP14	HP15	WS06	BH10	BH10	BH10	BH10
		Depth	1.00	0.50	1.50	0.50	1.00	0.50-1.00	4.50	0.50	1.00	2.00	8.00
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Dibromochloromethane	ug/kg								<5		<5	<5	
1,2-Dibromoethane	ug/kg								<3		<3	<3	
Chlorobenzene	ug/kg								<4		<4	<4	
1,1,1,2-Tetrachloroethane	ug/kg	110000.00							<5		<5	<5	
Styrene	ug/kg								<3		<3	<3	
Bromoform	ug/kg								<4		<4	<4	
Isopropylbenzene	ug/kg								96		5	652	
1,1,2,2-Tetrachloroethane	ug/kg	270000.00							<3		<3	<3	
Bromobenzene	ug/kg								<2		<2	<2	
1,2,3-Trichloropropane	ug/kg								<4		<4	<4	
Propylbenzene	ug/kg								224		18	1805	
2-Chlorotoluene	ug/kg								<3		<3	<3	
1,3,5-Trimethylbenzene	ug/kg								<3		30	149	
4-Chlorotoluene	ug/kg								<3		<3	<3	
tert-Butylbenzene	ug/kg								<5		<5	<5	
1,2,4-Trimethylbenzene	ug/kg								<6		77	5048	
sec-Butylbenzene	ug/kg								290		<4	759	
4-Isopropyltoluene	ug/kg								<4		<4	231	
1,3-Dichlorobenzene	ug/kg								<4		<4	<4	
1,4-Dichlorobenzene	ug/kg								<4		<4	<4	
n-Butylbenzene	ug/kg								174		<4	985	
1,2-Dichlorobenzene	ug/kg								<4		<4	<4	
1,2-Dibromo-3-chloropropane	ug/kg								<4		<4	<4	
1,2,4-Trichlorobenzene	ug/kg								<7		<7	<7	
Hexachlorobutadiene	ug/kg								<4		<4	<4	
1,2,3-Trichlorobenzene	ug/kg								<7		<7	<7	

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	BH8	BH8	BH8	TP20	TP20	TP20	TP22	TP22	TP22	WS13	WS13
		Depth	0.30	2.50	7.50	0.20	1.00	3.00	0.10	0.50	2.10	0.30	2.00
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Dibromochloromethane	ug/kg					<5	<5	<5		<5	<5		
1,2-Dibromoethane	ug/kg					<3	<3	<3		<3	<3		
Chlorobenzene	ug/kg					<4	<4	<4		<4	<4		
1,1,1,2-Tetrachloroethane	ug/kg	110000.00				<5	<5	<5		<5	<5		
Styrene	ug/kg					<3	<3	<3		<3	<3		
Bromoform	ug/kg					<4	<4	<4		<4	<4		
Isopropylbenzene	ug/kg					4	<3	1606		<3	10		
1,1,2,2-Tetrachloroethane	ug/kg	270000.00				<3	<3	<3		<3	<3		
Bromobenzene	ug/kg					<2	<2	<2		<2	<2		
1,2,3-Trichloropropane	ug/kg					<4	<4	<4		<4	<4		
Propylbenzene	ug/kg					6	12	3245		<4	<4		
2-Chlorotoluene	ug/kg					<3	<3	<3		<3	<3		
1,3,5-Trimethylbenzene	ug/kg					15	215	31		<3	<3		
4-Chlorotoluene	ug/kg					<3	<3	<3		<3	<3		
tert-Butylbenzene	ug/kg					<5	<5	178		<5	<5		
1,2,4-Trimethylbenzene	ug/kg					368	97	91		<6	<6		
sec-Butylbenzene	ug/kg					<4	<4	3555		<4	15		
4-Isopropyltoluene	ug/kg					<4	<4	<4		<4	<4		
1,3-Dichlorobenzene	ug/kg					<4	<4	<4		<4	<4		
1,4-Dichlorobenzene	ug/kg					<4	<4	<4		<4	<4		
n-Butylbenzene	ug/kg					<4	<4	4378		<4	<4		
1,2-Dichlorobenzene	ug/kg					<4	<4	<4		<4	<4		
1,2-Dibromo-3-chloropropane	ug/kg					<4	<4	<4		<4	<4		
1,2,4-Trichlorobenzene	ug/kg					<7	<7	<7		<7	<7		
Hexachlorobutadiene	ug/kg					<4	<4	<4		<4	<4		
1,2,3-Trichlorobenzene	ug/kg					<7	<7	<7		<7	<7		

Screened Soils Data

		Sample ID	WS13	WS19	WS19	WS19	WS21	WS21	BH11	BH11	BH9	BH9	WS20
		Depth	4.00	0.30	1.00	3.00	0.30	2.00	2.00	4.00	0.50	3.50	0.30
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Dibromochloromethane	ug/kg		<5			<5		<5	<5			<5	
1,2-Dibromoethane	ug/kg		<3			<3		<3	<3			<3	
Chlorobenzene	ug/kg		<4			<4		<4	<4			<4	
1,1,1,2-Tetrachloroethane	ug/kg	110000.00	<5			<5		<5	<5			<5	
Styrene	ug/kg		<3			<3		<3	<3			<3	
Bromoform	ug/kg		<4			<4		<4	<4			<4	
Isopropylbenzene	ug/kg		<3			57		<3	48			6	
1,1,2,2-Tetrachloroethane	ug/kg	270000.00	<3			<3		<3	<3			<3	
Bromobenzene	ug/kg		<2			<2		<2	<2			<2	
1,2,3-Trichloropropane	ug/kg		<4			<4		<4	<4			<4	
Propylbenzene	ug/kg		<4			21		<4	160			10	
2-Chlorotoluene	ug/kg		<3			<3		<3	<3			<3	
1,3,5-Trimethylbenzene	ug/kg		<3			<3		<3	204			<3	
4-Chlorotoluene	ug/kg		<3			<3		<3	<3			<3	
tert-Butylbenzene	ug/kg		<5			<5		<5	<5			<5	
1,2,4-Trimethylbenzene	ug/kg		<6			9		<6	415			<6	
sec-Butylbenzene	ug/kg		<4			<4		<4	82			58	
4-Isopropyltoluene	ug/kg		<4			<4		<4	19			<4	
1,3-Dichlorobenzene	ug/kg		<4			<4		<4	<4			<4	
1,4-Dichlorobenzene	ug/kg		<4			<4		<4	<4			<4	
n-Butylbenzene	ug/kg		<4			<4		<4	62			69	
1,2-Dichlorobenzene	ug/kg		<4			<4		<4	<4			<4	
1,2-Dibromo-3-chloropropane	ug/kg		<4			<4		<4	<4			<4	
1,2,4-Trichlorobenzene	ug/kg		<7			<7		<7	<7			<7	
Hexachlorobutadiene	ug/kg		<4			<4		<4	<4			<4	
1,2,3-Trichlorobenzene	ug/kg		<7			<7		<7	<7			<7	

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	WS20	WS18	WS18	WS08	WS08	TP18	TP18	TP24	TP24	TP23	TP23
		Depth	4.00	1.00	4.00	1.00	5.00	1.00	1.90	2.50	3.20	0.30	3.10
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Dibromochloromethane	ug/kg				<5				<5		<5		<5
1,2-Dibromoethane	ug/kg				<3				<3		36		<3
Chlorobenzene	ug/kg				<4				<4		<4		<4
1,1,1,2-Tetrachloroethane	ug/kg	110000.00			<5				<5		<5		<5
Styrene	ug/kg				<3				<3		<3		<3
Bromoform	ug/kg				<4				<4		<4		<4
Isopropylbenzene	ug/kg				86				11		1357		55
1,1,2,2-Tetrachloroethane	ug/kg	270000.00			<3				<3		<3		<3
Bromobenzene	ug/kg				<2				<2		<2		<2
1,2,3-Trichloropropane	ug/kg				<4				<4		<4		<4
Propylbenzene	ug/kg				201				34		2033		57
2-Chlorotoluene	ug/kg				<3				<3		<3		<3
1,3,5-Trimethylbenzene	ug/kg				<3				12		<3		<3
4-Chlorotoluene	ug/kg				<3				<3		<3		<3
tert-Butylbenzene	ug/kg				<5				<5		<5		<5
1,2,4-Trimethylbenzene	ug/kg				12				114		22		<6
sec-Butylbenzene	ug/kg				178				<4		1864		299
4-Isopropyltoluene	ug/kg				<4				<4		<4		<4
1,3-Dichlorobenzene	ug/kg				<4				<4		<4		<4
1,4-Dichlorobenzene	ug/kg				<4				<4		<4		<4
n-Butylbenzene	ug/kg				85				<4		2110		161
1,2-Dichlorobenzene	ug/kg				<4				<4		<4		<4
1,2-Dibromo-3-chloropropane	ug/kg				<4				<4		<4		<4
1,2,4-Trichlorobenzene	ug/kg				<7				<7		<7		<7
Hexachlorobutadiene	ug/kg				<4				<4		<4		<4
1,2,3-Trichlorobenzene	ug/kg				<7				<7		<7		<7

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	TP14	TP14	TP13	TP13	TP15	TP15	WS09	WS09	WS10	WS10	WS10
		Depth	0.50	2.00	0.50	2.00	0.50	1.50	0.50	2.00	0.30	0.50	2.00
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Dibromochloromethane	ug/kg						<5		<5				<5
1,2-Dibromoethane	ug/kg						<3		<3				<3
Chlorobenzene	ug/kg						<4		<4				<4
1,1,1,2-Tetrachloroethane	ug/kg	110000.00					<5		<5				<5
Styrene	ug/kg						<3		<3				<3
Bromoform	ug/kg						<4		<4				<4
Isopropylbenzene	ug/kg						<3		<3				<3
1,1,2,2-Tetrachloroethane	ug/kg	270000.00					<3		<3				<3
Bromobenzene	ug/kg						<2		<2				<2
1,2,3-Trichloropropane	ug/kg						<4		<4				<4
Propylbenzene	ug/kg						<4		<4				<4
2-Chlorotoluene	ug/kg						<3		<3				<3
1,3,5-Trimethylbenzene	ug/kg						<3		<3				11
4-Chlorotoluene	ug/kg						<3		<3				<3
tert-Butylbenzene	ug/kg						<5		<5				<5
1,2,4-Trimethylbenzene	ug/kg						<6		<6				<6
sec-Butylbenzene	ug/kg						<4		<4				<4
4-Isopropyltoluene	ug/kg						<4		<4				<4
1,3-Dichlorobenzene	ug/kg						<4		<4				<4
1,4-Dichlorobenzene	ug/kg						<4		<4				<4
n-Butylbenzene	ug/kg						<4		<4				<4
1,2-Dichlorobenzene	ug/kg						<4		<4				<4
1,2-Dibromo-3-chloropropane	ug/kg						<4		<4				<4
1,2,4-Trichlorobenzene	ug/kg						<7		<7				<7
Hexachlorobutadiene	ug/kg						<4		<4				<4
1,2,3-Trichlorobenzene	ug/kg						<7		<7				<7

Screened Soils Data

		Sample ID	TP25	TP26	TP27	TP28	BH9	BH9	WS22	WS24	WS25	WS25	BH6
		Depth	0.50	0.50	1.00	1.50	6.50	12.00	1.00	3.50	1.00	3.00	1.50
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Dibromochloromethane	ug/kg						<5			<5		<5	
1,2-Dibromoethane	ug/kg						<3			<3		<3	
Chlorobenzene	ug/kg						<4			<4		<4	
1,1,1,2-Tetrachloroethane	ug/kg	110000.00					<5			<5		<5	
Styrene	ug/kg						<3			<3		<3	
Bromoform	ug/kg						<4			<4		<4	
Isopropylbenzene	ug/kg						<3			126		4138	
1,1,2,2-Tetrachloroethane	ug/kg	270000.00					<3			<3		<3	
Bromobenzene	ug/kg						<2			<2		<2	
1,2,3-Trichloropropane	ug/kg						<4			<4		<4	
Propylbenzene	ug/kg						<4			38		6982	
2-Chlorotoluene	ug/kg						<3			<3		<3	
1,3,5-Trimethylbenzene	ug/kg						<3			<3		<3	
4-Chlorotoluene	ug/kg						<3			<3		<3	
tert-Butylbenzene	ug/kg						<5			<5		<5	
1,2,4-Trimethylbenzene	ug/kg						<6			<6		216	
sec-Butylbenzene	ug/kg						<4			502		19348	
4-Isopropyltoluene	ug/kg						<4			<4		<4	
1,3-Dichlorobenzene	ug/kg						<4			<4		<4	
1,4-Dichlorobenzene	ug/kg						<4			<4		<4	
n-Butylbenzene	ug/kg						<4			<4		5983	
1,2-Dichlorobenzene	ug/kg						<4			<4		<4	
1,2-Dibromo-3-chloropropane	ug/kg						<4			<4		<4	
1,2,4-Trichlorobenzene	ug/kg						<7			<7		<7	
Hexachlorobutadiene	ug/kg						<4			<4		<4	
1,2,3-Trichlorobenzene	ug/kg						<7			<7		<7	

Screened Soils Data

		Sample ID	BH6	TP17	TP29	TP30	TP31	WS29	WS29	WS26	WS26	WS28	WS27
		Depth	7.50	0.30	0.60	1.50	1.00	2.00	3.00	0.50	4.00	1.50	0.30
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Dibromochloromethane	ug/kg							<5	<5	<5	<5	<5	<5
1,2-Dibromoethane	ug/kg							<3	<3	<3	<3	<3	<3
Chlorobenzene	ug/kg							<4	<4	<4	<4	<4	<4
1,1,1,2-Tetrachloroethane	ug/kg	110000.00						<5	<5	<5	<5	<5	<5
Styrene	ug/kg							<3	<3	<3	<3	<3	<3
Bromoform	ug/kg							<4	<4	<4	<4	<4	<4
Isopropylbenzene	ug/kg							<3	<3	<3	<3	<3	<3
1,1,2,2-Tetrachloroethane	ug/kg	270000.00						<3	<3	<3	<3	<3	<3
Bromobenzene	ug/kg							<2	<2	<2	<2	<2	<2
1,2,3-Trichloropropane	ug/kg							<4	<4	<4	<4	<4	<4
Propylbenzene	ug/kg							<4	<4	<4	<4	<4	<4
2-Chlorotoluene	ug/kg							<3	<3	<3	<3	<3	<3
1,3,5-Trimethylbenzene	ug/kg							<3	<3	<3	<3	<3	<3
4-Chlorotoluene	ug/kg							<3	<3	<3	<3	<3	<3
tert-Butylbenzene	ug/kg							<5	<5	<5	<5	<5	<5
1,2,4-Trimethylbenzene	ug/kg							<6	<6	<6	<6	<6	37
sec-Butylbenzene	ug/kg							<4	<4	<4	<4	<4	<4
4-Isopropyltoluene	ug/kg							<4	<4	<4	<4	<4	<4
1,3-Dichlorobenzene	ug/kg							<4	<4	<4	<4	<4	<4
1,4-Dichlorobenzene	ug/kg							<4	<4	<4	<4	<4	<4
n-Butylbenzene	ug/kg							<4	<4	<4	<4	<4	<4
1,2-Dichlorobenzene	ug/kg							<4	<4	<4	<4	<4	<4
1,2-Dibromo-3-chloropropane	ug/kg							<4	<4	<4	<4	<4	<4
1,2,4-Trichlorobenzene	ug/kg							<7	<7	<7	<7	<7	<7
Hexachlorobutadiene	ug/kg							<4	<4	<4	<4	<4	<4
1,2,3-Trichlorobenzene	ug/kg							<7	<7	<7	<7	<7	<7

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	WS27	WS27	HP16	HP17	HP18	HP19	HP20	HP21	HP22	HP23	HP24
		Depth	3.50	4.80	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Dibromochloromethane	ug/kg		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2-Dibromoethane	ug/kg		<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Chlorobenzene	ug/kg		<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
1,1,1,2-Tetrachloroethane	ug/kg	110000.00	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Styrene	ug/kg		<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Bromoform	ug/kg		<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Isopropylbenzene	ug/kg		<3	<3	<3	<3	<3	<3	5	<3	<3	<3	<3
1,1,2,2-Tetrachloroethane	ug/kg	270000.00	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Bromobenzene	ug/kg		<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2,3-Trichloropropane	ug/kg		<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Propylbenzene	ug/kg		<4	<4	8	<4	<4	<4	15	6	<4	<4	<4
2-Chlorotoluene	ug/kg		<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
1,3,5-Trimethylbenzene	ug/kg		<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
4-Chlorotoluene	ug/kg		<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
tert-Butylbenzene	ug/kg		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
1,2,4-Trimethylbenzene	ug/kg		<6	<6	<6	<6	<6	<6	<6	<6	<6	<6	<6
sec-Butylbenzene	ug/kg		<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
4-Isopropyltoluene	ug/kg		<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
1,3-Dichlorobenzene	ug/kg		<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
1,4-Dichlorobenzene	ug/kg		<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
n-Butylbenzene	ug/kg		<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
1,2-Dichlorobenzene	ug/kg		<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
1,2-Dibromo-3-chloropropane	ug/kg		<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
1,2,4-Trichlorobenzene	ug/kg		<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7
Hexachlorobutadiene	ug/kg		<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
1,2,3-Trichlorobenzene	ug/kg		<7	<7	<7	<7	<7	<7	<7	<7	<7	<7	<7

Screened Soils Data

		Sample ID	HP25	HP26	HP27	WS34	WS34	WS33	WS33	WS33	WS33	WS2	WS2
		Depth	0.50	0.50	0.50	0.4	3.0	1.2	2.0	3.5	4.5	0.7	4.5
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Dibromochloromethane	ug/kg		<5	<5	<5		<5		<5	<5	<50		<5
1,2-Dibromoethane	ug/kg		<3	<3	<3		<3		<3	<3	<30		<3
Chlorobenzene	ug/kg		<4	<4	<4		<4		<4	<4	<40		<4
1,1,1,2-Tetrachloroethane	ug/kg	110000.00	<5	<5	<5		<5		<5	<5	<50		<5
Styrene	ug/kg		<3	<3	<3		<3		<3	<3	<30		<3
Bromoform	ug/kg		<4	<4	<4		<4		<4	<4	<40		<4
Isopropylbenzene	ug/kg		<3	<3	<3		3		<3	55	10471		<3
1,1,2,2-Tetrachloroethane	ug/kg	270000.00	<3	<3	<3		<3		<3	<3	<30		<3
Bromobenzene	ug/kg		<2	<2	<2		<2		<2	<2	<20		<2
1,2,3-Trichloropropane	ug/kg		<4	<4	<4		<4		<4	<4	<40		<4
Propylbenzene	ug/kg		<4	<4	<4		<4		<4	60	7093		<4
2-Chlorotoluene	ug/kg		<3	<3	<3		<3		<3	<3	<30		<3
1,3,5-Trimethylbenzene	ug/kg		<3	<3	<3		<3		<3	<3	83		<3
4-Chlorotoluene	ug/kg		<3	<3	<3		<3		<3	<3	<30		<3
tert-Butylbenzene	ug/kg		<5	<5	<5		<5		<5	<5	410		<5
1,2,4-Trimethylbenzene	ug/kg		<6	<6	<6		<6		<6	56	2197		<6
sec-Butylbenzene	ug/kg		<4	<4	<4		<4		<4	358	13347		<4
4-Isopropyltoluene	ug/kg		<4	<4	<4		<4		<4	57	16431		<4
1,3-Dichlorobenzene	ug/kg		<4	<4	<4		<4		<4	<4	<40		<4
1,4-Dichlorobenzene	ug/kg		<4	<4	<4		<4		<4	<4	<40		<4
n-Butylbenzene	ug/kg		<4	<4	<4		<4		<4	<4	8330		<4
1,2-Dichlorobenzene	ug/kg		<4	<4	<4		<4		<4	<4	<40		<4
1,2-Dibromo-3-chloropropane	ug/kg		<4	<4	<4		<4		<4	<4	<40		<4
1,2,4-Trichlorobenzene	ug/kg		<7	<7	<7		<7		<7	<7	<70		<7
Hexachlorobutadiene	ug/kg		<4	<4	<4		<4		<4	<4	<40		<4
1,2,3-Trichlorobenzene	ug/kg		<7	<7	<7		<7		<7	<7	<70		<7

Tidal Lagoon Swansea Bay

Screened Soils Data

		Sample ID	BH12	BH12	BH12	WS17	WS17	WS23 HP	BH5	BH7	WS30	WS30	WS30
		Depth	0.3	2.6	6.6	1.5	4.0	0.2	2.50	5.50	1.00	4.00	5.00
		Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Test	**Units**	**Screening Value**											
Dibromochloromethane	ug/kg			<5	<5	<5	<5				<5	<5	<5
1,2-Dibromoethane	ug/kg			<3	<3	<3	<3				<3	<3	<3
Chlorobenzene	ug/kg			<4	<4	<4	<4				<4	<4	<4
1,1,1,2-Tetrachloroethane	ug/kg	110000.00		<5	<5	<5	<5				<5	<5	<5
Styrene	ug/kg			<3	<3	<3	<3				<3	<3	<3
Bromoform	ug/kg			<4	<4	<4	<4				<4	<4	<4
Isopropylbenzene	ug/kg			<3	<3	50	6				<3	1423	<3
1,1,2,2-Tetrachloroethane	ug/kg	270000.00		<3	<3	<3	<3				<3	<3	<3
Bromobenzene	ug/kg			<2	<2	<2	<2				<2	<2	<2
1,2,3-Trichloropropane	ug/kg			<4	<4	<4	<4				<4	<4	<4
Propylbenzene	ug/kg			<4	<4	31	6				<4	3478	<4
2-Chlorotoluene	ug/kg			<3	<3	<3	<3				<3	<3	<3
1,3,5-Trimethylbenzene	ug/kg			<3	<3	7	<3				<3	<3	<3
4-Chlorotoluene	ug/kg			<3	<3	<3	<3				<3	<3	<3
tert-Butylbenzene	ug/kg			<5	<5	<5	<5				<5	<5	<5
1,2,4-Trimethylbenzene	ug/kg			<6	<6	38	<6				<6	<6	<6
sec-Butylbenzene	ug/kg			7	<4	33	<4				<4	4999	<4
4-Isopropyltoluene	ug/kg			9	<4	29	<4				<4	<4	<4
1,3-Dichlorobenzene	ug/kg			<4	<4	<4	<4				<4	<4	<4
1,4-Dichlorobenzene	ug/kg			<4	<4	<4	<4				<4	<4	<4
n-Butylbenzene	ug/kg			<4	<4	11	<4				<4	3881	<4
1,2-Dichlorobenzene	ug/kg			<4	<4	<4	<4				<4	<4	<4
1,2-Dibromo-3-chloropropane	ug/kg			<4	<4	<4	<4				<4	<4	<4
1,2,4-Trichlorobenzene	ug/kg			<7	<7	<7	<7				<7	<7	<7
Hexachlorobutadiene	ug/kg			<4	<4	<4	<4				<4	<4	<4
1,2,3-Trichlorobenzene	ug/kg			<7	<7	<7	<7				<7	<7	<7

Screened Soils Data

		Sample ID	WS31	WS31	WS32
		Depth	0.50	2.60	2.50
		Sample Type	Soil	Soil	Soil
Test	**Units**	**Screening Value**			
Dibromochloromethane	ug/kg			<5	<5
1,2-Dibromoethane	ug/kg			<3	<3
Chlorobenzene	ug/kg			<4	<4
1,1,1,2-Tetrachloroethane	ug/kg	110000.00		<5	<5
Styrene	ug/kg			<3	<3
Bromoform	ug/kg			<4	<4
Isopropylbenzene	ug/kg			12	<3
1,1,2,2-Tetrachloroethane	ug/kg	270000.00		<3	<3
Bromobenzene	ug/kg			<2	<2
1,2,3-Trichloropropane	ug/kg			<4	<4
Propylbenzene	ug/kg			86	5
2-Chlorotoluene	ug/kg			<3	<3
1,3,5-Trimethylbenzene	ug/kg			4	<3
4-Chlorotoluene	ug/kg			<3	<3
tert-Butylbenzene	ug/kg			<5	<5
1,2,4-Trimethylbenzene	ug/kg			1027	<6
sec-Butylbenzene	ug/kg			95	<4
4-Isopropyltoluene	ug/kg			15	<4
1,3-Dichlorobenzene	ug/kg			<4	<4
1,4-Dichlorobenzene	ug/kg			<4	<4
n-Butylbenzene	ug/kg			203	<4
1,2-Dichlorobenzene	ug/kg			<4	<4
1,2-Dibromo-3-chloropropane	ug/kg			<4	<4
1,2,4-Trichlorobenzene	ug/kg			<7	<7
Hexachlorobutadiene	ug/kg			<4	<4
1,2,3-Trichlorobenzene	ug/kg			<7	<7

Tidal Lagoon Swansea Bay

Screened Groundwater Data

		Sample ID	BH12	BH11	BH5	BH6	BH7	BH10	BH9	BH3	BH1	BH2	BH8
		Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water
		Sampled Date	02/12/2016	02/12/2016	02/12/2016	01/12/2016	01/12/2016	02/12/2016	02/12/2016	01/12/2016	01/12/2016	01/12/2016	01/12/2016
Test	**Units**	**Screening Value**											
Total Alkalinity as CaCO3 #	mg/l		300	646	318	228	168	272	498	158	342	336	440
Metals													
Dissolved Arsenic #	ug/l	25	2.2	10.6	39.7	7.1	17.4	9	21.4	42.2	<0.9	7.1	20.9
Dissolved Boron	ug/l	1000	60	256	159	196	157	179	151	3249	1520	1566	753
Dissolved Cadmium #	ug/l	0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.6	<0.5	<0.5
Total Dissolved Chromium #	ug/l	0.6	<0.2	<0.2	<0.2	0.4	<0.2	0.4	<0.2	<0.2	<0.2	<0.2	<0.2
Dissolved Copper #	ug/l	3.76	<3	<3	<3	<3	<3	<3	3	<3	<3	12	<3
Dissolved Lead #	ug/l	1.3	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Dissolved Nickel #	ug/l	20	1.7	1.4	1.3	0.5	1.4	1.9	<0.2	0.5	3.5	5.3	0.8
Dissolved Selenium #	ug/l	10	30.9	<1.2	<1.2	6.5	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2
Dissolved Zinc #	ug/l	9.6	273	8	105	35	76	46	<3	17	44	25	10
Mercury Dissolved by CVAF #	ug/l	0.07	<0.01	<0.01	<0.01	0.09	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PAH MS													
Acenaphthene	ug/l		<0.01	0.46	<0.01	0.08	<0.01	<0.01	0.26	<0.01	<0.01	<0.01	<0.01
Acenaphthylene	ug/l		<0.01	0.13	<0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Anthracene	ug/l	0.1	<0.01	0.02	<0.01	0.02	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01
Benzo(a)anthracene	ug/l		<0.01	<0.01	<0.01	0.02	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01
Benzo(a)pyrene	ug/l	0.017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(b)fluoranthene	ug/l	0.017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(ghi)perylene	ug/l	0.017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(k)fluoranthene	ug/l	0.017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chrysene	ug/l		<0.01	<0.01	<0.01	0.02	<0.01	<0.01	0.03	<0.01	<0.01	<0.01	<0.01
Dibenzo(ah)anthracene	ug/l		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Fluoranthene	ug/l	0.1	0.01	0.04	<0.01	0.1	<0.01	<0.01	0.36	0.01	0.01	<0.01	<0.01
Fluorene	ug/l		<0.01	0.53	<0.01	0.11	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Indeno(123cd)pyrene	ug/l	0.0017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Naphthalene	ug/l	2	<0.1	0.6	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	0.1	0.1	<0.1
Phenanthrene	ug/l		<0.01	0.07	<0.01	0.04	<0.01	<0.01	<0.01	0.01	0.02	<0.01	<0.01
Pyrene	ug/l		0.04	0.04	<0.01	0.08	<0.01	0.01	0.32	0.01	0.03	0.04	<0.01
PAH 16 Total	ug/l		<0.1	1.9	<0.1	0.5	<0.1	<0.1	1.1	<0.1	0.2	0.1	<0.1
PAH Surrogate % Recovery	%		84	78	77	71	80	84	72	70	72	74	72
Benzo(bk)fluoranthene	ug/l		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Tidal Lagoon Swansea Bay

Screened Groundwater Data

	Sample ID	BH1	BH2	BH3	BH5	BH6	BH7	BH8	BH9	BH10	BH11	BH12
	Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water
	Sampled Date	09/12/2016	09/12/2016	09/12/2016	09/12/2016	09/12/2016	09/12/2016	12/12/2016	12/12/2016	12/12/2016	12/12/2016	12/12/2016
Test	**Units**	**Screening Value**										
Total Alkalinity as CaCO3 #	mg/l		348	344	164	380	250	260	582	514	304	428	292
Metals												
Dissolved Arsenic #	ug/l	25	4.2	10.6	47.6	486.2	19.5	29.6	27	19.8	4.9	15.7	3.1
Dissolved Boron	ug/l	1000	1467	1573	3285	212	275	182	940	162	179	264	56
Dissolved Cadmium #	ug/l	0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Dissolved Chromium #	ug/l	0.6	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	<0.2	0.6	<0.2	0.4
Dissolved Copper #	ug/l	3.76	<3	19	<3	<3	<3	<3	<3	<3	<3	<3	<3
Dissolved Lead #	ug/l	1.3	<0.4	<0.4	<0.4	4.8	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Dissolved Nickel #	ug/l	20	1.2	4.2	<0.2	0.5	0.3	1.2	0.9	<0.2	1.6	1.2	1.8
Dissolved Selenium #	ug/l	10	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2
Dissolved Zinc #	ug/l	9.6	23	25	15	121	58	83	<3	<3	27	<3	548
Mercury Dissolved by CVAF #	ug/l	0.07	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
PAH MS												
Acenaphthene	ug/l		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.25	<0.01	0.11	<0.01
Acenaphthylene	ug/l		<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01
Anthracene	ug/l	0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01
Benzo(a)anthracene	ug/l		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	<0.01
Benzo(a)pyrene	ug/l	0.017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(b)fluoranthene	ug/l	0.017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(ghi)perylene	ug/l	0.017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Benzo(k)fluoranthene	ug/l	0.017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Chrysene	ug/l		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	<0.01
Dibenzo(ah)anthracene	ug/l		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Fluoranthene	ug/l	0.1	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	0.01	0.35	<0.01	<0.01	<0.01
Fluorene	ug/l		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.08	<0.01
Indeno(123cd)pyrene	ug/l	0.0017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Naphthalene	ug/l	2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1
Phenanthrene	ug/l		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01	<0.01
Pyrene	ug/l		<0.01	<0.01	0.02	<0.01	0.01	<0.01	0.03	0.31	<0.01	<0.01	0.01
PAH 16 Total	ug/l		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1	<0.1	0.3	<0.1
PAH Surrogate % Recovery	%		80	80	79	77	74	83	81	79	80	88	77
Benzo(bk)fluoranthene	ug/l		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01

Tidal Lagoon Swansea Bay

Screened Groundwater Data

			Sample ID	BH12	BH11	BH5	BH6	BH7	BH10	BH9	BH3	BH1	BH2	BH8
			Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water
			Sampled Date	02/12/2016	02/12/2016	02/12/2016	01/12/2016	01/12/2016	02/12/2016	02/12/2016	01/12/2016	01/12/2016	01/12/2016	01/12/2016
TPH CWG														
Aliphatics														
>C5-C6 #	ug/l			48	50	<10	<10	<10	<10	<10	<10	<10	<10	<10
>C6-C8 #	ug/l			<10	293	<10	<10	<10	<10	<10	<10	<10	<10	<10
>C8-C10 #	ug/l			<10	90	<10	<10	<10	<10	<10	<10	<10	<10	<10
>C10-C12 #	ug/l			<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
>C12-C16 #	ug/l			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
>C16-C21 #	ug/l			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
>C21-C35 #	ug/l			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Total aliphatics C5-35 #	ug/l			48	433	<10	<10	<10	<10	<10	<10	<10	<10	<10
Aromatics														
>C5-EC7 #	ug/l			<10	27	<10	<10	<10	<10	<10	<10	<10	<10	<10
>EC7-EC8 #	ug/l			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
>EC8-EC10 #	ug/l			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
>EC10-EC12 #	ug/l			<5	116	<5	<5	<5	<5	<5	<5	<5	<5	<5
>EC12-EC16 #	ug/l			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
>EC16-EC21 #	ug/l			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
>EC21-EC35 #	ug/l			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Total aromatics C5-35 #	ug/l			<10	143	<10	<10	<10	<10	<10	<10	<10	<10	<10
Total aliphatics and aromatics(C5-35) #	ug/l	10		48	576	<10	<10	<10	<10	<10	<10	<10	<10	<10
BTEX/MTBE and Phenol														
Methyl Tertiary Butyl Ether #	ug/l			<0.1	<0.1	<0.1	<0.1	<0.1	0.5	<0.1	<0.1	<0.1	<0.1	<0.1
Benzene #	ug/l	8		<0.5	36.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene #	ug/l	74		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Ethylbenzene #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
p/m-Xylene #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
o-Xylene #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Phenol	ug/l	7.7		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
VOC MS														
Dichlorodifluoromethane	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Methyl Tertiary Butyl Ether #	ug/l			<0.1	<0.1	<0.1	<0.1	<0.1	0.5	<0.1	<0.1	<0.1	<0.1	<0.1
Chloromethane #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Vinyl Chloride #	ug/l			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Bromomethane	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Trichlorofluoromethane #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
1,1-Dichloroethene (1,1 DCE) #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Dichloromethane (DCM) #	ug/l			<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1-2-Dichloroethene #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3

Tidal Lagoon Swansea Bay

Screened Groundwater Data

			Sample ID	BH1	BH2	BH3	BH5	BH6	BH7	BH8	BH9	BH10	BH11	BH12
			Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water
			Sampled Date	09/12/2016	09/12/2016	09/12/2016	09/12/2016	09/12/2016	09/12/2016	12/12/2016	12/12/2016	12/12/2016	12/12/2016	12/12/2016
TPH CWG														
Aliphatics														
>C5-C6 #	ug/l			<10	<10	<10	<10	<10	<10	<10	<10	<10	83	44
>C6-C8 #	ug/l			<10	<10	<10	<10	<10	<10	<10	<10	<10	427	34
>C8-C10 #	ug/l			<10	<10	<10	<10	<10	<10	<10	<10	<10	115	<10
>C10-C12 #	ug/l			<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
>C12-C16 #	ug/l			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
>C16-C21 #	ug/l			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
>C21-C35 #	ug/l			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Total aliphatics C5-35 #	ug/l			<10	<10	<10	<10	<10	<10	<10	<10	<10	625	78
Aromatics														
>C5-EC7 #	ug/l			<10	<10	<10	<10	<10	<10	<10	<10	<10	50	<10
>EC7-EC8 #	ug/l			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
>EC8-EC10 #	ug/l			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
>EC10-EC12 #	ug/l			<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
>EC12-EC16 #	ug/l			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
>EC16-EC21 #	ug/l			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
>EC21-EC35 #	ug/l			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Total aromatics C5-35 #	ug/l			<10	<10	<10	<10	<10	<10	<10	<10	<10	50	<10
Total aliphatics and aromatics(C5-35) #	ug/l	10		<10	<10	<10	<10	<10	<10	<10	<10	<10	675	78
BTEX/MTBE and Phenol														
Methyl Tertiary Butyl Ether #	ug/l			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.5	<0.1	<0.1
Benzene #	ug/l	8		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	42.2	<0.5
Toluene #	ug/l	74		<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Ethylbenzene #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
p/m-Xylene #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
o-Xylene #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Phenol	ug/l	7.7		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.7	<0.5
VOC MS														
Dichlorodifluoromethane	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Methyl Tertiary Butyl Ether #	ug/l			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.5	<0.1	<0.1
Chloromethane #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Vinyl Chloride #	ug/l			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Bromomethane	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Trichlorofluoromethane #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
1,1-Dichloroethene (1,1 DCE) #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Dichloromethane (DCM) #	ug/l			<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1-2-Dichloroethene #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3

Tidal Lagoon Swansea Bay

Screened Groundwater Data

			Sample ID	BH12	BH11	BH5	BH6	BH7	BH10	BH9	BH3	BH1	BH2	BH8
			Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water
			Sampled Date	02/12/2016	02/12/2016	02/12/2016	01/12/2016	01/12/2016	02/12/2016	02/12/2016	01/12/2016	01/12/2016	01/12/2016	01/12/2016
1,1-Dichloroethane #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
cis-1-2-Dichloroethene #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
2,2-Dichloropropane	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Chloroform #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,1,1-Trichloroethane #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,1-Dichloropropene #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Carbon tetrachloride #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2-Dichloroethane #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Benzene #	ug/l			<0.5	36.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene (TCE) #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
1,2-Dichloropropane #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Dibromomethane #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Bromodichloromethane #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
cis-1-3-Dichloropropene	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Toluene #	ug/l			<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1-3-Dichloropropene	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,1,2-Trichloroethane #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Tetrachloroethene (PCE) #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
1,3-Dichloropropane #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Dibromochloromethane #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Chlorobenzene #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,1,1,2-Tetrachloroethane #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Ethylbenzene #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
p/m-Xylene #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
o-Xylene #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Styrene	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Bromoform #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Isopropylbenzene #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
1,1,2,2-Tetrachloroethane	ug/l			<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Bromobenzene #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2,3-Trichloropropane #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Propylbenzene #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
2-Chlorotoluene #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
1,3,5-Trimethylbenzene #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
4-Chlorotoluene #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
tert-Butylbenzene #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
1,2,4-Trimethylbenzene #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3

Tidal Lagoon Swansea Bay

Screened Groundwater Data

			Sample ID	BH1	BH2	BH3	BH5	BH6	BH7	BH8	BH9	BH10	BH11	BH12
			Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water
			Sampled Date	09/12/2016	09/12/2016	09/12/2016	09/12/2016	09/12/2016	09/12/2016	12/12/2016	12/12/2016	12/12/2016	12/12/2016	12/12/2016
1,1-Dichloroethane #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
cis-1-2-Dichloroethene #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
2,2-Dichloropropane	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromochloromethane #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Chloroform #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,1,1-Trichloroethane #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,1-Dichloropropene #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Carbon tetrachloride #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2-Dichloroethane #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Benzene #	ug/l			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	42.2	<0.5
Trichloroethene (TCE) #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
1,2-Dichloropropane #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Dibromomethane #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Bromodichloromethane #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
cis-1-3-Dichloropropene	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Toluene #	ug/l			<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
trans-1-3-Dichloropropene	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,1,2-Trichloroethane #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Tetrachloroethene (PCE) #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
1,3-Dichloropropane #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Dibromochloromethane #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2-Dibromoethane #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Chlorobenzene #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,1,1,2-Tetrachloroethane #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Ethylbenzene #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
p/m-Xylene #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
o-Xylene #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Styrene	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Bromoform #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Isopropylbenzene #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
1,1,2,2-Tetrachloroethane	ug/l			<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Bromobenzene #	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2,3-Trichloropropane #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Propylbenzene #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
2-Chlorotoluene #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
1,3,5-Trimethylbenzene #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
4-Chlorotoluene #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
tert-Butylbenzene #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
1,2,4-Trimethylbenzene #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3

Tidal Lagoon Swansea Bay

Screened Groundwater Data

			Sample ID	BH12	BH11	BH5	BH6	BH7	BH10	BH9	BH3	BH1	BH2	BH8
			Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water
			Sampled Date	02/12/2016	02/12/2016	02/12/2016	01/12/2016	01/12/2016	02/12/2016	02/12/2016	01/12/2016	01/12/2016	01/12/2016	01/12/2016
sec-Butylbenzene #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
4-Isopropyltoluene #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
1,3-Dichlorobenzene #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
1,4-Dichlorobenzene #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
n-Butylbenzene #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
1,2-Dichlorobenzene #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
1,2-Dibromo-3-chloropropane	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2,4-Trichlorobenzene	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Hexachlorobutadiene	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Naphthalene	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2,3-Trichlorobenzene	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
SVOC MS														
2-Chlorophenol #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Methylphenol #	ug/l			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-Nitrophenol	ug/l			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-Dichlorophenol #	ug/l			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-Dimethylphenol	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,4,5-Trichlorophenol #	ug/l			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,6-Trichlorophenol	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Chloro-3-methylphenol #	ug/l			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4-Methylphenol	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Nitrophenol	ug/l			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Pentachlorophenol	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Phenol	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Chloronaphthalene #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Methylnaphthalene #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bis(2-ethylhexyl) phthalate	ug/l			<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Butylbenzyl phthalate	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Di-n-butyl phthalate #	ug/l			<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5
Di-n-Octyl phthalate	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Diethyl phthalate #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dimethyl phthalate	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Nitroaniline	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,4-Dinitrotoluene #	ug/l			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,6-Dinitrotoluene	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Tidal Lagoon Swansea Bay

Screened Groundwater Data

			Sample ID	BH1	BH2	BH3	BH5	BH6	BH7	BH8	BH9	BH10	BH11	BH12
			Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water
			Sampled Date	09/12/2016	09/12/2016	09/12/2016	09/12/2016	09/12/2016	09/12/2016	12/12/2016	12/12/2016	12/12/2016	12/12/2016	12/12/2016
sec-Butylbenzene #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
4-Isopropyltoluene #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
1,3-Dichlorobenzene #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
1,4-Dichlorobenzene #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
n-Butylbenzene #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
1,2-Dichlorobenzene #	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
1,2-Dibromo-3-chloropropane	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2,4-Trichlorobenzene	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Hexachlorobutadiene	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Naphthalene	ug/l			<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
1,2,3-Trichlorobenzene	ug/l			<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
SVOC MS														
2-Chlorophenol #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Methylphenol #	ug/l			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2-Nitrophenol	ug/l			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-Dichlorophenol #	ug/l			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-Dimethylphenol	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,4,5-Trichlorophenol #	ug/l			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4,6-Trichlorophenol	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Chloro-3-methylphenol #	ug/l			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
4-Methylphenol	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Nitrophenol	ug/l			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Pentachlorophenol	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Phenol	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Chloronaphthalene #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Methylnaphthalene #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bis(2-ethylhexyl) phthalate	ug/l			<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5
Butylbenzyl phthalate	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Di-n-butyl phthalate #	ug/l			<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5
Di-n-Octyl phthalate	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Diethyl phthalate #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dimethyl phthalate	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2,4-Trichlorobenzene #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2-Nitroaniline	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
2,4-Dinitrotoluene #	ug/l			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,6-Dinitrotoluene	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1

Tidal Lagoon Swansea Bay

Screened Groundwater Data

			Sample ID	BH12	BH11	BH5	BH6	BH7	BH10	BH9	BH3	BH1	BH2	BH8
			Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water
			Sampled Date	02/12/2016	02/12/2016	02/12/2016	01/12/2016	01/12/2016	02/12/2016	02/12/2016	01/12/2016	01/12/2016	01/12/2016	01/12/2016
3-Nitroaniline	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Bromophenylphenylether #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Chloroaniline	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Chlorophenylphenylether #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Nitroaniline	ug/l			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Azobenzene #	ug/l			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bis(2-chloroethoxy)methane #	ug/l			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bis(2-chloroethyl)ether #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbazole #	ug/l			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenzofuran #	ug/l			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Hexachlorobenzene #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Hexachlorocyclopentadiene	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Hexachloroethane #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Isophorone #	ug/l			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
N-nitrosodi-n-propylamine #	ug/l			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nitrobenzene #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sulphate #	mg/l			58.3	202.7	208.2	22	15.1	33.4	24.6	2527.5	1213.7	1227.5	182.8
Chloride #	mg/l			90.1	38.3	80.2	56.8	62.5	99.1	59.8	16220.4	7265.3	7507	929.3
Total Cyanide	ug/l	1		<1	5	<1	<1	<1	<1	<1	2	<1	<1	1
Ammoniacal Nitrogen as N #	mg/l			0.04	2.9	3.28	1.93	0.37	1.02	0.43	0.55	5.09	0.87	1.62
pH #	pH units	6-9.0		7.31	7.25	7.33	7.56	7.43	7.51	7.36	7.48	7.66	7.72	7.89

Tidal Lagoon Swansea Bay

Screened Groundwater Data

			Sample ID	BH1	BH2	BH3	BH5	BH6	BH7	BH8	BH9	BH10	BH11	BH12
			Sample Type	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water	Ground Water
			Sampled Date	09/12/2016	09/12/2016	09/12/2016	09/12/2016	09/12/2016	09/12/2016	12/12/2016	12/12/2016	12/12/2016	12/12/2016	12/12/2016
3-Nitroaniline	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Bromophenylphenylether #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Chloroaniline	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Chlorophenylphenylether #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
4-Nitroaniline	ug/l			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Azobenzene #	ug/l			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bis(2-chloroethoxy)methane #	ug/l			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bis(2-chloroethyl)ether #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbazole #	ug/l			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenzofuran #	ug/l			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Hexachlorobenzene #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Hexachlorobutadiene #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Hexachlorocyclopentadiene	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Hexachloroethane #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Isophorone #	ug/l			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
N-nitrosodi-n-propylamine #	ug/l			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nitrobenzene #	ug/l			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Sulphate #	mg/l			1073.1	1107	2435.3	291.2	21.9	8.5	81.9	21	31.9	70.4	34
Chloride #	mg/l			7460.6	7733.4	16127.7	52	59	44.6	676.7	64.8	87.3	44.9	115.6
Total Cyanide	ug/l	1		<1	<1	<1	<1	<1	<1	<1	<1	<1	2	<1
Ammoniacal Nitrogen as N #	mg/l			7.89	0.93	0.64	2.67	2.03	<0.03	1.19	0.46	0.7	1.55	<0.03
pH #	pH units	6-9.0		7.87	7.89	7.64	7.71	7.82	7.75	8.03	7.74	7.71	7.54	7.65

Tidal Lagoon Swansea Bay

Screened Surface Water Data

		Sample ID	SW1	SW2
		Sample Type	Surface Water	Surface Water
		Sampled Date	23/11/2016	23/11/2016
Test	**Units**	**Screening Value**		
Total Alkalinity as CaCO3 #	mg/l		1186	636
Phenol	ug/l	7.7	<0.5	<0.5
EPH >C10-C12 #	ug/l	10	<10	280
EPH >C12-C16 #	ug/l	10	420	330
EPH >C16-C21 #	ug/l	10	790	60
EPH >C21-C28	ug/l	10	<10	<10
EPH >C28-C35	ug/l	10	<10	<10
EPH >C35-C40 #	ug/l	10	<10	<10
EPH >C10-C40 #	ug/l	10	1210	670
Sulphate #	mg/l		696.8	419.1
Chloride #	mg/l		10742.6	4834.4
Total Cyanide	ug/l	1	5	4
Ammoniacal Nitrogen as N #	mg/l		2.05	0.56
Hexavalent Chromium	mg/l	0.0034	<0.006	<0.006
pH #	pH units	6-9.0	7.61	8.36
Metals				
Dissolved Arsenic #	ug/l	25	3	10.4
Dissolved Boron	ug/l	1000	2005	1100
Dissolved Cadmium #	ug/l	0.2	<0.5	<0.5
Total Dissolved Chromium #	ug/l	0.6	<0.2	0.2
Dissolved Copper #	ug/l	3.76	<3	<3
Dissolved Lead #	ug/l	1.3	<0.4	<0.4
Dissolved Nickel #	ug/l	8.6	<0.2	<0.2
Dissolved Selenium #	ug/l	10	<1.2	<1.2
Dissolved Zinc #	ug/l	9.6	<3	<3
Mercury Dissolved	ug/l	0.07	<0.01	<0.01
PAH MS				
Acenaphthene	ug/l		<1.00	0.07
Acenaphthylene	ug/l		<1.00	0.09
Anthracene	ug/l		<1.00	0.05
Benzo(a)anthracene	ug/l		<1.00	0.05
Benzo(a)pyrene	ug/l		<1.00	0.02
Benzo(b)fluoranthene	ug/l	0.017	<1.00	0.03
Benzo(ghi)perylene	ug/l	0.0082	<1.00	<0.01
Benzo(k)fluoranthene	ug/l	0.017	<1.00	0.01
Chrysene	ug/l		<1.00	0.05
Dibenzo(ah)anthracene	ug/l		<1.00	<0.01
Fluoranthene	ug/l	0.0063	<1.00	0.07
Fluorene	ug/l		<1.00	<0.01
Indeno(123cd)pyrene	ug/l	0.1	<1.00	<0.01
Naphthalene	ug/l		<10.0	<0.1
Phenanthrene	ug/l		<1.00	0.03
Pyrene	ug/l		<1.00	0.05

Appendix K – CIRIA C552 Risk Methodology

The following tables are derived from CIRIA C552 and have been used to define the risk rating presented in the Qualitative Risk Assessment matrix.

Classification of consequence

Classification	Definition
Severe	Short term (acute) risk to human health likely to result in 'significant harm' as defined by the Environment Protection Act 1990, Part IIA. Short term risk of pollution (note; Water Resources Act contains no scope for considering significant pollution) of sensitive water resource. Catastrophic damage to building/property. A short term risk to a particular ecosystem, or organism forming part of such ecosystem. (Note the definitions of ecological systems within the Draft Circular on Contaminated Land DETR, 2000).
Medium	Chronic damage to human health ('significant harm', as defined In DETR, 2000). Pollution of sensitive water resources (note; Water Resources Act contains no scope for considering significant pollution). A significant change in a particular ecosystem, or an organism forming part of such an ecosystem. (Note the definitions of ecological systems within the Draft Circular on Contaminated Land DETR, 2000).
Mild	Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services ('significant harm', as defined In DETR, 2000). Damage to sensitive buildings/structures/services or the environment.
Minor	Harm, although not necessarily significant harm, which may results in a financial loss, or expenditure to resolve. Non-permanent heath effects to human health (easily prevented by means such as personal protective clothing etc). Easily repairable effects of damage to buildings, structures and services.

Classification of probability

Classification	Definition
High likelihood	There is a pollution linkage and an event that either appears very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution.
Likely	There is a pollutant linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term.
Low likelihood	There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period that such an event would take place, and is even less likely in the shorter term.
Unlikely	There is a pollution linkage but circumstances are such that it is improbable that an event would occur even in the very long term.

Matrix of consequence against probability to gain a risk classification

		Consequence			
		Severe	**Medium**	**Mild**	**Minor**
Probability	**High Likelihood**	Very High Risk	High Risk	Moderate Risk	Moderate/Low Risk
	Likely	High Risk	Moderate Risk	Moderate/Low Risk	Low Risk
	Low likelihood	Moderate Risk	Moderate/Low Risk	Low Risk	Very Low Risk
	Unlikely	Moderate/Low Risk	Low Risk	Very Low Risk	Very Low Risk