Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-20813
Client Ref 4486
Contract Title Black Cats

			Lab No	2226676	2226677	2226678	2226679	2226680	2226681
			.Sample ID	TP306	TP322	TP326	TP327	TP340	TP301
			Depth	0.55	0.60	0.50	1.50	0.20	0.60
			Other ID	2	2	3	2	1	2
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	24/08/2023	25/08/2023	25/08/2023	25/08/2023	25/08/2023	24/08/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Preparation									
Stones >10mm	DETSC 1003*	1	% m/m	19	28	11	21	32	20
Moisture Content	DETSC 1004	0.1	%	13	8.3	15	20	11	15
Metals									
Antimony	DETSC 2301*	1	mg/kg						
Arsenic	DETSC 2301#	0.2	mg/kg	4.0	13	20	11	23	4.0
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	< 0.2	0.8	0.5	0.2	1.0	< 0.2
Cadmium	DETSC 2301#	0.1	mg/kg	< 0.1	0.6	0.4	< 0.1	0.3	0.6
Chromium	DETSC 2301#	0.15	mg/kg	44	19	30	14	88	31
Chromium III	DETSC 2301*	0.15	mg/kg	44	19	30	14	88	31
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	28	94	55	110	410	21
Lead	DETSC 2301#	0.3	mg/kg	9.8	120	240	16	310	26
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l						
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	0.09	1.3	0.08	0.38	< 0.05
Nickel	DETSC 2301#	1	mg/kg	44	26	17	46	200	28
Potassium	DETSC 2301*	1	mg/kg						
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	90	41	65	49	50	39
Zinc	DETSC 2301#	1	mg/kg	750	3400	750	170	140	100
Inorganics									
pH	DETSC 2008#		pH	7.3	10.7	9.9	8.3	8.0	6.8
Calorific Value	DETSC 5008	1	MJ/kg	< 1.0	2.8	8.3	8.2	2.5	< 1.0
Total Organic Carbon	DETSC 2084#	0.5	%	< 0.5	10	21	29	7.9	1.8
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l						
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l						
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l						
Sulphide	DETSC 2024*	10	mg/kg						
Sulphur as S, Total	DETSC 2320	0.01	%						
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01				
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01				
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	1.4				
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	< 1.5	< 1.5				
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	< 1.2	< 1.2				
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	< 1.5	2.3				
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	< 3.4	190				
Aliphatic C5-C35	DETSC 3072*	10	mg/kg	< 10	190				
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01				
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01				
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01	< 0.01				
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	< 0.9	6.5				

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-20813
Client Ref 4486
Contract Title Black Cats

			Lab No	2226676	2226677	2226678	2226679	2226680	2226681
			.Sample ID	TP306	TP322	TP326	TP327	TP340	TP301
			Depth	0.55	0.60	0.50	1.50	0.20	0.60
			Other ID	2	2	3	2	1	2
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	24/08/2023	25/08/2023	25/08/2023	25/08/2023	25/08/2023	24/08/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	5.4	25				
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	48	170				
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	63	600				
Aromatic C5-C35	DETSC 3072*	10	mg/kg	120	800				
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg	120	990				
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg	< 0.1	1.4	< 0.1	< 0.1	< 0.1	< 0.1
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10	420	< 10	< 10	< 10	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg	55	1500	< 10	130	< 10	< 10
EPH (C16-C21)	DETSC 3311	10	mg/kg	410	7600	19	1200	< 10	< 10
EPH (C21-C35)	DETSC 3311	10	mg/kg	490	8800	34	1600	< 10	< 10
EPH (C35-C40)	DETSC 3311	10	mg/kg	26	590	< 10	81	< 10	< 10
EPH (C10-C40)	DETSC 3311#	10	mg/kg	990	19000	58	3000	< 10	< 10
Benzene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01				
Ethylbenzene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01				
Toluene	DETSC 3321#	0.01	mg/kg	< 0.01	< 0.01				
Xylene	DETSC 3321#	0.01	mg/kg	< 0.01	0.21				
MTBE	DETSC 3321	0.01	mg/kg	< 0.01	< 0.01				
PAHs									
Naphthalene	DETSC 3303#	0.03	mg/kg	1.2	< 0.30	0.04	0.36	< 0.03	0.05
Acenaphthylene	DETSC 3303#	0.03	mg/kg	0.07	< 0.30	< 0.03	0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	3.8	1.3	0.19	2.3	< 0.03	0.17
Fluorene	DETSC 3303	0.03	mg/kg	2.3	1.4	0.13	1.4	< 0.03	0.11
Phenanthrene	DETSC 3303#	0.03	mg/kg	30	17	1.6	11	0.15	1.2
Anthracene	DETSC 3303	0.03	mg/kg	4.5	3.9	0.39	3.0	< 0.03	0.22
Fluoranthene	DETSC 3303#	0.03	mg/kg	34	52	2.1	14	0.23	1.9
Pyrene	DETSC 3303#	0.03	mg/kg	30	40	1.8	13	0.21	1.8
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	6.2	26	0.55	4.0	0.08	0.58
Chrysene	DETSC 3303	0.03	mg/kg	6.5	30	0.58	4.3	0.09	0.69
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	5.3	34	0.48	3.5	0.08	0.60
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	2.0	14	0.16	1.2	< 0.03	0.23
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	4.1	23	0.36	2.6	0.05	0.40
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	1.0	10	0.11	0.65	< 0.03	0.14
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	0.29	4.3	< 0.03	0.19	< 0.03	0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	1.4	12	0.11	0.85	< 0.03	0.16
Naphthalene	DETSC 3301	0.1	mg/kg						
Acenaphthylene	DETSC 3301	0.1	mg/kg						
Acenaphthene	DETSC 3301	0.1	mg/kg						
Fluorene	DETSC 3301	0.1	mg/kg						
Phenanthrene	DETSC 3301	0.1	mg/kg						
Anthracene	DETSC 3301	0.1	mg/kg						
Fluoranthene	DETSC 3301	0.1	mg/kg						
Pyrene	DETSC 3301	0.1	mg/kg						

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Soil/Misc Samples

Our Ref 23-20813
Client Ref 4486
Contract Title Black Cats

				Lab No	2226676	2226677	2226678	2226679	2226680	2226681
				.Sample ID	TP306	TP322	TP326	TP327	TP340	TP301
				Depth	0.55	0.60	0.50	1.50	0.20	0.60
				Other ID	2	2	3	2	1	2
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	24/08/2023	25/08/2023	25/08/2023	25/08/2023	25/08/2023	24/08/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg							
Chrysene	DETSC 3301	0.1	mg/kg							
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg							
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg							
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg							
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg							
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg							
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg							
Coronene	DETSC 3301*	0.1	mg/kg							
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	130	270	8.6	62	0.88	8.2
PAH 16 Total	DETSC 3301	1.6	mg/kg							
Phenols										
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg							
Subcontracted Analysis										
mass before grinding	DETSC 3401#	0.1	g							
mass of removed material	DETSC 3401#	0.1	g							
mass after grinding	DETSC 3401#	0.1	g							
2,4,6-trinitrophenyl-N-methylnitramine (tetryl)	DETSC 3401#	1	mg/kg							
2,4,6-trinitrotoluene (2,4,6-TNT)	DETSC 3401#	0.5	mg/kg							
2,4-dinitrotoluene (2,4-DNT)	DETSC 3401#	1	mg/kg							
2,6-dinitrotoluene (2,6-DNT)	DETSC 3401#	1	mg/kg							
cyclo-1,3,5-trimethylene-2,4,6-trinitramine (hexogen, RDX)	DETSC 3401#	1	mg/kg							
cyclotetramethylenetetranitramine (HMX)	DETSC 3401#	1	mg/kg							
hexanitrostilbene (HNS)	DETSC 3401#	0.5	mg/kg							
pentaerythritol tetranitrate (PETN)	DETSC 3401#	5	mg/kg							
2,4,6-trinitrophenol (picric acid)	DETSC 3401#	0.1	mg/kg							
picrite (nitroguanidine)	DETSC 3401#	0.1	mg/kg							
ethylene glycol dinitrate (EGDN)	DETSC 3401#	0.1	mg/kg							
nitroglycerine (NG)	DETSC 3401#	0.1	mg/kg							
nitrocellulose (NC)	DETSC 3401#	5000	mg/kg							
chlorate	DETSC 3401#	1	mg/kg							
perchlorate	DETSC 3401#	0.5	mg/kg							
description of removed material	DETSC 3401#	n/a								

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-20813
Client Ref 4486
Contract Title Black Cats

				Lab No	2226682	2226683	2226684	2226685	2226686	2226687
				.Sample ID	TP303	TP309	TP317	TP319	TP324	TP327
				Depth	0.10	0.80	0.60	0.30	0.15	0.30
				Other ID	1	1	1	1	2	1
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	24/08/2023	24/08/2023	24/08/2023	24/08/2023	25/08/2023	25/08/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Preparation										
Stones >10mm	DETSC 1003*	1	% m/m	43	28	16	33	19	14
Moisture Content	DETSC 1004	0.1	%	2.7	11	16	3.9	6.6	6.5
Metals										
Antimony	DETSC 2301*	1	mg/kg		< 1.0	2.3			
Arsenic	DETSC 2301#	0.2	mg/kg	29	2.3	17	23	9.0	26
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.4	< 0.2	0.3	0.4	0.4	1.0
Cadmium	DETSC 2301#	0.1	mg/kg	0.3	0.2	0.3	0.3	0.6	0.4
Chromium	DETSC 2301#	0.15	mg/kg	19	15	13	24	41	50
Chromium III	DETSC 2301*	0.15	mg/kg	19	15	13	24	41	50
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	86	8.0	23	73	35	1100
Lead	DETSC 2301#	0.3	mg/kg	89	4.9	38	110	28	520
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l	< 10		< 10	< 10		< 10
Mercury	DETSC 2325#	0.05	mg/kg	1.2	< 0.05	0.33	0.29	0.12	0.14
Nickel	DETSC 2301#	1	mg/kg	37	6.5	10	23	34	130
Potassium	DETSC 2301*	1	mg/kg		510	570			
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	1.0
Vanadium	DETSC 2301#	0.8	mg/kg	76	15	23	46	46	100
Zinc	DETSC 2301#	1	mg/kg	83	33	140	110	110	140
Inorganics										
pH	DETSC 2008#		pH	8.0	8.7	8.3	7.9	10.7	8.7
Calorific Value	DETSC 5008	1	MJ/kg						
Total Organic Carbon	DETSC 2084#	0.5	%	3.2	5.8	2.5	6.1	6.5	20
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l	18		3.7	2.2		7.6
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l	3.9		2.6	4.3		24
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	60		35	44		120
Sulphide	DETSC 2024*	10	mg/kg		44	36		28	
Sulphur as S, Total	DETSC 2320	0.01	%		0.03	0.08		0.16	
Petroleum Hydrocarbons										
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg						
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg						
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg						
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg						
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg						
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg						
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg						
Aliphatic C5-C35	DETSC 3072*	10	mg/kg						
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg						
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg						
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg						
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg						

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Soil/Misc Samples

Our Ref 23-20813
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Contract Title Black Cats

				Lab No	2226682	2226683	2226684	2226685	2226686	2226687
				.Sample ID	TP303	TP309	TP317	TP319	TP324	TP327
				Depth	0.10	0.80	0.60	0.30	0.15	0.30
				Other ID	1	1	1	1	2	1
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	24/08/2023	24/08/2023	24/08/2023	24/08/2023	25/08/2023	25/08/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg							
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg							
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg							
Aromatic C5-C35	DETSC 3072*	10	mg/kg							
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg							
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 200.0	< 10	< 10	< 200.0	< 200.0	< 10	
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 200.0	14	< 10	< 200.0	1200	11	
EPH (C16-C21)	DETSC 3311	10	mg/kg	< 200.0	83	39	320	7200	57	
EPH (C21-C35)	DETSC 3311	10	mg/kg	< 200.0	170	120	1100	7600	110	
EPH (C35-C40)	DETSC 3311	10	mg/kg	< 200.0	16	19	270	360	15	
EPH (C10-C40)	DETSC 3311#	10	mg/kg	< 200.0	280	190	1800	16000	200	
Benzene	DETSC 3321#	0.01	mg/kg							
Ethylbenzene	DETSC 3321#	0.01	mg/kg							
Toluene	DETSC 3321#	0.01	mg/kg							
Xylene	DETSC 3321#	0.01	mg/kg							
MTBE	DETSC 3321	0.01	mg/kg							
PAHs										
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	0.07	0.07	0.71	3.2	0.04	
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.15	< 0.30	< 0.03	
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	0.30	0.20	2.7	6.8	0.17	
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	0.17	0.12	1.8	4.2	0.10	
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.22	2.3	1.4	21	46	1.3	
Anthracene	DETSC 3303	0.03	mg/kg	0.05	0.46	0.28	3.9	11	0.24	
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.32	3.4	2.0	27	71	2.0	
Pyrene	DETSC 3303#	0.03	mg/kg	0.29	3.2	1.8	24	64	1.8	
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.15	1.1	0.60	6.7	29	0.63	
Chrysene	DETSC 3303	0.03	mg/kg	0.20	1.2	0.71	7.2	30	0.69	
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.25	1.1	0.68	7.2	26	0.63	
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.10	0.40	0.24	2.7	11	0.22	
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.16	0.83	0.47	5.5	22	0.45	
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.11	0.26	0.19	2.4	7.1	0.15	
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	0.06	0.05	0.61	2.4	0.04	
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.15	0.31	0.25	3.0	7.5	0.17	
Naphthalene	DETSC 3301	0.1	mg/kg							
Acenaphthylene	DETSC 3301	0.1	mg/kg							
Acenaphthene	DETSC 3301	0.1	mg/kg							
Fluorene	DETSC 3301	0.1	mg/kg							
Phenanthrene	DETSC 3301	0.1	mg/kg							
Anthracene	DETSC 3301	0.1	mg/kg							
Fluoranthene	DETSC 3301	0.1	mg/kg							
Pyrene	DETSC 3301	0.1	mg/kg							

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				Lab No	2226682	2226683	2226684	2226685	2226686	2226687
				.Sample ID	TP303	TP309	TP317	TP319	TP324	TP327
				Depth	0.10	0.80	0.60	0.30	0.15	0.30
				Other ID	1	1	1	1	2	1
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	24/08/2023	24/08/2023	24/08/2023	24/08/2023	25/08/2023	25/08/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg							
Chrysene	DETSC 3301	0.1	mg/kg							
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg							
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg							
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg							
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg							
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg							
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg							
Coronene	DETSC 3301*	0.1	mg/kg							
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	2.0	15	9.1	120	340	8.6
PAH 16 Total	DETSC 3301	1.6	mg/kg						
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg		1.1	1.5			
Subcontracted Analysis									
mass before grinding	DETSC 3401#	0.1	g		99.4	106			
mass of removed material	DETSC 3401#	0.1	g		12.8	22.1			
mass after grinding	DETSC 3401#	0.1	g		74.8	83.3			
2,4,6-trinitrophenyl-N-methylnitramine (tetryl)	DETSC 3401#	1	mg/kg		< 1.00	< 1.00			
2,4,6-trinitrotoluene (2,4,6-TNT)	DETSC 3401#	0.5	mg/kg		< 0.50	< 0.50			
2,4-dinitrotoluene (2,4-DNT)	DETSC 3401#	1	mg/kg		< 1.000	< 1.000			
2,6-dinitrotoluene (2,6-DNT)	DETSC 3401#	1	mg/kg		< 1.00	< 1.00			
cyclo-1,3,5-trimethylene-2,4,6-trinitramine (hexogen, RDX)	DETSC 3401#	1	mg/kg		< 1.00	< 1.00			
cyclotetramethylenetetranitramine (HMX)	DETSC 3401#	1	mg/kg		< 1.00	< 1.00			
hexanitrostilbene (HNS)	DETSC 3401#	0.5	mg/kg		< 0.50	< 0.50			
pentaerythritol tetranitrate (PETN)	DETSC 3401#	5	mg/kg		< 5.00	< 5.00			
2,4,6-trinitrophenol (picric acid)	DETSC 3401#	0.1	mg/kg		< 0.10	< 0.10			
picrite (nitroguanidine)	DETSC 3401#	0.1	mg/kg		< 0.10	< 0.10			
ethylene glycol dinitrate (EGDN)	DETSC 3401#	0.1	mg/kg		< 1.00	< 1.00			
nitroglycerine (NG)	DETSC 3401#	0.1	mg/kg		< 1.00	< 1.00			
nitrocellulose (NC)	DETSC 3401#	5000	mg/kg		< 5000	< 5000			
chlorate	DETSC 3401#	1	mg/kg		< 1.00	< 1.00			
perchlorate	DETSC 3401#	0.5	mg/kg		< 0.50	< 0.50			
description of removed material	DETSC 3401#	n/a			Rocks, hardened soil (TC)	Rocks, hardened soil (TC)			

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-20813
Client Ref 4486
Contract Title Black Cats

				Lab No	2226688	2226689	2226690	2226691	2226692	2226693
				.Sample ID	TP330	TP332	TP338	TP313	TP323	TP305
				Depth	0.40	0.40	0.20	0.70	0.40	0.05
				Other ID	1	1	2	2	1	1
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	25/08/2023	25/08/2023	25/08/2023	24/08/2023	24/08/2023	24/08/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Preparation										
Stones >10mm	DETSC 1003*	1	% m/m	27	30	34	22	39	
Moisture Content	DETSC 1004	0.1	%	11	12	11	15	12	
Metals										
Antimony	DETSC 2301*	1	mg/kg	1.1				4.1	
Arsenic	DETSC 2301#	0.2	mg/kg	10	19	14	18	25	
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.2	0.7	0.9	0.3	0.4	
Cadmium	DETSC 2301#	0.1	mg/kg	2.8	0.4	0.5	0.2	0.4	
Chromium	DETSC 2301#	0.15	mg/kg	10	41	22	16	20	
Chromium III	DETSC 2301*	0.15	mg/kg	10	41	22	16	20	
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Copper	DETSC 2301#	0.2	mg/kg	31	74	89	59	47	
Lead	DETSC 2301#	0.3	mg/kg	29	96	83	62	59	
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l		< 10	< 10	< 10	< 10	
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	0.48	0.15	0.13	< 0.05	
Nickel	DETSC 2301#	1	mg/kg	13	20	20	20	20	
Potassium	DETSC 2301*	1	mg/kg	1500				940	
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	
Vanadium	DETSC 2301#	0.8	mg/kg	28	40	32	26	38	
Zinc	DETSC 2301#	1	mg/kg	160	120	130	100	180	
Inorganics										
pH	DETSC 2008#		pH	8.4	10.2	9.3	7.5	9.0	
Calorific Value	DETSC 5008	1	MJ/kg						
Total Organic Carbon	DETSC 2084#	0.5	%	4.7	5.2	6.4	4.1	5.3	
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l		3.4	3.4	6.7	5.6	
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l		2.4	6.0	3.1	2.9	
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l		180	130	41	55	
Sulphide	DETSC 2024*	10	mg/kg	72	12	40		60	
Sulphur as S, Total	DETSC 2320	0.01	%	0.09	0.11	0.08		0.06	
Petroleum Hydrocarbons										
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg						
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg						
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg						
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg						
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg						
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg						
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg						
Aliphatic C5-C35	DETSC 3072*	10	mg/kg						
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg						
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg						
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg						
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg						

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-20813
Client Ref 4486
Contract Title Black Cats

				Lab No	2226688	2226689	2226690	2226691	2226692	2226693
				.Sample ID	TP330	TP332	TP338	TP313	TP323	TP305
				Depth	0.40	0.40	0.20	0.70	0.40	0.05
				Other ID	1	1	2	2	1	1
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	25/08/2023	25/08/2023	25/08/2023	24/08/2023	24/08/2023	24/08/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg							
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg							
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg							
Aromatic C5-C35	DETSC 3072*	10	mg/kg							
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg							
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1		
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 200.0	< 10	< 10	< 10	< 200.0		
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 200.0	39	< 10	11	350		
EPH (C16-C21)	DETSC 3311	10	mg/kg	270	290	27	83	1800		
EPH (C21-C35)	DETSC 3311	10	mg/kg	1200	480	69	300	1800		
EPH (C35-C40)	DETSC 3311	10	mg/kg	280	45	13	21	< 200.0		
EPH (C10-C40)	DETSC 3311#	10	mg/kg	1900	850	120	420	4300		
Benzene	DETSC 3321#	0.01	mg/kg							
Ethylbenzene	DETSC 3321#	0.01	mg/kg							
Toluene	DETSC 3321#	0.01	mg/kg							
Xylene	DETSC 3321#	0.01	mg/kg							
MTBE	DETSC 3321	0.01	mg/kg							
PAHs										
Naphthalene	DETSC 3303#	0.03	mg/kg	0.17	0.22	< 0.03	0.20	0.75		
Acenaphthylene	DETSC 3303#	0.03	mg/kg	0.20	0.03	0.04	< 0.03	0.17		
Acenaphthene	DETSC 3303#	0.03	mg/kg	0.87	1.1	0.44	0.22	2.9		
Fluorene	DETSC 3303	0.03	mg/kg	0.48	0.65	0.40	0.14	2.0		
Phenanthrene	DETSC 3303#	0.03	mg/kg	4.2	7.2	2.6	2.6	20		
Anthracene	DETSC 3303	0.03	mg/kg	1.5	1.7	1.1	0.54	5.2		
Fluoranthene	DETSC 3303#	0.03	mg/kg	11	11	3.6	4.8	27		
Pyrene	DETSC 3303#	0.03	mg/kg	11	10	3.2	4.5	24		
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	5.3	3.8	1.2	2.2	7.2		
Chrysene	DETSC 3303	0.03	mg/kg	5.8	4.7	1.4	2.7	8.3		
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	7.7	4.3	1.8	2.6	6.7		
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	2.9	1.4	0.56	0.80	2.2		
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	6.2	3.3	1.5	1.8	5.1		
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	3.0	1.1	0.76	0.62	1.5		
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	0.70	0.32	0.19	0.24	0.46		
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	3.8	1.2	0.92	1.0	1.6		
Naphthalene	DETSC 3301	0.1	mg/kg							< 2.0
Acenaphthylene	DETSC 3301	0.1	mg/kg							< 2.0
Acenaphthene	DETSC 3301	0.1	mg/kg							< 2.0
Fluorene	DETSC 3301	0.1	mg/kg							< 2.0
Phenanthrene	DETSC 3301	0.1	mg/kg							13
Anthracene	DETSC 3301	0.1	mg/kg							3.6
Fluoranthene	DETSC 3301	0.1	mg/kg							4.4
Pyrene	DETSC 3301	0.1	mg/kg							3.8

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-20813
Client Ref 4486
Contract Title Black Cats

				Lab No	2226688	2226689	2226690	2226691	2226692	2226693
				.Sample ID	TP330	TP332	TP338	TP313	TP323	TP305
				Depth	0.40	0.40	0.20	0.70	0.40	0.05
				Other ID	1	1	2	2	1	1
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	25/08/2023	25/08/2023	25/08/2023	24/08/2023	24/08/2023	24/08/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg							< 2.0
Chrysene	DETSC 3301	0.1	mg/kg							< 2.0
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg							< 2.0
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg							< 2.0
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg							< 2.0
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg							< 2.0
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg							< 2.0
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg							< 2.0
Coronene	DETSC 3301*	0.1	mg/kg							< 2.0
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	64	52	20	25	120		
PAH 16 Total	DETSC 3301	1.6	mg/kg							25
Phenols										
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	1.6				< 0.3		
Subcontracted Analysis										
mass before grinding	DETSC 3401#	0.1	g	99.7				167		
mass of removed material	DETSC 3401#	0.1	g	53.4				12.8		
mass after grinding	DETSC 3401#	0.1	g	113				74.8		
2,4,6-trinitrophenyl-N-methylnitramine (tetryl)	DETSC 3401#	1	mg/kg	< 1.00				< 1.00		
2,4,6-trinitrotoluene (2,4,6-TNT)	DETSC 3401#	0.5	mg/kg	< 0.50				< 0.50		
2,4-dinitrotoluene (2,4-DNT)	DETSC 3401#	1	mg/kg	< 1.000				< 1.000		
2,6-dinitrotoluene (2,6-DNT)	DETSC 3401#	1	mg/kg	< 1.00				< 1.00		
cyclo-1,3,5-trimethylene-2,4,6-trinitramine (hexogen, RDX)	DETSC 3401#	1	mg/kg	< 1.00				< 1.00		
cyclotetramethylenetetranitramine (HMX)	DETSC 3401#	1	mg/kg	< 1.00				< 1.00		
hexanitrostilbene (HNS)	DETSC 3401#	0.5	mg/kg	< 0.50				< 0.50		
pentaerythritol tetranitrate (PETN)	DETSC 3401#	5	mg/kg	< 5.00				< 5.00		
2,4,6-trinitrophenol (picric acid)	DETSC 3401#	0.1	mg/kg	< 0.10				< 0.10		
picrite (nitroguanidine)	DETSC 3401#	0.1	mg/kg	< 0.10				< 0.10		
ethylene glycol dinitrate (EGDN)	DETSC 3401#	0.1	mg/kg	< 1.00				< 1.00		
nitroglycerine (NG)	DETSC 3401#	0.1	mg/kg	< 1.00				< 1.00		
nitrocellulose (NC)	DETSC 3401#	5000	mg/kg	< 5000				< 5000		
chlorate	DETSC 3401#	1	mg/kg	< 1.00				< 1.00		
perchlorate	DETSC 3401#	0.5	mg/kg	< 0.50				< 0.50		
description of removed material	DETSC 3401#	n/a		Rocks, hardened soil (TC)				Rocks, hardened soil (TC)		

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-20813
Client Ref 4486
Contract Title Black Cats

Test	Method	LOD	Units						
Lab No				2226694	2226695	2226696	2226697	2226698	2226699
.Sample ID				TP312	TP324	TP326	TP339	TP308	TP332
Depth				0.05	0.05	0.05	0.05	1.00	1.40
Other ID				1	1	1	1	2	2
Sample Type				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date				24/08/2023	25/08/2023	25/08/2023	25/08/2023	24/08/2023	25/08/2023
Sampling Time				n/s	n/s	n/s	n/s	n/s	n/s
Preparation									
Stones >10mm	DETSC 1003*	1	% m/m					8.0	44
Moisture Content	DETSC 1004	0.1	%					11	11
Metals									
Antimony	DETSC 2301*	1	mg/kg						
Arsenic	DETSC 2301#	0.2	mg/kg					12	6.3
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg					0.3	1.2
Cadmium	DETSC 2301#	0.1	mg/kg					0.2	0.6
Chromium	DETSC 2301#	0.15	mg/kg					17	16
Chromium III	DETSC 2301*	0.15	mg/kg					17	16
Chromium, Hexavalent	DETSC 2204*	1	mg/kg					< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg					270	23
Lead	DETSC 2301#	0.3	mg/kg					67	34
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l					< 10	< 10
Mercury	DETSC 2325#	0.05	mg/kg					0.21	0.08
Nickel	DETSC 2301#	1	mg/kg					24	11
Potassium	DETSC 2301*	1	mg/kg						
Selenium	DETSC 2301#	0.5	mg/kg					< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg					23	18
Zinc	DETSC 2301#	1	mg/kg					100	100
Inorganics									
pH	DETSC 2008#		pH					8.3	11.2
Calorific Value	DETSC 5008	1	MJ/kg						
Total Organic Carbon	DETSC 2084#	0.5	%					4.0	1.6
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l					3.0	20
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l					4.4	3.8
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l					24	110
Sulphide	DETSC 2024*	10	mg/kg						
Sulphur as S, Total	DETSC 2320	0.01	%						
Petroleum Hydrocarbons									
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg						
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg						
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg						
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg						
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg						
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg						
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg						
Aliphatic C5-C35	DETSC 3072*	10	mg/kg						
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg						
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg						
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg						
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg						

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-20813
Client Ref 4486
Contract Title Black Cats

				Lab No	2226694	2226695	2226696	2226697	2226698	2226699
				.Sample ID	TP312	TP324	TP326	TP339	TP308	TP332
				Depth	0.05	0.05	0.05	0.05	1.00	1.40
				Other ID	1	1	1	1	2	2
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	24/08/2023	25/08/2023	25/08/2023	25/08/2023	24/08/2023	25/08/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg							
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg							
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg							
Aromatic C5-C35	DETSC 3072*	10	mg/kg							
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg							
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg						< 0.1	< 0.1
EPH (C10-C12)	DETSC 3311	10	mg/kg						< 10	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg						< 10	19
EPH (C16-C21)	DETSC 3311	10	mg/kg						< 10	100
EPH (C21-C35)	DETSC 3311	10	mg/kg						< 10	99
EPH (C35-C40)	DETSC 3311	10	mg/kg						< 10	11
EPH (C10-C40)	DETSC 3311#	10	mg/kg						< 10	230
Benzene	DETSC 3321#	0.01	mg/kg							
Ethylbenzene	DETSC 3321#	0.01	mg/kg							
Toluene	DETSC 3321#	0.01	mg/kg							
Xylene	DETSC 3321#	0.01	mg/kg							
MTBE	DETSC 3321	0.01	mg/kg							
PAHs										
Naphthalene	DETSC 3303#	0.03	mg/kg						0.04	0.12
Acenaphthylene	DETSC 3303#	0.03	mg/kg						0.04	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg						< 0.03	0.28
Fluorene	DETSC 3303	0.03	mg/kg						0.03	0.16
Phenanthrene	DETSC 3303#	0.03	mg/kg						0.46	1.5
Anthracene	DETSC 3303	0.03	mg/kg						0.07	0.30
Fluoranthene	DETSC 3303#	0.03	mg/kg						0.57	1.6
Pyrene	DETSC 3303#	0.03	mg/kg						0.48	1.4
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg						0.17	0.38
Chrysene	DETSC 3303	0.03	mg/kg						0.23	0.44
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg						0.22	0.30
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg						0.10	0.13
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg						0.17	0.23
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg						0.09	0.08
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg						< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg						0.10	0.08
Naphthalene	DETSC 3301	0.1	mg/kg	< 2.0	0.1	0.1	< 0.1			
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 2.0	< 0.1	< 0.1	< 0.1			
Acenaphthene	DETSC 3301	0.1	mg/kg	< 2.0	< 0.1	< 0.1	< 0.1			
Fluorene	DETSC 3301	0.1	mg/kg	< 2.0	< 0.1	< 0.1	< 0.1			
Phenanthrene	DETSC 3301	0.1	mg/kg	< 2.0	0.3	< 0.1	0.2			
Anthracene	DETSC 3301	0.1	mg/kg	< 2.0	< 0.1	< 0.1	< 0.1			
Fluoranthene	DETSC 3301	0.1	mg/kg	< 2.0	0.5	1.2	0.2			
Pyrene	DETSC 3301	0.1	mg/kg	< 2.0	0.9	< 0.1	1.1			

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-20813
Client Ref 4486
Contract Title Black Cats

				Lab No	2226694	2226695	2226696	2226697	2226698	2226699
				.Sample ID	TP312	TP324	TP326	TP339	TP308	TP332
				Depth	0.05	0.05	0.05	0.05	1.00	1.40
				Other ID	1	1	1	1	2	2
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	24/08/2023	25/08/2023	25/08/2023	25/08/2023	24/08/2023	25/08/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	< 2.0	< 0.1	< 0.1	< 0.1		
Chrysene	DETSC 3301	0.1	mg/kg	< 2.0	1.6	< 0.1	< 0.1		
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	< 2.0	< 0.1	< 0.1	< 0.1		
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	< 2.0	< 0.1	< 0.1	< 0.1		
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	< 2.0	< 0.1	< 0.1	< 0.1		
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	< 2.0	< 0.1	< 0.1	< 0.1		
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 2.0	< 0.1	< 0.1	< 0.1		
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	< 2.0	< 0.1	< 0.1	< 0.1		
Coronene	DETSC 3301*	0.1	mg/kg	< 2.0	< 0.1	< 0.1	< 0.1		
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg					2.8	7.0
PAH 16 Total	DETSC 3301	1.6	mg/kg	< 1.6	3.4	< 1.6	< 1.6		
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg						
Subcontracted Analysis									
mass before grinding	DETSC 3401#	0.1	g						
mass of removed material	DETSC 3401#	0.1	g						
mass after grinding	DETSC 3401#	0.1	g						
2,4,6-trinitrophenyl-N-methylnitramine (tetryl)	DETSC 3401#	1	mg/kg						
2,4,6-trinitrotoluene (2,4,6-TNT)	DETSC 3401#	0.5	mg/kg						
2,4-dinitrotoluene (2,4-DNT)	DETSC 3401#	1	mg/kg						
2,6-dinitrotoluene (2,6-DNT)	DETSC 3401#	1	mg/kg						
cyclo-1,3,5-trimethylene-2,4,6-trinitramine (hexogen, RDX)	DETSC 3401#	1	mg/kg						
cyclotetramethylenetetranitramine (HMX)	DETSC 3401#	1	mg/kg						
hexanitrostilbene (HNS)	DETSC 3401#	0.5	mg/kg						
pentaerythritol tetranitrate (PETN)	DETSC 3401#	5	mg/kg						
2,4,6-trinitrophenol (picric acid)	DETSC 3401#	0.1	mg/kg						
picrite (nitroguanidine)	DETSC 3401#	0.1	mg/kg						
ethylene glycol dinitrate (EGDN)	DETSC 3401#	0.1	mg/kg						
nitroglycerine (NG)	DETSC 3401#	0.1	mg/kg						
nitrocellulose (NC)	DETSC 3401#	5000	mg/kg						
chlorate	DETSC 3401#	1	mg/kg						
perchlorate	DETSC 3401#	0.5	mg/kg						
description of removed material	DETSC 3401#	n/a							

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-20813
Client Ref 4486
Contract Title Black Cats

				Lab No	2226700	2226704	2226705	2226706	2226707	2226708
				.Sample ID	TP333	TP301	TP336	TP328	TP335	TP301
				Depth	1.00	0.60	1.60	0.50	2.00	0.05
				Other ID	2	3	2	1	3	1
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	25/08/2023	24/08/2023	25/08/2023	25/08/2023	25/08/2023	24/08/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Preparation										
Stones >10mm	DETSC 1003*	1	% m/m	21	9.0	< 1.0	38	16	50
Moisture Content	DETSC 1004	0.1	%	13	14	20	9.4	11	1.1
Metals										
Antimony	DETSC 2301*	1	mg/kg						
Arsenic	DETSC 2301#	0.2	mg/kg	6.7	5.9	23	11	1.7	0.9
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.3	0.3	0.3	0.7	< 0.2	< 0.2
Cadmium	DETSC 2301#	0.1	mg/kg	0.6	0.6	0.3	0.2	< 0.1	0.5
Chromium	DETSC 2301#	0.15	mg/kg	22	27	16	16	8.8	< 0.15
Chromium III	DETSC 2301*	0.15	mg/kg	22	27	16	16	8.8	< 0.15
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	22	48	45	21	4.9	< 0.2
Lead	DETSC 2301#	0.3	mg/kg	60	39	71	47	7.3	< 0.3
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l	< 10	< 10	< 10	< 10	< 10	< 10
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	0.33	0.11	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	21	25	19	11	5.3	1.3
Potassium	DETSC 2301*	1	mg/kg						
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.5
Vanadium	DETSC 2301#	0.8	mg/kg	28	34	35	28	11	6.2
Zinc	DETSC 2301#	1	mg/kg	59	89	110	48	48	28
Inorganics										
pH	DETSC 2008#		pH	8.4	8.0	7.1	6.9	7.1	8.9
Calorific Value	DETSC 5008	1	MJ/kg						
Total Organic Carbon	DETSC 2084#	0.5	%	1.9	2.5	3.7	3.7	< 0.5	7.0
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l	2.6	1.4	16	2.0	2.5	5.2
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l	2.8	3.0	4.4	1.3	2.3	1.1
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	30	38	46	16	11	10
Sulphide	DETSC 2024*	10	mg/kg						
Sulphur as S, Total	DETSC 2320	0.01	%						
Petroleum Hydrocarbons										
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg						
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg						
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg						
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg						
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg						
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg						
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg						
Aliphatic C5-C35	DETSC 3072*	10	mg/kg						
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg						
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg						
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg						
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg						

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-20813
Client Ref 4486
Contract Title Black Cats

				Lab No	2226700	2226704	2226705	2226706	2226707	2226708
				.Sample ID	TP333	TP301	TP336	TP328	TP335	TP301
				Depth	1.00	0.60	1.60	0.50	2.00	0.05
				Other ID	2	3	2	1	3	1
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	25/08/2023	24/08/2023	25/08/2023	25/08/2023	25/08/2023	24/08/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg							
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg							
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg							
Aromatic C5-C35	DETSC 3072*	10	mg/kg							
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg							
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	15	< 10	91	
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	170	< 10	1500	
EPH (C16-C21)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	1600	< 10	4000	
EPH (C21-C35)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	3300	< 10	9700	
EPH (C35-C40)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	310	< 10	980	
EPH (C10-C40)	DETSC 3311#	10	mg/kg	< 10	< 10	< 10	5400	< 10	16000	
Benzene	DETSC 3321#	0.01	mg/kg							
Ethylbenzene	DETSC 3321#	0.01	mg/kg							
Toluene	DETSC 3321#	0.01	mg/kg							
Xylene	DETSC 3321#	0.01	mg/kg							
MTBE	DETSC 3321	0.01	mg/kg							
PAHs										
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	0.10	< 0.03	3.2	< 0.03	< 0.30	
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.20	< 0.03	< 0.30	
Acenaphthene	DETSC 3303#	0.03	mg/kg	0.05	0.29	< 0.03	6.7	< 0.03	< 0.30	
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	0.16	< 0.03	4.4	< 0.03	< 0.30	
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.33	1.7	< 0.03	51	0.11	0.46	
Anthracene	DETSC 3303	0.03	mg/kg	0.06	0.30	< 0.03	9.4	0.03	0.57	
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.62	2.3	< 0.03	61	0.15	0.41	
Pyrene	DETSC 3303#	0.03	mg/kg	0.59	2.0	< 0.03	54	0.14	3.2	
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.21	0.64	< 0.03	21	0.07	0.99	
Chrysene	DETSC 3303	0.03	mg/kg	0.28	0.84	< 0.03	23	0.07	1.1	
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.28	0.56	< 0.03	20	0.07	< 0.30	
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.13	0.26	< 0.03	6.7	0.04	< 0.30	
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.20	0.41	< 0.03	16	0.05	< 0.30	
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.12	0.14	< 0.03	4.3	0.03	< 0.30	
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	0.04	< 0.03	1.4	< 0.03	< 0.30	
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.13	0.14	< 0.03	5.1	0.03	< 0.30	
Naphthalene	DETSC 3301	0.1	mg/kg							
Acenaphthylene	DETSC 3301	0.1	mg/kg							
Acenaphthene	DETSC 3301	0.1	mg/kg							
Fluorene	DETSC 3301	0.1	mg/kg							
Phenanthrene	DETSC 3301	0.1	mg/kg							
Anthracene	DETSC 3301	0.1	mg/kg							
Fluoranthene	DETSC 3301	0.1	mg/kg							
Pyrene	DETSC 3301	0.1	mg/kg							

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-20813
Client Ref 4486
Contract Title Black Cats

				Lab No	2226700	2226704	2226705	2226706	2226707	2226708
				.Sample ID	TP333	TP301	TP336	TP328	TP335	TP301
				Depth	1.00	0.60	1.60	0.50	2.00	0.05
				Other ID	2	3	2	1	3	1
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	25/08/2023	24/08/2023	25/08/2023	25/08/2023	25/08/2023	24/08/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg							
Chrysene	DETSC 3301	0.1	mg/kg							
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg							
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg							
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg							
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg							
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg							
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg							
Coronene	DETSC 3301*	0.1	mg/kg							
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	3.0	9.9	< 0.10	290	0.73	6.7	
PAH 16 Total	DETSC 3301	1.6	mg/kg							
Phenols										
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg							
Subcontracted Analysis										
mass before grinding	DETSC 3401#	0.1	g							
mass of removed material	DETSC 3401#	0.1	g							
mass after grinding	DETSC 3401#	0.1	g							
2,4,6-trinitrophenyl-N-methylnitramine (tetryl)	DETSC 3401#	1	mg/kg							
2,4,6-trinitrotoluene (2,4,6-TNT)	DETSC 3401#	0.5	mg/kg							
2,4-dinitrotoluene (2,4-DNT)	DETSC 3401#	1	mg/kg							
2,6-dinitrotoluene (2,6-DNT)	DETSC 3401#	1	mg/kg							
cyclo-1,3,5-trimethylene-2,4,6-trinitramine (hexogen, RDX)	DETSC 3401#	1	mg/kg							
cyclotetramethylenetetranitramine (HMX)	DETSC 3401#	1	mg/kg							
hexanitrostilbene (HNS)	DETSC 3401#	0.5	mg/kg							
pentaerythritol tetranitrate (PETN)	DETSC 3401#	5	mg/kg							
2,4,6-trinitrophenol (picric acid)	DETSC 3401#	0.1	mg/kg							
picrite (nitroguanidine)	DETSC 3401#	0.1	mg/kg							
ethylene glycol dinitrate (EGDN)	DETSC 3401#	0.1	mg/kg							
nitroglycerine (NG)	DETSC 3401#	0.1	mg/kg							
nitrocellulose (NC)	DETSC 3401#	5000	mg/kg							
chlorate	DETSC 3401#	1	mg/kg							
perchlorate	DETSC 3401#	0.5	mg/kg							
description of removed material	DETSC 3401#	n/a								

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-20813
Client Ref 4486
Contract Title Black Cats

			Lab No	2226709	2226710
			.Sample ID	TP306	TP312
			Depth	0.40	0.50
			Other ID	1	3
			Sample Type	SOIL	SOIL
			Sampling Date	24/08/2023	24/08/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Preparation					
Stones >10mm	DETSC 1003*	1	% m/m	27	30
Moisture Content	DETSC 1004	0.1	%	11	11
Metals					
Antimony	DETSC 2301*	1	mg/kg		
Arsenic	DETSC 2301#	0.2	mg/kg	2.9	7.0
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.4	0.3
Cadmium	DETSC 2301#	0.1	mg/kg	0.3	0.4
Chromium	DETSC 2301#	0.15	mg/kg	8.5	17
Chromium III	DETSC 2301*	0.15	mg/kg	8.5	17
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	28	68
Lead	DETSC 2301#	0.3	mg/kg	31	64
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l	< 10	< 10
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	8.9	28
Potassium	DETSC 2301*	1	mg/kg		
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	14	22
Zinc	DETSC 2301#	1	mg/kg	88	4600
Inorganics					
pH	DETSC 2008#		pH	11.7	7.9
Calorific Value	DETSC 5008	1	MJ/kg		
Total Organic Carbon	DETSC 2084#	0.5	%	1.7	1.5
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l	21	2.0
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l	3.5	2.7
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	19	51
Sulphide	DETSC 2024*	10	mg/kg		
Sulphur as S, Total	DETSC 2320	0.01	%		
Petroleum Hydrocarbons					
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg		
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg		
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg		
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg		
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg		
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg		
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg		
Aliphatic C5-C35	DETSC 3072*	10	mg/kg		
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg		
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg		
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg		
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg		

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-20813
Client Ref 4486
Contract Title Black Cats

			Lab No	2226709	2226710
			.Sample ID	TP306	TP312
			Depth	0.40	0.50
			Other ID	1	3
			Sample Type	SOIL	SOIL
			Sampling Date	24/08/2023	24/08/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg		
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg		
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg		
Aromatic C5-C35	DETSC 3072*	10	mg/kg		
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg		
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg	< 0.1	< 0.1
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 10	< 10
EPH (C16-C21)	DETSC 3311	10	mg/kg	< 10	< 10
EPH (C21-C35)	DETSC 3311	10	mg/kg	< 10	< 10
EPH (C35-C40)	DETSC 3311	10	mg/kg	< 10	< 10
EPH (C10-C40)	DETSC 3311#	10	mg/kg	< 10	< 10
Benzene	DETSC 3321#	0.01	mg/kg		
Ethylbenzene	DETSC 3321#	0.01	mg/kg		
Toluene	DETSC 3321#	0.01	mg/kg		
Xylene	DETSC 3321#	0.01	mg/kg		
MTBE	DETSC 3321	0.01	mg/kg		
PAHs					
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	0.06	0.15
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	0.09
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.54	1.1
Anthracene	DETSC 3303	0.03	mg/kg	0.08	0.16
Fluoranthene	DETSC 3303#	0.03	mg/kg	1.1	1.5
Pyrene	DETSC 3303#	0.03	mg/kg	1.2	1.4
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.44	0.44
Chrysene	DETSC 3303	0.03	mg/kg	0.55	0.55
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.62	0.50
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.25	0.21
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.59	0.47
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.13	0.09
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	0.04	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.18	0.13
Naphthalene	DETSC 3301	0.1	mg/kg		
Acenaphthylene	DETSC 3301	0.1	mg/kg		
Acenaphthene	DETSC 3301	0.1	mg/kg		
Fluorene	DETSC 3301	0.1	mg/kg		
Phenanthrene	DETSC 3301	0.1	mg/kg		
Anthracene	DETSC 3301	0.1	mg/kg		
Fluoranthene	DETSC 3301	0.1	mg/kg		
Pyrene	DETSC 3301	0.1	mg/kg		

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-20813
Client Ref 4486
Contract Title Black Cats

			Lab No	2226709	2226710
			.Sample ID	TP306	TP312
			Depth	0.40	0.50
			Other ID	1	3
			Sample Type	SOIL	SOIL
			Sampling Date	24/08/2023	24/08/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg		
Chrysene	DETSC 3301	0.1	mg/kg		
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg		
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg		
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg		
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg		
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg		
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg		
Coronene	DETSC 3301*	0.1	mg/kg		
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	5.8	6.7
PAH 16 Total	DETSC 3301	1.6	mg/kg		
Phenols					
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg		
Subcontracted Analysis					
mass before grinding	DETSC 3401#	0.1	g		
mass of removed material	DETSC 3401#	0.1	g		
mass after grinding	DETSC 3401#	0.1	g		
2,4,6-trinitrophenyl-N-methylnitramine (tetryl)	DETSC 3401#	1	mg/kg		
2,4,6-trinitrotoluene (2,4,6-TNT)	DETSC 3401#	0.5	mg/kg		
2,4-dinitrotoluene (2,4-DNT)	DETSC 3401#	1	mg/kg		
2,6-dinitrotoluene (2,6-DNT)	DETSC 3401#	1	mg/kg		
cyclo-1,3,5-trimethylene-2,4,6-trinitramine (hexogen, RDX)	DETSC 3401#	1	mg/kg		
cyclotetramethylenetetranitramine (HMX)	DETSC 3401#	1	mg/kg		
hexanitrostilbene (HNS)	DETSC 3401#	0.5	mg/kg		
pentaerythritol tetranitrate (PETN)	DETSC 3401#	5	mg/kg		
2,4,6-trinitrophenol (picric acid)	DETSC 3401#	0.1	mg/kg		
picrite (nitroguanidine)	DETSC 3401#	0.1	mg/kg		
ethylene glycol dinitrate (EGDN)	DETSC 3401#	0.1	mg/kg		
nitroglycerine (NG)	DETSC 3401#	0.1	mg/kg		
nitrocellulose (NC)	DETSC 3401#	5000	mg/kg		
chlorate	DETSC 3401#	1	mg/kg		
perchlorate	DETSC 3401#	0.5	mg/kg		
description of removed material	DETSC 3401#	n/a			

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil VOC Samples

Our Ref 23-20813
Client Ref 4486
Contract Title Black Cats

			Lab No	2226676	2226677
			.Sample ID	TP306	TP322
			Depth	0.55	0.60
			Other ID	2	2
			Sample Type	SOIL	SOIL
			Sampling Date	24/08/2023	25/08/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
VOCs					
Vinyl Chloride	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,1 Dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Trans-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,1-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Cis-1,2-dichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
2,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Bromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Chloroform	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,1,1-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,1-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Carbon tetrachloride	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Benzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,2-dichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Trichloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,2-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Dibromomethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Bromodichloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
cis-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Toluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
trans-1,3-dichloropropene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,1,2-trichloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Tetrachloroethylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,3-dichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Dibromochloromethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,2-dibromoethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Chlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,1,1,2-tetrachloroethane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Ethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
m+p-Xylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
o-Xylene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Styrene	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01
Bromoform	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Isopropylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Bromobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,2,3-trichloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
n-propylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
2-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,3,5-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
4-chlorotoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Tert-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,2,4-trimethylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01

Key: * -not accredited. n/s -not supplied.

Summary of Chemical Analysis
Soil VOC Samples

Our Ref 23-20813
Client Ref 4486
Contract Title Black Cats

			Lab No	2226676	2226677
			.Sample ID	TP306	TP322
			Depth	0.55	0.60
			Other ID	2	2
			Sample Type	SOIL	SOIL
			Sampling Date	24/08/2023	25/08/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
sec-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
p-isopropyltoluene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,3-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,4-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
n-butylbenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,2-dichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,2-dibromo-3-chloropropane	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,2,4-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
Hexachlorobutadiene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
1,2,3-trichlorobenzene	DETSC 3431	0.01	mg/kg	< 0.01	< 0.01
MTBE	DETSC 3431*	0.01	mg/kg	< 0.01	< 0.01

Key: * -not accredited. n/s -not supplied.

Summary of Asbestos Analysis
Soil Samples

Our Ref 23-20813
Client Ref 4486
Contract Title Black Cats

Lab No	Sample ID	Sample Location	Material Type*	Result	Comment*	Analyst
2226676	TP306 2 0.55		SOIL	Chrysotile Amosite	Bundles of Chrysotile fibres & Amosite bundle	Keith Wilson
2226677	TP322 2 0.60		SOIL	Chrysotile	Bundle of Chrysotile fibres	Keith Wilson
2226678	TP326 3 0.50		SOIL	NAD	none	Keith Wilson
2226679	TP327 2 1.50		SOIL	NAD	none	Keith Wilson
2226680	TP340 1 0.20		SOIL	NAD	none	Keith Wilson
2226681	TP301 2 0.60		SOIL	Chrysotile	Bundles of Chrysotile fibres	Keith Wilson
2226682	TP303 1 0.10		SOIL	NAD	none	Keith Wilson
2226683	TP309 1 0.80		SOIL	NAD	none	Keith Wilson
2226684	TP317 1 0.60		SOIL	NAD	none	Keith Wilson
2226685	TP319 1 0.30		SOIL	NAD	none	Keith Wilson
2226686	TP324 2 0.15		SOIL	NAD	none	Keith Wilson
2226687	TP327 1 0.30		SOIL	NAD	none	Keith Wilson
2226688	TP330 1 0.40		SOIL	NAD	none	Keith Wilson
2226689	TP332 1 0.40		SOIL	NAD	none	Keith Wilson
2226690	TP338 2 0.20		SOIL	NAD	none	Keith Wilson
2226691	TP313 2 0.70		SOIL	NAD	none	Keith Wilson
2226692	TP323 1 0.40		SOIL	NAD	none	Keith Wilson
2226698	TP308 2 1.00		SOIL	NAD	none	Keith Wilson
2226699	TP332 2 1.40		SOIL	NAD	none	Keith Wilson
2226700	TP333 2 1.00		SOIL	NAD	none	Keith Wilson
2226701	TP308 1 0.60		Cement	Chrysotile	none	Keith Wilson
2226702	TP312 2 0.20		Cement	Chrysotile	none	Keith Wilson
2226703	TP334 2 1.60		SOIL	NAD	none	Keith Wilson
2226704	TP301 3 0.60		SOIL	NAD	none	Keith Wilson
2226705	TP336 2 1.60		SOIL	NAD	none	Keith Wilson
2226706	TP328 1 0.50		SOIL	NAD	none	Keith Wilson
2226707	TP335 3 2.00		SOIL	NAD	none	Keith Wilson
2226708	TP301 1 0.05		SOIL	NAD	none	Keith Wilson
2226709	TP306 1 0.40		SOIL	Chrysotile	Bundles of Chrysotile fibres	Keith Wilson
2226710	TP312 3 0.50		SOIL	NAD	none	Keith Wilson

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 23-20813
Client Ref 4486
Contract Black Cats

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2226676	TP306 0.55 SOIL	24/08/23	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days), VOC (7 days)	
2226677	TP322 0.60 SOIL	25/08/23	GJ 250ml, GJ 60ml, PT 1L		
2226678	TP326 0.50 SOIL	25/08/23	GJ 250ml, GJ 60ml, PT 1L		
2226679	TP327 1.50 SOIL	25/08/23	GJ 250ml, GJ 60ml, PT 1L		
2226680	TP340 0.20 SOIL	25/08/23	GJ 250ml, GJ 60ml, PT 1L		
2226681	TP301 0.60 SOIL	24/08/23	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2226682	TP303 0.10 SOIL	24/08/23	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2226683	TP309 0.80 SOIL	24/08/23	GJ 250ml, GJ 60ml, PT 1L	Total Sulphur ICP (7 days), pH + Conductivity (7 days)	
2226684	TP317 0.60 SOIL	24/08/23	GJ 250ml, GJ 60ml, PT 1L	Total Sulphur ICP (7 days), pH + Conductivity (7 days)	
2226685	TP319 0.30 SOIL	24/08/23	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2226686	TP324 0.15 SOIL	25/08/23	GJ 250ml, GJ 60ml, PT 1L		
2226687	TP327 0.30 SOIL	25/08/23	GJ 250ml, GJ 60ml, PT 1L		
2226688	TP330 0.40 SOIL	25/08/23	GJ 250ml, GJ 60ml, PT 1L		
2226689	TP332 0.40 SOIL	25/08/23	GJ 250ml, GJ 60ml, PT 1L		
2226690	TP338 0.20 SOIL	25/08/23	GJ 250ml, GJ 60ml, PT 1L		
2226691	TP313 0.70 SOIL	24/08/23	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2226692	TP323 0.40 SOIL	24/08/23	GJ 250ml, GJ 60ml, PT 1L	Total Sulphur ICP (7 days), pH + Conductivity (7 days)	
2226693	TP305 0.05 SOIL	24/08/23	GJ 250ml, GJ 60ml, PT 1L		
2226694	TP312 0.05 SOIL	24/08/23	GJ 250ml, GJ 60ml, PT 1L		
2226695	TP324 0.05 SOIL	25/08/23	GJ 250ml, GJ 60ml, PT 1L		
2226696	TP326 0.05 SOIL	25/08/23	GJ 250ml, GJ 60ml, PT 1L		
2226697	TP339 0.05 SOIL	25/08/23	GJ 250ml, GJ 60ml, PT 1L		
2226698	TP308 1.00 SOIL	24/08/23	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2226699	TP332 1.40 SOIL	25/08/23	GJ 250ml, GJ 60ml, PT 1L		
2226700	TP333 1.00 SOIL	25/08/23	GJ 250ml, GJ 60ml, PT 1L		
2226701	TP308 0.60 MISC	25/08/23	GJ 250ml, GJ 60ml, PT 1L		
2226702	TP312 0.20 MISC	24/08/23	GJ 250ml, GJ 60ml, PT 1L		
2226703	TP334 1.60 SOIL	25/08/23	GJ 250ml, GJ 60ml, PT 1L		
2226704	TP301 0.60 SOIL	24/08/23	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2226705	TP336 1.60 SOIL	25/08/23	GJ 250ml, GJ 60ml, PT 1L		
2226706	TP328 0.50 SOIL	25/08/23	GJ 250ml, GJ 60ml, PT 1L		
2226707	TP335 2.00 SOIL	25/08/23	GJ 250ml, GJ 60ml, PT 1L		
2226708	TP301 0.05 SOIL	24/08/23	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2226709	TP306 0.40 SOIL	24/08/23	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2226710	TP312 0.50 SOIL	24/08/23	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Information in Support of the Analytical Results

Our Ref 23-20813
Client Ref 4486
Contract Black Cats

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.
Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	23-21123	*Issued:*	17-Oct-23

Client Lithos Consulting Ltd
Parkhill
Walton Rd
Wetherby
LS22 5DZ

Our Reference	23-21123
Client Reference	4486
Order No	21171/4486/CC
Contract Title	Black Cats
Description	73 Soil samples, 3 Misc samples.
Date Received	06-Sep-23
Date Started	06-Sep-23
Date Completed	17-Oct-23
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. 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 By

Kirk Bridgewood
General Manager

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

				Lab No	2228849	2228850	2228851	2228852	2228853	2228854
				.Sample ID	TP341	TP343	TP349	TP350	TP353	TP374
				Depth	0.30	0.50	0.40	0.15	0.40	0.30
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	01/09/2023	01/09/2023	01/09/2023	01/09/2023	01/09/2023	01/09/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Preparation										
Stones >10mm	DETSC 1003*	1	% m/m	20	24	7.0	9.0	10	8.0
Moisture Content	DETSC 1004	0.1	%	13	11	13	14	14	12
Metals										
Antimony	DETSC 2301*	1	mg/kg		4.8				
Arsenic	DETSC 2301#	0.2	mg/kg	55	39	74	35	24	51
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.8	0.5	0.5	0.4	0.7	0.6
Cadmium	DETSC 2301#	0.1	mg/kg	0.4	0.2	0.8	0.4	0.3	0.3
Chromium	DETSC 2301#	0.15	mg/kg	810	46	63	29	35	110
Chromium III	DETSC 2301*	0.15	mg/kg	810	46	63	29	35	110
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	3900	140	660	200	350	1200
Lead	DETSC 2301#	0.3	mg/kg	280	120	460	120	140	210
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l	< 10		< 10		< 10	
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	0.07	0.38	0.08	0.11	1.7
Nickel	DETSC 2301#	1	mg/kg	1800	79	120	55	36	230
Potassium	DETSC 2301*	1	mg/kg		1300				
Selenium	DETSC 2301#	0.5	mg/kg	6.7	0.7	0.7	0.8	< 0.5	0.9
Vanadium	DETSC 2301#	0.8	mg/kg	250	62	49	58	36	73
Zinc	DETSC 2301#	1	mg/kg	840	100	360	2400	250	330
Inorganics										
pH	DETSC 2008#		pH	8.8	7.9	6.6	7.9	8.3	8.7
Calorific Value	DETSC 5008	1	MJ/kg	3.9	< 1.0	2.3	3.9		< 1.0
Total Organic Carbon	DETSC 2084#	0.5	%	5.4	6.2	6.6	12	3.7	7.8
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l	3.8		3.4		2.8	
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l	1.7		16		7.6	
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	82		36		49	
Sulphide	DETSC 2024*	10	mg/kg	79	59		63		44
Sulphur as S, Total	DETSC 2320	0.01	%	0.08	0.11		0.11		0.11
Petroleum Hydrocarbons										
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 10	< 10	13	< 10	< 10	< 10
EPH (C16-C21)	DETSC 3311	10	mg/kg	< 10	< 10	63	13	83	20
EPH (C21-C35)	DETSC 3311	10	mg/kg	23	< 10	220	420	240	110
EPH (C35-C40)	DETSC 3311	10	mg/kg	< 10	< 10	17	170	22	13
EPH (C10-C40)	DETSC 3311#	10	mg/kg	35	< 10	310	600	350	150
PAHs										
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.83	< 0.03	0.83	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.08	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.55	< 0.03	1.1	0.04
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	0.54	< 0.03	0.86	< 0.03

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

				Lab No	2228849	2228850	2228851	2228852	2228853	2228854
				.Sample ID	TP341	TP343	TP349	TP350	TP353	TP374
				Depth	0.30	0.50	0.40	0.15	0.40	0.30
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	01/09/2023	01/09/2023	01/09/2023	01/09/2023	01/09/2023	01/09/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	0.11	3.2	0.09	7.3	0.32
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	0.74	< 0.03	2.0	0.07
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.03	0.15	4.0	0.17	8.7	0.55
Pyrene	DETSC 3303#	0.03	mg/kg	0.03	0.14	3.6	0.17	8.0	0.54
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	0.05	1.7	0.06	3.2	0.21
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	0.06	1.7	0.11	3.0	0.23
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	0.07	1.8	0.08	2.7	0.24
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	0.06	0.67	< 0.03	1.1	0.09
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	0.03	1.4	0.06	2.2	0.20
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.57	< 0.03	0.78	0.10
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.18	< 0.03	0.26	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.67	0.03	0.89	0.11
Naphthalene	DETSC 3301	0.1	mg/kg						
Acenaphthylene	DETSC 3301	0.1	mg/kg						
Acenaphthene	DETSC 3301	0.1	mg/kg						
Fluorene	DETSC 3301	0.1	mg/kg						
Phenanthrene	DETSC 3301	0.1	mg/kg						
Anthracene	DETSC 3301	0.1	mg/kg						
Fluoranthene	DETSC 3301	0.1	mg/kg						
Pyrene	DETSC 3301	0.1	mg/kg						
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg						
Chrysene	DETSC 3301	0.1	mg/kg						
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg						
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg						
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg						
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg						
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg						
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg						
Coronene	DETSC 3301*	0.1	mg/kg						
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	< 0.10	0.65	22	0.74	43	2.7
PAH 16 Total	DETSC 3301	1.6	mg/kg						
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg		1.7				
Subcontracted Analysis									
mass before grinding	DETSC 3401#	0.1	g						
mass of removed material	DETSC 3401#	0.1	g						
mass after grinding	DETSC 3401#	0.1	g						
2,4,6-trinitrophenyl-N-methylnitramine (tetryl)	DETSC 3401#	1	mg/kg						
2,4,6-trinitrotoluene (2,4,6-TNT)	DETSC 3401#	0.5	mg/kg						
2,4-dinitrotoluene (2,4-DNT)	DETSC 3401#	1	mg/kg						
2,6-dinitrotoluene (2,6-DNT)	DETSC 3401#	1	mg/kg						
cyclo-1,3,5-trimethylene-2,4,6-trinitramine (hexogen, RDX)	DETSC 3401#	1	mg/kg						

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

			Lab No	2228849	2228850	2228851	2228852	2228853	2228854
			.Sample ID	TP341	TP343	TP349	TP350	TP353	TP374
			Depth	0.30	0.50	0.40	0.15	0.40	0.30
			Other ID						
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	01/09/2023	01/09/2023	01/09/2023	01/09/2023	01/09/2023	01/09/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
cyclotetramethylenetetranitramine (HMX)	DETSC 3401#	1	mg/kg						
hexanitrostilbene (HNS)	DETSC 3401#	0.5	mg/kg						
pentaerythritol tetranitrate (PETN)	DETSC 3401#	5	mg/kg						
2,4,6-trinitrophenol (picric acid)	DETSC 3401#	0.1	mg/kg						
picrite (nitroguanidine)	DETSC 3401#	0.1	mg/kg						
ethylene glycol dinitrate (EGDN)	DETSC 3401#	0.1	mg/kg						
nitroglycerine (NG)	DETSC 3401#	0.1	mg/kg						
nitrocellulose (NC)	DETSC 3401#	5000	mg/kg						
chlorate	DETSC 3401#	1	mg/kg						
perchlorate	DETSC 3401#	0.5	mg/kg						
description of removed material	DETSC 3401#	n/a							

Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

				Lab No	2228855	2228856	2228857	2228858	2228859	2228860
				.Sample ID	TP410	TT301N	TP314	TP348	TP349	TP351
				Depth	3.20	0.40	0.70	0.10	0.40	0.30
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	01/09/2023	01/09/2023	01/09/2023	01/09/2023	01/09/2023	01/09/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Preparation										
Stones >10mm	DETSC 1003*	1	% m/m	5.0	11	4.0	1.0	6.0	12
Moisture Content	DETSC 1004	0.1	%	20	13	17	28	16	5.1
Metals										
Antimony	DETSC 2301*	1	mg/kg				5.5		
Arsenic	DETSC 2301#	0.2	mg/kg	70	36	35	18	53	
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	1.9	1.2	0.5	0.6	0.4	
Cadmium	DETSC 2301#	0.1	mg/kg	0.7	0.3	0.4	0.5	0.8	
Chromium	DETSC 2301#	0.15	mg/kg	470	86	35	24	44	
Chromium III	DETSC 2301*	0.15	mg/kg	470	86	35	24	44	
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Copper	DETSC 2301#	0.2	mg/kg	2800	320	160	77	160	
Lead	DETSC 2301#	0.3	mg/kg	1100	120	280	110	230	
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l	< 10		< 10			< 10
Mercury	DETSC 2325#	0.05	mg/kg	0.47	0.12	0.49	0.23	0.33	
Nickel	DETSC 2301#	1	mg/kg	800	79	36	24	36	
Potassium	DETSC 2301*	1	mg/kg				630		
Selenium	DETSC 2301#	0.5	mg/kg	5.0	1.1	0.6	< 0.5	0.6	
Vanadium	DETSC 2301#	0.8	mg/kg	170	130	42	29	42	
Zinc	DETSC 2301#	1	mg/kg	400	95	180	240	290	
Inorganics										
pH	DETSC 2008#		pH	8.6	7.7	7.8	7.6	7.8	
Calorific Value	DETSC 5008	1	MJ/kg		2.3				
Total Organic Carbon	DETSC 2084#	0.5	%	11	9.6	6.5	6.5	7.2	
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l	7.0		4.6			4.9
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l	5.0		2.9			< 1.0
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	110		37			22
Sulphide	DETSC 2024*	10	mg/kg			36	24		
Sulphur as S, Total	DETSC 2320	0.01	%			0.04	0.05		
Petroleum Hydrocarbons										
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	
EPH (C12-C16)	DETSC 3311	10	mg/kg	23	< 10	< 10	< 10	11	
EPH (C16-C21)	DETSC 3311	10	mg/kg	300	36	39	14	95	
EPH (C21-C35)	DETSC 3311	10	mg/kg	2400	160	100	100	270	
EPH (C35-C40)	DETSC 3311	10	mg/kg	240	40	12	28	20	
EPH (C10-C40)	DETSC 3311#	10	mg/kg	2900	240	160	150	400	
PAHs										
Naphthalene	DETSC 3303#	0.03	mg/kg	0.10	0.03	0.41	< 0.03	1.0	
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	
Acenaphthene	DETSC 3303#	0.03	mg/kg	0.34	0.04	0.58	0.04	1.3	
Fluorene	DETSC 3303	0.03	mg/kg	0.20	< 0.03	0.43	< 0.03	0.93	

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

				Lab No	2228855	2228856	2228857	2228858	2228859	2228860
				.Sample ID	TP410	TT301N	TP314	TP348	TP349	TP351
				Depth	3.20	0.40	0.70	0.10	0.40	0.30
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	01/09/2023	01/09/2023	01/09/2023	01/09/2023	01/09/2023	01/09/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Phenanthrene	DETSC 3303#	0.03	mg/kg	2.1	0.30	3.0	0.29	5.6	
Anthracene	DETSC 3303	0.03	mg/kg	0.50	0.06	0.77	0.05	1.5	
Fluoranthene	DETSC 3303#	0.03	mg/kg	3.0	0.53	3.0	0.47	5.8	
Pyrene	DETSC 3303#	0.03	mg/kg	2.7	0.45	2.6	0.38	5.1	
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	1.0	0.19	1.0	0.16	1.9	
Chrysene	DETSC 3303	0.03	mg/kg	0.99	0.20	1.0	0.18	2.0	
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.68	0.16	0.69	0.15	1.3	
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.28	0.07	0.23	0.05	0.48	
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.62	0.14	0.60	0.12	1.2	
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.18	0.05	0.17	0.05	0.34	
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	0.06	< 0.03	0.06	< 0.03	0.11	
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.24	0.06	0.20	0.07	0.42	
Naphthalene	DETSC 3301	0.1	mg/kg						
Acenaphthylene	DETSC 3301	0.1	mg/kg						
Acenaphthene	DETSC 3301	0.1	mg/kg						
Fluorene	DETSC 3301	0.1	mg/kg						
Phenanthrene	DETSC 3301	0.1	mg/kg						
Anthracene	DETSC 3301	0.1	mg/kg						
Fluoranthene	DETSC 3301	0.1	mg/kg						
Pyrene	DETSC 3301	0.1	mg/kg						
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg						
Chrysene	DETSC 3301	0.1	mg/kg						
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg						
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg						
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg						
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg						
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg						
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg						
Coronene	DETSC 3301*	0.1	mg/kg						
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	13	2.3	15	2.0	29	
PAH 16 Total	DETSC 3301	1.6	mg/kg						
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg				2.2		
Subcontracted Analysis									
mass before grinding	DETSC 3401#	0.1	g				62.5		
mass of removed material	DETSC 3401#	0.1	g				3.7		
mass after grinding	DETSC 3401#	0.1	g				58.5		
2,4,6-trinitrophenyl-N-methylnitramine (tetryl)	DETSC 3401#	1	mg/kg				< 1.00		
2,4,6-trinitrotoluene (2,4,6-TNT)	DETSC 3401#	0.5	mg/kg				< 0.50		
2,4-dinitrotoluene (2,4-DNT)	DETSC 3401#	1	mg/kg				< 1.00		
2,6-dinitrotoluene (2,6-DNT)	DETSC 3401#	1	mg/kg				< 1.00		
cyclo-1,3,5-trimethylene-2,4,6-trinitramine (hexogen, RDX)	DETSC 3401#	1	mg/kg				< 1.00		

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

			Lab No	2228855	2228856	2228857	2228858	2228859	2228860
			.Sample ID	TP410	TT301N	TP314	TP348	TP349	TP351
			Depth	3.20	0.40	0.70	0.10	0.40	0.30
			Other ID						
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	01/09/2023	01/09/2023	01/09/2023	01/09/2023	01/09/2023	01/09/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
cyclotetramethylenetetranitramine (HMX)	DETSC 3401#	1	mg/kg				< 1.00		
hexanitrostilbene (HNS)	DETSC 3401#	0.5	mg/kg				< 0.50		
pentaerythritol tetranitrate (PETN)	DETSC 3401#	5	mg/kg				< 5.00		
2,4,6-trinitrophenol (picric acid)	DETSC 3401#	0.1	mg/kg				< 0.10		
picrite (nitroguanidine)	DETSC 3401#	0.1	mg/kg				< 0.10		
ethylene glycol dinitrate (EGDN)	DETSC 3401#	0.1	mg/kg				< 0.10		
nitroglycerine (NG)	DETSC 3401#	0.1	mg/kg				< 0.10		
nitrocellulose (NC)	DETSC 3401#	5000	mg/kg				< 5000		
chlorate	DETSC 3401#	1	mg/kg				< 1.00		
perchlorate	DETSC 3401#	0.5	mg/kg				< 0.50		
description of removed material	DETSC 3401#	n/a					Rocks, hardened soil (TC)		

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

Test	Method	LOD	Units						
Lab No				2228861	2228862	2228863	2228864	2228865	2228866
.Sample ID				TP360	TP364	TP376	TP380	TP381	TP382
Depth				0.35	0.40	0.30	0.30	0.20	0.20
Other ID									
Sample Type				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date				01/09/2023	01/09/2023	29/08/2023	29/08/2023	29/08/2023	29/08/2023
Sampling Time				n/s	n/s	n/s	n/s	n/s	n/s
Preparation									
Stones >10mm	DETSC 1003*	1	% m/m	5.0	31	9.0		2.0	8.0
Moisture Content	DETSC 1004	0.1	%	13	12	13		15	9.2
Metals									
Antimony	DETSC 2301*	1	mg/kg						
Arsenic	DETSC 2301#	0.2	mg/kg	14		10		20	18
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.5		0.2		0.7	< 0.2
Cadmium	DETSC 2301#	0.1	mg/kg	0.4		0.4		0.5	0.4
Chromium	DETSC 2301#	0.15	mg/kg	20		17		24	62
Chromium III	DETSC 2301*	0.15	mg/kg	20		17		24	62
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0		< 1.0		< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	40		40		95	43
Lead	DETSC 2301#	0.3	mg/kg	89		53		160	35
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l		< 10			< 10	< 10
Mercury	DETSC 2325#	0.05	mg/kg	0.17		0.10		0.36	0.08
Nickel	DETSC 2301#	1	mg/kg	17		15		29	24
Potassium	DETSC 2301*	1	mg/kg						
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5		< 0.5		< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	28		21		35	30
Zinc	DETSC 2301#	1	mg/kg	120		190		130	93
Inorganics									
pH	DETSC 2008#		pH	7.8		8.6		7.7	8.3
Calorific Value	DETSC 5008	1	MJ/kg						
Total Organic Carbon	DETSC 2084#	0.5	%	3.2		1.9		6.2	3.4
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l		2.0			3.6	2.1
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l		< 1.0			10	< 1.0
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l		13			12	< 10
Sulphide	DETSC 2024*	10	mg/kg	< 10			32		
Sulphur as S, Total	DETSC 2320	0.01	%	0.03			0.01		
Petroleum Hydrocarbons									
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg	< 0.1		< 0.1		< 0.1	< 0.1
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10		< 10		< 10	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 10		< 10		69	34
EPH (C16-C21)	DETSC 3311	10	mg/kg	< 10		< 10		610	450
EPH (C21-C35)	DETSC 3311	10	mg/kg	80		84		1200	1200
EPH (C35-C40)	DETSC 3311	10	mg/kg	28		18		110	110
EPH (C10-C40)	DETSC 3311#	10	mg/kg	110		110		2000	1800
PAHs									
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03		< 0.03		0.81	0.24
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03		< 0.03		0.04	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	0.04		< 0.03		2.8	2.5
Fluorene	DETSC 3303	0.03	mg/kg	0.04		< 0.03		1.9	1.3

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

				Lab No	2228861	2228862	2228863	2228864	2228865	2228866
				.Sample ID	TP360	TP364	TP376	TP380	TP381	TP382
				Depth	0.35	0.40	0.30	0.30	0.20	0.20
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	01/09/2023	01/09/2023	29/08/2023	29/08/2023	29/08/2023	29/08/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.38		0.11		17	16
Anthracene	DETSC 3303	0.03	mg/kg	0.05		< 0.03		4.0	3.3
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.73		0.20		19	23
Pyrene	DETSC 3303#	0.03	mg/kg	0.66		0.16		18	24
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.28		0.08		6.4	7.5
Chrysene	DETSC 3303	0.03	mg/kg	0.31		0.08		7.7	8.4
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.28		0.06		5.8	5.8
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.11		< 0.03		2.3	2.1
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.20		0.05		5.1	5.0
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.06		< 0.03		1.7	1.5
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03		< 0.03		0.50	0.54
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.08		< 0.03		2.0	2.0
Naphthalene	DETSC 3301	0.1	mg/kg						
Acenaphthylene	DETSC 3301	0.1	mg/kg						
Acenaphthene	DETSC 3301	0.1	mg/kg						
Fluorene	DETSC 3301	0.1	mg/kg						
Phenanthrene	DETSC 3301	0.1	mg/kg						
Anthracene	DETSC 3301	0.1	mg/kg						
Fluoranthene	DETSC 3301	0.1	mg/kg						
Pyrene	DETSC 3301	0.1	mg/kg						
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg						
Chrysene	DETSC 3301	0.1	mg/kg						
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg						
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg						
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg						
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg						
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg						
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg						
Coronene	DETSC 3301*	0.1	mg/kg						
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	3.2		0.74		96	100
PAH 16 Total	DETSC 3301	1.6	mg/kg						
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg						
Subcontracted Analysis									
mass before grinding	DETSC 3401#	0.1	g						
mass of removed material	DETSC 3401#	0.1	g						
mass after grinding	DETSC 3401#	0.1	g						
2,4,6-trinitrophenyl-N-methylnitramine (tetryl)	DETSC 3401#	1	mg/kg						
2,4,6-trinitrotoluene (2,4,6-TNT)	DETSC 3401#	0.5	mg/kg						
2,4-dinitrotoluene (2,4-DNT)	DETSC 3401#	1	mg/kg						
2,6-dinitrotoluene (2,6-DNT)	DETSC 3401#	1	mg/kg						
cyclo-1,3,5-trimethylene-2,4,6-trinitramine (hexogen, RDX)	DETSC 3401#	1	mg/kg						

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

			Lab No	2228861	2228862	2228863	2228864	2228865	2228866
			.Sample ID	TP360	TP364	TP376	TP380	TP381	TP382
			Depth	0.35	0.40	0.30	0.30	0.20	0.20
			Other ID						
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	01/09/2023	01/09/2023	29/08/2023	29/08/2023	29/08/2023	29/08/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
cyclotetramethylenetetranitramine (HMX)	DETSC 3401#	1	mg/kg						
hexanitrostilbene (HNS)	DETSC 3401#	0.5	mg/kg						
pentaerythritol tetranitrate (PETN)	DETSC 3401#	5	mg/kg						
2,4,6-trinitrophenol (picric acid)	DETSC 3401#	0.1	mg/kg						
picrite (nitroguanidine)	DETSC 3401#	0.1	mg/kg						
ethylene glycol dinitrate (EGDN)	DETSC 3401#	0.1	mg/kg						
nitroglycerine (NG)	DETSC 3401#	0.1	mg/kg						
nitrocellulose (NC)	DETSC 3401#	5000	mg/kg						
chlorate	DETSC 3401#	1	mg/kg						
perchlorate	DETSC 3401#	0.5	mg/kg						
description of removed material	DETSC 3401#	n/a							

Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

				Lab No	2228867	2228868	2228869	2228870	2228871	2228872
				.Sample ID	TP383	TP383	TP385	TP390	TP390	TP391W
				Depth	0.10	0.60	0.50	0.70	1.50	0.90
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	29/08/2023	29/08/2023	29/08/2023	29/08/2023	29/08/2023	29/08/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Preparation										
Stones >10mm	DETSC 1003*	1	% m/m		12	22	4.0	20	17
Moisture Content	DETSC 1004	0.1	%		13	14	23	14	20
Metals										
Antimony	DETSC 2301*	1	mg/kg	31					
Arsenic	DETSC 2301#	0.2	mg/kg		25	6.7	42	12	23
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg		0.3	< 0.2	2.3	2.8	3.2
Cadmium	DETSC 2301#	0.1	mg/kg		2.9	0.5	2.1	2.9	1.9
Chromium	DETSC 2301#	0.15	mg/kg		37	11	48	47	38
Chromium III	DETSC 2301*	0.15	mg/kg		37	11	48	47	38
Chromium, Hexavalent	DETSC 2204*	1	mg/kg		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg		2400	32	580	410	1300
Lead	DETSC 2301#	0.3	mg/kg		990	72	370	220	320
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l		< 10		< 10		11
Mercury	DETSC 2325#	0.05	mg/kg		0.74	< 0.05	0.48	0.12	0.08
Nickel	DETSC 2301#	1	mg/kg		40	13	33	35	51
Potassium	DETSC 2301*	1	mg/kg	1300					
Selenium	DETSC 2301#	0.5	mg/kg		< 0.5	< 0.5	0.7	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg		25	15	31	37	23
Zinc	DETSC 2301#	1	mg/kg		1400	100	660	310	1300
Inorganics										
pH	DETSC 2008#		pH		7.9	8.9	8.3	9.0	8.0
Calorific Value	DETSC 5008	1	MJ/kg						
Total Organic Carbon	DETSC 2084#	0.5	%		3.2	1.6	5.5	1.8	6.0
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l		5.0		13		20
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l		2.0		1.9		8.4
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l		13		55		84
Sulphide	DETSC 2024*	10	mg/kg	59		20			28
Sulphur as S, Total	DETSC 2320	0.01	%	0.06		0.03			0.10
Petroleum Hydrocarbons										
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
EPH (C10-C12)	DETSC 3311	10	mg/kg		< 10	< 10	< 10	< 10	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg		< 10	< 10	< 10	< 10	< 10
EPH (C16-C21)	DETSC 3311	10	mg/kg		62	< 10	20	< 10	< 10
EPH (C21-C35)	DETSC 3311	10	mg/kg		170	23	60	79	< 10
EPH (C35-C40)	DETSC 3311	10	mg/kg		12	< 10	< 10	22	< 10
EPH (C10-C40)	DETSC 3311#	10	mg/kg		250	36	91	110	< 10
PAHs										
Naphthalene	DETSC 3303#	0.03	mg/kg		0.12	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg		< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg		0.48	< 0.03	0.04	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg		0.34	< 0.03	< 0.03	< 0.03	< 0.03

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

				Lab No	2228867	2228868	2228869	2228870	2228871	2228872
				.Sample ID	TP383	TP383	TP385	TP390	TP390	TP391W
				Depth	0.10	0.60	0.50	0.70	1.50	0.90
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	29/08/2023	29/08/2023	29/08/2023	29/08/2023	29/08/2023	29/08/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Phenanthrene	DETSC 3303#	0.03	mg/kg		2.8	0.17	0.26	0.07	0.07
Anthracene	DETSC 3303	0.03	mg/kg		0.72	0.03	0.06	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg		3.4	0.24	0.34	0.10	0.09
Pyrene	DETSC 3303#	0.03	mg/kg		3.0	0.19	0.27	0.09	0.08
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg		1.2	0.08	0.10	0.04	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg		1.3	0.08	0.09	0.04	0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg		1.0	0.05	0.06	< 0.03	0.04
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg		0.42	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg		0.97	0.04	0.05	< 0.03	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg		0.31	< 0.03	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg		0.09	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg		0.37	< 0.03	< 0.03	< 0.03	< 0.03
Naphthalene	DETSC 3301	0.1	mg/kg						
Acenaphthylene	DETSC 3301	0.1	mg/kg						
Acenaphthene	DETSC 3301	0.1	mg/kg						
Fluorene	DETSC 3301	0.1	mg/kg						
Phenanthrene	DETSC 3301	0.1	mg/kg						
Anthracene	DETSC 3301	0.1	mg/kg						
Fluoranthene	DETSC 3301	0.1	mg/kg						
Pyrene	DETSC 3301	0.1	mg/kg						
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg						
Chrysene	DETSC 3301	0.1	mg/kg						
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg						
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg						
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg						
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg						
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg						
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg						
Coronene	DETSC 3301*	0.1	mg/kg						
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg		17	0.85	1.3	0.34	0.24
PAH 16 Total	DETSC 3301	1.6	mg/kg						
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	1.9					
Subcontracted Analysis									
mass before grinding	DETSC 3401#	0.1	g						
mass of removed material	DETSC 3401#	0.1	g						
mass after grinding	DETSC 3401#	0.1	g						
2,4,6-trinitrophenyl-N-methylnitramine (tetryl)	DETSC 3401#	1	mg/kg						
2,4,6-trinitrotoluene (2,4,6-TNT)	DETSC 3401#	0.5	mg/kg						
2,4-dinitrotoluene (2,4-DNT)	DETSC 3401#	1	mg/kg						
2,6-dinitrotoluene (2,6-DNT)	DETSC 3401#	1	mg/kg						
cyclo-1,3,5-trimethylene-2,4,6-trinitramine (hexogen, RDX)	DETSC 3401#	1	mg/kg						

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

			Lab No	2228867	2228868	2228869	2228870	2228871	2228872
			.Sample ID	TP383	TP383	TP385	TP390	TP390	TP391W
			Depth	0.10	0.60	0.50	0.70	1.50	0.90
			Other ID						
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	29/08/2023	29/08/2023	29/08/2023	29/08/2023	29/08/2023	29/08/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
cyclotetramethylenetetranitramine (HMX)	DETSC 3401#	1	mg/kg						
hexanitrostilbene (HNS)	DETSC 3401#	0.5	mg/kg						
pentaerythritol tetranitrate (PETN)	DETSC 3401#	5	mg/kg						
2,4,6-trinitrophenol (picric acid)	DETSC 3401#	0.1	mg/kg						
picrite (nitroguanidine)	DETSC 3401#	0.1	mg/kg						
ethylene glycol dinitrate (EGDN)	DETSC 3401#	0.1	mg/kg						
nitroglycerine (NG)	DETSC 3401#	0.1	mg/kg						
nitrocellulose (NC)	DETSC 3401#	5000	mg/kg						
chlorate	DETSC 3401#	1	mg/kg						
perchlorate	DETSC 3401#	0.5	mg/kg						
description of removed material	DETSC 3401#	n/a							

Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

				Lab No	2228873	2228874	2228875	2228876	2228877	2228878
				.Sample ID	TP397	TP399	TP410	TP410	TP411	TT302W
				Depth	0.50	0.10	0.10	0.40	0.30	0.30
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	29/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Preparation										
Stones >10mm	DETSC 1003*	1	% m/m		11	2.0		8.0	
Moisture Content	DETSC 1004	0.1	%		11	20		18	
Metals										
Antimony	DETSC 2301*	1	mg/kg	70			3.5		4.5
Arsenic	DETSC 2301#	0.2	mg/kg		12	16		20	
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg		0.2	1.0		0.3	
Cadmium	DETSC 2301#	0.1	mg/kg		0.2	0.5		0.2	
Chromium	DETSC 2301#	0.15	mg/kg		14	21		21	
Chromium III	DETSC 2301*	0.15	mg/kg		14	21		21	
Chromium, Hexavalent	DETSC 2204*	1	mg/kg		< 1.0	< 1.0		< 1.0	
Copper	DETSC 2301#	0.2	mg/kg		72	140		140	
Lead	DETSC 2301#	0.3	mg/kg		39	210		90	
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l		< 10	< 10		< 10	
Mercury	DETSC 2325#	0.05	mg/kg		< 0.05	0.19		0.12	
Nickel	DETSC 2301#	1	mg/kg		17	30		28	
Potassium	DETSC 2301*	1	mg/kg	4000			430		780
Selenium	DETSC 2301#	0.5	mg/kg		< 0.5	< 0.5		< 0.5	
Vanadium	DETSC 2301#	0.8	mg/kg		24	27		37	
Zinc	DETSC 2301#	1	mg/kg		62	120		210	
Inorganics										
pH	DETSC 2008#		pH		7.8	7.1		8.2	
Calorific Value	DETSC 5008	1	MJ/kg						
Total Organic Carbon	DETSC 2084#	0.5	%		5.6	5.1		14	
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l		5.3	6.3		3.0	
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l		1.0	16		< 1.0	
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l		20	18		16	
Sulphide	DETSC 2024*	10	mg/kg	55			28	67	24
Sulphur as S, Total	DETSC 2320	0.01	%	0.14			0.02	0.08	0.02
Petroleum Hydrocarbons										
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg		< 0.1	< 0.1		< 0.1	
EPH (C10-C12)	DETSC 3311	10	mg/kg		< 10	< 10		< 10	
EPH (C12-C16)	DETSC 3311	10	mg/kg		< 10	< 10		< 10	
EPH (C16-C21)	DETSC 3311	10	mg/kg		< 10	25		12	
EPH (C21-C35)	DETSC 3311	10	mg/kg		< 10	65		10	
EPH (C35-C40)	DETSC 3311	10	mg/kg		< 10	< 10		< 10	
EPH (C10-C40)	DETSC 3311#	10	mg/kg		< 10	97		27	
PAHs										
Naphthalene	DETSC 3303#	0.03	mg/kg		< 0.03	0.03		0.20	
Acenaphthylene	DETSC 3303#	0.03	mg/kg		< 0.03	< 0.03		< 0.03	
Acenaphthene	DETSC 3303#	0.03	mg/kg		< 0.03	0.15		0.55	
Fluorene	DETSC 3303	0.03	mg/kg		< 0.03	0.10		0.32	

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

				Lab No	2228873	2228874	2228875	2228876	2228877	2228878
				.Sample ID	TP397	TP399	TP410	TP410	TP411	TT302W
				Depth	0.50	0.10	0.10	0.40	0.30	0.30
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	29/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Phenanthrene	DETSC 3303#	0.03	mg/kg		0.18	1.2		3.7	
Anthracene	DETSC 3303	0.03	mg/kg		< 0.03	0.24		0.67	
Fluoranthene	DETSC 3303#	0.03	mg/kg		0.37	2.0		4.6	
Pyrene	DETSC 3303#	0.03	mg/kg		0.36	1.8		4.1	
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg		0.14	0.69		1.3	
Chrysene	DETSC 3303	0.03	mg/kg		0.19	0.85		1.5	
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg		0.15	0.77		1.1	
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg		0.06	0.30		0.44	
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg		0.11	0.56		0.75	
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg		0.04	0.22		0.22	
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg		< 0.03	0.04		0.06	
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg		0.04	0.24		0.27	
Naphthalene	DETSC 3301	0.1	mg/kg						
Acenaphthylene	DETSC 3301	0.1	mg/kg						
Acenaphthene	DETSC 3301	0.1	mg/kg						
Fluorene	DETSC 3301	0.1	mg/kg						
Phenanthrene	DETSC 3301	0.1	mg/kg						
Anthracene	DETSC 3301	0.1	mg/kg						
Fluoranthene	DETSC 3301	0.1	mg/kg						
Pyrene	DETSC 3301	0.1	mg/kg						
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg						
Chrysene	DETSC 3301	0.1	mg/kg						
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg						
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg						
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg						
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg						
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg						
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg						
Coronene	DETSC 3301*	0.1	mg/kg						
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg		1.6	9.1		20	
PAH 16 Total	DETSC 3301	1.6	mg/kg						
Phenols										
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	1.1			1.1		1.2
Subcontracted Analysis										
mass before grinding	DETSC 3401#	0.1	g	181					
mass of removed material	DETSC 3401#	0.1	g	111					
mass after grinding	DETSC 3401#	0.1	g	70.2					
2,4,6-trinitrophenyl-N-methylnitramine (tetryl)	DETSC 3401#	1	mg/kg	< 1.00					
2,4,6-trinitrotoluene (2,4,6-TNT)	DETSC 3401#	0.5	mg/kg	< 0.50					
2,4-dinitrotoluene (2,4-DNT)	DETSC 3401#	1	mg/kg	< 1.00					
2,6-dinitrotoluene (2,6-DNT)	DETSC 3401#	1	mg/kg	< 1.00					
cyclo-1,3,5-trimethylene-2,4,6-trinitramine (hexogen, RDX)	DETSC 3401#	1	mg/kg	< 1.00					

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

			Lab No	2228873	2228874	2228875	2228876	2228877	2228878
			.Sample ID	TP397	TP399	TP410	TP410	TP411	TT302W
			Depth	0.50	0.10	0.10	0.40	0.30	0.30
			Other ID						
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	29/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
cyclotetramethylenetetranitramine (HMX)	DETSC 3401#	1	mg/kg	< 1.00					
hexanitrostilbene (HNS)	DETSC 3401#	0.5	mg/kg	< 0.50					
pentaerythritol tetranitrate (PETN)	DETSC 3401#	5	mg/kg	< 5.00					
2,4,6-trinitrophenol (picric acid)	DETSC 3401#	0.1	mg/kg	< 0.10					
picrite (nitroguanidine)	DETSC 3401#	0.1	mg/kg	< 0.10					
ethylene glycol dinitrate (EGDN)	DETSC 3401#	0.1	mg/kg	< 0.10					
nitroglycerine (NG)	DETSC 3401#	0.1	mg/kg	< 0.10					
nitrocellulose (NC)	DETSC 3401#	5000	mg/kg	< 5000					
chlorate	DETSC 3401#	1	mg/kg	< 1.00					
perchlorate	DETSC 3401#	0.5	mg/kg	< 0.50					
description of removed material	DETSC 3401#	n/a		Rocks, hardened soil (TC)					

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

				Lab No	2228879	2228880	2228881	2228882	2228883	2228884
				.Sample ID	TT304N	TP341	TP350	TP364	TP375	TP382
				Depth	0.70	0.05	0.05	0.05	0.05	0.05
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Preparation										
Stones >10mm	DETSC 1003*	1	% m/m		16					
Moisture Content	DETSC 1004	0.1	%		7.4					
Metals										
Antimony	DETSC 2301*	1	mg/kg							
Arsenic	DETSC 2301#	0.2	mg/kg		8.1					
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg		< 0.2					
Cadmium	DETSC 2301#	0.1	mg/kg		0.5					
Chromium	DETSC 2301#	0.15	mg/kg		19					
Chromium III	DETSC 2301*	0.15	mg/kg		19					
Chromium, Hexavalent	DETSC 2204*	1	mg/kg		< 1.0					
Copper	DETSC 2301#	0.2	mg/kg		26					
Lead	DETSC 2301#	0.3	mg/kg		35					
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l		< 10					
Mercury	DETSC 2325#	0.05	mg/kg		0.10					
Nickel	DETSC 2301#	1	mg/kg		19					
Potassium	DETSC 2301*	1	mg/kg							
Selenium	DETSC 2301#	0.5	mg/kg		< 0.5					
Vanadium	DETSC 2301#	0.8	mg/kg		23					
Zinc	DETSC 2301#	1	mg/kg		92					
Inorganics										
pH	DETSC 2008#		pH		7.9					
Calorific Value	DETSC 5008	1	MJ/kg							
Total Organic Carbon	DETSC 2084#	0.5	%		1.2					
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l		3.1					
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l		1.0					
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l		11					
Sulphide	DETSC 2024*	10	mg/kg							
Sulphur as S, Total	DETSC 2320	0.01	%							
Petroleum Hydrocarbons										
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg		< 0.1					
EPH (C10-C12)	DETSC 3311	10	mg/kg		< 10					
EPH (C12-C16)	DETSC 3311	10	mg/kg		< 10					
EPH (C16-C21)	DETSC 3311	10	mg/kg		22					
EPH (C21-C35)	DETSC 3311	10	mg/kg		26					
EPH (C35-C40)	DETSC 3311	10	mg/kg		< 10					
EPH (C10-C40)	DETSC 3311#	10	mg/kg		51					
PAHs										
Naphthalene	DETSC 3303#	0.03	mg/kg		0.05					
Acenaphthylene	DETSC 3303#	0.03	mg/kg		< 0.03					
Acenaphthene	DETSC 3303#	0.03	mg/kg		0.38					
Fluorene	DETSC 3303	0.03	mg/kg		0.20					

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

			Lab No	2228879	2228880	2228881	2228882	2228883	2228884
			.Sample ID	TT304N	TP341	TP350	TP364	TP375	TP382
			Depth	0.70	0.05	0.05	0.05	0.05	0.05
			Other ID						
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Phenanthrene	DETSC 3303#	0.03	mg/kg	2.5					
Anthracene	DETSC 3303	0.03	mg/kg	0.47					
Fluoranthene	DETSC 3303#	0.03	mg/kg	3.9					
Pyrene	DETSC 3303#	0.03	mg/kg	3.5					
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	1.2					
Chrysene	DETSC 3303	0.03	mg/kg	1.4					
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	1.1					
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.42					
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.82					
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.24					
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	0.05					
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.27					
Naphthalene	DETSC 3301	0.1	mg/kg		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Acenaphthylene	DETSC 3301	0.1	mg/kg		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Acenaphthene	DETSC 3301	0.1	mg/kg		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Fluorene	DETSC 3301	0.1	mg/kg		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Phenanthrene	DETSC 3301	0.1	mg/kg		< 1.0	< 1.0	2.3	< 1.0	< 1.0
Anthracene	DETSC 3301	0.1	mg/kg		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Fluoranthene	DETSC 3301	0.1	mg/kg		< 1.0	< 1.0	2.5	< 1.0	2.8
Pyrene	DETSC 3301	0.1	mg/kg		1.6	< 1.0	1.6	< 1.0	3.2
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Chrysene	DETSC 3301	0.1	mg/kg		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg		2.6	2.8	< 1.0	< 1.0	< 1.0
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg		6.4	6.4	< 1.0	< 1.0	< 1.0
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg		8.3	10	< 1.0	< 1.0	< 1.0
Coronene	DETSC 3301*	0.1	mg/kg		2.0	< 1.0	< 1.0	< 1.0	< 1.0
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	16					
PAH 16 Total	DETSC 3301	1.6	mg/kg		19	19	6.4	< 1.6	6.0
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg						
Subcontracted Analysis									
mass before grinding	DETSC 3401#	0.1	g						
mass of removed material	DETSC 3401#	0.1	g						
mass after grinding	DETSC 3401#	0.1	g						
2,4,6-trinitrophenyl-N-methylnitramine (tetryl)	DETSC 3401#	1	mg/kg						
2,4,6-trinitrotoluene (2,4,6-TNT)	DETSC 3401#	0.5	mg/kg						
2,4-dinitrotoluene (2,4-DNT)	DETSC 3401#	1	mg/kg						
2,6-dinitrotoluene (2,6-DNT)	DETSC 3401#	1	mg/kg						
cyclo-1,3,5-trimethylene-2,4,6-trinitramine (hexogen, RDX)	DETSC 3401#	1	mg/kg						

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

			Lab No	2228879	2228880	2228881	2228882	2228883	2228884
			.Sample ID	TT304N	TP341	TP350	TP364	TP375	TP382
			Depth	0.70	0.05	0.05	0.05	0.05	0.05
			Other ID						
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
cyclotetramethylenetetranitramine (HMX)	DETSC 3401#	1	mg/kg						
hexanitrostilbene (HNS)	DETSC 3401#	0.5	mg/kg						
pentaerythritol tetranitrate (PETN)	DETSC 3401#	5	mg/kg						
2,4,6-trinitrophenol (picric acid)	DETSC 3401#	0.1	mg/kg						
picrite (nitroguanidine)	DETSC 3401#	0.1	mg/kg						
ethylene glycol dinitrate (EGDN)	DETSC 3401#	0.1	mg/kg						
nitroglycerine (NG)	DETSC 3401#	0.1	mg/kg						
nitrocellulose (NC)	DETSC 3401#	5000	mg/kg						
chlorate	DETSC 3401#	1	mg/kg						
perchlorate	DETSC 3401#	0.5	mg/kg						
description of removed material	DETSC 3401#	n/a							

Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

Test	Method	LOD	Units						
Lab No					2228885	2228886	2228887	2228888	2228889	2228890
.Sample ID					TT301N	TP315	TP365	TP368	TP369	TP392
Depth					0.05	0.10	0.10	0.10	0.10	0.50
Other ID										
Sample Type					SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date					30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023
Sampling Time					n/s	n/s	n/s	n/s	n/s	n/s
Preparation										
Stones >10mm	DETSC 1003*	1	% m/m		3.0	7.0	6.0	9.0	14
Moisture Content	DETSC 1004	0.1	%		14	17	15	14	7.2
Metals										
Antimony	DETSC 2301*	1	mg/kg							
Arsenic	DETSC 2301#	0.2	mg/kg		16	37	8.9	4.4	10
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg		0.3	0.8	0.4	0.4	0.8
Cadmium	DETSC 2301#	0.1	mg/kg		0.2	0.4	0.3	0.2	0.2
Chromium	DETSC 2301#	0.15	mg/kg		17	20	21	15	26
Chromium III	DETSC 2301*	0.15	mg/kg		17	20	21	15	26
Chromium, Hexavalent	DETSC 2204*	1	mg/kg		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg		54	94	49	18	27
Lead	DETSC 2301#	0.3	mg/kg		66	150	70	37	45
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l						
Mercury	DETSC 2325#	0.05	mg/kg		0.19	0.16	0.07	< 0.05	0.14
Nickel	DETSC 2301#	1	mg/kg		13	30	24	14	13
Potassium	DETSC 2301*	1	mg/kg						
Selenium	DETSC 2301#	0.5	mg/kg		0.7	0.9	< 0.5	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg		30	42	26	19	35
Zinc	DETSC 2301#	1	mg/kg		91	86	96	60	55
Inorganics										
pH	DETSC 2008#		pH		5.6	8.0	6.7	7.3	7.0
Calorific Value	DETSC 5008	1	MJ/kg						
Total Organic Carbon	DETSC 2084#	0.5	%		3.0	8.2	2.4	2.1	6.0
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l						
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l						
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l						
Sulphide	DETSC 2024*	10	mg/kg						
Sulphur as S, Total	DETSC 2320	0.01	%						
Petroleum Hydrocarbons										
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
EPH (C10-C12)	DETSC 3311	10	mg/kg		< 10	< 10	< 10	< 10	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg		< 10	< 10	< 10	< 10	< 10
EPH (C16-C21)	DETSC 3311	10	mg/kg		15	< 10	< 10	< 10	14
EPH (C21-C35)	DETSC 3311	10	mg/kg		17	12	12	< 10	26
EPH (C35-C40)	DETSC 3311	10	mg/kg		< 10	< 10	< 10	< 10	< 10
EPH (C10-C40)	DETSC 3311#	10	mg/kg		35	23	21	11	44
PAHs										
Naphthalene	DETSC 3303#	0.03	mg/kg		0.05	< 0.03	< 0.03	0.08	0.05
Acenaphthylene	DETSC 3303#	0.03	mg/kg		< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg		0.11	0.07	0.05	0.08	0.17
Fluorene	DETSC 3303	0.03	mg/kg		0.06	0.04	< 0.03	0.05	0.09

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

				Lab No	2228885	2228886	2228887	2228888	2228889	2228890
				.Sample ID	TT301N	TP315	TP365	TP368	TP369	TP392
				Depth	0.05	0.10	0.10	0.10	0.10	0.50
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Phenanthrene	DETSC 3303#	0.03	mg/kg		0.63	0.53	0.32	0.52	1.3
Anthracene	DETSC 3303	0.03	mg/kg		0.11	0.09	0.05	0.09	0.22
Fluoranthene	DETSC 3303#	0.03	mg/kg		0.69	0.83	0.46	0.62	2.0
Pyrene	DETSC 3303#	0.03	mg/kg		0.61	0.75	0.40	0.54	1.8
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg		0.23	0.26	0.16	0.19	0.73
Chrysene	DETSC 3303	0.03	mg/kg		0.31	0.36	0.21	0.25	0.90
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg		0.21	0.28	0.15	0.18	0.86
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg		0.08	0.11	0.07	0.08	0.35
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg		0.14	0.20	0.11	0.13	0.59
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg		0.06	0.09	0.05	0.05	0.26
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg		< 0.03	< 0.03	< 0.03	< 0.03	0.06
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg		0.05	0.09	0.05	0.06	0.28
Naphthalene	DETSC 3301	0.1	mg/kg	< 1.0					
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 1.0					
Acenaphthene	DETSC 3301	0.1	mg/kg	1.5					
Fluorene	DETSC 3301	0.1	mg/kg	< 1.0					
Phenanthrene	DETSC 3301	0.1	mg/kg	8.3					
Anthracene	DETSC 3301	0.1	mg/kg	1.9					
Fluoranthene	DETSC 3301	0.1	mg/kg	11					
Pyrene	DETSC 3301	0.1	mg/kg	8.7					
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	4.1					
Chrysene	DETSC 3301	0.1	mg/kg	3.8					
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	3.7					
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	9.3					
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	4.9					
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	< 1.0					
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 1.0					
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	< 1.0					
Coronene	DETSC 3301*	0.1	mg/kg	< 1.0					
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg		3.4	3.7	2.1	2.9	9.6
PAH 16 Total	DETSC 3301	1.6	mg/kg	57					
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg						
Subcontracted Analysis									
mass before grinding	DETSC 3401#	0.1	g						
mass of removed material	DETSC 3401#	0.1	g						
mass after grinding	DETSC 3401#	0.1	g						
2,4,6-trinitrophenyl-N-methylnitramine (tetryl)	DETSC 3401#	1	mg/kg						
2,4,6-trinitrotoluene (2,4,6-TNT)	DETSC 3401#	0.5	mg/kg						
2,4-dinitrotoluene (2,4-DNT)	DETSC 3401#	1	mg/kg						
2,6-dinitrotoluene (2,6-DNT)	DETSC 3401#	1	mg/kg						
cyclo-1,3,5-trimethylene-2,4,6-trinitramine (hexogen, RDX)	DETSC 3401#	1	mg/kg						

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

			Lab No	2228885	2228886	2228887	2228888	2228889	2228890
			.Sample ID	TT301N	TP315	TP365	TP368	TP369	TP392
			Depth	0.05	0.10	0.10	0.10	0.10	0.50
			Other ID						
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
cyclotetramethylenetetranitramine (HMX)	DETSC 3401#	1	mg/kg						
hexanitrostilbene (HNS)	DETSC 3401#	0.5	mg/kg						
pentaerythritol tetranitrate (PETN)	DETSC 3401#	5	mg/kg						
2,4,6-trinitrophenol (picric acid)	DETSC 3401#	0.1	mg/kg						
picrite (nitroguanidine)	DETSC 3401#	0.1	mg/kg						
ethylene glycol dinitrate (EGDN)	DETSC 3401#	0.1	mg/kg						
nitroglycerine (NG)	DETSC 3401#	0.1	mg/kg						
nitrocellulose (NC)	DETSC 3401#	5000	mg/kg						
chlorate	DETSC 3401#	1	mg/kg						
perchlorate	DETSC 3401#	0.5	mg/kg						
description of removed material	DETSC 3401#	n/a							

Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

				Lab No	2228891	2228892	2228893	2228897	2228898	2228899
				.Sample ID	TP398	TP403	TP495	TP344	TP357	TP366
				Depth	0.20	0.20	0.20	0.80	0.60	0.60
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	30/08/2023	30/08/2023	30/08/2023	31/08/2023	31/08/2023	31/08/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Preparation										
Stones >10mm	DETSC 1003*	1	% m/m	8.0	5.0	21	17	13	14
Moisture Content	DETSC 1004	0.1	%	15	17	12	11	12	16
Metals										
Antimony	DETSC 2301*	1	mg/kg						
Arsenic	DETSC 2301#	0.2	mg/kg	7.4	72	26	68	3.4	34
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.5	0.6	1.0	0.7	< 0.2	0.4
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	1.3	0.9	0.5	0.7	0.3
Chromium	DETSC 2301#	0.15	mg/kg	13	67	28	69	21	20
Chromium III	DETSC 2301*	0.15	mg/kg	13	67	28	69	21	20
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	26	650	180	580	20	69
Lead	DETSC 2301#	0.3	mg/kg	48	330	180	290	34	150
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l				< 10	< 10	< 10
Mercury	DETSC 2325#	0.05	mg/kg	0.09	0.28	0.19	0.26	< 0.05	0.34
Nickel	DETSC 2301#	1	mg/kg	12	170	66	110	26	21
Potassium	DETSC 2301*	1	mg/kg						
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	0.5	0.5	< 0.5	0.6	0.6
Vanadium	DETSC 2301#	0.8	mg/kg	21	55	29	38	26	33
Zinc	DETSC 2301#	1	mg/kg	63	350	320	310	75	130
Inorganics										
pH	DETSC 2008#		pH	5.9	6.6	9.4	7.9	6.4	8.0
Calorific Value	DETSC 5008	1	MJ/kg						
Total Organic Carbon	DETSC 2084#	0.5	%	2.9	6.3	3.5	6.7	0.5	5.1
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l				9.6	11	3.1
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l				4.1	8.5	3.9
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l				160	24	23
Sulphide	DETSC 2024*	10	mg/kg				28		79
Sulphur as S, Total	DETSC 2320	0.01	%				0.10		0.05
Petroleum Hydrocarbons										
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	22	< 10	58
EPH (C16-C21)	DETSC 3311	10	mg/kg	< 10	21	< 10	96	< 10	240
EPH (C21-C35)	DETSC 3311	10	mg/kg	< 10	59	30	350	< 10	420
EPH (C35-C40)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	47	< 10	19
EPH (C10-C40)	DETSC 3311#	10	mg/kg	< 10	85	43	510	< 10	740
PAHs										
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	0.06	< 0.03	0.23	< 0.03	0.20
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.07	< 0.03	0.05
Acenaphthene	DETSC 3303#	0.03	mg/kg	0.04	0.15	< 0.03	0.35	< 0.03	0.48
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	0.10	< 0.03	0.31	< 0.03	0.26

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

				Lab No	2228891	2228892	2228893	2228897	2228898	2228899
				.Sample ID	TP398	TP403	TP495	TP344	TP357	TP366
				Depth	0.20	0.20	0.20	0.80	0.60	0.60
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	30/08/2023	30/08/2023	30/08/2023	31/08/2023	31/08/2023	31/08/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Phenanthrene	DETSC 3303#	0.03	mg/kg		0.27	1.1	0.03	2.1	< 0.03	2.5
Anthracene	DETSC 3303	0.03	mg/kg		0.04	0.29	< 0.03	0.42	< 0.03	0.44
Fluoranthene	DETSC 3303#	0.03	mg/kg		0.37	2.1	0.08	2.3	< 0.03	3.5
Pyrene	DETSC 3303#	0.03	mg/kg		0.33	2.0	0.10	2.1	< 0.03	3.1
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg		0.12	0.76	0.05	0.88	< 0.03	0.94
Chrysene	DETSC 3303	0.03	mg/kg		0.17	0.94	0.09	1.0	< 0.03	1.2
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg		0.13	0.82	0.11	0.80	< 0.03	0.91
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg		0.05	0.33	0.04	0.29	< 0.03	0.34
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg		0.08	0.60	0.04	0.57	< 0.03	0.64
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg		0.04	0.21	0.06	0.19	< 0.03	0.21
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg		< 0.03	0.04	< 0.03	0.06	< 0.03	0.06
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg		0.04	0.26	0.06	0.23	< 0.03	0.24
Naphthalene	DETSC 3301	0.1	mg/kg							
Acenaphthylene	DETSC 3301	0.1	mg/kg							
Acenaphthene	DETSC 3301	0.1	mg/kg							
Fluorene	DETSC 3301	0.1	mg/kg							
Phenanthrene	DETSC 3301	0.1	mg/kg							
Anthracene	DETSC 3301	0.1	mg/kg							
Fluoranthene	DETSC 3301	0.1	mg/kg							
Pyrene	DETSC 3301	0.1	mg/kg							
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg							
Chrysene	DETSC 3301	0.1	mg/kg							
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg							
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg							
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg							
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg							
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg							
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg							
Coronene	DETSC 3301*	0.1	mg/kg							
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg		1.6	9.7	0.62	12	< 0.10	15
PAH 16 Total	DETSC 3301	1.6	mg/kg							
Phenols										
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg							
Subcontracted Analysis										
mass before grinding	DETSC 3401#	0.1	g							
mass of removed material	DETSC 3401#	0.1	g							
mass after grinding	DETSC 3401#	0.1	g							
2,4,6-trinitrophenyl-N-methylnitramine (tetryl)	DETSC 3401#	1	mg/kg							
2,4,6-trinitrotoluene (2,4,6-TNT)	DETSC 3401#	0.5	mg/kg							
2,4-dinitrotoluene (2,4-DNT)	DETSC 3401#	1	mg/kg							
2,6-dinitrotoluene (2,6-DNT)	DETSC 3401#	1	mg/kg							
cyclo-1,3,5-trimethylene-2,4,6-trinitramine (hexogen, RDX)	DETSC 3401#	1	mg/kg							

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

			Lab No	2228891	2228892	2228893	2228897	2228898	2228899
			.Sample ID	TP398	TP403	TP495	TP344	TP357	TP366
			Depth	0.20	0.20	0.20	0.80	0.60	0.60
			Other ID						
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	30/08/2023	30/08/2023	30/08/2023	31/08/2023	31/08/2023	31/08/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
cyclotetramethylenetetranitramine (HMX)	DETSC 3401#	1	mg/kg						
hexanitrostilbene (HNS)	DETSC 3401#	0.5	mg/kg						
pentaerythritol tetranitrate (PETN)	DETSC 3401#	5	mg/kg						
2,4,6-trinitrophenol (picric acid)	DETSC 3401#	0.1	mg/kg						
picrite (nitroguanidine)	DETSC 3401#	0.1	mg/kg						
ethylene glycol dinitrate (EGDN)	DETSC 3401#	0.1	mg/kg						
nitroglycerine (NG)	DETSC 3401#	0.1	mg/kg						
nitrocellulose (NC)	DETSC 3401#	5000	mg/kg						
chlorate	DETSC 3401#	1	mg/kg						
perchlorate	DETSC 3401#	0.5	mg/kg						
description of removed material	DETSC 3401#	n/a							

Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

				Lab No	2228900	2228901	2228902	2228903	2228904	2228905
				.Sample ID	TP380	TP384	TP389	TP411	TP369	TP377
				Depth	1.10	1.50	2.20	2.00	1.60	0.20
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	31/08/2023	31/08/2023	31/08/2023	31/08/2023	31/08/2023	31/08/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Preparation										
Stones >10mm	DETSC 1003*	1	% m/m	15	12	7.0	11	4.0	14
Moisture Content	DETSC 1004	0.1	%	13	16	13	10	19	13
Metals										
Antimony	DETSC 2301*	1	mg/kg						
Arsenic	DETSC 2301#	0.2	mg/kg	6.1	68	12	2.8	16	3.1
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	< 0.2	0.6	1.1	0.4	0.6	0.3
Cadmium	DETSC 2301#	0.1	mg/kg	< 0.1	0.8	0.2	0.3	0.3	0.1
Chromium	DETSC 2301#	0.15	mg/kg	7.7	71	15	29	14	12
Chromium III	DETSC 2301*	0.15	mg/kg	7.7	71	15	29	14	12
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	20	340	57	19	28	12
Lead	DETSC 2301#	0.3	mg/kg	21	850	61	44	73	20
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l	< 10		< 10		< 10	
Mercury	DETSC 2325#	0.05	mg/kg	0.06	2.2	0.17	< 0.05	0.16	< 0.05
Nickel	DETSC 2301#	1	mg/kg	8.8	36	17	26	13	11
Potassium	DETSC 2301*	1	mg/kg						
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	0.5	< 0.5	< 0.5	0.6	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	12	33	20	34	23	17
Zinc	DETSC 2301#	1	mg/kg	25	730	72	84	72	39
Inorganics										
pH	DETSC 2008#		pH	7.5	8.1	6.7	7.6	6.3	6.6
Calorific Value	DETSC 5008	1	MJ/kg						
Total Organic Carbon	DETSC 2084#	0.5	%	1.0	5.7	2.7	0.9	3.5	1.2
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l	2.7		22		2.8	
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l	< 1.0		20		5.5	
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	< 10		20		29	
Sulphide	DETSC 2024*	10	mg/kg			20			32
Sulphur as S, Total	DETSC 2320	0.01	%			0.04			0.01
Petroleum Hydrocarbons										
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg	< 0.1	0.4	< 0.1	< 0.1	< 0.1	< 0.1
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 10	30	< 10	< 10	< 10	< 10
EPH (C16-C21)	DETSC 3311	10	mg/kg	< 10	170	< 10	12	13	< 10
EPH (C21-C35)	DETSC 3311	10	mg/kg	< 10	460	17	20	27	< 10
EPH (C35-C40)	DETSC 3311	10	mg/kg	< 10	32	< 10	< 10	< 10	< 10
EPH (C10-C40)	DETSC 3311#	10	mg/kg	11	700	26	34	44	< 10
PAHs										
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	0.32	< 0.03	0.07	0.22	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	0.21	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	0.48	0.03	0.33	0.31	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	0.44	< 0.03	0.19	0.19	< 0.03

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

				Lab No	2228900	2228901	2228902	2228903	2228904	2228905
				.Sample ID	TP380	TP384	TP389	TP411	TP369	TP377
				Depth	1.10	1.50	2.20	2.00	1.60	0.20
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	31/08/2023	31/08/2023	31/08/2023	31/08/2023	31/08/2023	31/08/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Phenanthrene	DETSC 3303#	0.03	mg/kg		0.11	6.4	0.25	2.0	1.5	0.06
Anthracene	DETSC 3303	0.03	mg/kg		< 0.03	1.2	0.04	0.37	0.25	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg		0.15	10	0.33	2.4	1.7	0.07
Pyrene	DETSC 3303#	0.03	mg/kg		0.14	9.1	0.29	2.1	1.4	0.06
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg		0.06	3.1	0.10	0.67	0.46	0.03
Chrysene	DETSC 3303	0.03	mg/kg		0.07	3.7	0.13	0.78	0.65	0.04
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg		0.05	3.2	0.10	0.57	0.42	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg		< 0.03	1.3	0.04	0.23	0.16	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg		0.04	2.3	0.06	0.43	0.25	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg		< 0.03	0.81	< 0.03	0.15	0.10	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg		< 0.03	0.17	< 0.03	0.04	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg		< 0.03	1.0	< 0.03	0.15	0.09	< 0.03
Naphthalene	DETSC 3301	0.1	mg/kg							
Acenaphthylene	DETSC 3301	0.1	mg/kg							
Acenaphthene	DETSC 3301	0.1	mg/kg							
Fluorene	DETSC 3301	0.1	mg/kg							
Phenanthrene	DETSC 3301	0.1	mg/kg							
Anthracene	DETSC 3301	0.1	mg/kg							
Fluoranthene	DETSC 3301	0.1	mg/kg							
Pyrene	DETSC 3301	0.1	mg/kg							
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg							
Chrysene	DETSC 3301	0.1	mg/kg							
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg							
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg							
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg							
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg							
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg							
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg							
Coronene	DETSC 3301*	0.1	mg/kg							
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg		0.62	44	1.3	10	7.7	0.23
PAH 16 Total	DETSC 3301	1.6	mg/kg							
Phenols										
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg							
Subcontracted Analysis										
mass before grinding	DETSC 3401#	0.1	g							
mass of removed material	DETSC 3401#	0.1	g							
mass after grinding	DETSC 3401#	0.1	g							
2,4,6-trinitrophenyl-N-methylnitramine (tetryl)	DETSC 3401#	1	mg/kg							
2,4,6-trinitrotoluene (2,4,6-TNT)	DETSC 3401#	0.5	mg/kg							
2,4-dinitrotoluene (2,4-DNT)	DETSC 3401#	1	mg/kg							
2,6-dinitrotoluene (2,6-DNT)	DETSC 3401#	1	mg/kg							
cyclo-1,3,5-trimethylene-2,4,6-trinitramine (hexogen, RDX)	DETSC 3401#	1	mg/kg							

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

			Lab No	2228900	2228901	2228902	2228903	2228904	2228905
			.Sample ID	TP380	TP384	TP389	TP411	TP369	TP377
			Depth	1.10	1.50	2.20	2.00	1.60	0.20
			Other ID						
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	31/08/2023	31/08/2023	31/08/2023	31/08/2023	31/08/2023	31/08/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
cyclotetramethylenetetranitramine (HMX)	DETSC 3401#	1	mg/kg						
hexanitrostilbene (HNS)	DETSC 3401#	0.5	mg/kg						
pentaerythritol tetranitrate (PETN)	DETSC 3401#	5	mg/kg						
2,4,6-trinitrophenol (picric acid)	DETSC 3401#	0.1	mg/kg						
picrite (nitroguanidine)	DETSC 3401#	0.1	mg/kg						
ethylene glycol dinitrate (EGDN)	DETSC 3401#	0.1	mg/kg						
nitroglycerine (NG)	DETSC 3401#	0.1	mg/kg						
nitrocellulose (NC)	DETSC 3401#	5000	mg/kg						
chlorate	DETSC 3401#	1	mg/kg						
perchlorate	DETSC 3401#	0.5	mg/kg						
description of removed material	DETSC 3401#	n/a							

Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

				Lab No	2228906	2228907	2228908	2228909	2228910	2228911
				.Sample ID	TP379	TP347	TP349	TP354	TP361	TP368
				Depth	0.40	0.90	1.00	0.60	0.10	0.50
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	31/08/2023	31/08/2023	31/08/2023	31/08/2023	31/08/2023	31/08/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Preparation										
Stones >10mm	DETSC 1003*	1	% m/m	10	16	12	8.0	19	11
Moisture Content	DETSC 1004	0.1	%	13	13	9.4	12	5.2	12
Metals										
Antimony	DETSC 2301*	1	mg/kg						
Arsenic	DETSC 2301#	0.2	mg/kg	3.6	4.6	23	2.7	1.4	6.3
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.3	< 0.2	1.1	0.3	< 0.2	< 0.2
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	0.2	1.1	< 0.1	0.2	0.2
Chromium	DETSC 2301#	0.15	mg/kg	11	14	32	10	15	15
Chromium III	DETSC 2301*	0.15	mg/kg	11	14	32	10	15	15
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	13	15	95	8.8	7.2	16
Lead	DETSC 2301#	0.3	mg/kg	21	24	150	12	13	36
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l	< 10	< 10			< 10	
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	0.09	< 0.05	< 0.05	0.06
Nickel	DETSC 2301#	1	mg/kg	12	13	36	7.7	13	14
Potassium	DETSC 2301*	1	mg/kg						
Selenium	DETSC 2301#	0.5	mg/kg	0.5	< 0.5	0.9	0.5	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	16	18	66	12	17	20
Zinc	DETSC 2301#	1	mg/kg	60	65	120	38	40	70
Inorganics										
pH	DETSC 2008#		pH	7.1	6.6	9.6	9.8	8.3	7.7
Calorific Value	DETSC 5008	1	MJ/kg						
Total Organic Carbon	DETSC 2084#	0.5	%	1.0	1.0	10	0.9	< 0.5	1.6
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l	2.1	3.7			2.2	
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l	< 1.0	< 1.0			< 1.0	
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	25	14			< 10	
Sulphide	DETSC 2024*	10	mg/kg		16		20		
Sulphur as S, Total	DETSC 2320	0.01	%		< 0.01		0.02		
Petroleum Hydrocarbons										
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 10	< 10	< 10	< 10	< 10	< 10
EPH (C16-C21)	DETSC 3311	10	mg/kg	< 10	< 10	23	< 10	< 10	< 10
EPH (C21-C35)	DETSC 3311	10	mg/kg	61	< 10	290	15	< 10	< 10
EPH (C35-C40)	DETSC 3311	10	mg/kg	< 10	< 10	87	< 10	< 10	< 10
EPH (C10-C40)	DETSC 3311#	10	mg/kg	74	< 10	410	22	< 10	14
PAHs										
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.06	< 0.03	< 0.03	0.18
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	0.06	< 0.03	0.10	< 0.03	0.06	0.07
Fluorene	DETSC 3303	0.03	mg/kg	0.03	< 0.03	0.05	< 0.03	0.04	0.04

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

				Lab No	2228906	2228907	2228908	2228909	2228910	2228911
				.Sample ID	TP379	TP347	TP349	TP354	TP361	TP368
				Depth	0.40	0.90	1.00	0.60	0.10	0.50
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	31/08/2023	31/08/2023	31/08/2023	31/08/2023	31/08/2023	31/08/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Phenanthrene	DETSC 3303#	0.03	mg/kg		0.33	0.07	0.87	0.03	0.53	0.41
Anthracene	DETSC 3303	0.03	mg/kg		0.05	< 0.03	0.19	< 0.03	0.08	0.07
Fluoranthene	DETSC 3303#	0.03	mg/kg		0.39	0.09	1.4	0.05	0.83	0.53
Pyrene	DETSC 3303#	0.03	mg/kg		0.35	0.08	1.3	0.05	0.72	0.47
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg		0.12	< 0.03	0.52	< 0.03	0.20	0.18
Chrysene	DETSC 3303	0.03	mg/kg		0.20	0.05	0.65	< 0.03	0.23	0.23
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg		0.17	< 0.03	0.55	< 0.03	0.16	0.18
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg		0.15	< 0.03	0.23	< 0.03	0.07	0.07
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg		0.07	< 0.03	0.39	< 0.03	0.11	0.12
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg		0.03	< 0.03	0.19	< 0.03	0.05	0.05
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg		< 0.03	< 0.03	0.05	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg		0.03	< 0.03	0.28	< 0.03	0.04	0.05
Naphthalene	DETSC 3301	0.1	mg/kg							
Acenaphthylene	DETSC 3301	0.1	mg/kg							
Acenaphthene	DETSC 3301	0.1	mg/kg							
Fluorene	DETSC 3301	0.1	mg/kg							
Phenanthrene	DETSC 3301	0.1	mg/kg							
Anthracene	DETSC 3301	0.1	mg/kg							
Fluoranthene	DETSC 3301	0.1	mg/kg							
Pyrene	DETSC 3301	0.1	mg/kg							
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg							
Chrysene	DETSC 3301	0.1	mg/kg							
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg							
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg							
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg							
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg							
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg							
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg							
Coronene	DETSC 3301*	0.1	mg/kg							
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg		1.9	0.29	6.8	< 0.10	3.1	2.7
PAH 16 Total	DETSC 3301	1.6	mg/kg							
Phenols										
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg							
Subcontracted Analysis										
mass before grinding	DETSC 3401#	0.1	g							
mass of removed material	DETSC 3401#	0.1	g							
mass after grinding	DETSC 3401#	0.1	g							
2,4,6-trinitrophenyl-N-methylnitramine (tetryl)	DETSC 3401#	1	mg/kg							
2,4,6-trinitrotoluene (2,4,6-TNT)	DETSC 3401#	0.5	mg/kg							
2,4-dinitrotoluene (2,4-DNT)	DETSC 3401#	1	mg/kg							
2,6-dinitrotoluene (2,6-DNT)	DETSC 3401#	1	mg/kg							
cyclo-1,3,5-trimethylene-2,4,6-trinitramine (hexogen, RDX)	DETSC 3401#	1	mg/kg							

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

				Lab No	2228906	2228907	2228908	2228909	2228910	2228911
				.Sample ID	TP379	TP347	TP349	TP354	TP361	TP368
				Depth	0.40	0.90	1.00	0.60	0.10	0.50
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	31/08/2023	31/08/2023	31/08/2023	31/08/2023	31/08/2023	31/08/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
cyclotetramethylenetetranitramine (HMX)	DETSC 3401#	1	mg/kg							
hexanitrostilbene (HNS)	DETSC 3401#	0.5	mg/kg							
pentaerythritol tetranitrate (PETN)	DETSC 3401#	5	mg/kg							
2,4,6-trinitrophenol (picric acid)	DETSC 3401#	0.1	mg/kg							
picrite (nitroguanidine)	DETSC 3401#	0.1	mg/kg							
ethylene glycol dinitrate (EGDN)	DETSC 3401#	0.1	mg/kg							
nitroglycerine (NG)	DETSC 3401#	0.1	mg/kg							
nitrocellulose (NC)	DETSC 3401#	5000	mg/kg							
chlorate	DETSC 3401#	1	mg/kg							
perchlorate	DETSC 3401#	0.5	mg/kg							
description of removed material	DETSC 3401#	n/a								

Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

Test	Method	LOD	Units	Lab No	2228912	2228913	2228914	2228915	2228916	2228917
				.Sample ID	TP370	TP372	TP398	TP358	TP359	TP366
				Depth	0.80	0.60	1.00	0.20	0.20	0.20
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	31/08/2023	31/08/2023	31/08/2023	29/08/2023	29/08/2023	29/08/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Preparation										
Stones >10mm	DETSC 1003*	1	% m/m		7.0	8.0	5.0	36	4.0	27
Moisture Content	DETSC 1004	0.1	%		11	11	14	7.4	9.2	6.1
Metals										
Antimony	DETSC 2301*	1	mg/kg							
Arsenic	DETSC 2301#	0.2	mg/kg		9.2	18	7.2	3.7	2.4	1.4
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg		< 0.2	0.2	0.2	< 0.2	< 0.2	< 0.2
Cadmium	DETSC 2301#	0.1	mg/kg		0.2	1.2	0.2	0.3	0.2	0.1
Chromium	DETSC 2301#	0.15	mg/kg		18	20	16	21	14	7.7
Chromium III	DETSC 2301*	0.15	mg/kg		18	20	16	21	14	7.7
Chromium, Hexavalent	DETSC 2204*	1	mg/kg		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg		41	140	37	44	19	4.8
Lead	DETSC 2301#	0.3	mg/kg		86	57	40	28	14	11
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l		< 10		< 10	< 10		< 10
Mercury	DETSC 2325#	0.05	mg/kg		0.08	0.09	0.07	< 0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg		20	37	17	25	14	7.2
Potassium	DETSC 2301*	1	mg/kg							
Selenium	DETSC 2301#	0.5	mg/kg		0.6	0.8	< 0.5	0.5	< 0.5	0.5
Vanadium	DETSC 2301#	0.8	mg/kg		22	24	23	23	19	8.5
Zinc	DETSC 2301#	1	mg/kg		68	200	57	52	54	21
Inorganics										
pH	DETSC 2008#		pH		7.6	7.5	5.3	7.9	7.7	8.2
Calorific Value	DETSC 5008	1	MJ/kg							
Total Organic Carbon	DETSC 2084#	0.5	%		1.5	1.3	2.6	1.1	0.7	< 0.5
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l		2.1		2.3	2.3		2.3
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l		3.3		1.4	1.6		< 1.0
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l		15		< 10	11		< 10
Sulphide	DETSC 2024*	10	mg/kg		< 10				< 10	
Sulphur as S, Total	DETSC 2320	0.01	%		0.02				0.01	
Petroleum Hydrocarbons										
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg		< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
EPH (C10-C12)	DETSC 3311	10	mg/kg		< 10	< 10	< 10	< 10	< 10	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg		< 10	< 10	< 10	< 10	< 10	< 10
EPH (C16-C21)	DETSC 3311	10	mg/kg		< 10	< 10	< 10	< 10	< 10	21
EPH (C21-C35)	DETSC 3311	10	mg/kg		34	31	< 10	1000	190	1100
EPH (C35-C40)	DETSC 3311	10	mg/kg		11	< 10	< 10	400	72	380
EPH (C10-C40)	DETSC 3311#	10	mg/kg		51	45	< 10	1400	260	1500
PAHs										
Naphthalene	DETSC 3303#	0.03	mg/kg		0.08	< 0.03	0.15	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg		< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg		0.04	0.04	0.10	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg		< 0.03	< 0.03	0.06	< 0.03	< 0.03	< 0.03

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

			Lab No	2228912	2228913	2228914	2228915	2228916	2228917
			.Sample ID	TP370	TP372	TP398	TP358	TP359	TP366
			Depth	0.80	0.60	1.00	0.20	0.20	0.20
			Other ID						
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	31/08/2023	31/08/2023	31/08/2023	29/08/2023	29/08/2023	29/08/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.30	0.23	0.52	< 0.03	< 0.03	0.16
Anthracene	DETSC 3303	0.03	mg/kg	0.06	0.04	0.09	< 0.03	< 0.03	0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.42	0.32	0.53	< 0.03	< 0.03	0.23
Pyrene	DETSC 3303#	0.03	mg/kg	0.38	0.29	0.47	< 0.03	< 0.03	0.21
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.16	0.13	0.16	< 0.03	< 0.03	0.08
Chrysene	DETSC 3303	0.03	mg/kg	0.25	0.16	0.19	< 0.03	< 0.03	0.08
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.19	0.13	0.15	< 0.03	< 0.03	0.06
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.07	0.05	0.06	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.12	0.08	0.11	< 0.03	< 0.03	0.05
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.06	0.03	0.04	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.08	0.04	0.04	< 0.03	< 0.03	< 0.03
Naphthalene	DETSC 3301	0.1	mg/kg						
Acenaphthylene	DETSC 3301	0.1	mg/kg						
Acenaphthene	DETSC 3301	0.1	mg/kg						
Fluorene	DETSC 3301	0.1	mg/kg						
Phenanthrene	DETSC 3301	0.1	mg/kg						
Anthracene	DETSC 3301	0.1	mg/kg						
Fluoranthene	DETSC 3301	0.1	mg/kg						
Pyrene	DETSC 3301	0.1	mg/kg						
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg						
Chrysene	DETSC 3301	0.1	mg/kg						
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg						
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg						
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg						
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg						
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg						
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg						
Coronene	DETSC 3301*	0.1	mg/kg						
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	2.2	1.5	2.7	< 0.10	< 0.10	0.87
PAH 16 Total	DETSC 3301	1.6	mg/kg						
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg						
Subcontracted Analysis									
mass before grinding	DETSC 3401#	0.1	g						
mass of removed material	DETSC 3401#	0.1	g						
mass after grinding	DETSC 3401#	0.1	g						
2,4,6-trinitrophenyl-N-methylnitramine (tetryl)	DETSC 3401#	1	mg/kg						
2,4,6-trinitrotoluene (2,4,6-TNT)	DETSC 3401#	0.5	mg/kg						
2,4-dinitrotoluene (2,4-DNT)	DETSC 3401#	1	mg/kg						
2,6-dinitrotoluene (2,6-DNT)	DETSC 3401#	1	mg/kg						
cyclo-1,3,5-trimethylene-2,4,6-trinitramine (hexogen, RDX)	DETSC 3401#	1	mg/kg						

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

			Lab No	2228912	2228913	2228914	2228915	2228916	2228917
			.Sample ID	TP370	TP372	TP398	TP358	TP359	TP366
			Depth	0.80	0.60	1.00	0.20	0.20	0.20
			Other ID						
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	31/08/2023	31/08/2023	31/08/2023	29/08/2023	29/08/2023	29/08/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
cyclotetramethylenetetranitramine (HMX)	DETSC 3401#	1	mg/kg						
hexanitrostilbene (HNS)	DETSC 3401#	0.5	mg/kg						
pentaerythritol tetranitrate (PETN)	DETSC 3401#	5	mg/kg						
2,4,6-trinitrophenol (picric acid)	DETSC 3401#	0.1	mg/kg						
picrite (nitroguanidine)	DETSC 3401#	0.1	mg/kg						
ethylene glycol dinitrate (EGDN)	DETSC 3401#	0.1	mg/kg						
nitroglycerine (NG)	DETSC 3401#	0.1	mg/kg						
nitrocellulose (NC)	DETSC 3401#	5000	mg/kg						
chlorate	DETSC 3401#	1	mg/kg						
perchlorate	DETSC 3401#	0.5	mg/kg						
description of removed material	DETSC 3401#	n/a							

Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

				Lab No	2228918	2228919	2228920	2228921	2228922	2228923
				.Sample ID	TP362	TP367	TP373	TP378	TP386	TP406
				Depth	0.20	0.20	0.20	0.20	0.30	0.30
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	29/08/2023	29/08/2023	29/08/2023	29/08/2023	29/08/2023	30/08/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Preparation										
Stones >10mm	DETSC 1003*	1	% m/m	6.0	3.0	4.0	3.0	5.0	2.0
Moisture Content	DETSC 1004	0.1	%	13	13	16	12	16	17
Metals										
Antimony	DETSC 2301*	1	mg/kg						
Arsenic	DETSC 2301#	0.2	mg/kg	13	13	16	8.4	13	29
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.3	0.3	0.3	0.3	0.4	0.4
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	0.2	0.3	0.2	0.2	0.3
Chromium	DETSC 2301#	0.15	mg/kg	14	13	19	8.8	11	17
Chromium III	DETSC 2301*	0.15	mg/kg	14	13	19	8.8	11	17
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	33	37	38	23	28	52
Lead	DETSC 2301#	0.3	mg/kg	72	76	76	47	67	110
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l		< 10		< 10		< 10
Mercury	DETSC 2325#	0.05	mg/kg	0.16	0.12	0.25	0.10	0.16	0.38
Nickel	DETSC 2301#	1	mg/kg	13	9.2	15	8.6	9.4	13
Potassium	DETSC 2301*	1	mg/kg						
Selenium	DETSC 2301#	0.5	mg/kg	0.8	< 0.5	1.0	0.6	0.8	1.1
Vanadium	DETSC 2301#	0.8	mg/kg	23	19	28	15	20	31
Zinc	DETSC 2301#	1	mg/kg	60	51	74	50	59	71
Inorganics										
pH	DETSC 2008#		pH	5.3	5.5	5.4	5.6	5.3	5.3
Calorific Value	DETSC 5008	1	MJ/kg						
Total Organic Carbon	DETSC 2084#	0.5	%	3.0	3.1	3.0	2.4	2.7	4.1
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l		3.2		2.4		2.2
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l		1.5		1.4		4.0
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l		< 10		< 10		< 10
Sulphide	DETSC 2024*	10	mg/kg		16			24	
Sulphur as S, Total	DETSC 2320	0.01	%		0.03			0.04	
Petroleum Hydrocarbons										
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg						
EPH (C10-C12)	DETSC 3311	10	mg/kg						
EPH (C12-C16)	DETSC 3311	10	mg/kg						
EPH (C16-C21)	DETSC 3311	10	mg/kg						
EPH (C21-C35)	DETSC 3311	10	mg/kg						
EPH (C35-C40)	DETSC 3311	10	mg/kg						
EPH (C10-C40)	DETSC 3311#	10	mg/kg						
PAHs										
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.05	0.21	0.09	0.34
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	0.05	0.12	0.16	0.15	0.51
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	0.07	0.11	0.09	0.33

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

			Lab No	2228918	2228919	2228920	2228921	2228922	2228923
			.Sample ID	TP362	TP367	TP373	TP378	TP386	TP406
			Depth	0.20	0.20	0.20	0.20	0.30	0.30
			Other ID						
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	29/08/2023	29/08/2023	29/08/2023	29/08/2023	29/08/2023	30/08/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.21	0.34	0.72	0.97	0.78	2.7
Anthracene	DETSC 3303	0.03	mg/kg	0.05	0.07	0.15	0.19	0.14	0.54
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.43	0.56	1.0	0.98	0.92	3.4
Pyrene	DETSC 3303#	0.03	mg/kg	0.40	0.51	0.92	0.86	0.82	3.0
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.18	0.21	0.37	0.34	0.31	1.2
Chrysene	DETSC 3303	0.03	mg/kg	0.21	0.22	0.41	0.38	0.35	1.3
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.23	0.22	0.37	0.32	0.26	1.1
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.09	0.08	0.13	0.10	0.10	0.38
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.14	0.16	0.25	0.21	0.18	0.75
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.06	0.07	0.10	0.09	0.07	0.26
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.03	< 0.03	< 0.03	0.09
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.06	0.07	0.11	0.09	0.07	0.28
Naphthalene	DETSC 3301	0.1	mg/kg						
Acenaphthylene	DETSC 3301	0.1	mg/kg						
Acenaphthene	DETSC 3301	0.1	mg/kg						
Fluorene	DETSC 3301	0.1	mg/kg						
Phenanthrene	DETSC 3301	0.1	mg/kg						
Anthracene	DETSC 3301	0.1	mg/kg						
Fluoranthene	DETSC 3301	0.1	mg/kg						
Pyrene	DETSC 3301	0.1	mg/kg						
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg						
Chrysene	DETSC 3301	0.1	mg/kg						
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg						
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg						
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg						
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg						
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg						
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg						
Coronene	DETSC 3301*	0.1	mg/kg						
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	2.1	2.6	4.8	5.0	4.3	16
PAH 16 Total	DETSC 3301	1.6	mg/kg						
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg						
Subcontracted Analysis									
mass before grinding	DETSC 3401#	0.1	g						
mass of removed material	DETSC 3401#	0.1	g						
mass after grinding	DETSC 3401#	0.1	g						
2,4,6-trinitrophenyl-N-methylnitramine (tetryl)	DETSC 3401#	1	mg/kg						
2,4,6-trinitrotoluene (2,4,6-TNT)	DETSC 3401#	0.5	mg/kg						
2,4-dinitrotoluene (2,4-DNT)	DETSC 3401#	1	mg/kg						
2,6-dinitrotoluene (2,6-DNT)	DETSC 3401#	1	mg/kg						
cyclo-1,3,5-trimethylene-2,4,6-trinitramine (hexogen, RDX)	DETSC 3401#	1	mg/kg						

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

			Lab No	2228918	2228919	2228920	2228921	2228922	2228923
			.Sample ID	TP362	TP367	TP373	TP378	TP386	TP406
			Depth	0.20	0.20	0.20	0.20	0.30	0.30
			Other ID						
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	29/08/2023	29/08/2023	29/08/2023	29/08/2023	29/08/2023	30/08/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
cyclotetramethylenetetranitramine (HMX)	DETSC 3401#	1	mg/kg						
hexanitrostilbene (HNS)	DETSC 3401#	0.5	mg/kg						
pentaerythritol tetranitrate (PETN)	DETSC 3401#	5	mg/kg						
2,4,6-trinitrophenol (picric acid)	DETSC 3401#	0.1	mg/kg						
picrite (nitroguanidine)	DETSC 3401#	0.1	mg/kg						
ethylene glycol dinitrate (EGDN)	DETSC 3401#	0.1	mg/kg						
nitroglycerine (NG)	DETSC 3401#	0.1	mg/kg						
nitrocellulose (NC)	DETSC 3401#	5000	mg/kg						
chlorate	DETSC 3401#	1	mg/kg						
perchlorate	DETSC 3401#	0.5	mg/kg						
description of removed material	DETSC 3401#	n/a							

Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

			Lab No	2228924
			.Sample ID	TP493
			Depth	0.20
			Other ID	
			Sample Type	SOIL
			Sampling Date	30/08/2023
			Sampling Time	n/s
Test	**Method**	**LOD**	**Units**	
Preparation				
Stones >10mm	DETSC 1003*	1	% m/m	18
Moisture Content	DETSC 1004	0.1	%	9.9
Metals				
Antimony	DETSC 2301*	1	mg/kg	
Arsenic	DETSC 2301#	0.2	mg/kg	30
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	< 0.2
Cadmium	DETSC 2301#	0.1	mg/kg	0.1
Chromium	DETSC 2301#	0.15	mg/kg	21
Chromium III	DETSC 2301*	0.15	mg/kg	21
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	56
Lead	DETSC 2301#	0.3	mg/kg	81
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l	< 10
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05
Nickel	DETSC 2301#	1	mg/kg	29
Potassium	DETSC 2301*	1	mg/kg	
Selenium	DETSC 2301#	0.5	mg/kg	0.7
Vanadium	DETSC 2301#	0.8	mg/kg	29
Zinc	DETSC 2301#	1	mg/kg	74
Inorganics				
pH	DETSC 2008#		pH	7.9
Calorific Value	DETSC 5008	1	MJ/kg	
Total Organic Carbon	DETSC 2084#	0.5	%	1.3
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l	2.4
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l	< 1.0
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	10
Sulphide	DETSC 2024*	10	mg/kg	< 10
Sulphur as S, Total	DETSC 2320	0.01	%	0.08
Petroleum Hydrocarbons				
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg	
EPH (C10-C12)	DETSC 3311	10	mg/kg	
EPH (C12-C16)	DETSC 3311	10	mg/kg	
EPH (C16-C21)	DETSC 3311	10	mg/kg	
EPH (C21-C35)	DETSC 3311	10	mg/kg	
EPH (C35-C40)	DETSC 3311	10	mg/kg	
EPH (C10-C40)	DETSC 3311#	10	mg/kg	
PAHs				
Naphthalene	DETSC 3303#	0.03	mg/kg	0.05
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	0.23
Fluorene	DETSC 3303	0.03	mg/kg	0.14

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

Lab No	2228924
.Sample ID	TP493
Depth	0.20
Other ID	
Sample Type	SOIL
Sampling Date	30/08/2023
Sampling Time	n/s

Test	Method	LOD	Units	
Phenanthrene	DETSC 3303#	0.03	mg/kg	1.7
Anthracene	DETSC 3303	0.03	mg/kg	0.33
Fluoranthene	DETSC 3303#	0.03	mg/kg	2.1
Pyrene	DETSC 3303#	0.03	mg/kg	1.9
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.56
Chrysene	DETSC 3303	0.03	mg/kg	0.56
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.44
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.16
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.32
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.11
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.12
Naphthalene	DETSC 3301	0.1	mg/kg	
Acenaphthylene	DETSC 3301	0.1	mg/kg	
Acenaphthene	DETSC 3301	0.1	mg/kg	
Fluorene	DETSC 3301	0.1	mg/kg	
Phenanthrene	DETSC 3301	0.1	mg/kg	
Anthracene	DETSC 3301	0.1	mg/kg	
Fluoranthene	DETSC 3301	0.1	mg/kg	
Pyrene	DETSC 3301	0.1	mg/kg	
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	
Chrysene	DETSC 3301	0.1	mg/kg	
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	
Coronene	DETSC 3301*	0.1	mg/kg	
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	8.7
PAH 16 Total	DETSC 3301	1.6	mg/kg	
Phenols				
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	
Subcontracted Analysis				
mass before grinding	DETSC 3401#	0.1	g	
mass of removed material	DETSC 3401#	0.1	g	
mass after grinding	DETSC 3401#	0.1	g	
2,4,6-trinitrophenyl-N-methylnitramine (tetryl)	DETSC 3401#	1	mg/kg	
2,4,6-trinitrotoluene (2,4,6-TNT)	DETSC 3401#	0.5	mg/kg	
2,4-dinitrotoluene (2,4-DNT)	DETSC 3401#	1	mg/kg	
2,6-dinitrotoluene (2,6-DNT)	DETSC 3401#	1	mg/kg	
cyclo-1,3,5-trimethylene-2,4,6-trinitramine (hexogen, RDX)	DETSC 3401#	1	mg/kg	

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

Lab No	2228924
.Sample ID	TP493
Depth	0.20
Other ID	
Sample Type	SOIL
Sampling Date	30/08/2023
Sampling Time	n/s

Test	Method	LOD	Units	
cyclotetramethylenetetranitramine (HMX)	DETSC 3401#	1	mg/kg	
hexanitrostilbene (HNS)	DETSC 3401#	0.5	mg/kg	
pentaerythritol tetranitrate (PETN)	DETSC 3401#	5	mg/kg	
2,4,6-trinitrophenol (picric acid)	DETSC 3401#	0.1	mg/kg	
picrite (nitroguanidine)	DETSC 3401#	0.1	mg/kg	
ethylene glycol dinitrate (EGDN)	DETSC 3401#	0.1	mg/kg	
nitroglycerine (NG)	DETSC 3401#	0.1	mg/kg	
nitrocellulose (NC)	DETSC 3401#	5000	mg/kg	
chlorate	DETSC 3401#	1	mg/kg	
perchlorate	DETSC 3401#	0.5	mg/kg	
description of removed material	DETSC 3401#	n/a		

Summary of Asbestos Analysis
Soil Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

Lab No	Sample ID	Sample Location	Material Type*	Result	Comment*	Analyst
2228849	TP341 0.30		SOIL	NAD	none	Robertas Ciparis
2228850	TP343 0.50		SOIL	NAD	none	Robertas Ciparis
2228851	TP349 0.40		SOIL	NAD	none	Robertas Ciparis
2228852	TP350 0.15		SOIL	NAD	none	Robertas Ciparis
2228853	TP353 0.40		SOIL	Amosite	Amosite present as fibre bundles	Robertas Ciparis
2228854	TP374 0.30		SOIL	NAD	none	Robertas Ciparis
2228855	TP410 3.20		SOIL	NAD	none	Robertas Ciparis
2228856	TT301N 0.40		SOIL	NAD	none	Robertas Ciparis
2228857	TP314 0.70		SOIL	NAD	none	Robertas Ciparis
2228858	TP348 0.10		SOIL	NAD	none	Robertas Ciparis
2228859	TP349 0.40		SOIL	NAD	none	Robertas Ciparis
2228861	TP360 0.35		SOIL	NAD	none	Robertas Ciparis
2228863	TP376 0.30		SOIL	NAD	none	Robertas Ciparis
2228865	TP381 0.20		SOIL	NAD	none	Robertas Ciparis
2228866	TP382 0.20		SOIL	NAD	none	Robertas Ciparis
2228868	TP383 0.60		SOIL	NAD	none	Robertas Ciparis
2228869	TP385 0.50		SOIL	NAD	none	Robertas Ciparis
2228870	TP390 0.70		SOIL	Chrysotile	Chrysotile present in microscopic insulation debris	Robertas Ciparis
2228871	TP390 1.50		SOIL	NAD	none	Robertas Ciparis
2228872	TP391W 0.90		SOIL	NAD	none	Robertas Ciparis
2228874	TP399 0.10		SOIL	NAD	none	Robertas Ciparis
2228875	TP410 0.10		SOIL	NAD	none	Robertas Ciparis
2228877	TP411 0.30		SOIL	NAD	none	Robertas Ciparis
2228879	TT304N 0.70		SOIL	NAD	none	Robertas Ciparis
2228886	TP315 0.10		SOIL	NAD	none	Robertas Ciparis
2228887	TP365 0.10		SOIL	NAD	none	Robertas Ciparis
2228888	TP368 0.10		SOIL	NAD	none	Robertas Ciparis
2228889	TP369 0.10		SOIL	NAD	none	Robertas Ciparis
2228890	TP392 0.50		SOIL	NAD	none	Robertas Ciparis
2228891	TP398 0.20		SOIL	NAD	none	Robertas Ciparis
2228892	TP403 0.20		SOIL	NAD	none	Robertas Ciparis
2228893	TP495 0.20		SOIL	Chrysotile Amosite	Chrysotile and Amosite present as fibre bundles	Robertas Ciparis
2228894	TP342 1.10		Cement	Chrysotile	none	Robertas Ciparis
2228895	TP344 1.30		Cement	Chrysotile	none	Robertas Ciparis
2228896	TP388 0.10		Cement	Chrysotile	none	Robertas Ciparis
2228897	TP344 0.80		SOIL	NAD	none	Robertas Ciparis
2228898	TP357 0.60		SOIL	NAD	none	Robertas Ciparis
2228899	TP366 0.60		SOIL	NAD	none	Robertas Ciparis
2228900	TP380 1.10		SOIL	NAD	none	Robertas Ciparis
2228901	TP384 1.50		SOIL	NAD	none	Robertas Ciparis
2228902	TP389 2.20		SOIL	NAD	none	Robertas Ciparis
2228903	TP411 2.00		SOIL	NAD	none	Robertas Ciparis
2228904	TP369 1.60		SOIL	NAD	none	Robertas Ciparis
2228905	TP377 0.20		SOIL	NAD	none	Robertas Ciparis
2228906	TP379 0.40		SOIL	NAD	none	Robertas Ciparis

Summary of Asbestos Analysis
Soil Samples

Our Ref 23-21123
Client Ref 4486
Contract Title Black Cats

Lab No	Sample ID	Sample Location	Material Type*	Result	Comment*	Analyst
2228907	TP347 0.90		SOIL	NAD	none	Robertas Ciparis
2228908	TP349 1.00		SOIL	NAD	none	Robertas Ciparis
2228909	TP354 0.60		SOIL	NAD	none	Robertas Ciparis
2228910	TP361 0.10		SOIL	NAD	none	Robertas Ciparis
2228911	TP368 0.50		SOIL	NAD	none	Robertas Ciparis
2228912	TP370 0.80		SOIL	NAD	none	Robertas Ciparis
2228913	TP372 0.60		SOIL	NAD	none	Robertas Ciparis
2228914	TP398 1.00		SOIL	NAD	none	Robertas Ciparis
2228915	TP358 0.20		SOIL	NAD	none	Robertas Ciparis
2228916	TP359 0.20		SOIL	NAD	none	Robertas Ciparis
2228917	TP366 0.20		SOIL	NAD	none	Robertas Ciparis
2228918	TP362 0.20		SOIL	NAD	none	Robertas Ciparis
2228919	TP367 0.20		SOIL	NAD	none	Robertas Ciparis
2228920	TP373 0.20		SOIL	NAD	none	Robertas Ciparis
2228921	TP378 0.20		SOIL	NAD	none	Robertas Ciparis
2228922	TP386 0.30		SOIL	NAD	none	Robertas Ciparis
2228923	TP406 0.30		SOIL	NAD	none	Robertas Ciparis
2228924	TP493 0.20		SOIL	NAD	none	Robertas Ciparis

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 23-21123
Client Ref 4486
Contract Black Cats

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2228849	TP341 0.30 SOIL	01/09/23	GJ 250ml, GJ 60ml, PT 1L		
2228850	TP343 0.50 SOIL	01/09/23	GJ 250ml, GJ 60ml, PT 1L		
2228851	TP349 0.40 SOIL	01/09/23	GJ 250ml, GJ 60ml, PT 1L		
2228852	TP350 0.15 SOIL	01/09/23	GJ 250ml, GJ 60ml, PT 1L		
2228853	TP353 0.40 SOIL	01/09/23	GJ 250ml, GJ 60ml, PT 1L		
2228854	TP374 0.30 SOIL	01/09/23	GJ 250ml, GJ 60ml, PT 1L		
2228855	TP410 3.20 SOIL	01/09/23	GJ 250ml, GJ 60ml, PT 1L		
2228856	TT301N 0.40 SOIL	01/09/23	GJ 250ml, GJ 60ml, PT 1L		
2228857	TP314 0.70 SOIL	01/09/23	GJ 250ml, GJ 60ml, PT 1L		
2228858	TP348 0.10 SOIL	01/09/23	GJ 250ml, GJ 60ml, PT 1L		
2228859	TP349 0.40 SOIL	01/09/23	GJ 250ml, GJ 60ml, PT 1L		
2228860	TP351 0.30 SOIL	01/09/23	GJ 250ml, GJ 60ml, PT 1L		
2228861	TP360 0.35 SOIL	01/09/23	GJ 250ml, GJ 60ml, PT 1L		
2228862	TP364 0.40 SOIL	01/09/23	GJ 250ml, GJ 60ml, PT 1L		
2228863	TP376 0.30 SOIL	29/08/23	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2228864	TP380 0.30 SOIL	29/08/23	GJ 250ml, GJ 60ml, PT 1L	Total Sulphur ICP (7 days)	
2228865	TP381 0.20 SOIL	29/08/23	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2228866	TP382 0.20 SOIL	29/08/23	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2228867	TP383 0.10 SOIL	29/08/23	GJ 250ml, GJ 60ml, PT 1L	Total Sulphur ICP (7 days)	
2228868	TP383 0.60 SOIL	29/08/23	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2228869	TP385 0.50 SOIL	29/08/23	GJ 250ml, GJ 60ml, PT 1L	Total Sulphur ICP (7 days), pH + Conductivity (7 days)	
2228870	TP390 0.70 SOIL	29/08/23	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2228871	TP390 1.50 SOIL	29/08/23	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2228872	TP391W 0.90 SOIL	29/08/23	GJ 250ml, GJ 60ml, PT 1L	Total Sulphur ICP (7 days), pH + Conductivity (7 days)	
2228873	TP397 0.50 SOIL	29/08/23	GJ 250ml, GJ 60ml, PT 1L	Total Sulphur ICP (7 days)	
2228874	TP399 0.10 SOIL	30/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228875	TP410 0.10 SOIL	30/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228876	TP410 0.40 SOIL	30/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228877	TP411 0.30 SOIL	30/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228878	TT302W 0.30 SOIL	30/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228879	TT304N 0.70 SOIL	30/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228880	TP341 0.05 SOIL	30/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228881	TP350 0.05 SOIL	30/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228882	TP364 0.05 SOIL	30/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228883	TP375 0.05 SOIL	30/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228884	TP382 0.05 SOIL	30/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228885	TT301N 0.05 SOIL	30/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228886	TP315 0.10 SOIL	30/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228887	TP365 0.10 SOIL	30/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228888	TP368 0.10 SOIL	30/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228889	TP369 0.10 SOIL	30/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228890	TP392 0.50 SOIL	30/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228891	TP398 0.20 SOIL	30/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228892	TP403 0.20 SOIL	30/08/23	GJ 250ml, GJ 60ml, PT 1L		

Information in Support of the Analytical Results

Our Ref 23-21123
Client Ref 4486
Contract Black Cats

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2228893	TP495 0.20 SOIL	30/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228894	TP342 1.10 MISC	31/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228895	TP344 1.30 MISC	31/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228896	TP388 0.10 MISC	31/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228897	TP344 0.80 SOIL	31/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228898	TP357 0.60 SOIL	31/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228899	TP366 0.60 SOIL	31/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228900	TP380 1.10 SOIL	31/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228901	TP384 1.50 SOIL	31/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228902	TP389 2.20 SOIL	31/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228903	TP411 2.00 SOIL	31/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228904	TP369 1.60 SOIL	31/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228905	TP377 0.20 SOIL	31/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228906	TP379 0.40 SOIL	31/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228907	TP347 0.90 SOIL	31/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228908	TP349 1.00 SOIL	31/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228909	TP354 0.60 SOIL	31/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228910	TP361 0.10 SOIL	31/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228911	TP368 0.50 SOIL	31/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228912	TP370 0.80 SOIL	31/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228913	TP372 0.60 SOIL	31/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228914	TP398 1.00 SOIL	31/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228915	TP358 0.20 SOIL	29/08/23	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2228916	TP359 0.20 SOIL	29/08/23	GJ 250ml, GJ 60ml, PT 1L	Total Sulphur ICP (7 days), pH + Conductivity (7 days)	
2228917	TP366 0.20 SOIL	29/08/23	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2228918	TP362 0.20 SOIL	29/08/23	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2228919	TP367 0.20 SOIL	29/08/23	GJ 250ml, GJ 60ml, PT 1L	Total Sulphur ICP (7 days), pH + Conductivity (7 days)	
2228920	TP373 0.20 SOIL	29/08/23	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2228921	TP378 0.20 SOIL	29/08/23	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2228922	TP386 0.30 SOIL	29/08/23	GJ 250ml, GJ 60ml, PT 1L	Total Sulphur ICP (7 days), pH + Conductivity (7 days)	
2228923	TP406 0.30 SOIL	30/08/23	GJ 250ml, GJ 60ml, PT 1L		
2228924	TP493 0.20 SOIL	30/08/23	GJ 250ml, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Information in Support of the Analytical Results

Our Ref 23-21123
Client Ref 4486
Contract Black Cats

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.
Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number 23-21621 *Issued:* 26-Sep-23

Client Lithos Consulting Ltd
Parkhill
Walton Rd
Wetherby
LS22 5DZ

Our Reference 23-21621

Client Reference 4486

Order No PO21200

Contract Title Black Cats

Description 8 Soil samples, 1 Misc sample.

Date Received 11-Sep-23

Date Started 11-Sep-23

Date Completed 26-Sep-23

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. 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 By

Kirk Bridgewood
General Manager

2139

Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21621
Client Ref 4486
Contract Title Black Cats

				Lab No	2231671	2231672	2231673	2231674	2231676	2231677
				.Sample ID	TP413	TP414	TP415	TP417	TP418	TP401
				Depth	0.50	1.00	0.80	1.40	0.60	0.40
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Preparation										
Stones >10mm	DETSC 1003*	1	% m/m	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Moisture Content	DETSC 1004	0.1	%	13	10	7.7	16	14	12
Metals										
Arsenic	DETSC 2301#	0.2	mg/kg	31	13	8.4	12	39	11
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.4	0.3	0.8	2.2	0.3	0.5
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	0.3	0.1	1.0	0.2	< 0.1
Chromium	DETSC 2301#	0.15	mg/kg	16	17	30	23	16	17
Chromium III	DETSC 2301*	0.15	mg/kg	16	17	30	23	16	17
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	69	55	55	770	56	47
Lead	DETSC 2301#	0.3	mg/kg	350	190	99	250	540	90
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l		< 10		20	< 10	
Mercury	DETSC 2325#	0.05	mg/kg	0.18	0.27	0.05	0.10	0.31	0.22
Nickel	DETSC 2301#	1	mg/kg	18	14	15	19	16	14
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	31	22	33	22	25	26
Zinc	DETSC 2301#	1	mg/kg	110	140	72	630	110	60
Inorganics										
pH	DETSC 2008#		pH	8.4	8.6	10.7	9.6	9.9	8.1
Total Organic Carbon	DETSC 2084#	0.5	%	4.6	2.3	1.7	2.1	4.4	2.0
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l		4.3		35	6.8	
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l		1.7		8.6	2.2	
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l		42		130	83	
Sulphide	DETSC 2024*	10	mg/kg		87		71	71	
Sulphur as S, Total	DETSC 2320	0.01	%		0.05		0.11	0.05	
Petroleum Hydrocarbons										
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10	< 10	16	< 10	< 10	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 10	49	98	< 10	< 10	22
EPH (C16-C21)	DETSC 3311	10	mg/kg	47	410	470	36	65	100
EPH (C21-C35)	DETSC 3311	10	mg/kg	110	1000	930	130	260	190
EPH (C35-C40)	DETSC 3311	10	mg/kg	< 10	170	89	23	31	19
EPH (C10-C40)	DETSC 3311#	10	mg/kg	170	1700	1600	190	360	340
PAHs										
Naphthalene	DETSC 3303#	0.03	mg/kg	0.14	0.29	0.29	0.07	4.5	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	0.04	0.03	< 0.03	0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	0.29	0.92	0.55	0.14	2.0	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	0.18	0.87	0.42	0.10	1.8	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	1.6	6.0	3.0	0.95	8.2	0.18
Anthracene	DETSC 3303	0.03	mg/kg	0.33	1.6	0.78	0.24	2.9	0.05
Fluoranthene	DETSC 3303#	0.03	mg/kg	1.9	6.5	3.3	1.4	7.2	0.29

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21621
Client Ref 4486
Contract Title Black Cats

			Lab No	2231671	2231672	2231673	2231674	2231676	2231677
			.Sample ID	TP413	TP414	TP415	TP417	TP418	TP401
			Depth	0.50	1.00	0.80	1.40	0.60	0.40
			Other ID						
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023	30/08/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Pyrene	DETSC 3303#	0.03	mg/kg	1.7	5.5	2.9	1.3	6.5	0.25
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.60	1.9	1.2	0.50	2.6	0.13
Chrysene	DETSC 3303	0.03	mg/kg	0.69	1.9	1.2	0.53	2.7	0.11
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.56	1.5	1.0	0.46	2.0	0.11
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.20	0.58	0.33	0.15	0.77	0.05
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.42	1.2	0.81	0.34	1.7	0.09
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.14	0.37	0.26	0.13	0.53	0.04
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	0.05	0.12	0.09	0.04	0.15	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.15	0.44	0.33	0.17	0.58	0.05
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	8.9	30	17	6.5	44	1.4

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Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21621
Client Ref 4486
Contract Title Black Cats

			Lab No	2231680	2231684
			.Sample ID	TP402	TP412
			Depth	4.50	0.40
			Other ID		
			Sample Type	SOIL	SOIL
			Sampling Date	29/08/2023	30/08/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Preparation					
Stones >10mm	DETSC 1003*	1	% m/m	< 1.0	< 1.0
Moisture Content	DETSC 1004	0.1	%	16	5.1
Metals					
Arsenic	DETSC 2301#	0.2	mg/kg	12	3.0
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.4	< 0.2
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	0.3
Chromium	DETSC 2301#	0.15	mg/kg	20	11
Chromium III	DETSC 2301*	0.15	mg/kg	20	11
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	81	7.1
Lead	DETSC 2301#	0.3	mg/kg	96	12
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l		< 10
Mercury	DETSC 2325#	0.05	mg/kg	0.11	< 0.05
Nickel	DETSC 2301#	1	mg/kg	21	10
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	28	15
Zinc	DETSC 2301#	1	mg/kg	96	29
Inorganics					
pH	DETSC 2008#		pH	8.2	8.2
Total Organic Carbon	DETSC 2084#	0.5	%	2.4	< 0.5
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l		3.6
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l		< 1.0
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l		< 10
Sulphide	DETSC 2024*	10	mg/kg		24
Sulphur as S, Total	DETSC 2320	0.01	%		< 0.01
Petroleum Hydrocarbons					
EPH (C6-C10)	DETSC 3321*	0.1	mg/kg	< 0.1	< 0.1
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10	< 10
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 10	< 10
EPH (C16-C21)	DETSC 3311	10	mg/kg	23	< 10
EPH (C21-C35)	DETSC 3311	10	mg/kg	53	11
EPH (C35-C40)	DETSC 3311	10	mg/kg	< 10	< 10
EPH (C10-C40)	DETSC 3311#	10	mg/kg	85	17
PAHs					
Naphthalene	DETSC 3303#	0.03	mg/kg	0.04	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	0.07	0.06
Fluorene	DETSC 3303	0.03	mg/kg	0.06	0.04
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.49	0.45
Anthracene	DETSC 3303	0.03	mg/kg	0.13	0.10
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.51	0.82

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil/Misc Samples

Our Ref 23-21621
Client Ref 4486
Contract Title Black Cats

			Lab No	2231680	2231684
			.Sample ID	TP402	TP412
			Depth	4.50	0.40
			Other ID		
			Sample Type	SOIL	SOIL
			Sampling Date	29/08/2023	30/08/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Pyrene	DETSC 3303#	0.03	mg/kg	0.42	0.74
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.17	0.36
Chrysene	DETSC 3303	0.03	mg/kg	0.15	0.36
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.11	0.33
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.04	0.13
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.10	0.28
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.03	0.09
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.04	0.12
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	2.3	3.9

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Asbestos Analysis
Soil Samples

Our Ref 23-21621
Client Ref 4486
Contract Title Black Cats

Lab No	Sample ID	Sample Location	Material Type*	Result	Comment*	Analyst
2231671	TP413 0.50		SOIL	Chrysotile	Chrysotile present in microscopic insulation residue	Barry Kelly
2231672	TP414 1.00		SOIL	Chrysotile	Chrysotile present in microscopic insulation debris	Barry Kelly
2231673	TP415 0.80		SOIL	NAD	none	Barry Kelly
2231674	TP417 1.40		SOIL	Chrysotile	Chrysotile present in brown microscopic insulation residue	Barry Kelly
2231675	TP417 1.60		Cement	Chrysotile	Chrysotile present in cement roof sheet	Barry Kelly
2231676	TP418 0.60		SOIL	NAD	none	Barry Kelly
2231677	TP401 0.40		SOIL	NAD	none	Barry Kelly
2231680	TP402 4.50		SOIL	NAD	none	Barry Kelly
2231684	TP412 0.40		SOIL	Chrysotile	Chrysotile present in microscopic insulation debris	Barry Kelly

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 23-21621
Client Ref 4486
Contract Black Cats

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2231671	TP413 0.50 SOIL	30/08/23	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2231672	TP414 1.00 SOIL	30/08/23	GJ 250ml, GJ 60ml, PT 1L	Total Sulphur ICP (7 days), pH + Conductivity (7 days)	
2231673	TP415 0.80 SOIL	30/08/23	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2231674	TP417 1.40 SOIL	30/08/23	GJ 250ml, GJ 60ml, PT 1L	Total Sulphur ICP (7 days), pH + Conductivity (7 days)	
2231675	TP417 1.60 MISC	30/08/23	GJ 250ml, GJ 60ml, PT 1L		
2231676	TP418 0.60 SOIL	30/08/23	GJ 250ml, GJ 60ml, PT 1L	Total Sulphur ICP (7 days), pH + Conductivity (7 days)	
2231677	TP401 0.40 SOIL	30/08/23	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2231678	TP402 0.30 SOIL	30/08/23	GJ 250ml, GJ 60ml, PT 1L		
2231679	TP401 1.00 SOIL	29/08/23	PT 1L		
2231680	TP402 4.50 SOIL	29/08/23	GJ 250ml, GJ 60ml, PT 1L	pH + Conductivity (7 days)	
2231681	TP408 0.10 SOIL	29/08/23	GJ 250ml, GJ 60ml, PT 1L		
2231682	TP408 0.80 SOIL	29/08/23	GJ 250ml, GJ 60ml, PT 1L		
2231683	TP412 0.20 SOIL	30/08/23	GJ 250ml, GJ 60ml, PT 1L		
2231684	TP412 0.40 SOIL	30/08/23	GJ 250ml, GJ 60ml, PT 1L	Total Sulphur ICP (7 days), pH + Conductivity (7 days)	

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number	23-23453,23-23452,23-23451	*Issued:*	13-Nov-23

Client Lithos Consulting Ltd
Parkhill
Walton Rd
Wetherby
LS22 5DZ

Our Reference	23-23453,23-23452,23-23451
Client Reference	4486
Order No	PO21200
Contract Title	Black Cats
Description	11 Soil samples.
Date Received	11-Sep-23
Date Started	03-Oct-23
Date Completed	13-Nov-23
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. 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 By

Kirk Bridgewood
General Manager

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Summary of Asbestos Analysis

Samples

Our Ref 23-23453,23-23452,23-23451
Client Ref 4486
Contract Title Black Cats

Lab No	Sample ID	Sample Location	Material Type	Result	Comment*	Analyst

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Summary of Asbestos Quantification Analysis
Soil Samples

Our Ref 23-23453,23-23452,23-23451
Client Ref 4486
Contract Title Black Cats

			Lab No	2242335	2242336	2242337	2242338
			.Sample ID	TP306	TP322	TP301	TP306
			Depth	0.55	0.60	0.60	0.40
			Other ID	2	2	2	1
			Sample Type				
			Sampling Date	24/08/2023	25/08/2023	24/08/2023	24/08/2023
			Sampling Time				
Test	**Method**	**Units**					
Total Mass% Asbestos (a+b+c)	DETSC 1102	Mass %		**0.005**	**< 0.001**	**0.001**	**0.002**
Gravimetric Quantification (a)	DETSC 1102	Mass %		na	na	na	na
Detailed Gravimetric Quantification (b)	DETSC 1102	Mass %		0.005	<0.001	0.001	0.002
Quantification by PCOM (c)	DETSC 1102	Mass %		na	na	na	na
Potentially Respirable Fibres (d)	DETSC 1102	Fibres/g		na	na	na	na
Breakdown of Gravimetric Analysis (a)							
Mass of Sample		g		353.34	584.28	908.85	681.73
ACMs present*		type					
Mass of ACM in sample		g					
% ACM by mass		%					
% asbestos in ACM		%					
% asbestos in sample		%					
Breakdown of Detailed Gravimetric Analysis (b)							
% Amphibole bundles in sample		Mass %		<0.001	na	na	na
% Chrysotile bundles in sample		Mass %		0.004	<0.001	0.001	0.002
Breakdown of PCOM Analysis (c)							
% Amphibole fibres in sample		Mass %		na	na	na	na
% Chrysotile fibres in sample		Mass %		na	na	na	na
Breakdown of Potentially Respirable Fibre Analysis (d)							
Amphibole fibres		Fibres/g		na	na	na	na
Chrysotile fibres		Fibres/g		na	na	na	na

* Denotes test or material description outside of UKAS accreditation.
% asbestos in Asbestos Containing Materials (ACMs) is determined by
by reference to HSG 264.
Recommended sample size for quantification is approximately 1kg
# denotes deviating sample

Information in Support of the Analytical Results

Our Ref 23-23453,23-23452,23-23451
Client Ref 4486
Contract Black Cats

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2242335	TP306 0.55 SOIL	24/08/23	GJ 250ml, GJ 60ml, PT 1L		
2242336	TP322 0.60 SOIL	25/08/23	GJ 250ml, GJ 60ml, PT 1L		
2242337	TP301 0.60 SOIL	24/08/23	GJ 250ml, GJ 60ml, PT 1L		
2242338	TP306 0.40 SOIL	24/08/23	GJ 250ml, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number 23-23455 *Issued:* 18-Oct-23

Client Lithos Consulting Ltd
Parkhill
Walton Rd
Wetherby
LS22 5DZ

Our Reference 23-23455

Client Reference 4486

Order No 21171/4486/CC

Contract Title Black Cats

Description One Soil sample.

Date Received 01-Sep-23

Date Started 03-Oct-23

Date Completed 18-Oct-23

Test Procedures Identified by prefix DETSn (details on request).

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Approved By

Kirk Bridgewood
General Manager

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-23455
Client Ref 4486
Contract Title Black Cats

			Lab No	2242339
			.Sample ID	TP301
			Depth	0.05
			Other ID	1
			Sample Type	SOIL
			Sampling Date	24/08/2023
			Sampling Time	n/s
Test	**Method**	**LOD**	**Units**	
Preparation				
Stones >10mm	DETSC 1003*	1	% m/m	50
Moisture Content	DETSC 1004	0.1	%	1.1
Petroleum Hydrocarbons				
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg	< 0.01
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg	< 0.01
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg	69
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg	710
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg	1400
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg	2100
Aliphatic C5-C35	DETSC 3072*	10	mg/kg	4300
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg	< 0.01
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg	< 0.01
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg	< 0.01
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg	23
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg	510
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg	1500
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg	4400
Aromatic C5-C35	DETSC 3072*	10	mg/kg	6400
TPH Ali/Aro Total C5-C35	DETSC 3072*	10	mg/kg	11000
Benzene	DETSC 3321#	0.01	mg/kg	< 0.01
Ethylbenzene	DETSC 3321#	0.01	mg/kg	< 0.01
Toluene	DETSC 3321#	0.01	mg/kg	< 0.01
Xylene	DETSC 3321#	0.01	mg/kg	< 0.01
MTBE	DETSC 3321	0.01	mg/kg	< 0.01

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Information in Support of the Analytical Results

Our Ref 23-23455
Client Ref 4486
Contract Black Cats

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2242339	TP301 0.05 SOIL	24/08/23	GJ 250ml		BTEX / C5-C10

Key: G-Glass J-Jar

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

End of Report

Certificate of Analysis

Certificate Number 23-26199 *Issued:* 17-Nov-23

Client Lithos Consulting Ltd
Parkhill
Walton Rd
Wetherby
LS22 5DZ

Our Reference 23-26199

Client Reference 4486

Order No 21489/4486jbr

Contract Title Black Cats

Description 56 Soil samples.

Date Received 07-Nov-23

Date Started 07-Nov-23

Date Completed 17-Nov-23

Test Procedures Identified by prefix DETSn (details on request).

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Approved By

Kirk Bridgewood
General Manager

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-26199
Client Ref 4486
Contract Title Black Cats

				Lab No	2258832	2258833	2258834	2258835	2258836	2258837
				.Sample ID	TP538	TP547	TP549	TP501	TP505	TP509
				Depth	0.70	0.50	0.50	0.10	0.10	0.10
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	02/11/2023	03/11/2023	03/11/2023	31/10/2023	30/10/2023	31/10/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Preparation										
Stones >10mm	DETSC 1003*	1	% m/m	< 1.0	52	12	4.0	10	9.0
Moisture Content	DETSC 1004	0.1	%	19	11	16	21	20	17
Metals										
Arsenic	DETSC 2301#	0.2	mg/kg	2.8	3.3	3.2	13	12	13
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.2	< 0.2	< 0.2	0.3	0.3	0.3
Cadmium	DETSC 2301#	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.2	0.3	0.2
Chromium	DETSC 2301#	0.15	mg/kg	6.5	12	4.6	18	11	7.1
Chromium III	DETSC 2301*	0.15	mg/kg	6.5	12	4.6	18	11	7.1
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	9.8	8.1	8.2	46	21	25
Lead	DETSC 2301#	0.3	mg/kg	15	13	12	83	49	58
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l	< 10	< 10	< 10			
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	< 0.05	0.16	0.16	0.12
Nickel	DETSC 2301#	1	mg/kg	4.7	6.9	2.1	13	8.4	5.8
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	12	14	9.8	23	17	15
Zinc	DETSC 2301#	1	mg/kg	16	28	21	84	55	39
Inorganics										
pH	DETSC 2008#		pH	5.8	6.1	5.6	5.3	5.8	5.5
Total Organic Carbon	DETSC 2084#	0.5	%	2.1	1.0	2.2	3.3	3.3	3.5
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l	6.4	3.6	3.9			
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l	< 1.0	< 1.0	< 1.0			
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	89	13	18			
Petroleum Hydrocarbons										
VPH (C6-C10)	DETSC 3321*	0.1	mg/kg	< 0.1	< 0.1	< 0.1			
EPH (C10-C12)	DETSC 3311	10	mg/kg	< 10	< 10	< 10			
EPH (C12-C16)	DETSC 3311	10	mg/kg	< 10	< 10	< 10			
EPH (C16-C21)	DETSC 3311	10	mg/kg	< 10	< 10	< 10			
EPH (C21-C35)	DETSC 3311	10	mg/kg	< 10	< 10	< 10			
EPH (C35-C40)	DETSC 3311	10	mg/kg	< 10	< 10	< 10			
EPH (C10-C40)	DETSC 3311#	10	mg/kg	< 10	< 10	< 10			
PAHs										
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.07	< 0.03	0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.09	< 0.03	0.08
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.06	< 0.03	0.05
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.89	0.10	0.46
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.13	< 0.03	0.11
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	0.04	< 0.03	1.4	0.18	0.72
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	0.04	< 0.03	1.5	0.15	0.61
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.41	0.06	0.22
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.57	0.06	0.27

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-26199
Client Ref 4486
Contract Title Black Cats

				Lab No	2258832	2258833	2258834	2258835	2258836	2258837
				.Sample ID	TP538	TP547	TP549	TP501	TP505	TP509
				Depth	0.70	0.50	0.50	0.10	0.10	0.10
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	02/11/2023	03/11/2023	03/11/2023	31/10/2023	30/10/2023	31/10/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg		< 0.03	< 0.03	< 0.03	0.31	0.05	0.21
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg		< 0.03	< 0.03	< 0.03	0.12	< 0.03	0.06
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg		< 0.03	< 0.03	< 0.03	0.23	0.04	0.15
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg		< 0.03	< 0.03	< 0.03	0.07	< 0.03	0.05
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg		< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg		< 0.03	< 0.03	< 0.03	0.08	< 0.03	0.05
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg		< 0.10	< 0.10	< 0.10	5.9	0.63	3.0

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-26199
Client Ref 4486
Contract Title Black Cats

				Lab No	2258838	2258839	2258840	2258841	2258842	2258843
				.Sample ID	TP513	TP515	TP517	TP521	TP525	TP527
				Depth	0.10	0.10	0.10	0.10	0.10	0.10
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	02/11/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Preparation										
Stones >10mm	DETSC 1003*	1	% m/m	3.0	8.0	3.0	1.0	< 1.0	< 1.0
Moisture Content	DETSC 1004	0.1	%	17	20	17	17	17	18
Metals										
Arsenic	DETSC 2301#	0.2	mg/kg	16	16	12	15	17	22
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.3	0.3	0.2	0.4	0.3	0.3
Cadmium	DETSC 2301#	0.1	mg/kg	0.3	0.3	0.2	0.2	0.3	0.3
Chromium	DETSC 2301#	0.15	mg/kg	9.2	18	8.8	8.4	12	20
Chromium III	DETSC 2301*	0.15	mg/kg	9.2	18	8.8	8.4	12	20
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	25	30	23	23	33	51
Lead	DETSC 2301#	0.3	mg/kg	54	63	53	60	130	95
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l						
Mercury	DETSC 2325#	0.05	mg/kg	0.15	0.15	0.14	0.14	0.19	0.29
Nickel	DETSC 2301#	1	mg/kg	6.9	11	5.0	5.5	9.1	15
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	19	28	16	18	21	32
Zinc	DETSC 2301#	1	mg/kg	48	80	37	38	49	74
Inorganics										
pH	DETSC 2008#		pH	6.0	5.6	5.7	5.6	6.4	5.4
Total Organic Carbon	DETSC 2084#	0.5	%	3.0	2.4	2.9	3.7	3.8	6.7
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l						
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l						
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l						
Petroleum Hydrocarbons										
VPH (C6-C10)	DETSC 3321*	0.1	mg/kg						
EPH (C10-C12)	DETSC 3311	10	mg/kg						
EPH (C12-C16)	DETSC 3311	10	mg/kg						
EPH (C16-C21)	DETSC 3311	10	mg/kg						
EPH (C21-C35)	DETSC 3311	10	mg/kg						
EPH (C35-C40)	DETSC 3311	10	mg/kg						
EPH (C10-C40)	DETSC 3311#	10	mg/kg						
PAHs										
Naphthalene	DETSC 3303#	0.03	mg/kg	0.07	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	0.04	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	0.12	< 0.03	< 0.03	0.05	0.10	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	0.08	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.63	0.17	0.06	0.34	0.80	0.07
Anthracene	DETSC 3303	0.03	mg/kg	0.13	0.03	< 0.03	0.07	0.18	0.07
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.84	0.33	0.12	0.60	1.9	0.11
Pyrene	DETSC 3303#	0.03	mg/kg	0.73	0.29	0.10	0.53	1.7	0.09
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.27	0.10	0.04	0.19	0.69	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	0.25	0.10	0.04	0.23	0.72	0.05

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-26199
Client Ref 4486
Contract Title Black Cats

				Lab No	2258838	2258839	2258840	2258841	2258842	2258843
				.Sample ID	TP513	TP515	TP517	TP521	TP525	TP527
				Depth	0.10	0.10	0.10	0.10	0.10	0.10
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	01/11/2023	01/11/2023	01/11/2023	01/11/2023	01/11/2023	02/11/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg		0.22	0.11	0.04	0.20	1.0	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg		0.08	0.04	< 0.03	0.07	0.35	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg		0.18	0.08	< 0.03	0.14	0.73	< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg		0.05	< 0.03	< 0.03	0.06	0.41	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg		< 0.03	< 0.03	< 0.03	< 0.03	0.07	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg		0.06	0.04	< 0.03	0.06	0.51	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg		3.7	1.2	0.35	2.5	9.1	0.39

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-26199
Client Ref 4486
Contract Title Black Cats

				Lab No	2258844	2258845	2258846	2258847	2258848	2258849
				.Sample ID	TP531	TP533	TP537	TP541	TP543	TP545
				Depth	0.10	0.10	0.10	0.10	0.10	0.10
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	02/11/2023	02/11/2023	02/11/2023	03/11/2023	03/11/2023	03/11/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Preparation										
Stones >10mm	DETSC 1003*	1	% m/m	5.0	2.0	6.0	5.0	8.0	7.0
Moisture Content	DETSC 1004	0.1	%	15	18	18	17	17	15
Metals										
Arsenic	DETSC 2301#	0.2	mg/kg	9.7	14	10	15	21	18
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.3	0.3	0.3	0.2	0.2	0.3
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	0.2	< 0.1	0.2	0.3	0.3
Chromium	DETSC 2301#	0.15	mg/kg	15	18	16	14	16	16
Chromium III	DETSC 2301*	0.15	mg/kg	15	18	16	14	16	16
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	17	24	15	28	33	30
Lead	DETSC 2301#	0.3	mg/kg	46	62	34	54	71	68
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l						
Mercury	DETSC 2325#	0.05	mg/kg	0.09	0.20	0.05	0.15	0.20	0.17
Nickel	DETSC 2301#	1	mg/kg	13	11	9.1	7.4	7.7	8.9
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	22	26	23	20	21	21
Zinc	DETSC 2301#	1	mg/kg	67	82	37	55	58	95
Inorganics										
pH	DETSC 2008#		pH	6.5	5.8	5.6	5.7	6.1	6.0
Total Organic Carbon	DETSC 2084#	0.5	%	1.9	2.6	3.5	3.3	3.7	4.9
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l						
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l						
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l						
Petroleum Hydrocarbons										
VPH (C6-C10)	DETSC 3321*	0.1	mg/kg						
EPH (C10-C12)	DETSC 3311	10	mg/kg						
EPH (C12-C16)	DETSC 3311	10	mg/kg						
EPH (C16-C21)	DETSC 3311	10	mg/kg						
EPH (C21-C35)	DETSC 3311	10	mg/kg						
EPH (C35-C40)	DETSC 3311	10	mg/kg						
EPH (C10-C40)	DETSC 3311#	10	mg/kg						
PAHs										
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.07
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	0.05
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.20	0.20	0.11	0.17	0.21	0.41
Anthracene	DETSC 3303	0.03	mg/kg	0.19	< 0.03	< 0.03	0.16	< 0.03	0.09
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.36	0.31	0.20	0.28	0.36	0.55
Pyrene	DETSC 3303#	0.03	mg/kg	0.32	0.28	0.18	0.25	0.32	0.47
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.10	0.07	0.05	0.07	0.10	0.14
Chrysene	DETSC 3303	0.03	mg/kg	0.15	0.13	0.09	0.13	0.16	0.21

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-26199
Client Ref 4486
Contract Title Black Cats

				Lab No	2258844	2258845	2258846	2258847	2258848	2258849
				.Sample ID	TP531	TP533	TP537	TP541	TP543	TP545
				Depth	0.10	0.10	0.10	0.10	0.10	0.10
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	02/11/2023	02/11/2023	02/11/2023	03/11/2023	03/11/2023	03/11/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg		0.12	0.09	0.07	0.09	0.12	0.14
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg		0.04	0.04	0.03	0.04	0.05	0.05
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg		0.09	0.07	0.05	0.07	0.09	0.11
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg		0.04	0.03	< 0.03	< 0.03	0.04	0.05
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg		< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg		0.04	< 0.03	< 0.03	< 0.03	< 0.03	0.04
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg		1.6	1.2	0.75	1.2	1.5	2.4

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-26199
Client Ref 4486
Contract Title Black Cats

				Lab No	2258850	2258851	2258852	2258853	2258854	2258855
				.Sample ID	TP600	TP601	TP602	TP603	TP604	TP605
				Depth	0.10	0.10	0.10	0.10	0.10	0.10
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	30/10/2023	30/10/2023	30/10/2023	30/10/2023	30/10/2023	30/10/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Preparation										
Stones >10mm	DETSC 1003*	1	% m/m	10	4.0	4.0	12	6.0	8.0
Moisture Content	DETSC 1004	0.1	%	16	17	17	18	17	17
Metals										
Arsenic	DETSC 2301#	0.2	mg/kg	12	16	18	20	20	21
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.2	0.2	0.2	< 0.2	< 0.2	0.3
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	0.3	0.2	0.3	0.3	0.3
Chromium	DETSC 2301#	0.15	mg/kg	11	16	15	17	17	16
Chromium III	DETSC 2301*	0.15	mg/kg	11	16	15	17	17	16
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	27	36	33	38	46	42
Lead	DETSC 2301#	0.3	mg/kg	47	59	70	84	92	92
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l						
Mercury	DETSC 2325#	0.05	mg/kg	0.11	0.30	0.23	0.21	0.21	0.22
Nickel	DETSC 2301#	1	mg/kg	8.2	11	8.3	9.6	9.4	10
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	0.5	0.7	< 0.5	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	20	24	21	23	23	24
Zinc	DETSC 2301#	1	mg/kg	58	58	87	56	77	78
Inorganics										
pH	DETSC 2008#		pH	4.9	5.2	5.0	5.0	5.0	5.0
Total Organic Carbon	DETSC 2084#	0.5	%	3.1	4.0	4.5	4.9	5.8	5.5
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l						
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l						
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l						
Petroleum Hydrocarbons										
VPH (C6-C10)	DETSC 3321*	0.1	mg/kg						
EPH (C10-C12)	DETSC 3311	10	mg/kg						
EPH (C12-C16)	DETSC 3311	10	mg/kg						
EPH (C16-C21)	DETSC 3311	10	mg/kg						
EPH (C21-C35)	DETSC 3311	10	mg/kg						
EPH (C35-C40)	DETSC 3311	10	mg/kg						
EPH (C10-C40)	DETSC 3311#	10	mg/kg						
PAHs										
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	0.04	0.06	< 0.03	0.03	0.05	0.04
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	0.04	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.32	0.43	0.08	0.29	0.42	0.33
Anthracene	DETSC 3303	0.03	mg/kg	0.06	0.08	0.08	0.06	0.08	0.06
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.54	0.56	0.12	0.48	0.73	0.53
Pyrene	DETSC 3303#	0.03	mg/kg	0.47	0.49	0.10	0.43	0.66	0.47
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.13	0.13	< 0.03	0.13	0.22	0.13
Chrysene	DETSC 3303	0.03	mg/kg	0.20	0.19	0.05	0.19	0.27	0.19

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-26199
Client Ref 4486
Contract Title Black Cats

				Lab No	2258850	2258851	2258852	2258853	2258854	2258855
				.Sample ID	TP600	TP601	TP602	TP603	TP604	TP605
				Depth	0.10	0.10	0.10	0.10	0.10	0.10
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	30/10/2023	30/10/2023	30/10/2023	30/10/2023	30/10/2023	30/10/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg		0.14	0.12	< 0.03	0.14	0.25	0.14
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg		0.06	0.06	< 0.03	0.06	0.09	0.05
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg		0.11	0.07	< 0.03	0.11	0.15	0.10
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg		0.04	0.03	< 0.03	0.04	0.08	0.04
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg		< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg		0.04	< 0.03	< 0.03	0.04	0.07	0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg		2.2	2.2	0.43	2.0	3.1	2.1

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-26199
Client Ref 4486
Contract Title Black Cats

				Lab No	2258856	2258857	2258858	2258859	2258860	2258861
				.Sample ID	TP606	TP607	TP608	TP609	TP611	TP500
				Depth	0.10	0.10	0.10	0.10	0.20	1.10
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	30/10/2023	30/10/2023	30/10/2023	30/10/2023	30/10/2023	31/10/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Preparation										
Stones >10mm	DETSC 1003*	1	% m/m	1.0	< 1.0	< 1.0	2.0	2.0	
Moisture Content	DETSC 1004	0.1	%	19	19	17	18	19	
Metals										
Arsenic	DETSC 2301#	0.2	mg/kg	15	17	16	22	26	
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.3	0.3	< 0.2	< 0.2	0.3	
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	0.3	0.3	0.3	0.5	
Chromium	DETSC 2301#	0.15	mg/kg	13	24	14	28	32	
Chromium III	DETSC 2301*	0.15	mg/kg	13	24	14	28	32	
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	
Copper	DETSC 2301#	0.2	mg/kg	29	38	30	43	71	
Lead	DETSC 2301#	0.3	mg/kg	69	82	73	100	110	
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l						
Mercury	DETSC 2325#	0.05	mg/kg	0.18	0.32	0.19	0.27	0.32	
Nickel	DETSC 2301#	1	mg/kg	8.6	11	9.2	13	18	
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	0.5	< 0.5	0.5	0.9	
Vanadium	DETSC 2301#	0.8	mg/kg	21	25	21	31	37	
Zinc	DETSC 2301#	1	mg/kg	89	94	69	85	110	
Inorganics										
pH	DETSC 2008#		pH	5.2	5.2	5.3	5.3	5.7	6.4
Total Organic Carbon	DETSC 2084#	0.5	%	4.9	4.0	4.3	3.0	4.2	
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l						
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l						
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l						< 10
Petroleum Hydrocarbons										
VPH (C6-C10)	DETSC 3321*	0.1	mg/kg						
EPH (C10-C12)	DETSC 3311	10	mg/kg						
EPH (C12-C16)	DETSC 3311	10	mg/kg						
EPH (C16-C21)	DETSC 3311	10	mg/kg						
EPH (C21-C35)	DETSC 3311	10	mg/kg						
EPH (C35-C40)	DETSC 3311	10	mg/kg						
EPH (C10-C40)	DETSC 3311#	10	mg/kg						
PAHs										
Naphthalene	DETSC 3303#	0.03	mg/kg	0.03	< 0.03	< 0.03	< 0.03	< 0.03	
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	
Acenaphthene	DETSC 3303#	0.03	mg/kg	0.27	0.06	0.13	0.06	0.13	
Fluorene	DETSC 3303	0.03	mg/kg	0.15	0.04	0.06	0.03	0.07	
Phenanthrene	DETSC 3303#	0.03	mg/kg	1.9	0.46	0.87	0.44	0.92	
Anthracene	DETSC 3303	0.03	mg/kg	0.37	0.09	0.18	0.08	0.19	
Fluoranthene	DETSC 3303#	0.03	mg/kg	2.7	0.68	1.2	0.60	1.3	
Pyrene	DETSC 3303#	0.03	mg/kg	2.3	0.60	1.1	0.52	1.1	
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.71	0.17	0.28	0.14	0.34	
Chrysene	DETSC 3303	0.03	mg/kg	0.71	0.23	0.31	0.20	0.35	

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-26199
Client Ref 4486
Contract Title Black Cats

				Lab No	2258856	2258857	2258858	2258859	2258860	2258861
				.Sample ID	TP606	TP607	TP608	TP609	TP611	TP500
				Depth	0.10	0.10	0.10	0.10	0.20	1.10
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	30/10/2023	30/10/2023	30/10/2023	30/10/2023	30/10/2023	31/10/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg		0.57	0.17	0.21	0.13	0.27	
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg		0.20	0.07	0.09	0.05	0.11	
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg		0.42	0.13	0.16	0.10	0.21	
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg		0.13	0.05	0.05	0.03	0.07	
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg		0.03	< 0.03	< 0.03	< 0.03	< 0.03	
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg		0.14	0.05	0.05	0.03	0.08	
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg		11	2.8	4.7	2.3	5.1	

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-26199
Client Ref 4486
Contract Title Black Cats

				Lab No	2258862	2258863	2258864	2258865	2258866	2258867
				.Sample ID	TP503	TP506	TP512	TP514	TP516	TP519
				Depth	0.80	0.50	1.00	0.90	1.30	0.70
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	31/10/2023	31/10/2023	31/10/2023	01/11/2023	01/11/2023	01/11/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Preparation										
Stones >10mm	DETSC 1003*	1	% m/m							
Moisture Content	DETSC 1004	0.1	%							
Metals										
Arsenic	DETSC 2301#	0.2	mg/kg							
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg							
Cadmium	DETSC 2301#	0.1	mg/kg							
Chromium	DETSC 2301#	0.15	mg/kg							
Chromium III	DETSC 2301*	0.15	mg/kg							
Chromium, Hexavalent	DETSC 2204*	1	mg/kg							
Copper	DETSC 2301#	0.2	mg/kg							
Lead	DETSC 2301#	0.3	mg/kg							
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l							
Mercury	DETSC 2325#	0.05	mg/kg							
Nickel	DETSC 2301#	1	mg/kg							
Selenium	DETSC 2301#	0.5	mg/kg							
Vanadium	DETSC 2301#	0.8	mg/kg							
Zinc	DETSC 2301#	1	mg/kg							
Inorganics										
pH	DETSC 2008#		pH		6.0	6.8	7.9	6.2	6.4	6.2
Total Organic Carbon	DETSC 2084#	0.5	%							
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l							
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l							
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l		< 10	< 10	12	< 10	< 10	< 10
Petroleum Hydrocarbons										
VPH (C6-C10)	DETSC 3321*	0.1	mg/kg							
EPH (C10-C12)	DETSC 3311	10	mg/kg							
EPH (C12-C16)	DETSC 3311	10	mg/kg							
EPH (C16-C21)	DETSC 3311	10	mg/kg							
EPH (C21-C35)	DETSC 3311	10	mg/kg							
EPH (C35-C40)	DETSC 3311	10	mg/kg							
EPH (C10-C40)	DETSC 3311#	10	mg/kg							
PAHs										
Naphthalene	DETSC 3303#	0.03	mg/kg							
Acenaphthylene	DETSC 3303#	0.03	mg/kg							
Acenaphthene	DETSC 3303#	0.03	mg/kg							
Fluorene	DETSC 3303	0.03	mg/kg							
Phenanthrene	DETSC 3303#	0.03	mg/kg							
Anthracene	DETSC 3303	0.03	mg/kg							
Fluoranthene	DETSC 3303#	0.03	mg/kg							
Pyrene	DETSC 3303#	0.03	mg/kg							
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg							
Chrysene	DETSC 3303	0.03	mg/kg							

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Summary of Chemical Analysis
Soil Samples

Our Ref 23-26199
Client Ref 4486
Contract Title Black Cats

	Lab No	2258862	2258863	2258864	2258865	2258866	2258867
	.Sample ID	TP503	TP506	TP512	TP514	TP516	TP519
	Depth	0.80	0.50	1.00	0.90	1.30	0.70
	Other ID						
	Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampling Date	31/10/2023	31/10/2023	31/10/2023	01/11/2023	01/11/2023	01/11/2023
	Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg				
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg				
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg				
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg				
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg				
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg				
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg				

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-26199
Client Ref 4486
Contract Title Black Cats

				Lab No	2258868	2258869	2258870	2258871	2258872	2258873
				.Sample ID	TP523	TP529	TP534	TP536	TP541	TP545
				Depth	1.10	0.80	1.10	0.80	0.70	1.00
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	01/11/2023	02/11/2023	02/11/2023	02/11/2023	03/11/2023	03/11/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Preparation										
Stones >10mm	DETSC 1003*	1	% m/m							
Moisture Content	DETSC 1004	0.1	%							
Metals										
Arsenic	DETSC 2301#	0.2	mg/kg							
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg							
Cadmium	DETSC 2301#	0.1	mg/kg							
Chromium	DETSC 2301#	0.15	mg/kg							
Chromium III	DETSC 2301*	0.15	mg/kg							
Chromium, Hexavalent	DETSC 2204*	1	mg/kg							
Copper	DETSC 2301#	0.2	mg/kg							
Lead	DETSC 2301#	0.3	mg/kg							
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l							
Mercury	DETSC 2325#	0.05	mg/kg							
Nickel	DETSC 2301#	1	mg/kg							
Selenium	DETSC 2301#	0.5	mg/kg							
Vanadium	DETSC 2301#	0.8	mg/kg							
Zinc	DETSC 2301#	1	mg/kg							
Inorganics										
pH	DETSC 2008#		pH		6.5	6.2	6.5	6.0	6.5	6.4
Total Organic Carbon	DETSC 2084#	0.5	%							
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l							
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l							
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l		< 10	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons										
VPH (C6-C10)	DETSC 3321*	0.1	mg/kg							
EPH (C10-C12)	DETSC 3311	10	mg/kg							
EPH (C12-C16)	DETSC 3311	10	mg/kg							
EPH (C16-C21)	DETSC 3311	10	mg/kg							
EPH (C21-C35)	DETSC 3311	10	mg/kg							
EPH (C35-C40)	DETSC 3311	10	mg/kg							
EPH (C10-C40)	DETSC 3311#	10	mg/kg							
PAHs										
Naphthalene	DETSC 3303#	0.03	mg/kg							
Acenaphthylene	DETSC 3303#	0.03	mg/kg							
Acenaphthene	DETSC 3303#	0.03	mg/kg							
Fluorene	DETSC 3303	0.03	mg/kg							
Phenanthrene	DETSC 3303#	0.03	mg/kg							
Anthracene	DETSC 3303	0.03	mg/kg							
Fluoranthene	DETSC 3303#	0.03	mg/kg							
Pyrene	DETSC 3303#	0.03	mg/kg							
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg							
Chrysene	DETSC 3303	0.03	mg/kg							

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-26199
Client Ref 4486
Contract Title Black Cats

	Lab No	2258868	2258869	2258870	2258871	2258872	2258873
	.Sample ID	TP523	TP529	TP534	TP536	TP541	TP545
	Depth	1.10	0.80	1.10	0.80	0.70	1.00
	Other ID						
	Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampling Date	01/11/2023	02/11/2023	02/11/2023	02/11/2023	03/11/2023	03/11/2023
	Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg				
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg				
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg				
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg				
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg				
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg				
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg				

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-26199
Client Ref 4486
Contract Title Black Cats

			Lab No	2258874	2258875	2258876	2258877	2258878	2258879
			.Sample ID	TP603	TP604	TP608	TP504	TP510	TP510
			Depth	1.60	1.60	0.80	0.80	0.80	1.50
			Other ID						
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	30/10/2023	30/10/2023	30/10/2023	01/11/2023	31/10/2023	31/10/2023
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Preparation									
Stones >10mm	DETSC 1003*	1	% m/m						
Moisture Content	DETSC 1004	0.1	%						
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg						
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg						
Cadmium	DETSC 2301#	0.1	mg/kg						
Chromium	DETSC 2301#	0.15	mg/kg						
Chromium III	DETSC 2301*	0.15	mg/kg						
Chromium, Hexavalent	DETSC 2204*	1	mg/kg						
Copper	DETSC 2301#	0.2	mg/kg						
Lead	DETSC 2301#	0.3	mg/kg						
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l						
Mercury	DETSC 2325#	0.05	mg/kg						
Nickel	DETSC 2301#	1	mg/kg						
Selenium	DETSC 2301#	0.5	mg/kg						
Vanadium	DETSC 2301#	0.8	mg/kg						
Zinc	DETSC 2301#	1	mg/kg						
Inorganics									
pH	DETSC 2008#		pH	6.5	5.2	5.9	6.1	6.3	6.5
Total Organic Carbon	DETSC 2084#	0.5	%						
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l						
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l						
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	< 10	19	< 10	< 10	11	< 10
Petroleum Hydrocarbons									
VPH (C6-C10)	DETSC 3321*	0.1	mg/kg						
EPH (C10-C12)	DETSC 3311	10	mg/kg						
EPH (C12-C16)	DETSC 3311	10	mg/kg						
EPH (C16-C21)	DETSC 3311	10	mg/kg						
EPH (C21-C35)	DETSC 3311	10	mg/kg						
EPH (C35-C40)	DETSC 3311	10	mg/kg						
EPH (C10-C40)	DETSC 3311#	10	mg/kg						
PAHs									
Naphthalene	DETSC 3303#	0.03	mg/kg						
Acenaphthylene	DETSC 3303#	0.03	mg/kg						
Acenaphthene	DETSC 3303#	0.03	mg/kg						
Fluorene	DETSC 3303	0.03	mg/kg						
Phenanthrene	DETSC 3303#	0.03	mg/kg						
Anthracene	DETSC 3303	0.03	mg/kg						
Fluoranthene	DETSC 3303#	0.03	mg/kg						
Pyrene	DETSC 3303#	0.03	mg/kg						
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg						
Chrysene	DETSC 3303	0.03	mg/kg						

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-26199
Client Ref 4486
Contract Title Black Cats

	Lab No	2258874	2258875	2258876	2258877	2258878	2258879
	.Sample ID	TP603	TP604	TP608	TP504	TP510	TP510
	Depth	1.60	1.60	0.80	0.80	0.80	1.50
	Other ID						
	Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampling Date	30/10/2023	30/10/2023	30/10/2023	01/11/2023	31/10/2023	31/10/2023
	Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg						
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg						
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg						
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg						
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg						
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg						
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg						

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-26199
Client Ref 4486
Contract Title Black Cats

				Lab No	2258880	2258881	2258882	2258883	2258884	2258885
				.Sample ID	TP525	TP530	TP536	TP542	TP546	TP603
				Depth	2.20	1.60	1.40	1.50	1.10	2.10
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	01/11/2023	02/11/2023	02/11/2023	03/11/2023	03/11/2023	30/10/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Preparation										
Stones >10mm	DETSC 1003*	1	% m/m							
Moisture Content	DETSC 1004	0.1	%							
Metals										
Arsenic	DETSC 2301#	0.2	mg/kg							
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg							
Cadmium	DETSC 2301#	0.1	mg/kg							
Chromium	DETSC 2301#	0.15	mg/kg							
Chromium III	DETSC 2301*	0.15	mg/kg							
Chromium, Hexavalent	DETSC 2204*	1	mg/kg							
Copper	DETSC 2301#	0.2	mg/kg							
Lead	DETSC 2301#	0.3	mg/kg							
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l							
Mercury	DETSC 2325#	0.05	mg/kg							
Nickel	DETSC 2301#	1	mg/kg							
Selenium	DETSC 2301#	0.5	mg/kg							
Vanadium	DETSC 2301#	0.8	mg/kg							
Zinc	DETSC 2301#	1	mg/kg							
Inorganics										
pH	DETSC 2008#		pH		6.2	6.2	6.6	6.9	6.6	6.5
Total Organic Carbon	DETSC 2084#	0.5	%							
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l							
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l							
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l		< 10	< 10	< 10	< 10	< 10	< 10
Petroleum Hydrocarbons										
VPH (C6-C10)	DETSC 3321*	0.1	mg/kg							
EPH (C10-C12)	DETSC 3311	10	mg/kg							
EPH (C12-C16)	DETSC 3311	10	mg/kg							
EPH (C16-C21)	DETSC 3311	10	mg/kg							
EPH (C21-C35)	DETSC 3311	10	mg/kg							
EPH (C35-C40)	DETSC 3311	10	mg/kg							
EPH (C10-C40)	DETSC 3311#	10	mg/kg							
PAHs										
Naphthalene	DETSC 3303#	0.03	mg/kg							
Acenaphthylene	DETSC 3303#	0.03	mg/kg							
Acenaphthene	DETSC 3303#	0.03	mg/kg							
Fluorene	DETSC 3303	0.03	mg/kg							
Phenanthrene	DETSC 3303#	0.03	mg/kg							
Anthracene	DETSC 3303	0.03	mg/kg							
Fluoranthene	DETSC 3303#	0.03	mg/kg							
Pyrene	DETSC 3303#	0.03	mg/kg							
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg							
Chrysene	DETSC 3303	0.03	mg/kg							

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-26199
Client Ref 4486
Contract Title Black Cats

				Lab No	2258880	2258881	2258882	2258883	2258884	2258885
				.Sample ID	TP525	TP530	TP536	TP542	TP546	TP603
				Depth	2.20	1.60	1.40	1.50	1.10	2.10
				Other ID						
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Sampling Date	01/11/2023	02/11/2023	02/11/2023	03/11/2023	03/11/2023	30/10/2023
				Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**							
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg							
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg							
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg							
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg							
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg							
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg							
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg							

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-26199
Client Ref 4486
Contract Title Black Cats

			Lab No	2258886	2258887
			.Sample ID	TP607	TP524
			Depth	1.80	1.10
			Other ID		
			Sample Type	SOIL	SOIL
			Sampling Date	30/10/2023	01/11/2023
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Preparation					
Stones >10mm	DETSC 1003*	1	% m/m		
Moisture Content	DETSC 1004	0.1	%		
Metals					
Arsenic	DETSC 2301#	0.2	mg/kg		
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg		
Cadmium	DETSC 2301#	0.1	mg/kg		
Chromium	DETSC 2301#	0.15	mg/kg		
Chromium III	DETSC 2301*	0.15	mg/kg		
Chromium, Hexavalent	DETSC 2204*	1	mg/kg		
Copper	DETSC 2301#	0.2	mg/kg		
Lead	DETSC 2301#	0.3	mg/kg		
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l		
Mercury	DETSC 2325#	0.05	mg/kg		
Nickel	DETSC 2301#	1	mg/kg		
Selenium	DETSC 2301#	0.5	mg/kg		
Vanadium	DETSC 2301#	0.8	mg/kg		
Zinc	DETSC 2301#	1	mg/kg		
Inorganics					
pH	DETSC 2008#		pH	6.4	6.4
Total Organic Carbon	DETSC 2084#	0.5	%		
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l		
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l		
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	< 10	< 10
Petroleum Hydrocarbons					
VPH (C6-C10)	DETSC 3321*	0.1	mg/kg		
EPH (C10-C12)	DETSC 3311	10	mg/kg		
EPH (C12-C16)	DETSC 3311	10	mg/kg		
EPH (C16-C21)	DETSC 3311	10	mg/kg		
EPH (C21-C35)	DETSC 3311	10	mg/kg		
EPH (C35-C40)	DETSC 3311	10	mg/kg		
EPH (C10-C40)	DETSC 3311#	10	mg/kg		
PAHs					
Naphthalene	DETSC 3303#	0.03	mg/kg		
Acenaphthylene	DETSC 3303#	0.03	mg/kg		
Acenaphthene	DETSC 3303#	0.03	mg/kg		
Fluorene	DETSC 3303	0.03	mg/kg		
Phenanthrene	DETSC 3303#	0.03	mg/kg		
Anthracene	DETSC 3303	0.03	mg/kg		
Fluoranthene	DETSC 3303#	0.03	mg/kg		
Pyrene	DETSC 3303#	0.03	mg/kg		
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg		
Chrysene	DETSC 3303	0.03	mg/kg		

Key: * -not accredited. # -MCERTS (accreditation only applies if report carries the MCERTS logo). n/s -not supplied.

Summary of Chemical Analysis
Soil Samples

Our Ref 23-26199
Client Ref 4486
Contract Title Black Cats

	Lab No	2258886	2258887
	.Sample ID	TP607	TP524
	Depth	1.80	1.10
	Other ID		
	Sample Type	SOIL	SOIL
	Sampling Date	30/10/2023	01/11/2023
	Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg		
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg		
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg		
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg		
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg		
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg		
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg		

Summary of Asbestos Analysis
Soil Samples

Our Ref 23-26199
Client Ref 4486
Contract Title Black Cats

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2258832	TP538 0.70	SOIL	NAD	none	Barry Kelly
2258833	TP547 0.50	SOIL	NAD	none	Barry Kelly
2258834	TP549 0.50	SOIL	NAD	none	Barry Kelly
2258835	TP501 0.10	SOIL	NAD	none	Barry Kelly
2258836	TP505 0.10	SOIL	NAD	none	Barry Kelly
2258837	TP509 0.10	SOIL	NAD	none	Barry Kelly
2258838	TP513 0.10	SOIL	NAD	none	Barry Kelly
2258839	TP515 0.10	SOIL	NAD	none	Barry Kelly
2258840	TP517 0.10	SOIL	NAD	none	Barry Kelly
2258841	TP521 0.10	SOIL	NAD	none	Barry Kelly
2258842	TP525 0.10	SOIL	NAD	none	Barry Kelly
2258843	TP527 0.10	SOIL	NAD	none	Barry Kelly
2258844	TP531 0.10	SOIL	NAD	none	Barry Kelly
2258845	TP533 0.10	SOIL	NAD	none	Barry Kelly
2258846	TP537 0.10	SOIL	NAD	none	Barry Kelly
2258847	TP541 0.10	SOIL	NAD	none	Barry Kelly
2258848	TP543 0.10	SOIL	NAD	none	Barry Kelly
2258849	TP545 0.10	SOIL	NAD	none	Barry Kelly
2258850	TP600 0.10	SOIL	NAD	none	Barry Kelly
2258851	TP601 0.10	SOIL	NAD	none	Barry Kelly
2258852	TP602 0.10	SOIL	NAD	none	Barry Kelly
2258853	TP603 0.10	SOIL	NAD	none	Barry Kelly
2258854	TP604 0.10	SOIL	NAD	none	Barry Kelly
2258855	TP605 0.10	SOIL	NAD	none	Barry Kelly
2258856	TP606 0.10	SOIL	NAD	none	Barry Kelly
2258857	TP607 0.10	SOIL	NAD	none	Barry Kelly
2258858	TP608 0.10	SOIL	NAD	none	Barry Kelly
2258859	TP609 0.10	SOIL	NAD	none	Barry Kelly
2258860	TP611 0.20	SOIL	NAD	none	Barry Kelly

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * - not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 23-26199
Client Ref 4486
Contract Black Cats

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2258832	TP538 0.70 SOIL	02/11/23	GJ 500ml, PT 1L		BTEX / C5-C10
2258833	TP547 0.50 SOIL	03/11/23	GJ 500ml, PT 1L		BTEX / C5-C10
2258834	TP549 0.50 SOIL	03/11/23	GJ 500ml, PT 1L		BTEX / C5-C10
2258835	TP501 0.10 SOIL	31/10/23	GJ 500ml, PT 1L		
2258836	TP505 0.10 SOIL	30/10/23	GJ 500ml, PT 1L	pH + Conductivity (7 days)	
2258837	TP509 0.10 SOIL	31/10/23	GJ 500ml, PT 1L		
2258838	TP513 0.10 SOIL	01/11/23	GJ 500ml, PT 1L		
2258839	TP515 0.10 SOIL	01/11/23	GJ 500ml, PT 1L		
2258840	TP517 0.10 SOIL	01/11/23	GJ 500ml, PT 1L		
2258841	TP521 0.10 SOIL	01/11/23	GJ 500ml, PT 1L		
2258842	TP525 0.10 SOIL	01/11/23	GJ 500ml, PT 1L		
2258843	TP527 0.10 SOIL	02/11/23	GJ 500ml, PT 1L		
2258844	TP531 0.10 SOIL	02/11/23	GJ 500ml, PT 1L		
2258845	TP533 0.10 SOIL	02/11/23	GJ 500ml, PT 1L		
2258846	TP537 0.10 SOIL	02/11/23	GJ 500ml, PT 1L		
2258847	TP541 0.10 SOIL	03/11/23	GJ 500ml, PT 1L		
2258848	TP543 0.10 SOIL	03/11/23	GJ 500ml, PT 1L		
2258849	TP545 0.10 SOIL	03/11/23	GJ 500ml, PT 1L		
2258850	TP600 0.10 SOIL	30/10/23	GJ 500ml, PT 1L	pH + Conductivity (7 days)	
2258851	TP601 0.10 SOIL	30/10/23	GJ 500ml, PT 1L	pH + Conductivity (7 days)	
2258852	TP602 0.10 SOIL	30/10/23	GJ 500ml, PT 1L	pH + Conductivity (7 days)	
2258853	TP603 0.10 SOIL	30/10/23	GJ 500ml, PT 1L	pH + Conductivity (7 days)	
2258854	TP604 0.10 SOIL	30/10/23	GJ 500ml, PT 1L	pH + Conductivity (7 days)	
2258855	TP605 0.10 SOIL	30/10/23	GJ 500ml, PT 1L	pH + Conductivity (7 days)	
2258856	TP606 0.10 SOIL	30/10/23	GJ 500ml, PT 1L	pH + Conductivity (7 days)	
2258857	TP607 0.10 SOIL	30/10/23	GJ 500ml, PT 1L	pH + Conductivity (7 days)	
2258858	TP608 0.10 SOIL	30/10/23	GJ 500ml, PT 1L	pH + Conductivity (7 days)	
2258859	TP609 0.10 SOIL	30/10/23	GJ 500ml, PT 1L	pH + Conductivity (7 days)	
2258860	TP611 0.20 SOIL	30/10/23	GJ 500ml, PT 1L	pH + Conductivity (7 days)	
2258861	TP500 1.10 SOIL	31/10/23	PT 1L		
2258862	TP503 0.80 SOIL	31/10/23	PT 1L		
2258863	TP506 0.50 SOIL	31/10/23	PT 1L		
2258864	TP512 1.00 SOIL	31/10/23	PT 1L		
2258865	TP514 0.90 SOIL	01/11/23	PT 1L		
2258866	TP516 1.30 SOIL	01/11/23	PT 1L		
2258867	TP519 0.70 SOIL	01/11/23	PT 1L		
2258868	TP523 1.10 SOIL	01/11/23	PT 1L		
2258869	TP529 0.80 SOIL	02/11/23	PT 1L		
2258870	TP534 1.10 SOIL	02/11/23	PT 1L		
2258871	TP536 0.80 SOIL	02/11/23	PT 1L		
2258872	TP541 0.70 SOIL	03/11/23	PT 1L		
2258873	TP545 1.00 SOIL	03/11/23	PT 1L		
2258874	TP603 1.60 SOIL	30/10/23	PT 1L	pH + Conductivity (7 days)	
2258875	TP604 1.60 SOIL	30/10/23	PT 1L	pH + Conductivity (7 days)	
2258876	TP608 0.80 SOIL	30/10/23	PT 1L	pH + Conductivity (7 days)	
2258877	TP504 0.80 SOIL	01/11/23	PT 1L		
2258878	TP510 0.80 SOIL	31/10/23	PT 1L		
2258879	TP510 1.50 SOIL	31/10/23	PT 1L		
2258880	TP525 2.20 SOIL	01/11/23	PT 1L		
2258881	TP530 1.60 SOIL	02/11/23	PT 1L		
2258882	TP536 1.40 SOIL	02/11/23	PT 1L		
2258883	TP542 1.50 SOIL	03/11/23	PT 1L		
2258884	TP546 1.10 SOIL	03/11/23	PT 1L		
2258885	TP603 2.10 SOIL	30/10/23	PT 1L	pH + Conductivity (7 days)	
2258886	TP607 1.80 SOIL	30/10/23	PT 1L	pH + Conductivity (7 days)	
2258887	TP524 1.10 SOIL	01/11/23	PT 1L		

Information in Support of the Analytical Results

Our Ref 23-26199
Client Ref 4486
Contract Black Cats

Key: G-Glass P-Plastic J-Jar T-Tub
DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.
Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

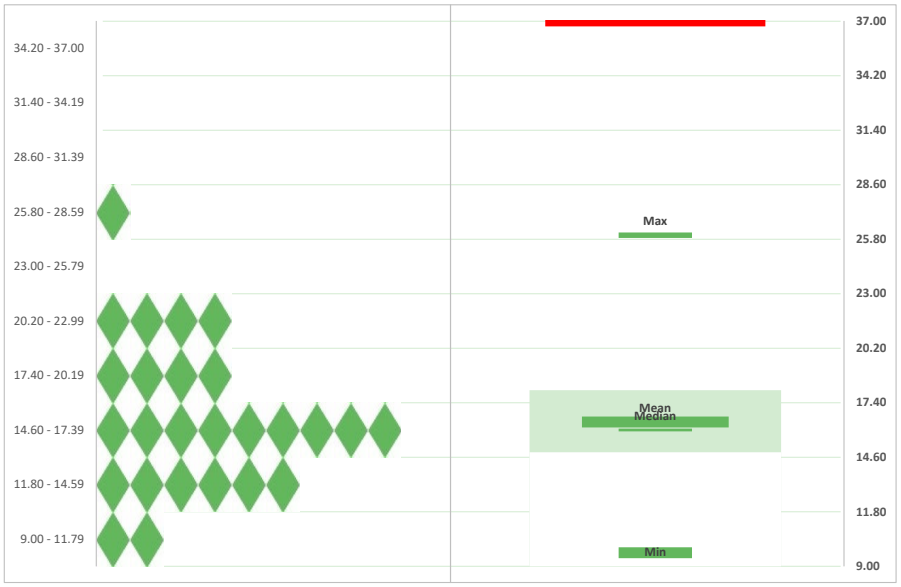
End of Report

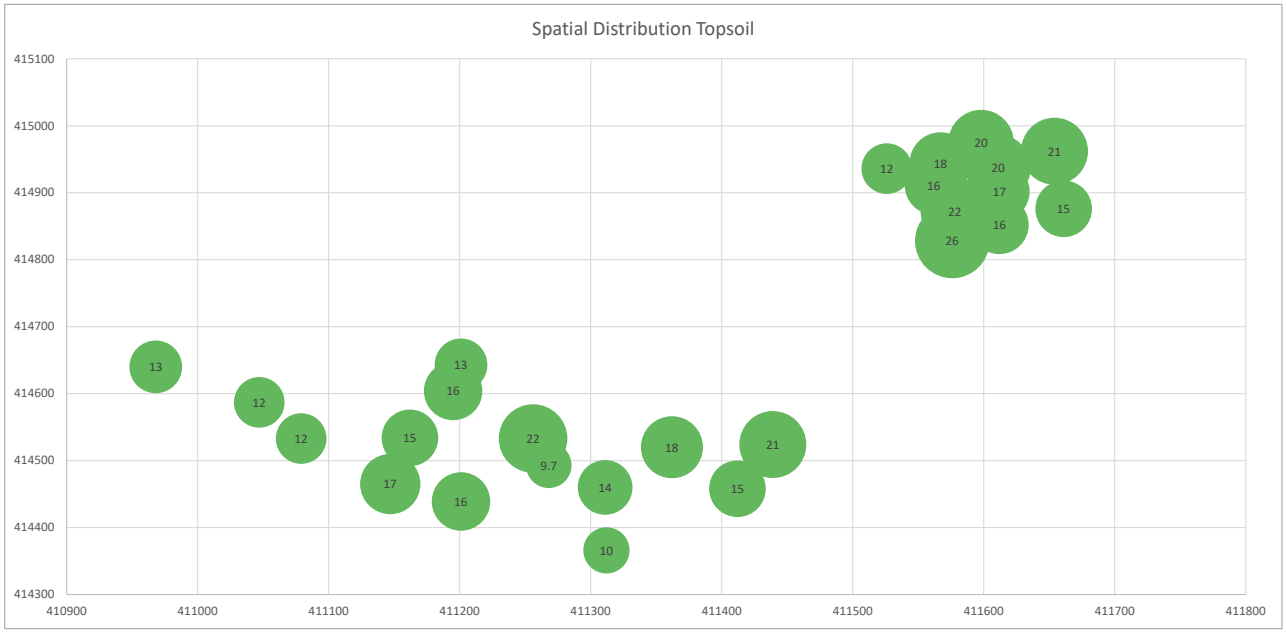
Black Cats, Blackmoorfoot Road, Huddersfield

Job No: 4486
Engineer: J Brown
Date: 21 November 2023

Topsoil: Dataset for As - Dot & Box Plots and Summary Statistics

Determinant	As
Critical concentration	37.00
No. samples	26.00
Max	26.00
Mean	16.41
Min	9.70
Median	16.00
Standard Deviation	4.04
Standard Error	0.79
T value	2.06
Upper Confidence Level (95%)	18.04
Upper Confidence Level (80%)	17.45
Lower Confidence Level (5%)	14.86
Transform data	Normal
Upper Confidence Level for chart	95%





Spatial distribution can show sampling clusters based on ground type it **does not** identify areas of contamintion

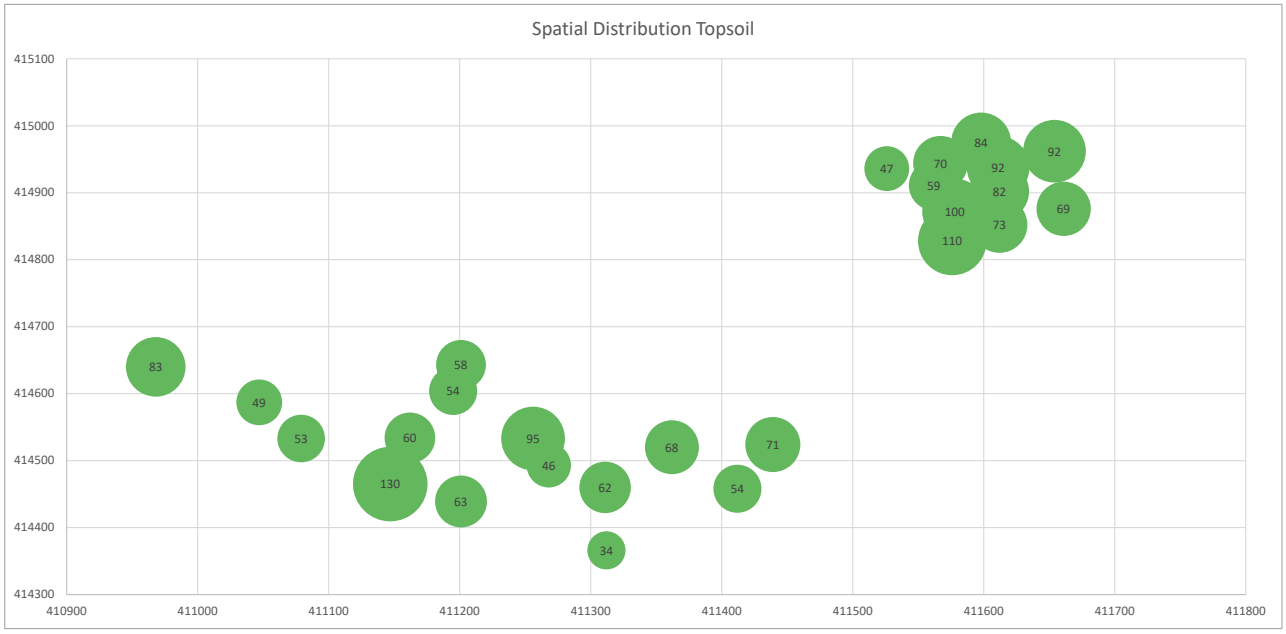
Black Cats, Blackmoorfoot Road, Huddersfield

Job No: 4486
Engineer: J Brown
Date: 21 November 2023

Topsoil: Dataset for Pb - Dot & Box Plots and Summary Statistics

Determinant	Pb
Critical concentration	200.00
No. samples	26.00
Max	130.00
Mean	68.32
Min	34.00
Median	68.50
Standard Deviation	22.17
Standard Error	4.35
T value	2.06
Upper Confidence Level (95%)	77.27
Upper Confidence Level (80%)	74.04
Lower Confidence Level (5%)	59.80
Transform data	Normal

Upper Confidence Level for chart	95%



Spatial distribution can show sampling clusters based on ground type it **does not** identify areas of contamintion

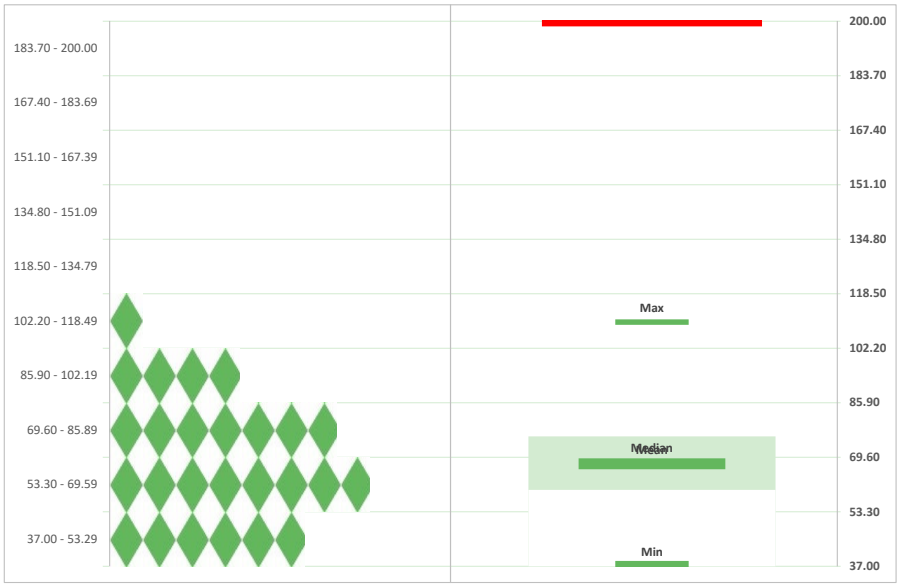
Black Cats, Blackmoorfoot Road, Huddersfield

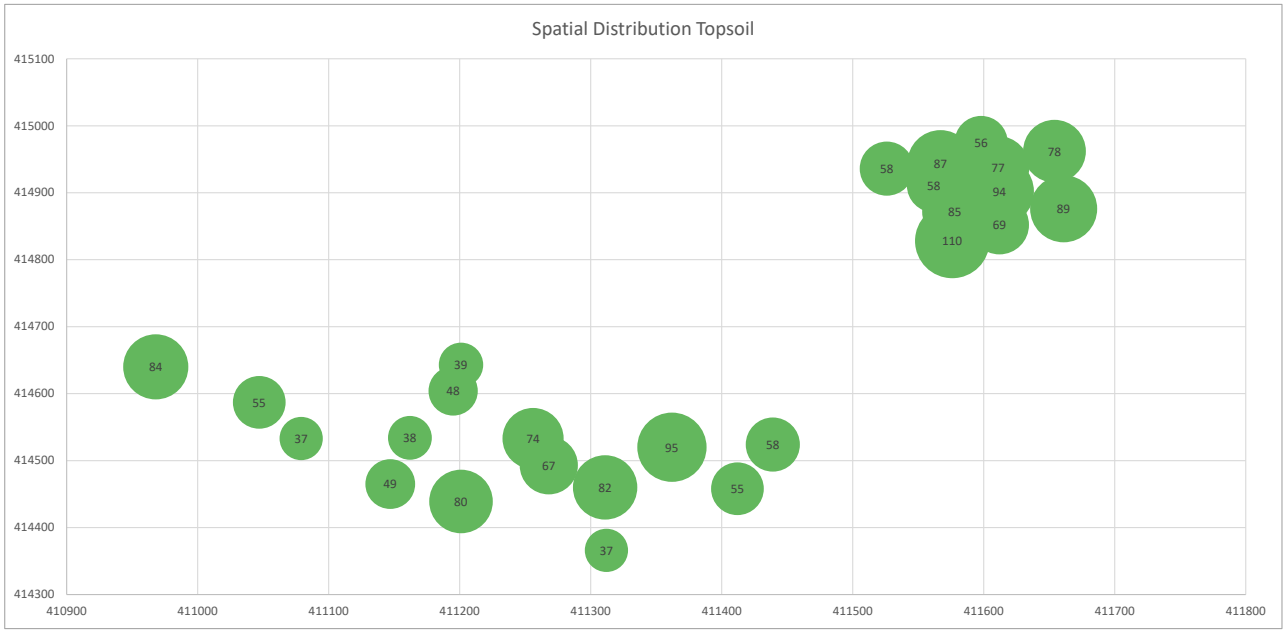
Job No: 4486
Engineer: J Brown
Date: 21 November 2023

Topsoil: Dataset for Zn - Dot & Box Plots and Summary Statistics

Determinant	Zn
Critical concentration	200.00
No. samples	26.00
Max	110.00
Mean	67.65
Min	37.00
Median	68.00
Standard Deviation	20.28
Standard Error	3.98
T value	2.06
Upper Confidence Level (95%)	75.84
Upper Confidence Level (80%)	72.89
Lower Confidence Level (5%)	59.86
Transform data	Normal

Upper Confidence Level for chart	95%





Spatial distribution can show sampling clusters based on ground type it **does not** identify areas of contamintion

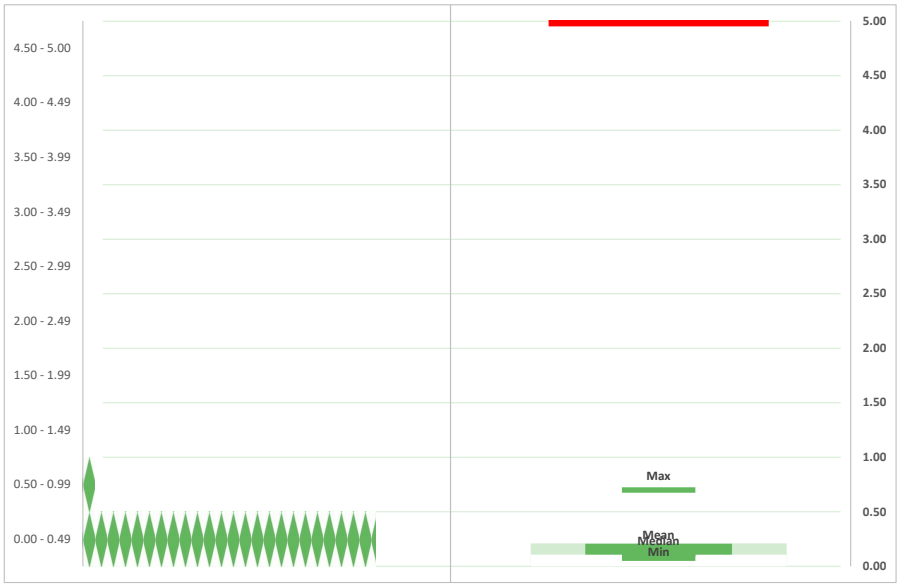
Black Cats, Blackmoorfoot Road, Huddersfield

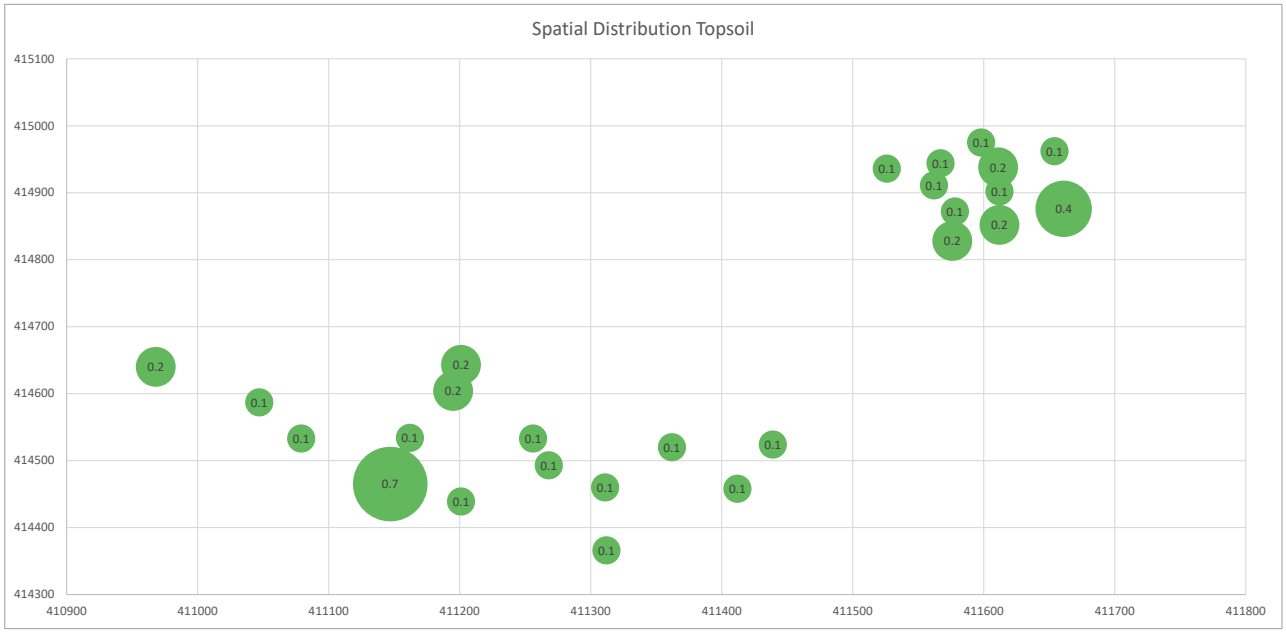
Job No: 4486
Engineer: J Brown
Date: 21 November 2023

Topsoil: Dataset for B(a)P - Dot & Box Plots and Summary Statistics

Determinant	B(a)P
Critical concentration	5.00
No. samples	26.00
Max	0.70
Mean	0.16
Min	0.10
Median	0.10
Standard Deviation	0.13
Standard Error	0.03
T value	2.06
Upper Confidence Level (95%)	0.21
Upper Confidence Level (80%)	0.19
Lower Confidence Level (5%)	0.11
Transform data	Normal

Upper Confidence Level for chart	95%





Spatial distribution can show sampling clusters based on ground type it **does not** identify areas of contamintion

Appendix U
Chemical Test Results
(2025)

Certificate of Analysis

Certificate Number	25-05379	*Issued:*	20-Mar-25

Client Lithos Consulting Ltd
Parkhill
Walton Rd
Wetherby
LS22 5DZ

Our Reference	25-05379
Client Reference ~	4486
Order No ~	PO23893
Contract Title ~	Black Cats, Huddersfield
Description	10 Soil samples, 1 Misc sample.
Date Received	12-Mar-25
Date Started	12-Mar-25
Date Completed	20-Mar-25
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. 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 By

Reyhan Irfan
Operations Manager

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Summary of Chemical Analysis
Misc/Soil Samples

Our Ref 25-05379
Client Ref ~ 4486
Contract Title ~ Black Cats, Huddersfield

			Lab No	2476912	2476913	2476914	2476915	2476916	2476917
			Sample ID ~	TP701	TP702	TP702	TP703	TP704	TP705
			Depth ~	1.20	1.10	2.50	0.50	1.00	0.90
			Other ID ~						
			Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date ~	05/03/2025	05/03/2025	05/03/2025	05/03/2025	05/03/2025	05/03/2025
			Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Preparation									
Stones >10mm	DETSC 1003*	1	% m/m	11	13	2.0	27	14	21
Moisture Content	DETSC 1004	0.1	%	13	12	22	12	15	21
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	8.8	15	9.5	13	280	5.1
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.6	0.6	0.9	1.1	0.5	0.2
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	0.2	0.4	0.5	1.5	0.5
Chromium	DETSC 2301#	0.15	mg/kg	16	21	21	23	84	21
Chromium III	DETSC 2301*	0.15	mg/kg	16	21	21	23	84	21
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	39	27	42	76	1500	22
Lead	DETSC 2301#	0.3	mg/kg	140	68	37	67	160	53
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l	< 10		< 10		< 10	
Mercury	DETSC 2325#	0.05	mg/kg	0.11	0.11	< 0.05	0.12	0.32	< 0.05
Nickel	DETSC 2301#	1	mg/kg	13	12	40	21	79	20
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	0.6	1.8	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	23	25	22	34	85	23
Zinc	DETSC 2301#	1	mg/kg	59	43	220	130	220	91
Inorganics									
pH	DETSC 2008#		pH	10.9	8.1	7.9	10.8	8.0	8.5
Total Organic Carbon	DETSC 2084#	0.5	%	3.9	2.8	0.8	5.2	13	1.0
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l	31		7.4		4.4	
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l	61		< 1.0		4.5	
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	22		140		67	
Petroleum Hydrocarbons									
EPH >C10-C12	DETSC 3521#	10	mg/kg	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00
EPH >C12-C16	DETSC 3521#	10	mg/kg	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00
EPH >C16-C21	DETSC 3521#	10	mg/kg	< 10.00	< 10.00	< 10.00	< 10.00	16.28	< 10.00
EPH >C21-C35	DETSC 3521#	10	mg/kg	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00
EPH >C35-C40	DETSC 3521#	10	mg/kg	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00
VPH (C6-C10)	DETSC 3321*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
EPH >C10-C40	DETSC 3521#	10	mg/kg	26.36	< 10.00	13.24	< 10.00	71.68	19.23
PAHs									
Naphthalene	DETSC 3303#	0.03	mg/kg	0.32	0.80	0.06	< 0.03	0.11	0.35
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.60	< 0.03	< 0.03	0.04	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	0.30	< 0.60	0.06	< 0.03	0.49	0.20
Fluorene	DETSC 3303	0.03	mg/kg	0.26	< 0.60	0.04	< 0.03	0.30	0.15
Phenanthrene	DETSC 3303#	0.03	mg/kg	1.8	4.7	0.49	0.18	3.9	0.92
Anthracene	DETSC 3303	0.03	mg/kg	0.43	1.2	0.10	< 0.03	0.84	0.18
Fluoranthene	DETSC 3303#	0.03	mg/kg	1.5	4.6	0.86	0.25	6.8	1.1
Pyrene	DETSC 3303#	0.03	mg/kg	1.5	4.6	0.76	0.21	6.1	0.95
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.66	2.5	0.33	0.09	3.2	0.38

Summary of Chemical Analysis
Misc/Soil Samples

Our Ref 25-05379
Client Ref ~ 4486
Contract Title ~ Black Cats, Huddersfield

			Lab No	2476912	2476913	2476914	2476915	2476916	2476917
			Sample ID ~	TP701	TP702	TP702	TP703	TP704	TP705
			Depth ~	1.20	1.10	2.50	0.50	1.00	0.90
			Other ID ~						
			Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date ~	05/03/2025	05/03/2025	05/03/2025	05/03/2025	05/03/2025	05/03/2025
			Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Chrysene	DETSC 3303	0.03	mg/kg	0.57	2.4	0.31	0.09	2.8	0.35
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.60	2.7	0.44	0.12	3.9	0.44
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.20	0.97	0.14	0.04	1.4	0.14
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.49	2.3	0.32	0.08	3.3	0.30
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.19	1.0	0.16	0.04	1.4	0.14
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	0.06	< 0.60	0.04	< 0.03	0.39	0.04
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.22	1.3	0.19	0.05	1.7	0.16
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	9.1	29	4.3	1.1	37	5.8

Summary of Chemical Analysis
Misc/Soil Samples

Our Ref 25-05379
Client Ref ~ 4486
Contract Title ~ Black Cats, Huddersfield

			Lab No	2476918	2476919	2476920	2476921
			Sample ID ~	TP706	TP707	TP708	TT701N
			Depth ~	1.30	1.50	0.80	1.00
			Other ID ~				
			Sample Type ~	SOIL	SOIL	SOIL	SOIL
			Sampling Date ~	05/03/2025	05/03/2025	05/03/2025	05/03/2025
			Sampling Time ~	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Preparation							
Stones >10mm	DETSC 1003*	1	% m/m	18	47	14	33
Moisture Content	DETSC 1004	0.1	%	12	5.3	18	12
Metals							
Arsenic	DETSC 2301#	0.2	mg/kg	3.5	35	6.6	6.8
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	< 0.2	0.3	0.6	0.7
Cadmium	DETSC 2301#	0.1	mg/kg	< 0.1	0.4	0.2	0.2
Chromium	DETSC 2301#	0.15	mg/kg	13	100	17	18
Chromium III	DETSC 2301*	0.15	mg/kg	13	100	17	18
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	8.3	100	35	33
Lead	DETSC 2301#	0.3	mg/kg	10	330	88	86
Magnesium Aqueous Extract (2:1)	DETSC 2076*	10	mg/l	< 10		< 10	
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	0.44	0.31	< 0.05
Nickel	DETSC 2301#	1	mg/kg	11	23	16	15
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	13	36	22	23
Zinc	DETSC 2301#	1	mg/kg	39	120	65	66
Inorganics							
pH	DETSC 2008#		pH	8.4	11.6	8.9	8.7
Total Organic Carbon	DETSC 2084#	0.5	%	< 0.5	6.5	3.0	2.7
Chloride Aqueous Extract (2:1)	DETSC 2055	1	mg/l	20		6.6	
Nitrate Aqueous Extract as NO3 (2:1)	DETSC 2055	1	mg/l	< 1.0		2.9	
Sulphate Aqueous Extract as SO4 (2:1)	DETSC 2076#	10	mg/l	57		120	
Petroleum Hydrocarbons							
EPH >C10-C12	DETSC 3521#	10	mg/kg	< 10.00	< 10.00	< 10.00	< 10.00
EPH >C12-C16	DETSC 3521#	10	mg/kg	< 10.00	< 10.00	< 10.00	< 10.00
EPH >C16-C21	DETSC 3521#	10	mg/kg	< 10.00	< 10.00	< 10.00	31.86
EPH >C21-C35	DETSC 3521#	10	mg/kg	< 10.00	< 10.00	< 10.00	77.52
EPH >C35-C40	DETSC 3521#	10	mg/kg	< 10.00	< 10.00	< 10.00	< 10.00
VPH (C6-C10)	DETSC 3321*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
EPH >C10-C40	DETSC 3521#	10	mg/kg	< 10.00	< 10.00	16.16	227.2
PAHs							
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.04	0.94
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	0.05	< 0.03	0.04	0.81
Fluorene	DETSC 3303	0.03	mg/kg	0.04	< 0.03	0.04	0.73
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.53	< 0.03	0.60	4.6
Anthracene	DETSC 3303	0.03	mg/kg	0.09	< 0.03	0.11	1.2
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.74	< 0.03	1.0	5.0
Pyrene	DETSC 3303#	0.03	mg/kg	0.66	< 0.03	0.90	4.9
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.27	< 0.03	0.43	2.3

Summary of Chemical Analysis
Misc/Soil Samples

Our Ref 25-05379
Client Ref ~ 4486
Contract Title ~ Black Cats, Huddersfield

			Lab No	2476918	2476919	2476920	2476921
			Sample ID ~	TP706	TP707	TP708	TT701N
			Depth ~	1.30	1.50	0.80	1.00
			Other ID ~				
			Sample Type ~	SOIL	SOIL	SOIL	SOIL
			Sampling Date ~	05/03/2025	05/03/2025	05/03/2025	05/03/2025
			Sampling Time ~	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Chrysene	DETSC 3303	0.03	mg/kg	0.26	< 0.03	0.41	2.2
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.33	< 0.03	0.54	2.2
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.12	< 0.03	0.17	0.78
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.26	< 0.03	0.37	1.8
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.12	< 0.03	0.20	0.65
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	0.03	< 0.03	0.06	0.21
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.14	< 0.03	0.24	0.80
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	3.6	< 0.10	5.2	29

Summary of Asbestos Analysis
Soil Samples

Our Ref 25-05379
Client Ref ~ 4486
Contract Title ~ Black Cats, Huddersfield

Lab No	Sample ID	Sample Location	Material Type*	Result	Comment*	Analyst
2476911	TP701 1.70		Board	Chrysotile Amosite	none	Lee Kerridge
2476912	TP701 1.20		SOIL	Amosite	Amosite bundles present	Lee Kerridge
2476913	TP702 1.10		SOIL	Chrysotile	Chrysotile bundles present	Lee Kerridge
2476914	TP702 2.50		SOIL	Chrysotile	Chrysotile bundles present	Lee Kerridge
2476915	TP703 0.50		SOIL	NAD	none	Lee Kerridge
2476916	TP704 1.00		SOIL	Chrysotile	Chrysotile bundles present	Lee Kerridge
2476917	TP705 0.90		SOIL	NAD	none	Lee Kerridge
2476918	TP706 1.30		SOIL	Chrysotile	Chrysotile bundles present	Lee Kerridge
2476919	TP707 1.50		SOIL	NAD	none	Lee Kerridge
2476920	TP708 0.80		SOIL	NAD	none	Lee Kerridge
2476921	TT701N 1.00		SOIL	NAD	none	Lee Kerridge

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 25-05379
Client Ref ~ 4486
Contract ~ Black Cats, Huddersfield

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
2476911	TP701 1.70 MISC	05/03/25	GJ 250ml, GJ 60ml, PT 1L		
2476912	TP701 1.20 SOIL	05/03/25	GJ 250ml, GJ 60ml, PT 1L		
2476913	TP702 1.10 SOIL	05/03/25	GJ 250ml, GJ 60ml, PT 1L		
2476914	TP702 2.50 SOIL	05/03/25	GJ 250ml, GJ 60ml, PT 1L		
2476915	TP703 0.50 SOIL	05/03/25	GJ 250ml, GJ 60ml, PT 1L		
2476916	TP704 1.00 SOIL	05/03/25	GJ 250ml, GJ 60ml, PT 1L		
2476917	TP705 0.90 SOIL	05/03/25	GJ 250ml, GJ 60ml, PT 1L		
2476918	TP706 1.30 SOIL	05/03/25	GJ 250ml, GJ 60ml, PT 1L		
2476919	TP707 1.50 SOIL	05/03/25	GJ 250ml, GJ 60ml, PT 1L		
2476920	TP708 0.80 SOIL	05/03/25	GJ 250ml, GJ 60ml, PT 1L		
2476921	TT701N 1.00 SOIL	05/03/25	GJ 250ml, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

Normec DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.
Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Key:

~ Sample details are provided by the client and can affect the validity of the results
***** -not accredited.
# -MCERTS (accreditation only applies if report carries the MCERTS logo).
$ -subcontracted.
n/s -not supplied.
I/S -insufficient sample.
U/S -unsuitable sample.
t/f -to follow.
nd -not detected.

End of Report

Certificate of Analysis

Certificate Number 25-25292 *Issued:* 11-Nov-25

Client Lithos Consulting Ltd
Parkhill
Walton Rd
Wetherby
LS22 5DZ

Our Reference 25-25292

Client Reference ~ 4486

Order No ~ PO25319

Contract Title ~ Black Cats, Huddersfield

Description 21 Soil samples.

Date Received 03-Nov-25

Date Started 03-Nov-25

Date Completed 11-Nov-25

Test Procedures Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. 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 By

Reyhan Irfan
Operations Manager

2139

Summary of Chemical Analysis
Soil Samples

Our Ref 25-25292
Client Ref ~ 4486
Contract Title ~ Black Cats, Huddersfield

	Lab No	2592936	2592937	2592938	2592939	2592940	2592941
	Sample ID ~	TP808	TT803	TP807	TP809	TT811-N	TP810
	Depth ~	0.40	1.60	0.30	0.50	0.20	0.20
	Other ID ~						
	Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampling Date ~	30/10/2025	27/10/2025	30/10/2025	30/10/2025	28/10/2025	30/10/2025
	Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Preparation							
Stones >10mm	DETSC 1003*	1	% m/m	17	15	56	16	21	8.0
Moisture Content	DETSC 1004	0.1	%	16	16	13	19	13	14
Metals							
Arsenic	DETSC 2301#	0.2	mg/kg	11	55	16	30	10	21
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.3	1.2	0.7	0.3	0.2	0.2
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	1.5	0.2	0.3	0.3	0.3
Chromium	DETSC 2301#	0.15	mg/kg	68	180	18	52	22	71
Chromium III	DETSC 2301*	0.15	mg/kg	68	180	18	52	22	71
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	57	1100	60	110	51	190
Lead	DETSC 2301#	0.3	mg/kg	96	410	230	230	66	150
Mercury	DETSC 2325#	0.05	mg/kg	0.08	< 0.05	0.06	0.52	0.09	0.20
Nickel	DETSC 2301#	1	mg/kg	18	320	13	28	22	24
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	3.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	78	59	18	36	25	28
Zinc	DETSC 2301#	1	mg/kg	97	150	140	150	100	140
Inorganics							
pH	DETSC 2008#		pH	9.0	8.0	10.8	8.1	8.1	7.7
Total Organic Carbon	DETSC 2084#	0.5	%	9.2	12	7.8	5.1	2.6	5.6
Petroleum Hydrocarbons							
EPH >C10-C12	DETSC 3521#	10	mg/kg	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00
EPH >C12-C16	DETSC 3521#	10	mg/kg	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00
EPH >C16-C21	DETSC 3521#	10	mg/kg	19.99	< 10.00	10.02	< 10.00	10.92	< 10.00
EPH >C21-C35	DETSC 3521#	10	mg/kg	196.6	78.89	19.37	< 10.00	12.12	< 10.00
EPH >C35-C40	DETSC 3521#	10	mg/kg	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00
VPH (C6-C10)	DETSC 3321*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
EPH >C10-C40	DETSC 3521#	10	mg/kg	319.9	124.4	34.71	18.36	30.60	< 10.00
PAHs							
Naphthalene	DETSC 3303#	0.03	mg/kg	0.08	< 0.03	0.06	0.07	1.0	0.09
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.09	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	0.31	< 0.03	0.18	0.15	0.41	0.14
Fluorene	DETSC 3303	0.03	mg/kg	0.17	< 0.03	0.12	0.16	0.31	0.09
Phenanthrene	DETSC 3303#	0.03	mg/kg	2.2	0.13	1.5	1.3	2.3	0.86
Anthracene	DETSC 3303	0.03	mg/kg	0.46	< 0.03	0.32	0.31	0.52	0.15
Fluoranthene	DETSC 3303#	0.03	mg/kg	4.5	0.21	2.5	1.8	2.5	1.1
Pyrene	DETSC 3303#	0.03	mg/kg	4.2	0.19	2.2	1.6	2.2	1.0
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	1.7	0.11	0.95	0.53	0.68	0.31
Chrysene	DETSC 3303	0.03	mg/kg	1.8	0.12	1.0	0.54	0.70	0.35
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	1.9	0.14	1.2	0.51	0.64	0.32
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.73	0.05	0.42	0.19	0.23	0.11
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	1.4	0.09	0.83	0.36	0.44	0.22

Summary of Chemical Analysis
Soil Samples

Our Ref 25-25292
Client Ref ~ 4486
Contract Title ~ Black Cats, Huddersfield

	Lab No	2592936	2592937	2592938	2592939	2592940	2592941
	Sample ID ~	TP808	TT803	TP807	TP809	TT811-N	TP810
	Depth ~	0.40	1.60	0.30	0.50	0.20	0.20
	Other ID ~						
	Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampling Date ~	30/10/2025	27/10/2025	30/10/2025	30/10/2025	28/10/2025	30/10/2025
	Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.57	0.06	0.41	0.15	0.17	0.09
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	0.15	< 0.03	0.11	0.03	0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.66	0.06	0.46	0.15	0.19	0.09
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	21	1.2	12	7.8	12	5.0

Summary of Chemical Analysis
Soil Samples

Our Ref 25-25292
Client Ref ~ 4486
Contract Title ~ Black Cats, Huddersfield

	Lab No	2592942	2592944	2592946	2592948	2592949	2592951
	Sample ID ~	TT815-S	TP804	TT801	TT805-W	TT808-N	TT813-E
	Depth ~	0.10	0.30	0.90	1.00	0.80	1.00
	Other ID ~						
	Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampling Date ~	29/10/2025	30/10/2025	27/10/2025	27/10/2025	28/10/2025	28/10/2025
	Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Preparation							
Stones >10mm	DETSC 1003*	1	% m/m	26	18	22	15	42	53
Moisture Content	DETSC 1004	0.1	%	19	20	15	14	8.6	8.6
Metals							
Arsenic	DETSC 2301#	0.2	mg/kg	8.4	14	25	1.6	3.6	2.9
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	0.2	0.2	0.9	< 0.2	< 0.2	0.2
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	0.2	0.2	0.4	0.3	0.3
Chromium	DETSC 2301#	0.15	mg/kg	31	10	34	24	23	20
Chromium III	DETSC 2301*	0.15	mg/kg	31	10	34	24	23	20
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	19	27	65	8.0	11	13
Lead	DETSC 2301#	0.3	mg/kg	50	71	150	15	31	23
Mercury	DETSC 2325#	0.05	mg/kg	0.07	0.15	0.29	< 0.05	< 0.05	0.07
Nickel	DETSC 2301#	1	mg/kg	20	8.7	49	20	17	18
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	46	16	35	24	23	22
Zinc	DETSC 2301#	1	mg/kg	83	50	120	63	64	67
Inorganics							
pH	DETSC 2008#		pH	6.7	7.0	8.0	7.0	7.9	7.1
Total Organic Carbon	DETSC 2084#	0.5	%	4.5	3.5	5.0	< 0.5	0.6	0.5
Petroleum Hydrocarbons							
EPH >C10-C12	DETSC 3521#	10	mg/kg	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00
EPH >C12-C16	DETSC 3521#	10	mg/kg	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00
EPH >C16-C21	DETSC 3521#	10	mg/kg	< 10.00	< 10.00	< 10.00	48.91	21.14	< 10.00
EPH >C21-C35	DETSC 3521#	10	mg/kg	< 10.00	< 10.00	< 10.00	62.51	20.66	< 10.00
EPH >C35-C40	DETSC 3521#	10	mg/kg	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00
VPH (C6-C10)	DETSC 3321*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
EPH >C10-C40	DETSC 3521#	10	mg/kg	< 10.00	< 10.00	< 10.00	136.8	52.37	< 10.00
PAHs							
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.12	0.58	1.7	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.07	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	0.04	0.05	0.19	1.3	0.77	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	0.03	0.10	0.92	0.52	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.23	0.33	0.82	7.2	4.2	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	0.05	0.06	0.17	1.7	0.93	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.34	0.51	0.75	9.9	4.5	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	0.30	0.44	0.63	9.0	3.8	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.11	0.18	0.19	3.7	1.4	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	0.12	0.21	0.20	3.6	1.4	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.11	0.18	0.15	3.4	1.3	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.05	0.07	0.06	1.3	0.44	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.08	0.12	0.11	2.6	0.92	< 0.03

Summary of Chemical Analysis
Soil Samples

Our Ref 25-25292
Client Ref ~ 4486
Contract Title ~ Black Cats, Huddersfield

	Lab No	2592942	2592944	2592946	2592948	2592949	2592951
	Sample ID ~	TT815-S	TP804	TT801	TT805-W	TT808-N	TT813-E
	Depth ~	0.10	0.30	0.90	1.00	0.80	1.00
	Other ID ~						
	Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampling Date ~	29/10/2025	30/10/2025	27/10/2025	27/10/2025	28/10/2025	28/10/2025
	Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.04	0.07	0.05	1.1	0.40	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	0.37	0.12	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.04	0.06	0.05	1.2	0.40	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	1.4	2.3	3.6	48	23	< 0.10

Summary of Chemical Analysis
Soil Samples

Our Ref 25-25292
Client Ref ~ 4486
Contract Title ~ Black Cats, Huddersfield

	Lab No	2592953	2592955	2592956
	Sample ID ~	TT816-E	TP805	TP806
	Depth ~	1.00	1.60	0.20
	Other ID ~			
	Sample Type ~	SOIL	SOIL	SOIL
	Sampling Date ~	29/10/2025	30/10/2025	30/10/2025
	Sampling Time ~	n/s	n/s	n/s

Test	Method	LOD	Units			
Preparation						
Stones >10mm	DETSC 1003*	1	% m/m	68	40	33
Moisture Content	DETSC 1004	0.1	%	13	11	20
Metals						
Arsenic	DETSC 2301#	0.2	mg/kg	2.8	3.1	9.0
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	< 0.2	< 0.2	0.4
Cadmium	DETSC 2301#	0.1	mg/kg	0.3	0.2	0.2
Chromium	DETSC 2301#	0.15	mg/kg	20	18	13
Chromium III	DETSC 2301*	0.15	mg/kg	20	18	13
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	13	11	18
Lead	DETSC 2301#	0.3	mg/kg	24	21	58
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	0.08
Nickel	DETSC 2301#	1	mg/kg	20	20	9.1
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	21	23	16
Zinc	DETSC 2301#	1	mg/kg	77	63	55
Inorganics						
pH	DETSC 2008#		pH	8.0	8.2	6.7
Total Organic Carbon	DETSC 2084#	0.5	%	0.6	0.7	3.0
Petroleum Hydrocarbons						
EPH >C10-C12	DETSC 3521#	10	mg/kg	< 10.00		
EPH >C12-C16	DETSC 3521#	10	mg/kg	< 10.00		
EPH >C16-C21	DETSC 3521#	10	mg/kg	< 10.00		
EPH >C21-C35	DETSC 3521#	10	mg/kg	< 10.00		
EPH >C35-C40	DETSC 3521#	10	mg/kg	< 10.00		
VPH (C6-C10)	DETSC 3321*	0.1	mg/kg	< 0.1		
EPH >C10-C40	DETSC 3521#	10	mg/kg	< 10.00		
PAHs						
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	0.05	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.04	0.05	0.08
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.05	0.06	0.14
Pyrene	DETSC 3303#	0.03	mg/kg	0.04	0.05	0.13
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.05
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	0.06
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.03	0.03	0.06
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	0.04

Summary of Chemical Analysis
Soil Samples

Our Ref 25-25292
Client Ref ~ 4486
Contract Title ~ Black Cats, Huddersfield

			Lab No	2592953	2592955	2592956
			Sample ID ~	TT816-E	TP805	TP806
			Depth ~	1.00	1.60	0.20
			Other ID ~			
			Sample Type ~	SOIL	SOIL	SOIL
			Sampling Date ~	29/10/2025	30/10/2025	30/10/2025
			Sampling Time ~	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**			
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	0.13	0.21	0.57

Summary of Asbestos Analysis
Soil Samples

Our Ref 25-25292
Client Ref ~ 4486
Contract Title ~ Black Cats, Huddersfield

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2592936	TP808 0.40	SOIL	Chrysotile	Chrysotile present as fibre bundles	Josh Best
2592937	TT803 1.60	SOIL	NAD	none	Josh Best
2592938	TP807 0.30	SOIL	Chrysotile	Chrysotile present as fibre bundles	Josh Best
2592939	TP809 0.50	SOIL	NAD	none	Josh Best
2592940	TT811-N 0.20	SOIL	NAD	none	Josh Best
2592941	TP810 0.20	SOIL	NAD	none	Josh Best
2592942	TT815-S 0.10	SOIL	Amosite Chrysotile	Chrysotile and Amosite present as fibre bundles	Josh Best
2592943	TP801 0.60	SOIL	NAD	none	Josh Best
2592944	TP804 0.30	SOIL	NAD	none	Josh Best
2592945	TP805 0.40	SOIL	NAD	none	Josh Best
2592946	TT801 0.90	SOIL	NAD	none	Josh Best
2592947	TT804-N 0.80	SOIL	NAD	none	Josh Best
2592948	TT805-W 1.00	SOIL	NAD	none	Josh Best
2592949	TT808-N 0.80	SOIL	NAD	none	Josh Best
2592950	TT812-W 1.40	SOIL	Chrysotile	Chrysotile present as fibre bundles	Josh Best
2592951	TT813-E 1.00	SOIL	Chrysotile	Chrysotile present as fibre bundles	Josh Best
2592952	TT814-C 1.20	SOIL	NAD	none	Josh Best
2592953	TT816-E 1.00	SOIL	NAD	none	Josh Best
2592954	TT818-S 0.80	SOIL	NAD	none	Josh Best
2592955	TP805 1.60	SOIL	NAD	none	Josh Best
2592956	TP806 0.20	SOIL	NAD	none	Josh Best

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 25-25292
Client Ref ~ 4486
Contract ~ Black Cats, Huddersfield

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Incorrect container for tests
2592936	TP808 0.40 SOIL	30/10/25	GJ 250ml, GJ 60ml, PT 1L		
2592937	TT803 1.60 SOIL	27/10/25	GJ 250ml, GJ 60ml, PT 1L		
2592938	TP807 0.30 SOIL	30/10/25	GJ 250ml, GJ 60ml, PT 1L		
2592939	TP809 0.50 SOIL	30/10/25	GJ 250ml, GJ 60ml, PT 1L		
2592940	TT811-N 0.20 SOIL	28/10/25	GJ 250ml, GJ 60ml, PT 1L		
2592941	TP810 0.20 SOIL	30/10/25	GJ 250ml, GJ 60ml, PT 1L		
2592942	TT815-S 0.10 SOIL	29/10/25	GJ 250ml, GJ 60ml, PT 1L		
2592943	TP801 0.60 SOIL	30/10/25	GJ 250ml, GJ 60ml, PT 1L		
2592944	TP804 0.30 SOIL	30/10/25	GJ 250ml, GJ 60ml, PT 1L		
2592945	TP805 0.40 SOIL	30/10/25	GJ 250ml, GJ 60ml, PT 1L		
2592946	TT801 0.90 SOIL	27/10/25	GJ 250ml, GJ 60ml, PT 1L		
2592947	TT804-N 0.80 SOIL	28/10/25	GJ 250ml, GJ 60ml, PT 1L		
2592948	TT805-W 1.00 SOIL	27/10/25	GJ 250ml, GJ 60ml, PT 1L		
2592949	TT808-N 0.80 SOIL	28/10/25	GJ 250ml, GJ 60ml, PT 1L		
2592950	TT812-W 1.40 SOIL	28/10/25	GJ 250ml, GJ 60ml, PT 1L		
2592951	TT813-E 1.00 SOIL	28/10/25	GJ 250ml, GJ 60ml, PT 1L		
2592952	TT814-C 1.20 SOIL	28/10/25	GJ 250ml, GJ 60ml, PT 1L		
2592953	TT816-E 1.00 SOIL	29/10/25	GJ 250ml, GJ 60ml, PT 1L		
2592954	TT818-S 0.80 SOIL	29/10/25	GJ 250ml, GJ 60ml, PT 1L		
2592955	TP805 1.60 SOIL	30/10/25	GJ 250ml, GJ 60ml, PT 1L		
2592956	TP806 0.20 SOIL	30/10/25	GJ 250ml, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

Normec DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time, inappropriate containers etc are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

Information in Support of the Analytical Results

Our Ref 25-25292
Client Ref ~ 4486
Contract ~ Black Cats, Huddersfield

Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 250µm sieve
Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Key:
~ Sample details are provided by the client and can affect the validity of the results
***** -not accredited.
# -MCERTS (accreditation only applies if report carries the MCERTS logo).
$ -subcontracted.
n/s -not supplied.
I/S -insufficient sample.
U/S -unsuitable sample.
t/f -to follow.
nd -not detected.

End of Report Ver 25.10.03

Certificate of Analysis

Certificate Number	25-26021	*Issued:*	18-Nov-25

Client Lithos Consulting Ltd
Parkhill
Walton Rd
Wetherby
LS22 5DZ

Our Reference	25-26021
Client Reference ~	4486
Order No ~	PO25319
Contract Title ~	Black Cats, Huddersfield
Description	5 Soil samples.
Date Received	03-Nov-25
Date Started	12-Nov-25
Date Completed	18-Nov-25
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. 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 By

Reyhan Irfan
Operations Manager

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Summary of Asbestos Analysis

Samples

Our Ref 25-26021
Client Ref ~ 4486
Contract Title ~ Black Cats, Huddersfield

Lab No	Sample ID	Sample Location	Material Type	Result	Comment*	Analyst

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Summary of Asbestos Quantification Analysis
Soil Samples

Our Ref 25-26021
Client Ref ~ 4486
Contract Title ~ Black Cats, Huddersfield

			Lab No	2597079	2597080	2597081
			Sample ID ~	TP808	TP807	TT815-S
			Depth ~	0.40	0.30	0.10
			Other ID ~			
			Sample Type ~			
			Sampling Date ~	30/10/2025	30/10/2025	29/10/2025
			Sampling Time ~			
Test	**Method**	**LOQ**	**Units**			
Total Mass% Asbestos (a+b+c)	DETSC 1102	< 0.001	Mass %	**0.018**	**0.001**	**0.001**
Gravimetric Quantification (a)	DETSC 1102	< 0.001	Mass %	na	na	na
Detailed Gravimetric Quantification (b)	DETSC 1102	< 0.001	Mass %	0.018	0.001	0.001
Quantification by PCOM (c)	DETSC 1102	< 0.001	Mass %	na	na	na
Potentially Respirable Fibres (d)	DETSC 1102	< 0.001	Fibres/g	na	na	na
Breakdown of Gravimetric Analysis (a)						
Mass of Sample			g	415.60	489.08	471.60
ACMs present*			type			
Mass of ACM in sample			g			
% ACM by mass			%			
% asbestos in ACM			%			
% asbestos in sample			%			
Breakdown of Detailed Gravimetric Analysis (b)						
% Amphibole bundles in sample			Mass %	na	na	<0.001
% Chrysotile bundles in sample			Mass %	0.018	0.001	<0.001
Breakdown of PCOM Analysis (c)						
% Amphibole fibres in sample			Mass %	na	na	na
% Chrysotile fibres in sample			Mass %	na	na	na
Breakdown of Potentially Respirable Fibre Analysis (d)						
Amphibole fibres			Fibres/g	na	na	na
Chrysotile fibres			Fibres/g	na	na	na

* Denotes test or material description outside of UKAS accreditation.
% asbestos in Asbestos Containing Materials (ACMs) is determined by
by reference to HSG 264.
Recommended sample size for quantification is approximately 1kg
# denotes deviating sample
The results are based on dry weight.

Summary of Asbestos Quantification Analysis
Soil Samples

Our Ref 25-26021
Client Ref ~ 4486
Contract Title ~ Black Cats, Huddersfield

Lab No	2597082	2597083
Sample ID ~	TT812-W	TT813-E
Depth ~	1.40	1.00
Other ID ~		
Sample Type ~		
Sampling Date ~	28/10/2025	28/10/2025
Sampling Time ~		

Test	Method	LOQ	Units		
Total Mass% Asbestos (a+b+c)	DETSC 1102	< 0.001	Mass %	**0.010**	**0.002**
Gravimetric Quantification (a)	DETSC 1102	< 0.001	Mass %	na	na
Detailed Gravimetric Quantification (b)	DETSC 1102	< 0.001	Mass %	0.010	0.002
Quantification by PCOM (c)	DETSC 1102	< 0.001	Mass %	na	na
Potentially Respirable Fibres (d)	DETSC 1102	< 0.001	Fibres/g	na	na
Breakdown of Gravimetric Analysis (a)					
Mass of Sample			g	821.33	756.17
ACMs present*			type		
Mass of ACM in sample			g		
% ACM by mass			%		
% asbestos in ACM			%		
% asbestos in sample			%		
Breakdown of Detailed Gravimetric Analysis (b)					
% Amphibole bundles in sample			Mass %	na	na
% Chrysotile bundles in sample			Mass %	0.010	0.002
Breakdown of PCOM Analysis (c)					
% Amphibole fibres in sample			Mass %	na	na
% Chrysotile fibres in sample			Mass %	na	na
Breakdown of Potentially Respirable Fibre Analysis (d)					
Amphibole fibres			Fibres/g	na	na
Chrysotile fibres			Fibres/g	na	na

* Denotes test or material description outside of UKAS accreditation.
% asbestos in Asbestos Containing Materials (ACMs) is determined by
by reference to HSG 264.
Recommended sample size for quantification is approximately 1kg
# denotes deviating sample
The results are based on dry weight.

Information in Support of the Analytical Results

Our Ref 25-26021
Client Ref ~ 4486
Contract ~ Black Cats, Huddersfield

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Incorrect container for tests
2597079	TP808 0.40 SOIL	30/10/25	GJ 250ml, GJ 60ml, PT 1L		
2597080	TP807 0.30 SOIL	30/10/25	GJ 250ml, GJ 60ml, PT 1L		
2597081	TT815-S 0.10 SOIL	29/10/25	GJ 250ml, GJ 60ml, PT 1L		
2597082	TT812-W 1.40 SOIL	28/10/25	GJ 250ml, GJ 60ml, PT 1L		
2597083	TT813-E 1.00 SOIL	28/10/25	GJ 250ml, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub

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Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Key:
~ Sample details are provided by the client and can affect the validity of the results
***** -not accredited.
# -MCERTS (accreditation only applies if report carries the MCERTS logo).
$ -subcontracted.
n/s -not supplied.
I/S -insufficient sample.
U/S -unsuitable sample.
t/f -to follow.
nd -not detected.

End of Report Ver 25.10.03

Certificate of Analysis

Certificate Number	25-25650	*Issued:*	17-Nov-25

Client Lithos Consulting Ltd
Parkhill
Walton Rd
Wetherby
LS22 5DZ

Our Reference	25-25650
Client Reference ~	4486
Order No ~	PO25328
Contract Title ~	Black Cats, Huddersfield
Description	6 Soil samples.
Date Received	06-Nov-25
Date Started	06-Nov-25
Date Completed	17-Nov-25
Test Procedures	Identified by prefix DETSn (details on request).

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. 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 By

Reyhan Irfan
Operations Manager

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Summary of Chemical Analysis
Soil Samples

Our Ref 25-25650
Client Ref ~ 4486
Contract Title ~ Black Cats, Huddersfield

	Lab No	2595142	2595143	2595144	2595145	2595146	2595147
	Sample ID ~	WS801	WS801	WS802	WS803	WS804	WS805
	Depth ~	0.45	1.00	2.10	0.50	0.40	2.30
	Other ID ~						
	Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampling Date ~	04/11/2025	04/11/2025	04/11/2025	04/11/2025	04/11/2025	04/11/2025
	Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Preparation							
Stones >10mm	DETSC 1003*	1	% m/m	11	25	47	30	53	7.0
Moisture Content	DETSC 1004	0.1	%	16	9.1	6.5	9.0	7.5	16
Metals							
Arsenic	DETSC 2301#	0.2	mg/kg	6.8	2.3	1.2	2.4	1.6	2.1
Boron, Water Soluble (2.5:1)	DETSC 2311#	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	0.5
Cadmium	DETSC 2301#	0.1	mg/kg	0.8	< 0.1	0.3	0.2	< 0.1	0.1
Chromium	DETSC 2301#	0.15	mg/kg	9.6	11	19	12	22	15
Chromium III	DETSC 2301*	0.15	mg/kg	9.6	11	19	12	22	15
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Copper	DETSC 2301#	0.2	mg/kg	16	7.9	5.6	5.4	4.1	6.9
Lead	DETSC 2301#	0.3	mg/kg	40	5.2	8.5	12	7.6	19
Mercury	DETSC 2325#	0.05	mg/kg	0.07	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	11	14	16	10	13	8.7
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vanadium	DETSC 2301#	0.8	mg/kg	15	15	23	14	26	15
Zinc	DETSC 2301#	1	mg/kg	130	42	45	34	51	30
Inorganics							
pH	DETSC 2008#		pH	8.2	8.2	8.2	8.5	7.8	8.3
Total Organic Carbon	DETSC 2084#	0.5	%	1.3	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Petroleum Hydrocarbons							
EPH >C10-C12	DETSC 3521#	10	mg/kg	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00
EPH >C12-C16	DETSC 3521#	10	mg/kg	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00
EPH >C16-C21	DETSC 3521#	10	mg/kg	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00
EPH >C21-C35	DETSC 3521#	10	mg/kg	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00
EPH >C35-C40	DETSC 3521#	10	mg/kg	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00
VPH (C6-C10)	DETSC 3321*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
EPH >C10-C40	DETSC 3521#	10	mg/kg	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00	< 10.00
PAHs							
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	0.14	< 0.03	< 0.03	0.05	< 0.03	< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	0.23	0.03	< 0.03	0.09	< 0.03	< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	0.21	0.03	< 0.03	0.08	< 0.03	< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	0.08	< 0.03	< 0.03	0.03	< 0.03	< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	0.10	< 0.03	< 0.03	0.04	< 0.03	< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	0.09	< 0.03	< 0.03	0.03	< 0.03	< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	0.04	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	0.07	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03

Summary of Chemical Analysis
Soil Samples

Our Ref 25-25650
Client Ref ~ 4486
Contract Title ~ Black Cats, Huddersfield

	Lab No	2595142	2595143	2595144	2595145	2595146	2595147
	Sample ID ~	WS801	WS801	WS802	WS803	WS804	WS805
	Depth ~	0.45	1.00	2.10	0.50	0.40	2.30
	Other ID ~						
	Sample Type ~	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampling Date ~	04/11/2025	04/11/2025	04/11/2025	04/11/2025	04/11/2025	04/11/2025
	Sampling Time ~	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**				
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	0.05	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	0.05	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
PAH - USEPA 16, Total	DETSC 3303	0.1	mg/kg	1.1	< 0.10	< 0.10	0.25	< 0.10	< 0.10

Summary of Asbestos Analysis
Soil Samples

Our Ref 25-25650
Client Ref ~ 4486
Contract Title ~ Black Cats, Huddersfield

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
2595142	WS801 0.45	SOIL	NAD	none	James Heath
2595143	WS801 1.00	SOIL	NAD	none	James Heath
2595144	WS802 2.10	SOIL	NAD	none	James Heath
2595145	WS803 0.50	SOIL	NAD	none	James Heath
2595146	WS804 0.40	SOIL	NAD	none	James Heath
2595147	WS805 2.30	SOIL	NAD	none	James Heath

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: * -not included in laboratory scope of accreditation.

Information in Support of the Analytical Results

Our Ref 25-25650
Client Ref ~ 4486
Contract ~ Black Cats, Huddersfield

Containers Received & Deviating Samples

Lab No	Sample ID ~	Date Sampled ~	Containers Received	Holding time exceeded for tests	Incorrect container for tests
2595142	WS801 0.45 SOIL	04/11/25	GJ 250ml, GJ 60ml, PT 1L		
2595143	WS801 1.00 SOIL	04/11/25	GJ 250ml, GJ 60ml, PT 1L		
2595144	WS802 2.10 SOIL	04/11/25	GJ 250ml, GJ 60ml, PT 1L		
2595145	WS803 0.50 SOIL	04/11/25	GJ 250ml, GJ 60ml, PT 1L		
2595146	WS804 0.40 SOIL	04/11/25	GJ 250ml, GJ 60ml, PT 1L		
2595147	WS805 2.30 SOIL	04/11/25	GJ 250ml, GJ 60ml, PT 1L		

Key: G-Glass P-Plastic J-Jar T-Tub
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Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 250µm sieve
Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.
The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months

Key:
~ Sample details are provided by the client and can affect the validity of the results
***** -not accredited.
# -MCERTS (accreditation only applies if report carries the MCERTS logo).
$ -subcontracted.
n/s -not supplied.
I/S -insufficient sample.
U/S -unsuitable sample.
t/f -to follow.
nd -not detected.

End of Report Ver 25.10.03

Appendix V

Geotechnical Test Results

(2023)

LABORATORY REPORT

Contract Number: PSL23/8167

Report Date: 27 October 2023

Client's Reference: 4486

Client Name: Lithos Consulting
Parkhill
Walton Road
Wetherby
North Yorkshire
LS22 5DZ

For the attention of: Charlotte Copley

Contract Title: Black Cats

Date Received: 27/9/2023
Date Commenced: 27/9/2023
Date Completed: 27/10/2023

Notes: Opinions and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. 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 other than in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:

A Watkins (Director)
R Berriman (Quality Manager)
S Royle (Laboratory Manager)

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SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
TP341	3	B	2.00		MADE GROUND dark brown very sandy silty gravel.
TP345	3	B	3.50		MADE GROUND dark brown very gravelly silty sand.
TP352C	2	B	1.20		MADE GROUND dark brown very sandy slightly clayey silty gravel.
TP350	4	D	2.00		Brown mottled grey sandy CLAY.
TP358	2	D	1.00		Brown mottled grey slightly sandy CLAY.
TP311	3	B	2.50		Brown slightly gravelly sandy CLAY.
TP313	3	B	2.00		Brown slightly sandy clayey GRAVEL of cobbles.
TP326	4	B	0.70		Brown sandy clayey GRAVEL.
TP332	3	B	1.60		Brown sandy clayey GRAVEL with many cobbles.
TP357	2	B	0.80		Brown sandy clayey GRAVEL with many cobbles.
TP380	3	B	2.20		Brown very sandy very clayey GRAVEL of cobbles.
TP382	3	B	2.00		Brown very sandy slightly clayey silty GRAVEL.
TP385	2	B	1.50		Brown gravelly very sandy CLAY.
TP388	3	B	2.50		Brown sandy very clayey GRAVEL of cobbles.
TP389	3	B	2.20		Brown very sandy clayey silty GRAVEL.
TP401	3	B	2.00		MADE GROUND brown silty sand & gravel.
TP402	2	B	1.50		Brown sandy very clayey GRAVEL of cobbles.
TP408	3	B	0.80		Brown sandy clayey GRAVEL with many cobbles.
TP398	2	B	0.80		Brown very sandy very clayey GRAVEL of cobbles.

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
TP399	2	B	1.00		MADE GROUND brown very sandy clayey silty gravel with cobbles.

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

Contract No:
PSL23/8167
Client Ref:
4486

SUMMARY OF SOIL CLASSIFICATION TESTS

(BS1377 : PART 2 : 1990)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Moisture Content % Clause 3.2	Linear Shrinkage % Clause 6.5	Particle Density Mg/m^3 Clause 8.2	Liquid Limit % Clause 4.3/4	Plastic Limit % Clause 5.3	Plasticity Index % Clause 5.4	Passing .425mm %	Remarks
TP341	3	B	2.00		26		2.59					
TP345	3	B	3.50		15		2.57					
TP352C	2	B	1.20		24		2.54					
TP350	4	D	2.00		22			49	24	25	100	Intermediate Plasticity CI
TP358	2	D	1.00		27			59	27	32	100	High Plasticity CH
TP311	3	B	2.50		36		2.67					
TP313	3	B	2.00		21		2.69					
TP326	4	B	0.70		14		2.66					
TP332	3	B	1.60		15		2.69					
TP357	2	B	0.80		17		2.69					
TP380	3	B	2.20		20		2.68	38	21	17	34	Intermediate Plasticity CI
TP382	3	B	2.00		15		2.66					
TP385	2	B	1.50		31		2.69	55	26	29	81	High Plasticity CH
TP388	3	B	2.50		21		2.70					
TP389	3	B	2.20		19		2.66					
TP401	3	B	2.00		13		2.44					
TP402	2	B	1.50		28		2.65	51	24	27	31	High Plasticity CH
TP408	3	B	0.80		19		2.68					
TP398	2	B	0.80		21		2.67					

SYMBOLS : **NP : Non Plastic** *** : Liquid Limit and Plastic Limit Wet Sieved.**

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

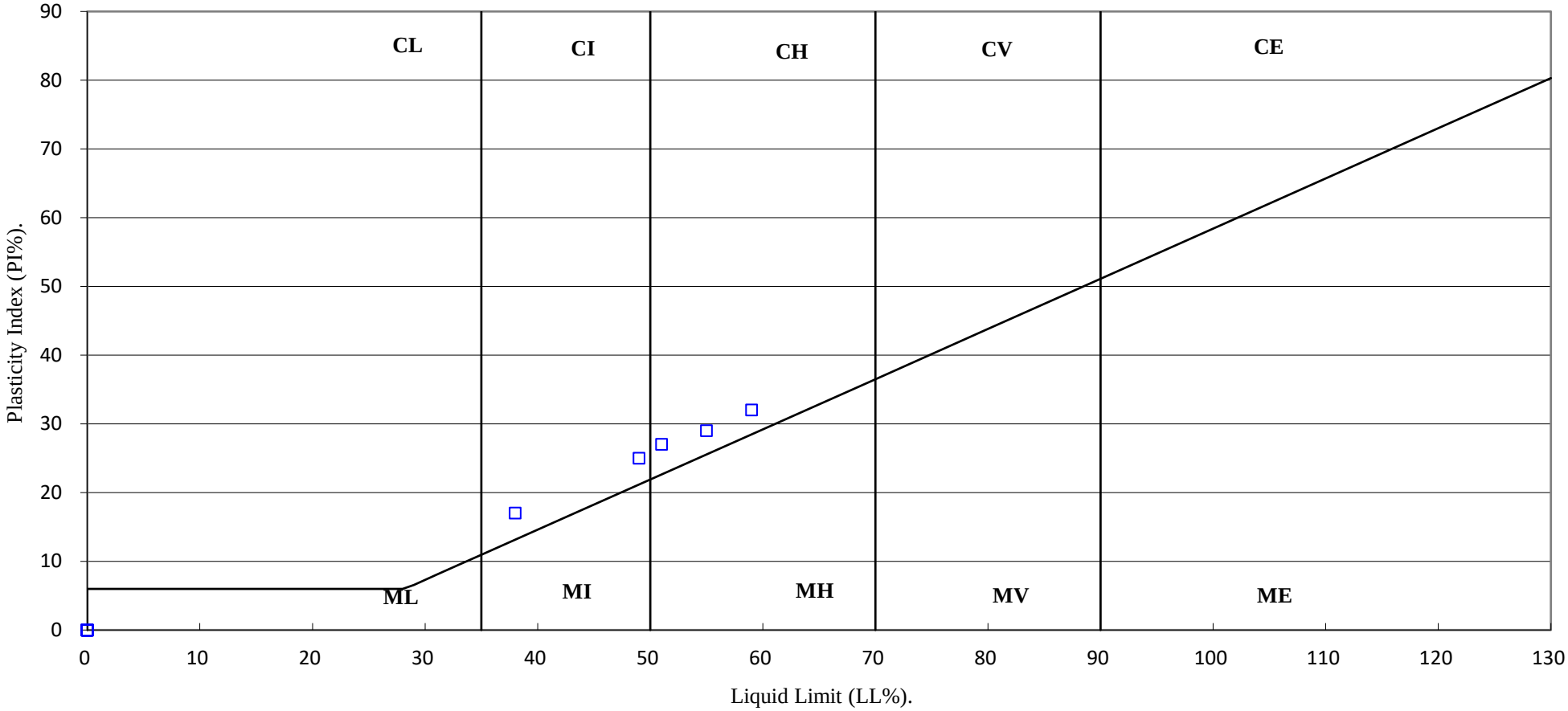
Contract No:

PSL23/8167

Client Ref:

4486

PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.



UKAS TESTING 4043	PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY	**Black Cats**

Contract No:
PSL23/8167
Client Ref:
4486

SUMMARY OF SOIL CLASSIFICATION TESTS

(BS1377 : PART 2 : 1990)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Moisture Content % Clause 3.2	Linear Shrinkage % Clause 6.5	Particle Density Mg/m^3 Clause 8.2	Liquid Limit % Clause 4.3/4	Plastic Limit % Clause 5.3	Plasticity Index % Clause 5.4	Passing .425mm %	Remarks
TP399	2	B	1.00		15		2.63					

SYMBOLS : **NP : Non Plastic** *** : Liquid Limit and Plastic Limit Wet Sieved.**

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

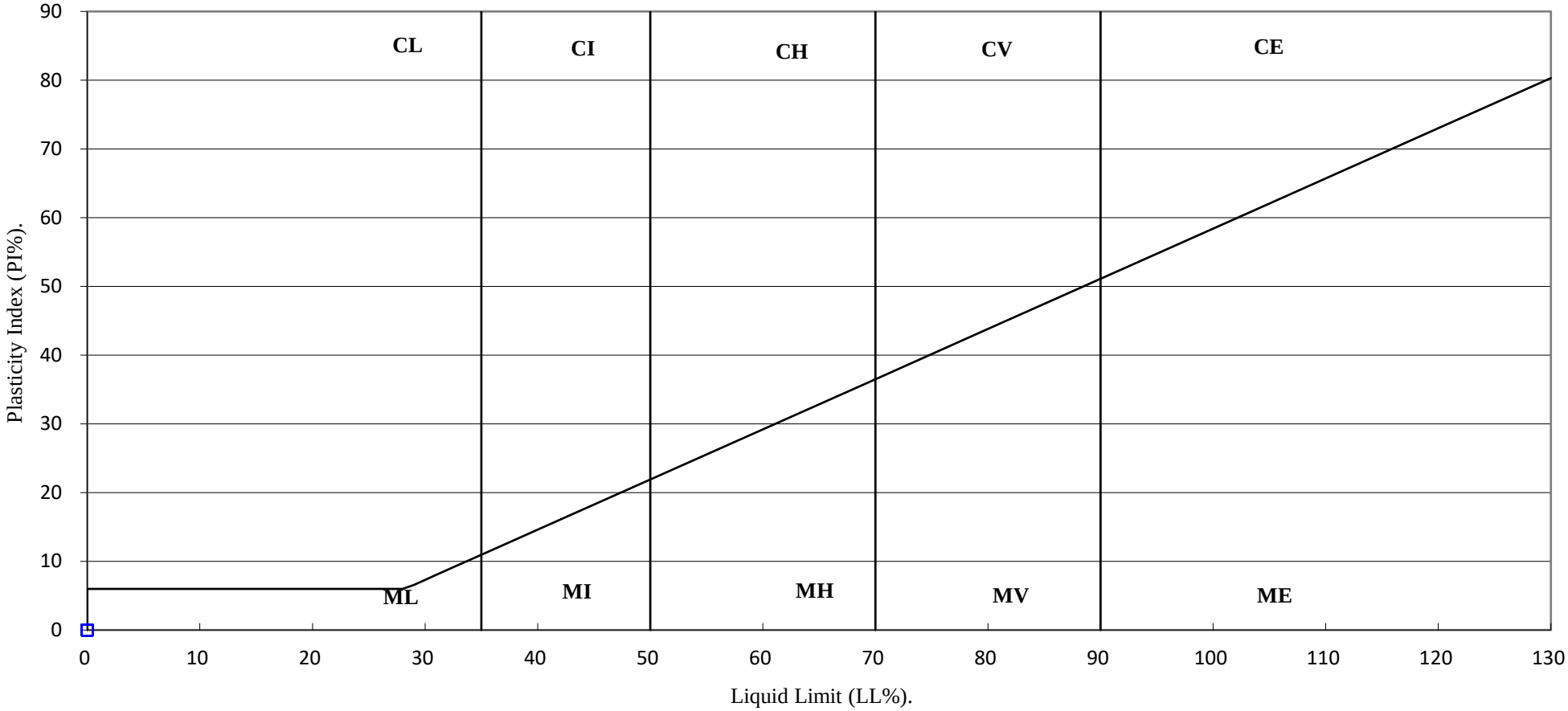
Contract No:

PSL23/8167

Client Ref:

4486

PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.



UKAS TESTING 4043	PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY	**Black Cats**

Contract No:
PSL23/8167
Client Ref:
4486

PARTICLE SIZE DISTRIBUTION TEST

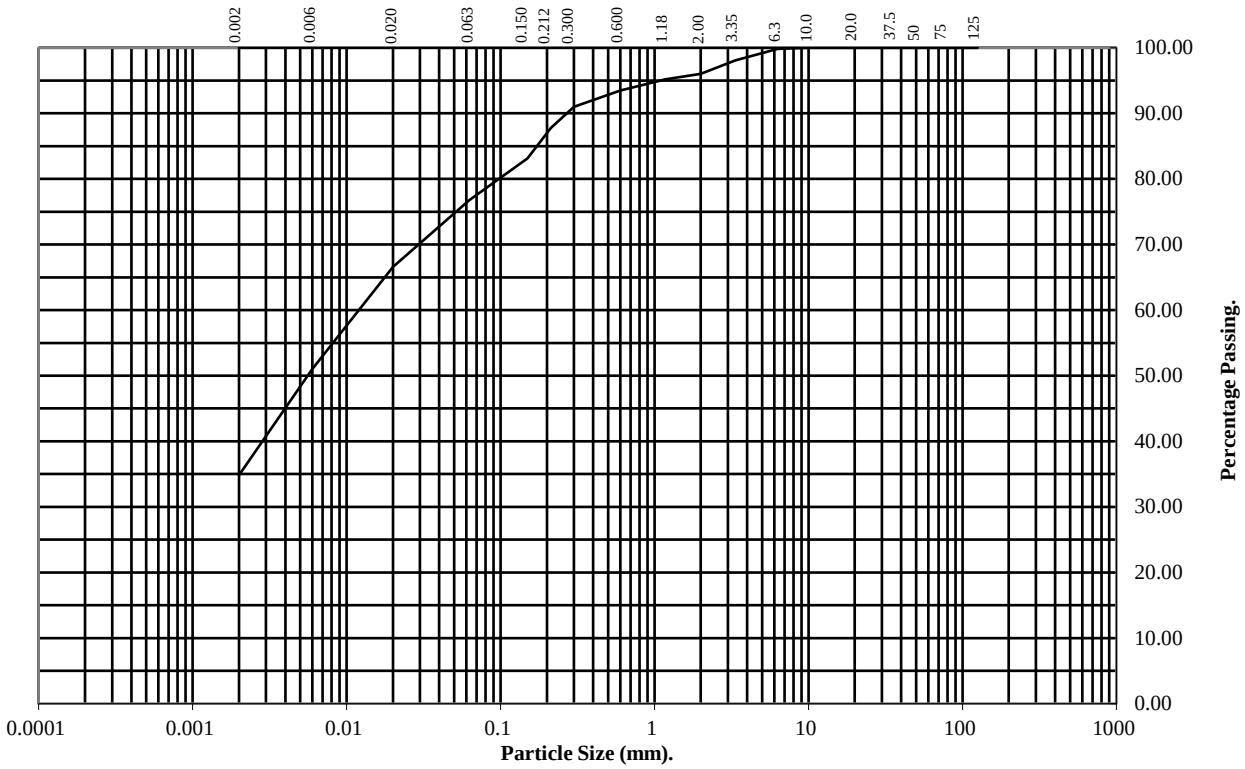
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: TP311 **Top Depth (m):** 2.50

Sample Number: 3 **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
50	100
37.5	100
20	100
10	100
6.3	100
3.35	98
2	96
1.18	95
0.6	93
0.3	91
0.212	88
0.15	83
0.063	77

Particle Diameter	Percentage Passing
0.02	67
0.006	51
0.002	35

Soil Fraction	Total Percentage
Cobbles	0
Gravel	4
Sand	19
Silt	42
Clay	35

Remarks:
See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

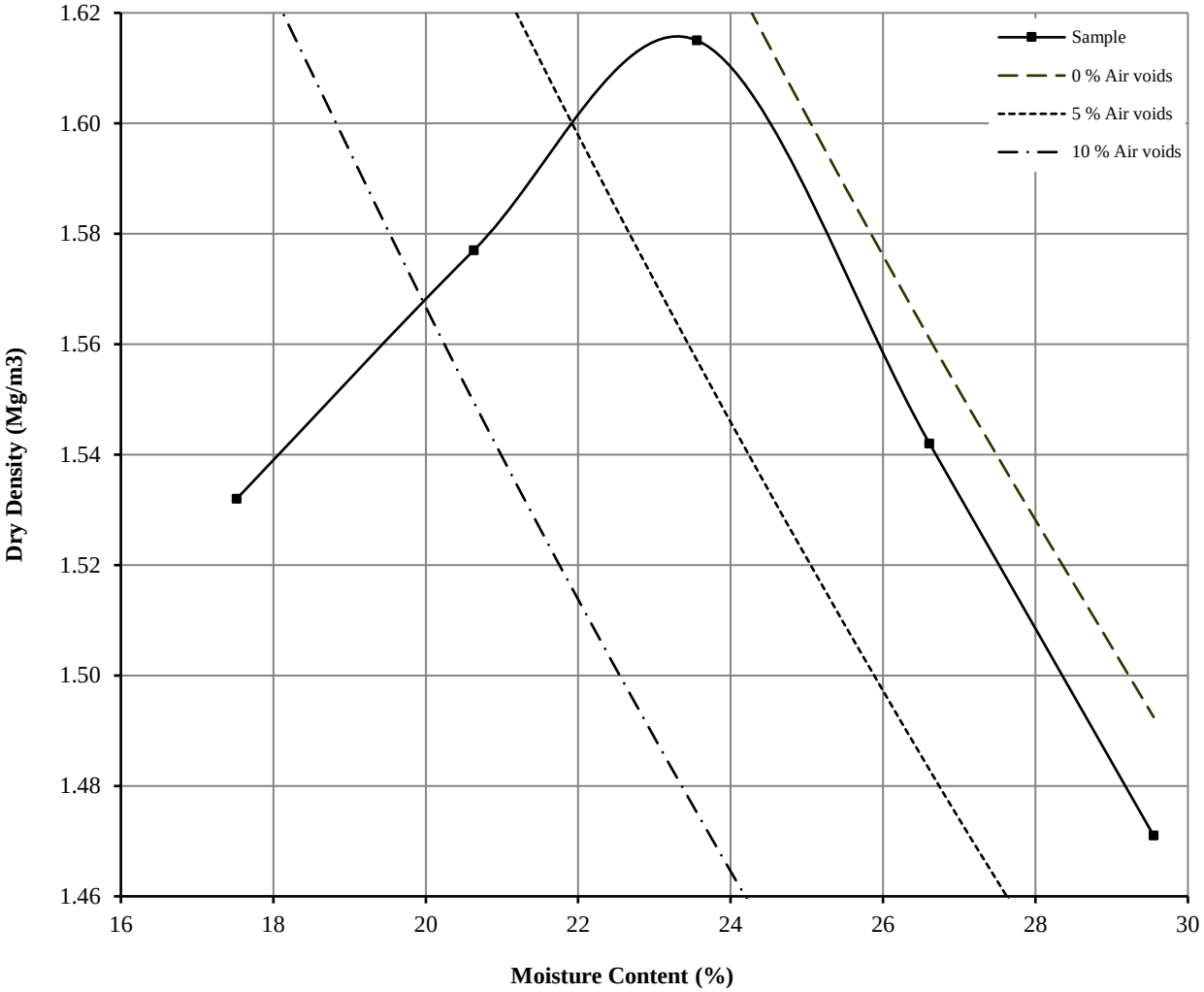
Contract No: PSL23/8167

Client Ref: 4486

DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.5 : 1990

Hole Number:	**TP311**	**Top Depth (m) :**	**2.50**
Sample Number:	**3**	**Base Depth (m) :**	
Sample Type:	**B**		



Initial Moisture Content:		36	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.67	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.62	Material Retained on 20.0 mm Test Sieve (%):		0
Optimum Moisture Content (%):		24			
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

Contract
PSL23/8167
Client Ref
4486

PARTICLE SIZE DISTRIBUTION TEST

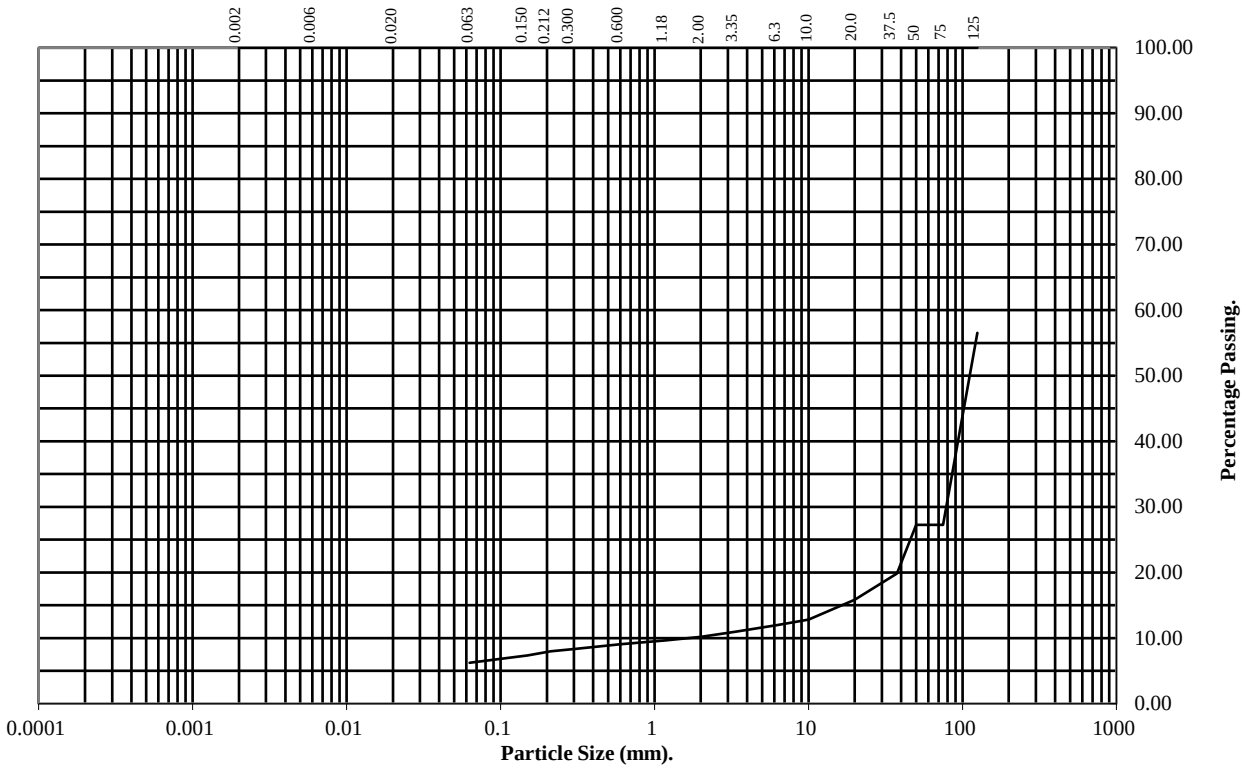
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: **TP313** **Top Depth (m):** **2.00**

Sample Number: **3** **Base Depth(m):**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	57
75	27
50	27
37.5	20
20	16
10	13
6.3	12
3.35	11
2	10
1.18	10
0.6	9
0.3	8
0.212	8
0.15	7
0.063	6

Soil Fraction	Total Percentage
Cobbles	73
Gravel	17
Sand	4
Silt/Clay	6

Remarks:
See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

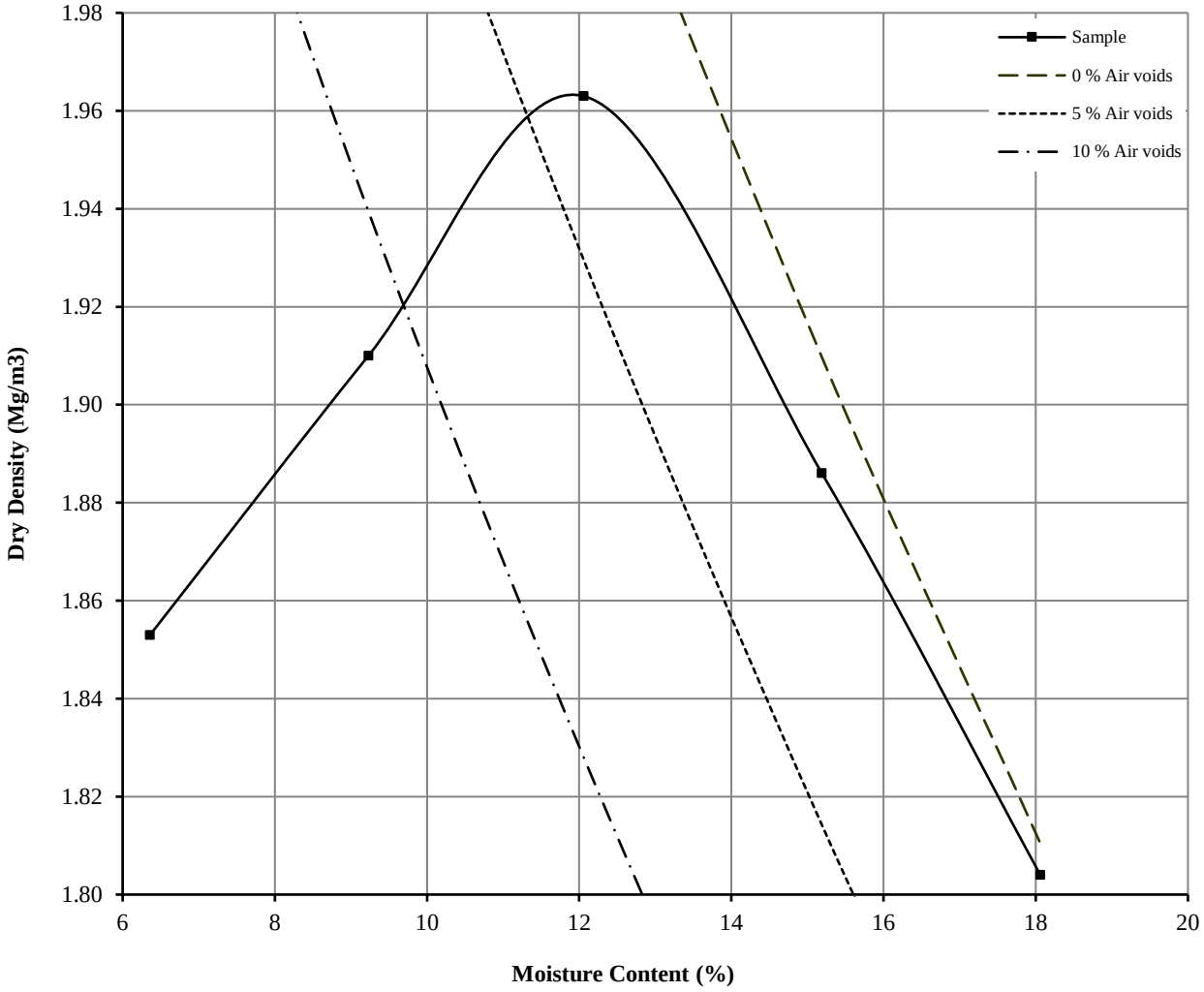
Contract No: **PSL23/8167**

Client Ref: **4486**

DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number:	**TP313**	**Top Depth (m) :**	**2.00**
Sample Number:	**3**	**Base Depth (m) :**	
Sample Type:	**B**		



Initial Moisture Content:		21	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.69	Measured	Material Retained on 37.5 mm Test Sieve (%):		80
Maximum Dry Density (Mg/m3):		1.96	Material Retained on 20.0 mm Test Sieve (%):		4
Optimum Moisture Content (%):		12			
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

Contract
PSL23/8167
Client Ref
4486

PARTICLE SIZE DISTRIBUTION TEST

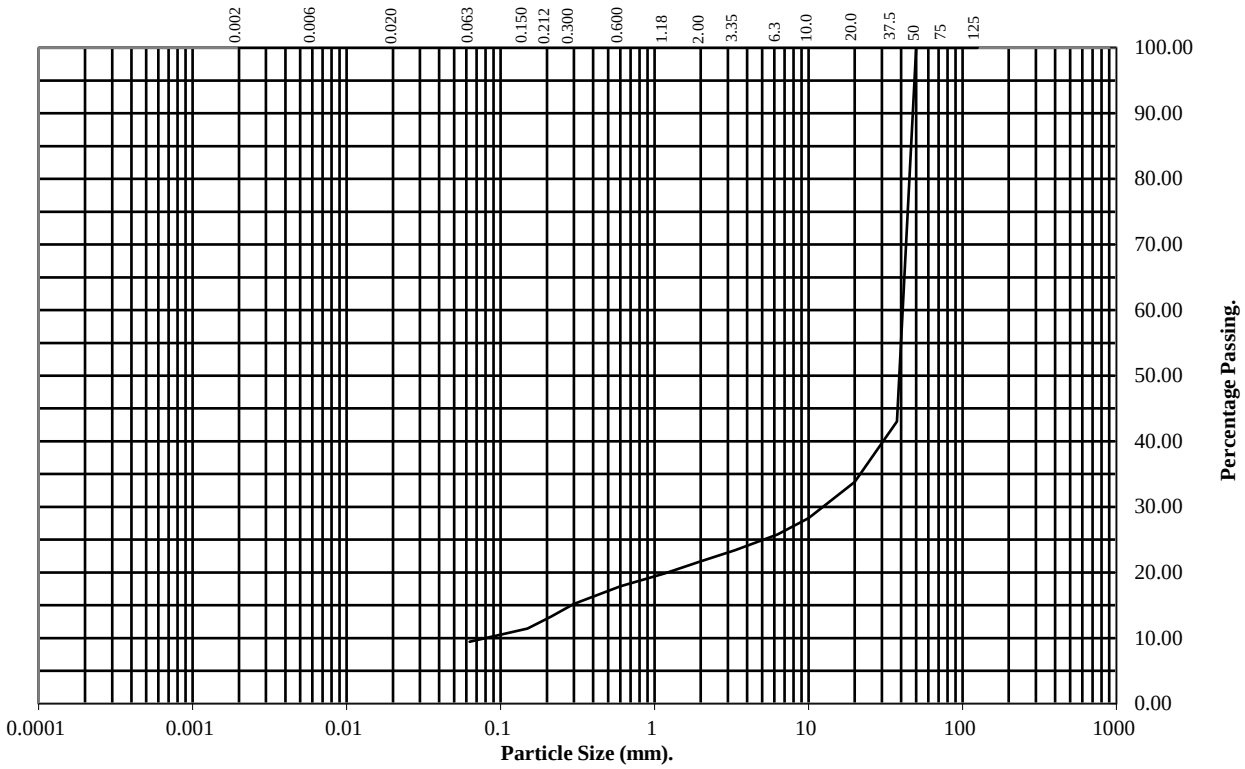
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: **TP326** **Top Depth (m):** **0.70**

Sample Number: **4** **Base Depth(m):**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
50	100
37.5	43
20	34
10	28
6.3	26
3.35	23
2	22
1.18	20
0.6	18
0.3	15
0.212	13
0.15	11
0.063	9

Soil Fraction	Total Percentage
Cobbles	0
Gravel	78
Sand	13
Silt/Clay	9

Remarks:
See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

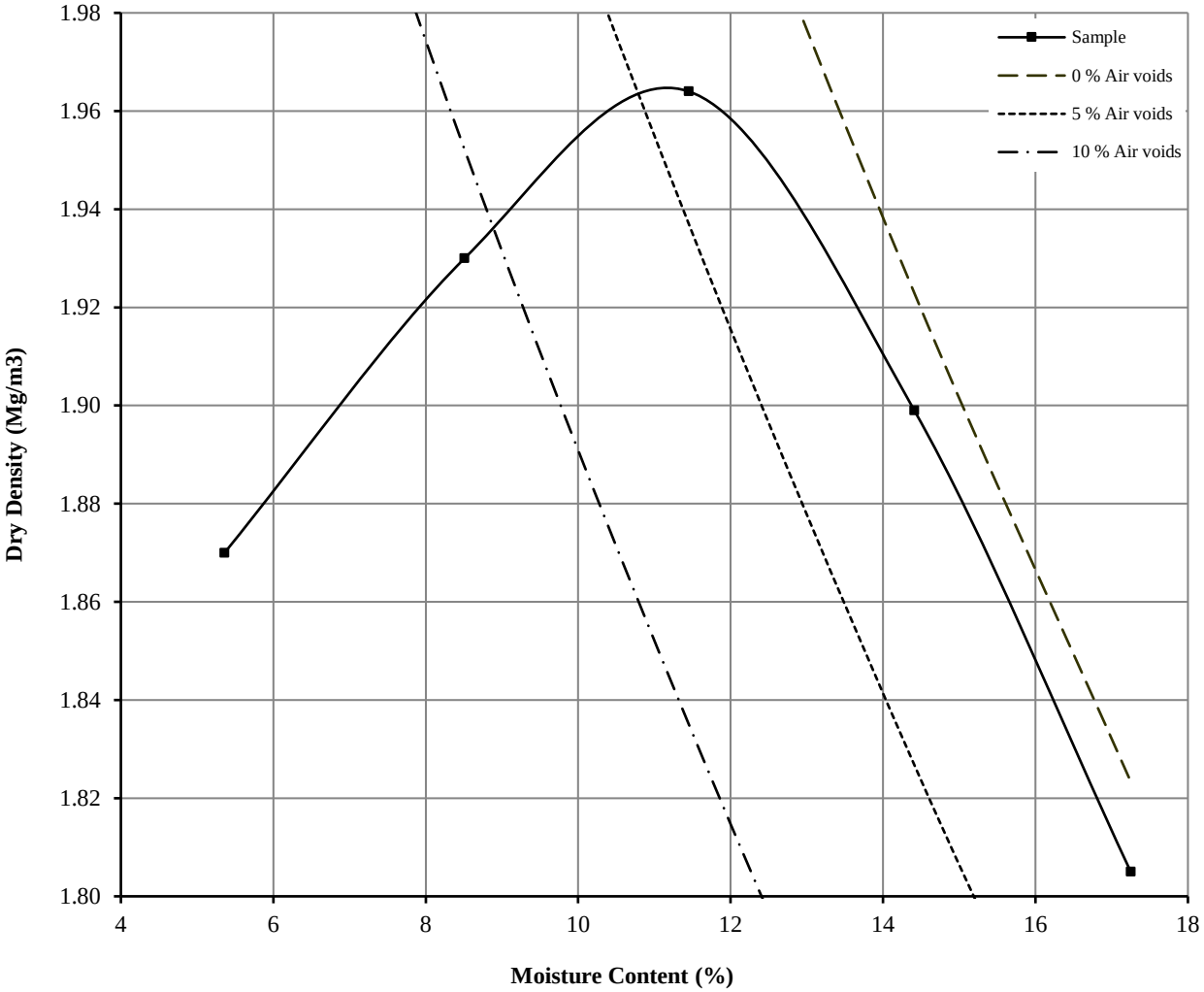
Contract No: **PSL23/8167**

Client Ref: **4486**

DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number:	**TP326**	**Top Depth (m) :**	**0.70**
Sample Number:	**4**	**Base Depth (m) :**	
Sample Type:	**B**		



Initial Moisture Content:		14	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.66	Measured	Material Retained on 37.5 mm Test Sieve (%):		57
Maximum Dry Density (Mg/m3):		1.96	Material Retained on 20.0 mm Test Sieve (%):		9
Optimum Moisture Content (%):		11			
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

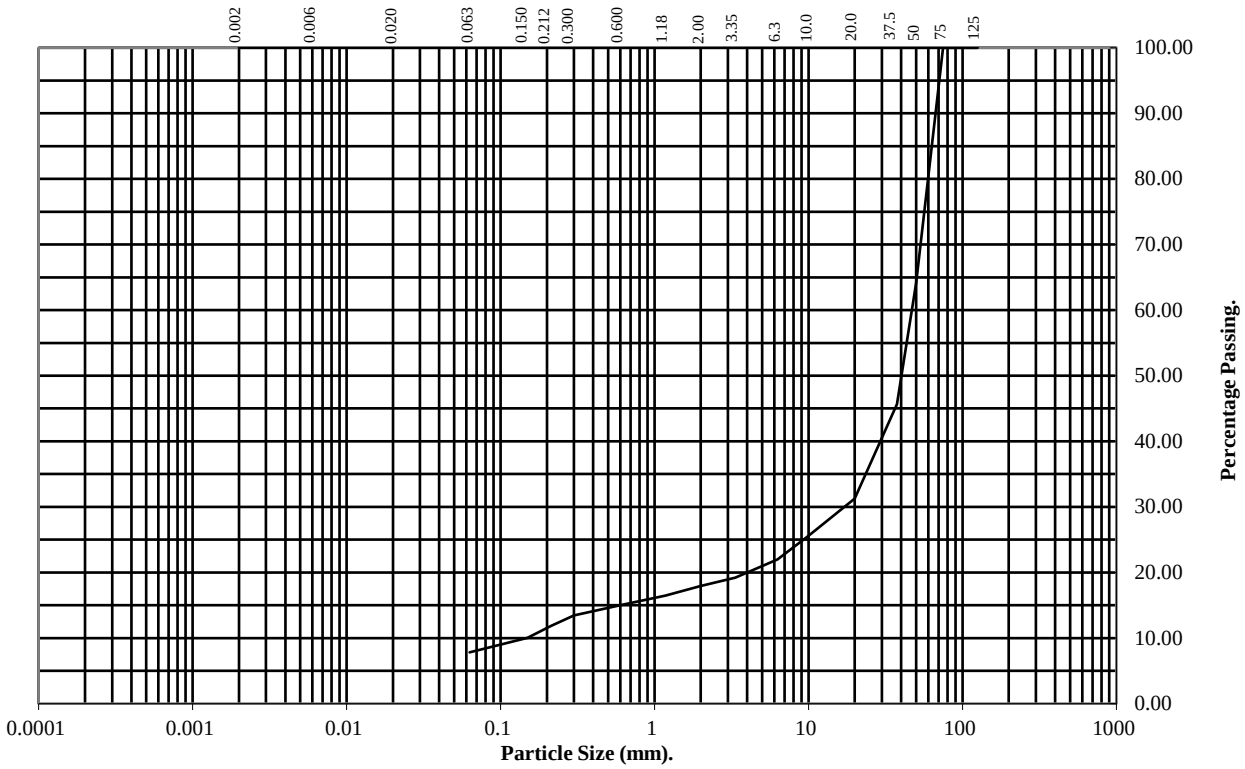
Contract
PSL23/8167
Client Ref
4486

PARTICLE SIZE DISTRIBUTION TEST

BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number:	**TP332**	**Top Depth (m):**	**1.60**
Sample Number:	**3**	**Base Depth(m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
50	64
37.5	46
20	31
10	26
6.3	22
3.35	19
2	18
1.18	16
0.6	15
0.3	13
0.212	12
0.15	10
0.063	8

Soil Fraction	Total Percentage
Cobbles	36
Gravel	46
Sand	10
Silt/Clay	8

Remarks:
See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

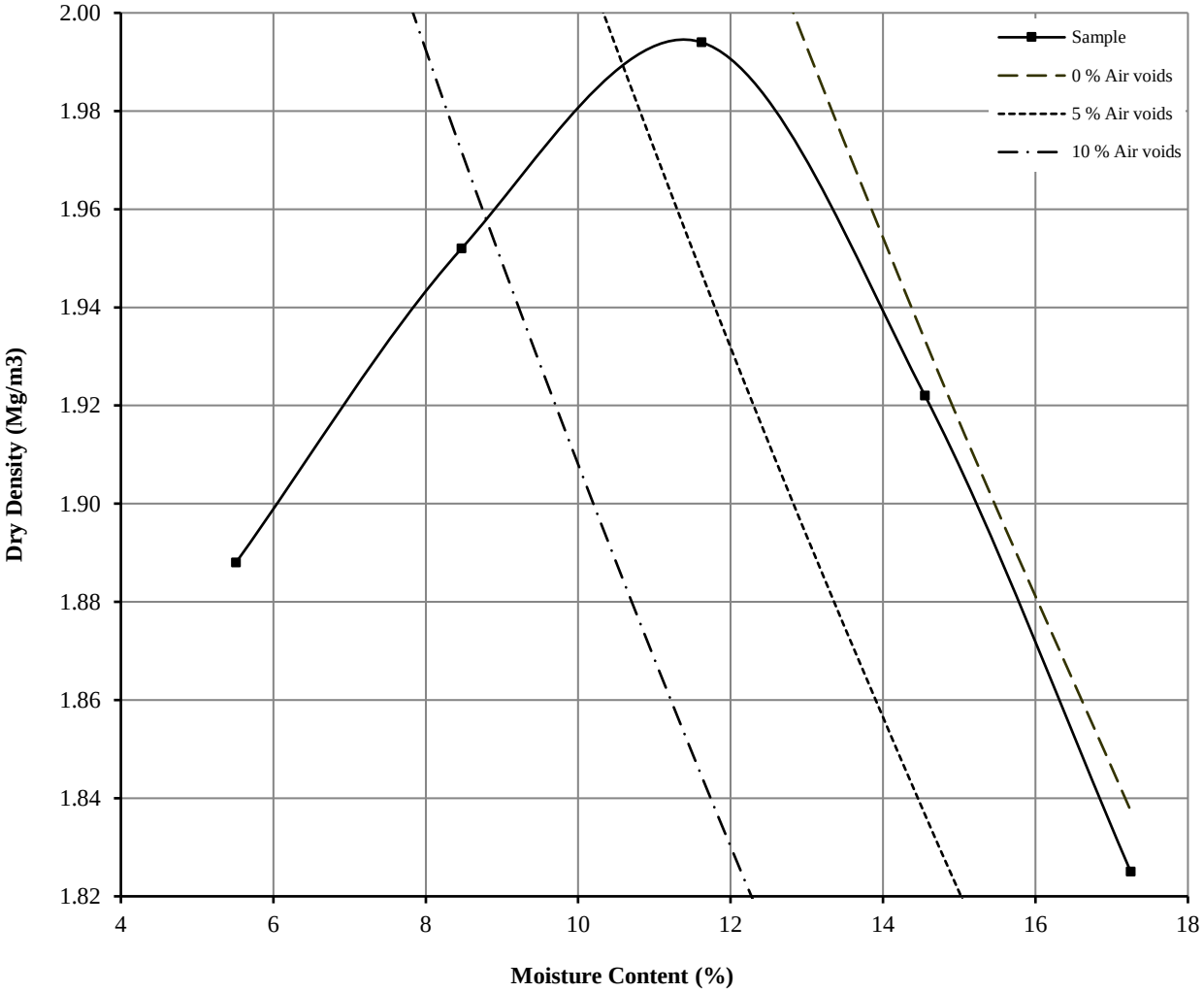
Black Cats

Contract No:
PSL23/8167
Client Ref:
4486

DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number:	**TP332**	**Top Depth (m) :**	**1.60**
Sample Number:	**3**	**Base Depth (m) :**	
Sample Type:	**B**		



Initial Moisture Content:		15	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.69	Measured	Material Retained on 37.5 mm Test Sieve (%):		54
Maximum Dry Density (Mg/m3):		1.99	Material Retained on 20.0 mm Test Sieve (%):		15
Optimum Moisture Content (%):		12			
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

Contract
PSL23/8167
Client Ref
4486

PARTICLE SIZE DISTRIBUTION TEST

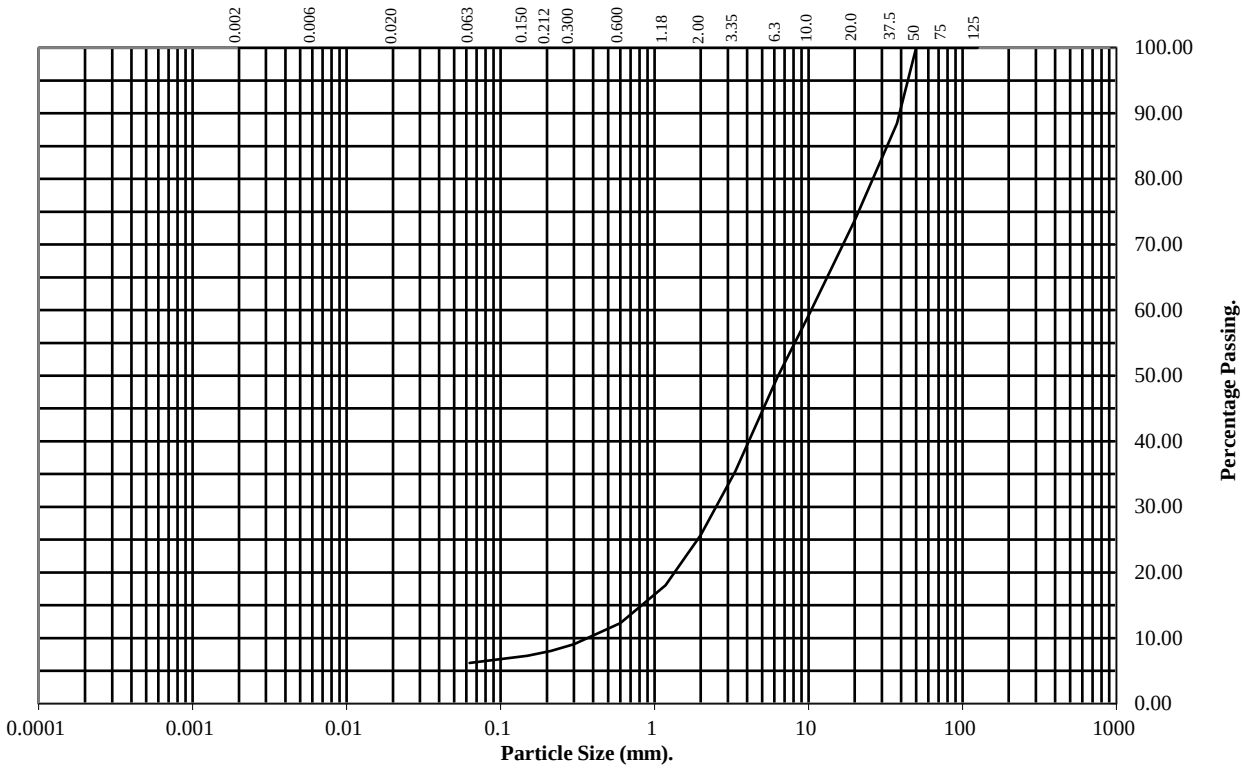
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: **TP341** **Top Depth (m):** **2.00**

Sample Number: **3** **Base Depth(m):**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
50	100
37.5	88
20	74
10	59
6.3	50
3.35	35
2	26
1.18	18
0.6	12
0.3	9
0.212	8
0.15	7
0.063	6

Soil Fraction	Total Percentage
Cobbles	0
Gravel	74
Sand	20
Silt/Clay	6

Remarks:
See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

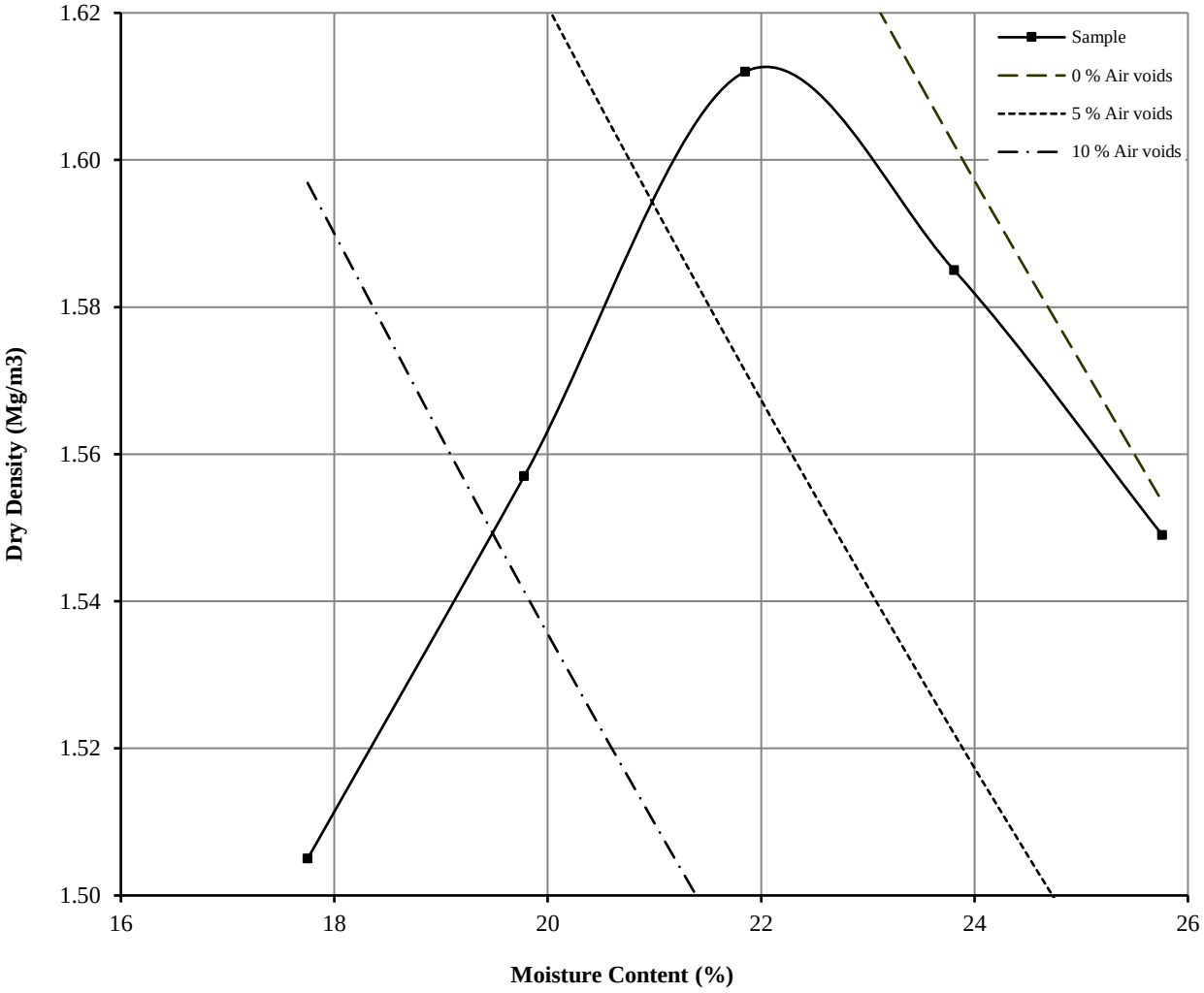
Contract No: **PSL23/8167**

Client Ref: **4486**

DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number:	**TP341**	**Top Depth (m) :**	**2.00**
Sample Number:	**3**	**Base Depth (m) :**	
Sample Type:	**B**		



Initial Moisture Content:		26	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.59	Measured	Material Retained on 37.5 mm Test Sieve (%):		12
Maximum Dry Density (Mg/m3):		1.61	Material Retained on 20.0 mm Test Sieve (%):		14
Optimum Moisture Content (%):		22			
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

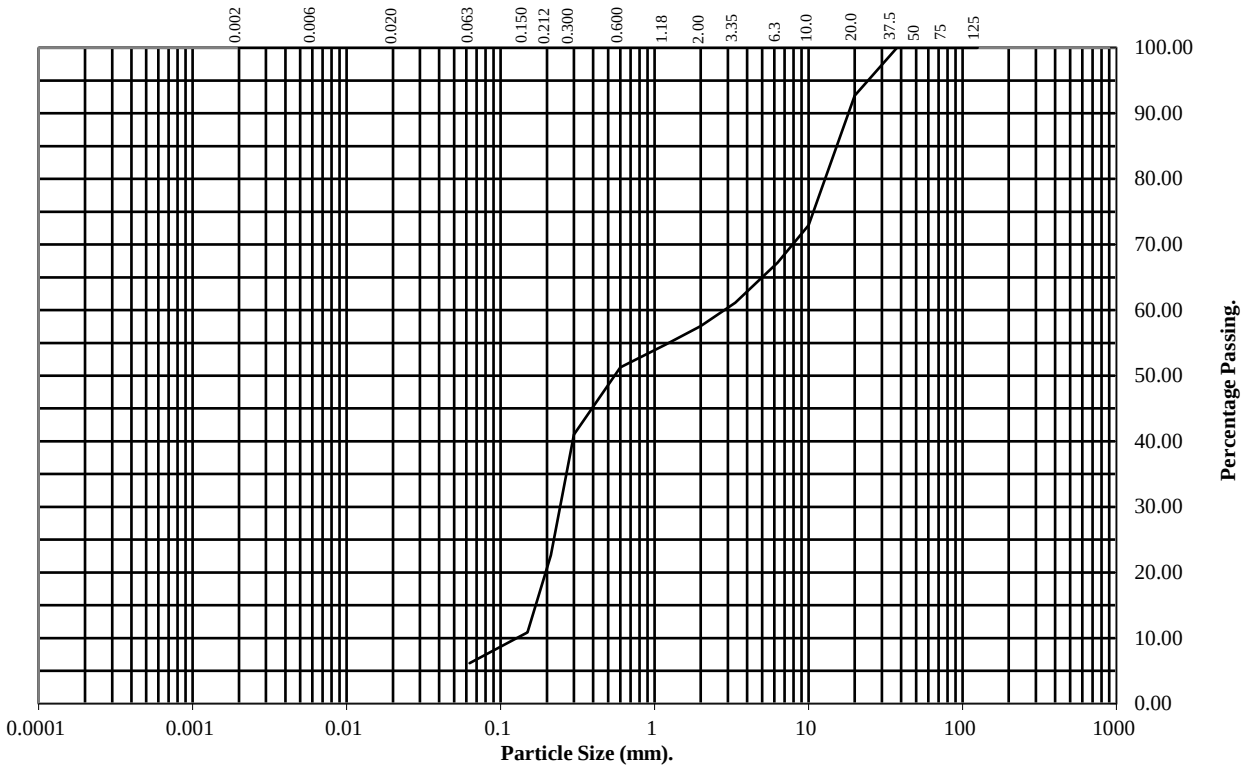
Contract
PSL23/8167
Client Ref
4486

PARTICLE SIZE DISTRIBUTION TEST

BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number:	**TP345**	**Top Depth (m):**	**3.50**
Sample Number:	**3**	**Base Depth(m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
50	100
37.5	100
20	93
10	73
6.3	67
3.35	61
2	58
1.18	55
0.6	51
0.3	41
0.212	23
0.15	11
0.063	6

Soil Fraction	Total Percentage
Cobbles	0
Gravel	42
Sand	52
Silt/Clay	6

Remarks:
See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

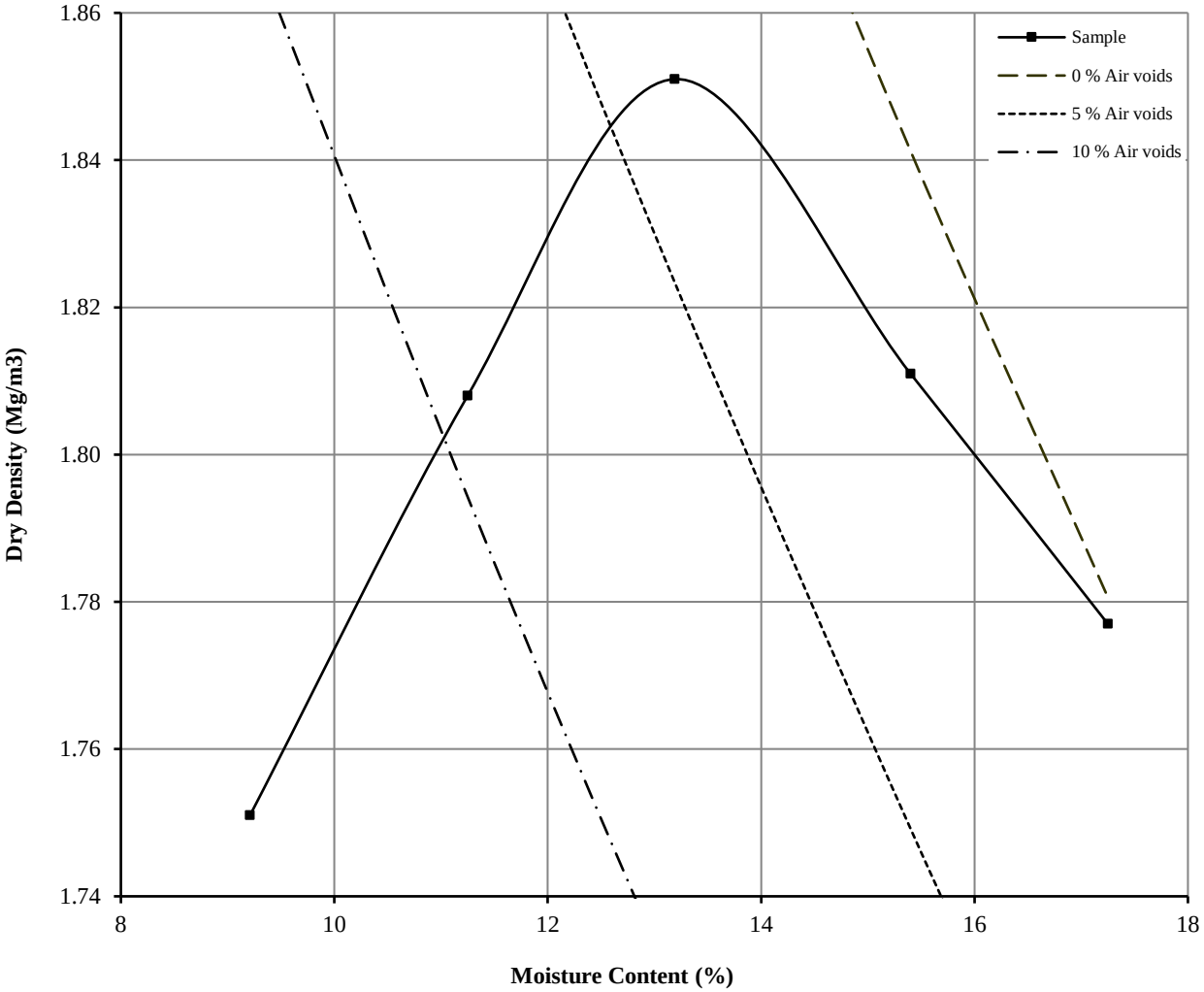
Black Cats

Contract No:
PSL23/8167
Client Ref:
4486

DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number:	**TP345**	**Top Depth (m) :**	**3.50**
Sample Number:	**3**	**Base Depth (m) :**	
Sample Type:	**B**		



Initial Moisture Content:		15	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.57	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.85	Material Retained on 20.0 mm Test Sieve (%):		7
Optimum Moisture Content (%):		13			
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

Contract
PSL23/8167
Client Ref
4486

PARTICLE SIZE DISTRIBUTION TEST

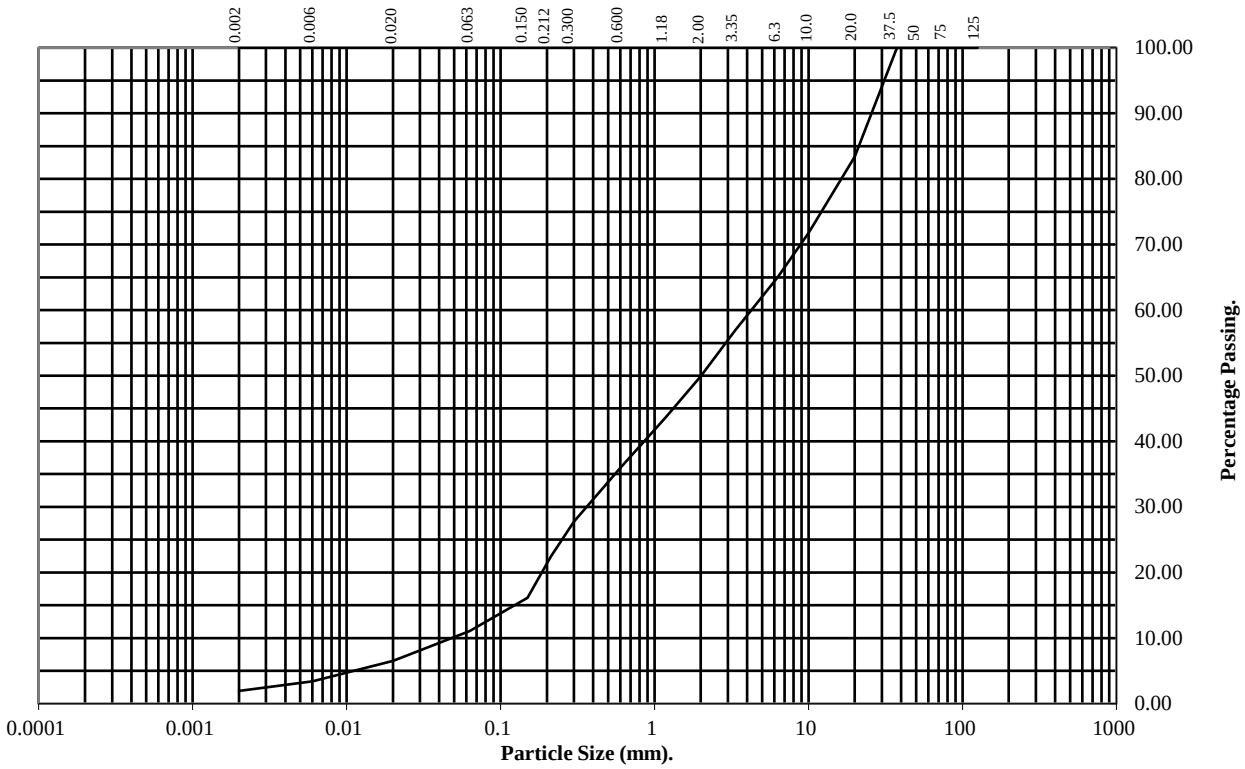
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: **TP352C** **Top Depth (m):** **1.20**

Sample Number: **2** **Base Depth(m):**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
50	100
37.5	100
20	83
10	72
6.3	65
3.35	57
2	50
1.18	44
0.6	36
0.3	28
0.212	22
0.15	16
0.063	11

Particle Diameter	Percentage Passing
0.02	7
0.006	3
0.002	2

Soil Fraction	Total Percentage
Cobbles	0
Gravel	50
Sand	39
Silt	9
Clay	2

Remarks:
See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

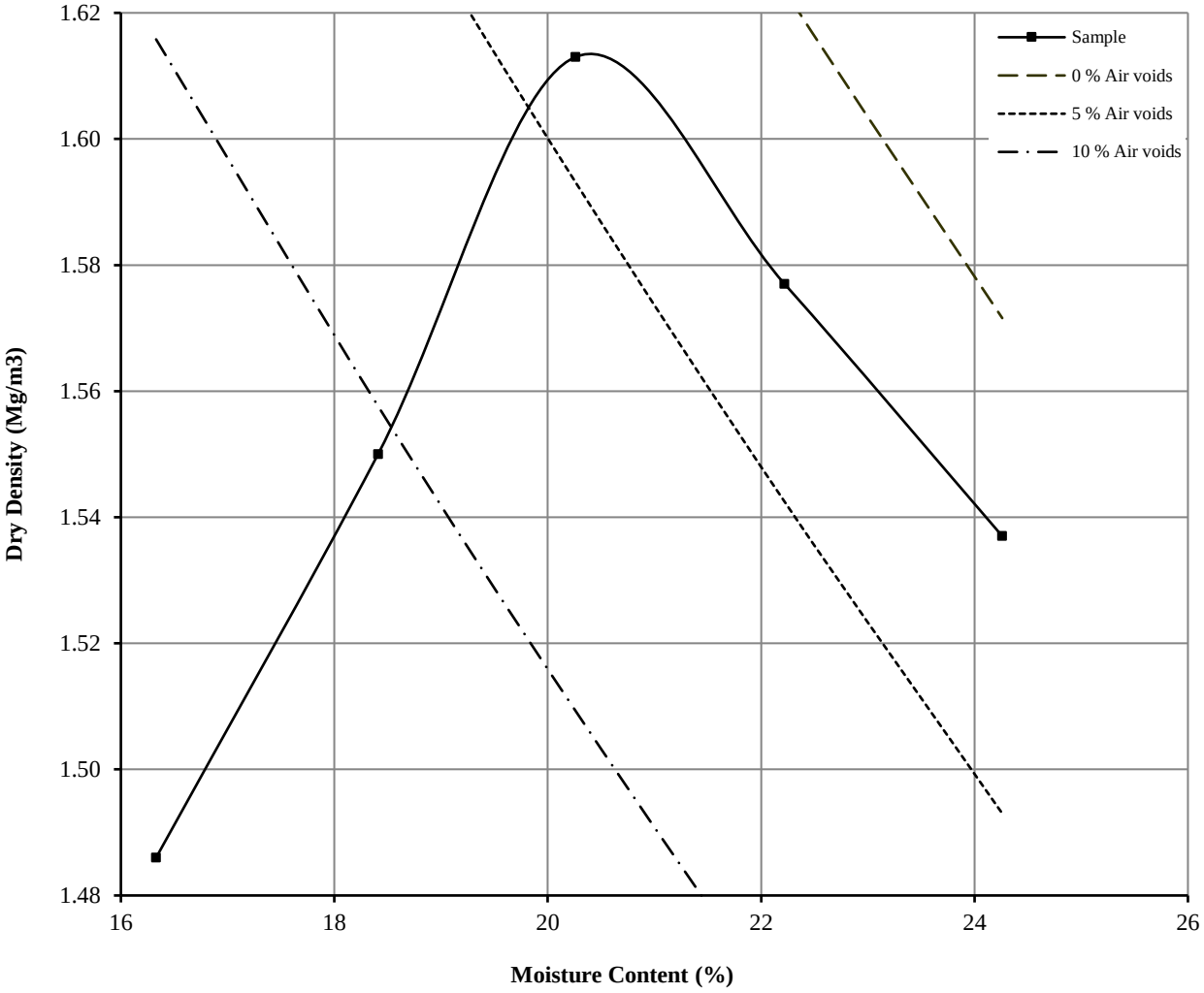
Black Cats

Contract No:
PSL23/8167
Client Ref:
4486

DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number:	**TP352C**	**Top Depth (m) :**	**1.20**
Sample Number:	**2**	**Base Depth (m) :**	
Sample Type:	**B**		



Initial Moisture Content:		24	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.54	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.61	Material Retained on 20.0 mm Test Sieve (%):		17
Optimum Moisture Content (%):		20			
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

Contract
PSL23/8167
Client Ref
4486

PARTICLE SIZE DISTRIBUTION TEST

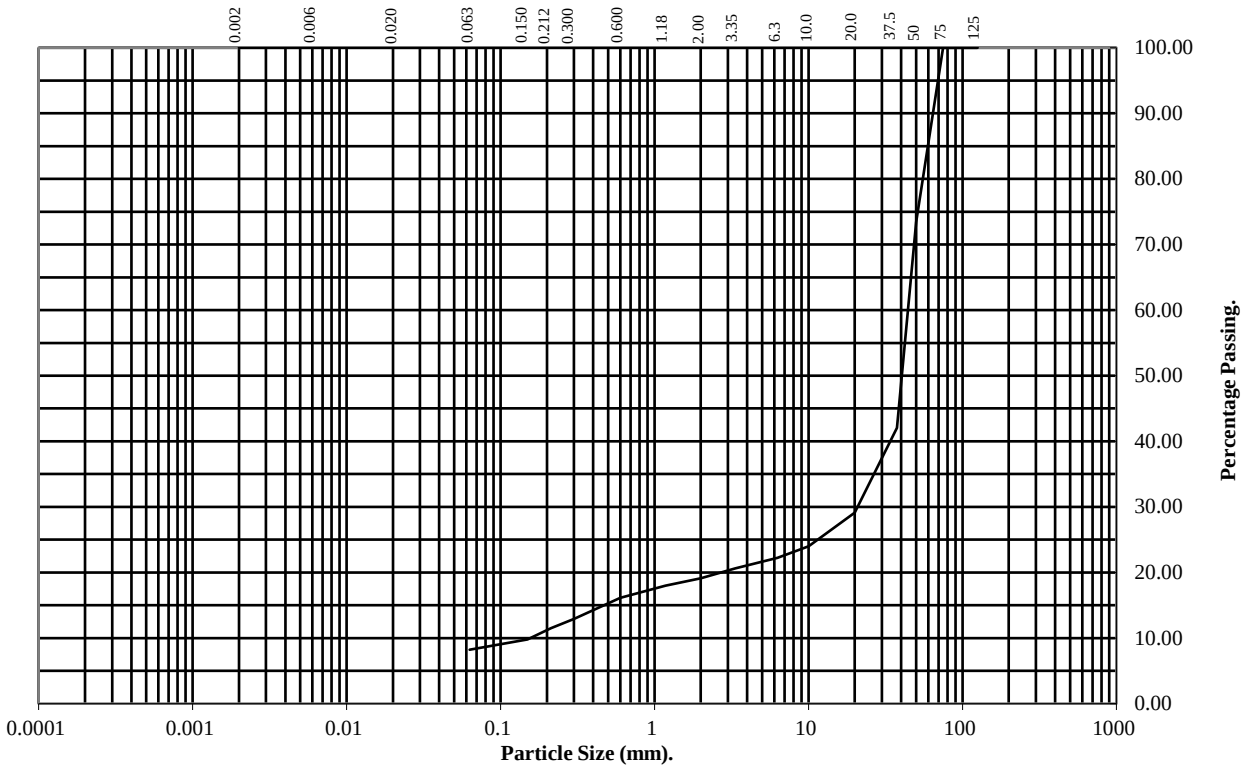
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: **TP357** **Top Depth (m):** **0.80**

Sample Number: **2** **Base Depth(m):**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
50	73
37.5	42
20	29
10	24
6.3	22
3.35	21
2	19
1.18	18
0.6	16
0.3	13
0.212	12
0.15	10
0.063	8

Soil Fraction	Total Percentage
Cobbles	27
Gravel	54
Sand	11
Silt/Clay	8

Remarks:
See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

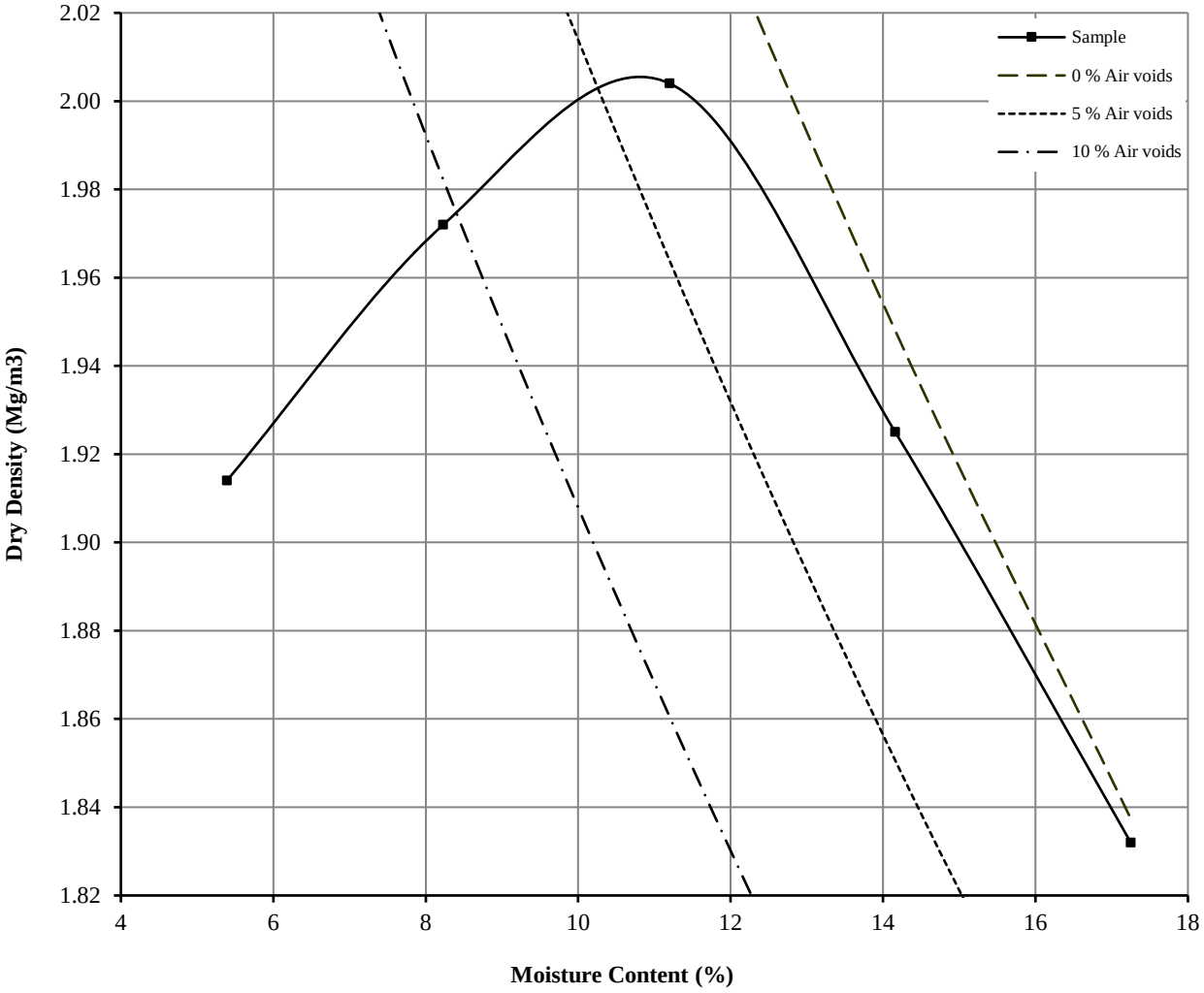
Contract No: **PSL23/8167**

Client Ref: **4486**

DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number:	**TP357**	**Top Depth (m) :**	**0.80**
Sample Number:	**2**	**Base Depth (m) :**	
Sample Type:	**B**		



Initial Moisture Content:		17	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.69	Measured	Material Retained on 37.5 mm Test Sieve (%):		58
Maximum Dry Density (Mg/m3):		2.00	Material Retained on 20.0 mm Test Sieve (%):		13
Optimum Moisture Content (%):		11			
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

Contract
PSL23/8167
Client Ref
4486

PARTICLE SIZE DISTRIBUTION TEST

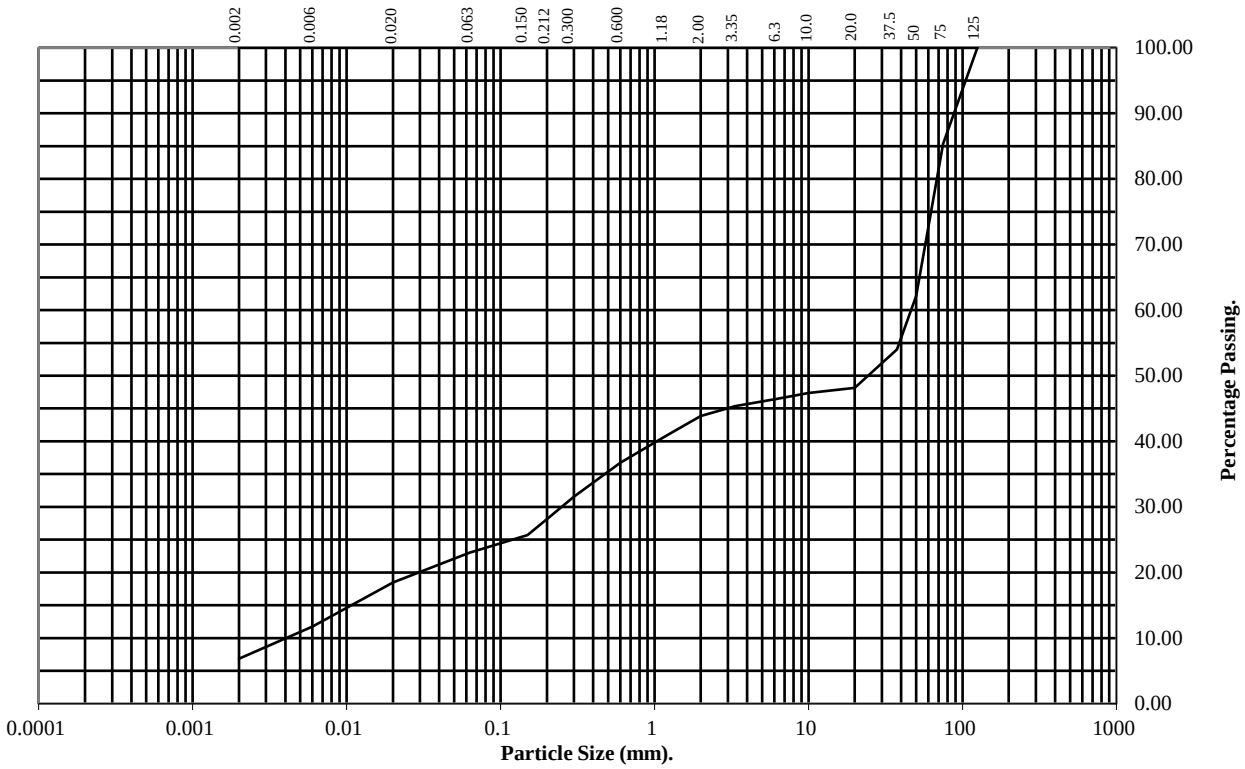
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: **TP380** **Top Depth (m):** **2.20**

Sample Number: **3** **Base Depth(m):**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	85
50	62
37.5	54
20	48
10	47
6.3	47
3.35	45
2	44
1.18	41
0.6	37
0.3	32
0.212	29
0.15	26
0.063	23

Particle Diameter	Percentage Passing
0.02	18
0.006	12
0.002	7

Soil Fraction	Total Percentage
Cobbles	38
Gravel	18
Sand	21
Silt	16
Clay	7

Remarks:
See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

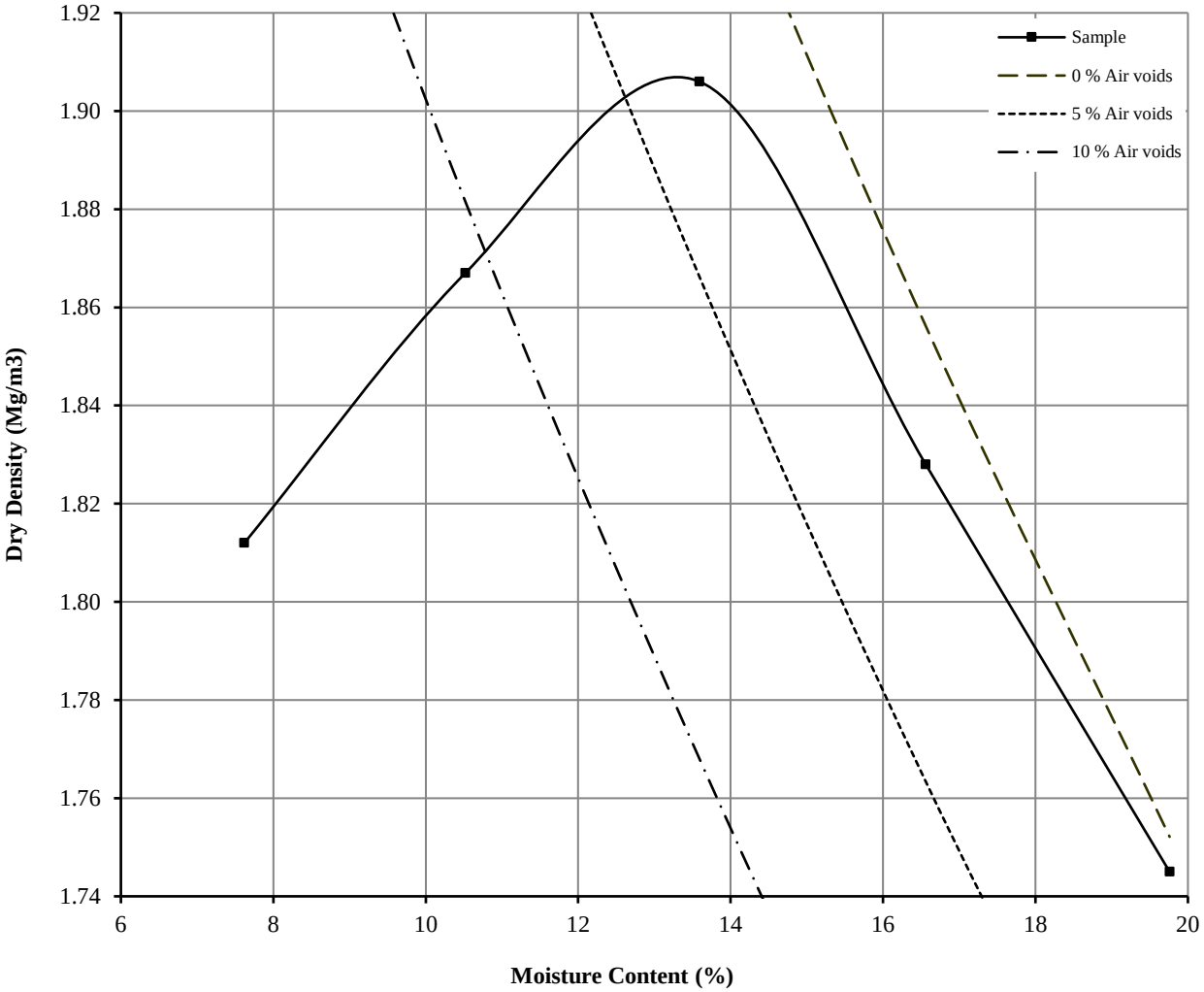
Black Cats

Contract No:
PSL23/8167
Client Ref:
4486

DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number:	**TP380**	**Top Depth (m) :**	**2.20**
Sample Number:	**3**	**Base Depth (m) :**	
Sample Type:	**B**		



Initial Moisture Content:		20	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.68	Measured	Material Retained on 37.5 mm Test Sieve (%):		56
Maximum Dry Density (Mg/m3):		1.91	Material Retained on 20.0 mm Test Sieve (%):		6
Optimum Moisture Content (%):		14			
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

Contract
PSL23/8167
Client Ref
4486

PARTICLE SIZE DISTRIBUTION TEST

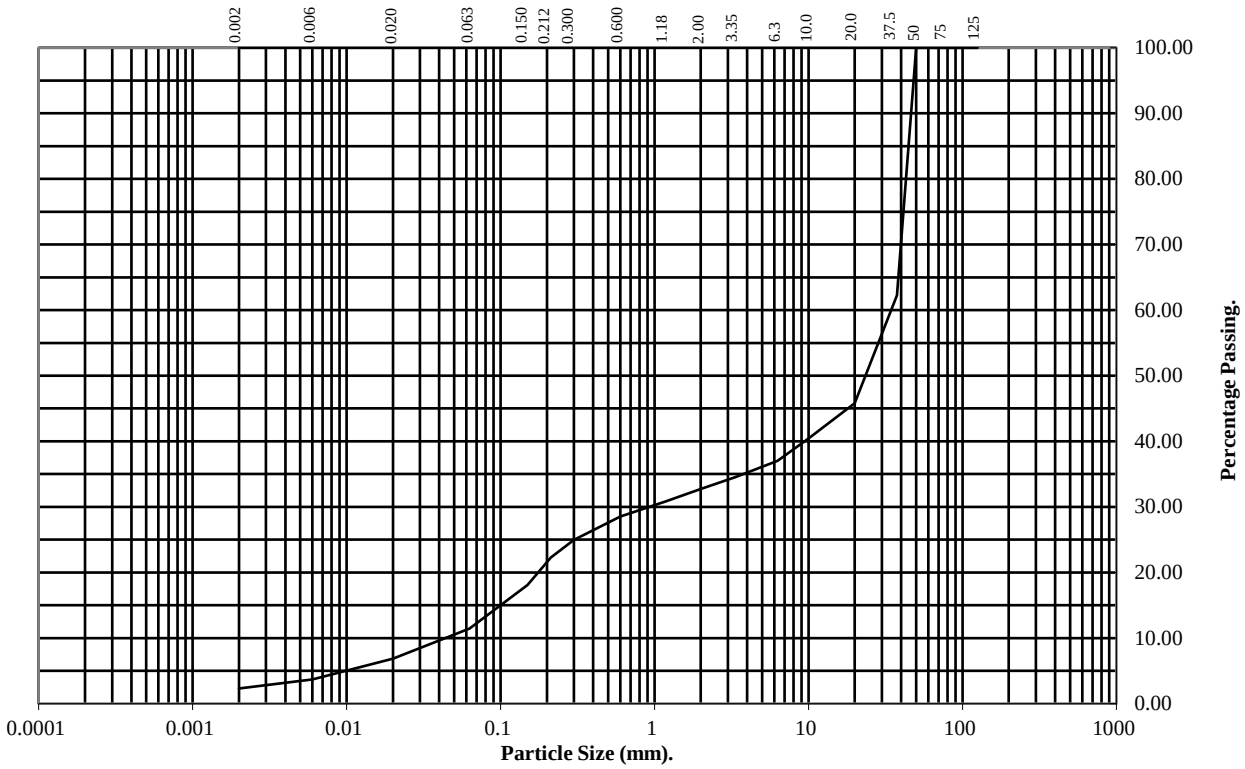
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: **TP382** **Top Depth (m):** **2.00**

Sample Number: **3** **Base Depth(m):**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
50	100
37.5	62
20	46
10	40
6.3	37
3.35	35
2	33
1.18	31
0.6	29
0.3	25
0.212	22
0.15	18
0.063	11

Particle Diameter	Percentage Passing
0.02	7
0.006	4
0.002	2

Soil Fraction	Total Percentage
Cobbles	0
Gravel	67
Sand	22
Silt	9
Clay	2

Remarks:
See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

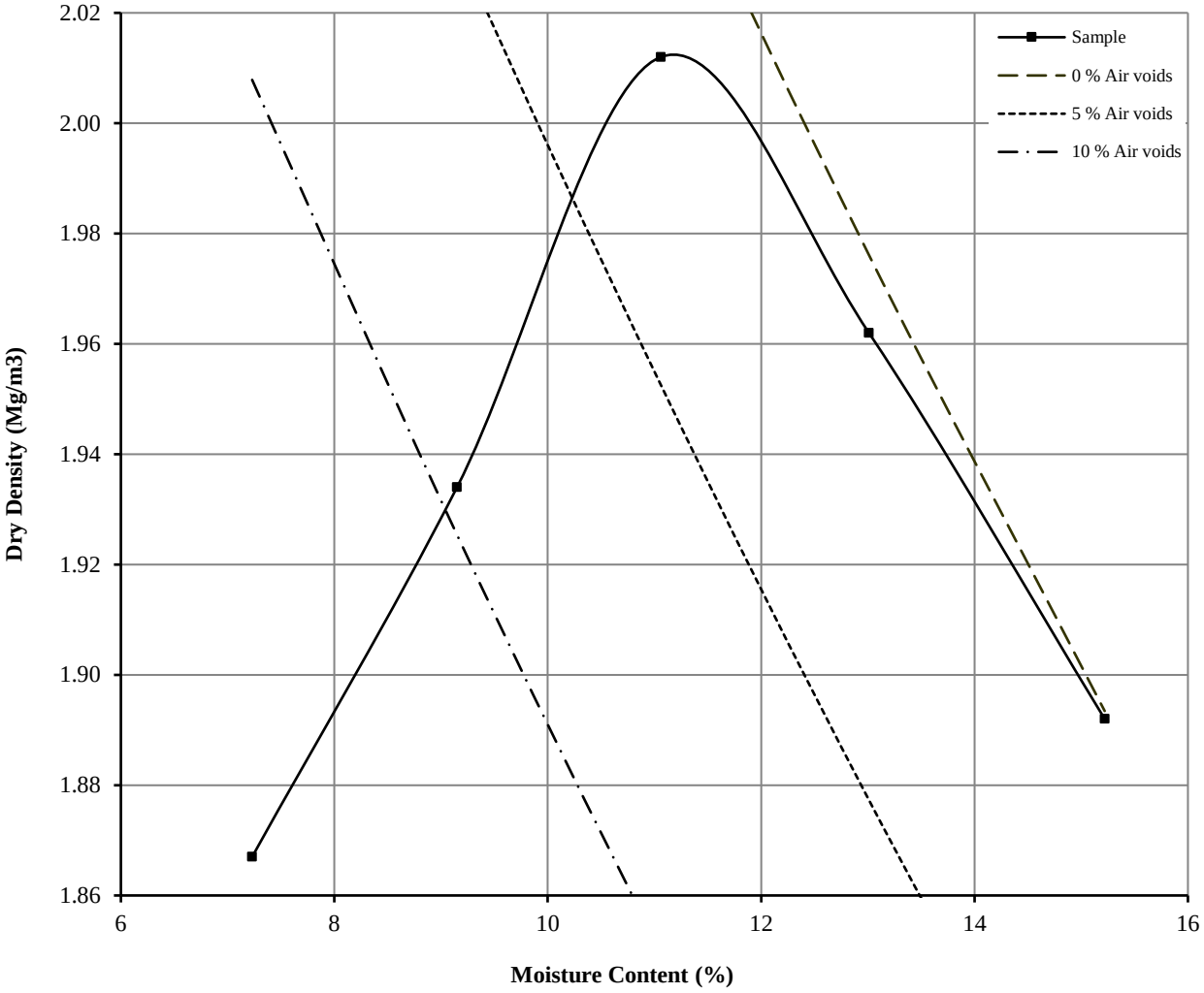
Black Cats

Contract No:
PSL23/8167
Client Ref:
4486

DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number:	**TP382**	**Top Depth (m) :**	**2.00**
Sample Number:	**3**	**Base Depth (m) :**	
Sample Type:	**B**		



Initial Moisture Content:		15	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.66	Measured	Material Retained on 37.5 mm Test Sieve (%):		38
Maximum Dry Density (Mg/m3):		2.01	Material Retained on 20.0 mm Test Sieve (%):		16
Optimum Moisture Content (%):		11			
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

Contract
PSL23/8167
Client Ref
4486

PARTICLE SIZE DISTRIBUTION TEST

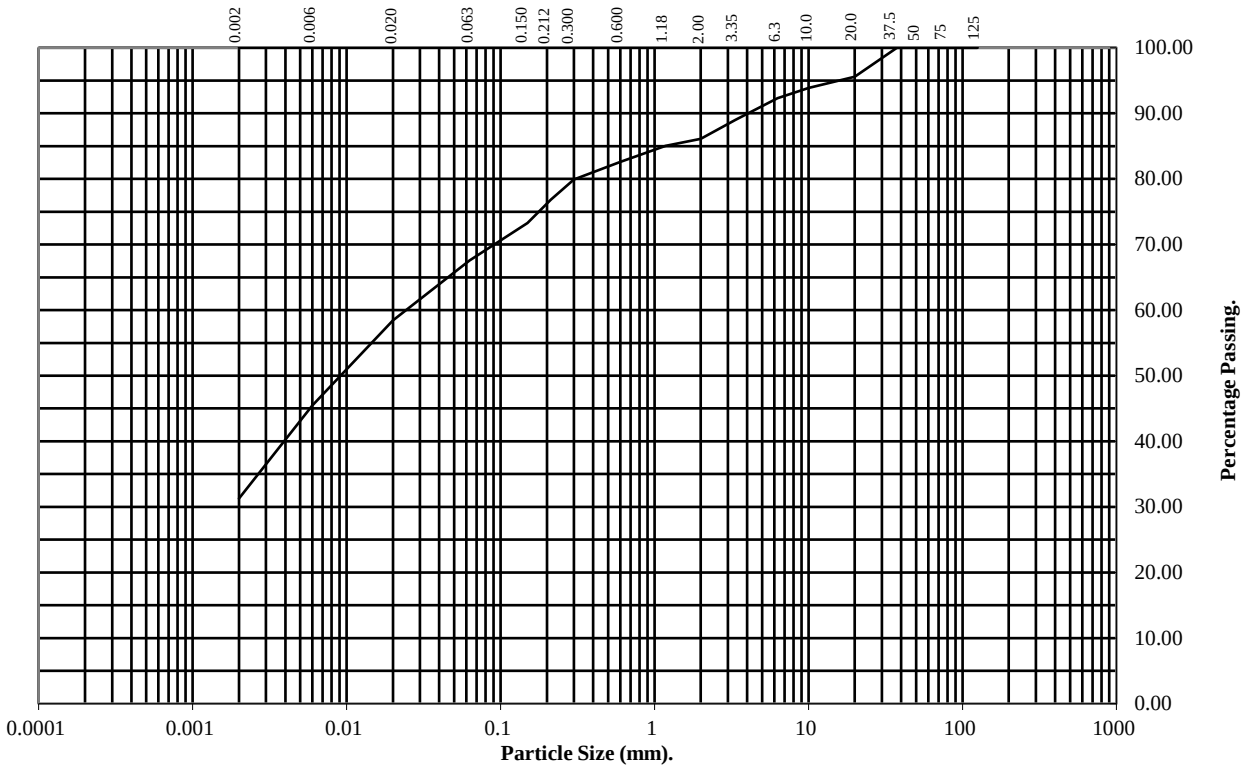
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: **TP385** **Top Depth (m):** **1.50**

Sample Number: **2** **Base Depth(m):**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
50	100
37.5	100
20	96
10	94
6.3	92
3.35	89
2	86
1.18	85
0.6	83
0.3	80
0.212	77
0.15	73
0.063	68

Particle Diameter	Percentage Passing
0.02	58
0.006	45
0.002	31

Soil Fraction	Total Percentage
Cobbles	0
Gravel	14
Sand	18
Silt	37
Clay	31

Remarks:
See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

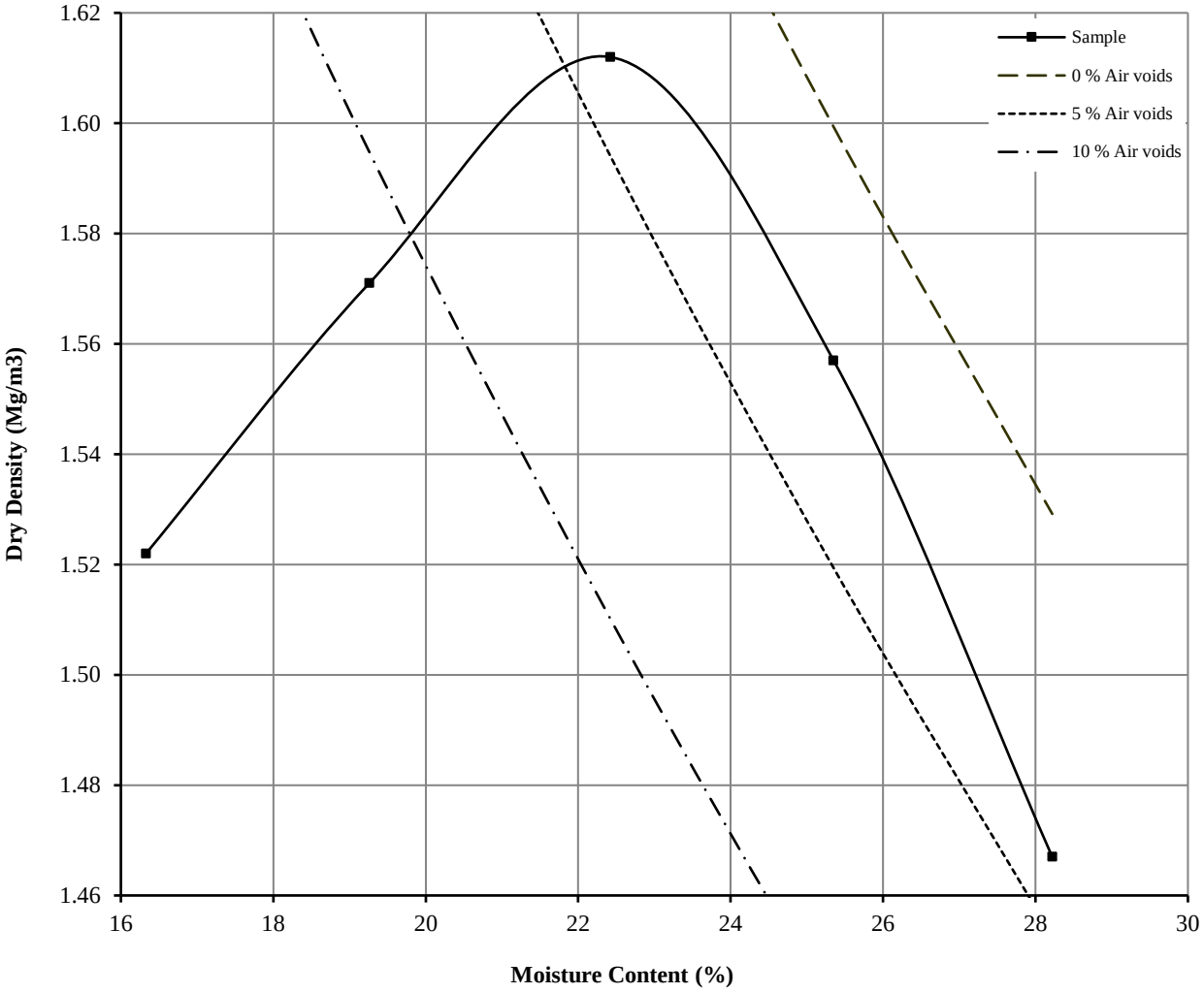
Black Cats

Contract No:
PSL23/8167
Client Ref:
4486

DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.5 : 1990

Hole Number:	**TP385**	**Top Depth (m) :**	**1.50**
Sample Number:	**2**	**Base Depth (m) :**	
Sample Type:	**B**		



Initial Moisture Content:		31	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.69	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.61	Material Retained on 20.0 mm Test Sieve (%):		4
Optimum Moisture Content (%):		22			
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

Contract
PSL23/8167
Client Ref
4486

PARTICLE SIZE DISTRIBUTION TEST

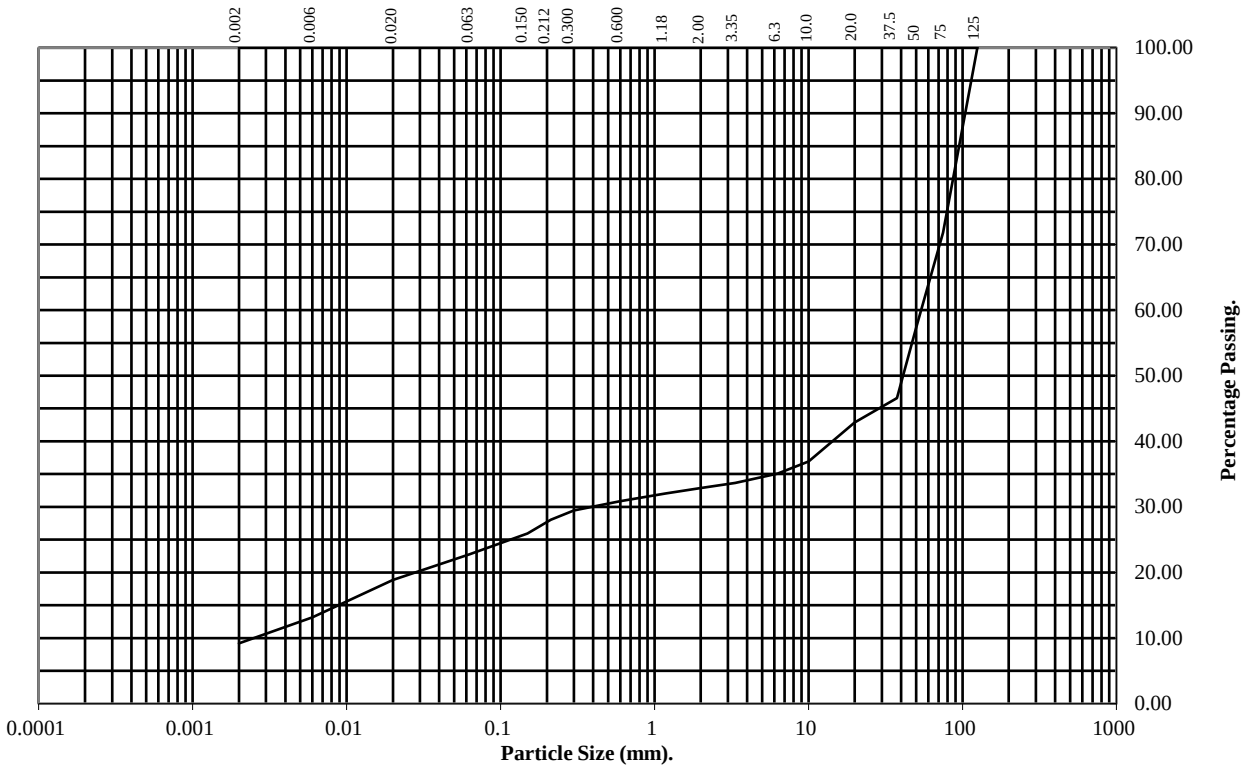
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: **TP388** **Top Depth (m):** **2.50**

Sample Number: **3** **Base Depth(m):**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	72
50	57
37.5	47
20	43
10	37
6.3	35
3.35	34
2	33
1.18	32
0.6	31
0.3	29
0.212	28
0.15	26
0.063	23

Particle Diameter	Percentage Passing
0.02	19
0.006	13
0.002	9

Soil Fraction	Total Percentage
Cobbles	43
Gravel	24
Sand	10
Silt	14
Clay	9

Remarks:
See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

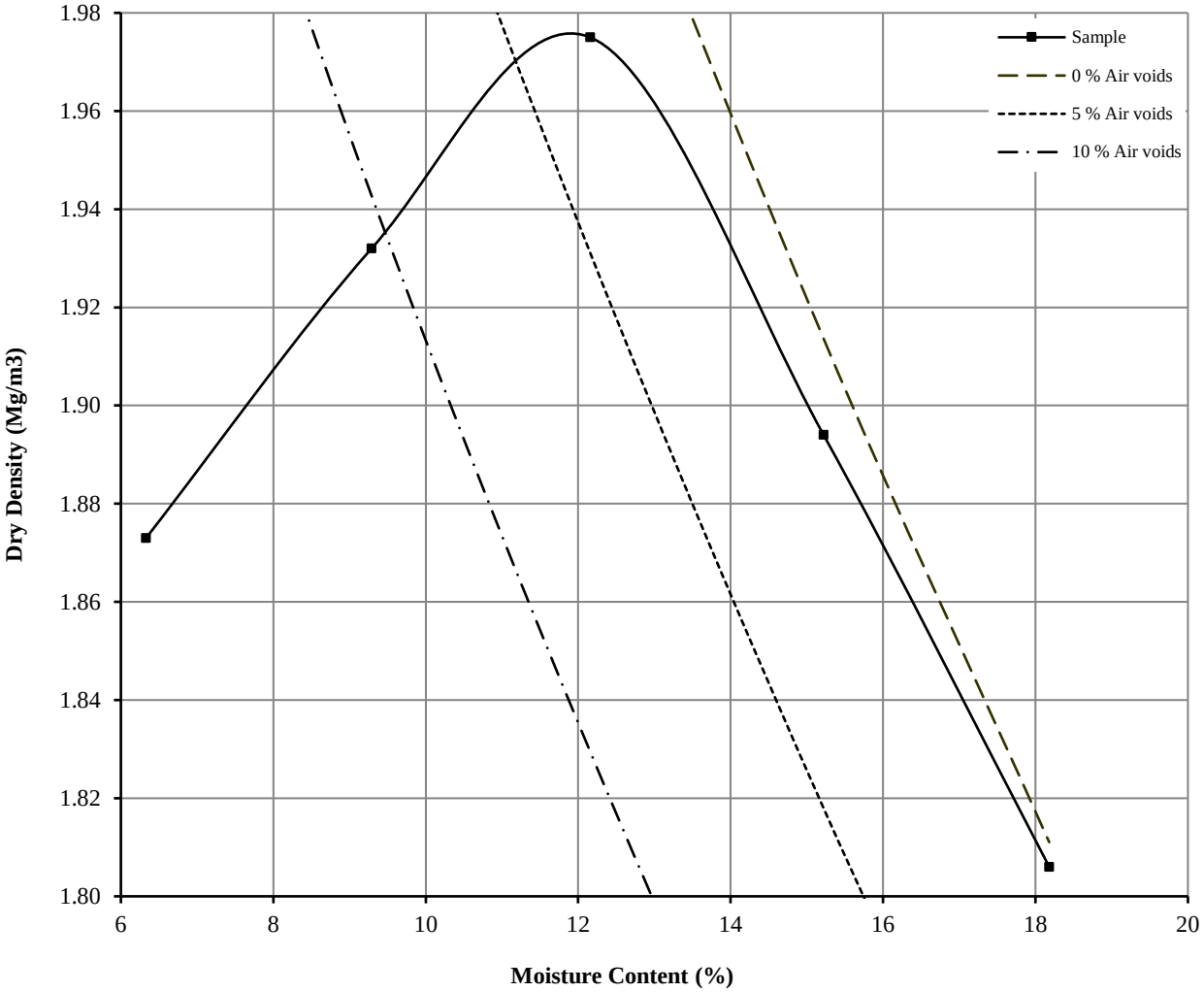
Black Cats

Contract No:
PSL23/8167
Client Ref:
4486

DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.5 : 1990

Hole Number:	**TP388**	**Top Depth (m) :**	**2.50**
Sample Number:	**3**	**Base Depth (m) :**	
Sample Type:	**B**		



Initial Moisture Content:		21	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.70	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.98	Material Retained on 20.0 mm Test Sieve (%):		0
Optimum Moisture Content (%):		12			
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

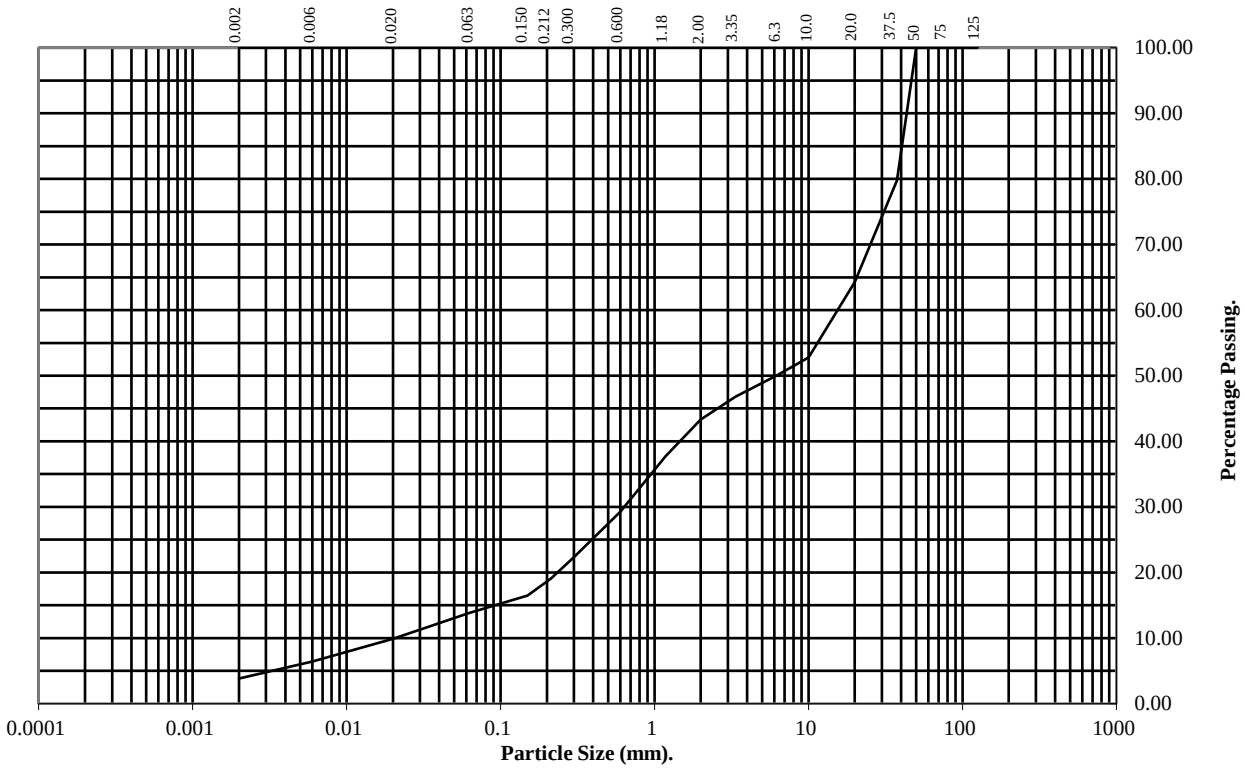
Contract
PSL23/8167
Client Ref
4486

PARTICLE SIZE DISTRIBUTION TEST

BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number:	**TP389**	**Top Depth (m):**	**2.20**
Sample Number:	**3**	**Base Depth(m):**	
Sample Type:	**B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
50	100
37.5	80
20	64
10	53
6.3	50
3.35	47
2	43
1.18	38
0.6	29
0.3	22
0.212	19
0.15	16
0.063	14

Particle Diameter	Percentage Passing
0.02	10
0.006	6
0.002	4

Soil Fraction	Total Percentage
Cobbles	0
Gravel	57
Sand	29
Silt	10
Clay	4

Remarks:
See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

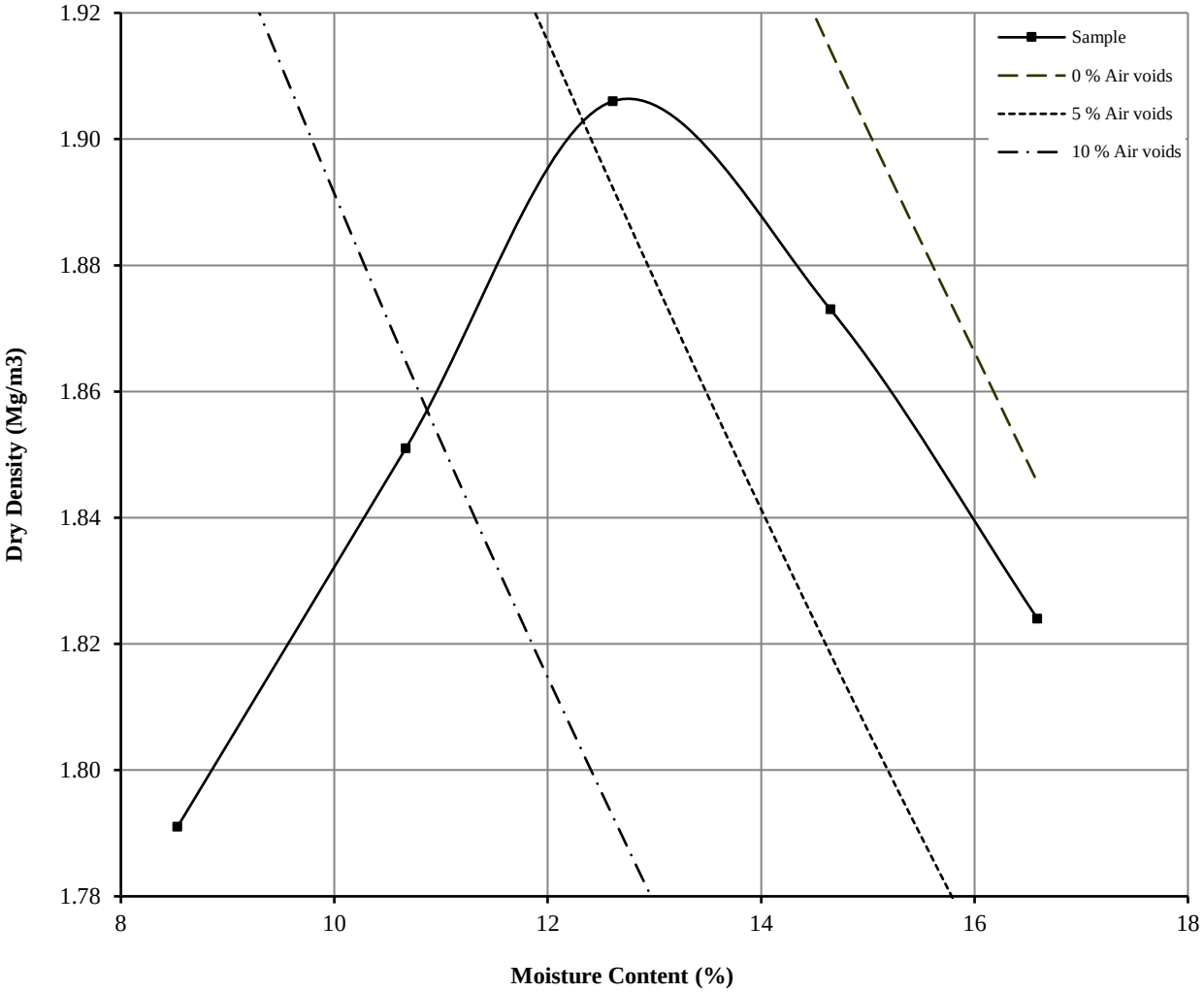
Black Cats

Contract No:
PSL23/8167
Client Ref:
4486

DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number:	**TP389**	**Top Depth (m) :**	**2.20**
Sample Number:	**3**	**Base Depth (m) :**	
Sample Type:	**B**		



Initial Moisture Content:		19	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.66	Measured	Material Retained on 37.5 mm Test Sieve (%):		20
Maximum Dry Density (Mg/m3):		1.91	Material Retained on 20.0 mm Test Sieve (%):		16
Optimum Moisture Content (%):		13			
Remarks See summary of soil descriptions					

PARTICLE SIZE DISTRIBUTION TEST

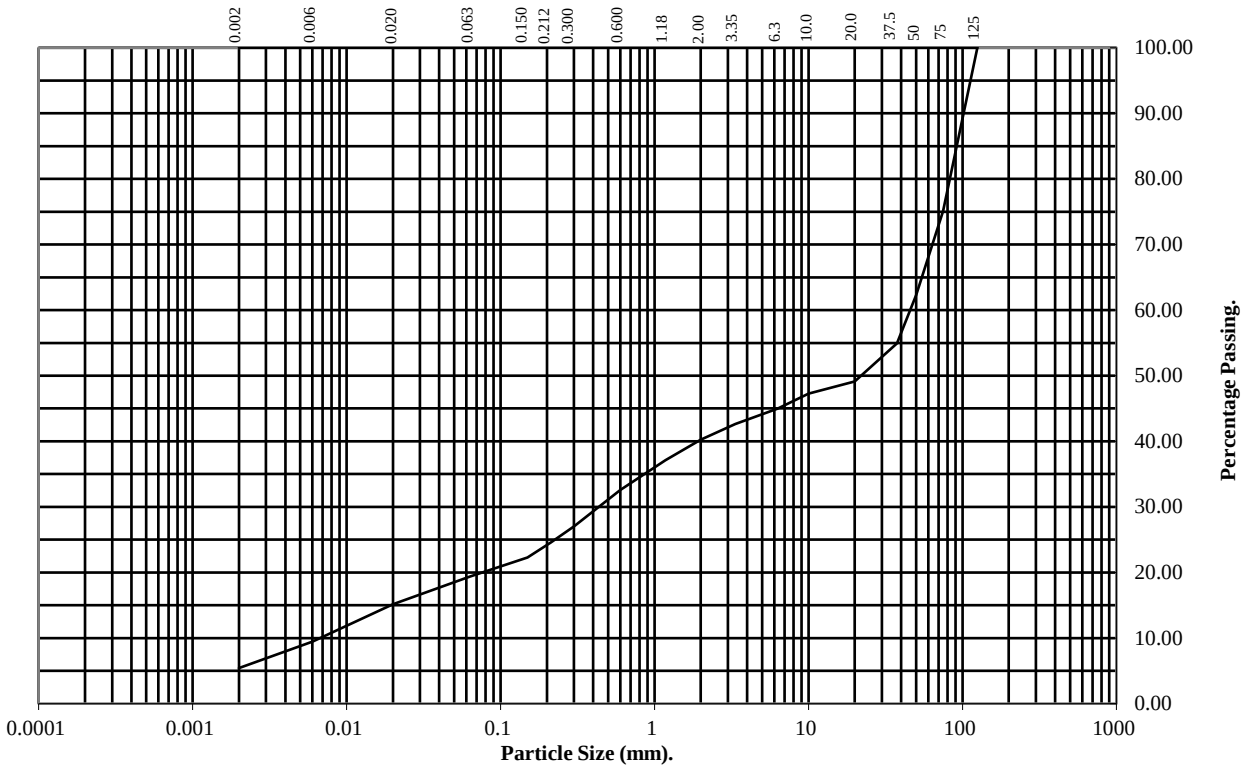
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: **TP398** **Top Depth (m):** **0.80**

Sample Number: **2** **Base Depth(m):**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	75
50	62
37.5	55
20	49
10	47
6.3	45
3.35	43
2	40
1.18	37
0.6	33
0.3	27
0.212	25
0.15	22
0.063	19

Particle Diameter	Percentage Passing
0.02	15
0.006	9
0.002	5

Soil Fraction	Total Percentage
Cobbles	38
Gravel	22
Sand	21
Silt	14
Clay	5

Remarks:
See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

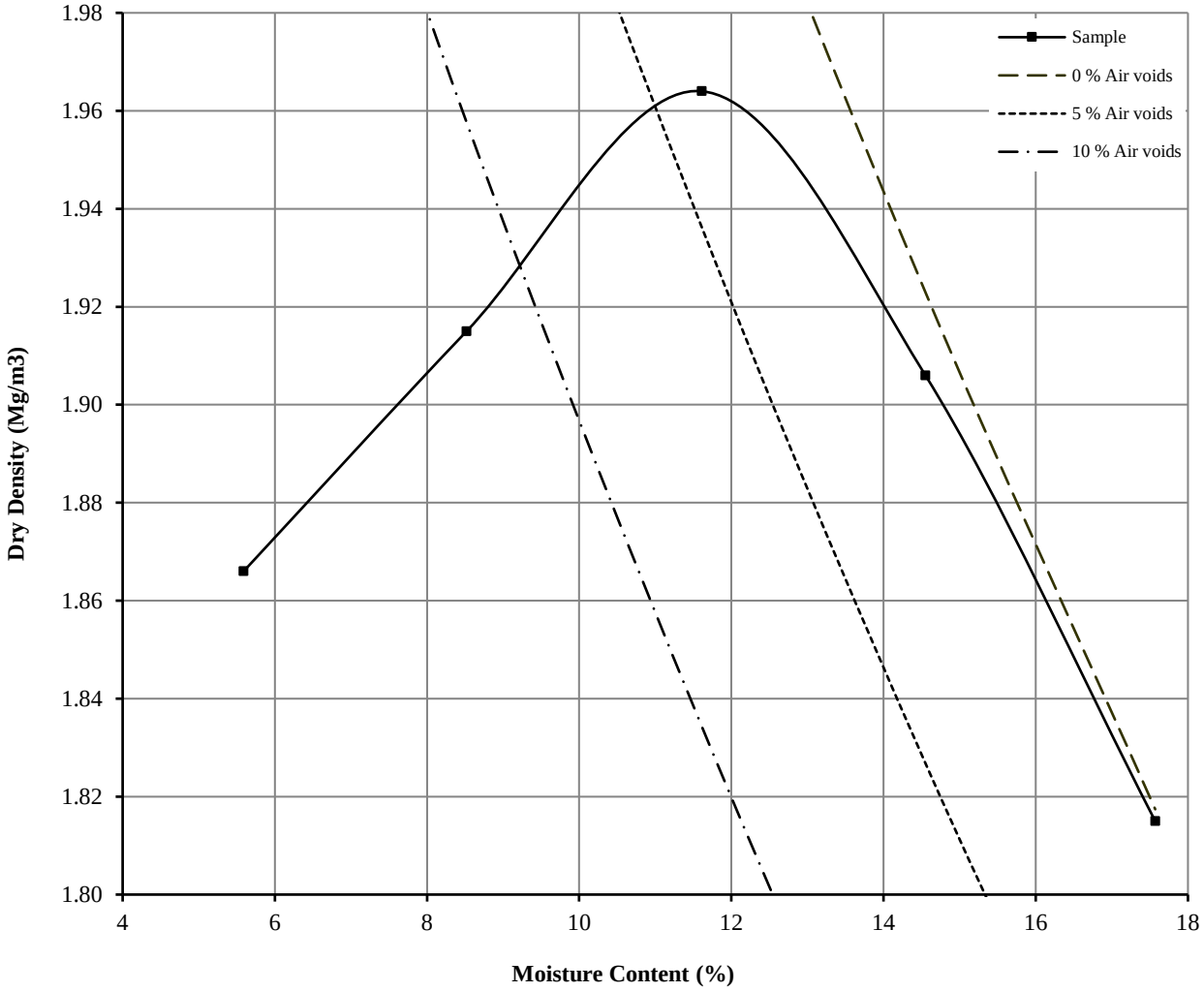
Black Cats

Contract No:
PSL23/8167
Client Ref:
4486

DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number:	**TP398**	**Top Depth (m) :**	**0.80**
Sample Number:	**2**	**Base Depth (m) :**	
Sample Type:	**B**		



Initial Moisture Content:		21	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.67	Measured	Material Retained on 37.5 mm Test Sieve (%):		45
Maximum Dry Density (Mg/m3):		1.96	Material Retained on 20.0 mm Test Sieve (%):		6
Optimum Moisture Content (%):		12			
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

Contract
PSL23/8167
Client Ref
4486

PARTICLE SIZE DISTRIBUTION TEST

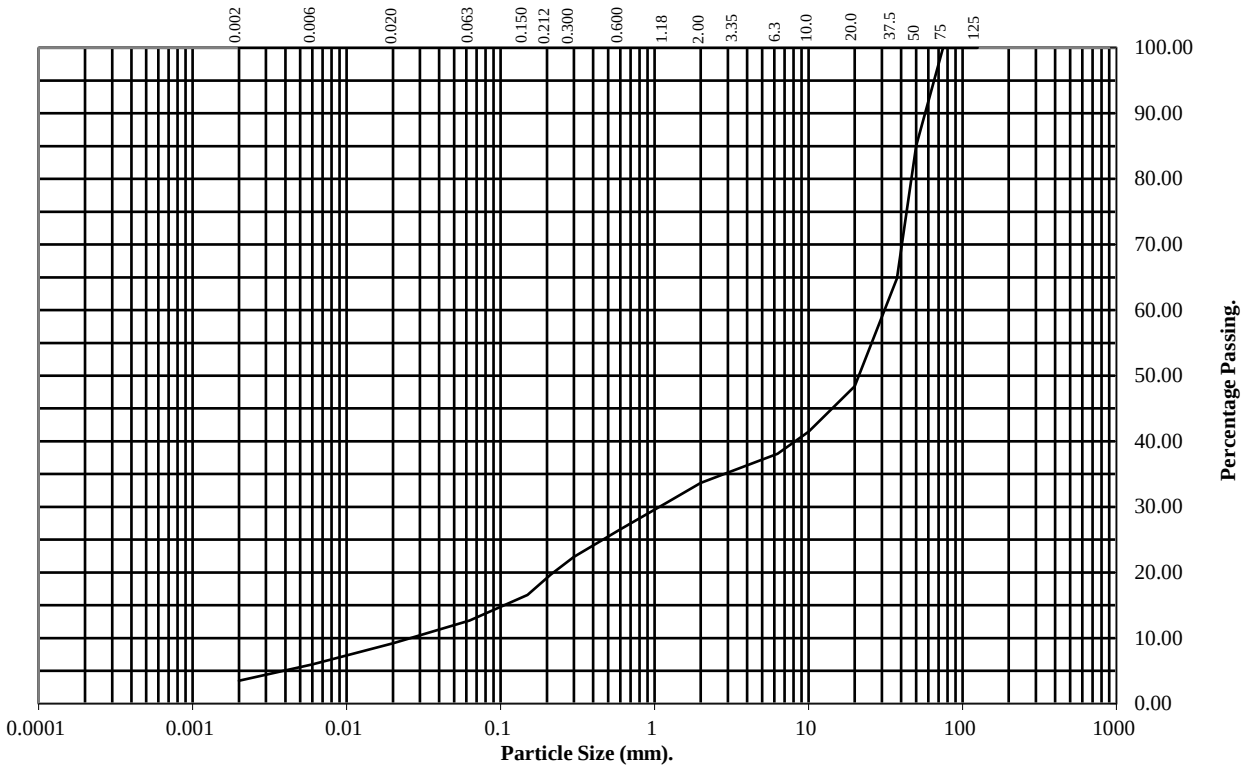
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: **TP399** **Top Depth (m):** **1.00**

Sample Number: **2** **Base Depth(m):**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
50	85
37.5	65
20	48
10	41
6.3	38
3.35	36
2	34
1.18	31
0.6	27
0.3	22
0.212	20
0.15	17
0.063	13

Particle Diameter	Percentage Passing
0.02	9
0.006	6
0.002	3

Soil Fraction	Total Percentage
Cobbles	15
Gravel	51
Sand	21
Silt	10
Clay	3

Remarks:
See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

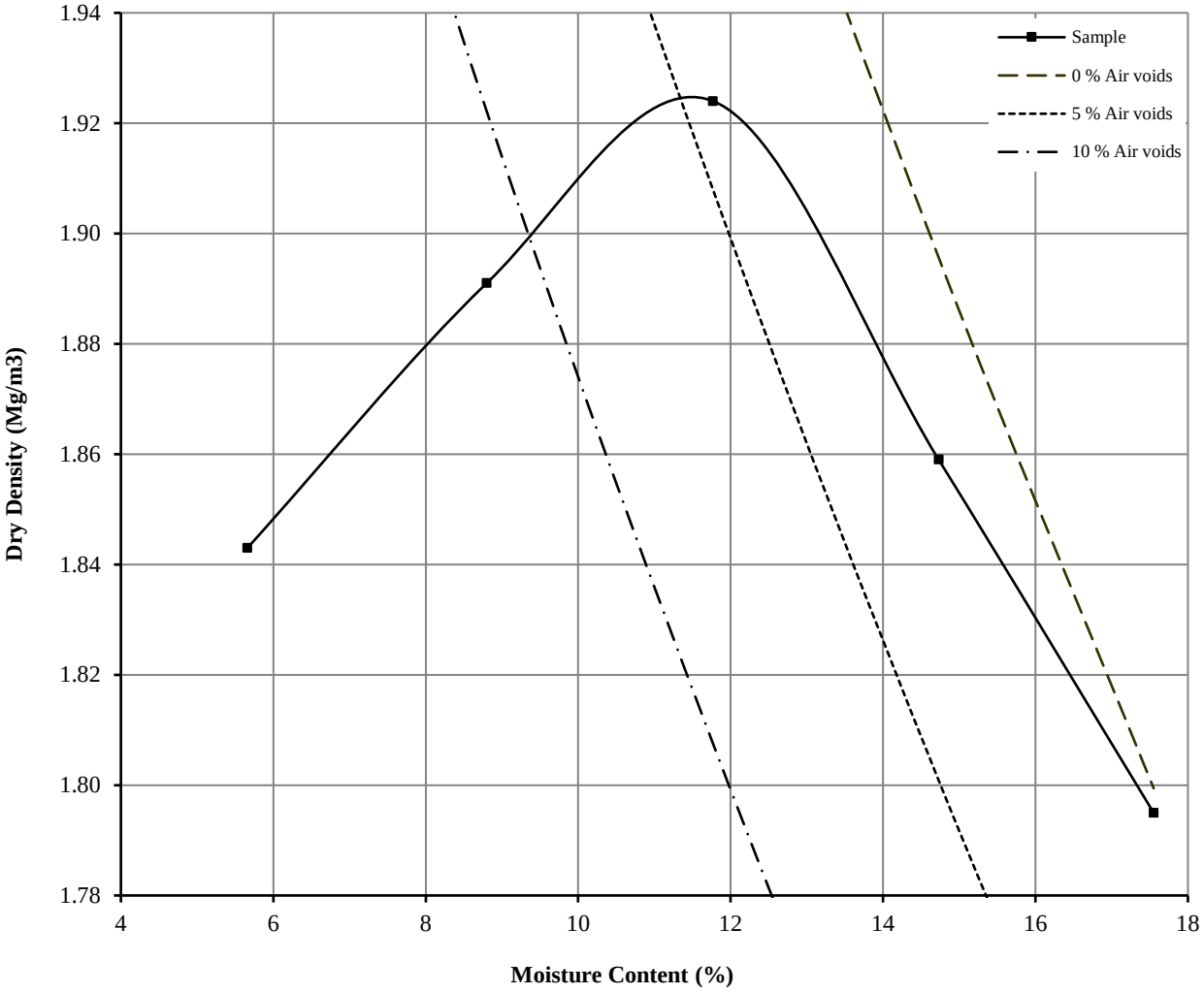
Black Cats

Contract No:
PSL23/8167
Client Ref:
4486

DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number:	**TP399**	**Top Depth (m) :**	**1.00**
Sample Number:	**2**	**Base Depth (m) :**	
Sample Type:	**B**		



Initial Moisture Content:		15	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.63	Measured	Material Retained on 37.5 mm Test Sieve (%):		35
Maximum Dry Density (Mg/m3):		1.92	Material Retained on 20.0 mm Test Sieve (%):		17
Optimum Moisture Content (%):		12			
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

Contract
PSL23/8167
Client Ref
4486

PARTICLE SIZE DISTRIBUTION TEST

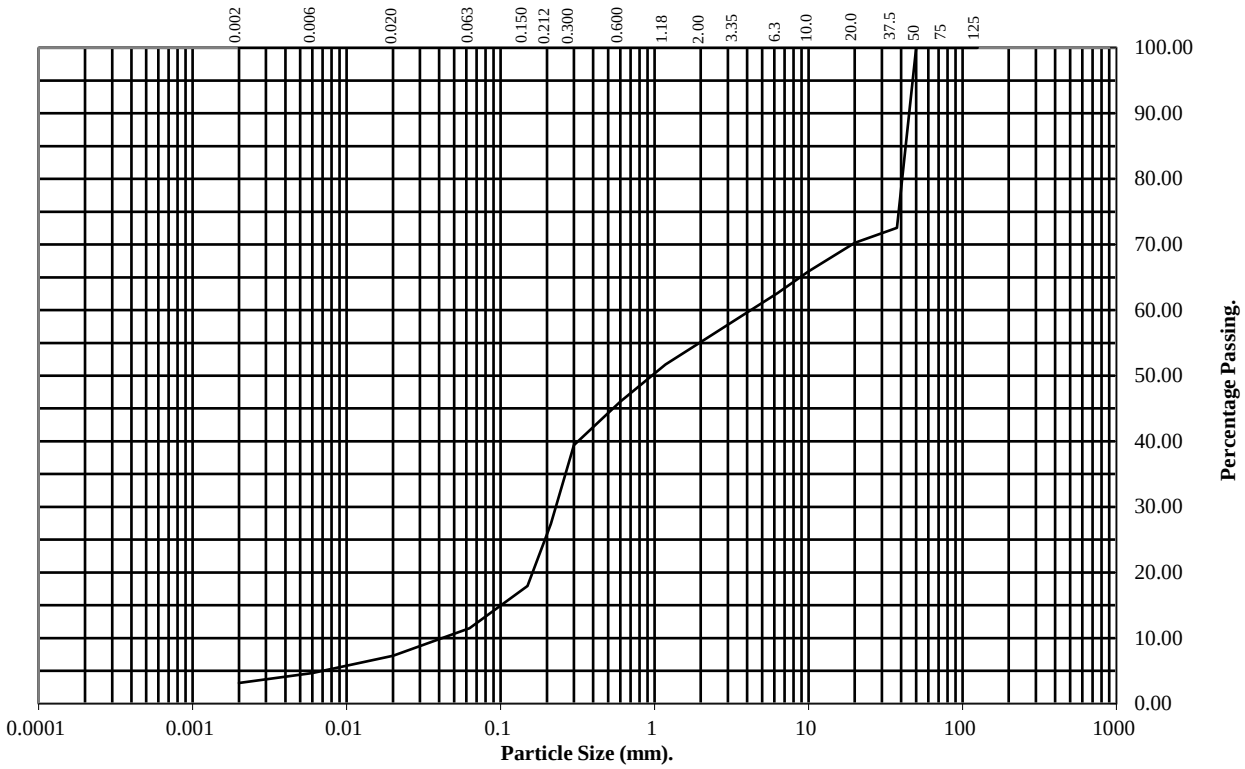
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: **TP401** **Top Depth (m):** **2.00**

Sample Number: **3** **Base Depth(m):**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
50	100
37.5	73
20	70
10	66
6.3	63
3.35	59
2	55
1.18	52
0.6	46
0.3	39
0.212	27
0.15	18
0.063	11

Particle Diameter	Percentage Passing
0.02	7
0.006	5
0.002	3

Soil Fraction	Total Percentage
Cobbles	0
Gravel	45
Sand	44
Silt	8
Clay	3

Remarks:
See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

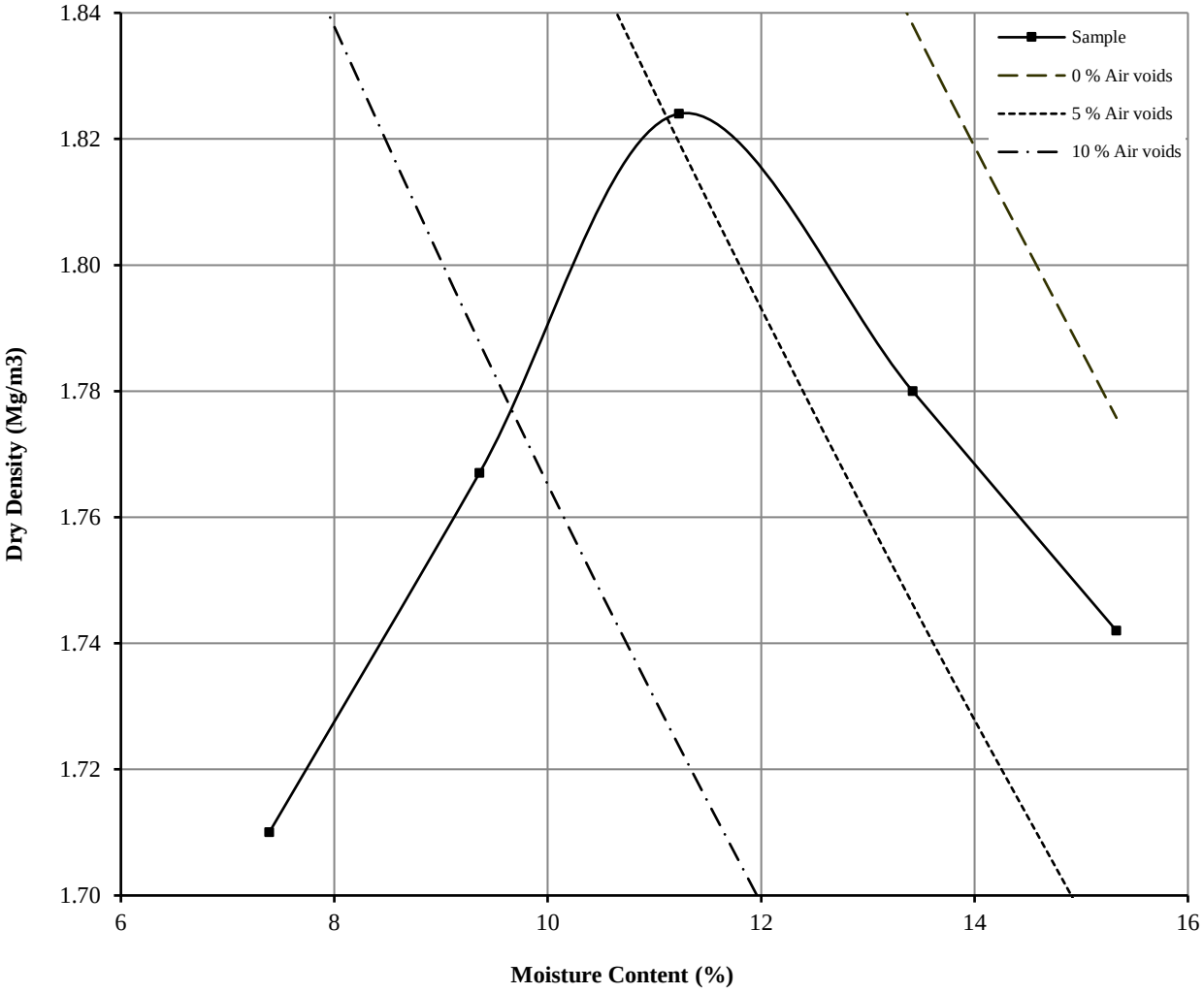
Black Cats

Contract No:
PSL23/8167
Client Ref:
4486

DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number:	**TP401**	**Top Depth (m) :**	**2.00**
Sample Number:	**3**	**Base Depth (m) :**	
Sample Type:	**B**		



Initial Moisture Content:		13	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.44	Measured	Material Retained on 37.5 mm Test Sieve (%):		27
Maximum Dry Density (Mg/m3):		1.82	Material Retained on 20.0 mm Test Sieve (%):		3
Optimum Moisture Content (%):		11			
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

Contract
PSL23/8167
Client Ref
4486

PARTICLE SIZE DISTRIBUTION TEST

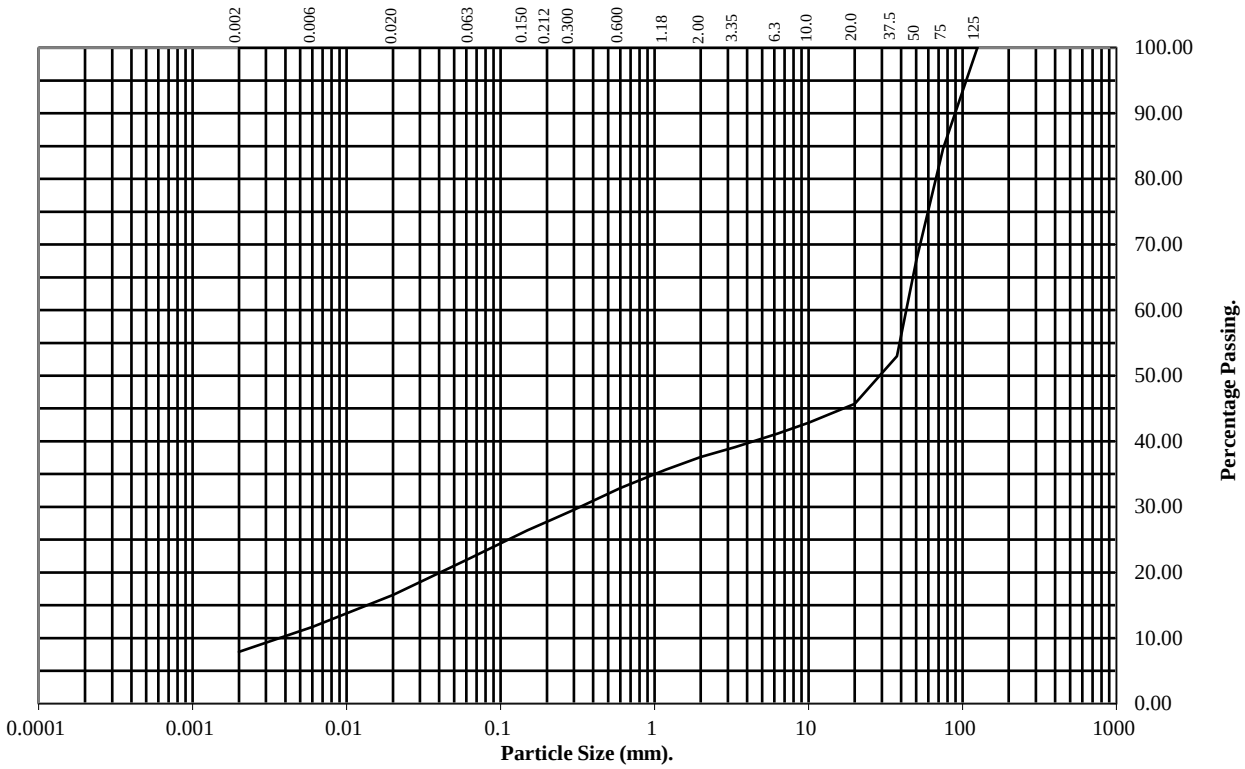
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: **TP402** **Top Depth (m):** **1.50**

Sample Number: **2** **Base Depth(m):**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	85
50	67
37.5	53
20	46
10	43
6.3	41
3.35	39
2	38
1.18	36
0.6	33
0.3	30
0.212	28
0.15	26
0.063	22

Particle Diameter	Percentage Passing
0.02	17
0.006	12
0.002	8

Soil Fraction	Total Percentage
Cobbles	33
Gravel	29
Sand	16
Silt	14
Clay	8

Remarks:
See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

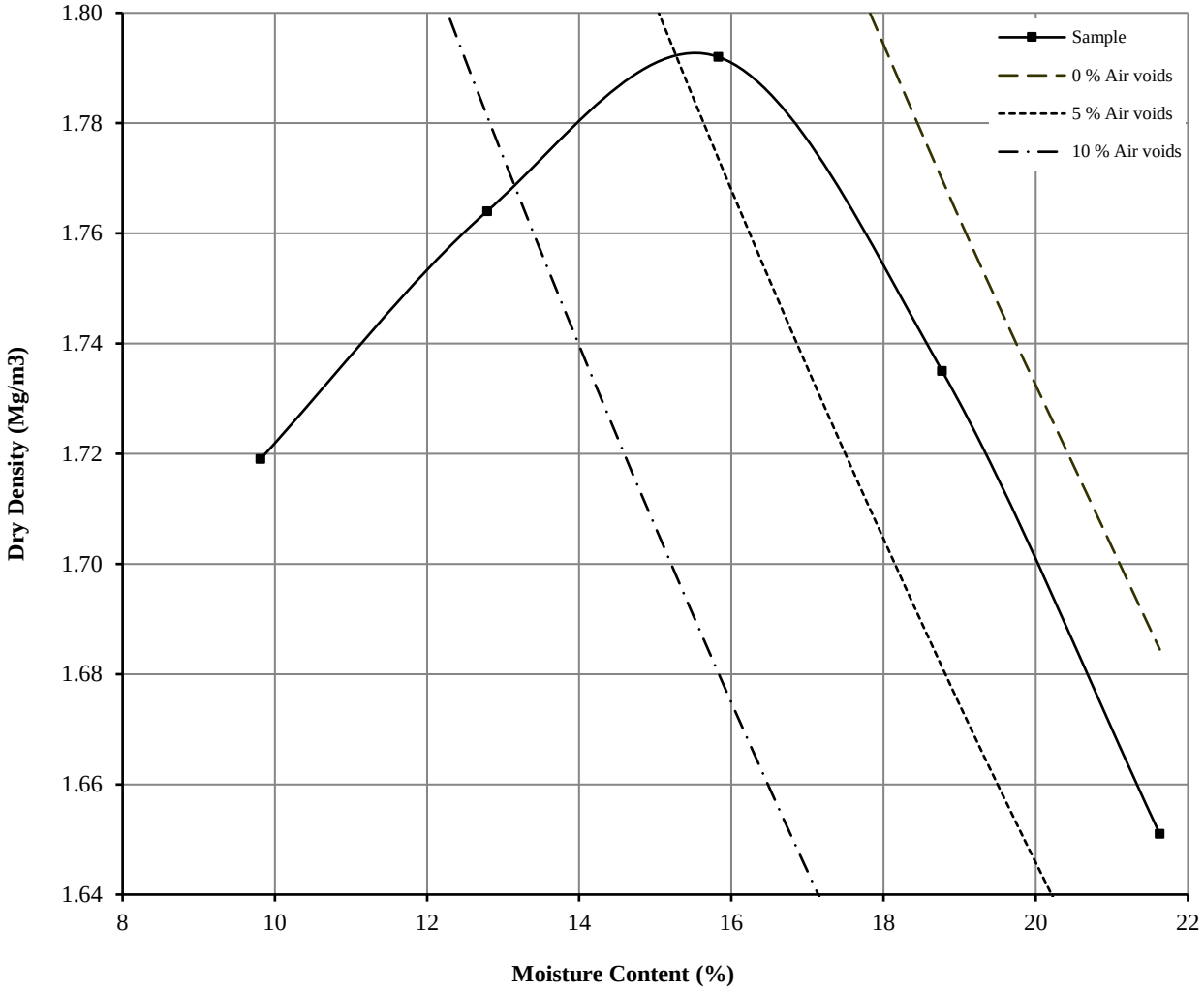
Black Cats

Contract No:
PSL23/8167
Client Ref:
4486

DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number:	**TP402**	**Top Depth (m) :**	**1.50**
Sample Number:	**2**	**Base Depth (m) :**	
Sample Type:	**B**		



Initial Moisture Content:		28	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.65	Measured	Material Retained on 37.5 mm Test Sieve (%):		47
Maximum Dry Density (Mg/m3):		1.79	Material Retained on 20.0 mm Test Sieve (%):		7
Optimum Moisture Content (%):		16			
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

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4486

PARTICLE SIZE DISTRIBUTION TEST

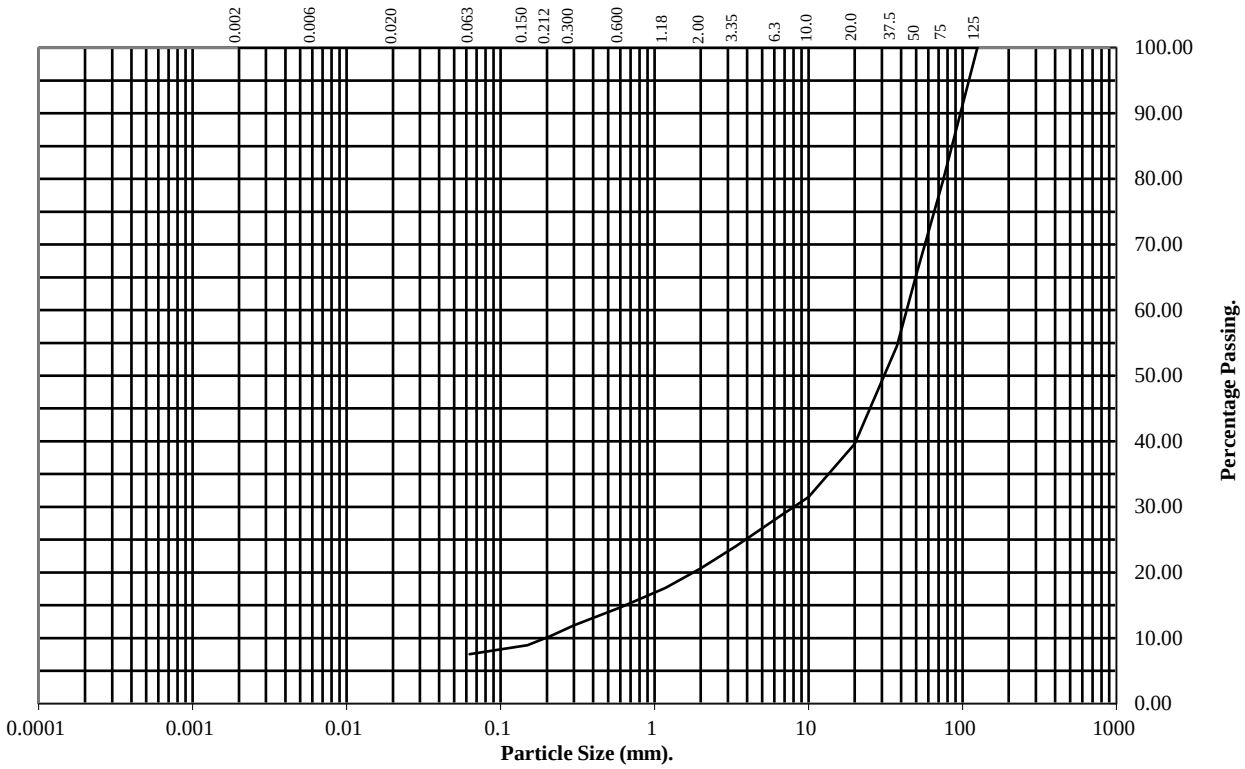
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: **TP408** **Top Depth (m):** **0.80**

Sample Number: **3** **Base Depth(m):**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	80
50	65
37.5	55
20	40
10	31
6.3	28
3.35	24
2	21
1.18	18
0.6	15
0.3	12
0.212	10
0.15	9
0.063	8

Soil Fraction	Total Percentage
Cobbles	35
Gravel	44
Sand	13
Silt/Clay	8

Remarks:
See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

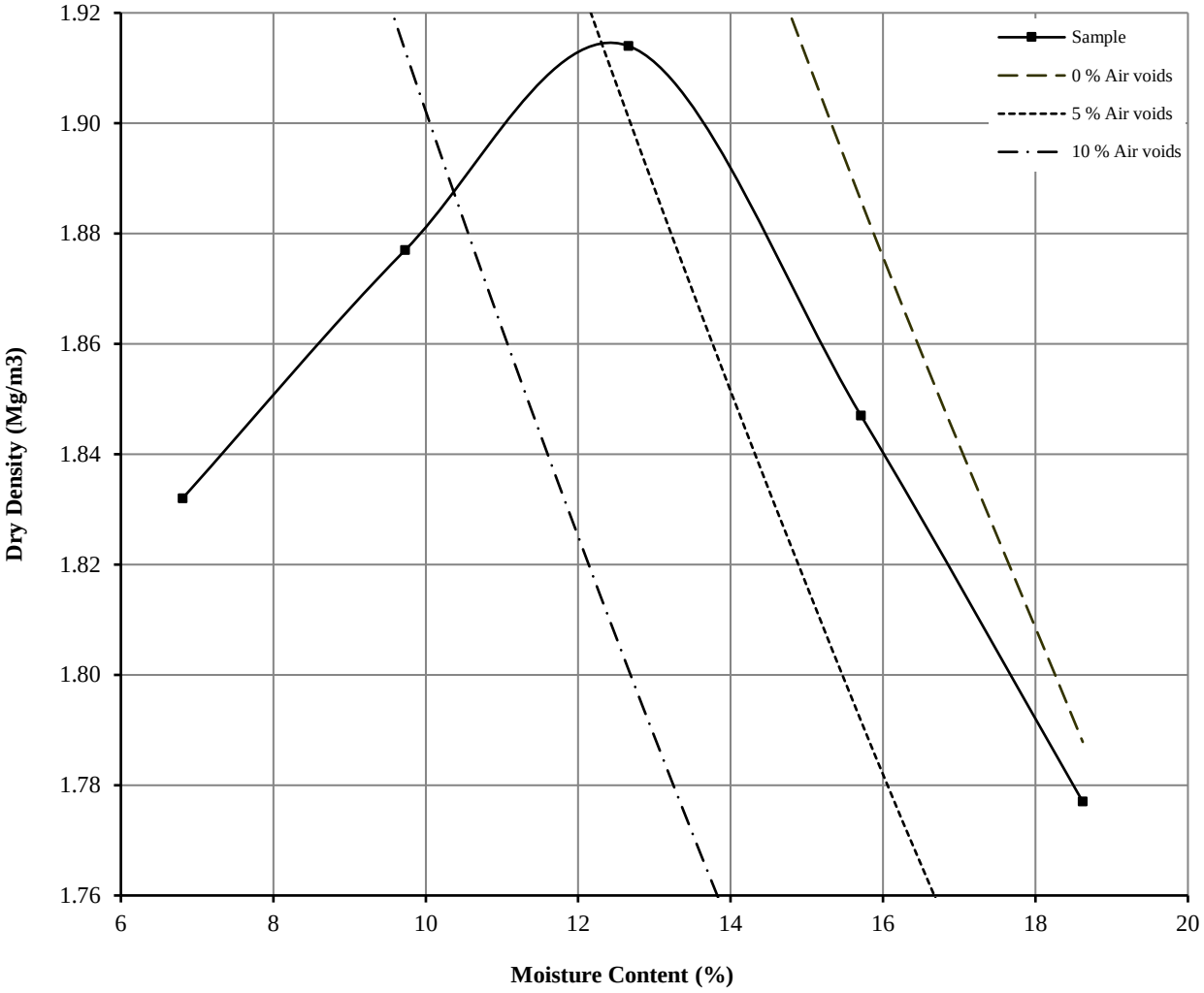
Contract No: **PSL23/8167**

Client Ref: **4486**

DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.6 : 1990

Hole Number:	**TP408**	**Top Depth (m) :**	**0.80**
Sample Number:	**3**	**Base Depth (m) :**	
Sample Type:	**B**		



Initial Moisture Content:		19	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.68	Measured	Material Retained on 37.5 mm Test Sieve (%):		45
Maximum Dry Density (Mg/m3):		1.91	Material Retained on 20.0 mm Test Sieve (%):		15
Optimum Moisture Content (%):		13			
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

Contract
PSL23/8167
Client Ref
4486

7 - 11 Harding Street
Leicester
LE1 4DH

Professional Soils Laboratory
5/7 Hexthorpe Road
Hexthorpe
Doncaster
DN4 0AR

Analytical Test Report: L23/05838/PSL - 23-37958

Your Project Reference:	**PSL23/8167 - Black Cats**		
Your Order Number:	PSL	Samples Received / Instructed:	05/10/2023 / 05/10/2023
Report Issue Number:	1	Sample Tested:	05/10 to 12/10/2023
Samples Analysed:	48 soil samples	Report issued:	12/10/2023

Signed

James Gane
Analytical Services Manager
CTS Group

Notes:

General

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30˚C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Samples were supplied by customer, results apply to the samples as received.

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

UKAS = UKAS Accreditation, MCERTS = MCERTS Accreditation, u = Unaccredited

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

Date of Issue: 10.10.2023

Issued by: J. Gane

Issue No: 4

Rev No: 4

CTS Group
7 - 11 Harding Street
Leicester
LE1 4DH

L23/05838/PSL - 23-37958

Project Reference - PSL23/8167 - Black Cats

Analytical Test Results - Chemical Analysis

Lab Reference			318492	318493	318494	318495	318496	318497	318498
Client Sample ID			-	-	-	-	-	-	-
Client Sample Location			TP327	TP341	TP343	TP345	TP352C	TP410	TP350
Client Sample Type			D&B	D&B	D&B	D&B	D&B	D	D
Client Sample Number			3	3	2	3	2	4	4
Depth - Top (m)			3.50	2.00	1.20	3.50	1.20	4.00	2.00
Depth - Bottom (m)			3.50	2.00	1.20	3.50	1.20	4.00	2.00
Date of Sampling			-	-	-	-	-	-	-
Time of Sampling			-	-	-	-	-	-	-
Sample Matrix			Sand	Sand	Sand	Sand	Sand	Sand	Clay
Determinant	**Units**	**Accreditation**							
Water soluble sulphate (as SO_4)	(mg/l)	u	200	230	90	45	490	150	61
pH Value	pH Units	MCERTS	8.3	8.4	8.7	8.6	8.3	8.2	8.5

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L23/05838/PSL - 23-37958

Project Reference - PSL23/8167 - Black Cats

Analytical Test Results - Chemical Analysis

Lab Reference			318499	318500	318501	318502	318503	318504	318505
Client Sample ID			-	-	-	-	-	-	-
Client Sample Location			TP358	TP314	TP390	TP413	TP414	TP418	TP303
Client Sample Type			D	D&B	D&B	D&B	D&B	D&B	D
Client Sample Number			2	2	1	2	2	2	2
Depth - Top (m)			1.00	2.20	0.50	1.00	1.50	0.70	0.70
Depth - Bottom (m)			1.00	2.20	0.50	1.00	1.50	0.70	0.70
Date of Sampling			-	-	-	-	-	-	-
Time of Sampling			-	-	-	-	-	-	-
Sample Matrix			Clay	Sand	Sand	Sand	Sand	Sand	Sand
Determinant	**Units**	**Accreditation**							
Water soluble sulphate (as SO_4)	(mg/l)	u	< 10	51	75	85	310	23	22
pH Value	pH Units	MCERTS	8.2	8.2	8.2	8.6	8.4	8.7	8.4

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Project Reference - PSL23/8167 - Black Cats

Analytical Test Results - Chemical Analysis

Lab Reference			318506	318507	318508	318509	318510	318511	318512
Client Sample ID			-	-	-	-	-	-	-
Client Sample Location			TP307	TP315	TP316	TP320	TP328	TP336	TP338
Client Sample Type			D	D	D	D	D	D	D
Client Sample Number			2	2	2	2	2	3	3
Depth - Top (m)			1.00	1.00	1.30	1.00	1.20	2.40	1.50
Depth - Bottom (m)			1.00	1.00	1.30	1.00	1.20	2.40	1.50
Date of Sampling			-	-	-	-	-	-	-
Time of Sampling			-	-	-	-	-	-	-
Sample Matrix			Sand	Sand	Sand	Sand	Sand	Clay	Sand
Determinant	**Units**	**Accreditation**							
Water soluble sulphate (as SO_4)	(mg/l)	u	43	< 10	27	21	15	< 10	33
pH Value	pH Units	MCERTS	8.1	7.4	7.7	7.7	6.9	7.1	8.0

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L23/05838/PSL - 23-37958

Project Reference - PSL23/8167 - Black Cats

Analytical Test Results - Chemical Analysis

Lab Reference			318513	318514	318515	318516	318517	318518	318519
Client Sample ID			-	-	-	-	-	-	-
Client Sample Location			TP355	TP360	TP362	TP371	TP378	TP404	TP408
Client Sample Type			D	D	D	D	D	D	D
Client Sample Number			2	2	2	2	2	2	4
Depth - Top (m)			0.70	1.00	0.60	0.60	0.90	1.00	1.70
Depth - Bottom (m)			0.70	1.00	0.60	0.60	0.90	1.00	1.70
Date of Sampling			-	-	-	-	-	-	-
Time of Sampling			-	-	-	-	-	-	-
Sample Matrix			Sand	Sand	Sand	Sand	Sand	Sand	Sand
Determinant	**Units**	**Accreditation**							
Water soluble sulphate (as SO_4)	(mg/l)	u	20	< 10	< 10	< 10	< 10	< 10	11
pH Value	pH Units	MCERTS	8.2	7.8	6.7	6.6	6.5	6.4	6.1

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Project Reference - PSL23/8167 - Black Cats

Analytical Test Results - Chemical Analysis

Lab Reference			318520	318521	318522	318523	318524	318525	318526
Client Sample ID			-	-	-	-	-	-	-
Client Sample Location			TP311	TP313	TP324	TP326	TP332	TP335	TP357
Client Sample Type			D&B	D&B	D	D&B	D&B	D	D&B
Client Sample Number			3	3	3	4	3	2	2
Depth - Top (m)			2.50	2.00	0.90	0.70	1.60	1.60	0.80
Depth - Bottom (m)			2.50	2.00	0.90	0.70	1.60	1.60	0.80
Date of Sampling			-	-	-	-	-	-	-
Time of Sampling			-	-	-	-	-	-	-
Sample Matrix			Clay	Sand	Sand	Sand	Sand	Sand	Sand
Determinant	**Units**	**Accreditation**							
Water soluble sulphate (as SO_4)	(mg/l)	u	77	38	140	61	38	< 10	23
pH Value	pH Units	MCERTS	5.1	6.5	6.4	7.4	8.3	8.0	6.5

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Project Reference - PSL23/8167 - Black Cats

Analytical Test Results - Chemical Analysis

Lab Reference			318527	318528	318529	318530	318531	318532	318533
Client Sample ID			-	-	-	-	-	-	-
Client Sample Location			TP380	TP382	TP385	TP388	TP389	TP389	TP401
Client Sample Type			D&B	D&B	D&B	D&B	D&B	D&B	D&B
Client Sample Number			3	3	2	3	-	3	3
Depth - Top (m)			2.20	2.00	1.50	2.50	2.20	2.20	2.00
Depth - Bottom (m)			2.20	2.00	1.50	2.50	2.20	2.20	2.00
Date of Sampling			-	-	-	-	-	-	-
Time of Sampling			-	-	-	-	-	-	-
Sample Matrix			Sand	Sand	Clay	Clay	Clay	Clay	Sand
Determinant	**Units**	**Accreditation**							
Water soluble sulphate (as SO_4)	(mg/l)	u	< 10	17	< 10	< 10	< 10	< 10	42
pH Value	pH Units	MCERTS	7.4	6.7	7.0	8.3	7.4	7.5	8.1

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Project Reference - PSL23/8167 - Black Cats

Analytical Test Results - Chemical Analysis

Lab Reference			318534	318535	318536	318537	318538	318539
Client Sample ID			-	-	-	-	-	-
Client Sample Location			TP402	TP408	TP368	TP398	TP399	TP381
Client Sample Type			D&B	D&B	D	D&B	D&B	D
Client Sample Number			2	3	3	2	2	4
Depth - Top (m)			1.50	0.80	0.80	0.80	1.00	2.30
Depth - Bottom (m)			1.50	0.80	0.80	0.80	1.00	2.30
Date of Sampling			-	-	-	-	-	-
Time of Sampling			-	-	-	-	-	-
Sample Matrix			Clay	Sand	Sand	Sand	Sand	Sand
Determinant	**Units**	**Accreditation**						
Water soluble sulphate (as SO_4)	(mg/l)	u	41	79	< 10	< 10	< 10	< 10
pH Value	pH Units	MCERTS	8.4	5.8	7.5	6.1	7.1	7.4

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L23/05838/PSL - 23-37958

Project Reference - PSL23/8167 - Black Cats

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
318492	-	TP327	D&B	3	Dark brown gravelly slightly clayey silty sand with rare brick fragments rootlets	-	-	36
318493	-	TP341	D&B	3	Dark brown gravelly slightly clayey silty sand with rare brick fragments rootlets	-	-	32
318494	-	TP343	D&B	2	Dark brown gravelly slightly clayey silty sand with rare brick fragments rootlets	-	-	62
318495	-	TP345	D&B	3	Dark brown gravelly slightly clayey silty sand with rare brick fragments rootlets	-	-	77
318496	-	TP352C	D&B	2	Dark brown gravelly slightly clayey silty sand with rare brick fragments rootlets	-	-	44
318497	-	TP410	D	4	Dark brown gravelly slightly clayey silty sand with rare brick fragments rootlets	-	-	53
318498	-	TP350	D	4	Mottled orange brown silty clay	-	-	68
318499	-	TP358	D	2	Mottled orange brown silty clay	-	-	70
318500	-	TP314	D&B	2	Dark brown gravelly slightly clayey silty sand with rare brick fragments rootlets	-	-	66
318501	-	TP390	D&B	1	Dark brown gravelly slightly clayey silty sand with rare brick fragments rootlets	-	-	56
318502	-	TP413	D&B	2	Dark brown gravelly slightly clayey silty sand with rare brick fragments rootlets	-	-	75
318503	-	TP414	D&B	2	Dark brown gravelly slightly clayey silty sand with rare brick fragments rootlets	-	-	70
318504	-	TP418	D&B	2	Dark brown gravelly slightly clayey silty sand with rare brick fragments rootlets	-	-	56
318505	-	TP303	D	2	Orangish brown gravelly slightly clayey silty sand	-	-	45
318506	-	TP307	D	2	Orangish brown gravelly slightly clayey silty sand	-	-	70
318507	-	TP315	D	2	Orangish brown gravelly slightly clayey silty sand	-	-	75
318508	-	TP316	D	2	Orangish brown gravelly slightly clayey silty sand	-	-	66
318509	-	TP320	D	2	Orangish brown gravelly slightly clayey silty sand	-	-	87
318510	-	TP328	D	2	Orangish brown gravelly slightly clayey silty sand	-	-	49
318511	-	TP336	D	3	Mottled orange brown silty clay	-	-	62
318512	-	TP338	D	3	Orangish brown gravelly slightly clayey silty sand	-	-	72
318513	-	TP355	D	2	Orangish brown gravelly slightly clayey silty sand	-	-	16

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Project Reference - PSL23/8167 - Black Cats

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
318514	-	TP360	D	2	Orangish brown gravelly slightly clayey silty sand	-	-	51
318515	-	TP362	D	2	Orangish brown gravelly slightly clayey silty sand	-	-	57
318516	-	TP371	D	2	Orangish brown gravelly slightly clayey silty sand	-	-	60
318517	-	TP378	D	2	Orangish brown gravelly slightly clayey silty sand	-	-	58
318518	-	TP404	D	2	Orangish brown gravelly slightly clayey silty sand	-	-	57
318519	-	TP408	D	4	Orangish brown gravelly slightly clayey silty sand	-	-	48
318520	-	TP311	D&B	3	Mottled orange brown silty clay	-	-	73
318521	-	TP313	D&B	3	Orangish brown gravelly slightly clayey silty sand	-	-	58
318522	-	TP324	D	3	Orangish brown gravelly slightly clayey silty sand	-	-	56
318523	-	TP326	D&B	4	Orangish brown gravelly slightly clayey silty sand	-	-	39
318524	-	TP332	D&B	3	Orangish brown gravelly slightly clayey silty sand	-	-	40
318525	-	TP335	D	2	Orangish brown slightly clayey silty sand	-	-	85
318526	-	TP357	D&B	2	Orangish brown gravelly slightly clayey silty sand	-	-	40
318527	-	TP380	D&B	3	Mottled black brown gravelly slightly clayey silty sand	-	-	61
318528	-	TP382	D&B	3	Orangish brown gravelly slightly clayey silty sand	-	-	60
318529	-	TP385	D&B	2	Brown slightly gravelly silty clay	-	-	66
318530	-	TP388	D&B	3	Brown slightly gravelly silty clay	-	-	37
318531	-	TP389	D&B	-	Brown slightly gravelly silty clay	-	-	78
318532	-	TP389	D&B	3	Brown slightly gravelly silty clay	-	-	69
318533	-	TP401	D&B	3	Made Ground- black gravelly silty sand with frequent brick fragments slag	-	-	85
318534	-	TP402	D&B	2	Brown slightly gravelly silty clay	-	-	78
318535	-	TP408	D&B	3	Brown gravelly slightly clayey silty sand	-	-	41
318536	-	TP368	D	3	Brown gravelly slightly clayey silty sand	-	-	41

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Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
318537	-	TP398	D&B	2	Brown gravelly slightly clayey silty sand with rare rootlets	-	-	51
318538	-	TP399	D&B	2	Brown gravelly slightly clayey silty sand with rare rootlets	-	-	45
318539	-	TP381	D	4	Orangish brown silty sand	-	-	77

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Project Reference - PSL23/8167 - Black Cats

Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
318492	-	TP327	D&B	3	
318493	-	TP341	D&B	3	
318494	-	TP343	D&B	2	
318495	-	TP345	D&B	3	
318496	-	TP352C	D&B	2	
318497	-	TP410	D	4	
318498	-	TP350	D	4	
318499	-	TP358	D	2	
318500	-	TP314	D&B	2	
318501	-	TP390	D&B	1	
318502	-	TP413	D&B	2	
318503	-	TP414	D&B	2	
318504	-	TP418	D&B	2	
318505	-	TP303	D	2	
318506	-	TP307	D	2	
318507	-	TP315	D	2	
318508	-	TP316	D	2	
318509	-	TP320	D	2	
318510	-	TP328	D	2	
318511	-	TP336	D	3	
318512	-	TP338	D	3	
318513	-	TP355	D	2	
318514	-	TP360	D	2	

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Project Reference - PSL23/8167 - Black Cats

Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
318515	-	TP362	D	2	
318516	-	TP371	D	2	
318517	-	TP378	D	2	
318518	-	TP404	D	2	
318519	-	TP408	D	4	
318520	-	TP311	D&B	3	
318521	-	TP313	D&B	3	
318522	-	TP324	D	3	
318523	-	TP326	D&B	4	
318524	-	TP332	D&B	3	
318525	-	TP335	D	2	
318526	-	TP357	D&B	2	
318527	-	TP380	D&B	3	
318528	-	TP382	D&B	3	
318529	-	TP385	D&B	2	
318530	-	TP388	D&B	3	
318531	-	TP389	D&B	-	
318532	-	TP389	D&B	3	
318533	-	TP401	D&B	3	
318534	-	TP402	D&B	2	
318535	-	TP408	D&B	3	
318536	-	TP368	D	3	
318537	-	TP398	D&B	2	

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L23/05838/PSL - 23-37958

Project Reference - PSL23/8167 - Black Cats

Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
318538	-	TP399	D&B	2	
318539	-	TP381	D	4	

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L23/05838/PSL - 23-37958

Project Reference - PSL23/8167 - Black Cats

Analysis Methodologies

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preperation	Test Details
ANIONSS	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
PHS	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis

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Project Reference - PSL23/8167 - Black Cats

Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

A - No date of sampling provided
C - Received in inappropriate container
H - Contains headspace
T - Temperature on receipt exceeds storage temperature
R - Sample(s) received with less than 96 hours for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
318492	-	TP327	D&B	3	MS - CL - Anions by Aquakem (2:1Extract)	A
318492	-	TP327	D&B	3	MS - CL - Sample Preparation	A
318492	-	TP327	D&B	3	MS - CL - pH in Soils	A
318493	-	TP341	D&B	3	MS - CL - Anions by Aquakem (2:1Extract)	A
318493	-	TP341	D&B	3	MS - CL - Sample Preparation	A
318493	-	TP341	D&B	3	MS - CL - pH in Soils	A
318494	-	TP343	D&B	2	MS - CL - Anions by Aquakem (2:1Extract)	A
318494	-	TP343	D&B	2	MS - CL - Sample Preparation	A
318494	-	TP343	D&B	2	MS - CL - pH in Soils	A
318495	-	TP345	D&B	3	MS - CL - Anions by Aquakem (2:1Extract)	A
318495	-	TP345	D&B	3	MS - CL - Sample Preparation	A
318495	-	TP345	D&B	3	MS - CL - pH in Soils	A
318496	-	TP352C	D&B	2	MS - CL - Anions by Aquakem (2:1Extract)	A
318496	-	TP352C	D&B	2	MS - CL - Sample Preparation	A
318496	-	TP352C	D&B	2	MS - CL - pH in Soils	A
318497	-	TP410	D	4	MS - CL - Anions by Aquakem (2:1Extract)	A
318497	-	TP410	D	4	MS - CL - Sample Preparation	A
318497	-	TP410	D	4	MS - CL - pH in Soils	A
318498	-	TP350	D	4	MS - CL - Anions by Aquakem (2:1Extract)	A
318498	-	TP350	D	4	MS - CL - Sample Preparation	A
318498	-	TP350	D	4	MS - CL - pH in Soils	A
318499	-	TP358	D	2	MS - CL - Anions by Aquakem (2:1Extract)	A
318499	-	TP358	D	2	MS - CL - Sample Preparation	A
318499	-	TP358	D	2	MS - CL - pH in Soils	A
318500	-	TP314	D&B	2	MS - CL - Anions by Aquakem (2:1Extract)	A
318500	-	TP314	D&B	2	MS - CL - Sample Preparation	A
318500	-	TP314	D&B	2	MS - CL - pH in Soils	A
318501	-	TP390	D&B	1	MS - CL - Anions by Aquakem (2:1Extract)	A
318501	-	TP390	D&B	1	MS - CL - Sample Preparation	A
318501	-	TP390	D&B	1	MS - CL - pH in Soils	A
318502	-	TP413	D&B	2	MS - CL - Anions by Aquakem (2:1Extract)	A
318502	-	TP413	D&B	2	MS - CL - Sample Preparation	A
318502	-	TP413	D&B	2	MS - CL - pH in Soils	A
318503	-	TP414	D&B	2	MS - CL - Anions by Aquakem (2:1Extract)	A
318503	-	TP414	D&B	2	MS - CL - Sample Preparation	A
318503	-	TP414	D&B	2	MS - CL - pH in Soils	A

7 - 11 Harding Street
Leicester
LE1 4DH

L23/05838/PSL - 23-37958

Project Reference - PSL23/8167 - Black Cats

Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

A - No date of sampling provided
C - Received in inappropriate container
H - Contains headspace
T - Temperature on receipt exceeds storage temperature
R - Sample(s) received with less than 96 hours for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
318504	-	TP418	D&B	2	MS - CL - Anions by Aquakem (2:1Extract)	A
318504	-	TP418	D&B	2	MS - CL - Sample Preparation	A
318504	-	TP418	D&B	2	MS - CL - pH in Soils	A
318505	-	TP303	D	2	MS - CL - Anions by Aquakem (2:1Extract)	A
318505	-	TP303	D	2	MS - CL - Sample Preparation	A
318505	-	TP303	D	2	MS - CL - pH in Soils	A
318506	-	TP307	D	2	MS - CL - Anions by Aquakem (2:1Extract)	A
318506	-	TP307	D	2	MS - CL - Sample Preparation	A
318506	-	TP307	D	2	MS - CL - pH in Soils	A
318507	-	TP315	D	2	MS - CL - Anions by Aquakem (2:1Extract)	A
318507	-	TP315	D	2	MS - CL - Sample Preparation	A
318507	-	TP315	D	2	MS - CL - pH in Soils	A
318508	-	TP316	D	2	MS - CL - Anions by Aquakem (2:1Extract)	A
318508	-	TP316	D	2	MS - CL - Sample Preparation	A
318508	-	TP316	D	2	MS - CL - pH in Soils	A
318509	-	TP320	D	2	MS - CL - Anions by Aquakem (2:1Extract)	A
318509	-	TP320	D	2	MS - CL - Sample Preparation	A
318509	-	TP320	D	2	MS - CL - pH in Soils	A
318510	-	TP328	D	2	MS - CL - Anions by Aquakem (2:1Extract)	A
318510	-	TP328	D	2	MS - CL - Sample Preparation	A
318510	-	TP328	D	2	MS - CL - pH in Soils	A
318511	-	TP336	D	3	MS - CL - Anions by Aquakem (2:1Extract)	A
318511	-	TP336	D	3	MS - CL - Sample Preparation	A
318511	-	TP336	D	3	MS - CL - pH in Soils	A
318512	-	TP338	D	3	MS - CL - Anions by Aquakem (2:1Extract)	A
318512	-	TP338	D	3	MS - CL - Sample Preparation	A
318512	-	TP338	D	3	MS - CL - pH in Soils	A
318513	-	TP355	D	2	MS - CL - Anions by Aquakem (2:1Extract)	A
318513	-	TP355	D	2	MS - CL - Sample Preparation	A
318513	-	TP355	D	2	MS - CL - pH in Soils	A
318514	-	TP360	D	2	MS - CL - Anions by Aquakem (2:1Extract)	A
318514	-	TP360	D	2	MS - CL - Sample Preparation	A
318514	-	TP360	D	2	MS - CL - pH in Soils	A
318515	-	TP362	D	2	MS - CL - Anions by Aquakem (2:1Extract)	A
318515	-	TP362	D	2	MS - CL - Sample Preparation	A
318515	-	TP362	D	2	MS - CL - pH in Soils	A

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Sample Deviations

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Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
318516	-	TP371	D	2	MS - CL - Anions by Aquakem (2:1Extract)	A
318516	-	TP371	D	2	MS - CL - Sample Preparation	A
318516	-	TP371	D	2	MS - CL - pH in Soils	A
318517	-	TP378	D	2	MS - CL - Anions by Aquakem (2:1Extract)	A
318517	-	TP378	D	2	MS - CL - Sample Preparation	A
318517	-	TP378	D	2	MS - CL - pH in Soils	A
318518	-	TP404	D	2	MS - CL - Anions by Aquakem (2:1Extract)	A
318518	-	TP404	D	2	MS - CL - Sample Preparation	A
318518	-	TP404	D	2	MS - CL - pH in Soils	A
318519	-	TP408	D	4	MS - CL - Anions by Aquakem (2:1Extract)	A
318519	-	TP408	D	4	MS - CL - Sample Preparation	A
318519	-	TP408	D	4	MS - CL - pH in Soils	A
318520	-	TP311	D&B	3	MS - CL - Anions by Aquakem (2:1Extract)	A
318520	-	TP311	D&B	3	MS - CL - Sample Preparation	A
318520	-	TP311	D&B	3	MS - CL - pH in Soils	A
318521	-	TP313	D&B	3	MS - CL - Anions by Aquakem (2:1Extract)	A
318521	-	TP313	D&B	3	MS - CL - Sample Preparation	A
318521	-	TP313	D&B	3	MS - CL - pH in Soils	A
318522	-	TP324	D	3	MS - CL - Anions by Aquakem (2:1Extract)	A
318522	-	TP324	D	3	MS - CL - Sample Preparation	A
318522	-	TP324	D	3	MS - CL - pH in Soils	A
318523	-	TP326	D&B	4	MS - CL - Anions by Aquakem (2:1Extract)	A
318523	-	TP326	D&B	4	MS - CL - Sample Preparation	A
318523	-	TP326	D&B	4	MS - CL - pH in Soils	A
318524	-	TP332	D&B	3	MS - CL - Anions by Aquakem (2:1Extract)	A
318524	-	TP332	D&B	3	MS - CL - Sample Preparation	A
318524	-	TP332	D&B	3	MS - CL - pH in Soils	A
318525	-	TP335	D	2	MS - CL - Anions by Aquakem (2:1Extract)	A
318525	-	TP335	D	2	MS - CL - Sample Preparation	A
318525	-	TP335	D	2	MS - CL - pH in Soils	A
318526	-	TP357	D&B	2	MS - CL - Anions by Aquakem (2:1Extract)	A
318526	-	TP357	D&B	2	MS - CL - Sample Preparation	A
318526	-	TP357	D&B	2	MS - CL - pH in Soils	A
318527	-	TP380	D&B	3	MS - CL - Anions by Aquakem (2:1Extract)	A
318527	-	TP380	D&B	3	MS - CL - Sample Preparation	A
318527	-	TP380	D&B	3	MS - CL - pH in Soils	A

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Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

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T - Temperature on receipt exceeds storage temperature
R - Sample(s) received with less than 96 hours for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
318528	-	TP382	D&B	3	MS - CL - Anions by Aquakem (2:1Extract)	A
318528	-	TP382	D&B	3	MS - CL - Sample Preparation	A
318528	-	TP382	D&B	3	MS - CL - pH in Soils	A
318529	-	TP385	D&B	2	MS - CL - Anions by Aquakem (2:1Extract)	A
318529	-	TP385	D&B	2	MS - CL - Sample Preparation	A
318529	-	TP385	D&B	2	MS - CL - pH in Soils	A
318530	-	TP388	D&B	3	MS - CL - Anions by Aquakem (2:1Extract)	A
318530	-	TP388	D&B	3	MS - CL - Sample Preparation	A
318530	-	TP388	D&B	3	MS - CL - pH in Soils	A
318531	-	TP389	D&B	-	MS - CL - Anions by Aquakem (2:1Extract)	A
318531	-	TP389	D&B	-	MS - CL - Sample Preparation	A
318531	-	TP389	D&B	-	MS - CL - pH in Soils	A
318532	-	TP389	D&B	3	MS - CL - Anions by Aquakem (2:1Extract)	A
318532	-	TP389	D&B	3	MS - CL - Sample Preparation	A
318532	-	TP389	D&B	3	MS - CL - pH in Soils	A
318533	-	TP401	D&B	3	MS - CL - Anions by Aquakem (2:1Extract)	A
318533	-	TP401	D&B	3	MS - CL - Sample Preparation	A
318533	-	TP401	D&B	3	MS - CL - pH in Soils	A
318534	-	TP402	D&B	2	MS - CL - Anions by Aquakem (2:1Extract)	A
318534	-	TP402	D&B	2	MS - CL - Sample Preparation	A
318534	-	TP402	D&B	2	MS - CL - pH in Soils	A
318535	-	TP408	D&B	3	MS - CL - Anions by Aquakem (2:1Extract)	A
318535	-	TP408	D&B	3	MS - CL - Sample Preparation	A
318535	-	TP408	D&B	3	MS - CL - pH in Soils	A
318536	-	TP368	D	3	MS - CL - Anions by Aquakem (2:1Extract)	A
318536	-	TP368	D	3	MS - CL - Sample Preparation	A
318536	-	TP368	D	3	MS - CL - pH in Soils	A
318537	-	TP398	D&B	2	MS - CL - Anions by Aquakem (2:1Extract)	A
318537	-	TP398	D&B	2	MS - CL - Sample Preparation	A
318537	-	TP398	D&B	2	MS - CL - pH in Soils	A
318538	-	TP399	D&B	2	MS - CL - Anions by Aquakem (2:1Extract)	A
318538	-	TP399	D&B	2	MS - CL - Sample Preparation	A
318538	-	TP399	D&B	2	MS - CL - pH in Soils	A
318539	-	TP381	D	4	MS - CL - Anions by Aquakem (2:1Extract)	A
318539	-	TP381	D	4	MS - CL - Sample Preparation	A
318539	-	TP381	D	4	MS - CL - pH in Soils	A

9462

LABORATORY REPORT

Contract Number: PSL23/9447

Report Date: 24 November 2023

Client's Reference: 4486

Client Name: Lithos Consulting

Parkhill
Walton Road
Wetherby
North Yorkshire
LS22 5DZ

For the attention of: James Brown/Charlotte Copley

Project Name: Black Cats

Date Received: 8/11/2023
Date Commenced: 8/11/2023
Date Completed: 23/11/2023

Notes: **Opinions and Interpretations are outside the UKAS Accreditation**

Checked and Approved Signatories:

A Watkins (Director)
R Berriman (Quality Manager)
S Royle (Laboratory Manager)

L Knight (Assistant Laboratory Manager)
S Eyre (Senior Technician)
M Fennell (Senior Technician)

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Email: rberriman@prosoils.co.uk
awatkins@prosoils.co.uk

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
TP504	1	B	0.20		Brown TOPSOIL.
TP513	2	B	0.20		Brown TOPSOIL.
TP514	1	B	0.20		Brown TOPSOIL.
TP515	2	B	0.20		Brown TOPSOIL.
TP516	1	B	0.20		Brown TOPSOIL.
TP528	1	B	0.20		Brown TOPSOIL.
TP538	1	B	0.10		MADE GROUND brown topsoil.
TP611	1	B	0.10		Brown TOPSOIL.
TP612	1	B	0.20		Brown TOPSOIL.
TP613	1	B	0.10		Brown TOPSOIL.
TP503	2	D	1.60		Brown slightly gravelly sandy silty CLAY.
TP515	3	D	1.10		Brown slightly gravelly sandy silty CLAY.
TP518	1	D	1.00		Brown slightly gravelly sandy silty CLAY.
TP525	2	D	1.20		Brown slightly gravelly sandy silty CLAY.
TP526	2	D	1.00		Brown slightly gravelly sandy silty CLAY.
TP528	3	D	1.30		Brown slightly gravelly sandy silty CLAY.
TP604	4	D	2.30		Brown silty CLAY.
TP508	1	D	1.00		Brown slightly gravelly very sandy silty CLAY.
TP525	3	D	1.80		Brown very gravelly clayey SILT.

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
TP528	2	D	0.70		Brown clayey silty SAND.
TP530	1	D	1.00		Brown very sandy silty GRAVEL.

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

Contract No:
PSL23/9447
Client Ref:
4486

SUMMARY OF SOIL CLASSIFICATION TESTS

(BS1377 : PART 2 : 1990)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Moisture Content % Clause 3.2	Linear Shrinkage % Clause 6.5	Particle Density Mg/m^3 Clause 8.2	Liquid Limit % Clause 4.3/4	Plastic Limit % Clause 5.3	Plasticity Index % Clause 5.4	Passing .425mm %	Remarks
TP503	2	D	1.60		17			52	24	28	98	High Plasticity CH
TP515	3	D	1.10		19			58	25	33	95	High Plasticity CH
TP518	1	D	1.00		25			46	23	23	97	Intermediate Plasticity CI
TP525	2	D	1.20		21			38	22	16	98	Intermediate Plasticity CI
TP526	2	D	1.00		25			44	24	20	99	Intermediate Plasticity CI
TP528	3	D	1.30		20			38	21	17	95	Intermediate Plasticity CI
TP604	4	D	2.30		39			74	32	42	100	Very High Plasticity CV
TP508	1	D	1.00		16			34	16	18	93	Low Plasticity CL
TP525	3	D	1.80		16				NP			
TP528	2	D	0.70		21				NP			
TP530	1	D	1.00		15				NP			

SYMBOLS : **NP : Non Plastic** *** : Liquid Limit and Plastic Limit Wet Sieved.**

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

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Contract No:

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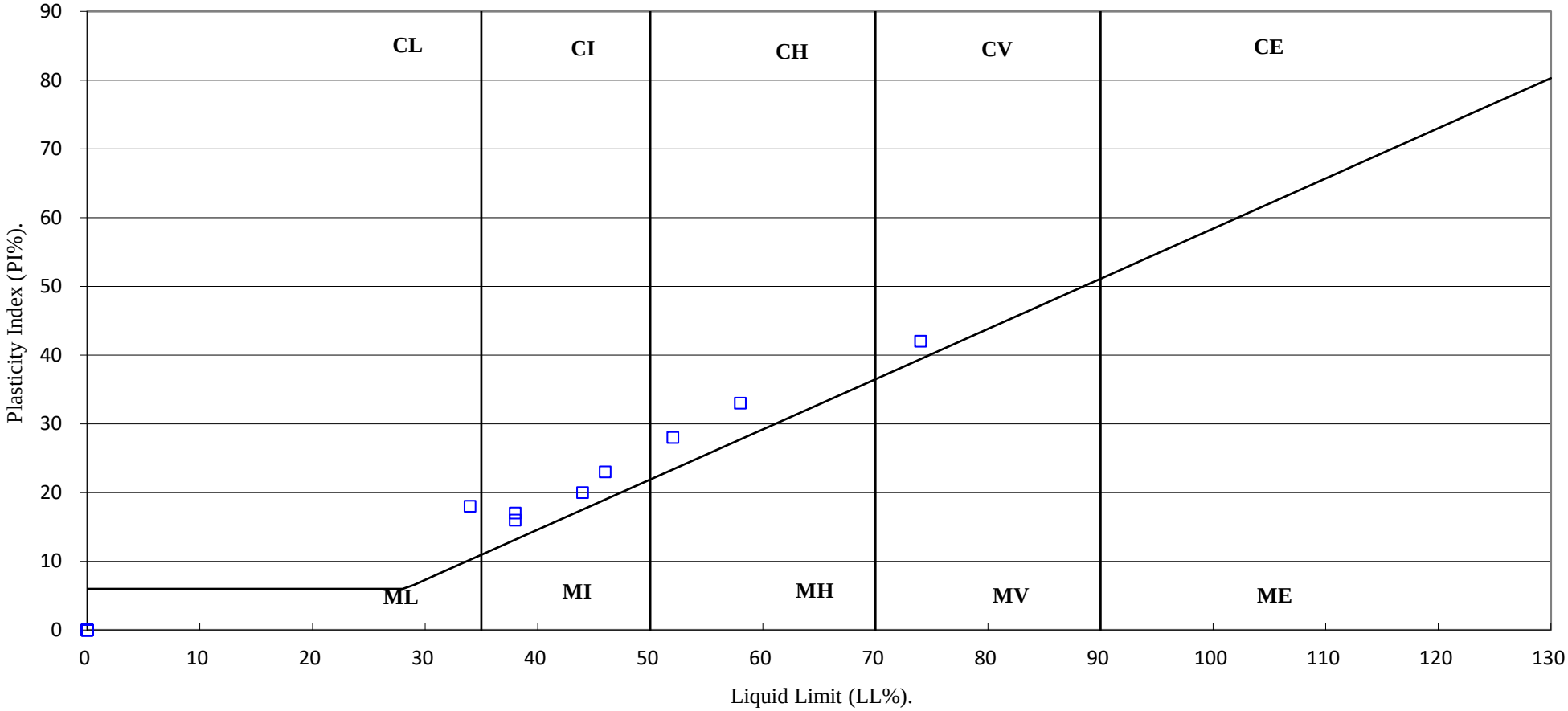
PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.



UKAS TESTING 4043 / PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY	**Black Cats**	**Contract No:** PSL23/9447 **Client Ref:** 4486

PARTICLE SIZE DISTRIBUTION TEST

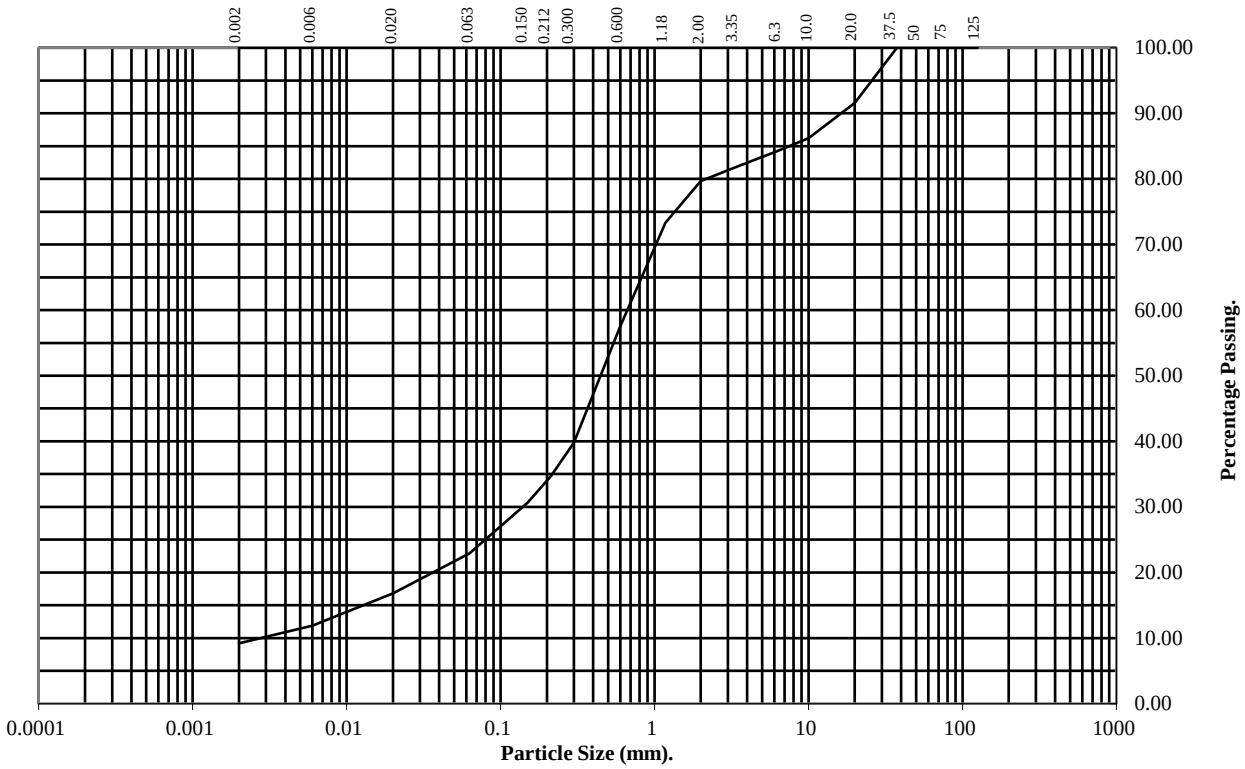
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: **TP504** **Top Depth (m):** **0.20**

Sample Number: **1** **Base Depth(m):**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
50	100
37.5	100
20	92
10	86
6.3	84
3.35	82
2	80
1.18	73
0.6	58
0.3	40
0.212	35
0.15	31
0.063	23

Particle Diameter	Percentage Passing
0.02	17
0.006	12
0.002	9

Soil Fraction	Total Percentage
Cobbles	0
Gravel	20
Sand	57
Silt	14
Clay	9

Remarks:
See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

Contract No:
PSL23/9447
Client Ref:
4486

PARTICLE SIZE DISTRIBUTION TEST

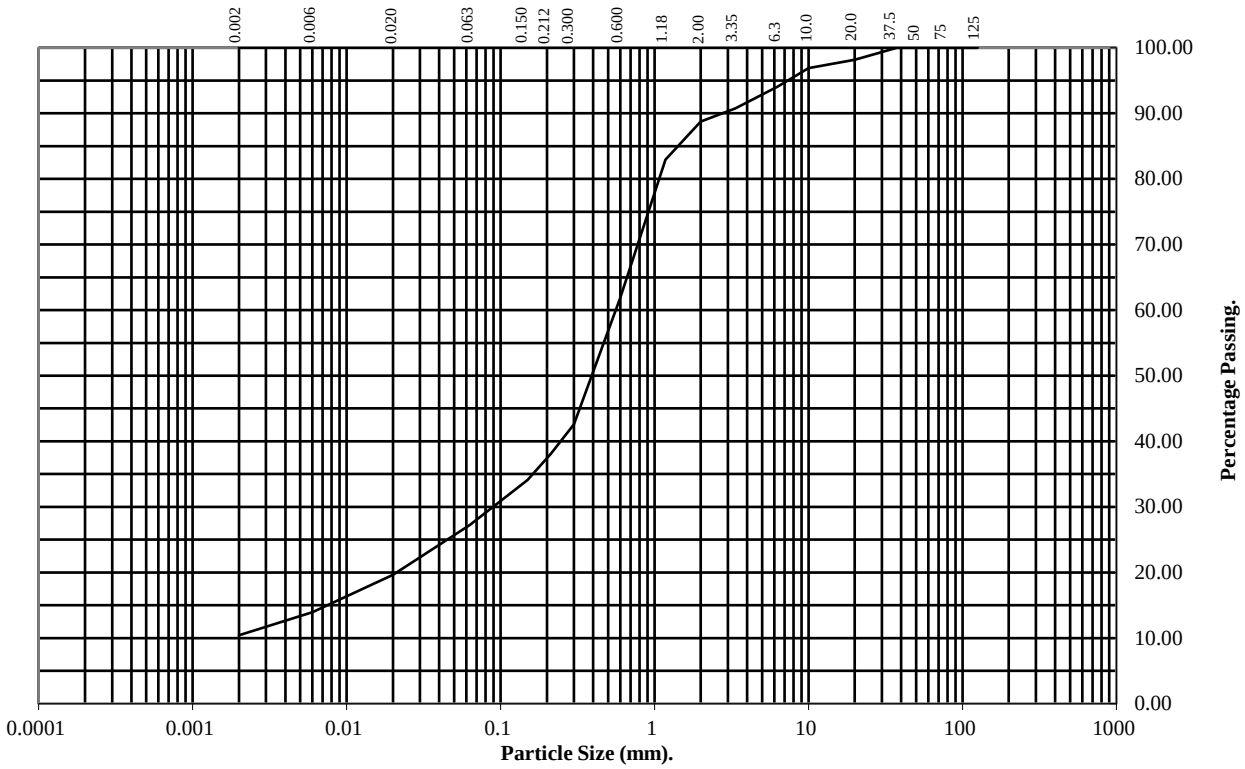
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: **TP513** **Top Depth (m):** **0.20**

Sample Number: **2** **Base Depth(m):**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
50	100
37.5	100
20	98
10	97
6.3	94
3.35	91
2	89
1.18	83
0.6	62
0.3	43
0.212	38
0.15	34
0.063	27

Particle Diameter	Percentage Passing
0.02	20
0.006	14
0.002	10

Soil Fraction	Total Percentage
Cobbles	0
Gravel	11
Sand	62
Silt	17
Clay	10

Remarks:
See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

Contract No:
PSL23/9447
Client Ref:
4486

PARTICLE SIZE DISTRIBUTION TEST

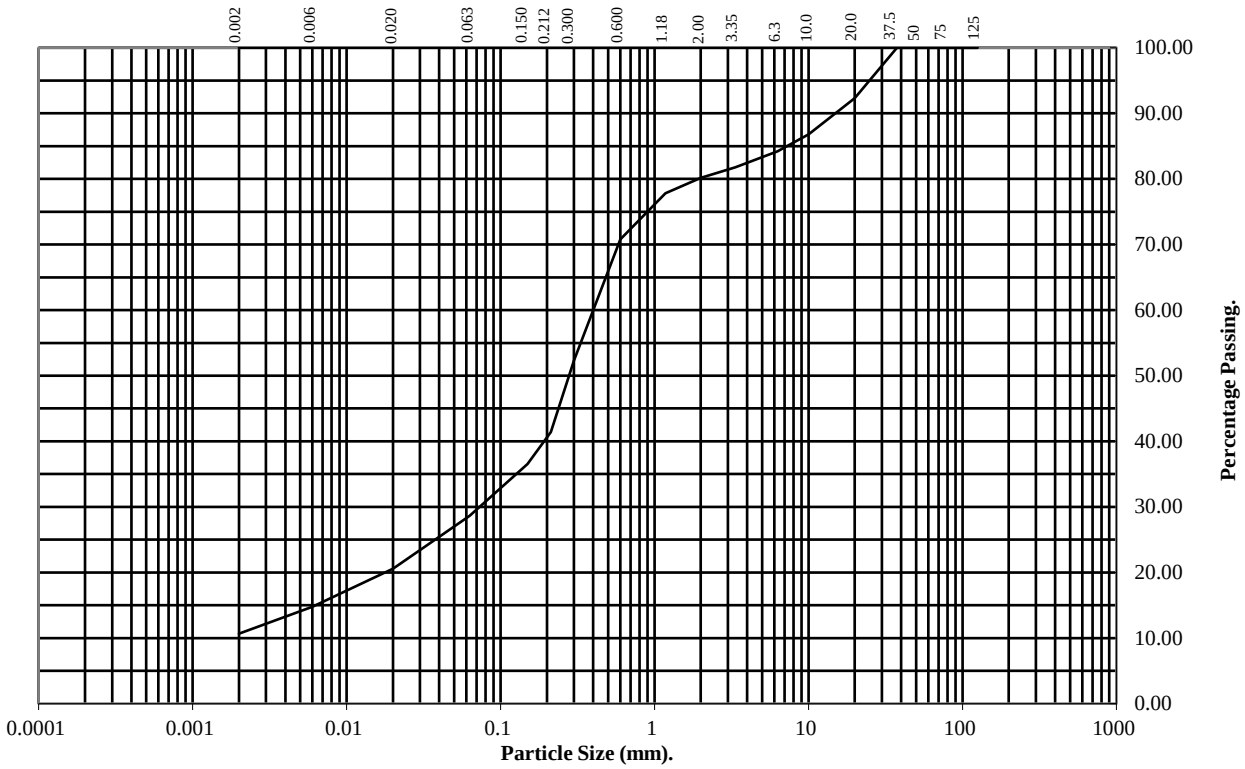
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: **TP514** **Top Depth (m):** **0.20**

Sample Number: **1** **Base Depth(m):**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
50	100
37.5	100
20	92
10	87
6.3	84
3.35	82
2	80
1.18	78
0.6	71
0.3	52
0.212	41
0.15	37
0.063	29

Particle Diameter	Percentage Passing
0.02	21
0.006	15
0.002	11

Soil Fraction	Total Percentage
Cobbles	0
Gravel	20
Sand	51
Silt	18
Clay	11

Remarks:
See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

Contract No:
PSL23/9447
Client Ref:
4486

PARTICLE SIZE DISTRIBUTION TEST

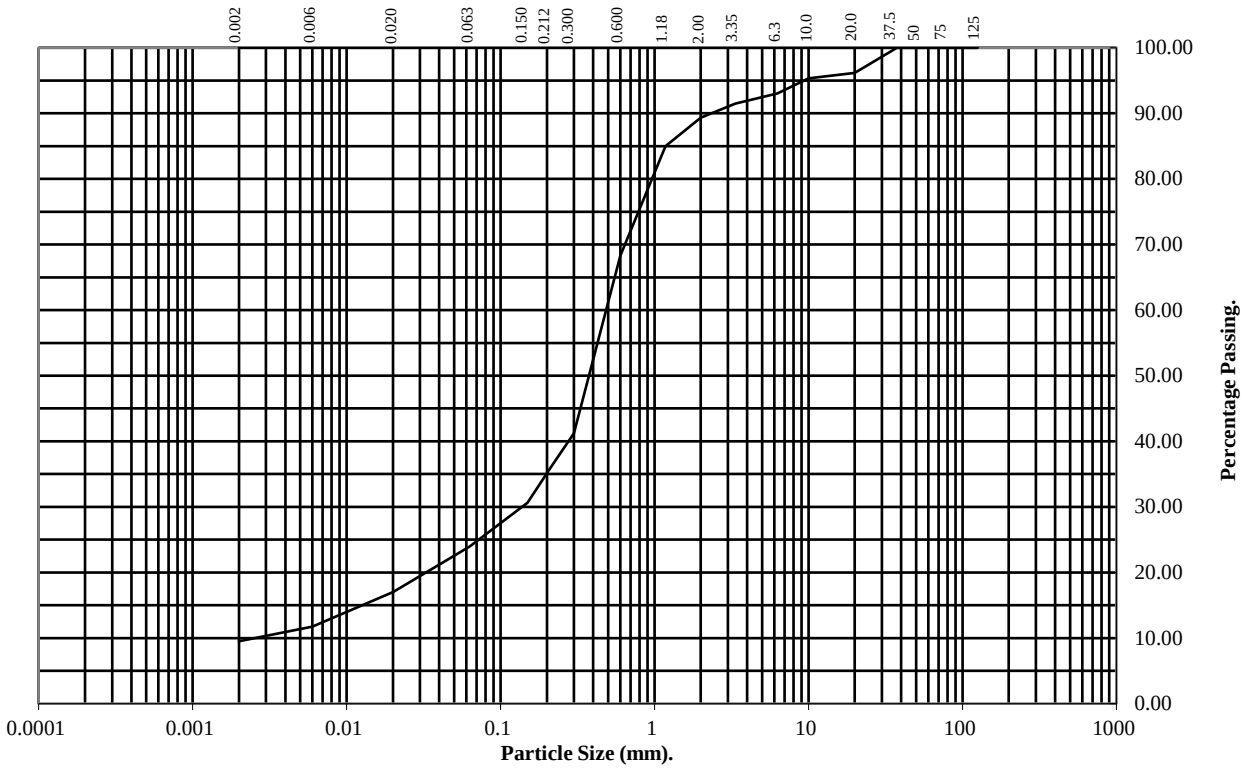
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: TP515 **Top Depth (m):** 0.20

Sample Number: 2 **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
50	100
37.5	100
20	96
10	95
6.3	93
3.35	92
2	89
1.18	85
0.6	68
0.3	41
0.212	36
0.15	31
0.063	24

Particle Diameter	Percentage Passing
0.02	17
0.006	12
0.002	10

Soil Fraction	Total Percentage
Cobbles	0
Gravel	11
Sand	65
Silt	14
Clay	10

Remarks:
See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

Contract No:
PSL23/9447
Client Ref:
4486

PARTICLE SIZE DISTRIBUTION TEST

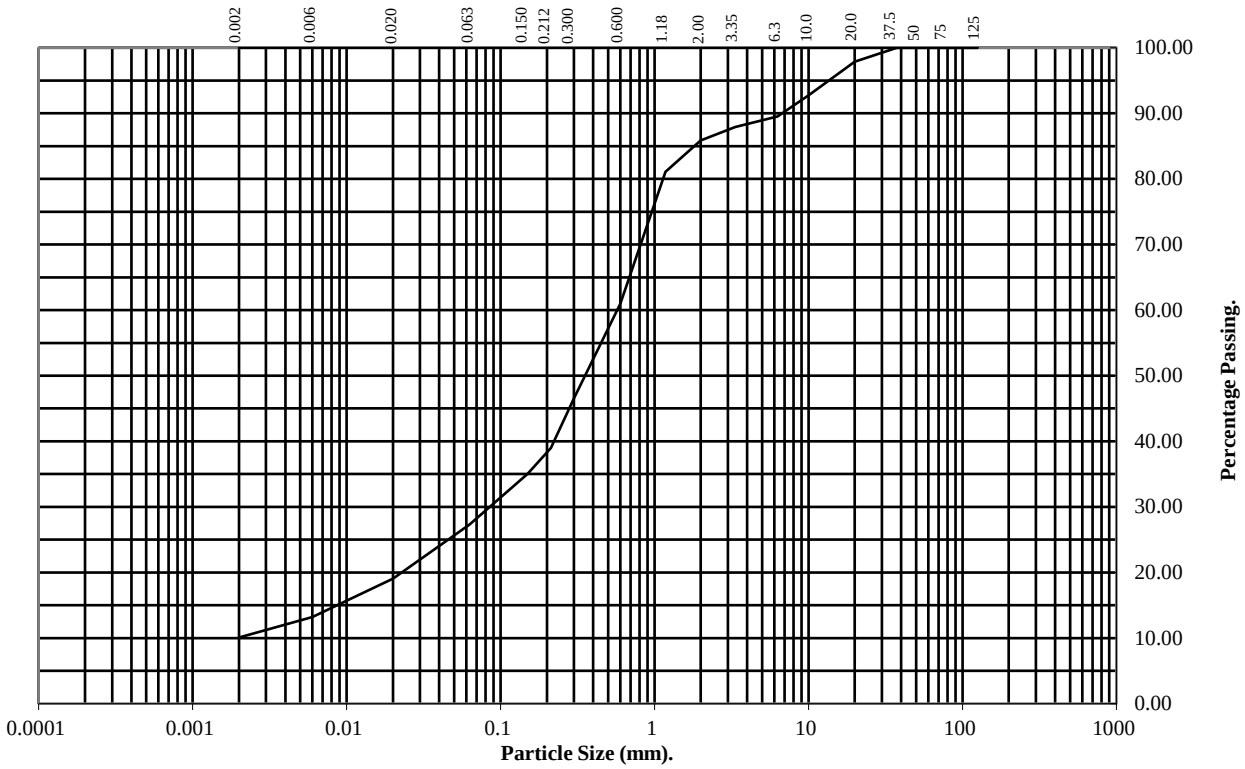
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: **TP516** **Top Depth (m):** **0.20**

Sample Number: **1** **Base Depth(m):**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
50	100
37.5	100
20	98
10	93
6.3	90
3.35	88
2	86
1.18	81
0.6	61
0.3	47
0.212	39
0.15	35
0.063	27

Particle Diameter	Percentage Passing
0.02	19
0.006	13
0.002	10

Soil Fraction	Total Percentage
Cobbles	0
Gravel	14
Sand	59
Silt	17
Clay	10

Remarks:
See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

Contract No:
PSL23/9447
Client Ref:
4486

PARTICLE SIZE DISTRIBUTION TEST

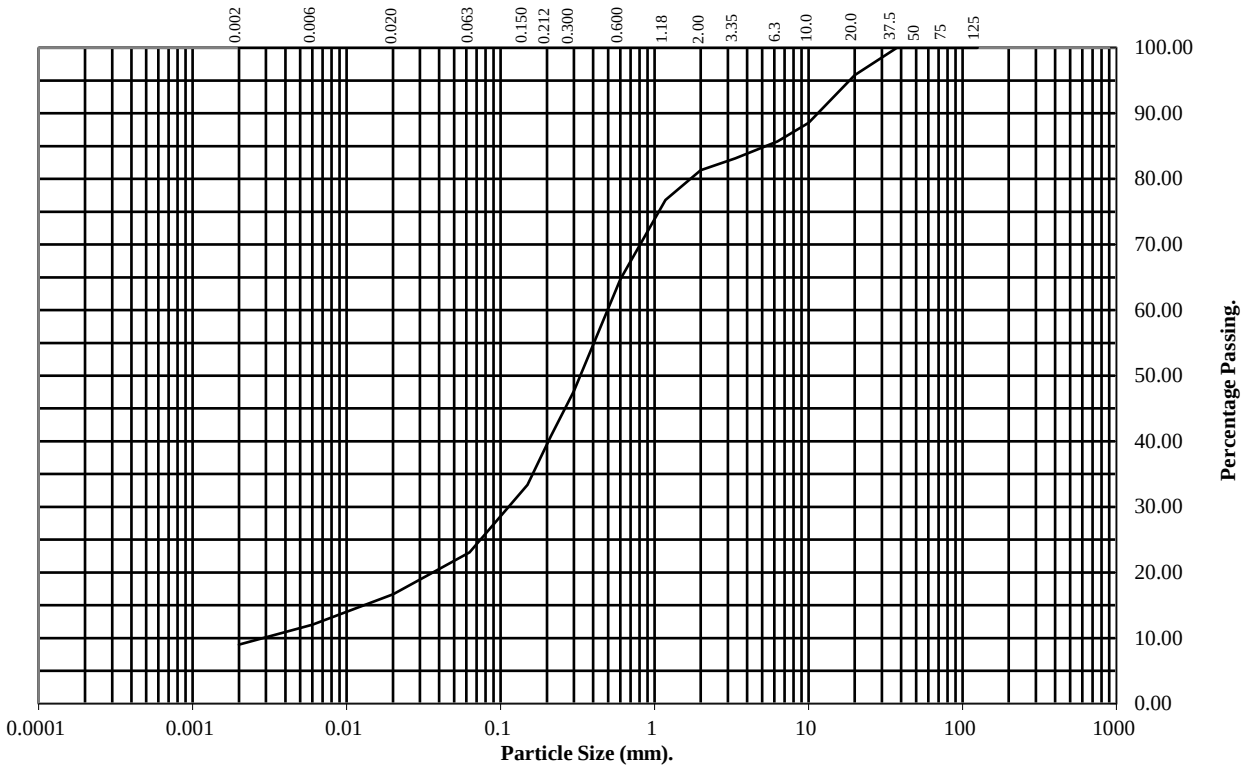
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: **TP528** **Top Depth (m):** **0.20**

Sample Number: **1** **Base Depth(m):**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
50	100
37.5	100
20	96
10	89
6.3	86
3.35	83
2	81
1.18	77
0.6	65
0.3	48
0.212	41
0.15	33
0.063	23

Particle Diameter	Percentage Passing
0.02	17
0.006	12
0.002	9

Soil Fraction	Total Percentage
Cobbles	0
Gravel	19
Sand	58
Silt	14
Clay	9

Remarks:
See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

Contract No:
PSL23/9447
Client Ref:
4486

PARTICLE SIZE DISTRIBUTION TEST

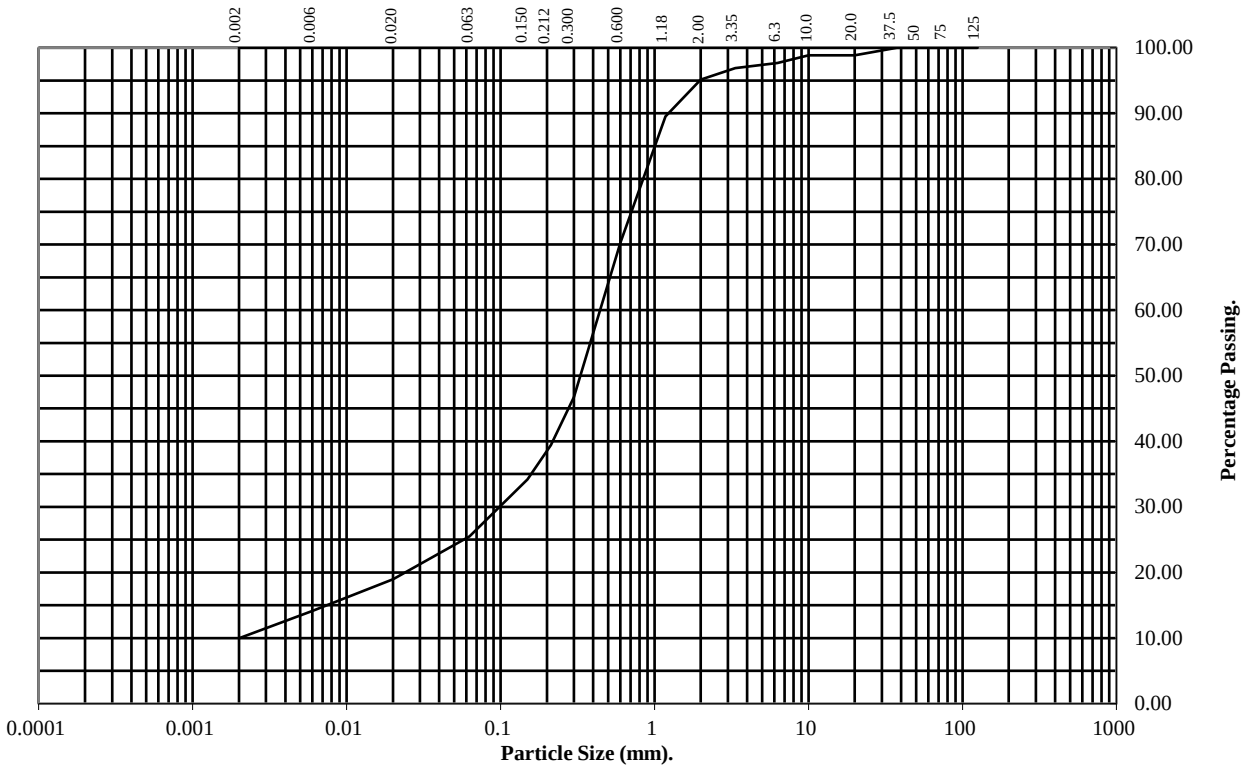
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: **TP538** **Top Depth (m):** **0.10**

Sample Number: **1** **Base Depth(m):**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
50	100
37.5	100
20	99
10	99
6.3	98
3.35	97
2	95
1.18	90
0.6	70
0.3	47
0.212	39
0.15	34
0.063	26

Particle Diameter	Percentage Passing
0.02	19
0.006	14
0.002	10

Soil Fraction	Total Percentage
Cobbles	0
Gravel	5
Sand	69
Silt	16
Clay	10

Remarks:
See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

Contract No:
PSL23/9447
Client Ref:
4486

PARTICLE SIZE DISTRIBUTION TEST

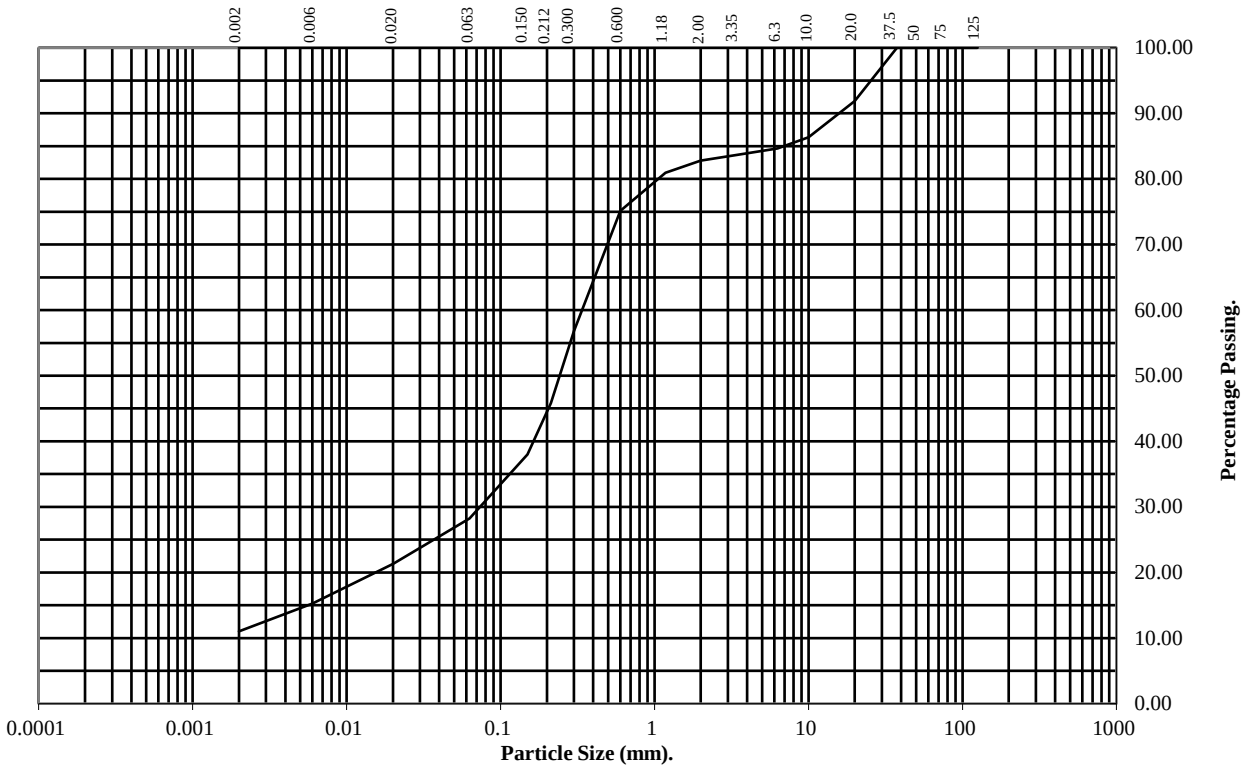
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: TP611 **Top Depth (m):** 0.10

Sample Number: 1 **Base Depth(m):**

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
50	100
37.5	100
20	92
10	86
6.3	85
3.35	84
2	83
1.18	81
0.6	75
0.3	57
0.212	46
0.15	38
0.063	28

Particle Diameter	Percentage Passing
0.02	21
0.006	15
0.002	11

Soil Fraction	Total Percentage
Cobbles	0
Gravel	17
Sand	55
Silt	17
Clay	11

Remarks:
See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

Contract No: PSL23/9447

Client Ref: 4486

PARTICLE SIZE DISTRIBUTION TEST

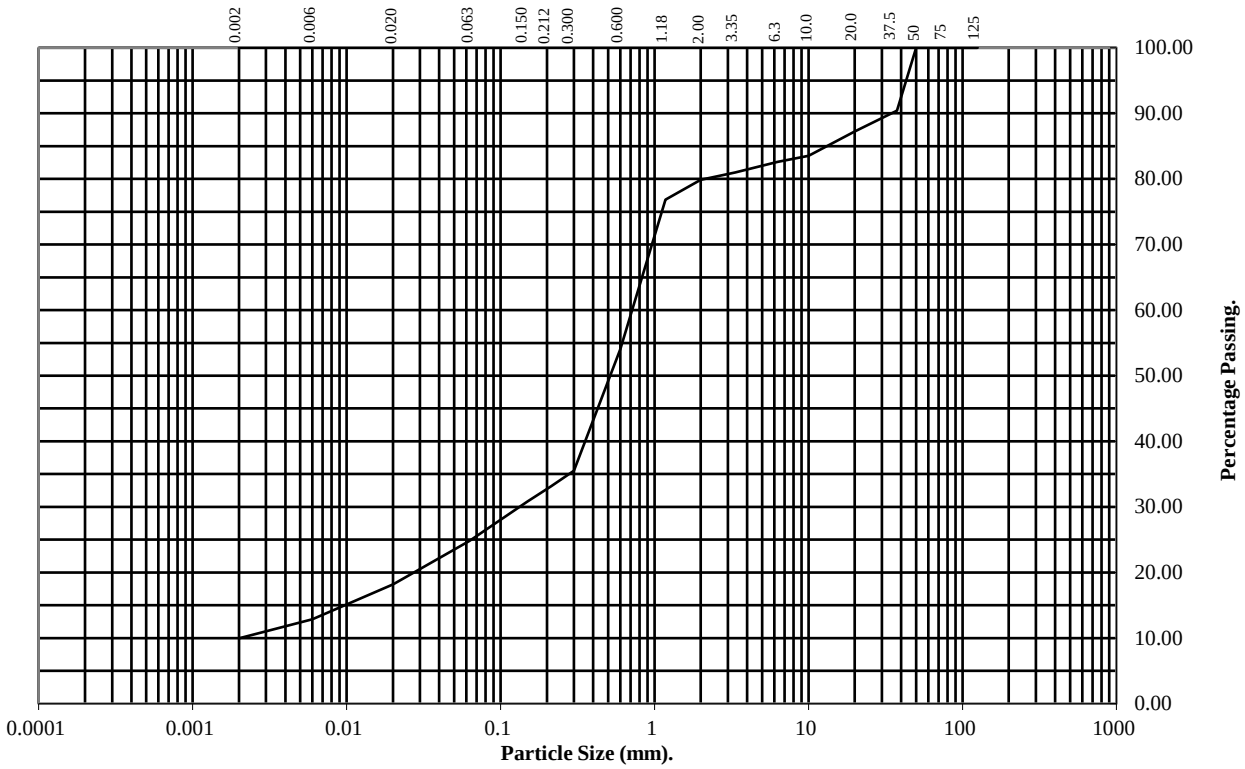
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: **TP612** **Top Depth (m):** **0.20**

Sample Number: **1** **Base Depth(m):**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
50	100
37.5	90
20	87
10	84
6.3	83
3.35	81
2	80
1.18	77
0.6	54
0.3	36
0.212	33
0.15	31
0.063	25

Particle Diameter	Percentage Passing
0.02	18
0.006	13
0.002	10

Soil Fraction	Total Percentage
Cobbles	0
Gravel	20
Sand	55
Silt	15
Clay	10

Remarks:
See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

Contract No:
PSL23/9447
Client Ref:
4486

PARTICLE SIZE DISTRIBUTION TEST

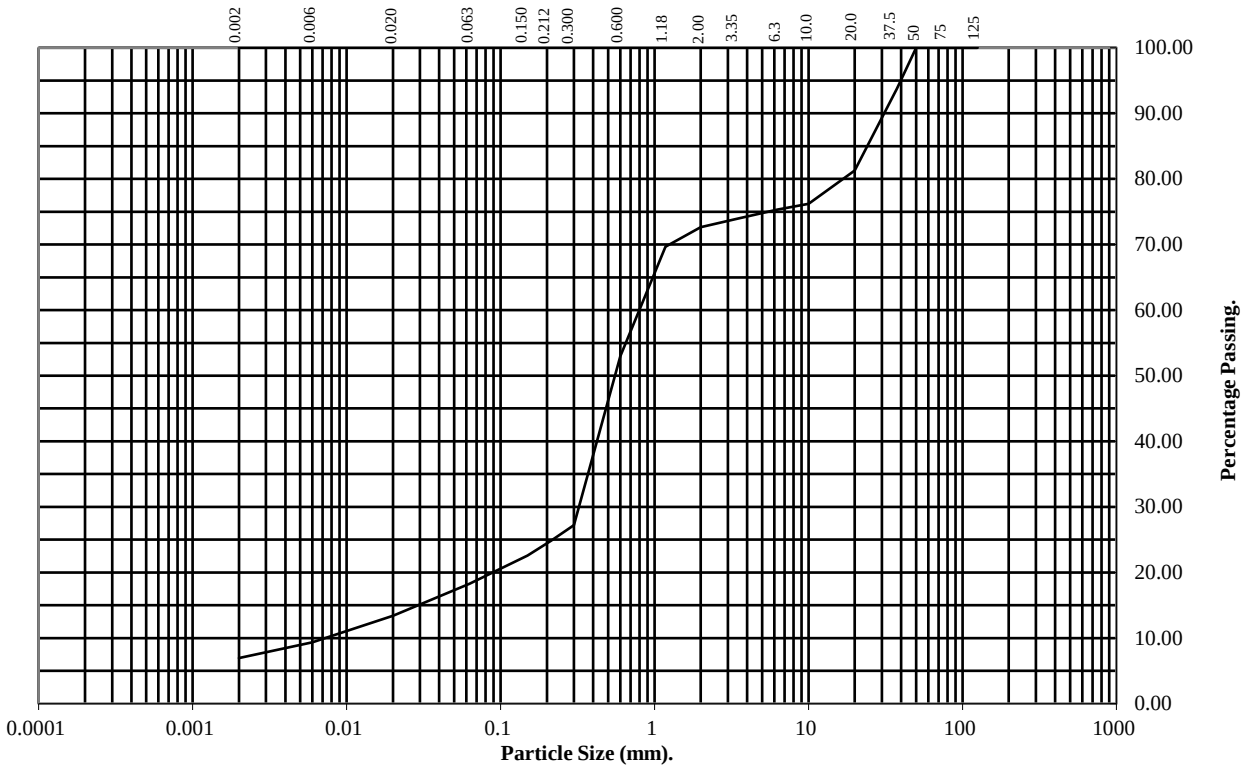
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: **TP613** **Top Depth (m):** **0.10**

Sample Number: **1** **Base Depth(m):**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
50	100
37.5	94
20	81
10	76
6.3	75
3.35	74
2	73
1.18	70
0.6	53
0.3	27
0.212	25
0.15	23
0.063	18

Particle Diameter	Percentage Passing
0.02	13
0.006	9
0.002	7

Soil Fraction	Total Percentage
Cobbles	0
Gravel	27
Sand	55
Silt	11
Clay	7

Remarks:
See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats

Contract No:
PSL23/9447
Client Ref:
4486

7 - 11 Harding Street
Leicester
LE1 4DH

Professional Soils Laboratory
5/7 Hexthorpe Road
Hexthorpe
Doncaster
DN4 0AR

Analytical Test Report: L23/07106/PSL - 23-39345

Your Project Reference:	**PSL23/9447 Black Cats PO21490/4486-002/JBR**		
Your Order Number:	PSL23/9447	Samples Received / Instructed:	17/11/2023 / 17/11/2023
Report Issue Number:	1	Sample Tested:	17/11 to 23/11/2023
Samples Analysed:	7 soil samples	Report issued:	23/11/2023

Signed

James Gane
Analytical Services Manager
CTS Group

Notes:

General

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30˚C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Samples were supplied by customer, results apply to the samples as received.

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

UKAS = UKAS Accreditation, MCERTS = MCERTS Accreditation, u = Unaccredited

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

Date of Issue: 30.10.2023

Issued by: J. Gane

Issue No: 4

Rev No: 5

7 - 11 Harding Street
Leicester
LE1 4DH

L23/07106/PSL - 23-39345

Project Reference - PSL23/9447 Black Cats
PO21490/4486-002/JBR

Analytical Test Results - Chemical Analysis

Lab Reference			327398	327399	327400	327401	327402	327403	327404
Client Sample ID			-	-	-	-	-	-	-
Client Sample Location			TP503	TP515	TP518	TP525	TP526	TP528	TP604
Client Sample Type			D	D	D	D	D	D	D
Client Sample Number			2	3	1	2	2	3	4
Depth - Top (m)			1.60	1.10	1.00	1.20	1.00	1.30	2.30
Depth - Bottom (m)			1.60	1.10	1.00	1.20	1.00	1.30	2.30
Date of Sampling			03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023	03/11/2023
Time of Sampling			-	-	-	-	-	-	-
Sample Matrix			Clay	Clay	Clay	Clay	Clay	Clay	Clay
Determinant	**Units**	**Accreditation**							
Water soluble sulphate (as SO_4)	(mg/l)	u	< 10	11	< 10	< 10	< 10	< 10	< 10
pH Value	pH Units	MCERTS	5.5	5.7	6.5	6.9	6.5	6.7	5.8

7 - 11 Harding Street
Leicester
LE1 4DH

L23/07106/PSL - 23-39345

Project Reference - PSL23/9447 Black Cats PO21490/4486-002/JBR

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
327398	-	TP503	D	2	Brown slightly gravelly sandy silty clay	-	-	73
327399	-	TP515	D	3	Brown slightly gravelly sandy silty clay	-	-	81
327400	-	TP518	D	1	Brown slightly gravelly sandy silty clay	-	-	69
327401	-	TP525	D	2	Brown slightly gravelly sandy silty clay	-	-	71
327402	-	TP526	D	2	Brown slightly gravelly sandy silty clay	-	-	65
327403	-	TP528	D	3	Brown slightly gravelly sandy silty clay	-	-	69
327404	-	TP604	D	4	Brown slightly gravelly sandy silty clay	-	-	77

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Leicester
LE1 4DH

L23/07106/PSL - 23-39345

Project Reference - PSL23/9447 Black Cats PO21490/4486-002/JBR

Sample Comments

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Comments
327398	-	TP503	D	2	
327399	-	TP515	D	3	
327400	-	TP518	D	1	
327401	-	TP525	D	2	
327402	-	TP526	D	2	
327403	-	TP528	D	3	
327404	-	TP604	D	4	

7 - 11 Harding Street
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LE1 4DH

L23/07106/PSL - 23-39345

Project Reference - PSL23/9447 Black Cats PO21490/4486-002/JBR

Analysis Methodologies

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preperation	Test Details
ANIONSS	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
PHS	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis

7 - 11 Harding Street
Leicester
LE1 4DH

L23/07106/PSL - 23-39345

Project Reference - PSL23/9447 Black Cats PO21490/4486-002/JBR

Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

A - No date of sampling provided
C - Received in inappropriate container
H - Contains headspace
T - Temperature on receipt exceeds storage temperature
R - Sample(s) received with less than 96 hours for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
327398	-	TP503	D	2	MS - CL - pH in Soils	RX
327399	-	TP515	D	3	MS - CL - pH in Soils	RX
327400	-	TP518	D	1	MS - CL - pH in Soils	RX
327401	-	TP525	D	2	MS - CL - pH in Soils	RX
327402	-	TP526	D	2	MS - CL - pH in Soils	RX
327403	-	TP528	D	3	MS - CL - pH in Soils	RX
327404	-	TP604	D	4	MS - CL - pH in Soils	RX

Appendix W
Geotechnical Test Results
(2025)

LABORATORY REPORT

Contract Number: PSL25/2056

Report Date: 07 April 2025

Client's Reference: 4486

Client Name: Lithos Consulting
Parkhill
Walton Road
Wetherby
North Yorkshire
LS22 5DZ

For the attention of: Adam Gombocz/James Brown

Contract Title: Black Cats, Huddersfield

Date Received: 19/3/2025
Date Commenced: 19/3/2025
Date Completed: 7/4/2025

Notes: Opinions and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. 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 other than in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:

A Watkins (Managing Director)	R Berriman (Associate Director)	S Royle (Laboratory Manager)
L Knight (Assistant Laboratory Manager)	S Eyre (Senior Technician)	T Watkins (Senior Technician)

5 – 7 Hexthorpe Road,
Hexthorpe,
Doncaster,
DN4 0AR
Tel: 01302 768098
Email: rberriman@prosoils.co.uk
awatkins@prosoils.co.uk

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
TP705	2	D&B	1.10		MADE GROUND dark grey very gravelly very clayey sand.
TP706	2	D&B	2.70		MADE GROUND brown very sandy very clayey gravel with some cobbles.
TP702	2	D&B	1.40		MADE GROUND brown sandy clayey gravel.
TP704	2	D&B	2.50		MADE GROUND brown slightly sandy gravelly clay with some cobbles.
TP707	2	D&B	2.00		Brown sandy slightly clayey GRAVEL with many cobbles.

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats, Huddersfield

Contract No:
PSL25/2056
Client Ref:
4486

SUMMARY OF SOIL CLASSIFICATION TESTS

BS 1377 - Part 2 : 2022 in accordance with BS EN ISO 17892 (as below)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Water Content %	Linear Shrinkage	Particle Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index %	Passing 0.425mm %	Remarks
TP705	2	D&B	1.10		31.4		2.55					
TP706	2	D&B	2.70		13.8		2.70					
TP702	2	D&B	1.40		13.2		2.68					
TP704	2	D&B	2.50		19.4		2.65					
TP707	2	D&B	2.00		16.9		2.68					

Water Content - BS 1377 - Part 2 : 2022 : Clause 4 in accordance with BS EN ISO 17892 - 1 : 2014 + A1 : 2022
Linear Shrinkage - BS 1377 - Part 2 : 2022 : Clause 7
Particle Density (Gas Jar method) - BS 1377 - Part 2 : 2022 : Clause 9
Liquid, Plastic Limit & Plasticity Index - BS 1377 - Part 2 : 2022 : Clause 5 & 6 in accordance with BS EN ISO 17892 - 12 : 2018 + A2 : 2022

SYMBOLS : NP = Non Plastic

UKAS TESTING 4043

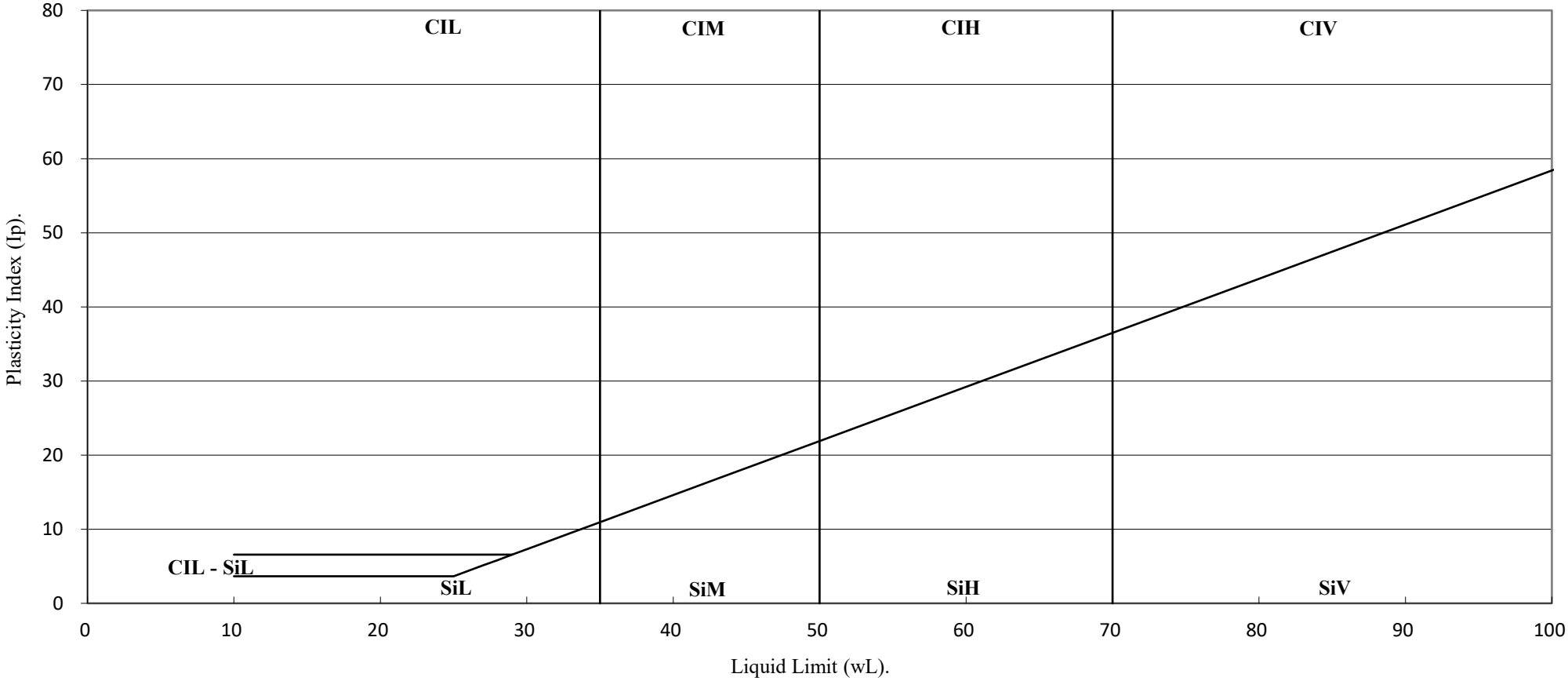
PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats, Huddersfield

Contract No:
PSL25/2056
Client Ref:
4486

PLASTICITY CHART

BS EN ISO 14688-2:2017 Clause 4.4



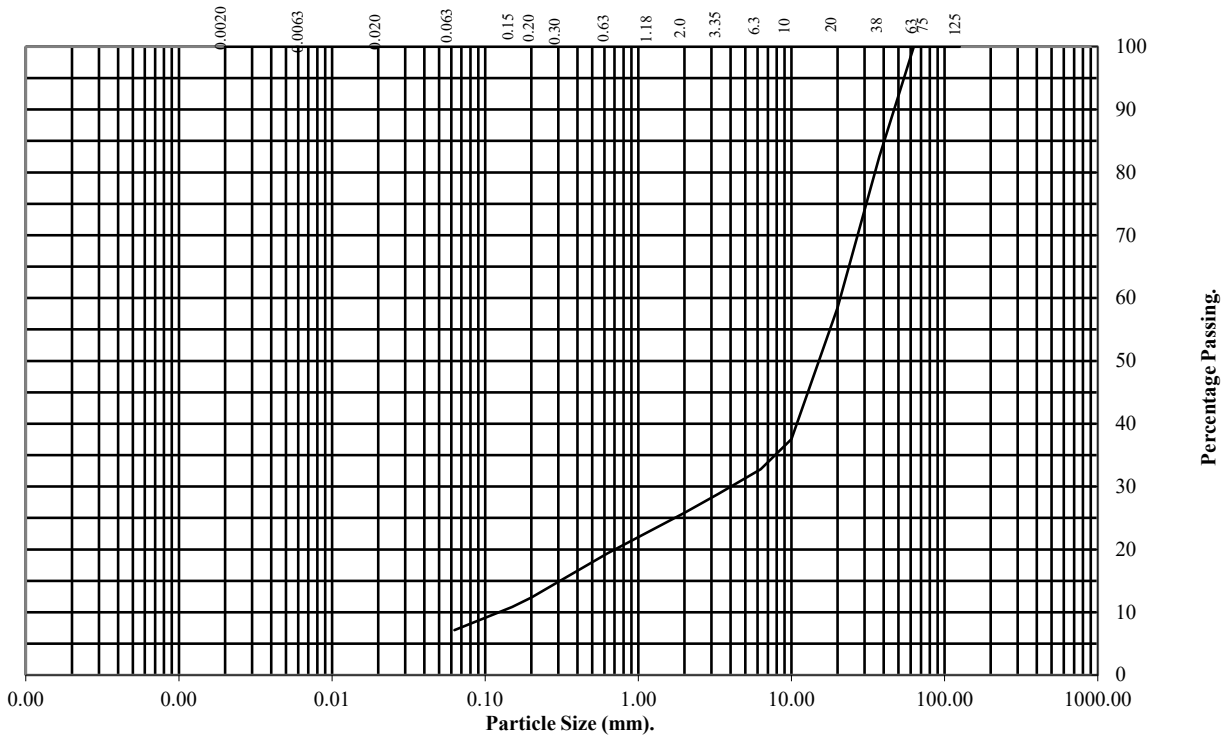
UKAS TESTING 4043 / PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY	**Black Cats, Huddersfield**	**Contract No:**
		PSL25/2056
		Client Ref:
		4486

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number:	**TP702**	**Top Depth (m):**	**1.40**
Sample Number:	**2**	**Base Depth (m):**	
Sample Type:	**D&B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	82
20	58
10	38
6.3	33
3.35	29
2	26
1.18	23
0.63	19
0.3	15
0.2	12
0.15	11
0.063	7

Soil Fraction	Total Percentage
Cobbles	0
Gravel	74
Sand	19
Silt/Clay	7

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats, Huddersfield

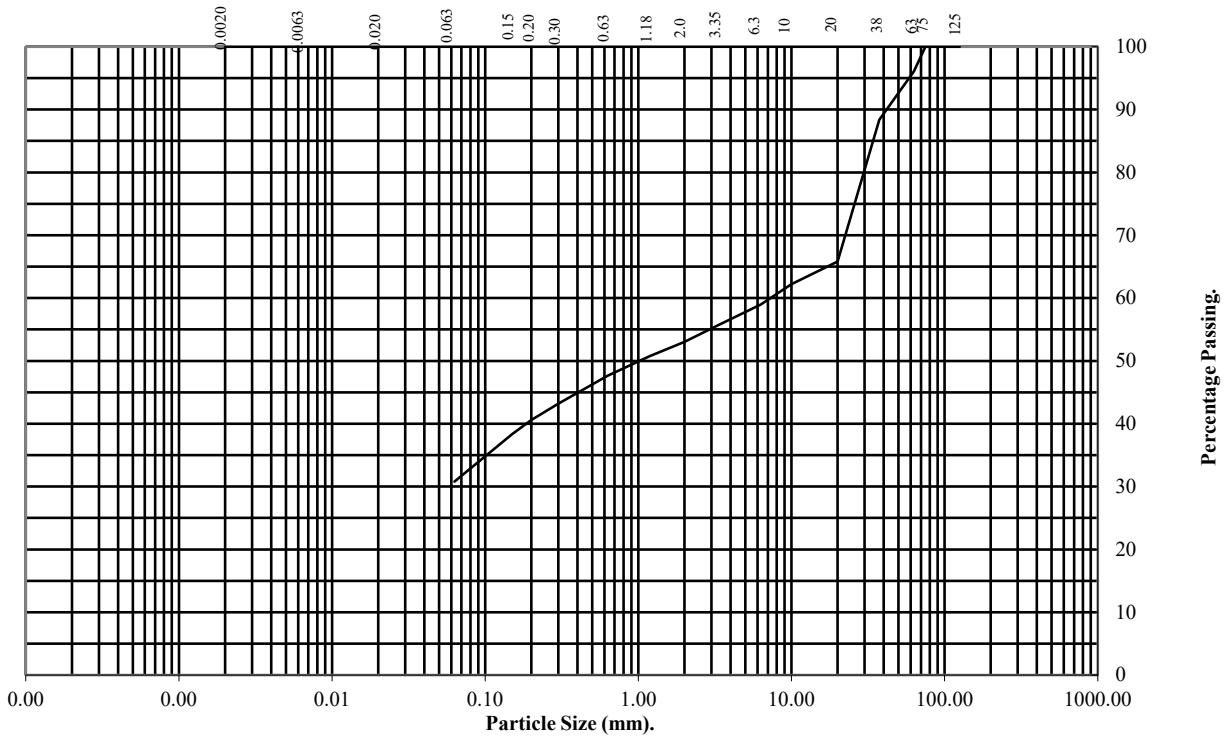
Contract No:
PSL25/2056
Client Ref:
4486

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number:	**TP704**	**Top Depth (m):**	**2.50**
Sample Number:	**2**	**Base Depth (m):**	
Sample Type:	**D&B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	96
37.5	88
20	66
10	62
6.3	59
3.35	56
2	53
1.18	51
0.63	48
0.3	43
0.2	41
0.15	38
0.063	31

Soil Fraction	Total Percentage
Cobbles	4
Gravel	43
Sand	22
Silt/Clay	31

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats, Huddersfield

Contract No:
PSL25/2056
Client Ref:
4486

PARTICLE SIZE DISTRIBUTION TEST

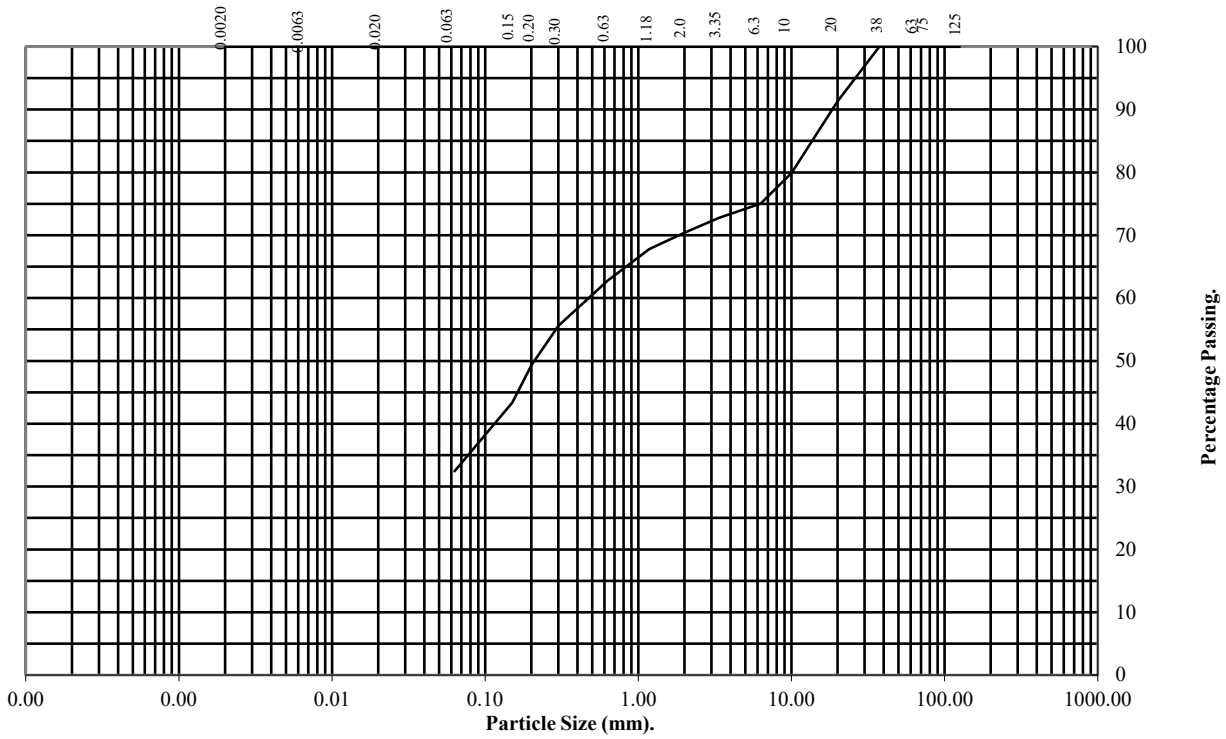
BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number: TP705 **Top Depth (m):** 1.10

Sample Number: 2 **Base Depth (m):**

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	91
10	80
6.3	75
3.35	73
2	70
1.18	68
0.63	63
0.3	56
0.2	49
0.15	43
0.063	32

Soil Fraction	Total Percentage
Cobbles	0
Gravel	30
Sand	38
Silt/Clay	32

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats, Huddersfield

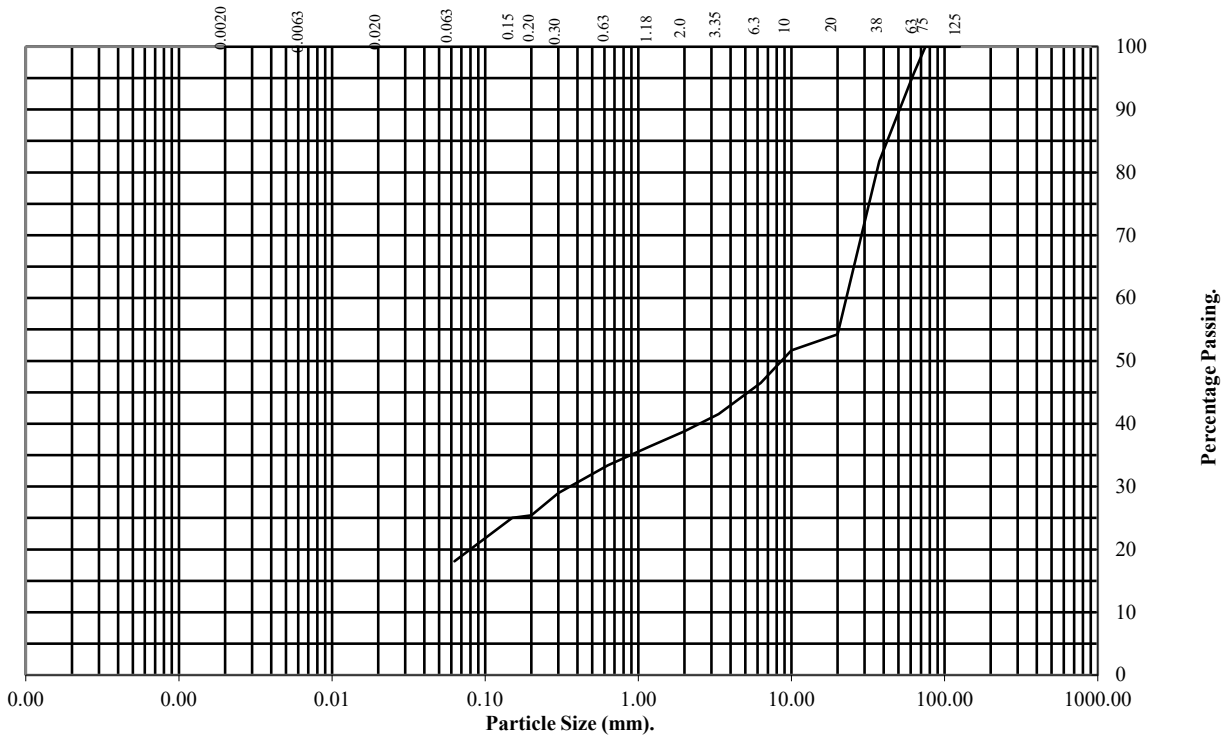
Contract No:
PSL25/2056
Client Ref:
4486

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number:	**TP706**	**Top Depth (m):**	**2.70**
Sample Number:	**2**	**Base Depth (m):**	
Sample Type:	**D&B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	96
37.5	82
20	54
10	52
6.3	47
3.35	42
2	39
1.18	36
0.63	33
0.3	29
0.2	25
0.15	25
0.063	18

Soil Fraction	Total Percentage
Cobbles	4
Gravel	57
Sand	21
Silt/Clay	18

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats, Huddersfield

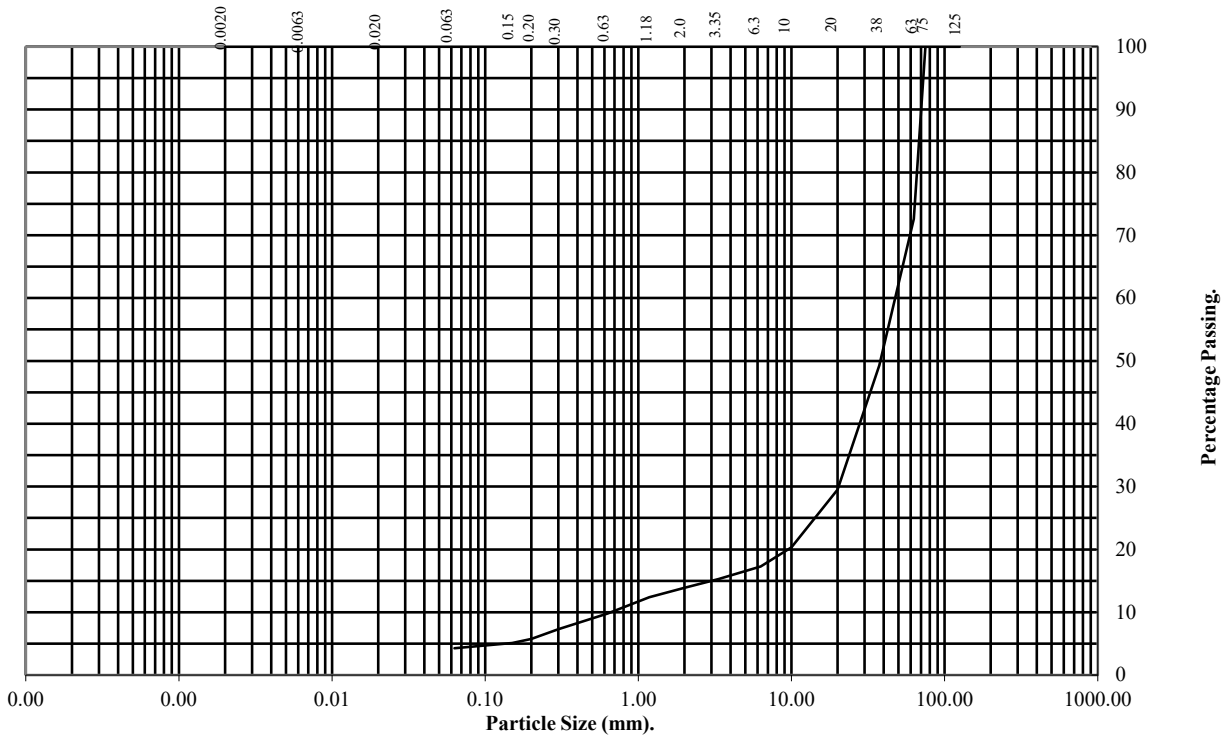
Contract No:
PSL25/2056
Client Ref:
4486

PARTICLE SIZE DISTRIBUTION TEST

BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number:	**TP707**	**Top Depth (m):**	**2.00**
Sample Number:	**2**	**Base Depth (m):**	
Sample Type:	**D&B**		



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	73
37.5	49
20	30
10	20
6.3	17
3.35	15
2	14
1.18	12
0.63	10
0.3	7
0.2	6
0.15	5
0.063	4

Soil Fraction	Total Percentage
Cobbles	27
Gravel	59
Sand	10
Silt/Clay	4

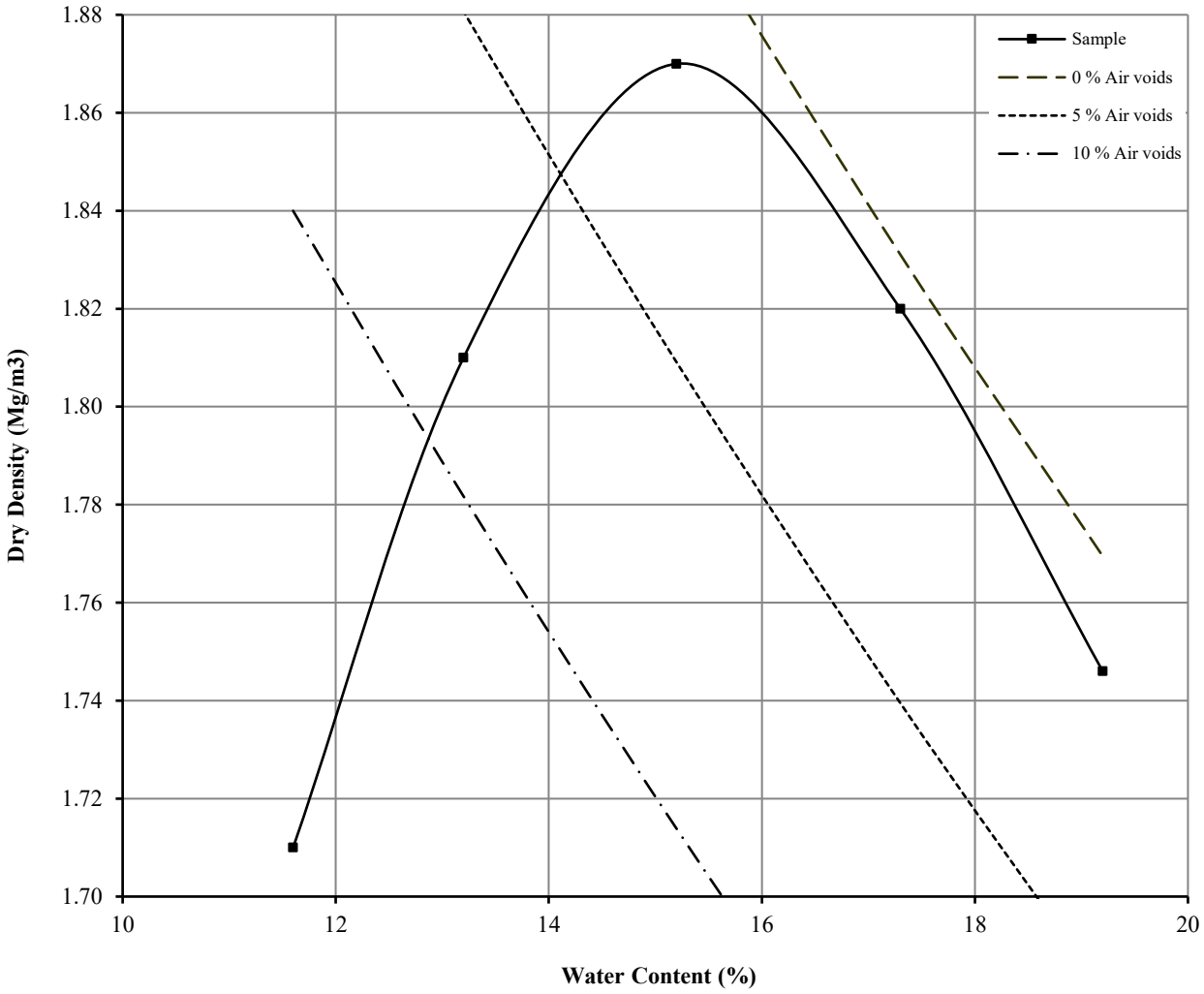
Remarks:

See Summary of Soil Descriptions

DRY DENSITY/WATER CONTENT RELATIONSHIP

BS 1377 - Part 2 : Clause 11 : 2022

Hole Number:	**TP702**	**Top Depth (m):**	**1.40**
Sample Number:	**2**	**Base Depth (m):**	
Sample Type:	**D&B**		



Initial Water Content:		13.2	Method of Compaction:	Vibro	Separate Samples
Particle Density (Mg/m3):	2.68	Measured	Material Retained on 37.5 mm Test Sieve (%):		18
Maximum Dry Density (Mg/m3):		1.87	Material Retained on 20.0 mm Test Sieve (%):		24
Optimum Water Content (%):		15	Grading Zone:		1
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

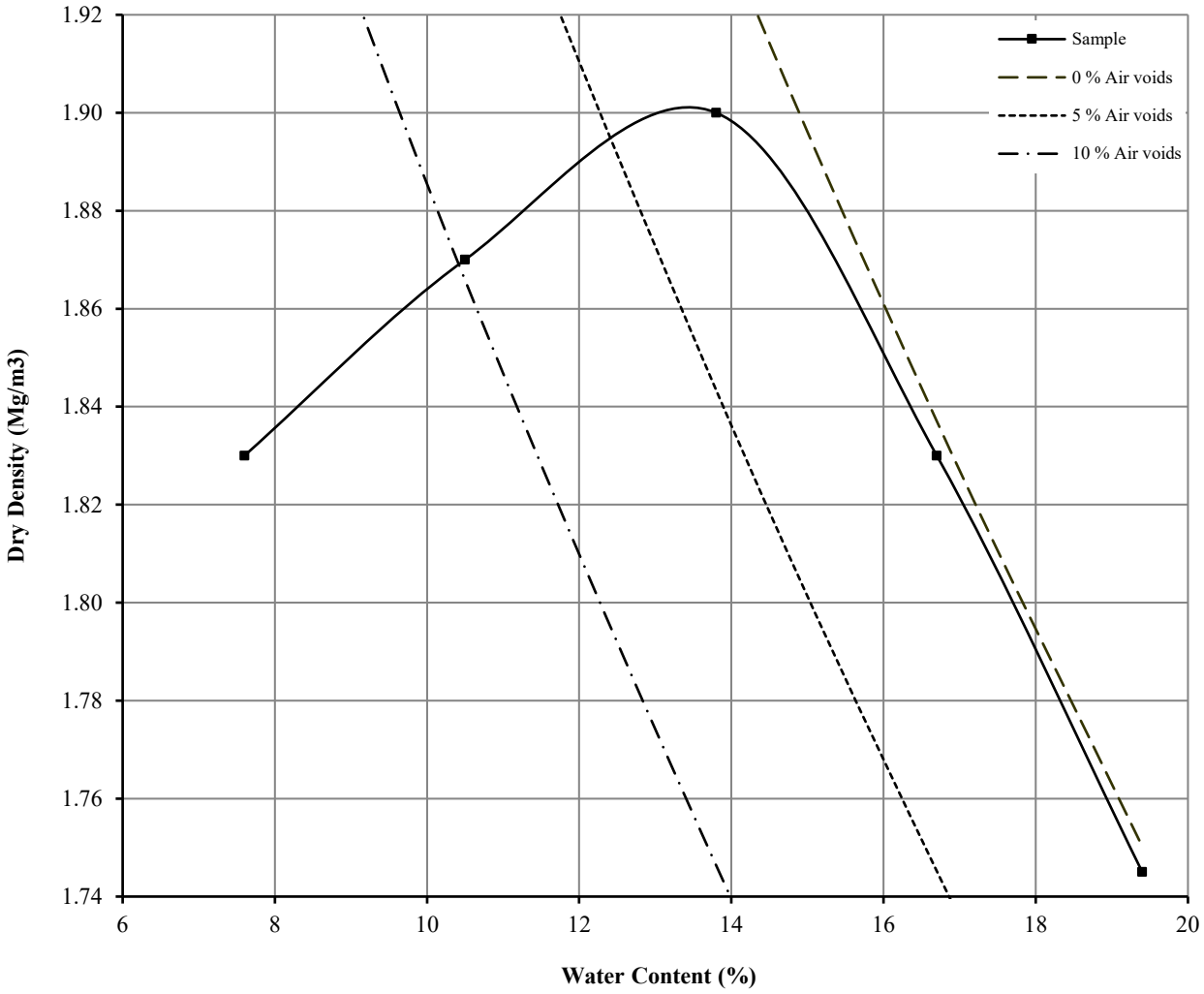
Black Cats, Huddersfield

Contract No.
PSL25/2056
Client Ref
4486

DRY DENSITY/WATER CONTENT RELATIONSHIP

BS 1377 - Part 2 : Clause 11 : 2022

Hole Number:	**TP704**	**Top Depth (m):**	**2.50**
Sample Number:	**2**	**Base Depth (m):**	
Sample Type:	**D&B**		



Initial Water Content:		19.4	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.65	Measured	Material Retained on 37.5 mm Test Sieve (%):		12
Maximum Dry Density (Mg/m3):		1.90	Material Retained on 20.0 mm Test Sieve (%):		22
Optimum Water Content (%):		14	Grading Zone:		1
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

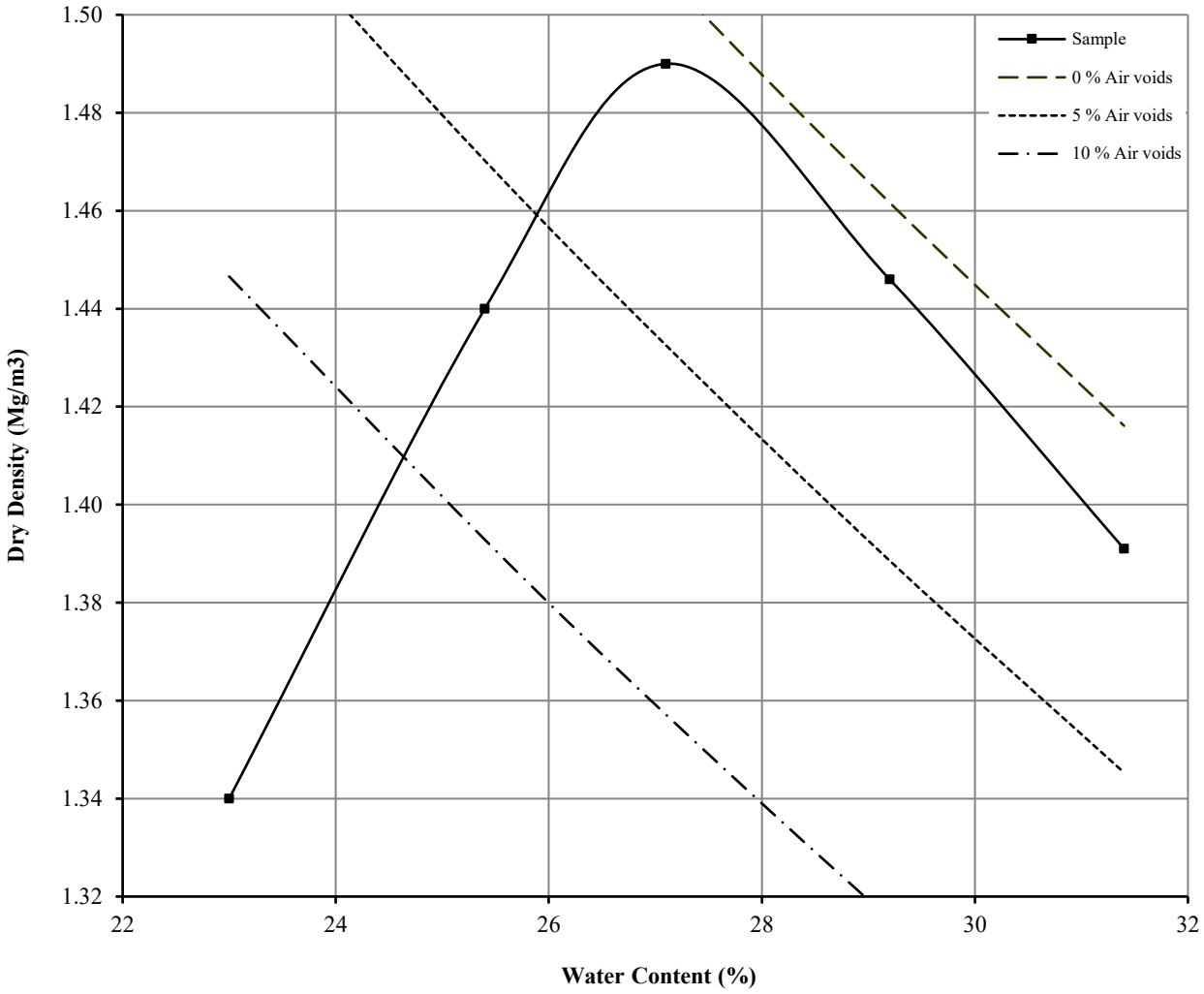
Black Cats, Huddersfield

Contract No.
PSL25/2056
Client Ref
4486

DRY DENSITY/WATER CONTENT RELATIONSHIP

BS 1377 - Part 2 : Clause 11 : 2022

Hole Number:	**TP705**	**Top Depth (m):**	**1.10**
Sample Number:	**2**	**Base Depth (m):**	
Sample Type:	**D&B**		



Initial Water Content:		31.4	Method of Compaction:	Vibro	Separate Samples
Particle Density (Mg/m3):	2.55	Measured	Material Retained on 37.5 mm Test Sieve (%):		0
Maximum Dry Density (Mg/m3):		1.49	Material Retained on 20.0 mm Test Sieve (%):		9
Optimum Water Content (%):		27	Grading Zone:		1
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats, Huddersfield

Contract No.
PSL25/2056
Client Ref
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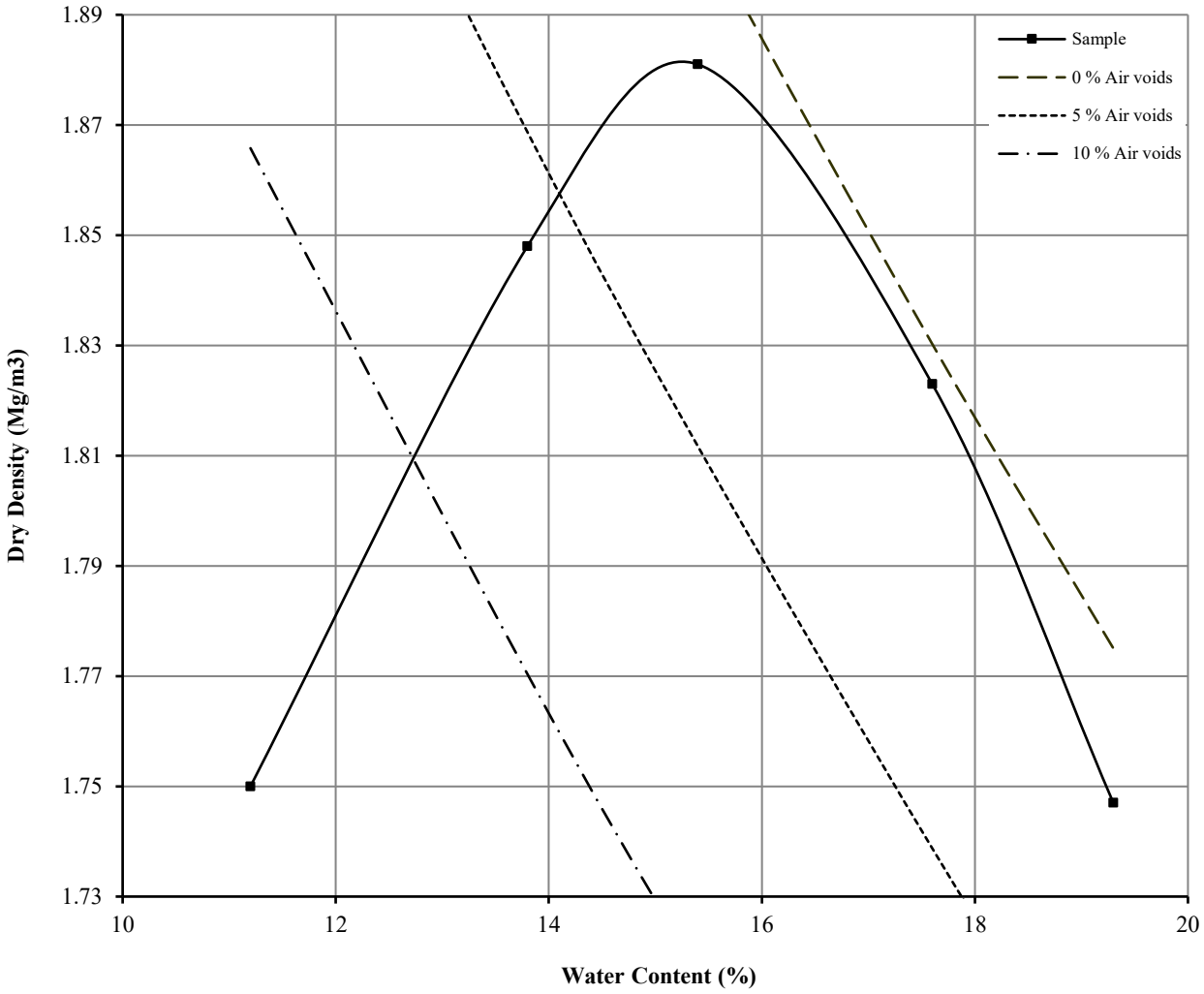
DRY DENSITY/WATER CONTENT RELATIONSHIP

BS 1377 - Part 2 : Clause 11 : 2022

Hole Number:	**TP706**	**Top Depth (m):**	**2.70**
Sample Number:	**2**	**Base Depth (m):**	
Sample Type:	**D&B**		



Initial Water Content:		13.8	Method of Compaction:	Vibro	Separate Samples
Particle Density (Mg/m3):	2.70	Measured	Material Retained on 37.5 mm Test Sieve (%):		18
Maximum Dry Density (Mg/m3):		1.88	Material Retained on 20.0 mm Test Sieve (%):		28
Optimum Water Content (%):		15	Grading Zone:		1
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

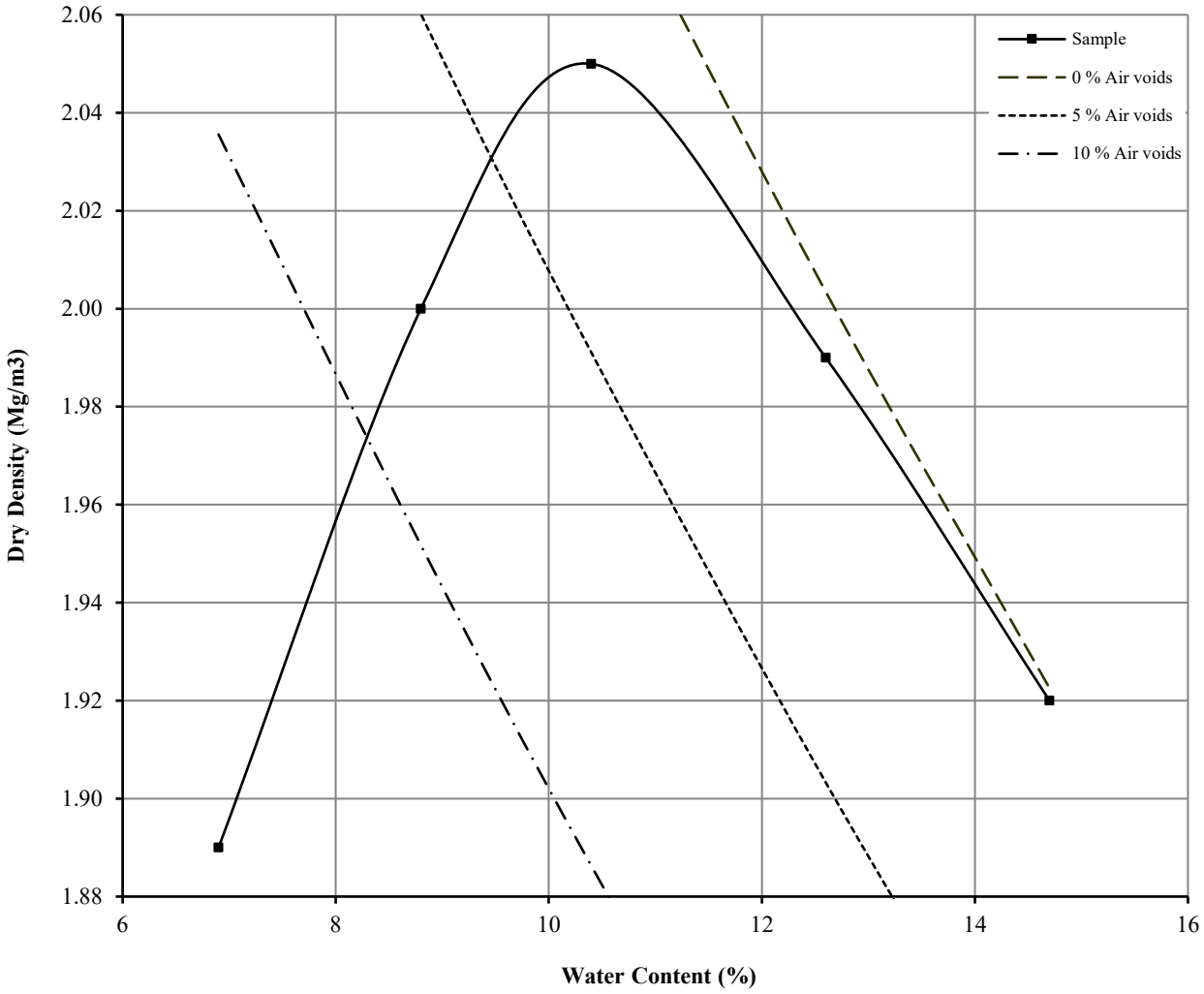
Black Cats, Huddersfield

Contract No.
PSL25/2056
Client Ref
4486

DRY DENSITY/WATER CONTENT RELATIONSHIP

BS 1377 - Part 2 : Clause 11 : 2022

Hole Number:	**TP707**	**Top Depth (m):**	**2.00**
Sample Number:	**2**	**Base Depth (m):**	
Sample Type:	**D&B**		



Initial Water Content:		6.9	Method of Compaction:	Vibro	Separate Samples
Particle Density (Mg/m3):	2.68	Measured	Material Retained on 37.5 mm Test Sieve (%):		51
Maximum Dry Density (Mg/m3):		2.05	Material Retained on 20.0 mm Test Sieve (%):		19
Optimum Water Content (%):		10	Grading Zone:		1
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats, Huddersfield

Contract No.
PSL25/2056
Client Ref
4486

LABORATORY REPORT

Contract Number: PSL25/8517

Report Date: 05 December 2025

Client's Reference: 4486

Client Name: Lithos Consulting
Parkhill
Walton Road
Wetherby
North Yorkshire
LS22 5DZ

For the attention of: Adam Gombocz/James Brown

Contract Title: Black Cats, Huddersfield

Date Received: 5/11/2025
Date Commenced: 5/11/2025
Date Completed: 5/12/2025

Notes: Opinions and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. 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 other than in full, without the prior written approval of the laboratory.

Checked and Approved Signatories:

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R Berriman (Associate Director)
S Royle (Laboratory Manager)

L Knight (Assistant Laboratory Manager)
S Eyre (Senior Technician)
T Watkins (Senior Technician)

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SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
TT802-N	1	D&B	0.80		Brown very sandy very clayey GRAVEL with cobbles.
TT804-W	2	D&B	1.40		Brown very sandy very clayey GRAVEL with cobbles.
TT806-N	1	D&B	0.90		Brown very sandy clayey GRAVEL with cobbles.
TT811-N	2	D&B	1.20		Brown sandy silty GRAVEL with cobbles.
TT814-C	2	D&B	2.00		Brown very sandy very clayey GRAVEL.
TT815-N	1	D&B	1.50		Dark brown sandy slightly silty GRAVEL with cobbles.
TT816-E	2	D&B	1.60		Dark brown very sandy clayey GRAVEL with cobbles.
TT818-S	2	D&B	1.60		Brown very sandy very clayey GRAVEL with cobbles.
TT819-E	1	D&B	1.70		Brown very sandy very clayey GRAVEL with cobbles.

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats, Huddersfield

Contract No:

PSL25/8517

Client Ref:

4486

SUMMARY OF SOIL CLASSIFICATION TESTS

BS 1377 - Part 2 : 2022 in accordance with BS EN ISO 17892 (as below)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Water Content %	Linear Shrinkage	Particle Density Mg/m^3	Liquid Limit %	Plastic Limit %	Plasticity Index %	Passing 0.425mm %	Remarks
TT802-N	1	D&B	0.80		16.0		2.54	29	17	12	40	Low Plasticity CIL
TT804-W	2	D&B	1.40		18.3		2.55	35	19	16	30	Medium Plasticity CIM
TT806-N	1	D&B	0.90		12.0		2.53		NP			
TT811-N	2	D&B	1.20		13.5		2.55		NP			
TT814-C	2	D&B	2.00		16.9		2.62	31	17	14	39	Low Plasticity CIL
TT815-N	1	D&B	1.50		12.2		2.55		NP			
TT816-E	2	D&B	1.60		15.2		2.49		NP			
TT818-S	2	D&B	1.60		13.9		2.65	35	16	19	26	Medium Plasticity CIM
TT819-E	1	D&B	1.70		16.5		2.54	31	15	16	28	Low Plasticity CIL

Water Content - BS 1377 - Part 2 : 2022 : Clause 4 in accordance with BS EN ISO 17892 - 1 : 2014 + A1 : 2022
Linear Shrinkage - BS 1377 - Part 2 : 2022 : Clause 7
Particle Density (Gas Jar method) - BS 1377 - Part 2 : 2022 : Clause 9
Liquid, Plastic Limit & Plasticity Index - BS 1377 - Part 2 : 2022 : Clause 5 & 6 in accordance with BS EN ISO 17892 - 12 : 2018 + A2 : 2022

SYMBOLS : NP = Non Plastic

UKAS TESTING 4043

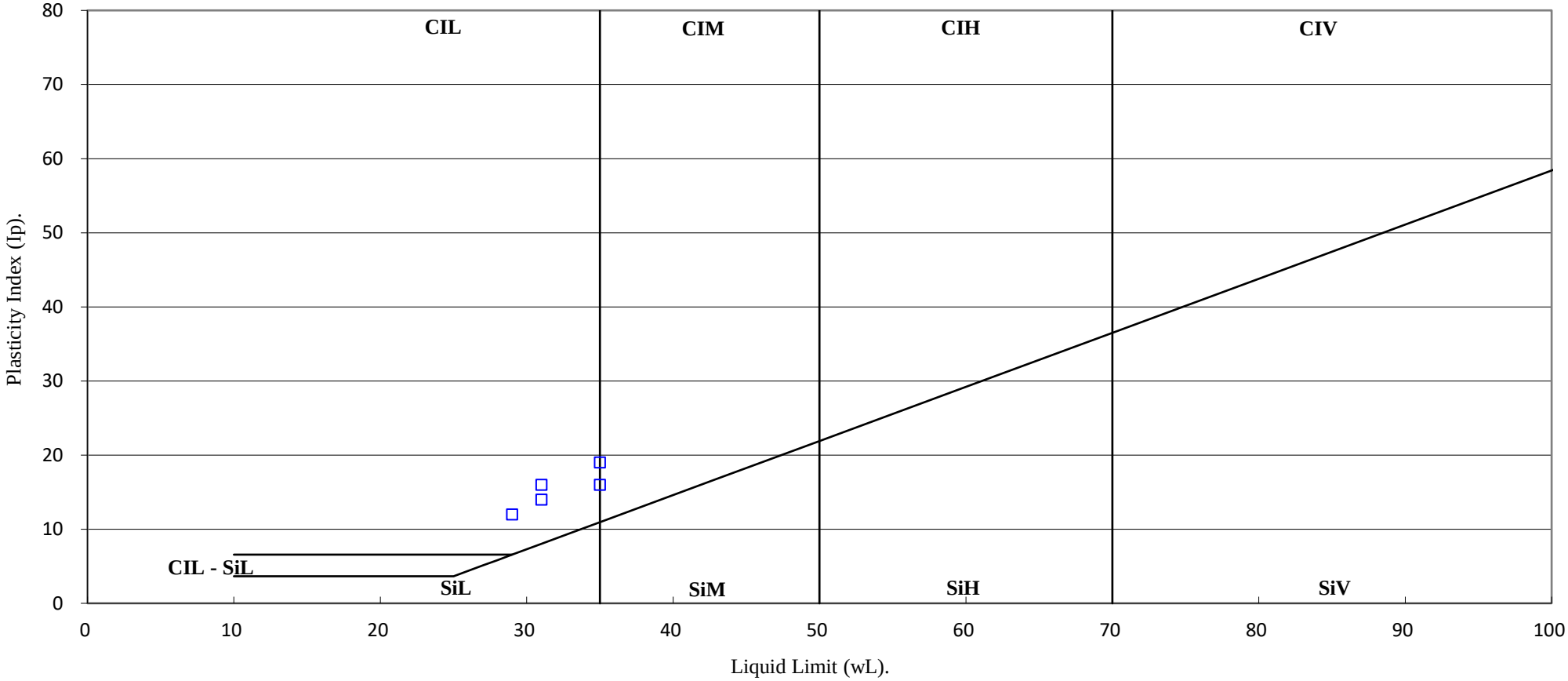
PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats, Huddersfield

Contract No:
PSL25/8517
Client Ref:
4486

PLASTICITY CHART

BS EN ISO 14688-2:2017 Clause 4.4



UKAS TESTING 4043 / PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY	**Black Cats, Huddersfield**	**Contract No:**
		PSL25/8517
		Client Ref:
		4486

PARTICLE SIZE DISTRIBUTION TEST

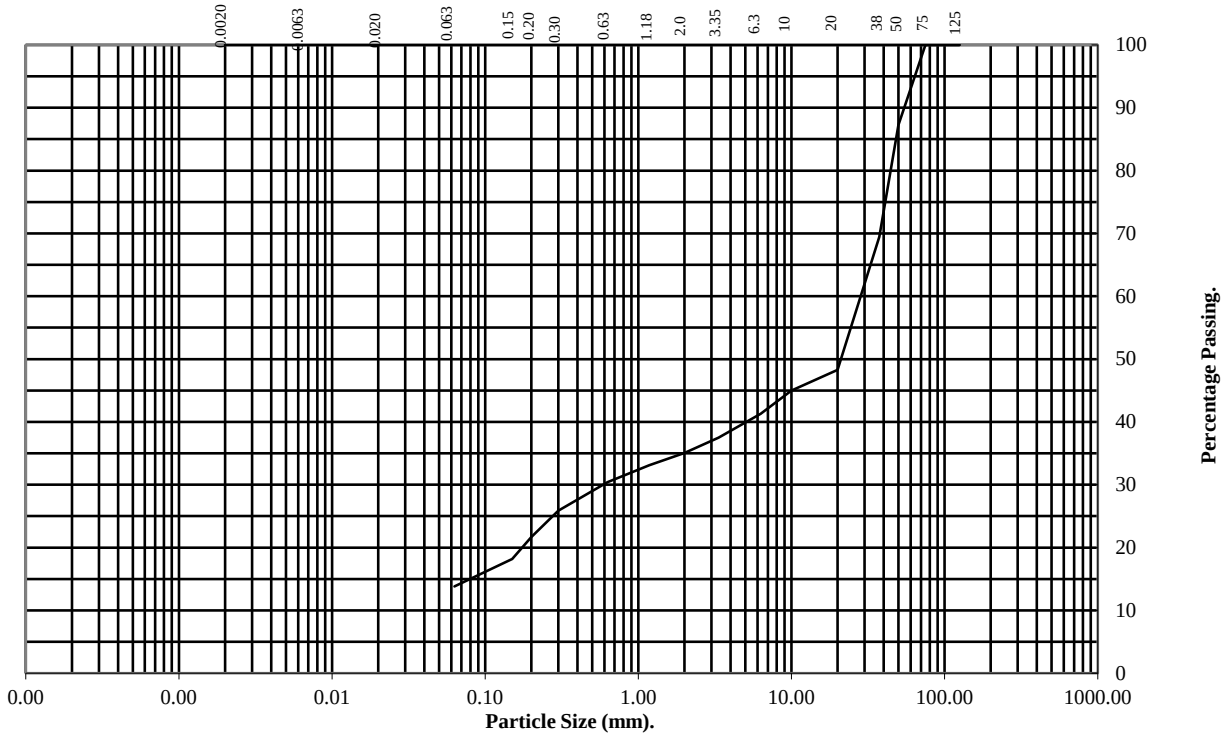
BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number: TT802-N **Top Depth (m):** 0.80

Sample Number: 1 **Base Depth (m):**

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
50	87
37.5	69
20	48
10	45
6.3	41
3.35	38
2	35
1.18	33
0.63	30
0.3	26
0.2	22
0.15	18
0.063	14

Soil Fraction	Total Percentage
Cobbles	13
Gravel	52
Sand	21
Silt/Clay	14

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats, Huddersfield

Contract No:
PSL25/8517
Client Ref:
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PARTICLE SIZE DISTRIBUTION TEST

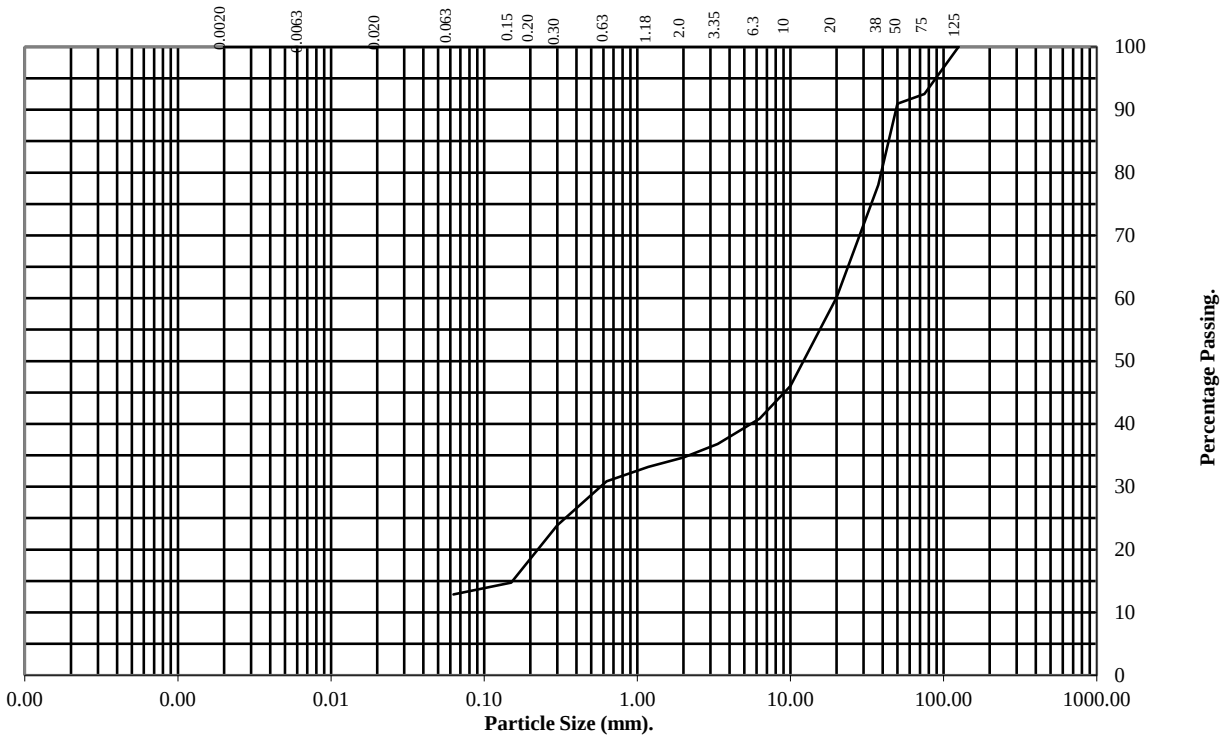
BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number: **TT804-W** **Top Depth (m):** **1.40**

Sample Number: **2** **Base Depth (m):**

Sample Type: **D&B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	93
50	91
37.5	78
20	60
10	46
6.3	41
3.35	37
2	35
1.18	33
0.63	31
0.3	24
0.2	19
0.15	15
0.063	13

Soil Fraction	Total Percentage
Cobbles	9
Gravel	56
Sand	22
Silt/Clay	13

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

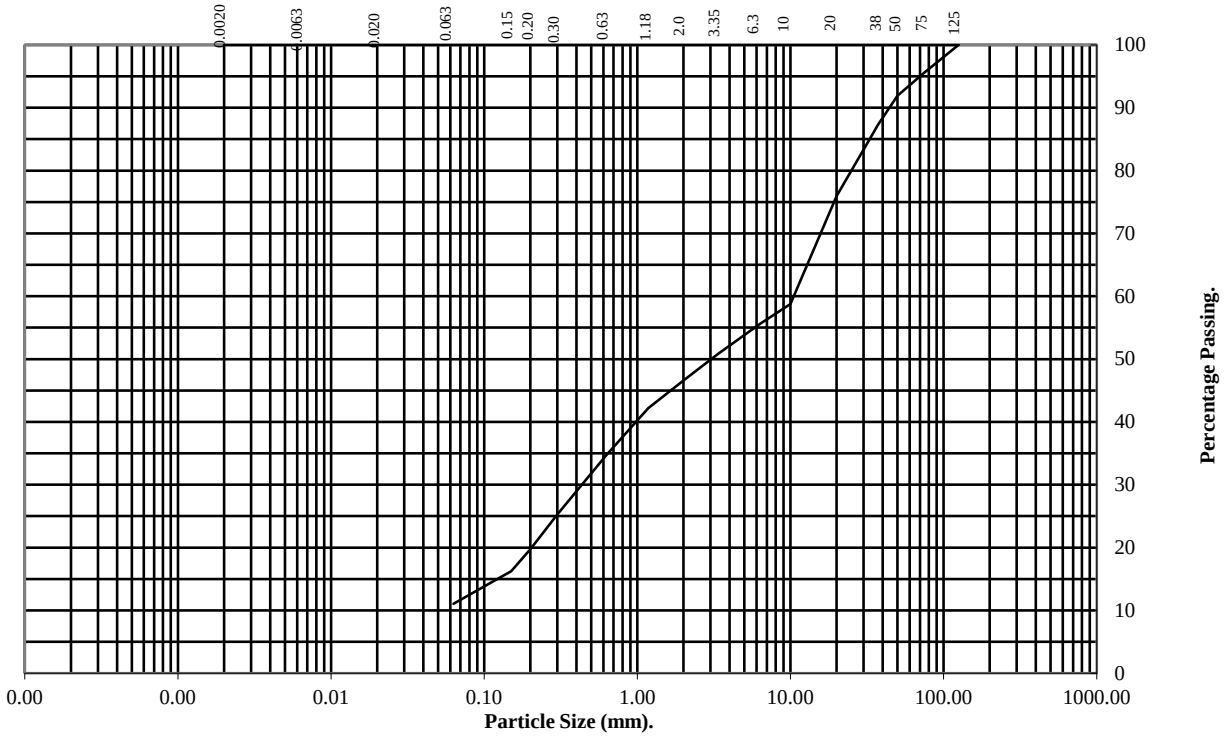
BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number: **TT806-N** **Top Depth (m):** **0.90**

Sample Number: **1** **Base Depth (m):**

Sample Type: **D&B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	96
50	92
37.5	87
20	76
10	59
6.3	56
3.35	51
2	47
1.18	42
0.63	35
0.3	25
0.2	20
0.15	16
0.063	11

Soil Fraction	Total Percentage
Cobbles	8
Gravel	45
Sand	36
Silt/Clay	11

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats, Huddersfield

Contract No:
PSL25/8517
Client Ref:
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PARTICLE SIZE DISTRIBUTION TEST

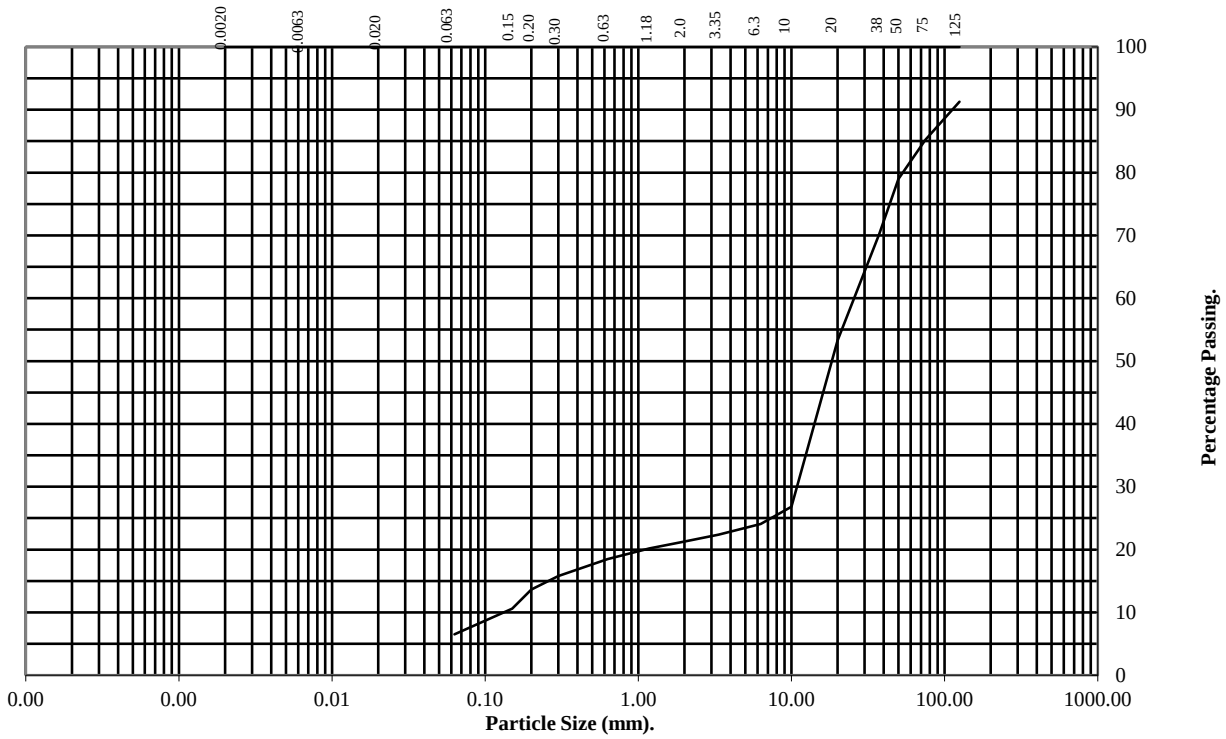
BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number: TT811-N **Top Depth (m):** 1.20

Sample Number: 2 **Base Depth (m):**

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	91
75	85
50	79
37.5	70
20	53
10	27
6.3	24
3.35	22
2	21
1.18	20
0.63	18
0.3	16
0.2	14
0.15	11
0.063	7

Soil Fraction	Total Percentage
Cobbles	21
Gravel	58
Sand	14
Silt/Clay	7

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats, Huddersfield

Contract No:
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Client Ref:
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PARTICLE SIZE DISTRIBUTION TEST

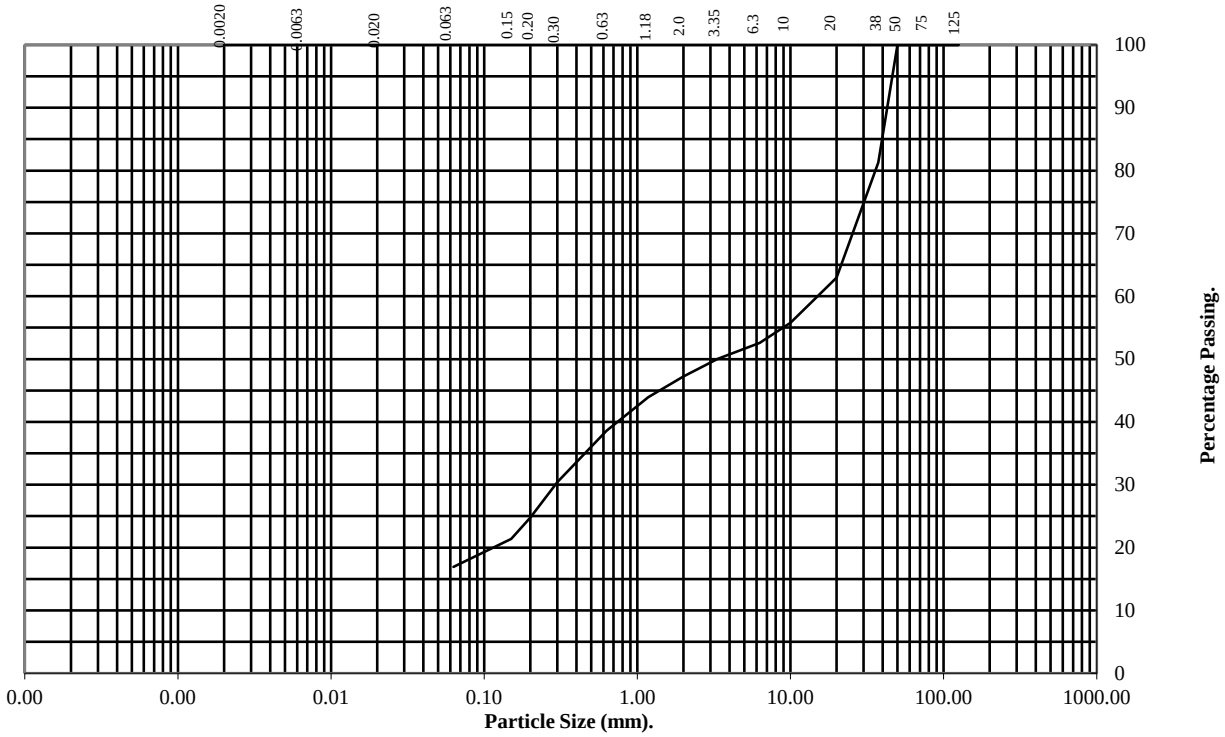
BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number: TT814-C **Top Depth (m):** 2.00

Sample Number: 2 **Base Depth (m):**

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
50	100
37.5	81
20	63
10	56
6.3	53
3.35	50
2	47
1.18	44
0.63	39
0.3	30
0.2	25
0.15	21
0.063	17

Soil Fraction	Total Percentage
Cobbles	0
Gravel	53
Sand	30
Silt/Clay	17

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats, Huddersfield

Contract No:
PSL25/8517
Client Ref:
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PARTICLE SIZE DISTRIBUTION TEST

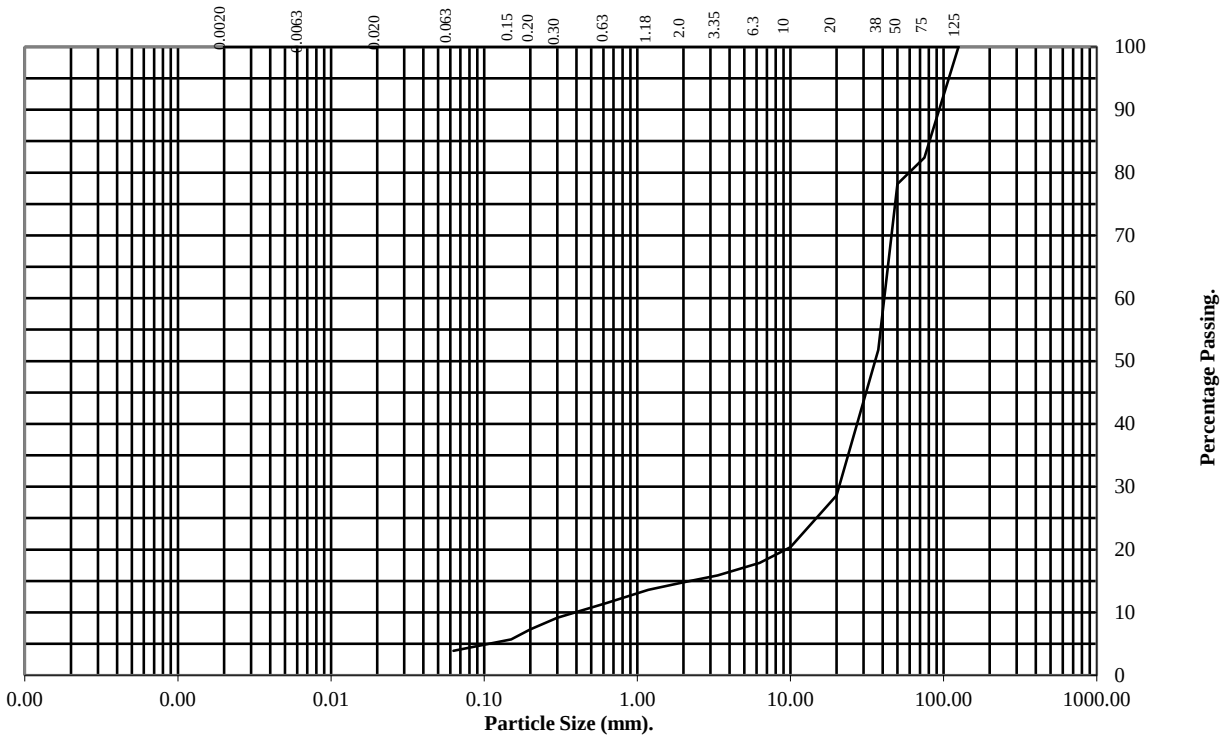
BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number: TT815-N **Top Depth (m):** 1.50

Sample Number: 1 **Base Depth (m):**

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	100
75	82
50	78
37.5	52
20	29
10	20
6.3	18
3.35	16
2	15
1.18	14
0.63	12
0.3	9
0.2	7
0.15	6
0.063	4

Soil Fraction	Total Percentage
Cobbles	22
Gravel	63
Sand	11
Silt/Clay	4

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats, Huddersfield

Contract No:
PSL25/8517
Client Ref:
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PARTICLE SIZE DISTRIBUTION TEST

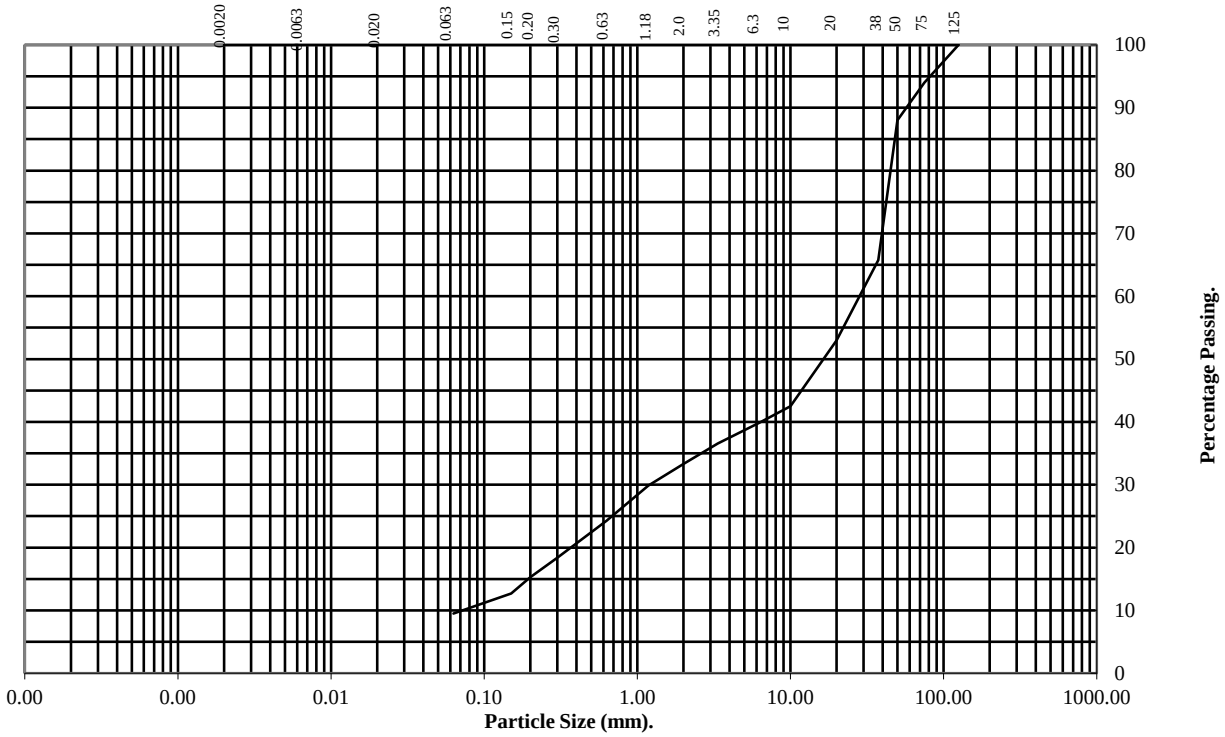
BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number: TT816-E **Top Depth (m):** 1.60

Sample Number: 2 **Base Depth (m):**

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	100
75	94
50	88
37.5	66
20	53
10	42
6.3	40
3.35	37
2	33
1.18	30
0.63	24
0.3	18
0.2	15
0.15	13
0.063	9

Soil Fraction	Total Percentage
Cobbles	12
Gravel	55
Sand	24
Silt/Clay	9

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats, Huddersfield

Contract No:
PSL25/8517
Client Ref:
4486

PARTICLE SIZE DISTRIBUTION TEST

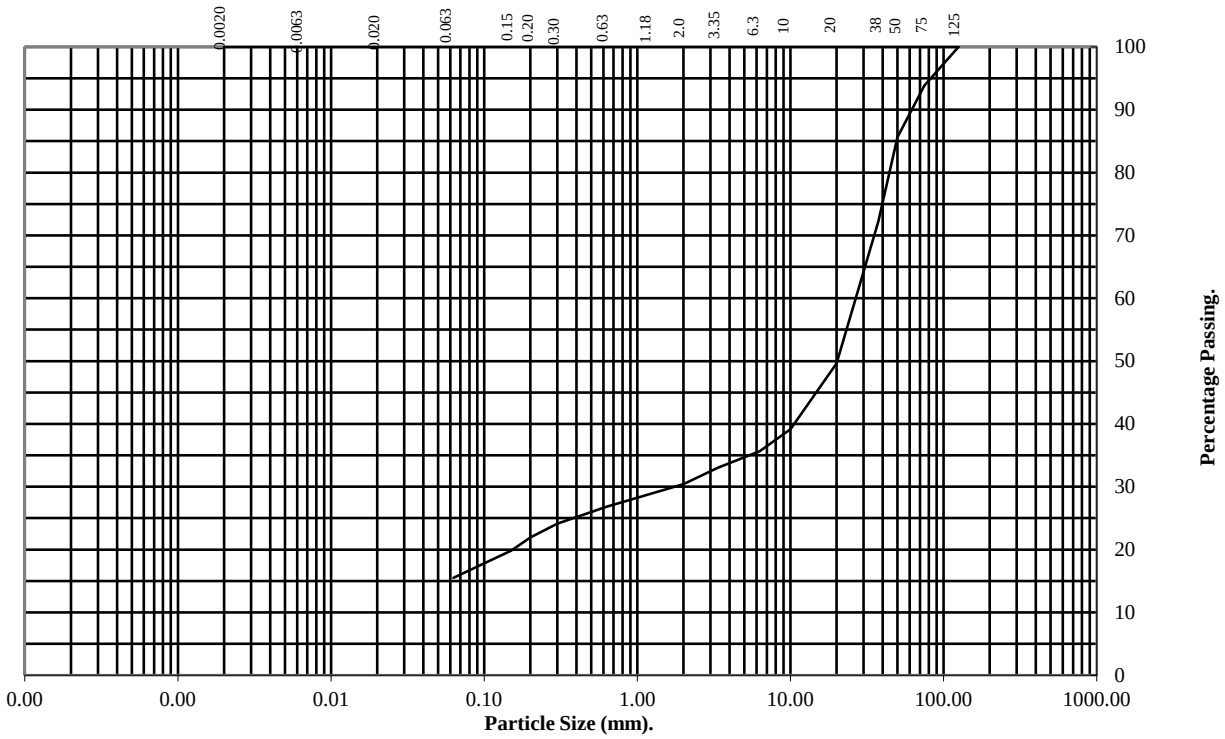
BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number: TT818-S **Top Depth (m):** 1.60

Sample Number: 2 **Base Depth (m):**

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	100
75	94
50	86
37.5	72
20	50
10	39
6.3	36
3.35	33
2	30
1.18	29
0.63	27
0.3	24
0.2	22
0.15	20
0.063	15

Soil Fraction	Total Percentage
Cobbles	14
Gravel	56
Sand	15
Silt/Clay	15

Remarks:

See Summary of Soil Descriptions

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats, Huddersfield

Contract No:
PSL25/8517
Client Ref:
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PARTICLE SIZE DISTRIBUTION TEST

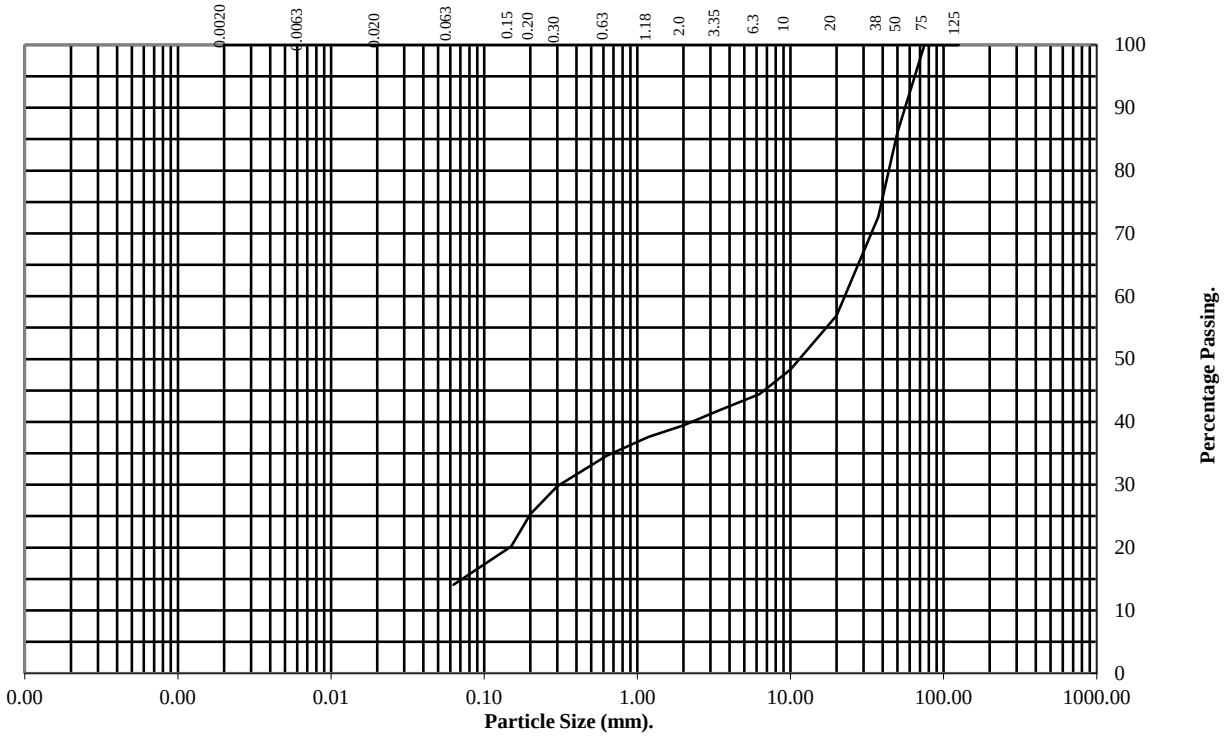
BS 1377 - Part 2 : 2022 : Clause 10 in accordance with BS EN ISO 17892 - 4 : 2016

Sieve Method, Clause 5.2

Hole Number: TT819-E **Top Depth (m):** 1.70

Sample Number: 1 **Base Depth (m):**

Sample Type: D&B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
50	86
37.5	73
20	57
10	48
6.3	44
3.35	42
2	39
1.18	38
0.63	35
0.3	30
0.2	25
0.15	20
0.063	14

Soil Fraction	Total Percentage
Cobbles	14
Gravel	47
Sand	25
Silt/Clay	14

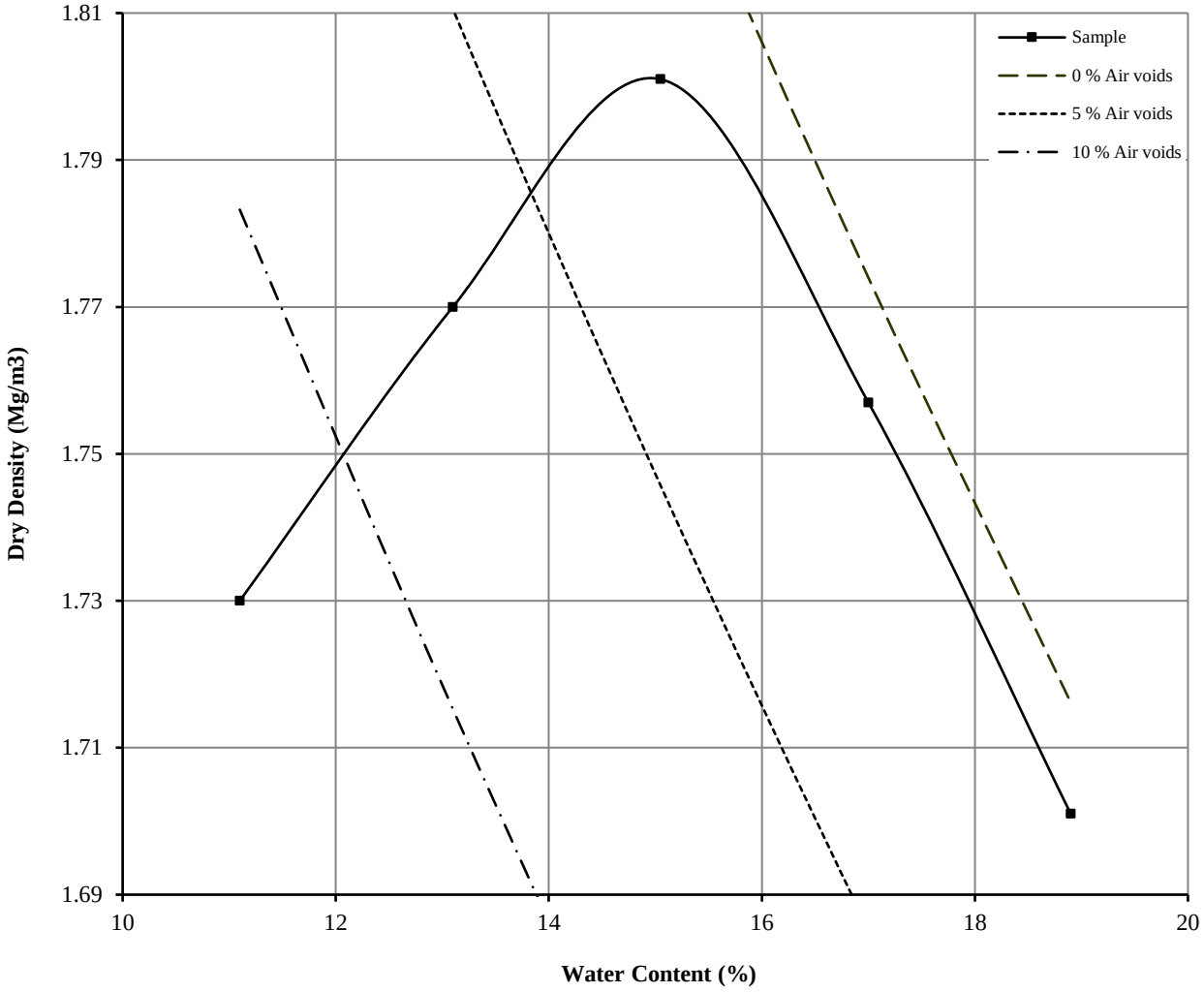
Remarks:

See Summary of Soil Descriptions

DRY DENSITY/WATER CONTENT RELATIONSHIP

Non compliance with BS 1377 - Part 2 : Clause 11 : 2022

Hole Number:	**TT802-N**	**Top Depth (m):**	**0.80**
Sample Number:	**1**	**Base Depth (m):**	
Sample Type:	**D&B**		

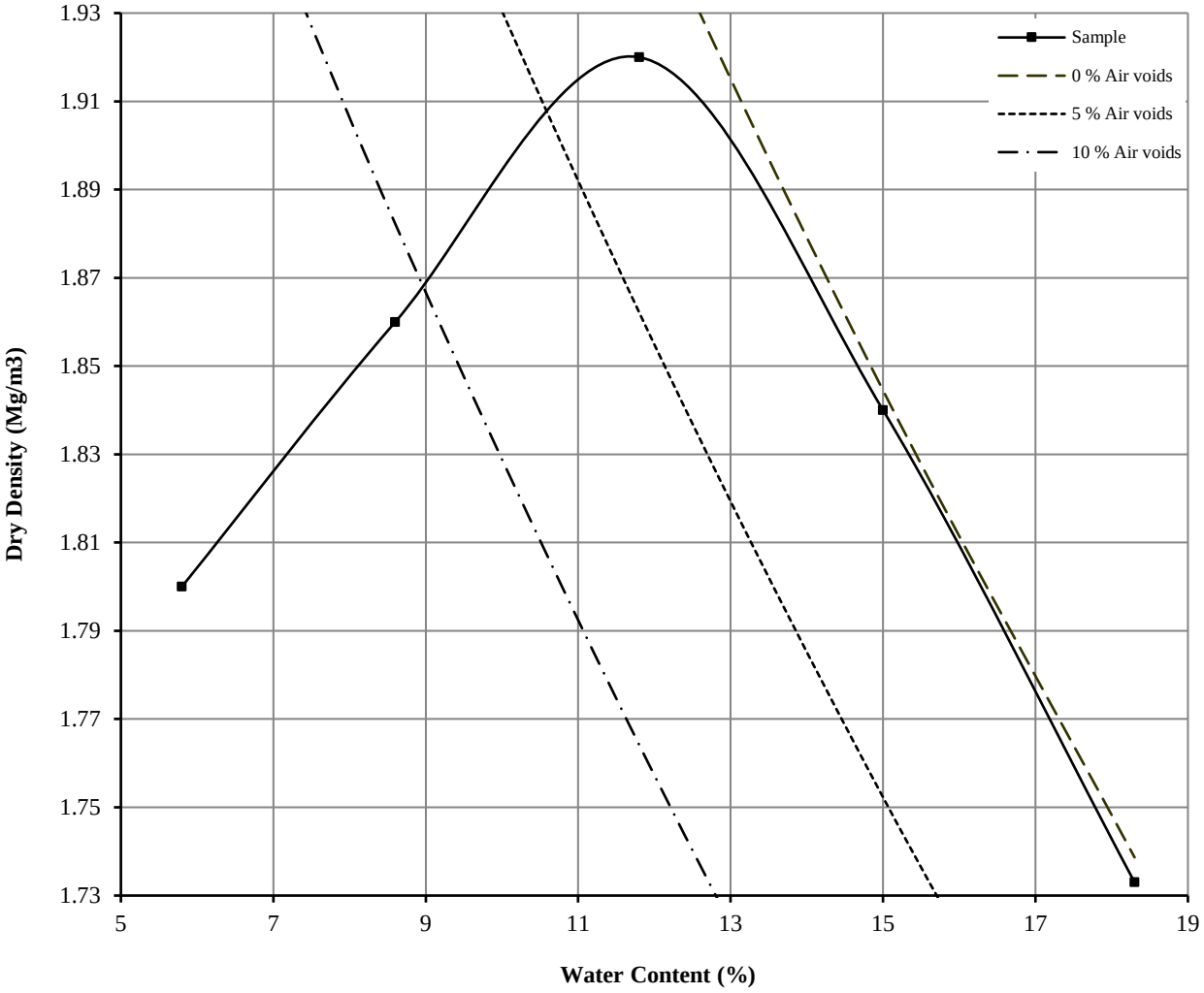


Initial Water Content:		18.9	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.54	Measured	Material Retained on 37.5 mm Test Sieve (%):		31
Maximum Dry Density (Mg/m3):		1.80	Material Retained on 20.0 mm Test Sieve (%):		21
Optimum Water Content (%):		15	Grading Zone:		X
Remarks See summary of soil descriptions					

DRY DENSITY/WATER CONTENT RELATIONSHIP

Non compliance with BS 1377 - Part 2 : Clause 11 : 2022

Hole Number:	**TT804-W**	**Top Depth (m):**	**1.40**
Sample Number:	**2**	**Base Depth (m):**	
Sample Type:	**D&B**		

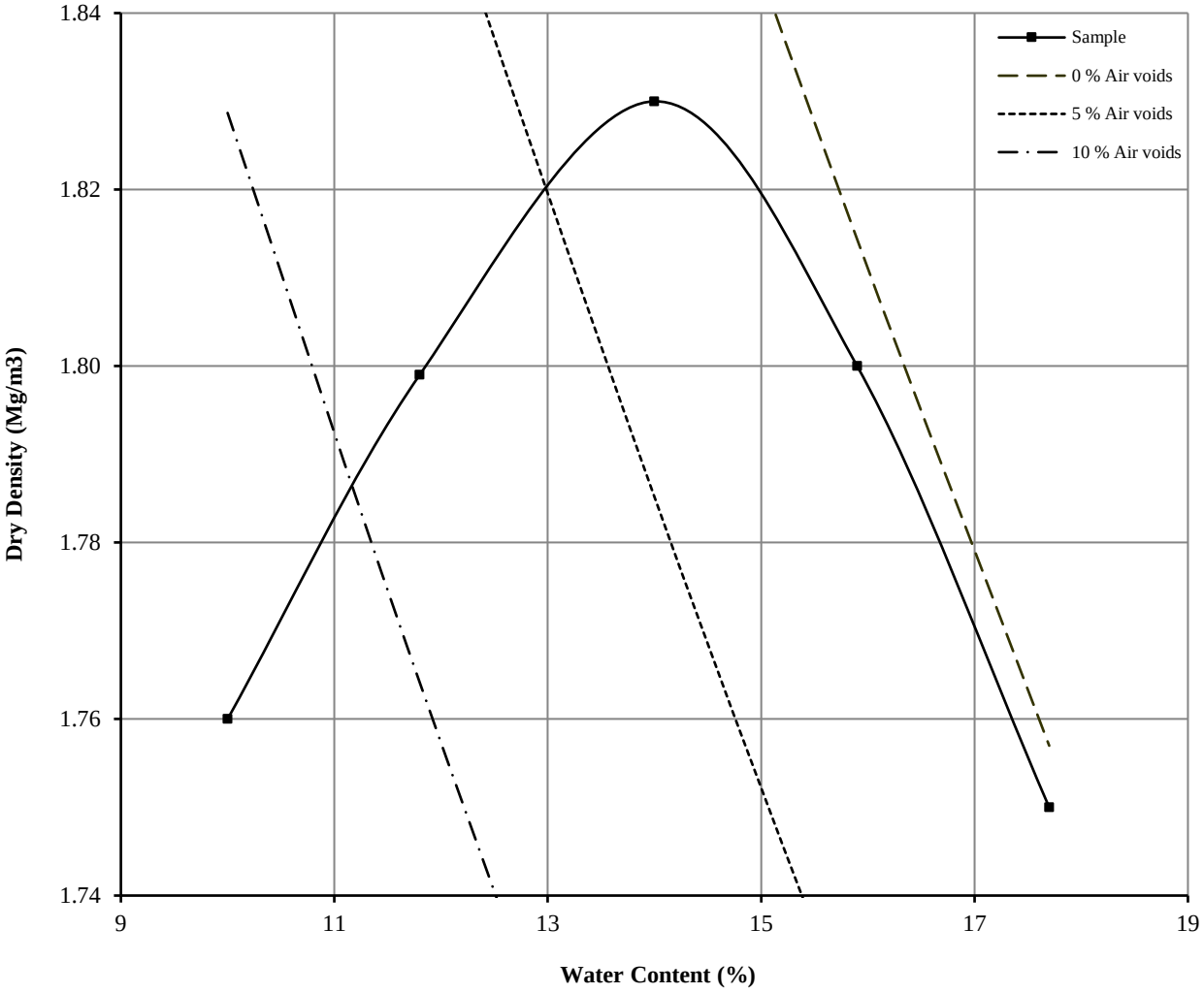


Initial Water Content:		18.3	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.55	Measured	Material Retained on 37.5 mm Test Sieve (%):		18
Maximum Dry Density (Mg/m3):		1.92	Material Retained on 20.0 mm Test Sieve (%):		22
Optimum Water Content (%):		12	Grading Zone:		X
Remarks See summary of soil descriptions					

DRY DENSITY/WATER CONTENT RELATIONSHIP

Non compliance with BS 1377 - Part 2 : Clause 11 : 2022

Hole Number:	**TT806-N**	**Top Depth (m):**	**0.90**
Sample Number:	**1**	**Base Depth (m):**	
Sample Type:	**D&B**		



Initial Water Content:		15.9	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.55	Measured	Material Retained on 37.5 mm Test Sieve (%):		13
Maximum Dry Density (Mg/m3):		1.83	Material Retained on 20.0 mm Test Sieve (%):		11
Optimum Water Content (%):		14	Grading Zone:		X
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats, Huddersfield

Contract No.
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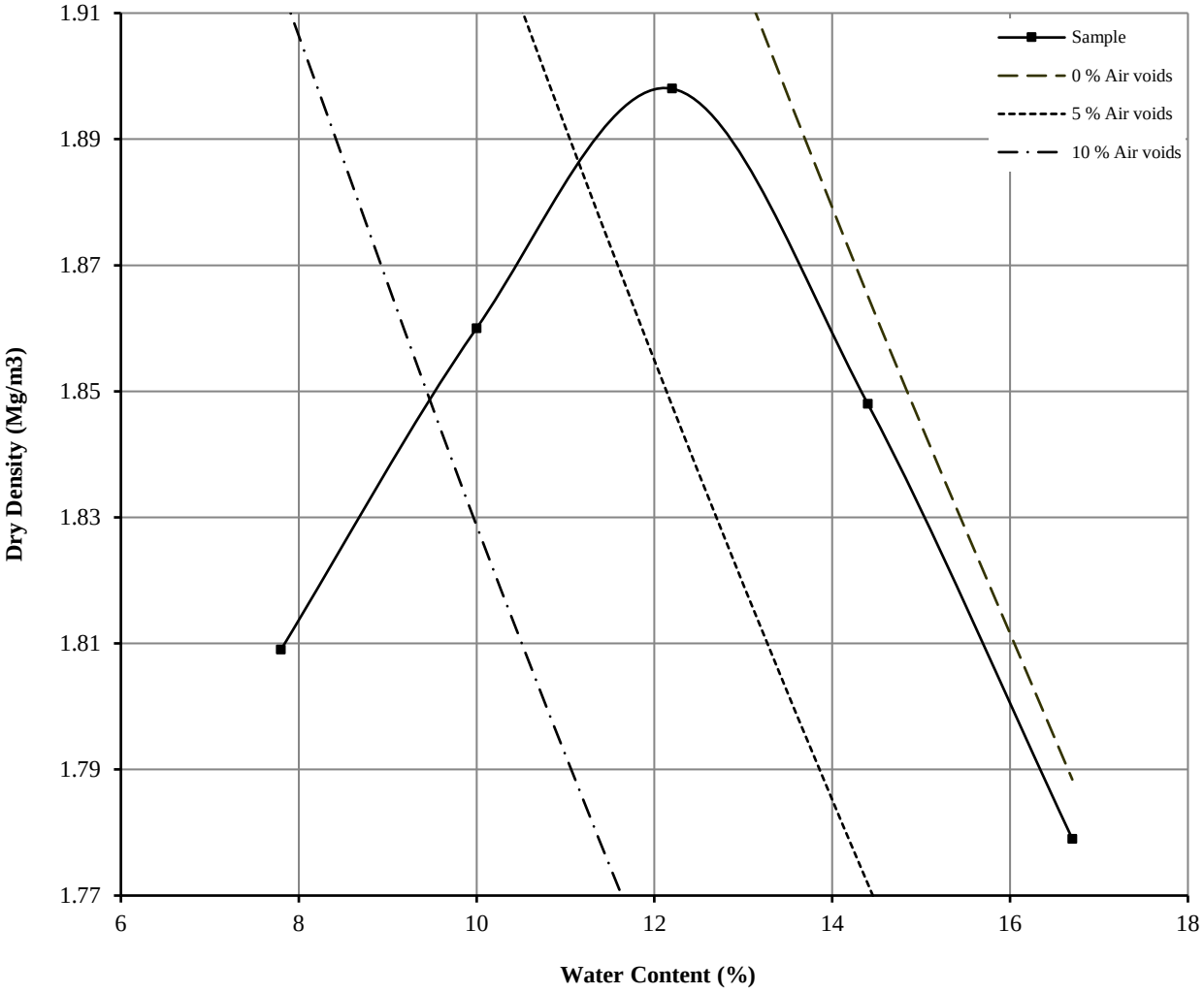
4486

DRY DENSITY/WATER CONTENT RELATIONSHIP

Non compliance with BS 1377 - Part 2 : Clause 11 : 2022

Hole Number:	**TT811-N**	**Top Depth (m):**	**1.20**
Sample Number:	**2**	**Base Depth (m):**	
Sample Type:	**D&B**		



Initial Water Content:		14.4	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.55	Measured	Material Retained on 37.5 mm Test Sieve (%):		30
Maximum Dry Density (Mg/m3):		1.90	Material Retained on 20.0 mm Test Sieve (%):		17
Optimum Water Content (%):		12	Grading Zone:		X
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats, Huddersfield

Contract No.
PSL25/8517
Client Ref
4486

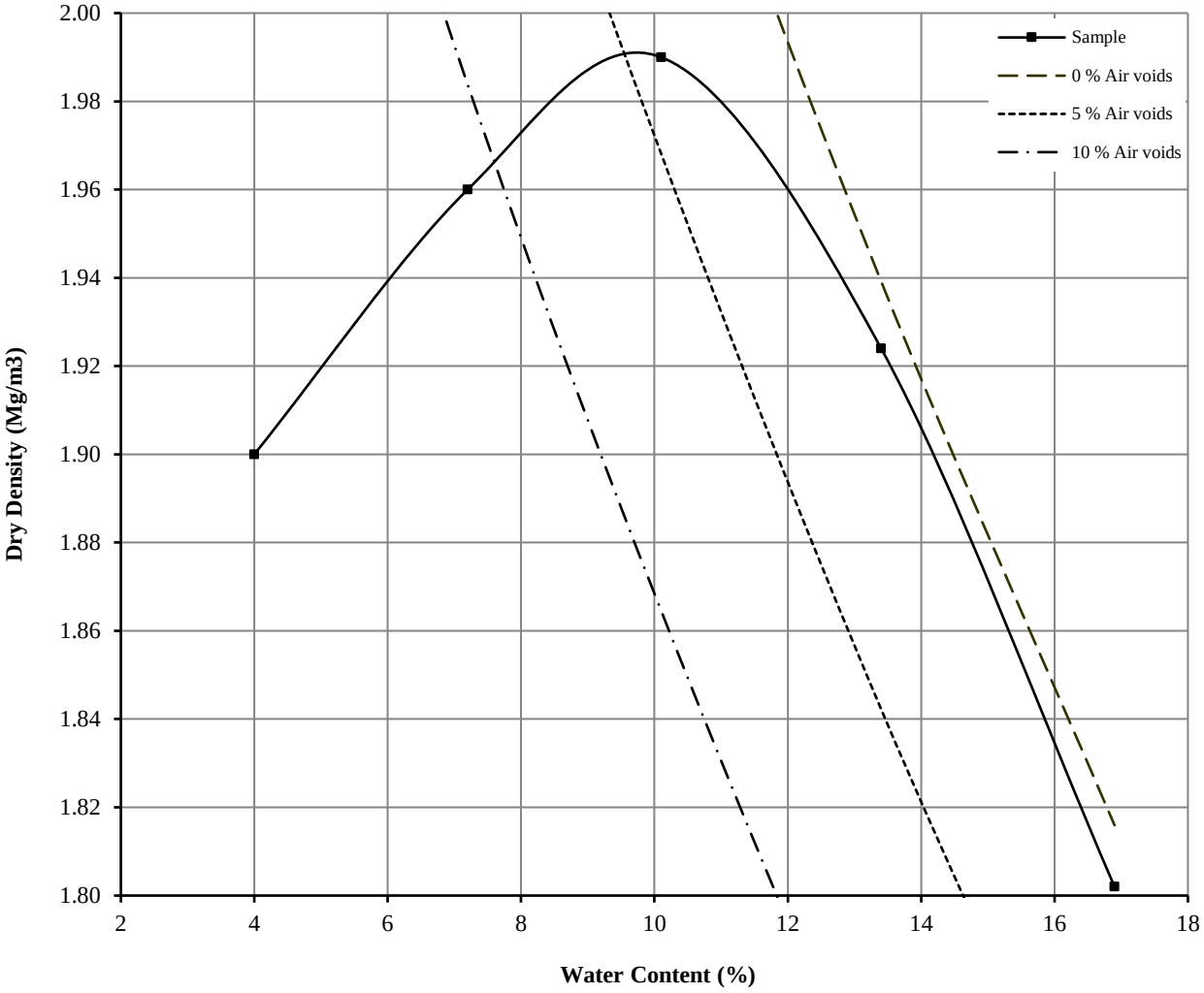
DRY DENSITY/WATER CONTENT RELATIONSHIP

Non compliance with BS 1377 - Part 2 : Clause 11 : 2022

Hole Number: TT814-C **Top Depth (m):** 2.00

Sample Number: 2 **Base Depth (m):**

Sample Type: D&B



Initial Water Content:		16.9	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.62	Measured	Material Retained on 37.5 mm Test Sieve (%):		19
Maximum Dry Density (Mg/m3):		1.99	Material Retained on 20.0 mm Test Sieve (%):		18
Optimum Water Content (%):		10	Grading Zone:		X
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats, Huddersfield

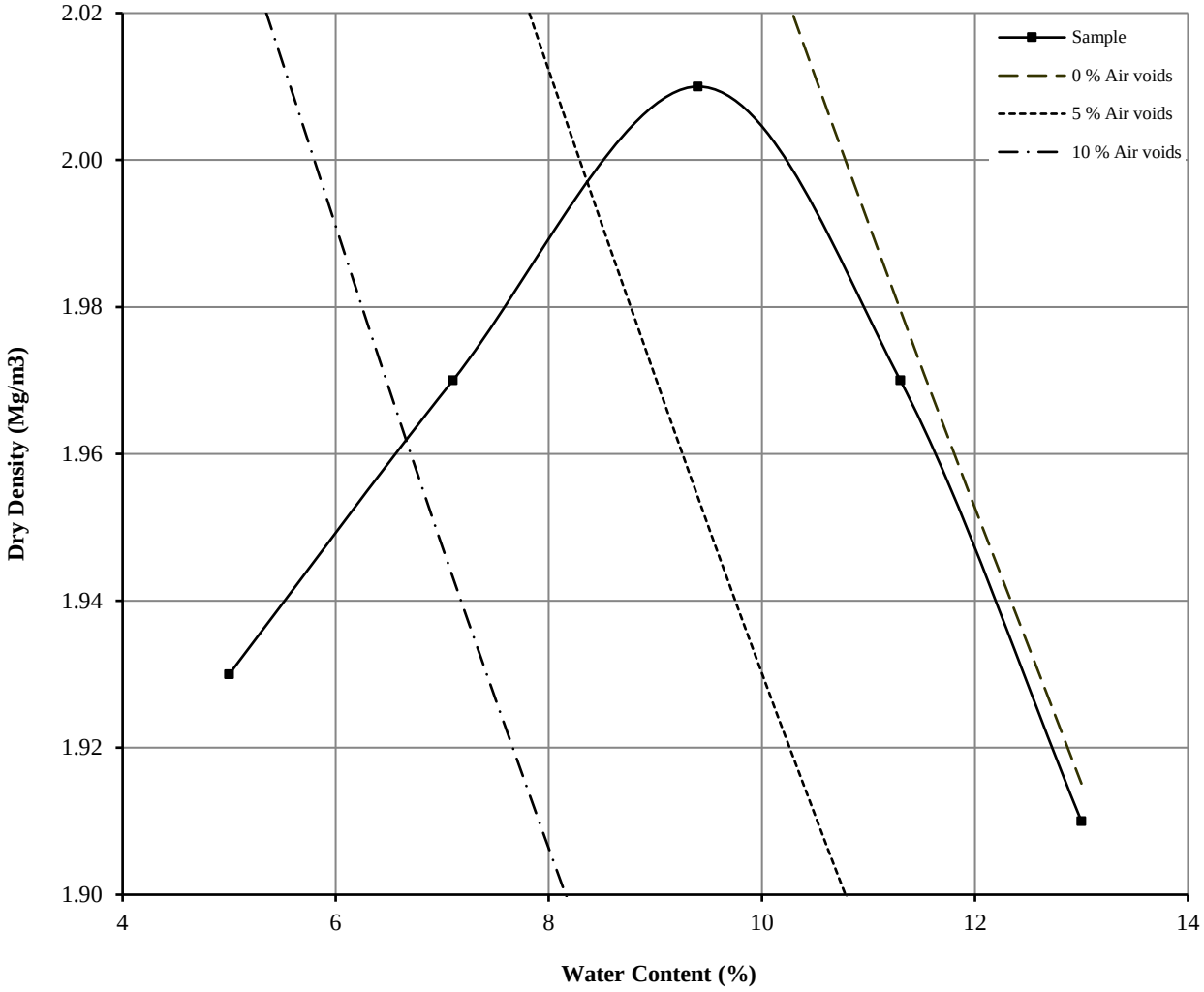
Contract No. PSL25/8517

Client Ref 4486

DRY DENSITY/WATER CONTENT RELATIONSHIP

Non compliance with BS 1377 - Part 2 : Clause 11 : 2022

Hole Number:	**TT815-N**	**Top Depth (m):**	**1.50**
Sample Number:	**1**	**Base Depth (m):**	
Sample Type:	**D&B**		



Initial Water Content:		9.4	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.55	Measured	Material Retained on 37.5 mm Test Sieve (%):		48
Maximum Dry Density (Mg/m3):		2.01	Material Retained on 20.0 mm Test Sieve (%):		23
Optimum Water Content (%):		9	Grading Zone:		X
Remarks See summary of soil descriptions					

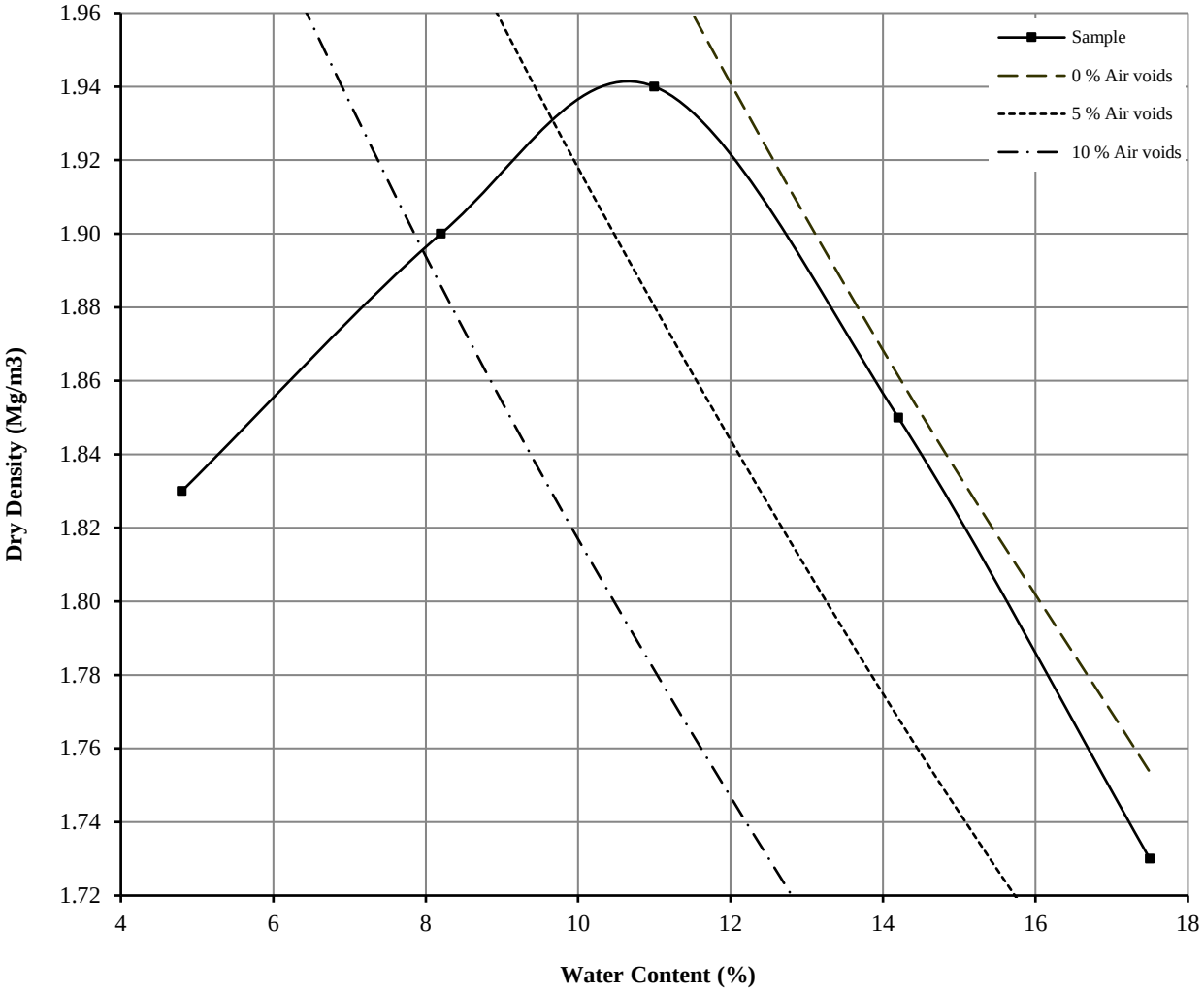
DRY DENSITY/WATER CONTENT RELATIONSHIP

Non compliance with BS 1377 - Part 2 : Clause 11 : 2022

Hole Number: TT816-E **Top Depth (m):** 1.60

Sample Number: 2 **Base Depth (m):**

Sample Type: D&B



Initial Water Content:		17.5	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.53	Measured	Material Retained on 37.5 mm Test Sieve (%):		34
Maximum Dry Density (Mg/m3):		1.94	Material Retained on 20.0 mm Test Sieve (%):		13
Optimum Water Content (%):		11	Grading Zone:		X
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

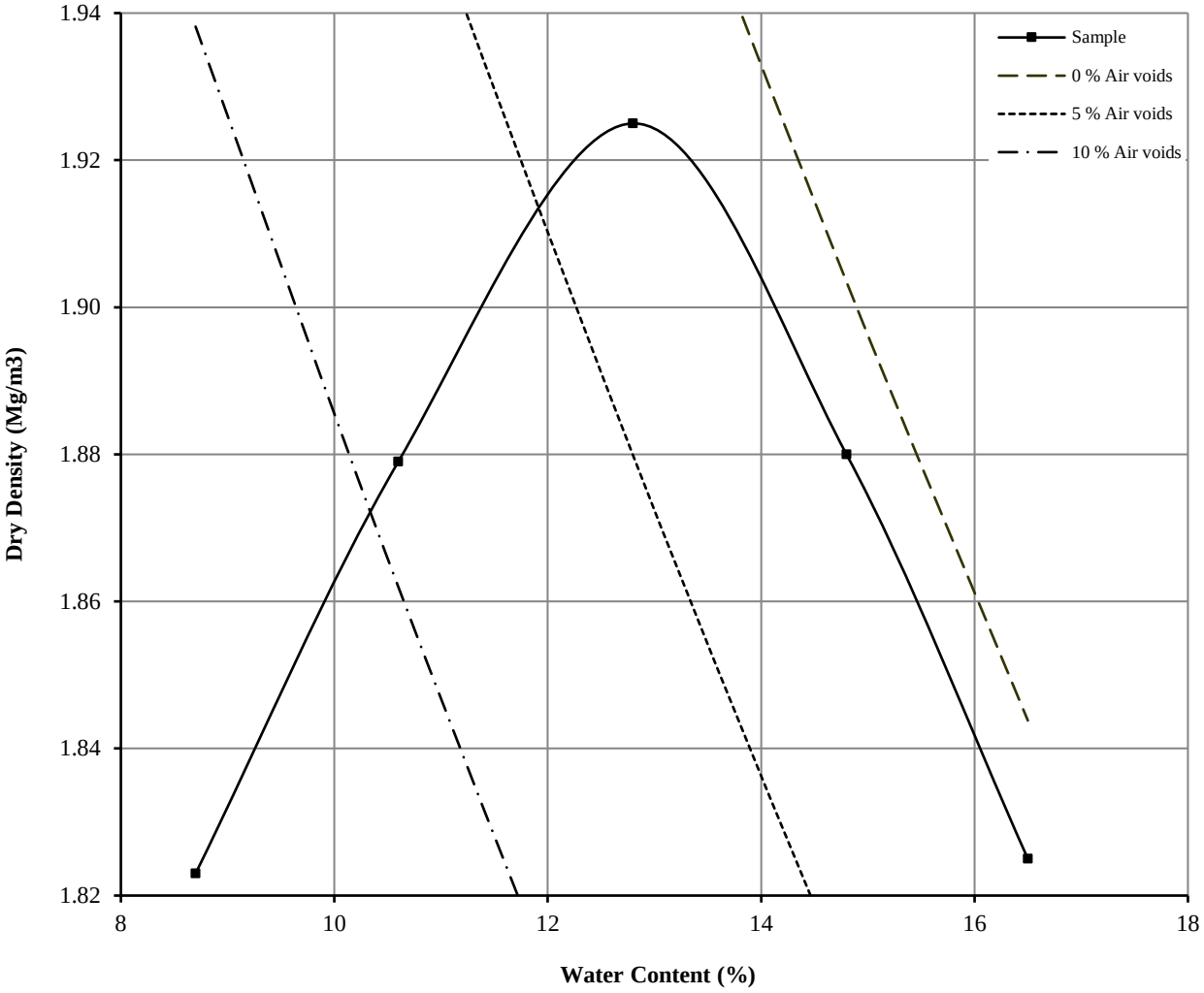
Black Cats, Huddersfield

Contract No.
PSL25/8517
Client Ref
4486

DRY DENSITY/WATER CONTENT RELATIONSHIP

Non compliance with BS 1377 - Part 2 : Clause 11 : 2022

Hole Number:	**TT818-S**	**Top Depth (m):**	**1.60**
Sample Number:	**2**	**Base Depth (m):**	
Sample Type:	**D&B**		



Initial Water Content:		14.8	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.65	Measured	Material Retained on 37.5 mm Test Sieve (%):		28
Maximum Dry Density (Mg/m3):		1.93	Material Retained on 20.0 mm Test Sieve (%):		22
Optimum Water Content (%):		13	Grading Zone:		X
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats, Huddersfield

Contract No.
PSL25/8517
Client Ref
4486

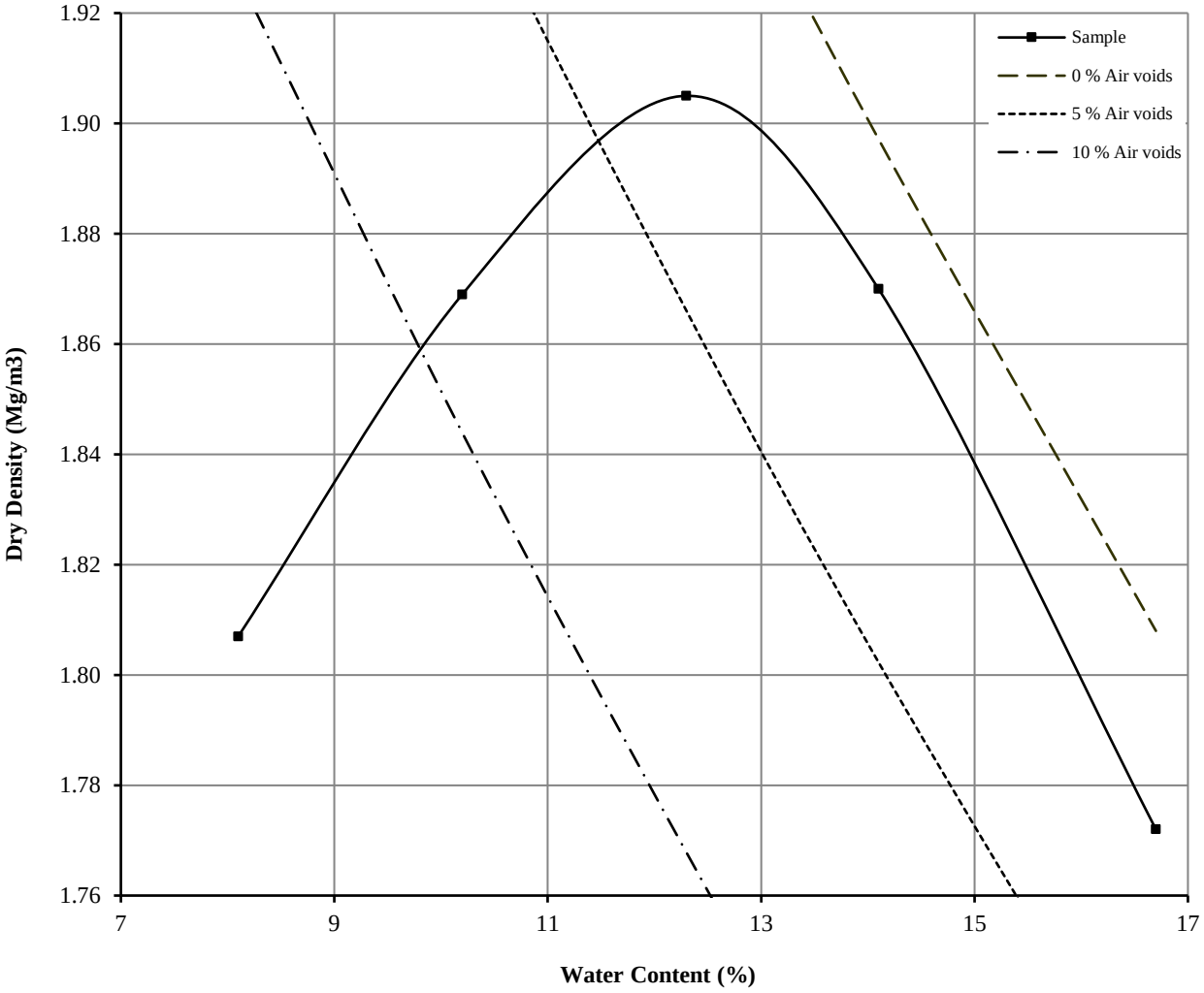
DRY DENSITY/WATER CONTENT RELATIONSHIP

Non compliance with BS 1377 - Part 2 : Clause 11 : 2022

Hole Number: TT819-E **Top Depth (m):** 1.70

Sample Number: 1 **Base Depth (m):**

Sample Type: D&B



Initial Water Content:		18.7	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.59	Measured	Material Retained on 37.5 mm Test Sieve (%):		27
Maximum Dry Density (Mg/m3):		1.91	Material Retained on 20.0 mm Test Sieve (%):		16
Optimum Water Content (%):		12	Grading Zone:		X
Remarks See summary of soil descriptions					

UKAS TESTING 4043

PSL PROFESSIONAL SOILS LABORATORY A PHENNA GROUP COMPANY

Black Cats, Huddersfield

Contract No. PSL25/8517

Client Ref 4486

Analytical Test Report	**L25/12938/PSL/25-93435**	**Tested on Behalf of**
Clients Project Reference	PSL25/8517 Black Cats, Huddersfield	Professional Soils Laboratory
Clients Order Number	PSL25/8517	5/7 Hexthorpe Road
Sample(s) Analysed	10	Hexthorpe
Sample(s) received / instructed	01/12/2025 / 01/12/2025	Doncaster
Sample(s) Tested	01/12/2025 to 05/12/2025	
Report issued	05/12/2025	DN4 0AR
Report issue number	1	

Signed

James Gane
Analytical Services Manager

Notes:

General

This report shall not be reproduce except in full

Please refer to Methodologies page for details pertaining to the analytical methods undertaken.

Samples were supplied by customer, results apply to the samples as received.

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Where specification limits are included these are for guidance only. Where a measured value has been highlighted this is not implying acceptance or failure and certainty of measurement values have not been taken into account.

Uncertainty of measurement values are available on request.

Moisture Content was determined in accordance with CTS method statement MS - CL - Sample Prep, oven dried at <30˚C.

Moisture Content is reported as a percentage of the dry mass of soil, this calculation is in accordance with BS1377, Part 2, 1990, Clause 3.2

Stone Content was determined in accordance with CTS method statement MS - CL - Sample Prep and refers to the percentage of stones retained on a 10mm BS test sieve.

MCERTS Accreditation only covers the SAND, CLAY and LOAM matrices

Deviating Samples

On receipt samples are compared against our sample holding and handling protocols, where any deviations have been noted these are reported on our deviating sample page (if present)

Accreditation Key

U = UKAS Accreditation, M = MCERTS Accreditation, N = Unaccredited, SC = Subcontracted

L25/12938/PSL/25-93435

PSL25/8517 Black Cats, Huddersfield

Analytical Test Results - ENV Analysis Soils

Lab Reference				653725	653727	653728	653729
Client Sample ID				-	-	-	-
Client Sample Location				TT802-N	TT804-W	TT806-N	TT811-N
Client Sample Type				-	-	-	-
Client Sample Number				1	2	1	2
Depth - Top (m)				0.8	1.4	0.9	1.2
Depth - Bottom (m)				0.8	1.4	0.9	1.2
Date of Sampling				30/10/2025	30/10/2025	30/10/2025	30/10/2025
Time of Sampling				-	-	-	-
Sample Matrix				Clay	Clay	Clay	Clay
Determinant	**Units**	**LOD**	**Accreditation**				
pH	pH units	1	M	8.1	8.2	8.3	8.4
Water Soluble Sulphate (as SO4)	mg/L	10	N	240	33	15	21

Date of Issue: 21.01.25
Issued by: J. Gane
Issue No: 1
Rev No: 9

Testing performed at
7-11 Harding Street, Leicester, LE1 4DH

L25/12938/PSL/25-93435

PSL25/8517 Black Cats, Huddersfield

Analytical Test Results - ENV Analysis Soils

Lab Reference				653730	653731	653732	653733
Client Sample ID				-	-	-	-
Client Sample Location				TT814-C	TT815-N	TT816-E	TT818-S
Client Sample Type				-	-	-	-
Client Sample Number				2	1	2	2
Depth - Top (m)				2	1.5	1.6	1.6
Depth - Bottom (m)				2	1.5	1.6	1.6
Date of Sampling				30/10/2025	30/10/2025	30/10/2025	30/10/2025
Time of Sampling				-	-	-	-
Sample Matrix				Clay	Clay	Clay	Clay
Determinant	**Units**	**LOD**	**Accreditation**				
pH	pH units	1	M	8.2	8.0	7.8	5.5
Water Soluble Sulphate (as SO4)	mg/L	10	N	19	42	42	30

Date of Issue: 21.01.25
Issued by: J. Gane
Issue No: 1
Rev No: 9

Testing performed at
7-11 Harding Street, Leicester, LE1 4DH

L25/12938/PSL/25-93435

PSL25/8517 Black Cats, Huddersfield

Analytical Test Results - ENV Analysis Soils

Lab Reference				**653734**
Client Sample ID				-
Client Sample Location				TT819-E
Client Sample Type				-
Client Sample Number				1
Depth - Top (m)				1.7
Depth - Bottom (m)				1.7
Date of Sampling				30/10/2025
Time of Sampling				-
Sample Matrix				Clay
Determinant	**Units**	**LOD**	**Accreditation**	
pH	pH units	1	M	6.4
Water Soluble Sulphate (as SO4)	mg/L	10	N	37

Date of Issue: 21.01.25
Issued by: J. Gane
Issue No: 1
Rev No: 9

Testing performed at
7-11 Harding Street, Leicester, LE1 4DH

L25/12938/PSL/25-93435

PSL25/8517 Black Cats, Huddersfield

Sample Descriptions

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Description	Moisture Content (%)	Stone Content (%)	Passing 2mm test sieve (%)
653725	-	TT802-N	SOIL	-	Brown slightly gravelly silty clay with rare brick fragments slag	-	-	79
653727	-	TT804-W	SOIL	-	Brown slightly gravelly silty clay with rare concrete slag	-	-	70
653728	-	TT806-N	SOIL	-	Brown slightly gravelly sandy silty clay with rare slag	-	-	64
653729	-	TT811-N	SOIL	-	Brown slightly gravelly silty clay with rare organic matter	-	-	85
653730	-	TT814-C	SOIL	-	Dark brown slightly gravelly silty clay with rare concrete	-	-	65
653731	-	TT815-N	SOIL	-	Dark brown slightly gravelly silty clay with rare concrete slag	-	-	80
653732	-	TT816-E	SOIL	-	Brown slightly gravelly silty clay with rare concrete	-	-	44
653733	-	TT818-S	SOIL	-	Brown slightly gravelly silty clay with rare concrete	-	-	78
653734	-	TT819-E	SOIL	-	Brown slightly gravelly silty clay with rare concrete organic matter	-	-	100

L25/12938/PSL/25-93435

PSL25/8517 Black Cats, Huddersfield

Analysis Methodologies - Please refer to sample comments page (if present) for any changes to methods Methods

Test Code	Test Name / Reference	Sample condition for analysis	Sample Preperation	Test Details
1377PREP	BS1377 Prep			Sample preparation of Soil for testing in accordance with BS1377:Part 3
ANIONSEXS	MS - CL - Anions by Aquakem (E)		Passing 2mm test sieve	Extraction of soils for Anions analysis in accordance with MS - CL - Anions by Aquakem
ANIONSS	MS - CL - Anions by Aquakem (2:1Extract)	Oven dried	Passing 2mm test sieve	Determination of Anions (inc Sulphate, chloride etc.) in soils by Aquakem. Analysis is based on a 2:1 water to soil extraction ratio
HOLD	No Testing Scheduled	-	-	No Testing Scheduled
PHS	MS - CL - pH in Soils	As received	Passing 10mm test sieve	Determination of pH in soils using a pH probe (using a 1:3 soil to water extraction)
SAMPLEPREP	MS - CL - Sample Preparation	-	-	Preparation of samples (including determination of moisture content) to allow for subsequent analysis

L25/12938/PSL/25-93435

PSL25/8517 Black Cats, Huddersfield

Sample Deviations

Deviations are listed below against each sample and associated test method, where deviation(s) are noted it means data may not be representative of the sample at the time of sampling and it is possible that results provided may be compromised.

Observations on receipt

A - No date of sampling provided
W - No time of sampling provided
C - Received in inappropriate container
H - Contains headspace
T - Temperature on receipt exceeds storage temperature
R - Sample(s) received with less than 2 hours for testing to commence/complete, any result formally classed as deviating will be marked with an X against the applicable test (i.e. RX)

Observations whilst in laboratory

X - Exceeds sampling to extraction or analysis timescales

Lab Reference	Client Sample ID	Client Sample Location	Client Sample Type	Client Sample Number	Test	Deviations
653725		TT802-N	SOIL		MS - CL - pH in Soils, MS - CL - Anions by Aquakem (2:1Extract)	R X
653727		TT804-W	SOIL		MS - CL - pH in Soils, MS - CL - Anions by Aquakem (2:1Extract)	R X
653728		TT806-N	SOIL		MS - CL - pH in Soils, MS - CL - Anions by Aquakem (2:1Extract)	R X
653729		TT811-N	SOIL		MS - CL - pH in Soils, MS - CL - Anions by Aquakem (2:1Extract)	R X
653730		TT814-C	SOIL		MS - CL - pH in Soils, MS - CL - Anions by Aquakem (2:1Extract)	R X
653731		TT815-N	SOIL		MS - CL - pH in Soils, MS - CL - Anions by Aquakem (2:1Extract)	R X
653732		TT816-E	SOIL		MS - CL - pH in Soils, MS - CL - Anions by Aquakem (2:1Extract)	R X
653733		TT818-S	SOIL		MS - CL - pH in Soils, MS - CL - Anions by Aquakem (2:1Extract)	R X
653734		TT819-E	SOIL		MS - CL - pH in Soils, MS - CL - Anions by Aquakem (2:1Extract)	R X

Testing performed at
7-11 Harding Street, Leicester, LE1 4DH

Appendix X

Gas Monitoring Results

Visit 1												
Job Title:										**Job No:**		
Black Cats, Huddersfield										**4486**		
Client:										**Sheet :**		
Vistry Homes, Countryside Partnerships and Miller Homes										1 of 9		
Date:	**Arrival Time:**		**Depart Time:**		**Operator:**							
03/10/2023	08:30		13:30		Erin Waddilove and Charlotte Copley							

Gas Monitoring Results:

Ambient Concentration (% Volume):	**CH_4:**	ND	**CO_2:**	ND	**O_2:**	20.6

Monitoring Point	**Groundwater level**	**Concentrations**					**Gas Flow Rates**			**Bottom of well**	**Remarks**
		Initial / Highest		**Steady concentrations**		**Lowest concn**	**Initial / Maximum**	**Steady**	**Time to fall from highest to steady**		
		CH_4	**CO_2**	**CH_4**	**CO_2**	**O_2**					
	(m) bgl	**% v/v**	**(%)**	**% v/v**	**(%)**	**(%)**	**litre/hr**	**litre/hr**	**secs**	**m**	
PH101	3.58	ND	1.7	ND	1.7	17.8	ND	ND	30.0	5.66	
PH102	5.25	ND	1.9	ND	1.9	18.0	ND	ND	30.0	5.46	
PH103	ND	ND	0.1	ND	0.1	19.7	ND	ND	30.0	5.73	10ppm CO detected
PH104	ND	ND	ND	ND	ND	19.8	ND	ND	30.0	5.66	10ppm CO detected
PH105	4.65	ND	ND	ND	ND	16.6	1.2	ND	60.0	5.63	10ppm CO detected
PH106	3.03	ND	4.6	ND	4.6	**14.4**	ND	ND	30.0	5.67	
PH107	ND	ND	ND	ND	ND	18.3	ND	ND	30.0	5.37	
PH108	ND	ND	0.3	ND	0.3	20.3	ND	ND	30.0	5.53	
PH109	ND	ND	0.5	ND	0.5	20.0	ND	ND	30.0	5.65	
PH110	ND	ND	0.3	ND	0.3	20.3	ND	ND	30.0	4.70	
PH111	5.13	ND	0.5	ND	0.5	20.2	ND	ND	30.0	5.16	
PH112	ND	ND	0.3	ND	0.3	20.2	ND	ND	30.0	1.90	
PH113	ND	ND	ND	ND	ND	19.0	ND	ND	30.0	5.71	
PH114	ND	ND	0.7	ND	0.7	18.5	1.2	ND	60.0	5.73	
PH115	5.48	ND	ND	ND	ND	20.6	ND	ND	30.0	5.72	
PH116	ND	ND	0.3	ND	0.3	20.4	ND	ND	30.0	5.35	
PH117	4.99	ND	1.2	ND	1.2	19.8	ND	ND	30.0	5.75	
PH118	ND	ND	0.3	ND	0.3	19.3	ND	ND	30.0	5.73	
PH119	ND	ND	0.4	ND	0.4	20.4	0.4	ND	60.0	3.84	
PH120	ND	ND	0.4	ND	0.4	20.3	ND	ND	30.0	5.60	
PH121	ND	ND	ND	ND	ND	19.5	-3.0	ND	60.0	5.74	
PH122	ND	ND	0.2	ND	0.2	20.3	1.5	ND	60.0	4.15	
PH123	2.75	ND	0.2	ND	0.2	20.3	ND	ND	30.0	5.75	
PH124	3.49	ND	0.8	ND	0.8	28.7	ND	ND	30.0	5.70	
PH125	ND	ND	0.8	ND	0.8	19.6	0.9	ND	60.0	5.68	
PH126	4.85	ND	0.6	ND	0.6	20.0	ND	ND	30.0	5.66	
PH127	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	Well destroyed - bung and monitoring pipe stolen and pipe in ground backfilled and blocked.
PH128	5.44	ND	ND	ND	ND	20.0	ND	ND	30.0	5.71	
PH129	5.55	ND	0.3	ND	0.3	19.8	2.2	ND	60.0	5.78	
PH130	5.52	ND	ND	ND	ND	19.3	ND	ND	30.0	5.78	
PH131p	-	-	-	-	-	-	-	-	-	-	Piezos installed on visit 3.
PH132p	-	-	-	-	-	-	-	-	-	-	Piezos installed on visit 3.
PH133p	-	-	-	-	-	-	-	-	-	-	Piezos installed on visit 3.

Equipment Used:	**Next Calibration Date**
Gas Data GFM436 Infrared Gas Analyser Geotechnical Instruments Dipmeter	22/03/2024

Key	
ND	None Detected
NR	Not Recorded
1.0	Recorded value does not breach trigger levels
5.0	Recorded value breaches trigger level 1
10.0	Recorded value breaches trigger level 2

	Site Data:			**Weather Station Data (Slaithwaite Station)**							**CH_4**	**CO_2**	**O_2**
	Temp (°C):	9 to 11		**Barometric Pressure Trend:**			Rising						
Time:	08:40	11:15	13:15	01:01	06:40	08:40	11:15	13:15	15:15	Trigger level 1	1.0	5.0	16.0
Pressure (mb):	990	987	985	1011	1010	1012	1014	1015	1016	Trigger level 2	5.0	10.0	10.0
	Weather Conditions:	Heavy rain, strong breeze											
	Surface Ground Conditions:	Wet											

Remarks: Slaithwaite weather station 4 miles south west from the site (Black Cats, Huddersfield).

Job Title:	Job No:
Black Cats, Huddersfield	4486
Client:	**Sheet :**
Vistry Homes, Countryside Partnerships and Miller Homes	2 of 9

Date:	Arrival Time:	Depart Time:	Operator:
24/10/2023	09:00	13:30	Erin Waddilove

Gas Monitoring Results:

Ambient Concentration (% Volume):	CH_4:	ND	CO_2:	ND	O_2:	20.6

Monitoring Point	Groundwater level	Concentrations: Initial / Highest CH_4	Initial / Highest CO_2	Steady concentrations CH_4	Steady concentrations CO_2	Lowest concn O_2	Gas Flow Rates: Initial / Maximum	Steady	Time to fall from highest to steady	Bottom of well	Remarks
	(m) bgl	% v/v	(%)	% v/v	(%)	(%)	litre/hr	litre/hr	secs	m	
PH101	ND	ND	4.6	ND	4.6	**14.3**	ND	ND	30.0	5.66	
PH102	ND	ND	1.3	ND	1.3	18.1	0.4	ND	45.0	5.46	
PH103	ND	ND	0.3	ND	0.3	19.4	0.2	ND	45.0	5.79	
PH104	ND	ND	ND	ND	ND	19.9	-0.3	ND	45.0	5.66	
PH105	ND	ND	0.1	ND	0.1	**14.9**	0.1	ND	40.0	5.60	
PH106	3.20	ND	3.4	ND	3.4	16.3	ND	ND	30.0	5.67	
PH107	ND	ND	ND	ND	ND	18.9	0.1	ND	40.0	5.40	
PH108	ND	ND	0.1	ND	0.1	20.5	0.1	ND	40.0	5.52	
PH109	ND	ND	0.5	ND	0.5	20.2	ND	ND	30.0	5.66	
PH110	ND	ND	0.1	ND	0.1	20.5	0.7	ND	45.0	4.70	
PH111	ND	ND	0.4	ND	0.4	20.2	0.8	ND	45.0	5.12	
PH112	ND	ND	0.2	ND	0.2	20.0	-1.2	ND	45.0	1.90	
PH113	ND	ND	ND	ND	ND	17.2	0.6	ND	45.0	5.71	
PH114	ND	ND	0.6	ND	0.6	18.7	ND	ND	30.0	5.73	
PH115	ND	ND	ND	ND	ND	20.2	ND	ND	30.0	5.66	
PH116	ND	ND	0.3	ND	0.3	20.2	ND	ND	30.0	5.35	
PH117	ND	ND	1.3	ND	1.3	18.4	ND	ND	30.0	5.13	
PH118	ND	ND	0.4	ND	0.4	19.2	ND	ND	30.0	5.73	
PH119	ND	ND	0.3	ND	0.3	20.3	0.3	0.1	60.0	3.85	
PH120	ND	ND	0.5	ND	0.5	20.1	ND	ND	30.0	5.60	
PH121	ND	ND	0.1	ND	0.1	18.9	0.1	ND	40.0	5.77	
PH122	ND	ND	0.2	ND	0.2	20.5	0.4	0.2	60.0	4.16	
PH123	ND	ND	3.0	ND	3.0	**15.0**	0.3	0.1	45.0	5.77	
PH124	3.55	ND	1.5	ND	1.5	18.4	ND	ND	30.0	5.72	
PH125	ND	ND	0.6	ND	0.6	20.0	ND	ND	30.0	5.74	
PH126	4.44	ND	1.0	ND	1.0	19.5	ND	ND	30.0	5.70	
PH127	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	Well destroyed - bung and monitoring pipe stolen and pipe in ground backfilled and blocked.
PH128	4.35	ND	0.5	ND	0.5	19.0	ND	ND	30.0	5.71	
PH129	ND	ND	0.7	ND	0.7	18.1	ND	ND	30.0	5.77	
PH130	4.53	ND	1.4	ND	1.4	17.4	ND	ND	30.0	5.80	
PH131p	-	-	-	-	-	-	-	-	-	-	Piezos installed on visit 3.
PH132p	-	-	-	-	-	-	-	-	-	-	Piezos installed on visit 3.
PH133p	-	-	-	-	-	-	-	-	-	-	Piezos installed on visit 3.

Equipment Used:	Next Calibration Date
Gas Data GFM436 Infrared Gas Analyser Geotechnical Instruments Dipmeter	22/03/2024

Key

ND	None Detected
NR	Not Recorded
1.0	Recorded value does not breach trigger levels
5.0	Recorded value breaches trigger level 1
10.0	Recorded value breaches trigger level 2

Site Data:			Weather Station Data (Hade Edge Station)							CH_4	CO_2	O_2
Temp (°C):	8 to 9		Barometric Pressure Trend:			Gradually falling						
Time:	09:00	11:00	13:00	01:02	07:02	09:02	11:00	13:02	13:02	Trigger level 1	1.0	5.0	16.0
Pressure (mb):	980	974	977	1009	1007	1007	1007	1006	1006	Trigger level 2	5.0	10.0	10.0
Weather Conditions:	Heavy rain, heavy cloud, foggy - poor visibility												
Surface Ground Conditions:	Very wet - high surface water runoff and flooding												

Remarks:

Slaithwaite weather station 4 miles south west from the site (Black Cats, Huddersfield).

Visit 3

Job Title:	Job No:
Black Cats, Huddersfield	4486
Client:	**Sheet :**
Vistry Homes, Countryside Partnerships and Miller Homes	3 of 9

Date:	Arrival Time:	Depart Time:	Operator:
14/11/2023	09:15	13:00	Erin Waddilove

Gas Monitoring Results:

Ambient Concentration (% Volume):	CH_4:	ND	CO_2:	ND	O_2:	20.6

Monitoring Point	Groundwater level	Concentrations: Initial / Highest CH_4	Initial / Highest CO_2	Steady concentrations CH_4	Steady concentrations CO_2	Lowest concn O_2	Gas Flow Rates: Initial / Maximum	Steady	Time to fall from highest to steady	Bottom of well	Remarks
	(m) bgl	% v/v	(%)	% v/v	(%)	(%)	litre/hr	litre/hr	secs	m	
PH101	2.50	ND	1.2	ND	1.2	19.0	0.1	0.1	45.0	5.64	
PH102	5.16	ND	1.4	ND	1.4	17.5	0.5	0.1	60.0	5.44	
PH103	5.46	ND	0.2	ND	0.2	18.7	0.4	0.2	60.0	5.76	
PH104	5.67	ND	ND	ND	ND	18.8	0.5	0.1	60.0	5.69	
PH105	4.18	ND	0.2	ND	0.2	**14.0**	-0.2	ND	45.0	5.60	
PH106	3.09	ND	2.9	ND	2.9	17.7	0.1	ND	30.0	5.67	
PH107	ND	ND	ND	ND	ND	19.4	0.6	0.1	45.0	5.37	
PH108	ND	ND	0.1	ND	0.1	20.4	-0.2	ND	40.0	5.53	
PH109	ND	ND	0.5	ND	0.5	20.0	0.1	ND	40.0	5.66	
PH110	ND	ND	0.1	ND	0.1	20.3	0.1	ND	40.0	5.70	
PH111	5.16	ND	0.6	ND	0.6	20.0	0.4	ND	40.0	5.17	
PH112	ND	ND	0.2	ND	0.2	20.3	ND	ND	30.0	1.90	
PH113	ND	ND	ND	ND	ND	16.9	ND	ND	30.0	5.70	
PH114	ND	ND	0.5	ND	0.5	19.1	ND	ND	30.0	5.70	
PH115	5.52	ND	0.5	ND	0.5	20.0	0.2	ND	40.0	5.68	
PH116	ND	ND	0.4	ND	0.4	20.1	0.4	ND	40.0	5.36	
PH117	5.07	ND	0.9	ND	0.9	19.7	0.6	ND	40.0	5.76	
PH118	ND	ND	0.4	ND	0.4	19.3	-0.1	ND	40.0	5.73	
PH119	3.89	ND	0.3	ND	0.3	20.0	0.4	0.2	60.0	3.90	
PH120	ND	ND	0.4	ND	0.4	20.1	0.1	ND	40.0	5.59	
PH121	ND	ND	0.2	ND	0.2	18.9	0.1	ND	40.0	5.76	
PH122	ND	ND	0.1	ND	0.1	20.5	ND	ND	30.0	4.41	
PH123	2.15	ND	ND	ND	ND	20.5	0.1	ND	40.0	5.77	
PH124	3.62	ND	1.4	ND	1.4	18.7	0.1	ND	40.0	5.72	
PH125	ND	ND	2.1	ND	2.1	20.4	ND	ND	30.0	5.74	
PH126	4.00	ND	1.7	ND	1.7	18.8	ND	ND	30.0	5.72	
PH127	ND	ND	ND	ND	ND	20.4	ND	ND	30.0	5.75	Well reinstated.
PH128	4.50	ND	0.7	ND	0.7	18.4	ND	ND	30.0	5.70	
PH129	5.63	ND	0.8	ND	0.8	**15.0**	0.1	0.1	45.0	5.76	
PH130	4.60	ND	2.3	ND	2.3	17.0	0.2	ND	40.0	5.76	
PH131p	-	-	-	-	-	-	-	-	-	-	Piezos installed on visit 3.
PH132p	-	-	-	-	-	-	-	-	-	-	Piezos installed on visit 3.
PH133p	-	-	-	-	-	-	-	-	-	-	Piezos installed on visit 3.

Equipment Used:	Next Calibration Date
Gas Data GFM436 Infrared Gas Analyser Geotechnical Instruments Dipmeter	22/03/2024

Key

ND	None Detected
NR	Not Recorded
1.0	Recorded value does not breach trigger levels
5.0	Recorded value breaches trigger level 1
10.0	Recorded value breaches trigger level 2

Site Data:			Weather Station Data (Slaithwaite Station)							CH_4	CO_2	O_2
Temp (°C):	8 to 10		Barometric Pressure Trend:			Rising/steady						
Time:	09:15	11:30	13:00	00:00	07:15	09:15	11:30	13:00	15:00	Trigger level 1	1.0	5.0	16.0
Pressure (mb):	976	974	973	995	997	997	998	998	999	Trigger level 2	5.0	10.0	10.0
Weather Conditions:	Light rain spells, overcast, heavy breeze												
Surface Ground Conditions:	Damp												

Remarks:

Slaithwaite weather station 4 miles south west from the site (Black Cats, Huddersfield).

Visit 4

Job Title:	Job No:
Black Cats, Huddersfield	4486
Client:	**Sheet :**
Vistry Homes, Countryside Partnerships and Miller Homes	4 of 9

Date:	Arrival Time:	Depart Time:	Operator:
05/12/2023	09:00	13:15	Erin Waddilove

Gas Monitoring Results:

Ambient Concentration (% Volume):	CH_4:	ND	CO_2:	ND	O_2:	20.5

Monitoring Point	Groundwater level	Concentrations					Gas Flow Rates			Bottom of well	Remarks
		Initial / Highest		Steady concentrations		Lowest concn	Initial / Maximum	Steady	Time to fall from highest to steady		
		CH_4	CO_2	CH_4	CO_2	O_2					
	(m) bgl	% v/v	(%)	% v/v	(%)	(%)	litre/hr	litre/hr	secs	m	
PH101	1.17	ND	4.1	ND	4.1	17.0	0.9	ND	40.0	5.66	
PH102	4.88	ND	0.7	ND	0.7	16.3	0.2	ND	40.0	5.48	
PH103	5.45	ND	0.2	ND	0.2	19.4	0.2	0.1	45.0	5.77	
PH104	ND	ND	0.1	ND	0.1	18.6	0.1	ND	40.0	5.67	
PH105	3.80	ND	0.8	ND	0.8	**14.2**	0.7	ND	40.0	5.61	
PH106	2.26	ND	2.2	ND	2.2	18.6	0.4	0.1	45.0	5.76	
PH107	ND	ND	0.3	ND	0.3	19.3	0.2	ND	40.0	5.37	
PH108	ND	ND	0.1	ND	0.1	20.2	ND	ND	30.0	5.57	
PH109	ND	ND	0.4	ND	0.4	19.9	0.4	ND	40.0	5.66	
PH110	ND	ND	0.1	ND	0.1	20.2	0.1	0.1	45.0	4.72	
PH111	5.14	ND	0.5	ND	0.5	19.9	ND	ND	30.0	5.17	
PH112	ND	ND	0.2	ND	0.2	19.6	0.5	0.1	45.0	1.90	
PH113	ND	ND	ND	ND	ND	16.5	1.5	ND	40.0	5.70	
PH114	ND	ND	0.4	ND	0.4	19.3	ND	ND	30.0	5.75	
PH115	5.47	ND	0.4	ND	0.4	19.0	1.3	ND	40.0	5.70	
PH116	ND	ND	0.4	ND	0.4	20.0	0.3	ND	40.0	5.35	
PH117	5.00	ND	1.1	ND	1.1	19.6	1.3	ND	40.0	5.77	
PH118	ND	ND	0.8	ND	0.8	19.4	1.5	ND	40.0	5.74	
PH119	ND	ND	0.2	ND	0.2	20.0	ND	ND	30.0	3.89	
PH120	ND	ND	0.3	ND	0.3	20.0	0.2	ND	40.0	5.56	
PH121	ND	ND	0.3	ND	0.3	19.0	0.8	0.1	45.0	5.76	
PH122	ND	ND	ND	ND	ND	20.3	ND	ND	30.0	4.16	
PH123	2.26	ND	2.0	ND	2.0	17.1	ND	ND	30.0	5.75	Valve left open when came to monitor.
PH124	3.40	ND	0.8	ND	0.8	19.8	0.7	0.7	45.0	3.70	Bung loose, replaced to monitor.
PH125	ND	ND	0.3	ND	0.3	19.9	ND	ND	30.0	5.79	
PH126	3.97	ND	1.2	ND	1.2	18.5	0.9	ND	40.0	5.75	
PH127	ND	ND	0.5	ND	0.5	19.5	1.1	ND	40.0	3.50	
PH128	4.55	ND	1.0	ND	1.0	**16.0**	0.1	ND	40.0	5.67	
PH129	5.64	ND	0.8	ND	0.8	16.6	0.6	ND	40.0	5.80	
PH130	3.91	ND	0.5	ND	0.5	18.5	ND	ND	40.0	5.79	
PH131p	-	ND	0.8	ND	0.8	19.0	3.9	ND	40.0	-	Piezos appear to have been bent on installation, could not dip.
PH132p	-	ND	2.0	ND	2.0	18.2	ND	ND	40.0	-	Piezos appear to have been bent on installation, could not dip.
PH133p	-	ND	2.0	ND	2.0	17.7	ND	ND	40.0	-	Piezos appear to have been bent on installation, could not dip.

Equipment Used:	Next Calibration Date
Gas Data GFM436 Infrared Gas Analyser Geotechnical Instruments Dipmeter	22/03/2024

Key

ND	None Detected
NR	Not Recorded
1.0	Recorded value does not breach trigger levels
5.0	Recorded value breaches trigger level 1
10.0	Recorded value breaches trigger level 2

Site Data:			Weather Station Data (Slaithwaite Station)					
Temp (°C):	3		Barometric Pressure Trend:			Rising		
Time:	09:00	11:30	13:00	00:00	07:00	09:00	11:30	13:00	15:00
Pressure (mb):	987	986	987	1003	1009	1011	1012	1013	1013
Weather Conditions:	Light rain, overcast, cloudy.								
Surface Ground Conditions:	Wet.								

	CH_4	CO_2	O_2
Trigger level 1	1.0	5.0	16.0
Trigger level 2	5.0	10.0	10.0

Remarks:

Slaithwaite weather station 4 miles south west from the site (Black Cats, Huddersfield).

Visit 5

Job Title:	Job No:
Black Cats, Huddersfield	4486
Client:	**Sheet :**
Vistry Homes, Countryside Partnerships and Miller Homes	5 of 9

Date:	Arrival Time:	Depart Time:	Operator:
09/01/2024	09:00	13:30	Erin Waddilove

Gas Monitoring Results:

Ambient Concentration (% Volume):	CH_4:	ND	CO_2:	ND	O_2:	20.5

Monitoring Point	Groundwater level	Concentrations: Initial / Highest		Concentrations: Steady concentrations		Concentrations: Lowest concn	Gas Flow Rates: Initial / Maximum	Gas Flow Rates: Steady	Gas Flow Rates: Time to fall from highest to steady	Bottom of well	Remarks
		CH_4	CO_2	CH_4	CO_2	O_2					
	(m) bgl	% v/v	(%)	% v/v	(%)	(%)	litre/hr	litre/hr	secs	m	
PH101	5.32	ND	3.7	ND	3.7	17.4	0.1	ND	30.0	5.65	
PH102	5.45	ND	0.7	ND	0.7	19.1	1.2	ND	40.0	5.46	
PH103	5.38	ND	0.2	ND	0.2	18.6	0.3	ND	30.0	5.76	
PH104	5.65	ND	0.1	ND	0.1	19.4	0.1	ND	30.0	5.67	
PH105	5.23	ND	1.1	ND	1.1	17.7	0.2	ND	30.0	5.60	
PH106	3.15	ND	1.5	ND	1.5	19.2	0.3	ND	30.0	5.64	
PH107	ND	ND	0.7	ND	0.7	19.4	ND	ND	30.0	5.37	
PH108	ND	ND	ND	ND	ND	19.9	1.8	ND	40.0	5.52	
PH109	ND	ND	0.4	ND	0.4	20.0	1.3	ND	40.0	5.68	
PH110	ND	ND	ND	ND	ND	20.0	ND	ND	30.0	4.73	
PH111	ND	ND	0.4	ND	0.4	20.2	0.8	ND	40.0	5.16	
PH112	ND	ND	0.1	ND	0.1	19.6	-0.1	ND	30.0	1.90	
PH113	ND	ND	ND	ND	ND	**15.6**	0.1	ND	30.0	5.60	
PH114	ND	ND	0.3	ND	0.3	19.4	4.4	ND	45.0	5.74	
PH115	5.65	ND	0.3	ND	0.3	19.3	ND	ND	30.0	5.20	
PH116	ND	ND	0.3	ND	0.3	20.0	2.1	ND	45.0	5.34	
PH117	5.24	ND	0.8	ND	0.8	19.6	ND	ND	30.0	5.74	
PH118	ND	ND	1.1	ND	1.1	19.3	0.9	ND	40.0	5.74	
PH119	ND	ND	0.2	ND	0.2	20.0	ND	ND	30.0	3.88	
PH120	ND	ND	0.2	ND	0.2	20.2	0.2	ND	30.0	5.60	
PH121	ND	ND	0.5	ND	0.5	19.4	ND	ND	30.0	5.74	
PH122	ND	ND	0.1	ND	0.1	20.2	1.5	ND	40.0	4.16	
PH123	3.39	ND	1.1	ND	1.1	17.2	1.2	ND	40.0	5.70	
PH124	3.62	ND	1.1	ND	1.1	19.0	ND	ND	30.0	5.71	
PH125	ND	ND	0.4	ND	0.4	19.8	ND	ND	30.0	5.76	
PH126	3.94	ND	1.1	ND	1.1	19.1	ND	ND	30.0	5.70	
PH127	ND	ND	0.5	ND	0.5	19.2	0.1	ND	30.0	2.52	
PH128	5.27	ND	0.7	ND	0.7	19.1	0.6	ND	30.0	5.67	
PH129	5.74	ND	1.1	ND	1.1	**15.7**	ND	ND	30.0	5.77	
PH130	4.63	ND	1.3	ND	1.3	19.5	0.3	ND	30.0	5.78	
PH131p	-	ND	0.9	ND	0.9	19.2	3.0	ND	45.0	-	
PH132p	-	ND	2.3	ND	2.3	17.8	1.8	ND	45.0	-	
PH133p	-	ND	0.5	ND	0.5	19.5	0.3	ND	30.0	-	Bung missing, replaced to monitor.

Equipment Used:	Next Calibration Date
Gas Data GFM436 Infrared Gas Analyser Geotechnical Instruments Dipmeter	22/03/2024

Key

ND	None Detected
NR	Not Recorded
1.0	Recorded value does not breach trigger levels
5.0	Recorded value breaches trigger level 1
10.0	Recorded value breaches trigger level 2

Site Data:			Weather Station Data (Slaithwaite Station)							CH_4	CO_2	O_2
Temp (°C):	1 to 2		Barometric Pressure Trend:			Steady						
Time:	09:00	11:00	13:00	00:00	07:00	09:00	11:00	13:00	15:00	Trigger level 1	1.0	5.0	16.0
Pressure (mb):	1012	1009	1008	1036	1036	1037	1037	1036	1036	Trigger level 2	5.0	10.0	10.0
Weather Conditions:	Sunny, moderate cloud, dry												
Surface Ground Conditions:	Damp												

Remarks:

Slaithwaite weather station 4 miles south west from the site (Black Cats, Huddersfield).

Visit 6

Job Title:	Job No:
Black Cats, Huddersfield	4486
Client:	**Sheet :**
Vistry Homes, Countryside Partnerships and Miller Homes	6 of 9

Date:	Arrival Time:	Depart Time:	Operator:
30/01/2024	09:30	14:30	Erin Waddilove

Gas Monitoring Results:

Ambient Concentration (% Volume):	CH_4:	ND	CO_2:	ND	O_2:	20.6

Monitoring Point	Groundwater level	Concentrations: Initial / Highest		Concentrations: Steady concentrations		Concentrations: Lowest concn	Gas Flow Rates: Initial / Maximum	Gas Flow Rates: Steady	Gas Flow Rates: Time to fall from highest to steady	Bottom of well	Remarks
		CH_4	CO_2	CH_4	CO_2	O_2					
	(m) bgl	% v/v	(%)	% v/v	(%)	(%)	litre/hr	litre/hr	secs	m	
PH101	1.40	ND	4.0	ND	4.0	18.4	ND	ND	30.0	5.65	
PH102	5.12	ND	0.4	ND	0.4	19.9	-0.1	ND	30.0	5.46	
PH103	5.44	ND	0.7	ND	0.7	19.5	0.3	ND	30.0	5.77	
PH104	5.66	ND	ND	ND	ND	19.9	0.1	ND	30.0	5.68	
PH105	3.96	ND	1.2	ND	1.2	18.6	-0.4	ND	40.0	5.60	
PH106	3.00	ND	1.2	ND	1.2	19.6	1.8	ND	60.0	5.68	
PH107	ND	ND	0.1	ND	0.1	19.6	-1.2	ND	60.0	5.37	
PH108	ND	ND	0.1	ND	0.1	20.3	-0.2	ND	40.0	5.55	
PH109	ND	ND	0.3	ND	0.3	20.1	0.2	ND	30.0	5.67	
PH110	ND	ND	ND	ND	ND	20.3	3.0	ND	60.0	4.72	
PH111	5.14	ND	0.4	ND	0.4	20.0	1.4	ND	40.0	5.16	
PH112	ND	ND	0.1	ND	0.1	20.1	0.5	0.1	45.0	1.89	
PH113	ND	ND	ND	ND	ND	**15.7**	24.5	ND	120.0	5.70	
PH114	ND	ND	0.3	ND	0.3	19.9	1.2	0.4	90.0	5.76	
PH115	5.43	ND	0.3	ND	0.3	20.2	0.3	0.1	60.0	5.70	
PH116	ND	ND	0.2	ND	0.2	20.2	0.7	ND	40.0	5.35	
PH117	5.02	ND	0.6	ND	0.6	20.0	1.8	ND	45.0	5.77	
PH118	ND	ND	1.1	ND	1.1	19.7	1.1	ND	45.0	5.73	
PH119	3.87	ND	0.2	ND	0.2	20.2	0.1	ND	30.0	3.89	
PH120	5.58	ND	0.2	ND	0.2	20.2	0.5	0.3	60.0	5.60	
PH121	ND	ND	0.8	ND	0.8	19.3	3.0	ND	45.0	5.77	
PH122	4.15	ND	ND	ND	ND	20.4	0.7	ND	40.0	4.17	
PH123	2.54	ND	1.6	ND	1.6	17.9	ND	ND	30.0	5.70	
PH124	3.43	ND	0.6	ND	0.6	19.9	0.1	ND	30.0	5.70	
PH125	ND	ND	0.1	ND	0.1	20.3	0.1	ND	30.0	5.78	
PH126	4.03	ND	1.1	ND	1.1	18.6	-3.0	ND	40.0	5.70	
PH127	ND	ND	0.1	ND	0.1	20.1	-0.3	ND	40.0	2.53	
PH128	3.67	ND	0.8	ND	0.8	18.5	1.5	ND	45.0	5.66	
PH129	5.66	ND	1.2	ND	1.2	16.5	0.2	0.1	60.0	5.68	
PH130	4.43	ND	1.0	ND	1.0	18.7	0.3	ND	40.0	5.77	
PH131p	-	ND	0.9	ND	0.9	19.2	2.7	ND	45.0	-	
PH132p	-	ND	1.1	ND	1.1	19.1	ND	ND	30.0	-	
PH133p	-	ND	2.2	ND	2.2	17.8	0.3	ND	40.0	-	

Equipment Used:	Next Calibration Date
Gas Data GFM436 Infrared Gas Analyser Geotechnical Instruments Dipmeter	22/03/2024

Key

ND	None Detected
NR	Not Recorded
1.0	Recorded value does not breach trigger levels
5.0	Recorded value breaches trigger level 1
10.0	Recorded value breaches trigger level 2

Site Data:			Weather Station Data (Slaithwaite Station)					
Temp (°C):	3 to 4		Barometric Pressure Trend:			Rising		
Time:	09:30	11:30	14:30	00:00	07:30	09:30	11:30	14:30	16:30
Pressure (mb):	1002	1001	1000	1017	1022	1025	1027	1028	1029
Weather Conditions:	Dry. sunny, light cloud and light winds								
Surface Ground Conditions:	Dry								

	CH_4	CO_2	O_2
Trigger level 1	1.0	5.0	16.0
Trigger level 2	5.0	10.0	10.0

Remarks:

Slaithwaite weather station 4 miles south west from the site (Black Cats, Huddersfield).

Visit 7

Job Title:	Job No:
Black Cats, Huddersfield	4486
Client:	**Sheet :**
Vistry Homes, Countryside Partnerships and Miller Homes	7 of 9

Date:	Arrival Time:	Depart Time:	Operator:
21/02/2024	09:15	13:30	Erin Waddilove

Gas Monitoring Results:

Ambient Concentration (% Volume):	CH_4:	ND	CO_2:	ND	O_2:	20.7

Monitoring Point	Groundwater level	Concentrations: Initial / Highest CH_4	Initial / Highest CO_2	Steady concentrations CH_4	Steady concentrations CO_2	Lowest concn O_2	Gas Flow Rates: Initial / Maximum	Steady	Time to fall from highest to steady	Bottom of well	Remarks
	(m) bgl	% v/v	(%)	% v/v	(%)	(%)	litre/hr	litre/hr	secs	m	
PH101	5.32	ND	4.2	ND	4.2	16.7	1.2	ND	240.0	5.65	
PH102	5.30	ND	0.4	ND	0.4	20.0	7.1	ND	420.0	5.47	
PH103	5.42	ND	0.7	ND	0.7	19.4	0.9	ND	180.0	5.77	
PH104	5.67	ND	ND	ND	ND	19.8	-2.1	ND	240.0	5.68	
PH105	4.06	ND	1.0	ND	1.0	17.8	-0.1	ND	180.0	5.60	
PH106	3.04	ND	1.1	ND	1.1	19.3	ND	ND	120.0	5.65	
PH107	ND	ND	0.1	ND	0.1	19.9	3.5	ND	300.0	5.39	
PH108	ND	ND	0.1	ND	0.1	20.2	3.8	ND	300.0	5.55	
PH109	ND	ND	ND	ND	ND	20.3	1.2	ND	240.0	5.68	
PH110	ND	ND	ND	ND	ND	20.2	0.1	ND	180.0	4.24	
PH111	5.20	ND	0.2	ND	0.2	20.2	1.0	ND	300.0	5.16	
PH112	ND	ND	0.1	ND	0.1	20.2	0.3	ND	240.0	1.89	
PH113	ND	ND	ND	ND	ND	**14.0**	-38.0	ND	540.0	5.70	
PH114	ND	ND	0.2	ND	0.2	19.9	3.6	ND	480.0	5.76	
PH115	5.37	ND	0.4	ND	0.4	20.0	ND	ND	120.0	5.70	
PH116	ND	ND	0.2	ND	0.2	20.2	ND	ND	120.0	5.35	
PH117	5.05	ND	0.8	ND	0.8	19.8	3.4	ND	300.0	5.77	
PH118	ND	ND	1.0	ND	1.0	19.7	-0.7	ND	240.0	5.73	
PH119	3.92	ND	0.2	ND	0.2	20.2	-1.8	ND	360.0	3.89	
PH120	5.62	ND	0.3	ND	0.3	20.0	0.6	ND	240.0	5.60	
PH121	ND	ND	0.9	ND	0.9	19.5	ND	ND	120.0	5.77	
PH122	4.14	ND	ND	ND	ND	20.2	-1.2	ND	180.0	4.17	
PH123	2.38	ND	1.5	ND	1.5	17.4	0.1	ND	120.0	5.71	
PH124	3.38	ND	0.9	ND	0.9	19.7	4.5	ND	300.0	5.70	
PH125	ND	ND	ND	ND	ND	20.3	2.4	ND	240.0	5.81	
PH126	4.20	ND	1.1	ND	1.1	18.5	3.3	ND	360.0	5.74	
PH127	ND	ND	ND	ND	ND	20.4	0.1	ND	180.0	2.50	
PH128	4.00	ND	0.7	ND	0.7	19.4	ND	ND	120.0	5.69	
PH129	5.56	ND	1.2	ND	1.2	16.2	1.2	ND	240.0	5.77	
PH130	4.64	ND	0.7	ND	0.7	18.6	3.3	ND	420.0	5.77	
PH131p	-	ND	1.9	ND	1.9	18.0	-0.1	ND	180.0	-	
PH132p	-	ND	2.1	ND	2.1	17.6	0.1	ND	120.0	-	
PH133p	-	ND	2.4	ND	2.4	17.4	-0.1	ND	180.0	-	

Equipment Used:	Next Calibration Date
Gas Data GFM436 Infrared Gas Analyser Geotechnical Instruments Dipmeter	22/03/2024

Key

ND	None Detected
NR	Not Recorded
1.0	Recorded value does not breach trigger levels
5.0	Recorded value breaches trigger level 1
10.0	Recorded value breaches trigger level 2

Site Data:			Weather Station Data (Slaithwaite Station)							CH_4	CO_2	O_2
Temp (°C):	8 to 10		Barometric Pressure Trend:			Falling						
Time:	09:15	11:30	13:30	00:00	07:15	09:15	11:30	13:30	15:30	Trigger level 1	1.0	5.0	16.0
Pressure (mb):	975	969	966	1016	1003	999	994	991	991	Trigger level 2	5.0	10.0	10.0
Weather Conditions:	High winds, heavy rain, cloudy												
Surface Ground Conditions:	Wet												

Remarks:

High winds - flow took a lot longer to settle to steady than usual, monitored until steady for at least 2 minutes.

Visit 8

Job Title:	Job No:
Black Cats, Huddersfield	4486
Client:	**Sheet :**
Vistry Homes, Countryside Partnerships and Miller Homes	8 of 9

Date:	Arrival Time:	Depart Time:	Operator:
15/03/2024	09:00	13:45	Erin Waddilove

Gas Monitoring Results:

Ambient Concentration (% Volume):	CH_4:	ND	CO_2:	ND	O_2:	20.8

Monitoring Point	Groundwater level	Concentrations: Initial / Highest CH_4	Initial / Highest CO_2	Steady concentrations CH_4	Steady concentrations CO_2	Lowest concn O_2	Gas Flow Rates: Initial / Maximum	Steady	Time to fall from highest to steady	Bottom of well	Remarks
	(m) bgl	% v/v	(%)	% v/v	(%)	(%)	litre/hr	litre/hr	secs	m	
PH101	5.02	ND	3.8	ND	3.8	**14.4**	1.8	ND	300.0	5.67	
PH102	5.37	ND	0.8	ND	0.8	19.0	1.3	ND	240.0	5.47	
PH103	5.49	ND	0.8	ND	0.8	19.3	1.5	ND	240.0	5.75	
PH104	5.67	ND	ND	ND	ND	19.8	-3.3	ND	360.0	5.69	
PH105	4.50	ND	1.5	ND	1.5	17.7	-2.1	ND	360.0	5.60	
PH106	3.42	ND	1.6	ND	1.6	18.9	6.8	ND	480.0	5.64	
PH107	ND	ND	0.2	ND	0.2	19.9	-0.4	ND	240.0	5.38	
PH108	ND	ND	ND	ND	ND	20.5	2.5	ND	360.0	5.55	
PH109	ND	ND	0.3	ND	0.3	20.3	2.1	ND	300.0	5.67	
PH110	ND	ND	ND	ND	ND	20.5	1.8	ND	240.0	4.74	
PH111	ND	ND	0.3	ND	0.3	20.4	1.9	ND	300.0	5.18	
PH112	ND	ND	0.2	ND	0.2	20.5	2.5	ND	360.0	1.90	
PH113	ND	ND	ND	ND	ND	**15.0**	-1.2	0.2	240.0	5.69	
PH114	ND	ND	ND	ND	ND	**15.3**	1.9	ND	300.0	5.73	
PH115	5.45	ND	0.2	ND	0.2	20.4	0.9	ND	180.0	5.69	
PH116	ND	ND	0.3	ND	0.3	20.2	5.0	ND	520.0	5.36	
PH117	5.02	ND	1.1	ND	1.1	18.9	1.9	ND	240.0	5.77	
PH118	ND	ND	1.1	ND	1.1	17.3	1.8	ND	240.0	5.73	
PH119	3.88	ND	0.2	ND	0.2	20.4	6.0	ND	480.0	3.90	
PH120	5.55	ND	0.2	ND	0.2	20.4	1.2	ND	240.0	5.56	
PH121	ND	ND	0.9	ND	0.9	19.5	1.3	ND	240.0	5.74	
PH122	4.16	ND	ND	ND	ND	20.5	1.3	ND	180.0	4.17	
PH123	5.60	ND	1.6	ND	1.6	17.7	12.7	ND	600.0	5.66	
PH124	3.80	ND	1.0	ND	1.0	18.9	2.0	ND	300.0	5.82	
PH125	ND	ND	ND	ND	ND	20.5	1.2	ND	240.0	5.84	
PH126	4.33	ND	1.2	ND	1.2	18.9	2.8	ND	300.0	5.73	
PH127	ND	ND	ND	ND	ND	20.6	ND	ND	120.0	2.50	
PH128	3.99	ND	0.8	ND	0.8	19.5	1.3	ND	180.0	5.67	
PH129	5.57	ND	1.2	ND	1.2	16.9	0.1	ND	120.0	5.78	
PH130	4.95	ND	1.1	ND	1.1	19.1	0.9	ND	180.0	5.77	
PH131p	-	ND	1.9	ND	1.9	18.2	0.1	ND	120.0	-	
PH132p	-	ND	2.1	ND	2.1	18.5	1.2	ND	180.0	-	
PH133p	-	ND	1.9	ND	1.9	18.5	1.3	ND	240.0	-	

Equipment Used:

Gas Data GFM436 Infrared Gas Analyser
Geotechnical Instruments Dipmeter

Next Calibration Date

22/03/2024

Key

ND	None Detected
NR	Not Recorded
1.0	Recorded value does not breach trigger levels
5.0	Recorded value breaches trigger level 1
10.0	Recorded value breaches trigger level 2

Site Data:			Weather Station Data (Slaithwaite Station)							CH_4	CO_2	O_2
Temp (°C):	11		Barometric Pressure Trend:			Falling						
Time:	09:00	11:30	13:45	00:00	07:00	09:00	11:30	13:45	15:45	Trigger level 1	1.0	5.0	16.0
Pressure (mb):	980	977	977	1006	1004	1004	1004	1004	1003	Trigger level 2	5.0	10.0	10.0
Weather Conditions:	Sunny, moderate cloud, light winds												
Surface Ground Conditions:	Dry												

Remarks:

Slaithwaite weather station 4 miles south west from the site (Black Cats, Huddersfield).

Visit 9

Job Title:	Job No:
Black Cats, Huddersfield	4486
Client:	**Sheet :**
Vistry Homes, Countryside Partnerships and Miller Homes	9 of 9

Date:	Arrival Time:	Depart Time:	Operator:
03/04/2024	08:45	13:00	Erin Waddilove

Gas Monitoring Results:

Ambient Concentration (% Volume):	CH_4:	ND	CO_2:	ND	O_2:	20.8

Monitoring Point	Groundwater level	Concentrations: Initial / Highest CH_4	Initial / Highest CO_2	Steady concentrations CH_4	Steady concentrations CO_2	Lowest concn O_2	Gas Flow Rates: Initial / Maximum	Steady	Time to fall from highest to steady	Bottom of well	Remarks
	(m) bgl	% v/v	(%)	% v/v	(%)	(%)	litre/hr	litre/hr	secs	m	
PH101	5.07	ND	3.0	ND	3.0	17.6	ND	ND	60.0	5.65	
PH102	5.28	ND	0.9	ND	0.9	18.9	ND	ND	60.0	5.47	
PH103	5.40	ND	0.8	ND	0.8	18.4	0.4	ND	180.0	5.17	
PH104	5.66	ND	0.1	ND	0.1	20.1	ND	ND	60.0	5.68	
PH105	4.13	ND	1.5	ND	1.5	18.4	ND	ND	60.0	5.60	
PH106	3.06	ND	1.4	ND	1.4	19.3	1.0	ND	240.0	5.66	
PH107	ND	ND	0.3	ND	0.3	20.0	ND	ND	60.0	5.38	
PH108	ND	ND	0.1	ND	0.1	20.7	ND	ND	60.0	5.53	
PH109	ND	ND	0.4	ND	0.4	20.5	ND	ND	60.0	5.67	
PH110	ND	ND	0.2	ND	0.2	20.1	ND	ND	60.0	4.73	
PH111	5.16	ND	0.4	ND	0.4	20.4	ND	ND	60.0	5.17	
PH112	ND	ND	0.1	ND	0.1	20.5	ND	ND	60.0	1.90	
PH113	ND	ND	ND	ND	ND	**13.9**	7.2	ND	360.0	5.69	
PH114	ND	ND	0.3	ND	0.3	20.0	0.6	ND	120.0	4.74	
PH115	5.45	ND	0.3	ND	0.3	20.6	ND	ND	60.0	5.68	
PH116	ND	ND	0.3	ND	0.3	20.6	ND	ND	60.0	5.35	
PH117	5.08	ND	1.1	ND	1.1	17.4	ND	ND	60.0	5.78	
PH118	ND	ND	1.0	ND	1.0	20.1	ND	ND	60.0	5.72	
PH119	3.84	ND	0.3	ND	0.3	20.6	ND	ND	60.0	3.88	
PH120	5.57	ND	0.2	ND	0.2	20.6	ND	ND	60.0	5.58	
PH121	ND	ND	1.0	ND	1.0	19.7	ND	ND	60.0	5.76	
PH122	ND	ND	0.1	ND	0.1	20.7	0.3	ND	120.0	4.17	
PH123	2.94	ND	2.1	ND	2.1	17.5	44.1	ND	480.0	5.66	
PH124	3.54	ND	1.0	ND	1.0	20.1	ND	ND	60.0	5.70	
PH125	ND	ND	0.1	ND	0.1	20.6	ND	ND	60.0	5.86	
PH126	ND	ND	1.1	ND	1.1	19.2	ND	ND	60.0	5.70	
PH127	ND	ND	0.4	ND	0.4	20.3	ND	ND	60.0	2.54	
PH128	4.40	ND	0.8	ND	0.8	19.4	1.2	ND	240.0	5.67	
PH129	5.60	ND	1.3	ND	1.3	17.0	1.5	ND	240.0	5.77	
PH130	4.94	ND	1.1	ND	1.1	18.6	ND	ND	60.0	5.78	
PH131p	-	ND	1.9	ND	1.9	18.2	ND	ND	60.0	-	
PH132p	-	ND	2.1	ND	2.1	18.5	ND	ND	60.0	-	
PH133p	-	ND	3.2	ND	3.2	16.8	ND	ND	60.0	-	

Equipment Used:	Next Calibration Date
Gas Data GFM436 Infrared Gas Analyser Geotechnical Instruments Dipmeter	22/03/2024

Key

ND	None Detected
NR	Not Recorded
1.0	Recorded value does not breach trigger levels
5.0	Recorded value breaches trigger level 1
10.0	Recorded value breaches trigger level 2

	Site Data:			Weather Station Data (Slaithwaite Station)							CH_4	CO_2	O_2
	Temp (°C):	8 to 11		Barometric Pressure Trend:			Falling to steady						
Time:	08:45	11:30	13:00	01:00	06:45	08:45	11:30	13:00	15:00	Trigger level 1	1.0	5.0	16.0
Pressure (mb):	976	966	965	997	993	993	993	993	993	Trigger level 2	5.0	10.0	10.0
	Weather Conditions:		Light rain showers, mild, light winds, cloudy										
	Surface Ground Conditions:		Wet										

Remarks:

Slaithwaite weather station 4 miles south west from the site (Black Cats, Huddersfield).

Appendix Y

Soakaway Test Results

SOIL INFILTRATION RATE IN ACCORDANCE WITH BRE DIGEST 365: 1991

Client:	Vistry Homes, Countryside Partnerships & Miller Homes
Engineer	CD & EW
Job Name:	Black Cats
Job No.:	4486

Date:	**01/11/2023**
Trial Pit No.	**TP513**
Test No.	**1**

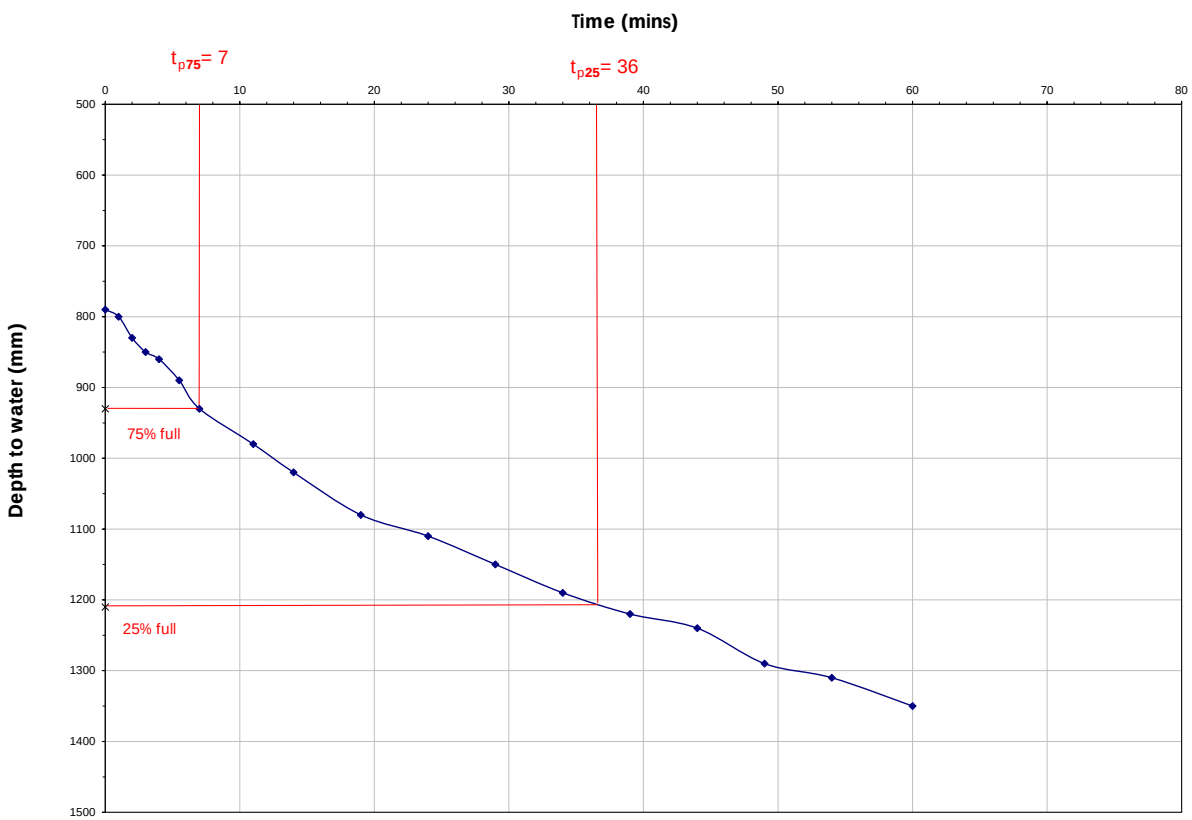
Time	Elapsed Time	Depth to water from ground level		
	(min)	(m)	(mm)	
09:01	0	0.79	790	
09:02	1	0.80	800	
09:03	2	0.83	830	
09:04	3	0.85	850	
09:05	4	0.86	860	
09:06:30	5.5	0.89	890	
09:08	7	0.93	930	
09:12	11	0.98	980	
09:15	14	1.02	1020	
09:20	19	1.08	1080	
09:25	24	1.11	1110	
09:30	29	1.15	1150	
09:35	34	1.19	1190	
09:40	39	1.22	1220	
09:45	44	1.24	1240	
09:50	49	1.29	1290	
09:55	54	1.31	1310	
10:01	60	1.35	1350	DRY

SOAKAWAY TRIAL PIT			
Dimensions		**(m)**	**(mm)**
Length	=	2.60	2600
Width	=	0.70	700
Depth	=	1.35	1350

Effective Depth (% full)		**(mm)**	**(m)**
0.25	=	1210	1.21
0.50	=	1070	1.07
0.75	=	930	0.93

Depth at start of test (mm)	=	790
Depth at end of test (mm)	=	1350
Base area of pit	=	1.82
a_{p50} - 50% internal surface area inc. base	=	3.668
V_{p75-25} - Volume 75 - 25%	=	0.5096

Read from the graph:		
$t_{p\ 75}$ (min)	=	7
$t_{p\ 25}$ (min)	=	36



Soil infiltration rate, f, (m/s) = 7.98E-05

SOIL INFILTRATION RATE IN ACCORDANCE WITH BRE DIGEST 365: 1991

Client:	Vistry Homes, Countryside Partnerships & Miller Homes
Engineer	CD & EW
Job Name:	Black Cats
Job No.:	4486

Date:	**01/11/2023**
Trial Pit No.	**TP513**
Test No.	**2**

Time	Elapsed Time	Depth to water from ground level		
	(min)	(m)	(mm)	
10:05	0	0.80	800	
10:06	1	0.81	810	
10:07	2	0.82	820	
10:08	3	0.83	830	
10:09	4	0.84	840	
10:10	5	0.85	850	
10:11	6	0.86	860	
10:13	8	0.87	870	
10:16	11	0.91	910	
10:18	13	0.92	920	
10:24	19	0.98	980	
10:29	24	1.03	1030	
10:35	30	1.06	1060	
10:40	35	1.10	1100	
11:10	65	1.24	1240	
11:18	73	1.27	1270	
11:25	85	1.29	1290	DRY

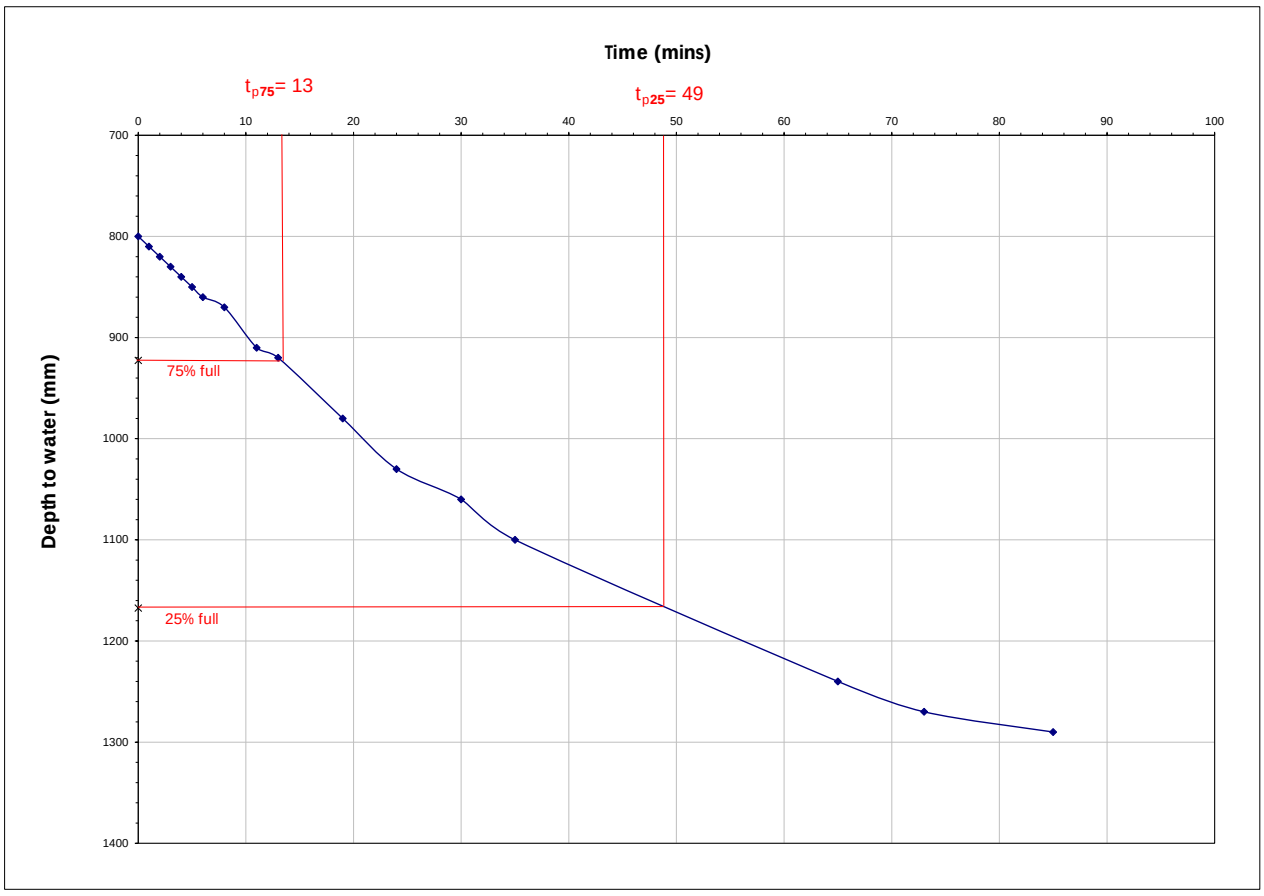
SOAKAWAY TRIAL PIT			
Dimensions		**(m)**	**(mm)**
Length	=	2.60	2600
Width	=	0.70	700
Depth	=	1.29	1290

Effective Depth (% full)		**(mm)**	**(m)**
0.25	=	1167.5	1.17
0.50	=	1045	1.05
0.75	=	922.5	0.92

Depth at start of test (mm)	=	800
Depth at end of test (mm)	=	1290

Base area of pit	=	1.82
a_{p50} - 50% internal surface area inc. base	=	3.437
V_{p75-25} - Volume 75 - 25%	=	0.4459

Read from the graph:		
$t_{p\ 75}$ (min)	=	13
$t_{p\ 25}$ (min)	=	49



Soil infiltration rate, f, (m/s) = 6.01E-05

SOIL INFILTRATION RATE IN ACCORDANCE WITH BRE DIGEST 365: 1991

Client:	Vistry Homes, Countryside Partnerships & Miller Homes
Engineer	CD & EW
Job Name:	Black Cats
Job No.:	4486

Date:	**01/11/2023**
Trial Pit No.	**TP513**
Test No.	**3**

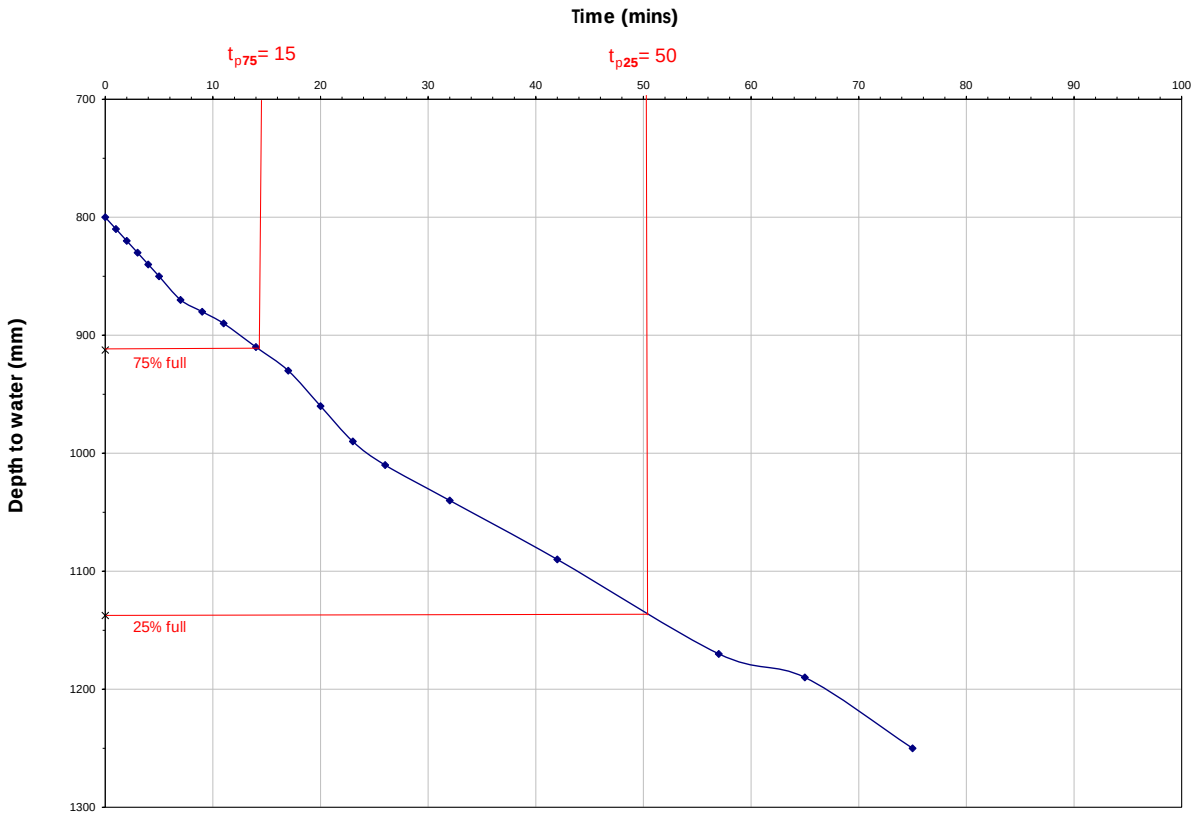
Time	Elapsed Time	Depth to water from ground level		
	(min)	(m)	(mm)	
13:20	0	0.80	800	
13:21	1	0.81	810	
13:22	2	0.82	820	
13:23	3	0.83	830	
13:24	4	0.84	840	
13:25	5	0.85	850	
13:27	7	0.87	870	
13:29	9	0.88	880	
13:31	11	0.89	890	
13:34	14	0.91	910	
13:37	17	0.93	930	
13:40	20	0.96	960	
13:43	23	0.99	990	
13:46	26	1.01	1010	
13:52	32	1.04	1040	
14:02	42	1.09	1090	
14:17	57	1.17	1170	
14:25	65	1.19	1190	
13:47	75	1.25	1250	DRY

SOAKAWAY TRIAL PIT			
Dimensions		**(m)**	**(mm)**
Length	=	2.60	2600
Width	=	0.70	700
Depth	=	1.25	1250

Effective Depth (% full)		**(mm)**	**(m)**
0.25	=	1137.5	1.14
0.50	=	1025	1.03
0.75	=	912.5	0.91

Depth at start of test (mm)	=	800
Depth at end of test (mm)	=	1250
Base area of pit	=	1.82
a_{p50} - 50% internal surface area inc. base	=	3.305
V_{p75-25} - Volume 75 - 25%	=	0.4095

Read from the graph:		
$t_{p\ 75}$ (min)	=	15
$t_{p\ 25}$ (min)	=	50



Soil infiltration rate, f, (m/s) = 5.90E-05

SOIL INFILTRATION RATE IN ACCORDANCE WITH BRE DIGEST 365: 1991

Client:	Vistry Homes, Countryside Partnerships & Miller Homes
Engineer	CD & EW
Job Name:	Black Cats
Job No.:	4486

Date:	**01/11/2023**
Trial Pit No.	**TP514**
Test No.	**1**

Time	Elapsed Time	Depth to water from ground level	
	(min)	(m)	(mm)
09:26:30	0	1.05	1050
09:27	0.5	1.26	1260
09:27:30	1	1.31	1310
09:29	2.5	1.38	1380
09:30	3.5	1.41	1410
09:31	4.5	1.42	1420
09:32	5.5	1.44	1440
09:33	6.5	1.47	1470
09:34	7.5	1.48	1480
09:37	10.5	1.52	1520
09:39	12.5	1.54	1540
09:43	16.5	1.59	1590
09:45	18.5	1.62	1620
09:47	20.5	1.64	1640
09:49	22.5	1.68	1680

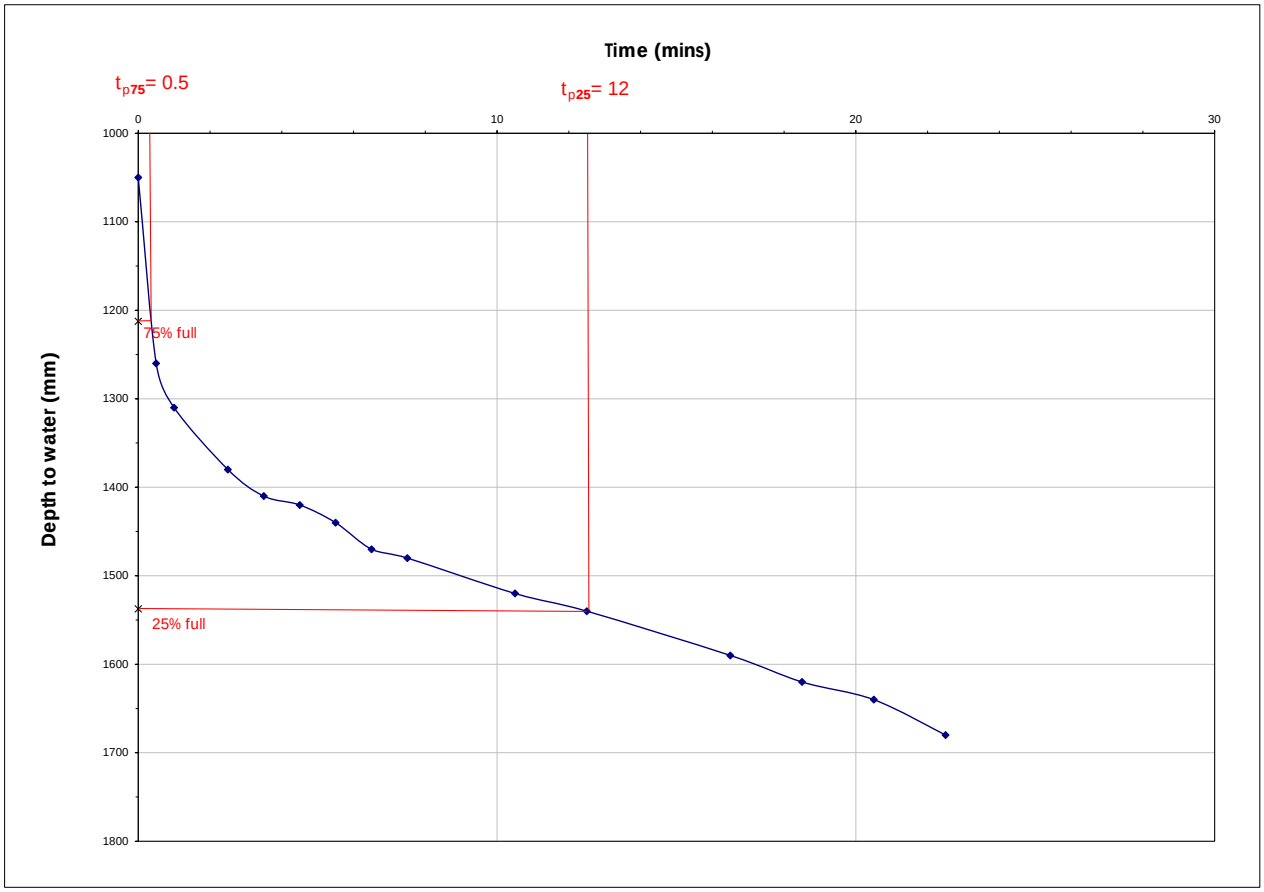
SOAKAWAY TRIAL PIT			
Dimensions		**(m)**	**(mm)**
Length	=	2.30	2300
Width	=	0.65	650
Depth	=	1.70	1700

Effective Depth (% full)		**(mm)**	**(m)**
0.25	=	1537.5	1.54
0.50	=	1375	1.38
0.75	=	1212.5	1.21

Depth at start of test (mm)	=	1050
Depth at end of test (mm)	=	1680

Base area of pit	=	1.495
a_{p50} - 50% internal surface area inc. base	=	3.4125
V_{p75-25} - Volume 75 - 25%	=	0.485875

Read from the graph:		
$t_{p\ 75}$ (min)	=	0.5
$t_{p\ 25}$ (min)	=	12



Soil infiltration rate, f, (m/s) = 2.06E-04

SOIL INFILTRATION RATE IN ACCORDANCE WITH BRE DIGEST 365: 1991

Client:	Vistry Homes, Countryside Partnerships & Miller Homes
Engineer	CD & EW
Job Name:	Black Cats
Job No.:	4486

Date:	**01/11/2023**
Trial Pit No.	**TP514**
Test No.	**2**

Time	Elapsed Time	Depth to water from ground level	
	(min)	(m)	(mm)
09:52	0	0.95	950
09:52:30	0.5	1.16	1160
09:53	1	1.24	1240
09:53:30	1.5	1.27	1270
09:54:00	2	1.29	1290
09:55	3	1.32	1320
09:56	4	1.34	1340
09:57	5	1.37	1370
09:59	7	1.42	1420
10:00	8	1.44	1440
10:02	10	1.46	1460
10:04	12	1.49	1490
10:07	15	1.54	1540
10:10	18	1.57	1570
10:12	20	1.59	1590
10:15	23	1.68	1680

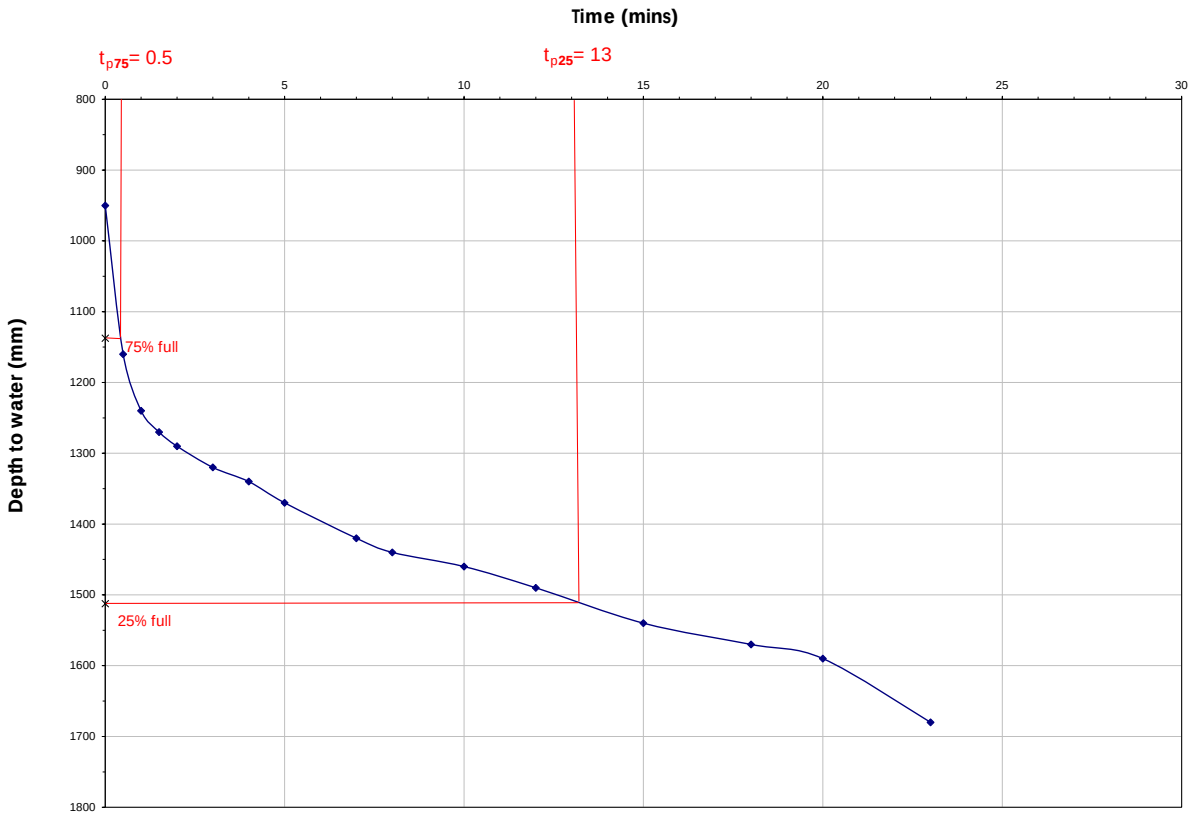
SOAKAWAY TRIAL PIT			
Dimensions		(m)	(mm)
Length	=	2.30	2300
Width	=	0.65	650
Depth	=	1.70	1700

Effective Depth (% full)		(mm)	(m)
0.25	=	1512.5	1.51
0.50	=	1325	1.33
0.75	=	1137.5	1.14

Depth at start of test (mm)	=	950
Depth at end of test (mm)	=	1680

Base area of pit	=	1.495
a_{p50} - 50% internal surface area inc. base	=	3.7075
V_{p75-25} - Volume 75 - 25%	=	0.560625

Read from the graph:		
$t_{p\ 75}$ (min)	=	0.5
$t_{p\ 25}$ (min)	=	13



Soil infiltration rate, f, (m/s) = 2.02E-04

SOIL INFILTRATION RATE IN ACCORDANCE WITH BRE DIGEST 365: 1991

Client:	Vistry Homes, Countryside Partnerships & Miller Homes
Engineer	CD & EW
Job Name:	Black Cats
Job No.:	4486

Date:	**01/11/2023**
Trial Pit No.	**TP514**
Test No.	**3**

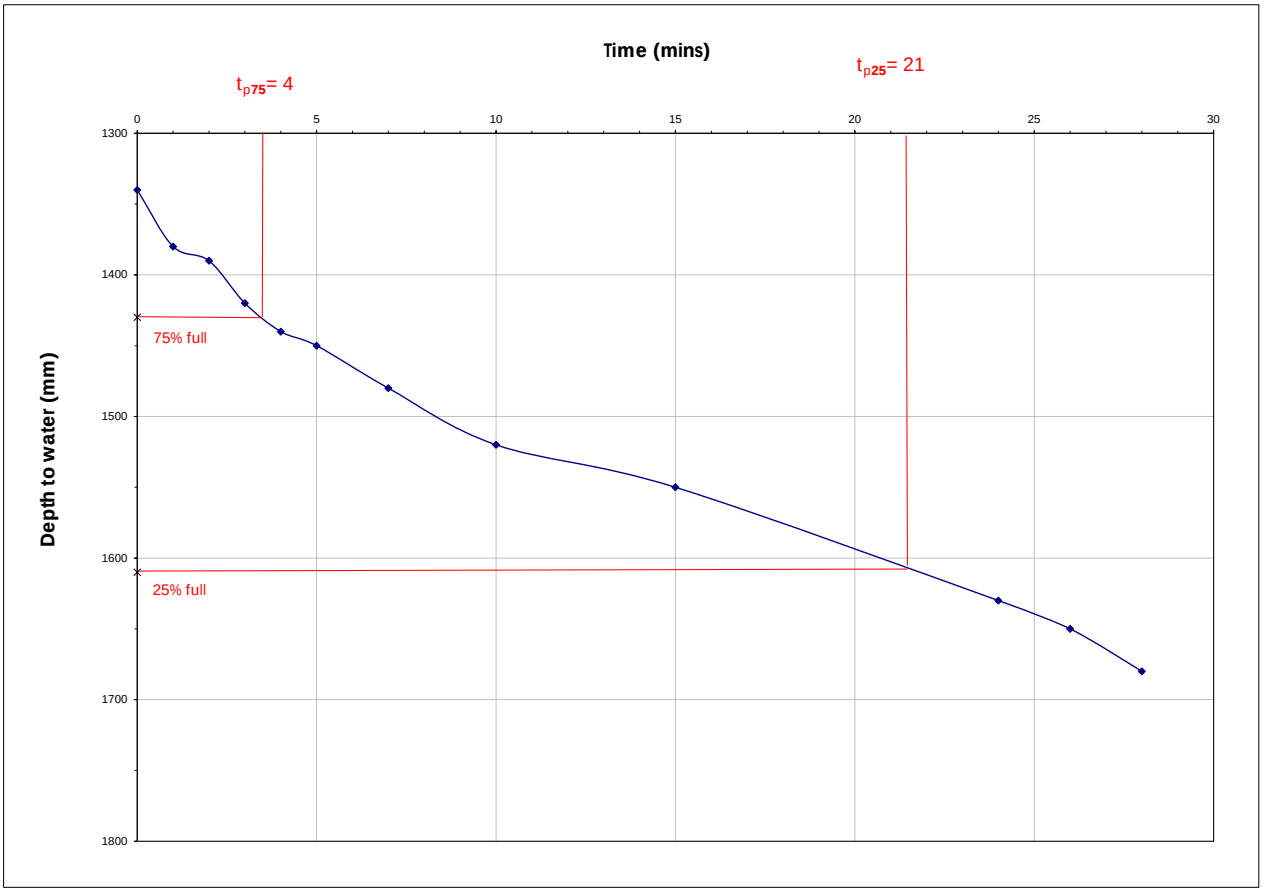
Time	Elapsed Time	Depth to water from ground level	
	(min)	(m)	(mm)
11:08	0	1.34	1340
11:09	1	1.38	1380
11:10	2	1.39	1390
11:11	3	1.42	1420
11:12	4	1.44	1440
11:13	5	1.45	1450
11:15	7	1.48	1480
11:18	10	1.52	1520
11:23	15	1.55	1550
11:32	24	1.63	1630
11:34	26	1.65	1650
11:36	28	1.68	1680

SOAKAWAY TRIAL PIT			
Dimensions		**(m)**	**(mm)**
Length	=	2.30	2300
Width	=	0.65	650
Depth	=	1.70	1700

Effective Depth (% full)		**(mm)**	**(m)**
0.25	=	1610	1.61
0.50	=	1520	1.52
0.75	=	1430	1.43

Depth at start of test (mm)	=	1340
Depth at end of test (mm)	=	1680
Base area of pit	=	1.495
a_{p50} - 50% internal surface area inc. base	=	2.557
V_{p75-25} - Volume 75 - 25%	=	0.2691

Read from the graph:		
$t_{p\ 75}$ (min)	=	4
$t_{p\ 25}$ (min)	=	21



Soil infiltration rate, f, (m/s) = 1.03E-04

SOIL INFILTRATION RATE IN ACCORDANCE WITH BRE DIGEST 365: 1991

Client:	Vistry Homes, Countryside Partnerships & Miller Homes
Engineer	CD & EW
Job Name:	Black Cats
Job No.:	4486

Date:	**01/11/2023**
Trial Pit No.	**TP516**
Test No.	**1**

Time	Elapsed Time	Depth to water from ground level	
	(min)	(m)	(mm)
12:08	0	0.88	880
12:09	1	0.88	880
12:10	2	0.89	890
12:11	3	0.90	900
12:12	4	0.91	910
12:13	5	0.92	920
12:15	7	0.94	940
12:17	9	0.96	960
12:19	11	0.98	980
12:22	14	1.03	1030
12:31	23	1.07	1070
12:46	38	1.18	1180
12:52	44	1.22	1220
12:54	46	1.25	1250
12:59	51	1.28	1280
13:04	56	1.32	1320
13:08	60	1.38	1380
13:17	69	1.42	1420
13:25	77	1.47	1470
13:32	84	1.50	1500
13:42	94	1.55	1550
13:48	100	1.58	1580
13:56	108	1.62	1620
13:58	110	1.63	1630

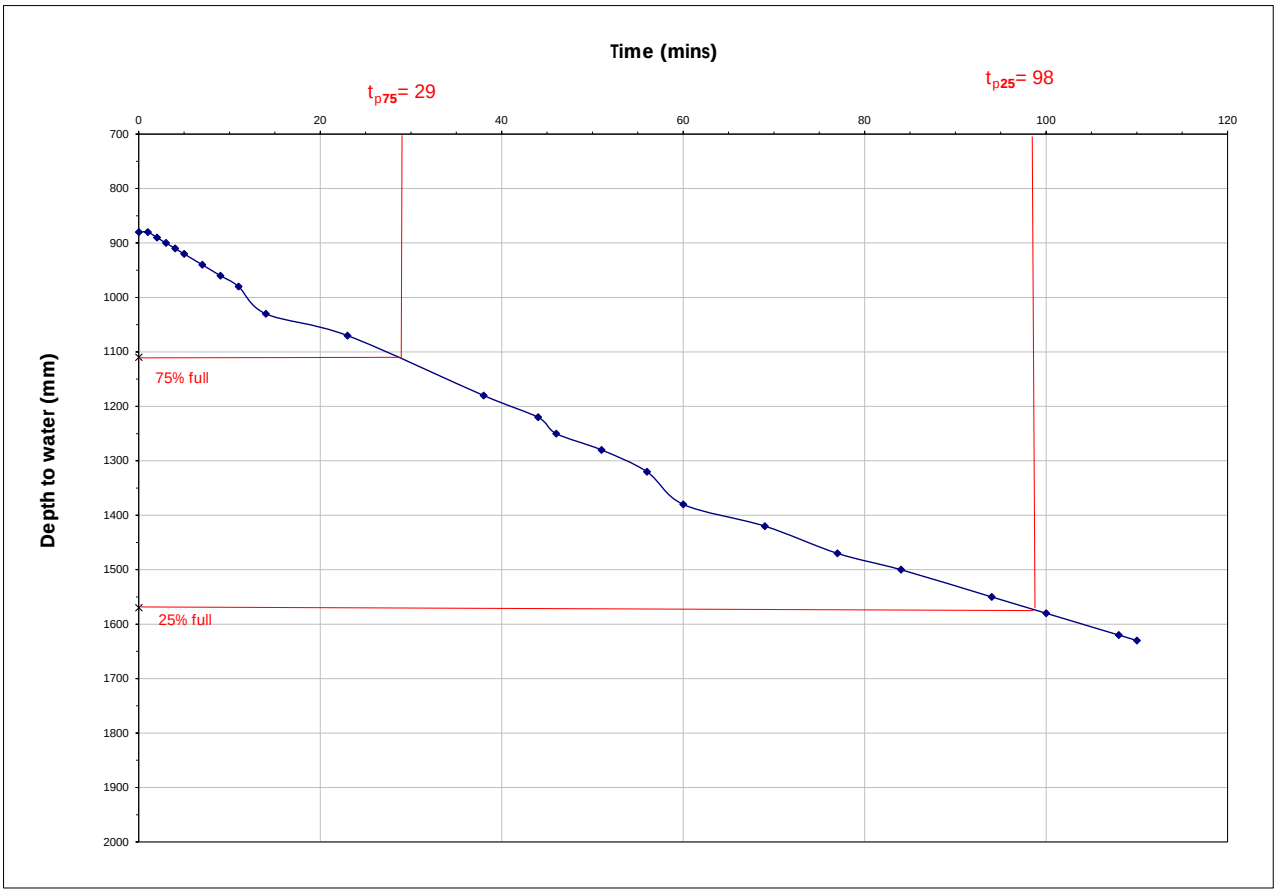
SOAKAWAY TRIAL PIT			
Dimensions		**(m)**	**(mm)**
Length	=	2.00	2000
Width	=	0.75	750
Depth	=	1.80	1800

Effective Depth (% full)		**(mm)**	**(m)**
0.25	=	1570	1.57
0.50	=	1340	1.34
0.75	=	1110	1.11

Depth at start of test (mm)	=	880
Depth at end of test (mm)	=	1630

Base area of pit	=	1.5
a_{p50} - 50% internal surface area inc. base	=	4.03
V_{p75-25} - Volume 75 - 25%	=	0.69

Read from the graph:		
$t_{p\ 75}$ (min)	=	29
$t_{p\ 25}$ (min)	=	98



Soil infiltration rate, f, (m/s) = 4.14E-05

SOIL INFILTRATION RATE IN ACCORDANCE WITH BRE DIGEST 365: 1991

Client:	Vistry Homes, Countryside Partnerships & Miller Homes
Engineer	CD & EW
Job Name:	Black Cats
Job No.:	4486

Date:	**01/11/2023**
Trial Pit No.	**TP516**
Test No.	**2**

Time	Elapsed Time	Depth to water from ground level	
	(min)	(m)	(mm)
14:01	0	0.78	780
14:02	1	0.78	780
14:03	2	0.80	800
14:04	3	0.80	800
14:05	4	0.81	810
14:06	5	0.81	810
14:11	10	0.85	850
14:25	24	0.96	960
14:30	29	1.00	1000
14:46	45	1.09	1090
14:51	50	1.12	1120
15:07	66	1.20	1200
15:21	80	1.28	1280
15:26	85	1.31	1310
15:30	89	1.34	1340
15:33	92	1.35	1350
15:37	96	1.36	1360
15:45	104	1.38	1380

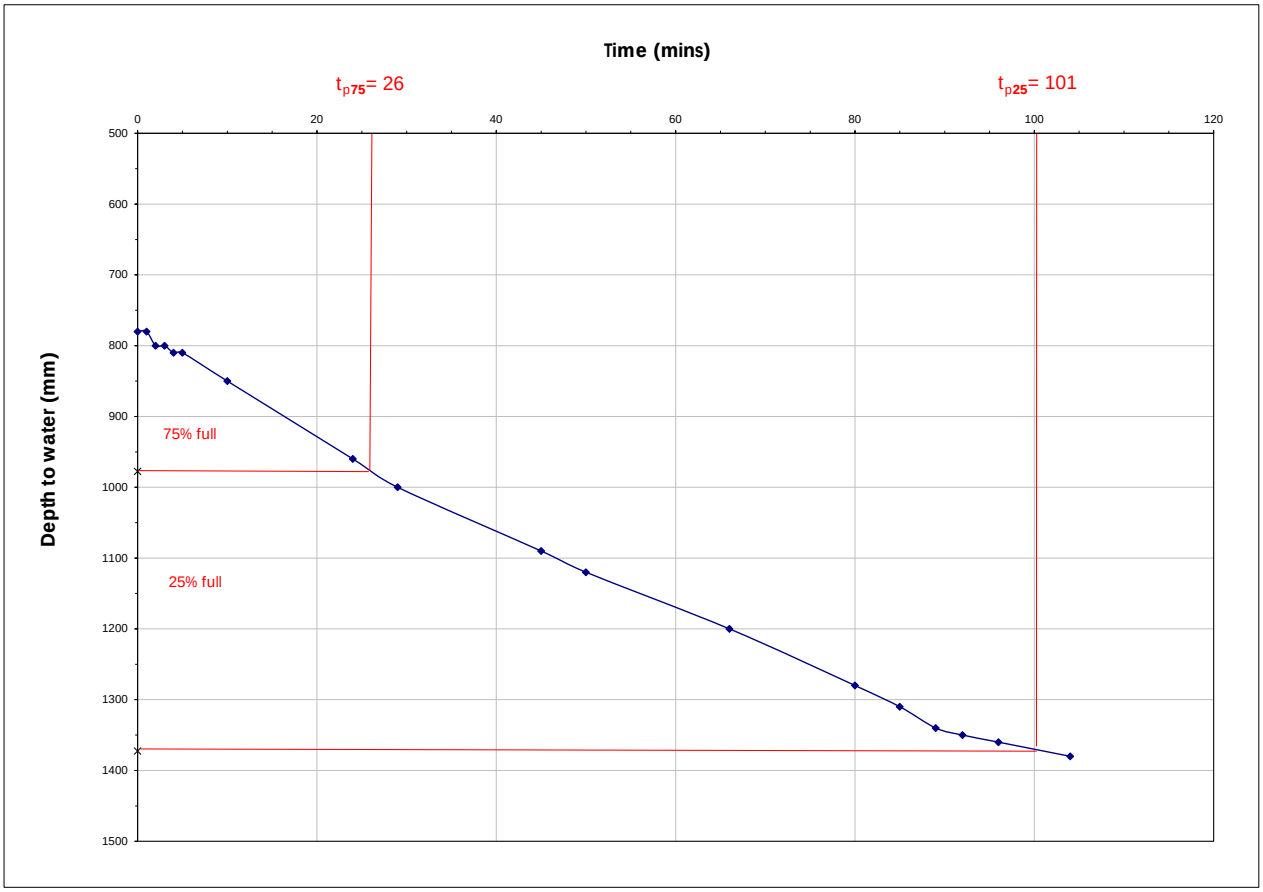
SOAKAWAY TRIAL PIT			
Dimensions		**(m)**	**(mm)**
Length	=	2.00	2000
Width	=	0.75	750
Depth	=	1.57	1570

Effective Depth (% full)		**(mm)**	**(m)**
0.25	=	1372.5	1.37
0.50	=	1175	1.18
0.75	=	977.5	0.98

Depth at start of test (mm)	=	780
Depth at end of test (mm)	=	1380

Base area of pit	=	1.5
a_{p50} - 50% internal surface area inc. base	=	3.6725
V_{p75-25} - Volume 75 - 25%	=	0.5925

Read from the graph:		
$t_{p\ 75}$ (min)	=	26
$t_{p\ 25}$ (min)	=	101



Soil infiltration rate, f, (m/s) = 3.59E-05

SOIL INFILTRATION RATE IN ACCORDANCE WITH BRE DIGEST 365: 1991

Client:	Vistry Homes, Countryside Partnerships & Miller Homes
Engineer	CD & EW
Job Name:	Black Cats
Job No.:	4486

Date:	**01/11/2023**
Trial Pit No.	**TP518**
Test No.	**1**

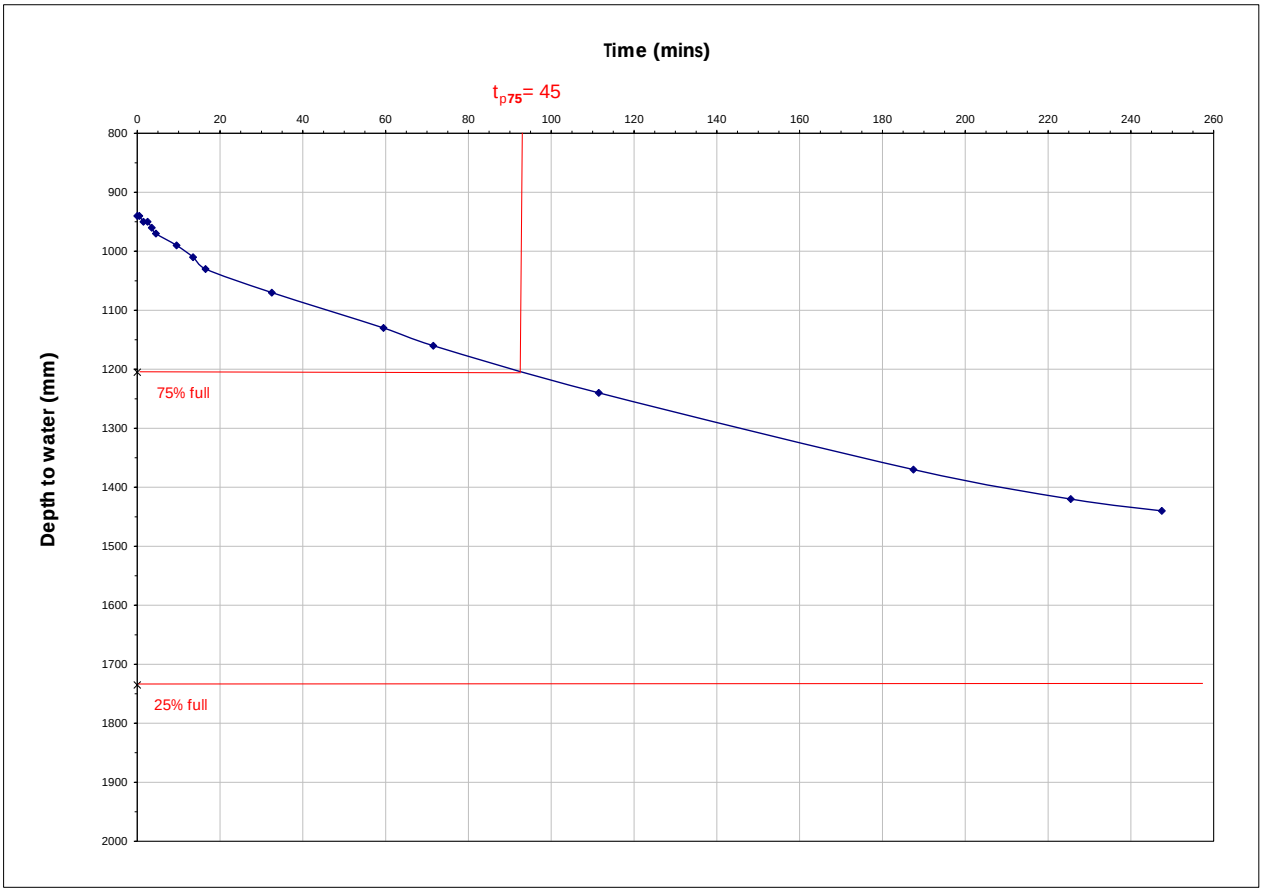
Time	Elapsed Time	Depth to water from ground level	
	(min)	(m)	(mm)
10:29:30	0	0.94	940
10:30	0.5	0.94	940
10:31	1.5	0.95	950
10:32	2.5	0.95	950
10:33	3.5	0.96	960
10:34	4.5	0.97	970
10:39	9.5	0.99	990
10:43	13.5	1.01	1010
10:46	16.5	1.03	1030
11:02	32.5	1.07	1070
11:29	59.5	1.13	1130
11:41	71.5	1.16	1160
12:21	111.5	1.24	1240
13:37	187.5	1.37	1370
14:15	225.5	1.42	1420
14:37	247.5	1.44	1440

SOAKAWAY TRIAL PIT			
Dimensions		**(m)**	**(mm)**
Length	=	2.20	2200
Width	=	0.70	700
Depth	=	2.00	2000

Effective Depth (% full)		**(mm)**	**(m)**
0.25	=	1735	1.74
0.50	=	1470	1.47
0.75	=	1205	1.21

Depth at start of test (mm)	=	940
Depth at end of test (mm)	=	1440
Base area of pit	=	1.54
a_{p50} - 50% internal surface area inc. base	=	4.614
V_{p75-25} - Volume 75 - 25%	=	0.8162

Read from the graph:		
$t_{p\ 75}$ (min)	=	45
$t_{p\ 25}$ (min)	=	n/a



Test did not attain 25% Effective depth. Unable to calculate soil infiltration rate

SOIL INFILTRATION RATE IN ACCORDANCE WITH BRE DIGEST 365: 1991

Client:	Vistry Homes, Countryside Partnerships & Miller Homes
Engineer	CD & EW
Job Name:	Black Cats
Job No.:	4486

Date:	**01/11/2023**
Trial Pit No.	**TP519**
Test No.	**1**

Time	Elapsed Time	Depth to water from ground level		
	(min)	(m)	(mm)	
10:51	0	0.95	950	
10:52	1	0.96	960	
10:53	2	0.96	960	
10:54	3	0.97	970	
10:55	4	0.97	970	
10:56	5	0.98	980	
10:58	7	0.99	990	
11:01	10	1.01	1010	
11:06	15	1.05	1050	
11:25	34	1.15	1150	
11:35	44	1.19	1190	
11:47	56	1.25	1250	
12:00	69	1.30	1300	
12:15	84	1.35	1350	
12:26	95	1.40	1400	DRY

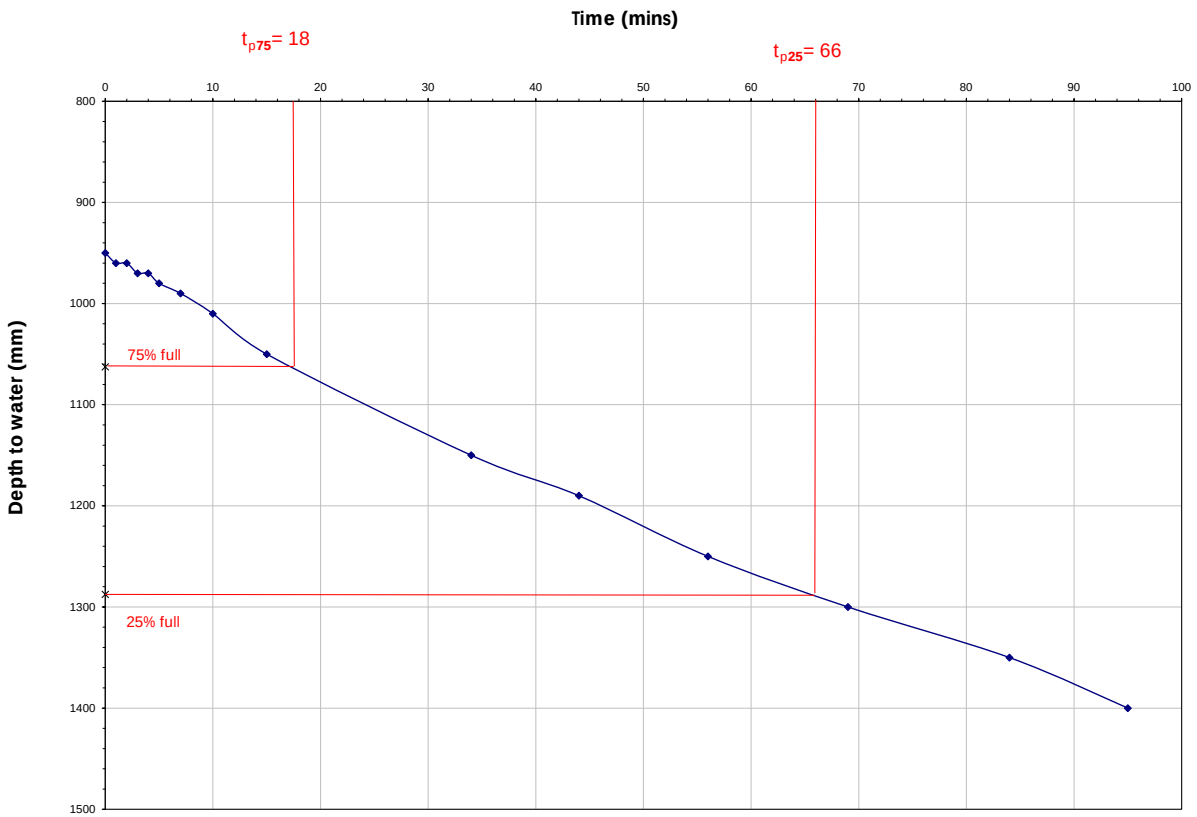
SOAKAWAY TRIAL PIT			
Dimensions		**(m)**	**(mm)**
Length	=	2.50	2500
Width	=	0.65	650
Depth	=	1.40	1400

Effective Depth (% full)		**(mm)**	**(m)**
0.25	=	1287.5	1.29
0.50	=	1175	1.18
0.75	=	1062.5	1.06

Depth at start of test (mm)	=	950
Depth at end of test (mm)	=	1400

Base area of pit	=	1.625
a_{p50} - 50% internal surface area inc. base	=	3.0425
V_{p75-25} - Volume 75 - 25%	=	0.365625

Read from the graph:		
$t_{p\ 75}$ (min)	=	18
$t_{p\ 25}$ (min)	=	66



Soil infiltration rate, f, (m/s) = 4.17E-05

SOIL INFILTRATION RATE IN ACCORDANCE WITH BRE DIGEST 365: 1991

Client:	Vistry Homes, Countryside Partnerships & Miller Homes
Engineer	CD & EW
Job Name:	Black Cats
Job No.:	4486

Date:	**01/11/2023**
Trial Pit No.	**TP519**
Test No.	**2**

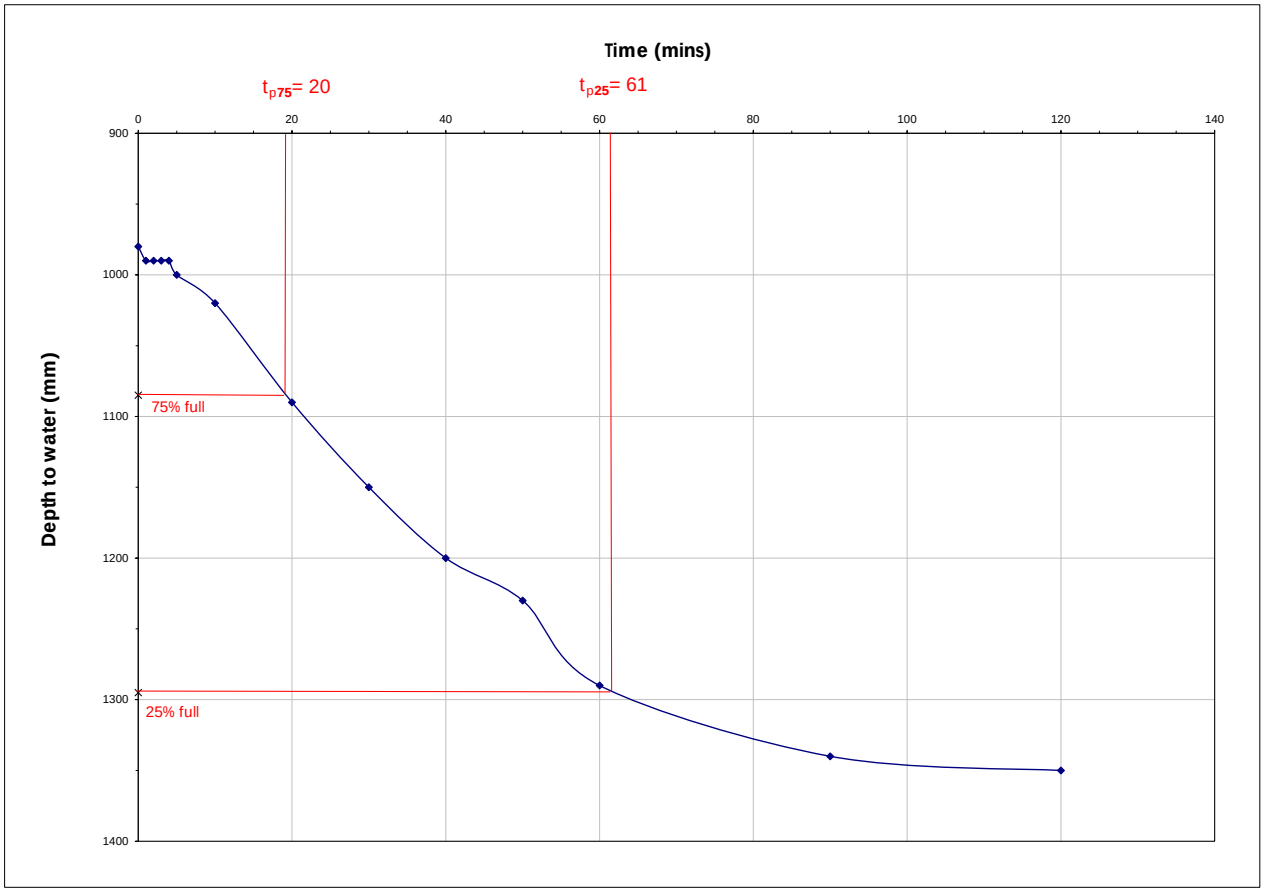
Time	Elapsed Time	Depth to water from ground level	
	(min)	(m)	(mm)
12:39	0	0.98	980
12:40	1	0.99	990
12:41	2	0.99	990
12:42	3	0.99	990
12:43	4	0.99	990
12:44	5	1.00	1000
12:50	10	1.02	1020
13:12	20	1.09	1090
13:29	30	1.15	1150
13:51	40	1.20	1200
14:08	50	1.23	1230
14:28	60	1.29	1290
14:49	90	1.34	1340
14:54	120	1.35	1350

SOAKAWAY TRIAL PIT			
Dimensions		**(m)**	**(mm)**
Length	=	2.50	2500
Width	=	0.65	650
Depth	=	1.40	1400

Effective Depth (% full)		**(mm)**	**(m)**
0.25	=	1295	1.30
0.50	=	1190	1.19
0.75	=	1085	1.09

Depth at start of test (mm)	=	980
Depth at end of test (mm)	=	1350
Base area of pit	=	1.625
a_{p50} - 50% internal surface area inc. base	=	2.948
V_{p75-25} - Volume 75 - 25%	=	0.34125

Read from the graph:		
$t_{p\ 75}$ (min)	=	20
$t_{p\ 25}$ (min)	=	61



Soil infiltration rate, f, (m/s) = 4.71E-05

SOIL INFILTRATION RATE IN ACCORDANCE WITH BRE DIGEST 365: 1991

Client:	Vistry Homes, Countryside Partnerships & Miller Homes
Engineer	CD & EW
Job Name:	Black Cats
Job No.:	4486

Date:	**31/10/2023**
Trial Pit No.	**TP611**
Test No.	**1**

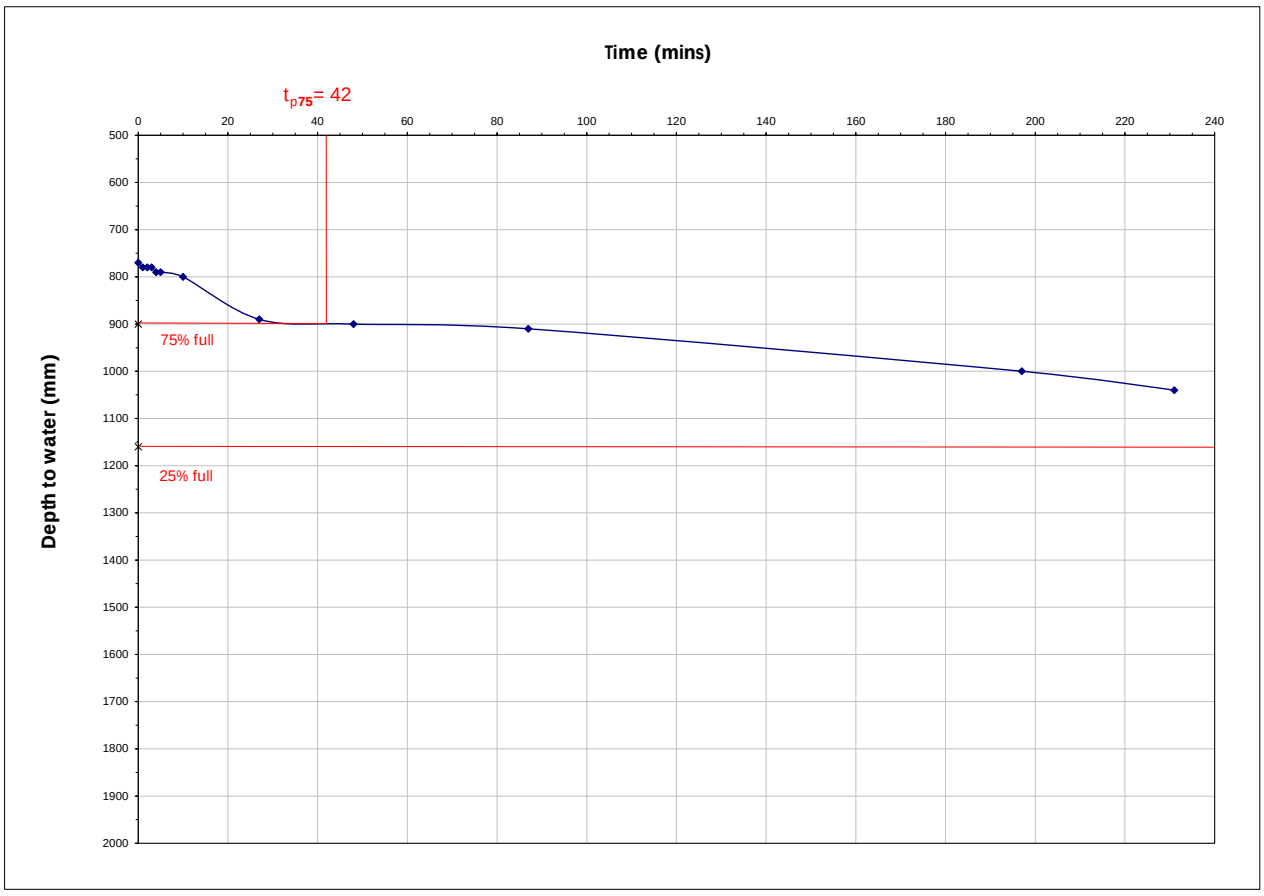
Time	Elapsed Time	Depth to water from ground level	
	(min)	(m)	(mm)
10:33	0	0.77	770
10:34	1	0.78	780
10:35	2	0.78	780
10:36	3	0.78	780
10:37	4	0.79	790
10:38	5	0.79	790
10:43	10	0.80	800
11:00	27	0.89	890
11:21	48	0.90	900
12:00	87	0.91	910
13:50	197	1.00	1000
14:24	231	1.04	1040

SOAKAWAY TRIAL PIT			
Dimensions		**(m)**	**(mm)**
Length	=	1.90	1900
Width	=	0.88	880
Depth	=	1.29	1290

Effective Depth (% full)		**(mm)**	**(m)**
0.25	=	1160	1.16
0.50	=	1030	1.03
0.75	=	900	0.90

Depth at start of test (mm)	=	770
Depth at end of test (mm)	=	1040
Base area of pit	=	1.672
a_{p50} - 50% internal surface area inc. base	=	3.1176
V_{p75-25} - Volume 75 - 25%	=	0.43472

Read from the graph:		
$t_{p\ 75}$ (min)	=	42
$t_{p\ 25}$ (min)	=	n/a



Test did not attain 25% Effective depth. Unable to calculate soil infiltration rate

SOIL INFILTRATION RATE IN ACCORDANCE WITH BRE DIGEST 365: 1991

Client:	Vistry Homes, Countryside Partnerships & Miller Homes
Engineer	CD & EW
Job Name:	Black Cats
Job No.:	4486

Date:	**31/10/2023**
Trial Pit No.	**TP612**
Test No.	**1**

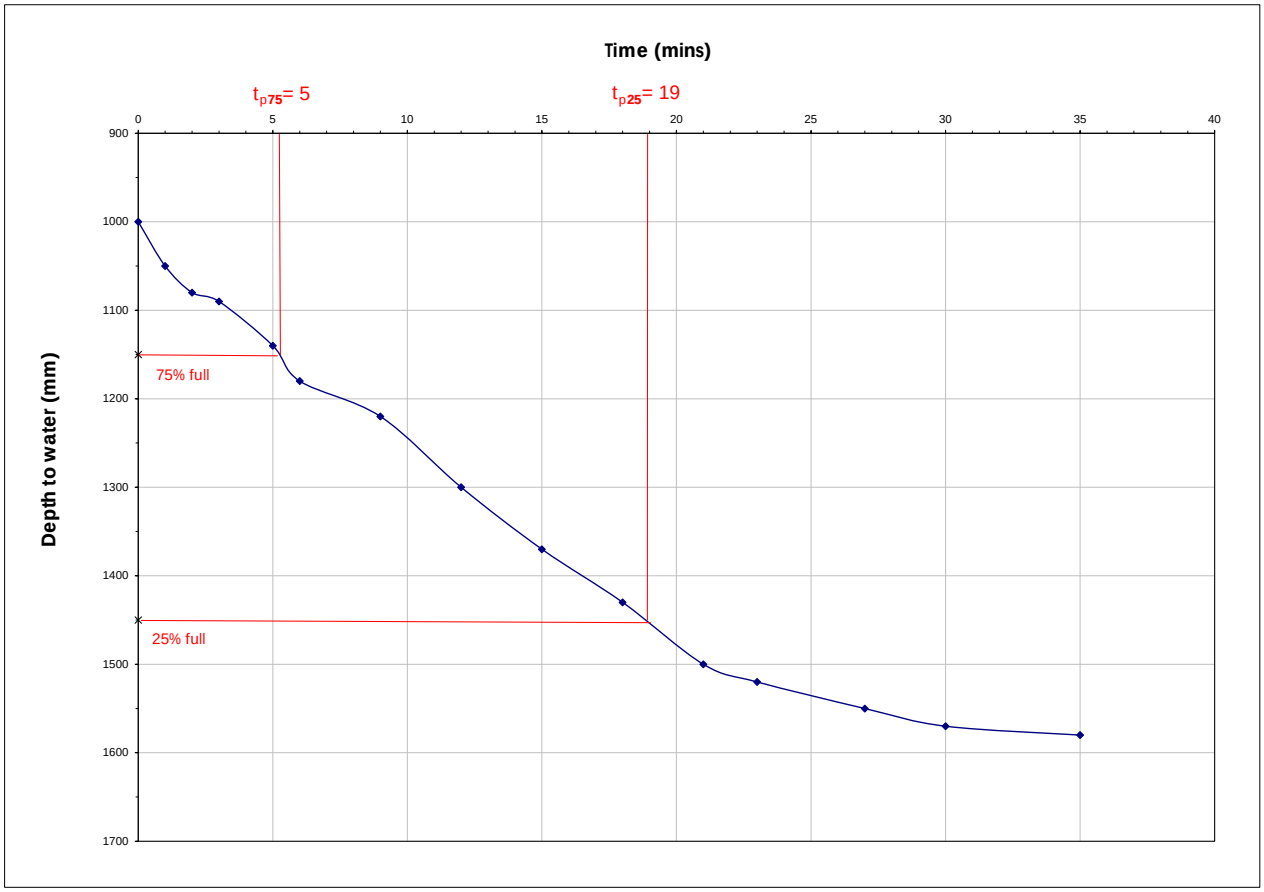
Time	Elapsed Time	Depth to water from ground level	
	(min)	(m)	(mm)
09:52	0	1.00	1000
09:53	1	1.05	1050
09:54	2	1.08	1080
09:55	3	1.09	1090
09:57	5	1.14	1140
09:58	6	1.18	1180
10:01	9	1.22	1220
10:04	12	1.30	1300
10:07	15	1.37	1370
10:10	18	1.43	1430
10:13	21	1.50	1500
10:15	23	1.52	1520
10:19	27	1.55	1550
10:22	30	1.57	1570
10:27	35	1.58	1580

SOAKAWAY TRIAL PIT			
Dimensions		**(m)**	**(mm)**
Length	=	2.30	2300
Width	=	0.70	700
Depth	=	1.60	1600

Effective Depth (% full)		**(mm)**	**(m)**
0.25	=	1450	1.45
0.50	=	1300	1.30
0.75	=	1150	1.15

Depth at start of test (mm)	=	1000
Depth at end of test (mm)	=	1580
Base area of pit	=	1.61
a_{p50} - 50% internal surface area inc. base	=	3.41
V_{p75-25} - Volume 75 - 25%	=	0.483

Read from the graph:		
$t_{p\ 75}$ (min)	=	5
$t_{p\ 25}$ (min)	=	19



Soil infiltration rate, f, (m/s) = 1.69E-04

SOIL INFILTRATION RATE IN ACCORDANCE WITH BRE DIGEST 365: 1991

Client:	Vistry Homes, Countryside Partnerships & Miller Homes
Engineer	CD & EW
Job Name:	Black Cats
Job No.:	4486

Date:	**31/10/2023**
Trial Pit No.	**TP612**
Test No.	**2**

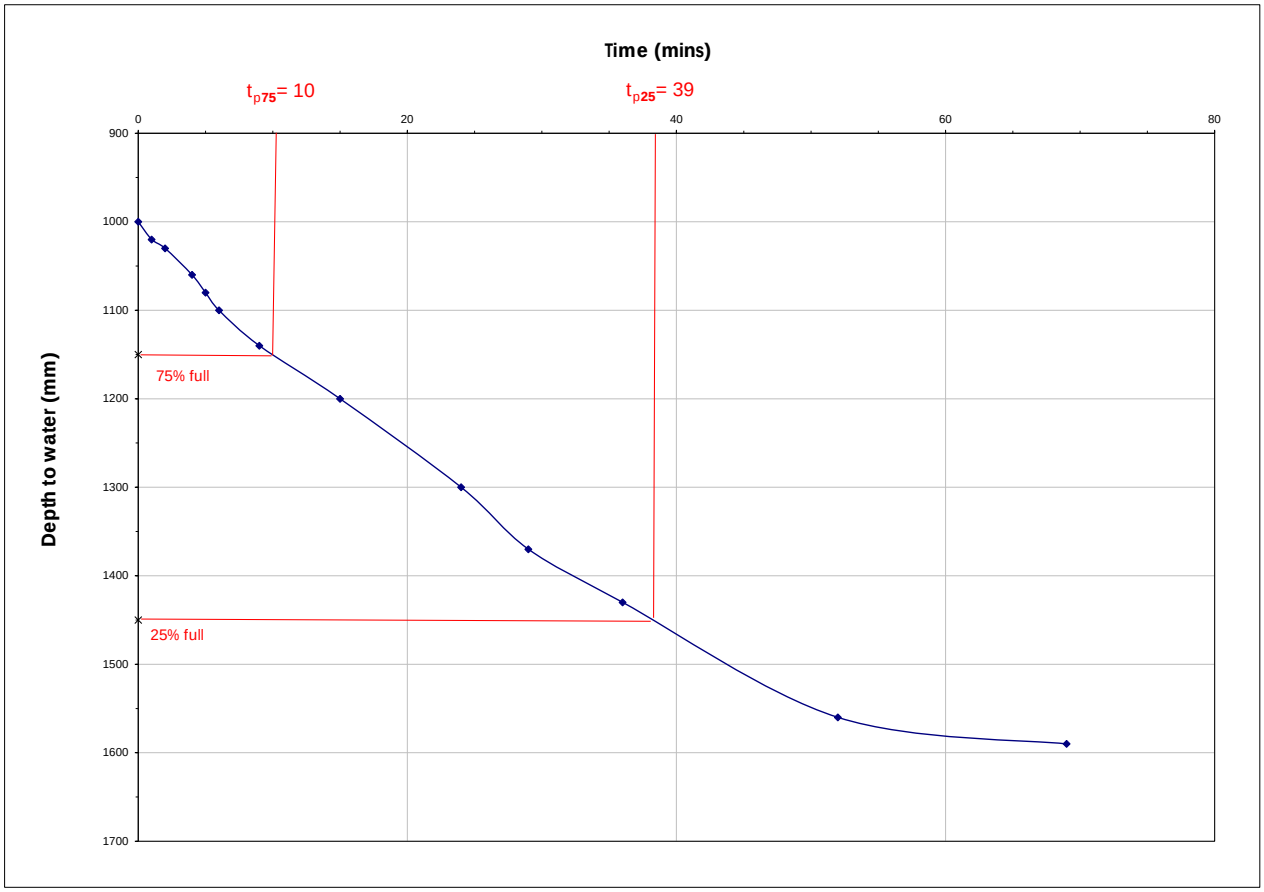
Time	Elapsed Time	Depth to water from ground level	
	(min)	(m)	(mm)
10:48	0	1.00	1000
10:49	1	1.02	1020
10:50	2	1.03	1030
10:52	4	1.06	1060
10:53	5	1.08	1080
10:54	6	1.10	1100
10:57	9	1.14	1140
11:03	15	1.20	1200
11:12	24	1.30	1300
11:17	29	1.37	1370
11:24	36	1.43	1430
11:40	52	1.56	1560
11:57	69	1.59	1590

SOAKAWAY TRIAL PIT			
Dimensions		**(m)**	**(mm)**
Length	=	2.30	2300
Width	=	0.70	700
Depth	=	1.60	1600

Effective Depth (% full)		**(mm)**	**(m)**
0.25	=	1450	1.45
0.50	=	1300	1.30
0.75	=	1150	1.15

Depth at start of test (mm)	=	1000
Depth at end of test (mm)	=	1590
Base area of pit	=	1.61
a_{p50} - 50% internal surface area inc. base	=	3.41
V_{p75-25} - Volume 75 - 25%	=	0.483

Read from the graph:		
$t_{p\ 75}$ (min)	=	10
$t_{p\ 25}$ (min)	=	39



Soil infiltration rate, f, (m/s) = 8.14E-05

SOIL INFILTRATION RATE IN ACCORDANCE WITH BRE DIGEST 365: 1991

Client:	Vistry Homes, Countryside Partnerships & Miller Homes
Engineer	CD & EW
Job Name:	Black Cats
Job No.:	4486

Date:	**31/10/2023**
Trial Pit No.	**TP612**
Test No.	**3**

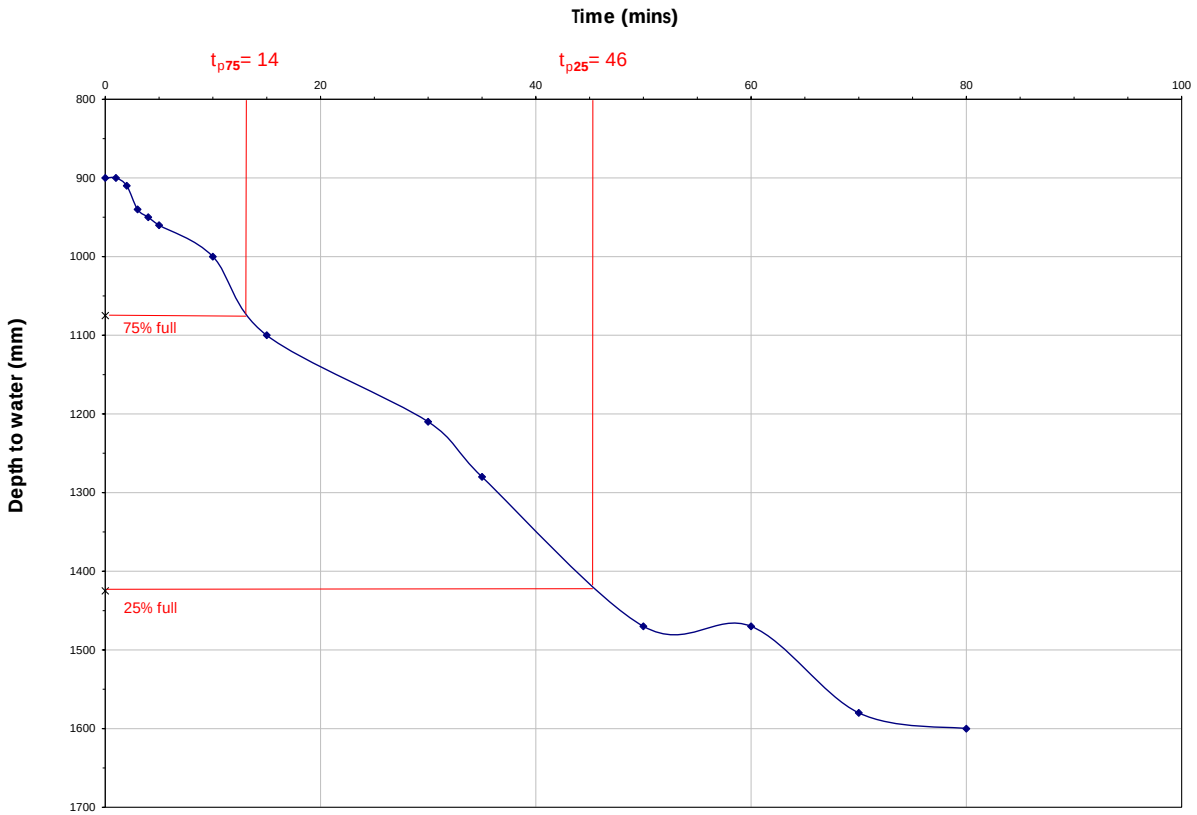
Time	Elapsed Time	Depth to water from ground level	
	(min)	(m)	(mm)
12:45	0	0.90	900
12:46	1	0.90	900
12:47	2	0.91	910
12:48	3	0.94	940
12:49	4	0.95	950
12:50	5	0.96	960
12:55	10	1.00	1000
13:00	15	1.10	1100
13:15	30	1.21	1210
13:20	35	1.28	1280
13:35	50	1.47	1470
13:45	60	1.47	1470
13:55	70	1.58	1580
14:05	80	1.60	1600

SOAKAWAY TRIAL PIT			
Dimensions		**(m)**	**(mm)**
Length	=	2.30	2300
Width	=	0.70	700
Depth	=	1.60	1600

Effective Depth (% full)		**(mm)**	**(m)**
0.25	=	1425	1.43
0.50	=	1250	1.25
0.75	=	1075	1.08

Depth at start of test (mm)	=	900
Depth at end of test (mm)	=	1600
Base area of pit	=	1.61
a_{p50} - 50% internal surface area inc. base	=	3.71
V_{p75-25} - Volume 75 - 25%	=	0.5635

Read from the graph:		
$t_{p\ 75}$ (min)	=	14
$t_{p\ 25}$ (min)	=	46



Soil infiltration rate, f, (m/s) = 7.91E-05

SOIL INFILTRATION RATE IN ACCORDANCE WITH BRE DIGEST 365: 1991

Client:	Vistry Homes, Countryside Partnerships & Miller Homes
Engineer	CD & EW
Job Name:	Black Cats
Job No.:	4486

Date:	**31/10/2023**
Trial Pit No.	**TP613**
Test No.	**1**

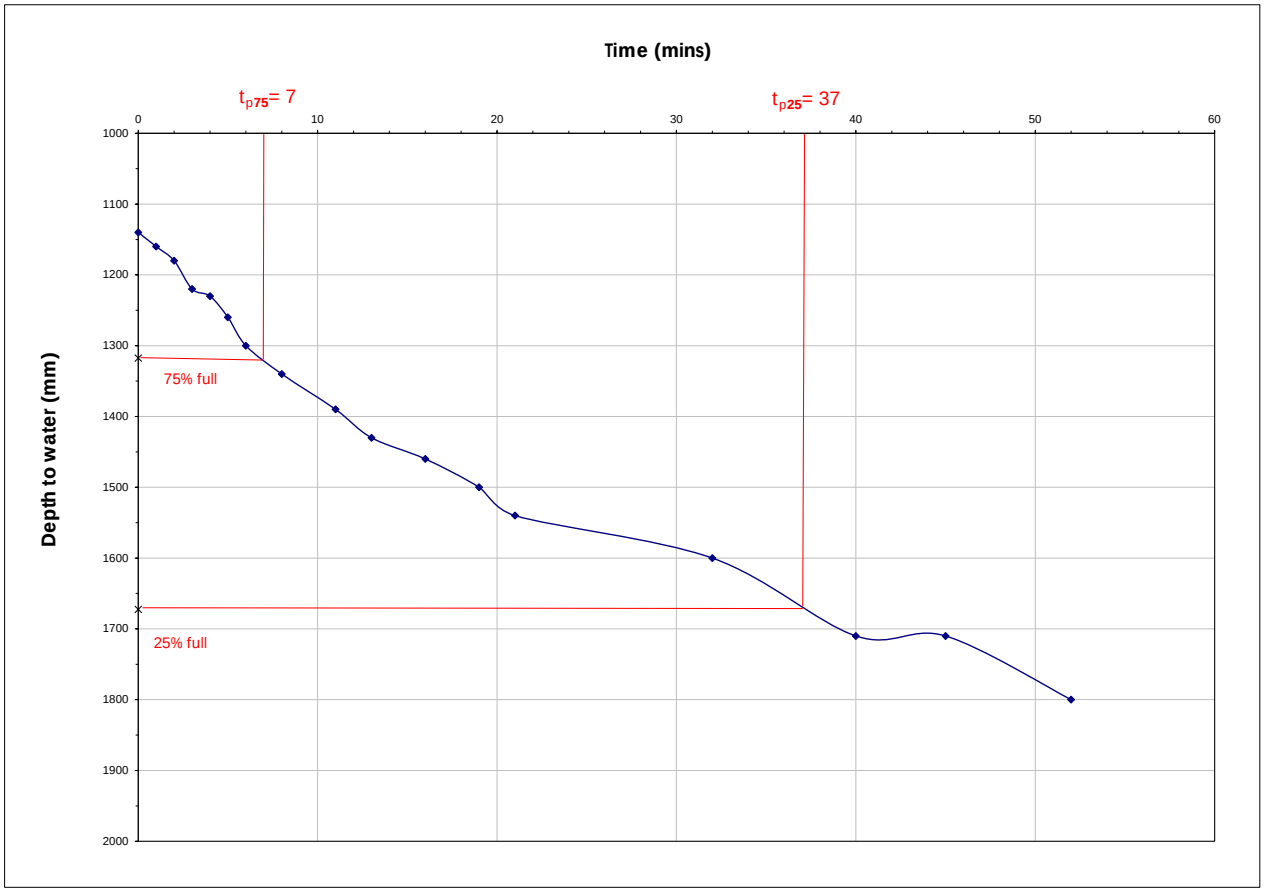
Time	Elapsed Time	Depth to water from ground level	
	(min)	(m)	(mm)
08:49	0	1.14	1140
08:50	1	1.16	1160
08:51	2	1.18	1180
08:52	3	1.22	1220
08:53	4	1.23	1230
08:54	5	1.26	1260
08:55	6	1.30	1300
08:57	8	1.34	1340
09:00	11	1.39	1390
09:02	13	1.43	1430
09:05	16	1.46	1460
09:08	19	1.50	1500
09:10	21	1.54	1540
09:21	32	1.60	1600
09:29	40	1.71	1710
09:34	45	1.71	1710
09:41	52	1.80	1800

SOAKAWAY TRIAL PIT			
Dimensions		(m)	(mm)
Length	=	2.20	2200
Width	=	0.77	770
Depth	=	1.85	1850

Effective Depth (% full)		(mm)	(m)
0.25	=	1672.5	1.67
0.50	=	1495	1.50
0.75	=	1317.5	1.32

Depth at start of test (mm)	=	1140
Depth at end of test (mm)	=	1800
Base area of pit	=	1.694
a_{p50} - 50% internal surface area inc. base	=	3.8027
V_{p75-25} - Volume 75 - 25%	=	0.60137

Read from the graph:		
$t_{p\ 75}$ (min)	=	7
$t_{p\ 25}$ (min)	=	37



Soil infiltration rate, f, (m/s) = 8.79E-05

SOIL INFILTRATION RATE IN ACCORDANCE WITH BRE DIGEST 365: 1991

Client:	Vistry Homes, Countryside Partnerships & Miller Homes
Engineer	CD & EW
Job Name:	Black Cats
Job No.:	4486

Date:	**31/10/2023**
Trial Pit No.	**TP613**
Test No.	**2**

Time	Elapsed Time	Depth to water from ground level		
	(min)	(m)	(mm)	
11:31	0	1.00	1000	
11:32	1	1.01	1010	
11:33	2	1.04	1040	
11:34	3	1.05	1050	
11:35	4	1.07	1070	
11:36	5	1.09	1090	
11:46	15	1.23	1230	
11:52	21	1.37	1370	
12:06	35	1.66	1660	
12:11	40	1.68	1680	DRY

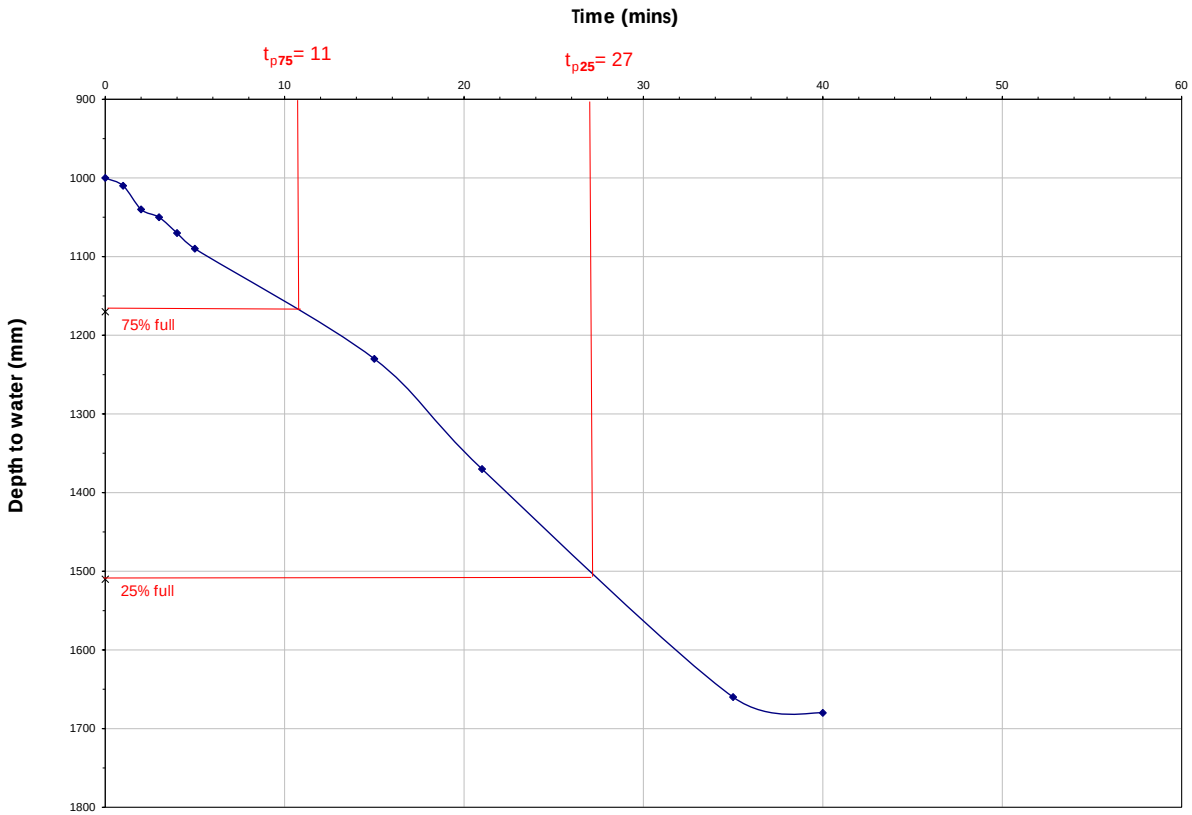
SOAKAWAY TRIAL PIT			
Dimensions		**(m)**	**(mm)**
Length	=	2.20	2200
Width	=	0.77	770
Depth	=	1.68	1680

Effective Depth (% full)		**(mm)**	**(m)**
0.25	=	1510	1.51
0.50	=	1340	1.34
0.75	=	1170	1.17

Depth at start of test (mm)	=	1000
Depth at end of test (mm)	=	1680

Base area of pit	=	1.694
a_{p50} - 50% internal surface area inc. base	=	3.7136
V_{p75-25} - Volume 75 - 25%	=	0.57596

Read from the graph:		
$t_{p\ 75}$ (min)	=	11
$t_{p\ 25}$ (min)	=	27



Soil infiltration rate, f, (m/s) = 1.62E-04

SOIL INFILTRATION RATE IN ACCORDANCE WITH BRE DIGEST 365: 1991

Client:	Vistry Homes, Countryside Partnerships & Miller Homes
Engineer	CD & EW
Job Name:	Black Cats
Job No.:	4486

Date:	**31/10/2023**
Trial Pit No.	**TP613**
Test No.	**3**

Time	Elapsed Time	Depth to water from ground level	
	(min)	(m)	(mm)
12:17	0	0.93	930
12:18	1	0.93	930
12:19	2	0.96	960
12:20	3	0.97	970
12:21	4	0.99	990
12:22	5	1.00	1000
12:30	13	1.11	1110
12:35	18	1.17	1170
12:38	21	1.20	1200
13:05	48	1.50	1500
13:30	73	1.67	1670

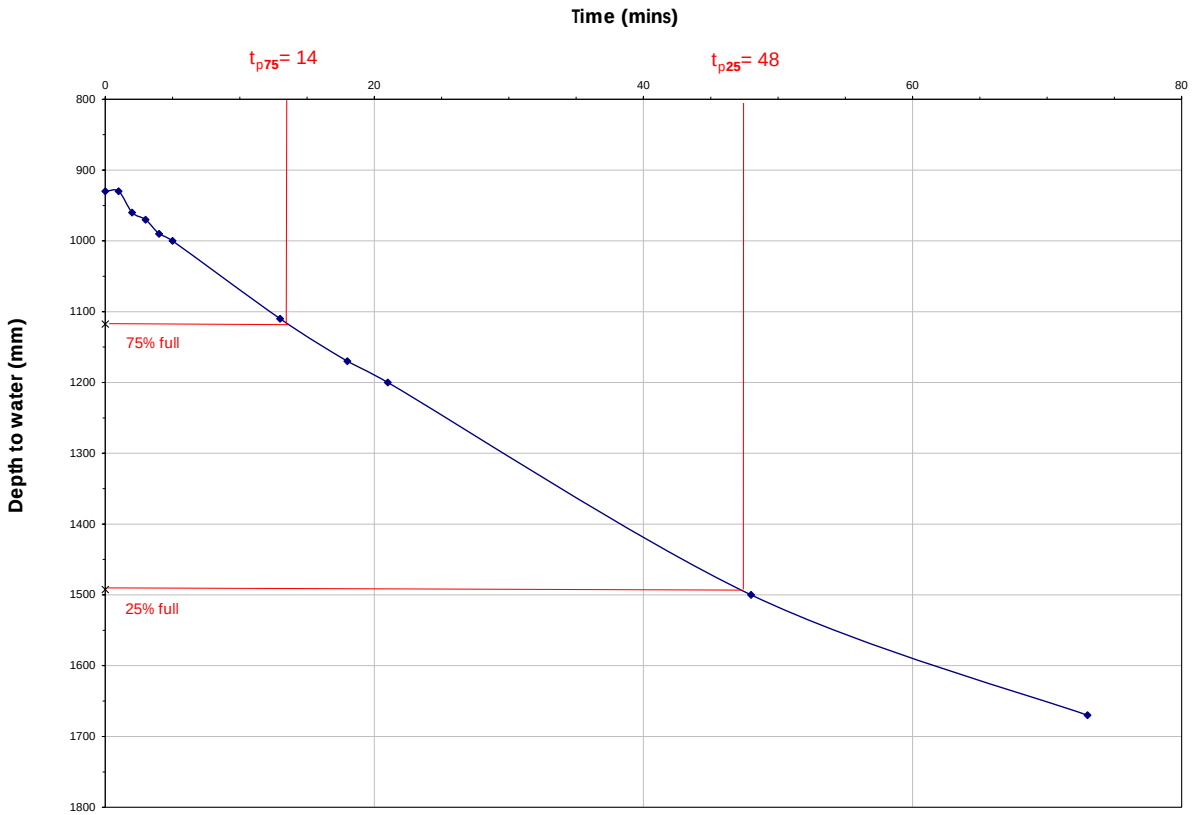
SOAKAWAY TRIAL PIT			
Dimensions		**(m)**	**(mm)**
Length	=	2.20	2200
Width	=	0.77	770
Depth	=	1.68	1680

Effective Depth (% full)		**(mm)**	**(m)**
0.25	=	1492.5	1.49
0.50	=	1305	1.31
0.75	=	1117.5	1.12

Depth at start of test (mm)	=	930
Depth at end of test (mm)	=	1670

Base area of pit	=	1.694
a_{p50} - 50% internal surface area inc. base	=	3.9215
V_{p75-25} - Volume 75 - 25%	=	0.63525

Read from the graph:		
$t_{p\ 75}$ (min)	=	14
$t_{p\ 25}$ (min)	=	48



Soil infiltration rate, f, (m/s) = 7.94E-05