The results can then be assessed and the results will be compared against the following:

- Sample Mean – if the sample mean of the data set is in excess of the GAC then the Upper Confidence Limit of the true population mean will be higher than the critical concentration.
- 95% of the Upper Confidence Limit.
- One Sample T Test (parametric test) carried out at the 95% confidence level.

On the basis of these tests, the validity of the Null Hypothesis can be assessed.

Certificate of Analysis

Certificate Number	17-94475	22-Mar-17
Client	Jordan Pritchard Gorman Civil & Structural Engineers 5 John Charles Way Leeds LS12 6QD	

Our Reference	17-94475
Client Reference	(not supplied)
Order No	(not supplied)
Contract Title	Capitol Park, Junction 37 (M1), Dodworth
Description	9 Soil samples, 5 Leachate samples.

Date Received	16-Mar-17
Date Started	16-Mar-17
Date Completed	22-Mar-17
Test Procedures	Identified by prefix DETSn (details on request).
Notes	Opinions and interpretations are outside the scope of UKAS 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. Observations and interpretations are outside the scope of ISO 17025. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Rob Brown
Business Manager

UKAS TESTING
2139

Summary of Chemical Analysis
Soil Samples

Our Ref 17-94475
Client Ref
Contract Title Capitol Park, Junction 37 (M1), Dodworth

			Lab No	1144064	1144065	1144066	1144067	1144068	1144069
			Sample ID	TP01	TP02	TP05	TP06	TP07	TP09
			Depth	0.00-0.20	0.00-0.20	0.00-0.30	0.00-0.50	1.60-1.80	0.00-0.10
			Other ID						
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	13/03/17	13/03/17	13/03/17	13/03/17	13/03/17	14/03/17
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	7.7	5.5	4.1	16	24	9.8
Cadmium	DETSC 2301#	0.1	mg/kg	< 0.1	0.1	< 0.1	0.1	0.2	0.2
Chromium	DETSC 2301#	0.15	mg/kg	17	19	20	17	17	18
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0		< 1.0		< 1.0	
Copper	DETSC 2301#	0.2	mg/kg	30	30	31	32	46	28
Lead	DETSC 2301#	0.3	mg/kg	16	18	13	15	40	17
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	32	35	39	38	23	39
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	0.6	< 0.5	< 0.5	0.6	< 0.5
Zinc	DETSC 2301#	1	mg/kg	74	78	77	78	82	88
Inorganics									
pH	DETSC 2008#			7.7	6.4	6.4	6.5	7.3	6.8
Cyanide, Free	DETSC 2130#	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Organic matter	DETSC 2002#	0.1	%	3.4	1.3	2.3	1.4	4.2	1.5
Ammoniacal Nitrogen as N	DETSC 2119#	0.5	mg/kg	3.9		8.7		13	
Chloride Aqueous Extract	DETSC 2055	1	mg/l	8.8		5.1		8.4	
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	24	12	< 10	< 10	58	< 10
Sulphide	DETSC 2024#	10	mg/kg	< 10		< 10		< 10	
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.03		0.02		0.08	
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					< 1.5	
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg					< 1.2	
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg					< 1.5	
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg					< 3.4	
Aliphatic C5-C35	DETSC 3072*	10	mg/kg					< 10	
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					< 0.9	
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg					< 0.5	
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg					< 0.6	
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg					< 1.4	
Aromatic C5-C35	DETSC 3072*	10	mg/kg					< 10	
TPH Ali/Aro Total	DETSC 3072*	10	mg/kg					< 10	
PAHs									
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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 17-94475
Client Ref
Contract Title Capitol Park, Junction 37 (M1), Dodworth

			Lab No	1144064	1144065	1144066	1144067	1144068	1144069
			Sample ID	TP01	TP02	TP05	TP06	TP07	TP09
			Depth	0.00-0.20	0.00-0.20	0.00-0.30	0.00-0.50	1.60-1.80	0.00-0.10
			Other ID						
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	13/03/17	13/03/17	13/03/17	13/03/17	13/03/17	14/03/17
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Fluorene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	0.4	< 0.1	< 0.1	< 0.1	< 0.1
Pyrene	DETSC 3301	0.1	mg/kg	< 0.1	0.9	< 0.1	< 0.1	0.2	< 0.1
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PAH Total	DETSC 3301	1.6	mg/kg	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3

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 17-94475
Client Ref
Contract Title Capitol Park, Junction 37 (M1), Dodworth

			Lab No	1144070	1144071	1144072
			Sample ID	TP10	TP09	TP11
			Depth	0.00-0.50	0.00-0.20	0.00-0.50
			Other ID			
			Sample Type	SOIL	SOIL	SOIL
			Sampling Date	14/03/17	14/03/17	14/03/17
			Sampling Time	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**			
Metals						
Arsenic	DETSC 2301#	0.2	mg/kg	9.8	14	12
Cadmium	DETSC 2301#	0.1	mg/kg	0.1	0.2	0.2
Chromium	DETSC 2301#	0.15	mg/kg	17	20	22
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0		< 1.0
Copper	DETSC 2301#	0.2	mg/kg	34	25	27
Lead	DETSC 2301#	0.3	mg/kg	17	29	33
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	31	15	18
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	0.8	0.7
Zinc	DETSC 2301#	1	mg/kg	66	87	99
Inorganics						
pH	DETSC 2008#			6.8	7.1	7.1
Cyanide, Free	DETSC 2130#	0.1	mg/kg	< 0.1	0.1	0.1
Organic matter	DETSC 2002#	0.1	%	3.0	2.5	3.5
Ammoniacal Nitrogen as N	DETSC 2119#	0.5	mg/kg	7.6		28
Chloride Aqueous Extract	DETSC 2055	1	mg/l	3.4		8.6
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	36	40	50
Sulphide	DETSC 2024#	10	mg/kg	< 10		56
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.04		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			
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	DETSC 3072*	10	mg/kg			
PAHs						
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.1

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 17-94475
Client Ref
Contract Title Capitol Park, Junction 37 (M1), Dodworth

			Lab No	1144070	1144071	1144072
			Sample ID	TP10	TP09	TP11
			Depth	0.00-0.50	0.00-0.20	0.00-0.50
			Other ID			
			Sample Type	SOIL	SOIL	SOIL
			Sampling Date	14/03/17	14/03/17	14/03/17
			Sampling Time	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**			
Fluorene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Phenanthrene	DETSC 3301	0.1	mg/kg	< 0.1	0.2	0.6
Anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.2
Fluoranthene	DETSC 3301	0.1	mg/kg	0.1	0.4	1.0
Pyrene	DETSC 3301	0.1	mg/kg	0.1	0.4	1.0
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.7
Chrysene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.4
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.3
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.2
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.6
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.4
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	0.1
PAH Total	DETSC 3301	1.6	mg/kg	< 1.6	< 1.6	5.5
Phenols						
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	< 0.3	< 0.3

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

Summary of Chemical Analysis
Leachate Samples

Our Ref 17-94475
Client Ref
Contract Title Capitol Park, Junction 37 (M1), Dodworth

			Lab No	1144073	1144074	1144075	1144076	1144077
			Sample ID	TP01	TP05	TP07	TP10	TP11
			Depth	0.00-0.20	0.00-0.30	1.60-1.80	0.00-0.50	0.00-0.50
			Other ID					
			Sample Type	LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE
			Sampling Date	13/03/17	13/03/17	13/03/17	14/03/17	14/03/17
			Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**					
Preparation								
NRA Leachate Preparation	DETS 036*			Y	Y	Y	Y	Y
Metals								
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	0.29	< 0.16	< 0.16	< 0.16	1.8
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Chromium, Dissolved	DETSC 2306	0.25	ug/l	< 0.25	< 0.25	< 0.25	< 0.25	0.33
Copper, Dissolved	DETSC 2306	0.4	ug/l	0.7	0.4	< 0.4	< 0.4	2.1
Lead, Dissolved	DETSC 2306	0.09	ug/l	0.14	< 0.09	0.11	< 0.09	0.44
Mercury, Dissolved	DETSC 2306	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	2.6	< 0.5	< 0.5	< 0.5	< 0.5
Selenium, Dissolved	DETSC 2306	0.25	ug/l	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Zinc, Dissolved	DETSC 2306	1.3	ug/l	190	< 1.3	< 1.3	9.1	5.0
Inorganics								
pH	DETSC 2008			7.2	6.5	6.4	6.7	6.8
Cyanide, Free	DETSC 2130	20	ug/l	< 20	< 20	< 20	< 20	< 20
Sulphate as SO4	DETSC 2055	0.1	mg/l	2.5	0.70	1.6	24	2.5
PAHs								
Naphthalene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	0.01	0.04
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	0.06	0.07
Fluorene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	0.05	0.07
Phenanthrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	0.07	0.17
Anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	0.02	0.05
Fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	0.07	0.10
Pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	0.05	0.07
Benzo(a)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	0.01	0.09
Chrysene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	0.51
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	0.03
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	0.04
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	0.04
Indeno(1,2,3-c,d)pyrene	DETSC 3304*	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(g,h,i)perylene	DETSC 3304*	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
PAH Total	DETSC 3304	0.04	ug/l	< 0.04	< 0.04	< 0.04	0.34	1.3
Phenols								
Phenol	*	0.5	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50

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

Summary of Asbestos Analysis
Soil Samples

Our Ref 17-94475
Client Ref
Contract Title Capitol Park, Junction 37 (M1), Dodworth

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
1144064	TP01 0.00-0.20	SOIL	NAD	none	Steven Lambert
1144065	TP02 0.00-0.20	SOIL	NAD	none	Steven Lambert
1144066	TP05 0.00-0.30	SOIL	NAD	none	Steven Lambert
1144067	TP06 0.00-0.50	SOIL	NAD	none	Steven Lambert
1144068	TP07 1.60-1.80	SOIL	NAD	none	Steven Lambert
1144069	TP09 0.00-0.10	SOIL	NAD	none	Steven Lambert
1144070	TP10 0.00-0.50	SOIL	NAD	none	Steven Lambert
1144071	TP09 0.00-0.20	SOIL	NAD	none	Steven Lambert
1144072	TP11 0.00-0.50	SOIL	NAD	none	Steven Lambert

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 17-94475
Client Ref
Contract Capitol Park, Junction 37 (M1), Dodworth

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
1144064	TP01 0.00-0.20 SOIL	13/03/17	GJ 250ml, PT 1L		
1144065	TP02 0.00-0.20 SOIL	13/03/17	GJ 250ml, PT 1L		
1144066	TP05 0.00-0.30 SOIL	13/03/17	GJ 250ml, PT 1L		
1144067	TP06 0.00-0.50 SOIL	13/03/17	GJ 250ml, PT 1L		
1144068	TP07 1.60-1.80 SOIL	13/03/17	GJ 250ml, GJ 60ml, PT 1L		
1144069	TP09 0.00-0.10 SOIL	14/03/17	GJ 250ml, PT 1L		
1144070	TP10 0.00-0.50 SOIL	14/03/17	GJ 250ml, PT 1L		
1144071	TP09 0.00-0.20 SOIL	14/03/17	GJ 250ml, PT 1L		
1144072	TP11 0.00-0.50 SOIL	14/03/17	GJ 250ml, PT 1L		
1144073	TP01 0.00-0.20 LEACHATE	13/03/17	GJ 250ml, PT 1L		
1144074	TP05 0.00-0.30 LEACHATE	13/03/17	GJ 250ml, PT 1L		
1144075	TP07 1.60-1.80 LEACHATE	13/03/17	GJ 250ml, GJ 60ml, PT 1L		
1144076	TP10 0.00-0.50 LEACHATE	14/03/17	GJ 250ml, PT 1L		
1144077	TP11 0.00-0.50 LEACHATE	14/03/17	GJ 250ml, 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.

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

Certificate of Analysis

Certificate Number	17-94765
	27-Mar-17
Client	Jordan Pritchard Gorman Civil & Structural Engineers 5 John Charles Way Leeds LS12 6QD
Our Reference	17-94765
Client Reference	(not supplied)
Order No	(not supplied)
Contract Title	CAPITAL PARK,JUNCTION 37,DODWORTH
Description	8 Soil samples, 8 Leachate samples.
Date Received	18-Mar-17
Date Started	18-Mar-17
Date Completed	27-Mar-17
Test Procedures	Identified by prefix DETSn (details on request).
Notes	Opinions and interpretations are outside the scope of UKAS 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. Observations and interpretations are outside the scope of ISO 17025. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Rob Brown
Business Manager

UKAS TESTING
2139

Summary of Chemical Analysis
Soil Samples

Our Ref 17-94765
Client Ref
Contract Title CAPITAL PARK,JUNCTION 37,DODWORTH

			Lab No	1145887	1145888	1145889	1145890	1145891	1145892
			Sample ID	TP14	TP16	TP17	TP18	TP20	TP21
			Depth	0.00-0.50	0.50-1.00	0.00-0.50	1.00-1.40	1.00-1.50	0.00-0.50
			Other ID						
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	14/03/17	14/03/17	14/03/17	16/03/17	16/03/17	16/03/17
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Metals									
Arsenic	DETSC 2301#	0.2	mg/kg	11	13	8.0	5.9	9.1	5.2
Cadmium	DETSC 2301#	0.1	mg/kg	0.2	0.1	< 0.1	0.1	0.1	0.1
Chromium	DETSC 2301#	0.15	mg/kg	19	20	19	19	18	24
Chromium, Hexavalent	DETSC 2204*	1	mg/kg	< 1.0		< 1.0			< 1.0
Copper	DETSC 2301#	0.2	mg/kg	35	53	36	34	33	35
Lead	DETSC 2301#	0.3	mg/kg	25	22	17	17	22	16
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	26	20	31	47	30	31
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	76	43	81	89	72	77
Inorganics									
pH	DETSC 2008#			7.6	5.1	6.0	6.8	8.2	7.9
Cyanide, Free	DETSC 2130#	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Organic matter	DETSC 2002#	0.1	%	2.9	18	1.9	0.7	1.1	1.6
Ammoniacal Nitrogen as N	DETSC 2119#	0.5	mg/kg	14		6.3			7.5
Chloride	DETSC 2055	1	mg/kg	11.7		6.5			1.8
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	97	40	69	15	15	19
Sulphide	DETSC 2024#	10	mg/kg	16		16			16
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					< 1.5	
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg					< 1.2	
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg					< 1.5	
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg					< 3.4	
Aliphatic C5-C35	DETSC 3072*	10	mg/kg					< 10	
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					< 0.9	
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg					< 0.5	
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg					< 0.6	
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg					< 1.4	
Aromatic C5-C35	DETSC 3072*	10	mg/kg					< 10	
TPH Ali/Aro Total	DETSC 3072*	10	mg/kg					< 10	
PAHs									
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1

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 17-94765
Client Ref
Contract Title CAPITAL PARK,JUNCTION 37,DODWORTH

			Lab No	1145887	1145888	1145889	1145890	1145891	1145892
			Sample ID	TP14	TP16	TP17	TP18	TP20	TP21
			Depth	0.00-0.50	0.50-1.00	0.00-0.50	1.00-1.40	1.00-1.50	0.00-0.50
			Other ID						
			Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Sampling Date	14/03/17	14/03/17	14/03/17	16/03/17	16/03/17	16/03/17
			Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**						
Fluorene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	0.3	< 0.1
Phenanthrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	0.1	0.2
Pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	0.1	0.2
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
PAH Total	DETSC 3301	1.6	mg/kg	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
Phenols									
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	0.4	0.8	0.4	0.4	0.4	< 0.3

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Summary of Chemical Analysis
Soil Samples

Our Ref 17-94765
Client Ref
Contract Title CAPITAL PARK,JUNCTION 37,DODWORTH

			Lab No	1145893	1145894
			Sample ID	TP12 (SPB)	TP12A(SP B)
			Depth	0.00-0.50	0.50-1.00
			Other ID		
			Sample Type	SOIL	SOIL
			Sampling Date	16/03/17	16/03/17
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Metals					
Arsenic	DETSC 2301#	0.2	mg/kg	7.1	7.4
Cadmium	DETSC 2301#	0.1	mg/kg	0.1	0.2
Chromium	DETSC 2301#	0.15	mg/kg	18	18
Chromium, Hexavalent	DETSC 2204*	1	mg/kg		< 1.0
Copper	DETSC 2301#	0.2	mg/kg	29	24
Lead	DETSC 2301#	0.3	mg/kg	21	21
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05
Nickel	DETSC 2301#	1	mg/kg	29	24
Selenium	DETSC 2301#	0.5	mg/kg	< 0.5	< 0.5
Zinc	DETSC 2301#	1	mg/kg	74	74
Inorganics					
pH	DETSC 2008#			7.4	8.4
Cyanide, Free	DETSC 2130#	0.1	mg/kg	< 0.1	< 0.1
Organic matter	DETSC 2002#	0.1	%	2.0	1.6
Ammoniacal Nitrogen as N	DETSC 2119#	0.5	mg/kg		6.2
Chloride	DETSC 2055	1	mg/kg		8.2
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	31	72
Sulphide	DETSC 2024#	10	mg/kg		12
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		< 1.5
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg		< 1.2
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg		< 1.5
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg		< 3.4
Aliphatic C5-C35	DETSC 3072*	10	mg/kg		< 10
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		< 0.9
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg		< 0.5
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg		1.2
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg		< 1.4
Aromatic C5-C35	DETSC 3072*	10	mg/kg		< 10
TPH Ali/Aro Total	DETSC 3072*	10	mg/kg		< 10
PAHs					
Naphthalene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Acenaphthylene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Acenaphthene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1

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 17-94765
Client Ref
Contract Title CAPITAL PARK,JUNCTION 37,DODWORTH

			Lab No	1145893	1145894
			Sample ID	TP12 (SPB)	TP12A(SP B)
			Depth	0.00-0.50	0.50-1.00
			Other ID		
			Sample Type	SOIL	SOIL
			Sampling Date	16/03/17	16/03/17
			Sampling Time	n/s	n/s
Test	**Method**	**LOD**	**Units**		
Fluorene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Phenanthrene	DETSC 3301	0.1	mg/kg	< 0.1	0.5
Anthracene	DETSC 3301	0.1	mg/kg	< 0.1	0.3
Fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	2.2
Pyrene	DETSC 3301	0.1	mg/kg	< 0.1	1.8
Benzo(a)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	1.3
Chrysene	DETSC 3301	0.1	mg/kg	< 0.1	1.0
Benzo(b)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	0.6
Benzo(k)fluoranthene	DETSC 3301	0.1	mg/kg	< 0.1	0.5
Benzo(a)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	1.4
Indeno(1,2,3-c,d)pyrene	DETSC 3301	0.1	mg/kg	< 0.1	0.6
Dibenzo(a,h)anthracene	DETSC 3301	0.1	mg/kg	< 0.1	< 0.1
Benzo(g,h,i)perylene	DETSC 3301	0.1	mg/kg	< 0.1	0.5
PAH Total	DETSC 3301	1.6	mg/kg	< 1.6	11
Phenols					
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	0.4	< 0.3

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

Summary of Chemical Analysis
Leachate Samples

Our Ref 17-94765
Client Ref
Contract Title CAPITAL PARK,JUNCTION 37,DODWORTH

			Lab No	1146233	1146234	1146235	1146236	1146237
			Sample ID	TP14	TP16	TP17	TP18	TP20
			Depth	0.00-0.50	0.50-1.00	0.00-0.50	1.00-1.40	1.00-1.50
			Other ID					
			Sample Type	LEACHATE	LEACHATE	LEACHATE	LEACHATE	LEACHATE
			Sampling Date	14/03/17	14/03/17	14/03/17	16/03/17	16/03/17
			Sampling Time	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**					
Preparation								
NRA Leachate Preparation	DETS 036*			Y	Y	Y	Y	Y
Metals								
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	1.5	0.31	0.73	0.38	0.94
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
Chromium, Dissolved	DETSC 2306	0.25	ug/l	0.54	< 0.25	< 0.25	< 0.25	0.32
Copper, Dissolved	DETSC 2306	0.4	ug/l	2.6	0.5	0.8	0.7	1.4
Lead, Dissolved	DETSC 2306	0.09	ug/l	0.96	0.15	0.38	0.30	0.47
Mercury, Dissolved	DETSC 2306	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Selenium, Dissolved	DETSC 2306	0.25	ug/l	0.40	< 0.25	1.4	0.81	0.81
Zinc, Dissolved	DETSC 2306	1.3	ug/l	1.4	< 1.3	< 1.3	< 1.3	< 1.3
Inorganics								
pH	DETSC 2008			7.1	6.1	6.5	6.5	7.6
Cyanide, Free	DETSC 2130	20	ug/l	< 20	< 20	< 20	< 20	< 20
Sulphate as SO4	DETSC 2055	0.1	mg/l	3.0	4.1	7.1	1.8	1.4
PAHs								
Naphthalene	DETSC 3304	0.01	ug/l	0.03	< 0.01	< 0.01	< 0.01	0.02
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	0.06	< 0.01	< 0.01	< 0.01	0.03
Fluorene	DETSC 3304	0.01	ug/l	0.06	< 0.01	< 0.01	< 0.01	0.03
Phenanthrene	DETSC 3304	0.01	ug/l	0.24	< 0.01	< 0.01	< 0.01	0.14
Anthracene	DETSC 3304	0.01	ug/l	0.04	< 0.01	< 0.01	< 0.01	0.02
Fluoranthene	DETSC 3304	0.01	ug/l	0.14	< 0.01	< 0.01	< 0.01	0.08
Pyrene	DETSC 3304	0.01	ug/l	0.09	< 0.01	< 0.01	< 0.01	0.07
Benzo(a)anthracene	DETSC 3304	0.01	ug/l	0.03	< 0.01	< 0.01	< 0.01	0.03
Chrysene	DETSC 3304	0.01	ug/l	0.04	< 0.01	< 0.01	< 0.01	0.05
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	0.05	< 0.01	< 0.01	< 0.01	0.08
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	0.02	< 0.01	< 0.01	< 0.01	0.03
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	0.03	< 0.01	< 0.01	< 0.01	0.06
Indeno(1,2,3-c,d)pyrene	DETSC 3304*	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	0.05
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(g,h,i)perylene	DETSC 3304*	0.01	ug/l	0.04	< 0.01	< 0.01	< 0.01	0.06
PAH Total	DETSC 3304	0.04	ug/l	0.88	< 0.04	< 0.04	< 0.04	0.75
Phenols								
Phenol	*	0.5	ug/l	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50

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

Summary of Chemical Analysis
Leachate Samples

Our Ref 17-94765
Client Ref
Contract Title CAPITAL PARK,JUNCTION 37,DODWORTH

			Lab No	1146238	1146239	1146240
			Sample ID	TP21	TP12 (SPB)	TP12A(SPB)
			Depth	0.00-0.50	0.00-0.50	0.50-1.00
			Other ID			
			Sample Type	LEACHATE	LEACHATE	LEACHATE
			Sampling Date	16/03/17	16/03/17	16/03/17
			Sampling Time	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**			
Preparation						
NRA Leachate Preparation	DETS 036*			Y	Y	Y
Metals						
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	0.57	1.5	0.18
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03	< 0.03
Chromium, Dissolved	DETSC 2306	0.25	ug/l	0.34	0.87	< 0.25
Copper, Dissolved	DETSC 2306	0.4	ug/l	1.1	2.6	0.4
Lead, Dissolved	DETSC 2306	0.09	ug/l	0.47	0.92	< 0.09
Mercury, Dissolved	DETSC 2306	0.01	ug/l	< 0.01	< 0.01	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	< 0.5	1.3	< 0.5
Selenium, Dissolved	DETSC 2306	0.25	ug/l	0.49	0.58	0.38
Zinc, Dissolved	DETSC 2306	1.3	ug/l	1.3	3.5	< 1.3
Inorganics						
pH	DETSC 2008			6.8	6.6	6.8
Cyanide, Free	DETSC 2130	20	ug/l	< 20	< 20	< 20
Sulphate as SO4	DETSC 2055	0.1	mg/l	2.3	2.3	4.1
PAHs						
Naphthalene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
Fluorene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
Phenanthrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
Anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
Pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
Chrysene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
Indeno(1,2,3-c,d)pyrene	DETSC 3304*	0.01	ug/l	< 0.01	< 0.01	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01	< 0.01	< 0.01
Benzo(g,h,i)perylene	DETSC 3304*	0.01	ug/l	< 0.01	< 0.01	< 0.01
PAH Total	DETSC 3304	0.04	ug/l	< 0.04	< 0.04	< 0.04
Phenols						
Phenol	*	0.5	ug/l	< 0.50	< 0.50	< 0.50

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

Summary of Asbestos Analysis
Soil Samples

Our Ref 17-94765
Client Ref
Contract Title CAPITAL PARK,JUNCTION 37,DODWORTH

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
1145887	TP14 0.00-0.50	SOIL	NAD	none	Colin Patrick
1145888	TP16 0.50-1.00	SOIL	NAD	none	Colin Patrick
1145889	TP17 0.00-0.50	SOIL	NAD	none	Colin Patrick
1145890	TP18 1.00-1.40	SOIL	NAD	none	Colin Patrick
1145891	TP20 1.00-1.50	SOIL	NAD	none	Colin Patrick
1145892	TP21 0.00-0.50	SOIL	NAD	none	Colin Patrick
1145893	TP12 (SPB) 0.00-0.50	SOIL	NAD	none	Colin Patrick
1145894	TP12A(SPB) 0.50-1.00	SOIL	NAD	none	Colin Patrick

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 17-94765
Client Ref
Contract CAPITAL PARK,JUNCTION 37,DODWORTH

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
1145887	TP14 0.00-0.50 SOIL	14/03/17	GJ 250ml, PT 1L		
1145888	TP16 0.50-1.00 SOIL	14/03/17	GJ 250ml, PT 1L		
1145889	TP17 0.00-0.50 SOIL	14/03/17	GJ 250ml, PT 1L		
1145890	TP18 1.00-1.40 SOIL	16/03/17	GJ 250ml, PT 1L		
1145891	TP20 1.00-1.50 SOIL	16/03/17	GJ 250ml, PT 1L		
1145892	TP21 0.00-0.50 SOIL	16/03/17	GJ 250ml, PT 1L		
1145893	TP12 (SPB) 0.00-0.50 SOIL	16/03/17	GJ 250ml, GV, PT 1L		
1145894	TP12A(SPB) 0.50-1.00 SOIL	16/03/17	GJ 250ml, GV, PT 1L		
1146233	TP14 0.00-0.50 LEACHATE	14/03/17	GJ 250ml, PT 1L		
1146234	TP16 0.50-1.00 LEACHATE	14/03/17	GJ 250ml, PT 1L		
1146235	TP17 0.00-0.50 LEACHATE	14/03/17	GJ 250ml, PT 1L		
1146236	TP18 1.00-1.40 LEACHATE	16/03/17	GJ 250ml, PT 1L		
1146237	TP20 1.00-1.50 LEACHATE	16/03/17	GJ 250ml, PT 1L		
1146238	TP21 0.00-0.50 LEACHATE	16/03/17	GJ 250ml, PT 1L		
1146239	TP12 (SPB) 0.00-0.50 LEACHATE	16/03/17	GJ 250ml, GV, PT 1L		
1146240	TP12A(SPB) 0.50-1.00 LEACHATE	16/03/17	GJ 250ml, GV, PT 1L		

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

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

Certificate of Analysis

Certificate Number 17-96039

06-Apr-17

Client JPG (Leeds) LTD
Civil & Structural Engineers
5 John Charles Way
Leeds
LS12 6QD

Our Reference 17-96039

Client Reference 2450

Order No (not supplied)

Contract Title CAPITAL PARK,JUNCTION 37, DODWORTH

Description One Water sample.

Date Received 31-Mar-17

Date Started 31-Mar-17

Date Completed 06-Apr-17

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

Notes Opinions and interpretations are outside the scope of UKAS 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. Observations and interpretations are outside the scope of ISO 17025. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Rob Brown
Business Manager

UKAS TESTING
2139

Summary of Chemical Analysis
Water Samples

Our Ref 17-96039
Client Ref 2450
Contract Title CAPITAL PARK,JUNCTION 37, DODWORTH

			Lab No	1152804
			Sample ID	RO 01
			Depth	
			Other ID	
			Sample Type	WATER
			Sampling Date	28/03/17
			Sampling Time	n/s
Test	**Method**	**LOD**	**Units**	
Metals				
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	0.46
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	0.21
Chromium, Dissolved	DETSC 2306	0.25	ug/l	< 0.25
Copper, Dissolved	DETSC 2306	0.4	ug/l	0.5
Lead, Dissolved	DETSC 2306	0.09	ug/l	< 0.09
Mercury, Dissolved	DETSC 2306	0.01	ug/l	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	12
Selenium, Dissolved	DETSC 2306	0.25	ug/l	0.86
Zinc, Dissolved	DETSC 2306	1.3	ug/l	19
Inorganics				
pH	DETSC 2008			6.4
Cyanide, Free	DETSC 2130	20	ug/l	< 20
Sulphate as SO4	DETSC 2055	0.1	mg/l	79
PAHs				
Naphthalene	DETSC 3304	0.01	ug/l	< 0.01
Acenaphthylene	DETSC 3304	0.01	ug/l	< 0.01
Acenaphthene	DETSC 3304	0.01	ug/l	< 0.01
Fluorene	DETSC 3304	0.01	ug/l	< 0.01
Phenanthrene	DETSC 3304	0.01	ug/l	< 0.01
Anthracene	DETSC 3304	0.01	ug/l	< 0.01
Fluoranthene	DETSC 3304	0.01	ug/l	< 0.01
Pyrene	DETSC 3304	0.01	ug/l	< 0.01
Benzo(a)anthracene	DETSC 3304	0.01	ug/l	< 0.01
Chrysene	DETSC 3304	0.01	ug/l	< 0.01
Benzo(b)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01
Benzo(k)fluoranthene	DETSC 3304	0.01	ug/l	< 0.01
Benzo(a)pyrene	DETSC 3304	0.01	ug/l	< 0.01
Indeno(1,2,3-c,d)pyrene	DETSC 3304*	0.01	ug/l	< 0.01
Dibenzo(a,h)anthracene	DETSC 3304	0.01	ug/l	< 0.01
Benzo(g,h,i)perylene	DETSC 3304*	0.01	ug/l	< 0.01
PAH Total	DETSC 3304	0.04	ug/l	< 0.04
Phenols				
Phenol	*	0.5	ug/l	< 0.50

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

Information in Support of the Analytical Results

Our Ref 17-96039
Client Ref 2450
Contract CAPITAL PARK,JUNCTION 37, DODWORTH

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
1152804	RO 01 WATER	28/03/17	GB 1L, PB 1L		

Key: G-Glass P-Plastic B-Bottle

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

Waste Classification Report

KPGQ4-SDAQR-TXEQM

Job name

Unit A, Capitol Park, Barnsley

Description/Comments

Project

2450

Site

Waste Stream Template

JPG CL WASTE STREAM V10

Classified by

Name:
Alex Nivlet
Date:
4/4/2017 12:45:23 PM UTC
Telephone:
0113 263 1155

Company:
JPG Leeds
5 John Charles Way
Leeds
LS12 6QA

Report

Created by: Alex Nivlet
Created date: 4/4/2017 12:45 UTC

Job summary

#	Sample Name	Depth [m]	Classification Result	Hazard properties	Page
1	TP07	1.60-1.80	Non Hazardous		2
2	TP10	0.00-0.50	Non Hazardous		4
3	TP11	0.00-0.50	Non Hazardous		6
4	TP16	0.50-1.00	Non Hazardous		8
5	TP17	0.00-0.50	Non Hazardous		10
6	TP12 (SPB)	0.00-0.50	Non Hazardous		12
7	TP12A(SPB)	0.50-1.00	Non Hazardous		14

Appendices	Page
Appendix A: Classifier defined and non CLP determinands	16
Appendix B: Rationale for selection of metal species	17
Appendix C: Version	18

Classification of sample: TP07

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
TP07
Sample Depth:
1.60-1.80 m
Moisture content:
0%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		24	mg/kg	1.32	31.688	mg/kg	0.00317 %		
2	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.2	mg/kg	1.85	0.371	mg/kg	0.000037 %		
3	chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		17	mg/kg	1.46	24.846	mg/kg	0.00248 %		
4	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.92	<1.923	mg/kg	<0.000192 %		<**LOD**
5	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		46	mg/kg	3.93	180.736	mg/kg	0.0181 %		
6	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	40	mg/kg		40	mg/kg	0.004 %		
7	mercury { mercury }	080-001-00-0	231-106-7	7439-97-6		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
8	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		23	mg/kg	2.64	60.644	mg/kg	0.00606 %		
9	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.6	mg/kg	2.55	1.532	mg/kg	0.000153 %		
10	zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		82	mg/kg	2.47	202.482	mg/kg	0.0202 %		
11	pH			PH		7.3	pH		7.3	pH	7.3 pH		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
12		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.1	mg/kg	1.88	<0.188	mg/kg	<0.000019 %		<**LOD**
		006-007-00-5											
13		TPH (C6 to C40) petroleum group				<10	mg/kg		<10	mg/kg	<0.001 %		<**LOD**
				TPH									
14		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
15		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-917-1	208-96-8									
16		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-469-6	83-32-9									
17		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-695-5	86-73-7									
18		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-581-5	85-01-8									
19		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			204-371-1	120-12-7									
20		fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-912-4	206-44-0									
21		pyrene				0.2	mg/kg		0.2	mg/kg	0.00002 %		
			204-927-3	129-00-0									
22		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-033-00-9	200-280-6	56-55-3									
23		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-048-00-0	205-923-4	218-01-9									
24		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-034-00-4	205-911-9	205-99-2									
25		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
26		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
27		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-893-2	193-39-5									
28		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
29		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-883-8	191-24-2									
30		phenol				<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
31		asbestos				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
		650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5									
										Total:	0.0556 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP10

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
TP10
Sample Depth:
0.00-0.50 m
Moisture content:
0%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		9.8	mg/kg	1.32	12.939	mg/kg	0.00129 %		
2	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.1	mg/kg	1.85	0.185	mg/kg	0.000019 %		
3	chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		17	mg/kg	1.46	24.846	mg/kg	0.00248 %		
4	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.92	<1.923	mg/kg	<0.000192 %		<**LOD**
5	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		34	mg/kg	3.93	133.588	mg/kg	0.0134 %		
6	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	17	mg/kg		17	mg/kg	0.0017 %		
7	mercury { mercury }	080-001-00-0	231-106-7	7439-97-6		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
8	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		31	mg/kg	2.64	81.737	mg/kg	0.00817 %		
9	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.5	mg/kg	2.55	<1.277	mg/kg	<0.000128 %		<**LOD**
10	zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		66	mg/kg	2.47	162.974	mg/kg	0.0163 %		
11	pH			PH		6.8	pH		6.8	pH	6.8 pH		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
12		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.1	mg/kg	1.88	<0.188	mg/kg	<0.000019 %		<**LOD**
		006-007-00-5											
13		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
14		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-917-1	208-96-8									
15		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-469-6	83-32-9									
16		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-695-5	86-73-7									
17		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-581-5	85-01-8									
18		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			204-371-1	120-12-7									
19		fluoranthene				0.1	mg/kg		0.1	mg/kg	0.00001 %		
			205-912-4	206-44-0									
20		pyrene				0.1	mg/kg		0.1	mg/kg	0.00001 %		
			204-927-3	129-00-0									
21		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-033-00-9	200-280-6	56-55-3									
22		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-048-00-0	205-923-4	218-01-9									
23		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-034-00-4	205-911-9	205-99-2									
24		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
25		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
26		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-893-2	193-39-5									
27		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
28		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-883-8	191-24-2									
29		phenol				<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
30		asbestos				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
		650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5									
										Total:	0.0439 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP11

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
TP11
Sample Depth:
0.00-0.50 m
Moisture content:
0%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		12	mg/kg	1.32	15.844	mg/kg	0.00158 %		
2	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.2	mg/kg	1.85	0.371	mg/kg	0.000037 %		
3	chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		22	mg/kg	1.46	32.154	mg/kg	0.00322 %		
4	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.92	<1.923	mg/kg	<0.000192 %		<**LOD**
5	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		27	mg/kg	3.93	106.084	mg/kg	0.0106 %		
6	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	33	mg/kg		33	mg/kg	0.0033 %		
7	mercury { mercury }	080-001-00-0	231-106-7	7439-97-6		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
8	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		18	mg/kg	2.64	47.46	mg/kg	0.00475 %		
9	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				0.7	mg/kg	2.55	1.788	mg/kg	0.000179 %		
10	zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		99	mg/kg	2.47	244.46	mg/kg	0.0244 %		
11	pH			PH		7.1	pH		7.1	pH	7.1 pH		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
12		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.1	mg/kg	1.88	<0.188	mg/kg	<0.000019 %		<**LOD**
		006-007-00-5											
13		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
14		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-917-1	208-96-8									
15		acenaphthene				0.1	mg/kg		0.1	mg/kg	0.00001 %		
			201-469-6	83-32-9									
16		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-695-5	86-73-7									
17		phenanthrene				0.6	mg/kg		0.6	mg/kg	0.00006 %		
			201-581-5	85-01-8									
18		anthracene				0.2	mg/kg		0.2	mg/kg	0.00002 %		
			204-371-1	120-12-7									
19		fluoranthene				1	mg/kg		1	mg/kg	0.0001 %		
			205-912-4	206-44-0									
20		pyrene				1	mg/kg		1	mg/kg	0.0001 %		
			204-927-3	129-00-0									
21		benzo[a]anthracene				0.7	mg/kg		0.7	mg/kg	0.00007 %		
		601-033-00-9	200-280-6	56-55-3									
22		chrysene				0.4	mg/kg		0.4	mg/kg	0.00004 %		
		601-048-00-0	205-923-4	218-01-9									
23		benzo[b]fluoranthene				0.3	mg/kg		0.3	mg/kg	0.00003 %		
		601-034-00-4	205-911-9	205-99-2									
24		benzo[k]fluoranthene				0.2	mg/kg		0.2	mg/kg	0.00002 %		
		601-036-00-5	205-916-6	207-08-9									
25		benzo[a]pyrene; benzo[def]chrysene				0.6	mg/kg		0.6	mg/kg	0.00006 %		
		601-032-00-3	200-028-5	50-32-8									
26		indeno[123-cd]pyrene				0.4	mg/kg		0.4	mg/kg	0.00004 %		
			205-893-2	193-39-5									
27		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
28		benzo[ghi]perylene				0.1	mg/kg		0.1	mg/kg	0.00001 %		
			205-883-8	191-24-2									
29		phenol				<0.3	mg/kg		<0.3	mg/kg	<0.00003 %		<**LOD**
		604-001-00-2	203-632-7	108-95-2									
30		asbestos				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
		650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5									
										Total:	0.049 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP16

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
TP16
Sample Depth:
0.50-1.00 m
Moisture content:
0%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		13 mg/kg	1.32	17.164 mg/kg	0.00172 %		
2	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.1 mg/kg	1.85	0.185 mg/kg	0.000019 %		
3	chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		20 mg/kg	1.46	29.231 mg/kg	0.00292 %		
4	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		53 mg/kg	3.93	208.24 mg/kg	0.0208 %		
5	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	22 mg/kg		22 mg/kg	0.0022 %		
6	mercury { mercury }	080-001-00-0	231-106-7	7439-97-6		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<LOD
7	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		20 mg/kg	2.64	52.734 mg/kg	0.00527 %		
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.5 mg/kg	2.55	<1.277 mg/kg	<0.000128 %		<LOD
9	zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		43 mg/kg	2.47	106.18 mg/kg	0.0106 %		
10	pH			PH		5.1 pH		5.1 pH	5.1 pH		
11	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.1 mg/kg	1.88	<0.188 mg/kg	<0.000019 %		<LOD
12	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
13		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-917-1	208-96-8									
14		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-469-6	83-32-9									
15		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7									
16		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			201-581-5	85-01-8									
17		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-371-1	120-12-7									
18		fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-912-4	206-44-0									
19		pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			204-927-3	129-00-0									
20		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
21		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
22		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
23		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
24		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
25		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-893-2	193-39-5									
26		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
27		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
			205-883-8	191-24-2									
28		phenol				0.8	mg/kg		0.8	mg/kg	0.00008 %		
		604-001-00-2	203-632-7	108-95-2									
29		asbestos				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
		650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5									
										Total:	0.044 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP17

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
TP17
Sample Depth:
0.00-0.50 m
Moisture content:
0%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		8	mg/kg	1.32	10.563	mg/kg	0.00106 %		
2	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.1	mg/kg	1.85	0.185	mg/kg	0.000019 %		
3	chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		19	mg/kg	1.46	27.77	mg/kg	0.00278 %		
4	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.92	<1.923	mg/kg	<0.000192 %		<**LOD**
5	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		36	mg/kg	3.93	141.446	mg/kg	0.0141 %		
6	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	17	mg/kg		17	mg/kg	0.0017 %		
7	mercury { mercury }	080-001-00-0	231-106-7	7439-97-6		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
8	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		31	mg/kg	2.64	81.737	mg/kg	0.00817 %		
9	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.5	mg/kg	2.55	<1.277	mg/kg	<0.000128 %		<**LOD**
10	zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		81	mg/kg	2.47	200.013	mg/kg	0.02 %		
11	pH			PH		6	pH		6	pH	6pH		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
12		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.1	mg/kg	1.88	<0.188	mg/kg	<0.000019 %		<**LOD**
		006-007-00-5											
13		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
14		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-917-1	208-96-8									
15		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-469-6	83-32-9									
16		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-695-5	86-73-7									
17		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-581-5	85-01-8									
18		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			204-371-1	120-12-7									
19		fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-912-4	206-44-0									
20		pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			204-927-3	129-00-0									
21		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-033-00-9	200-280-6	56-55-3									
22		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-048-00-0	205-923-4	218-01-9									
23		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-034-00-4	205-911-9	205-99-2									
24		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
25		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
26		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-893-2	193-39-5									
27		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
28		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-883-8	191-24-2									
29		phenol				0.4	mg/kg		0.4	mg/kg	0.00004 %		
		604-001-00-2	203-632-7	108-95-2									
30		asbestos				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
		650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5									
										Total:	0.0484 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP12 (SPB)

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
TP12 (SPB)
Sample Depth:
0.00-0.50 m
Moisture content:
0%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		7.1 mg/kg	1.32	9.374 mg/kg	0.000937 %		
2	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.1 mg/kg	1.85	0.185 mg/kg	0.000019 %		
3	chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		18 mg/kg	1.46	26.308 mg/kg	0.00263 %		
4	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		29 mg/kg	3.93	113.943 mg/kg	0.0114 %		
5	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	21 mg/kg		21 mg/kg	0.0021 %		
6	mercury { mercury }	080-001-00-0	231-106-7	7439-97-6		<0.05 mg/kg		<0.05 mg/kg	<0.000005 %		<**LOD**
7	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		29 mg/kg	2.64	76.464 mg/kg	0.00765 %		
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.5 mg/kg	2.55	<1.277 mg/kg	<0.000128 %		<**LOD**
9	zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		74 mg/kg	2.47	182.728 mg/kg	0.0183 %		
10	pH			PH		7.4 pH		7.4 pH	7.4 pH		
11	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<0.1 mg/kg	1.88	<0.188 mg/kg	<0.000019 %		<**LOD**
12	naphthalene	601-052-00-2	202-049-5	91-20-3		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<**LOD**

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
13		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-917-1	208-96-8									
14		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-469-6	83-32-9									
15		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-695-5	86-73-7									
16		phenanthrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-581-5	85-01-8									
17		anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			204-371-1	120-12-7									
18		fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-912-4	206-44-0									
19		pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			204-927-3	129-00-0									
20		benzo[a]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-033-00-9	200-280-6	56-55-3									
21		chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-048-00-0	205-923-4	218-01-9									
22		benzo[b]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-034-00-4	205-911-9	205-99-2									
23		benzo[k]fluoranthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-036-00-5	205-916-6	207-08-9									
24		benzo[a]pyrene; benzo[def]chrysene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-032-00-3	200-028-5	50-32-8									
25		indeno[123-cd]pyrene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-893-2	193-39-5									
26		dibenz[a,h]anthracene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-041-00-2	200-181-8	53-70-3									
27		benzo[ghi]perylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-883-8	191-24-2									
28		phenol				0.4	mg/kg		0.4	mg/kg	0.00004 %		
		604-001-00-2	203-632-7	108-95-2									
29		asbestos				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
		650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5									
										Total:	0.0434 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: TP12A(SPB)

Non Hazardous Waste
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:
TP12A(SPB)
Sample Depth:
0.50-1.00 m
Moisture content:
0%
(no correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand	CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		7.4	mg/kg	1.32	9.77	mg/kg	0.000977 %		
2	cadmium { cadmium sulfate }	048-009-00-9	233-331-6	10124-36-4		0.2	mg/kg	1.85	0.371	mg/kg	0.000037 %		
3	chromium in chromium(III) compounds { chromium(III) oxide }		215-160-9	1308-38-9		18	mg/kg	1.46	26.308	mg/kg	0.00263 %		
4	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<1	mg/kg	1.92	<1.923	mg/kg	<0.000192 %		<**LOD**
5	copper { copper sulphate pentahydrate }	029-023-00-4	231-847-6	7758-99-8		24	mg/kg	3.93	94.297	mg/kg	0.00943 %		
6	lead { lead compounds with the exception of those specified elsewhere in this Annex }	082-001-00-6			1	21	mg/kg		21	mg/kg	0.0021 %		
7	mercury { mercury }	080-001-00-0	231-106-7	7439-97-6		<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<**LOD**
8	nickel { nickel sulfate }	028-009-00-5	232-104-9	7786-81-4		24	mg/kg	2.64	63.28	mg/kg	0.00633 %		
9	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<0.5	mg/kg	2.55	<1.277	mg/kg	<0.000128 %		<**LOD**
10	zinc { zinc sulphate }	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]		74	mg/kg	2.47	182.728	mg/kg	0.0183 %		
11	pH			PH		8.4	pH		8.4	pH	8.4 pH		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
12		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<0.1	mg/kg	1.88	<0.188	mg/kg	<0.000019 %		<**LOD**
		006-007-00-5											
13		TPH (C6 to C40) petroleum group				<10	mg/kg		<10	mg/kg	<0.001 %		<**LOD**
				TPH									
14		naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
		601-052-00-2	202-049-5	91-20-3									
15		acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			205-917-1	208-96-8									
16		acenaphthene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-469-6	83-32-9									
17		fluorene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<**LOD**
			201-695-5	86-73-7									
18		phenanthrene				0.5	mg/kg		0.5	mg/kg	0.00005 %		
			201-581-5	85-01-8									
19		anthracene				0.3	mg/kg		0.3	mg/kg	0.00003 %		
			204-371-1	120-12-7									
20		fluoranthene				2.2	mg/kg		2.2	mg/kg	0.00022 %		
			205-912-4	206-44-0									
21		pyrene				1.8	mg/kg		1.8	mg/kg	0.00018 %		
			204-927-3	129-00-0									
22		benzo[a]anthracene				1.3	mg/kg		1.3	mg/kg	0.00013 %		
		601-033-00-9	200-280-6	56-55-3									
23		chrysene				1	mg/kg		1	mg/kg	0.0001 %		
		601-048-00-0	205-923-4	218-01-9									
24		benzo[b]fluoranthene				0.6	mg/kg		0.6	mg/kg	0.00006 %		
		601-034-00-4	205-911-9	205-99-2									
25		benzo[k]fluoranthene				0.5	mg/kg		0.5	mg/kg	0.00005 %		
		601-036-00-5	205-916-6	207-08-9									
26		benzo[a]pyrene; benzo[def]chrysene				1.4	mg/kg		1.4	mg/kg	0.00014 %		
		601-032-00-3	200-028-5	50-32-8									
27		indeno[123-cd]pyrene				0.6	mg/kg		0.6	mg/kg	0.00006 %		
			205-893-2	193-39-5									
28		dibenz[a,h]anthracene				0.1	mg/kg		0.1	mg/kg	0.00001 %		
		601-041-00-2	200-181-8	53-70-3									
29		benzo[ghi]perylene				0.5	mg/kg		0.5	mg/kg	0.00005 %		
			205-883-8	191-24-2									
30		phenol				0.3	mg/kg		0.3	mg/kg	0.00003 %		
		604-001-00-2	203-632-7	108-95-2									
31		asbestos				<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<**LOD**
		650-013-00-6	- - - - - - -	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5									
										Total:	0.0423 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Deteminand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Appendix A: Classifier defined and non CLP determinands

chromium(III) oxide (EC Number: 215-160-9, CAS Number: 1308-38-9)

Conversion factor: 1.462
Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 7/17/2015
Risk Phrases: R20 , R22 , R36 , R37 , R38 , R42 , R43 , R50/53 , R60 , R61
Hazard Statements: Acute Tox. 4 H332 , Acute Tox. 4 H302 , Eye Irrit. 2 H319 , STOT SE 3 H335 , Skin Irrit. 2 H315 , Resp. Sens. 1 H334 , Skin Sens. 1 H317 , Repr. 1B H360FD , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

copper sulphate pentahydrate (EC Number: 231-847-6, CAS Number: 7758-99-8)

CLP index number: 029-023-00-4
Data source: Regulation (EU) 2016/1179 of 19 July 2016 (ATP9)
Additional Risk Phrases: N R50/53 , N R50/53 >= 2.5 %
Additional Hazard Statement(s): None.
Reason for additional Hazards Statement(s)/Risk Phrase(s):
10/10/2016 - N R50/53 risk phrase sourced from: WM3 v1 still uses ecotoxic risk phrases
10/10/2016 - N R50/53 >= 2.5 % risk phrase sourced from: WM3 v1 still uses ecotoxic risk phrases

lead compounds with the exception of those specified elsewhere in this Annex

CLP index number: 082-001-00-6
Data source: Regulation 1272/2008/EC - Classification, labelling and packaging of substances and mixtures. (CLP)
Additional Risk Phrases: None.
Additional Hazard Statement(s): Carc. 2 H351
Reason for additional Hazards Statement(s)/Risk Phrase(s):
6/3/2015 - Carc. 2 H351 hazard statement sourced from: IARC Group 2A (Sup 7, 87) 2006; Lead REACH Consortium www.reach-lead.eu/substanceinformation.html. Review date 29/09/2015

pH (CAS Number: PH)

Description/Comments: Appendix C4
Data source: WM3 1st Edition 2015
Data source date: 5/25/2015
Risk Phrases: None.
Hazard Statements: None.

salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex

CLP index number: 006-007-00-5
Data source: Commission Regulation (EC) No 790/2009 - 1st Adaptation to Technical Progress for Regulation (EC) No 1272/2008. (ATP1)
Additional Risk Phrases: None.
Additional Hazard Statement(s): EUH032 >= 0.2 %
Reason for additional Hazards Statement(s)/Risk Phrase(s):
12/14/2015 - EUH032 >= 0.2 % hazard statement sourced from: WM3, Table C12.2

TPH (C6 to C40) petroleum group (CAS Number: TPH)

Description/Comments: Hazard statements taken from WM3 1st Edition 2015; Risk phrases: WM2 3rd Edition 2013
Data source: WM3 1st Edition 2015
Data source date: 5/25/2015
Risk Phrases: R10 , R45 , R46 , R51/53 , R63 , R65
Hazard Statements: Flam. Liq. 3 H226 , Asp. Tox. 1 H304 , STOT RE 2 H373 , Muta. 1B H340 , Carc. 1B H350 , Repr. 2 H361d , Aquatic Chronic 2 H411

acenaphthylene (EC Number: 205-917-1, CAS Number: 208-96-8)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 7/17/2015
Risk Phrases: R22 , R26 , R27 , R36 , R37 , R38
Hazard Statements: Acute Tox. 4 H302 , Acute Tox. 1 H330 , Acute Tox. 1 H310 , Eye Irrit. 2 H319 , STOT SE 3 H335 , Skin Irrit. 2 H315

acenaphthene (EC Number: 201-469-6, CAS Number: 83-32-9)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 7/17/2015
Risk Phrases: R36 , R37 , R38 , N R50/53 , N R51/53
Hazard Statements: Eye Irrit. 2 H319 , STOT SE 3 H335 , Skin Irrit. 2 H315 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410 , Aquatic Chronic 2 H411

fluorene (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 8/6/2015
Risk Phrases: N R50/53
Hazard Statements: Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

phenanthrene (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 8/6/2015
Risk Phrases: R22 , R36 , R37 , R38 , R40 , R43 , N R50/53
Hazard Statements: Acute Tox. 4 H302 , Eye Irrit. 2 H319 , STOT SE 3 H335 , Carc. 2 H351 , Skin Sens. 1 H317 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410 , Skin Irrit. 2 H315

anthracene (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 7/17/2015
Risk Phrases: R36 , R37 , R38 , R43 , N R50/53
Hazard Statements: Eye Irrit. 2 H319 , STOT SE 3 H335 , Skin Irrit. 2 H315 , Skin Sens. 1 H317 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

fluoranthene (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 8/21/2015
Risk Phrases: Xn R22 , N R50/53
Hazard Statements: Acute Tox. 4 H302 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

pyrene (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 8/21/2015
Risk Phrases: Xi R36/37/38 , N R50/53
Hazard Statements: Skin Irrit. 2 H315 , Eye Irrit. 2 H319 , STOT SE 3 H335 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

indeno[123-cd]pyrene (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 8/6/2015
Risk Phrases: R40
Hazard Statements: Carc. 2 H351

benzo[ghi]perylene (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015
Data source: http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database
Data source date: 7/23/2015
Risk Phrases: N R50/53
Hazard Statements: Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

Worst case species based on hazard statements

cadmium {cadmium sulfate}

Worst case species based on hazard statements

chromium in chromium(III) compounds {chromium(III) oxide}

Worst case species based on hazard statements

chromium in chromium(VI) compounds {chromium(VI) oxide}

Worst case species based on hazard statements

copper {copper sulphate pentahydrate}

Most likely common species

lead {lead compounds with the exception of those specified elsewhere in this Annex}

Worst case species based on hazard statements

mercury {mercury}

Worst case species based on hazard statements

nickel {nickel sulfate}

Worst case species based on hazard statements

selenium {selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex}

Worst case species based on hazard statements

zinc {zinc sulphate}

Worst case species based on hazard statements

cyanides {salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex}

Worst case species

Appendix C: Version

HazWasteOnline Classification Engine: WM3 1st Edition, May 2015
HazWasteOnline Classification Engine Version: 2017.55.3206.6376 (24 Feb 2017)
HazWasteOnline Database: 2017.55.3206.6376 (24 Feb 2017)

This classification utilises the following guidance and legislation:
WM3 - Waste Classification - May 2015
CLP Regulation - Regulation 1272/2008/EC of 16 December 2008
1st ATP - Regulation 790/2009/EC of 10 August 2009
2nd ATP - Regulation 286/2011/EC of 10 March 2011
3rd ATP - Regulation 618/2012/EU of 10 July 2012
4th ATP - Regulation 487/2013/EU of 8 May 2013
Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013
5th ATP - Regulation 944/2013/EU of 2 October 2013
6th ATP - Regulation 605/2014/EU of 5 June 2014
WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014
Revised List of Wastes 2014 - Decision 2014/955/EU of 18 December 2014
7th ATP - Regulation 2015/1221/EU of 24 July 2015
8th ATP - Regulation (EU) 2016/918 of 19 May 2016
9th ATP - Regulation (EU) 2016/1179 of 19 July 2016
POPs Regulation 2004 - Regulation 850/2004/EC of 29 April 2004
1st ATP to POPs Regulation - Regulation 756/2010/EU of 24 August 2010
2nd ATP to POPs Regulation - Regulation 757/2010/EU of 24 August 2010

Appendix D Geotechnical Testing Results

LABORATORY REPORT

4043

Contract Number: PSL17/1324

Report Date: 11 April 2017

Client's Reference: 2450

Client Name: JPG Leeds
5 John Charles Way
Leeds
West Yorkshire
LS12 6QD

For the attention of: John Parkinson

Contract Title: Capitol Park, Junction 37 (M1), Dodworth.

Date Received: 20/3/2017
Date Commenced: 20/3/2017
Date Completed: 11/4/2017

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:

R Gunson (Director)	A Watkins (Director)	R Berriman (Quality Manager)
L Knight (Senior Technician)	S Royle (Senior Technician)	A Fry (Senior Technician)

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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	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
TP02		D	0.20	0.50	7.6						
TP03		D	0.10	0.20	7.9						
TP04		D	0.00	0.50	17		45	23	22	100	Intermediate plasticity CI.
TP08		D	0.20	0.40	6.2						
TP11		D	2.10	2.60	30		64	30	34	100	High plasticity CH.
TP14		D	1.10	1.50	20		59	28	31	94	High plasticity CH.
TP15		D	0.30	0.80	18		48	25	23	100	Intermediate plasticity CI.
TP19		D	2.50	2.60	25		61	29	32	95	High plasticity CH.
BH01		B	0.00	1.00	21	2.52					
TP12(SPB)		B	1.30	1.80	19	2.65					
TP13		B	0.50	1.00							
TP20(SPA)		B	1.00	1.50	13	2.65					

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

UKAS TESTING 4043

PSL Professional Soils Laboratory

Capitol Park, Junction 37 (M1), Dodworth

Contract No:

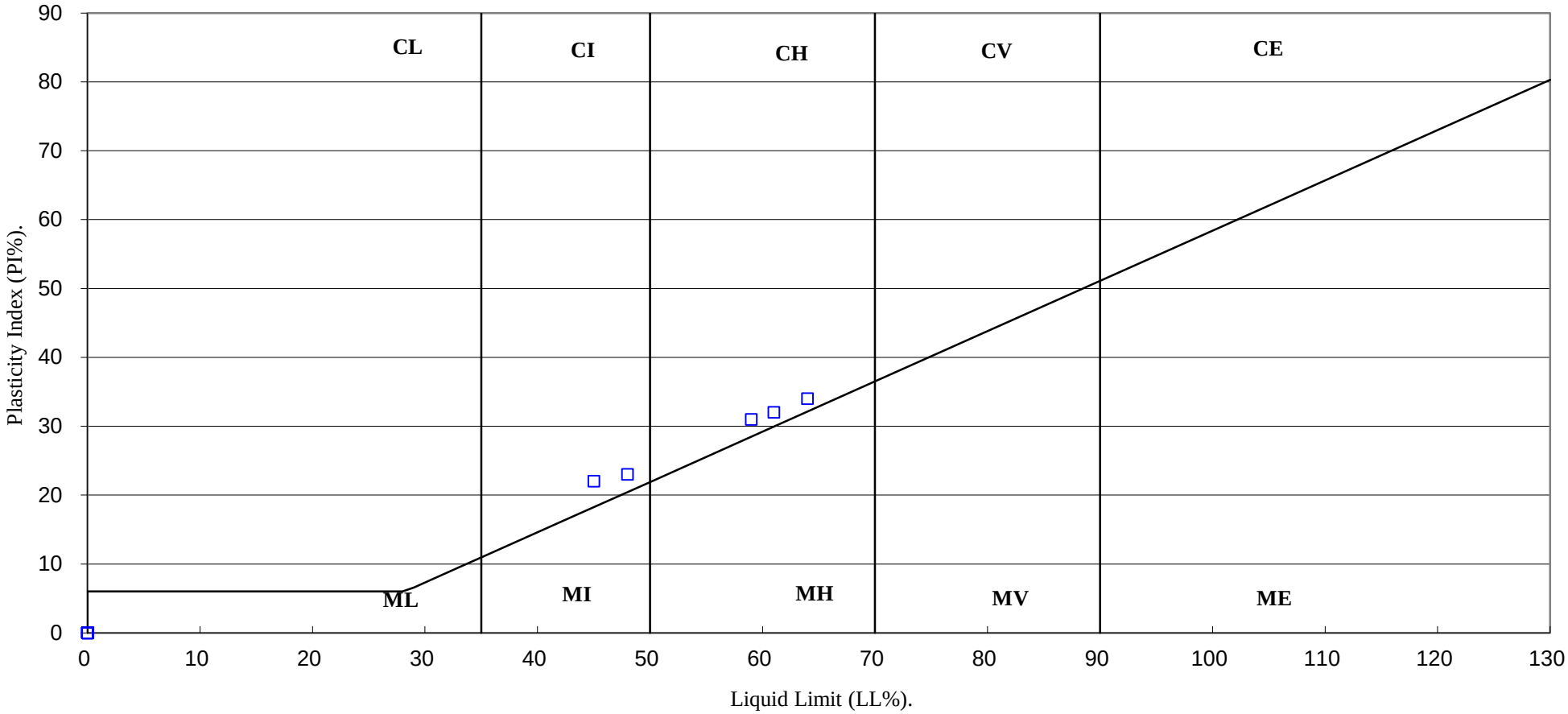
PSL17/1324

Client Ref:

2450

PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.

(BS5930 :2015)



UKAS TESTING 4043	PSL Professional Soils Laboratory	Capitol Park, Junction 37 (M1), Dodworth	**Contract No:** PSL17/1324
			Client Ref: 2450

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
TP02		D	0.20	0.50	Brown gravel of MUDSTONE.
TP03		D	0.10	0.20	Brown gravel of MUDSTONE.
TP04		D	0.00	0.50	Brown mottled grey sandy silty CLAY.
TP08		D	0.20	0.40	Brown GRAVEL.
TP11		D	2.10	2.60	Brown mottled grey slightly sandy silty CLAY.
TP14		D	1.10	1.50	Brown mottled grey slightly gravelly slightly sandy silty CLAY.
TP15		D	0.30	0.80	Brown mottled grey slightly sandy silty CLAY.
TP19		D	2.50	2.60	Brown slightly gravelly slightly sandy silty CLAY.
BH01		B	0.00	1.00	Brown very gravelly sandy CLAY with cobbles.
TP12(SPB)		B	1.30	1.80	Brown mottled grey gravelly sandy CLAY.
TP13		B	0.50	1.00	Brown mottled grey very gravelly slightly sandy CLAY.
TP20(SPA)		B	1.00	1.50	Brown very gravelly sandy CLAY with cobbles.

UKAS TESTING
4043

PSL
Professional Soils Laboratory

Capitol Park, Junction 37 (M1), Dodworth

Contract No:
PSL17/1324
Client Ref:
2450

PARTICLE SIZE DISTRIBUTION TEST

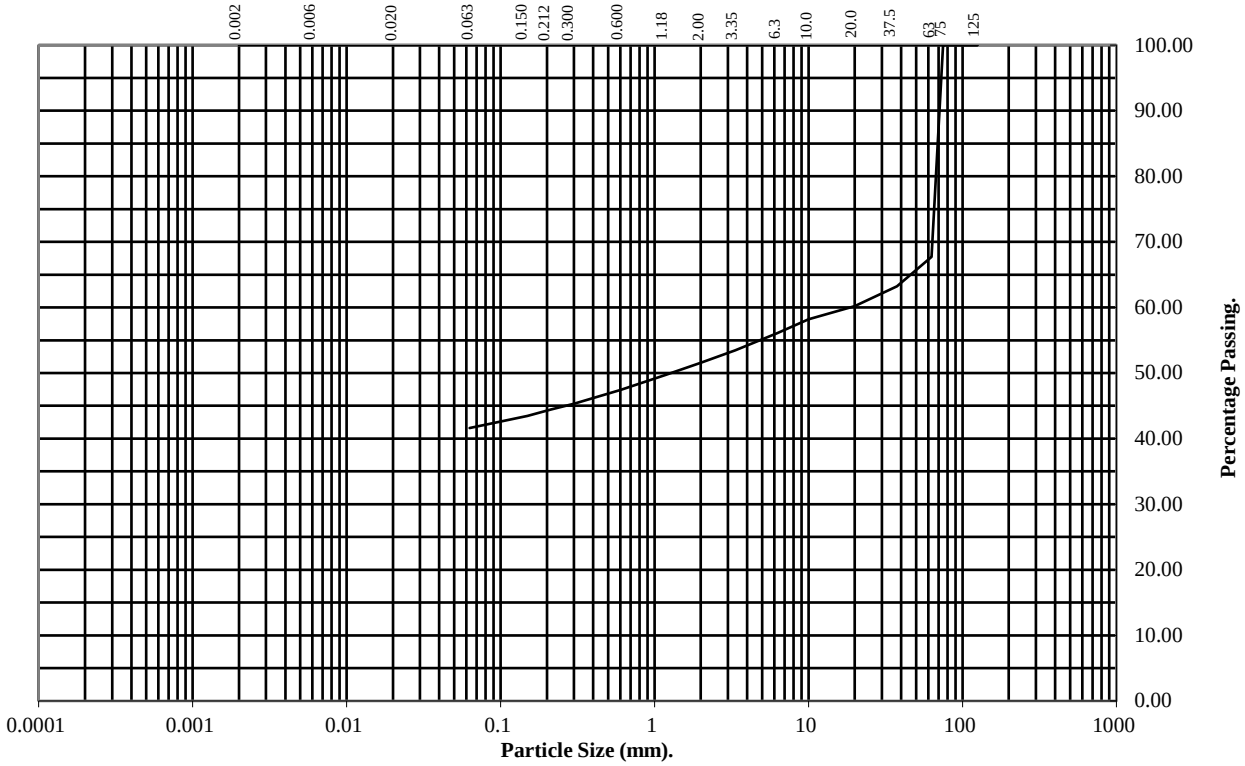
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: **BH01** **Top Depth (m):** **0.00**

Sample Number: **Base Depth(m):** **0.10**

Sample Type: **B**



BS Test Sieve	Percentage Passing
125	100
75	100
63	68
37.5	63
20	60
10	58
6.3	56
3.35	53
2	52
1.18	50
0.6	47
0.3	45
0.212	44
0.15	43
0.063	42

Soil Fraction	Total Percentage
Cobbles	32
Gravel	16
Sand	10
Silt/Clay	42

Remarks:

See summary of soil descriptions.

UKAS TESTING 4043

PSL Professional Soils Laboratory

Capitol Park, Junction 37 (M1), Dodworth

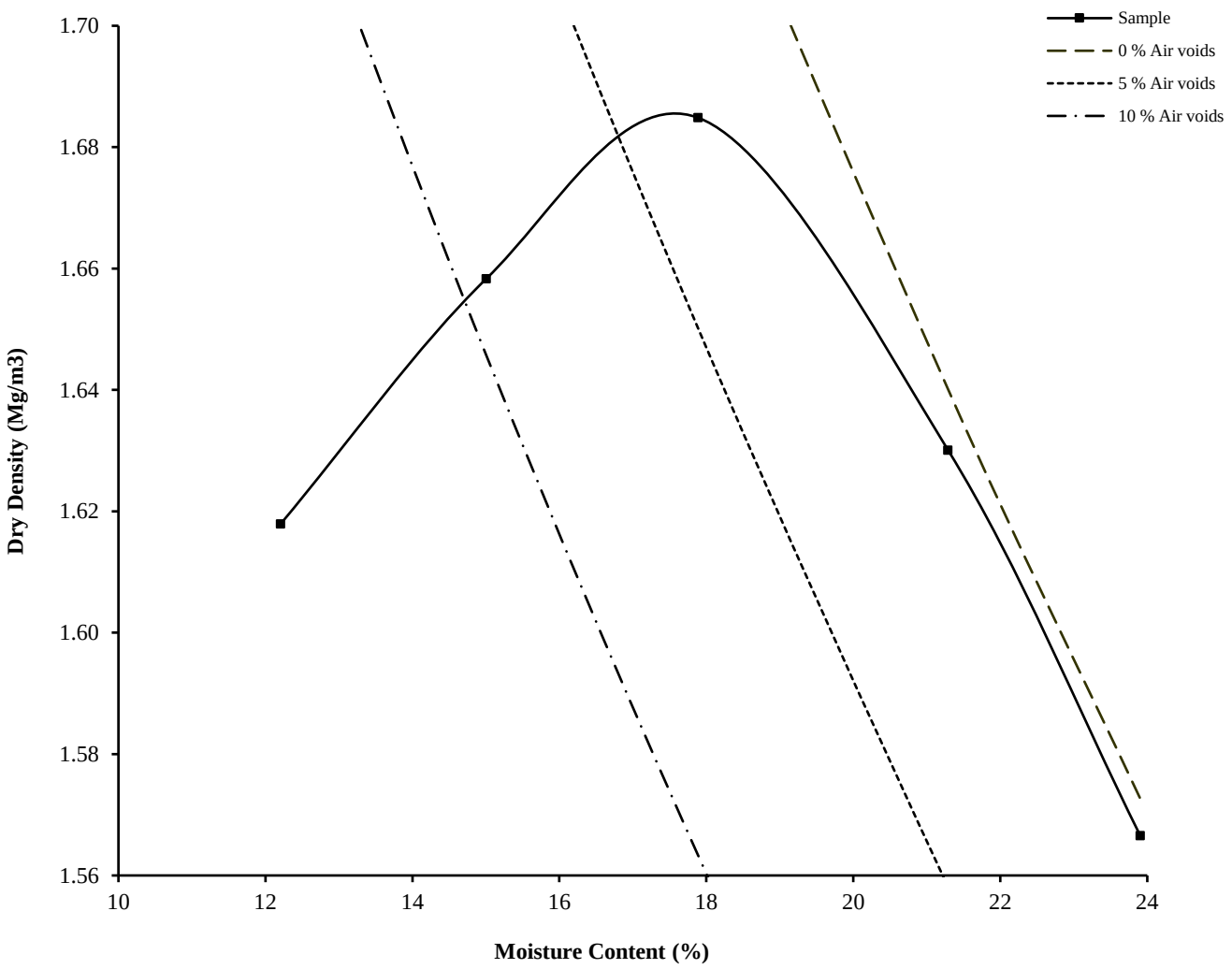
Contract No: **PSL17/1324**

Client Ref: **2450**

DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : 1990

Hole Number:	**BH01**	**Top Depth (m) :**	**0.00**
Sample Number:		**Base Depth (m) :**	**1.00**
Sample Type:	**B**		



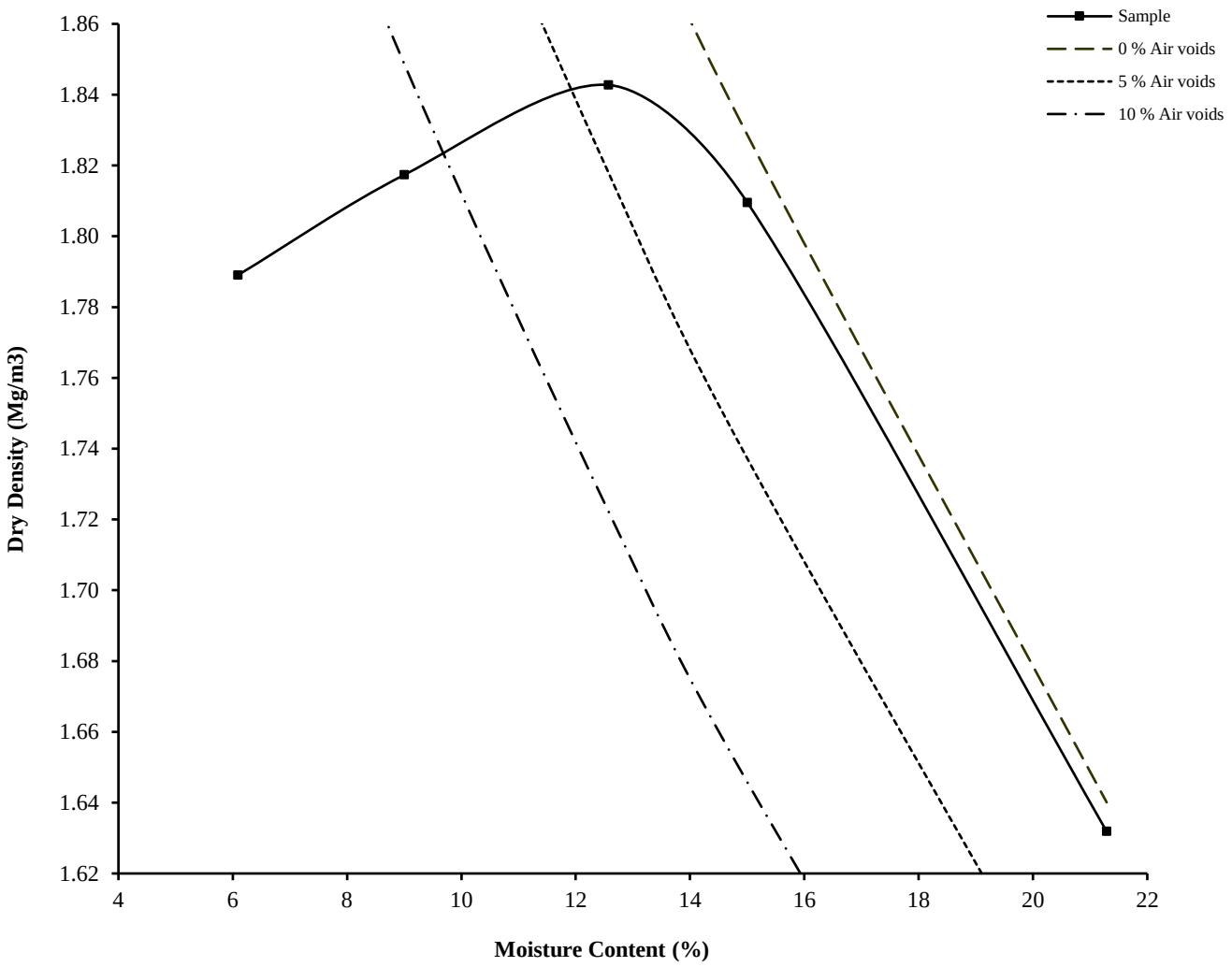
Initial Moisture Content:		21	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.52	Actual	Material Retained on 37.5 mm Test Sieve (%):		37
Maximum Dry Density (Mg/m3):		1.68	Material Retained on 20.0 mm Test Sieve (%):		3
Optimum Moisture Content (%):		18			
Remarks See summary of soil descriptions					

UKAS TESTING 4043	PSL Professional Soils Laboratory	**Capitol Park, Junction 37 (M1), Dodworth**	**Contract** **PSL17/1324** **Client Ref** **2450**

DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : 1990

Hole Number:	**BH01**	**Top Depth (m) :**	**0.00**
Sample Number:		**Base Depth (m) :**	**1.00**
Sample Type:	**B**		



Initial Moisture Content:		21	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.52	Actual	Material Retained on 37.5 mm Test Sieve (%):		37
Maximum Dry Density (Mg/m3):		1.84	Material Retained on 20.0 mm Test Sieve (%):		3
Optimum Moisture Content (%):		13			
Remarks See summary of soil descriptions					

UKAS TESTING 4043	PSL Professional Soils Laboratory	**Capitol Park, Junction 37 (M1), Dodworth**	**Contract** **PSL17/1324** **Client Ref** **2450**

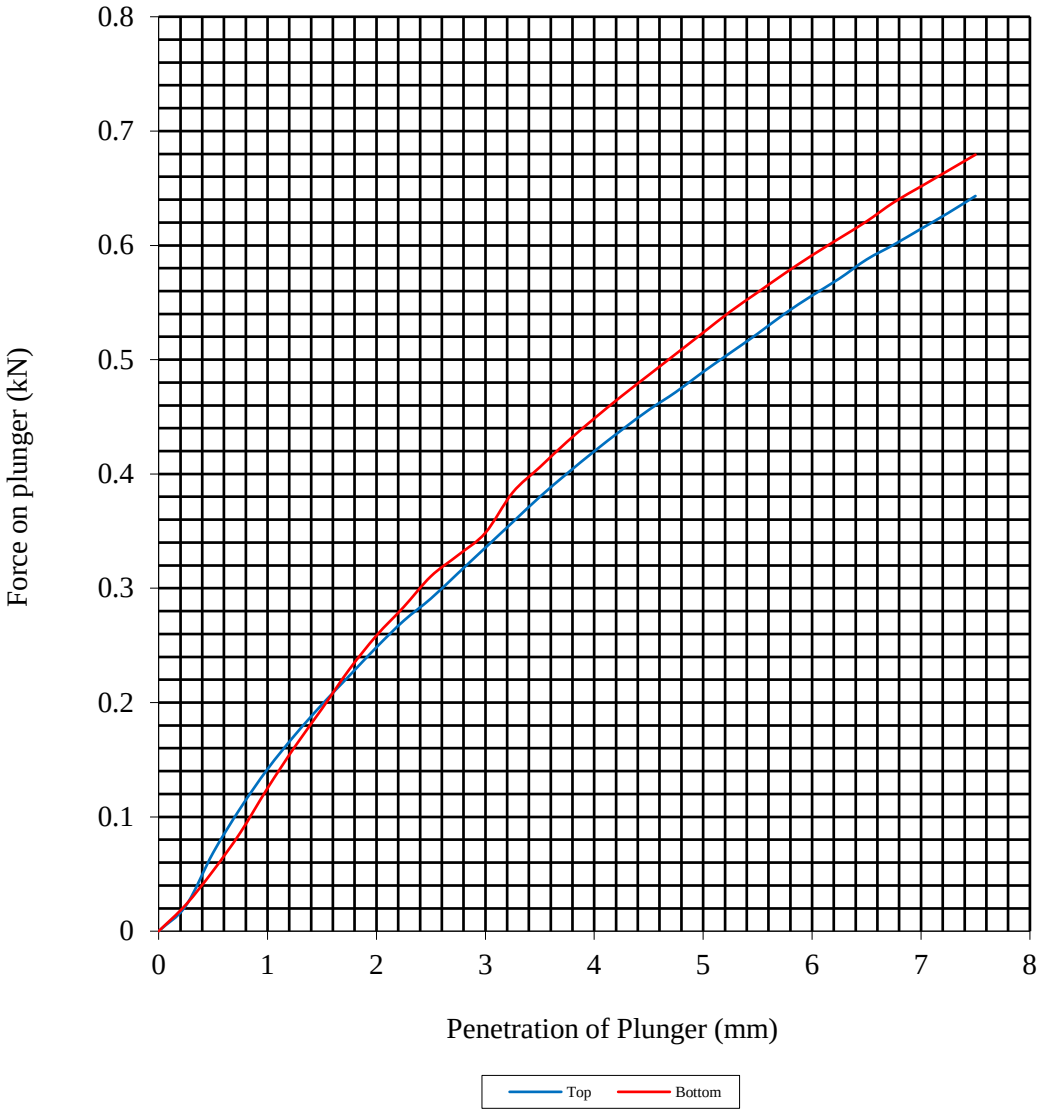
CALIFORNIA BEARING RATIO TEST

Non compliance with BS 1377 : Part 4 : 1990

Hole Number: BH01 **Top Depth (m):** 0.00

Sample Number: **Base Depth (m):** 1.00

Sample Type: B



Initial Sample Conditions		Sample Preparation		Final Moisture Content %		C.B.R. Value %	
Moisture Content:	21	Surcharge Kg:	14kg	Sample Top	21	Sample Top	2.4
Bulk Density Mg/m3:	1.98	Soaking Time hrs	0	Sample Bottom	21	Sample Bottom	2.6
Dry Density Mg/m3:	1.63	Swelling mm:	0	Remarks: See summary of soil descriptions.			
Percentage retained on 20mm BS test sieve:			40				
Compaction Conditions		2.5kg					

UKAS TESTING 4043

PSL Professional Soils Laboratory

Capitol Park, Junction 37 (M1), Dodworth

Contract No: PSL17/1324

Client Ref: 2450

PARTICLE SIZE DISTRIBUTION TEST

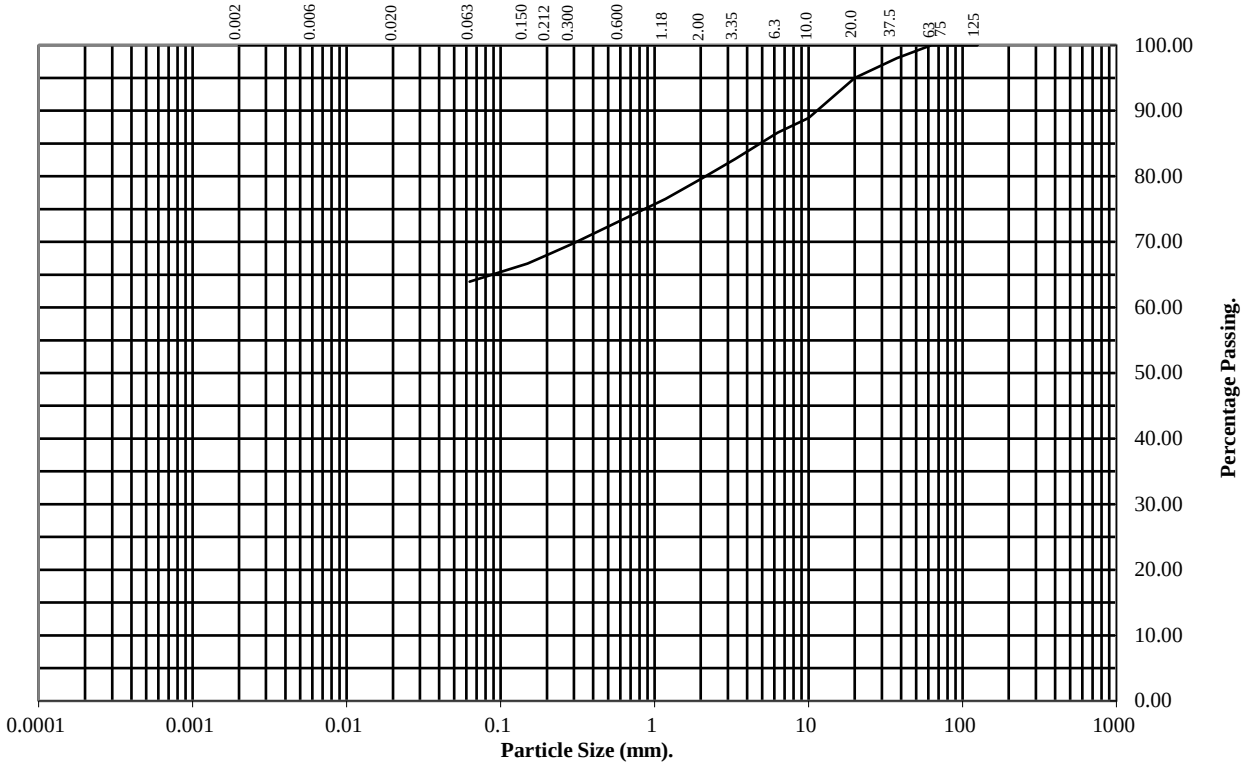
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: **TP12(SPB)** **Top Depth (m):** **1.30**

Sample Number: **Base Depth(m):** **1.80**

Sample Type: **B**



BS Test Sieve	Percentage Passing
125	100
75	100
63	100
37.5	98
20	95
10	89
6.3	87
3.35	83
2	80
1.18	77
0.6	73
0.3	70
0.212	68
0.15	67
0.063	64

Soil Fraction	Total Percentage
Cobbles	0
Gravel	20
Sand	16
Silt/Clay	64

Remarks:

See summary of soil descriptions.

UKAS TESTING 4043

PSL Professional Soils Laboratory

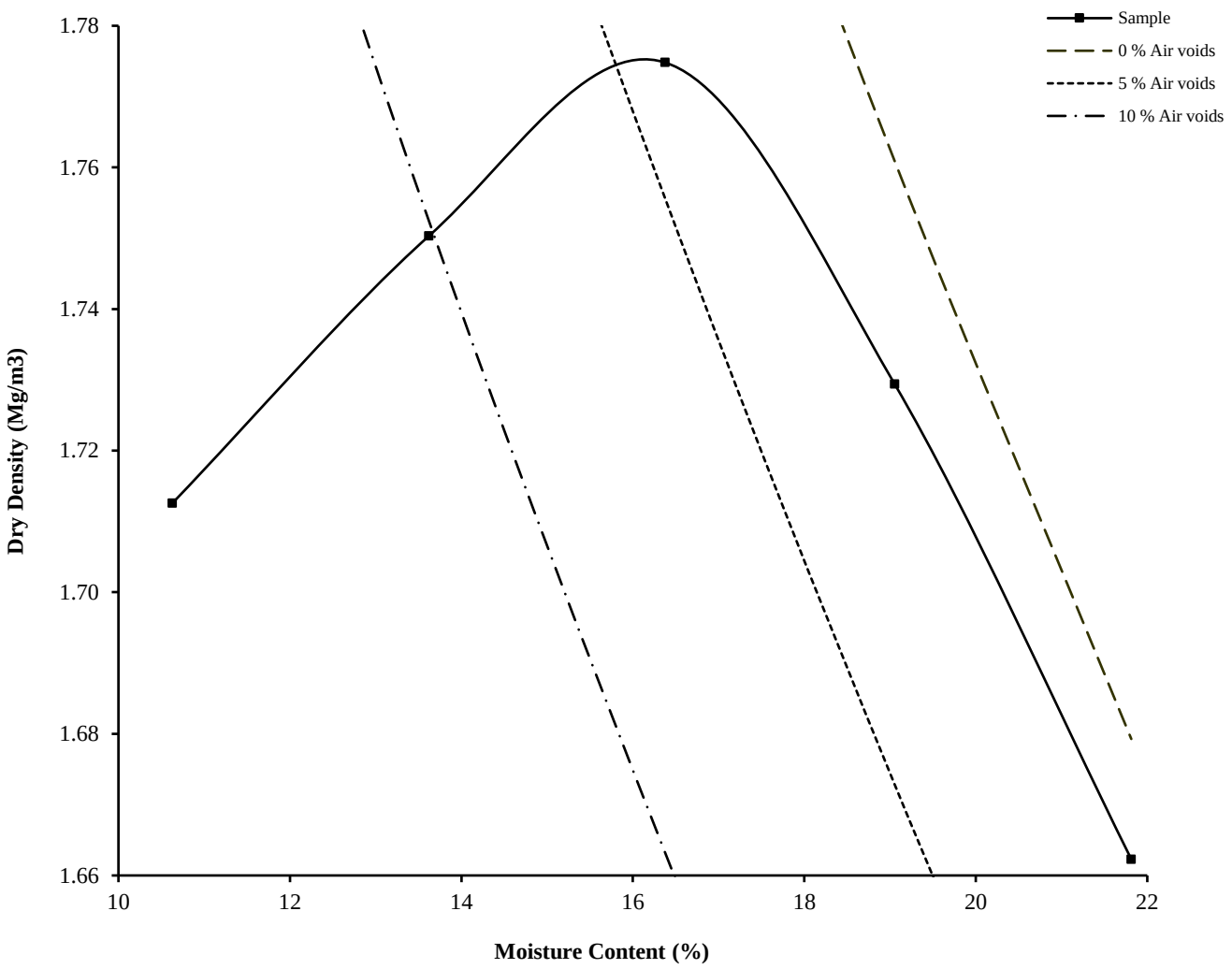
Capitol Park, Junction 37 (M1), Dodworth

Contract No:
PSL17/1324
Client Ref:
2450

DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : 1990

Hole Number:	**TP12(SPB)**	**Top Depth (m) :**	**1.30**
Sample Number:		**Base Depth (m) :**	**1.80**
Sample Type:	**B**		

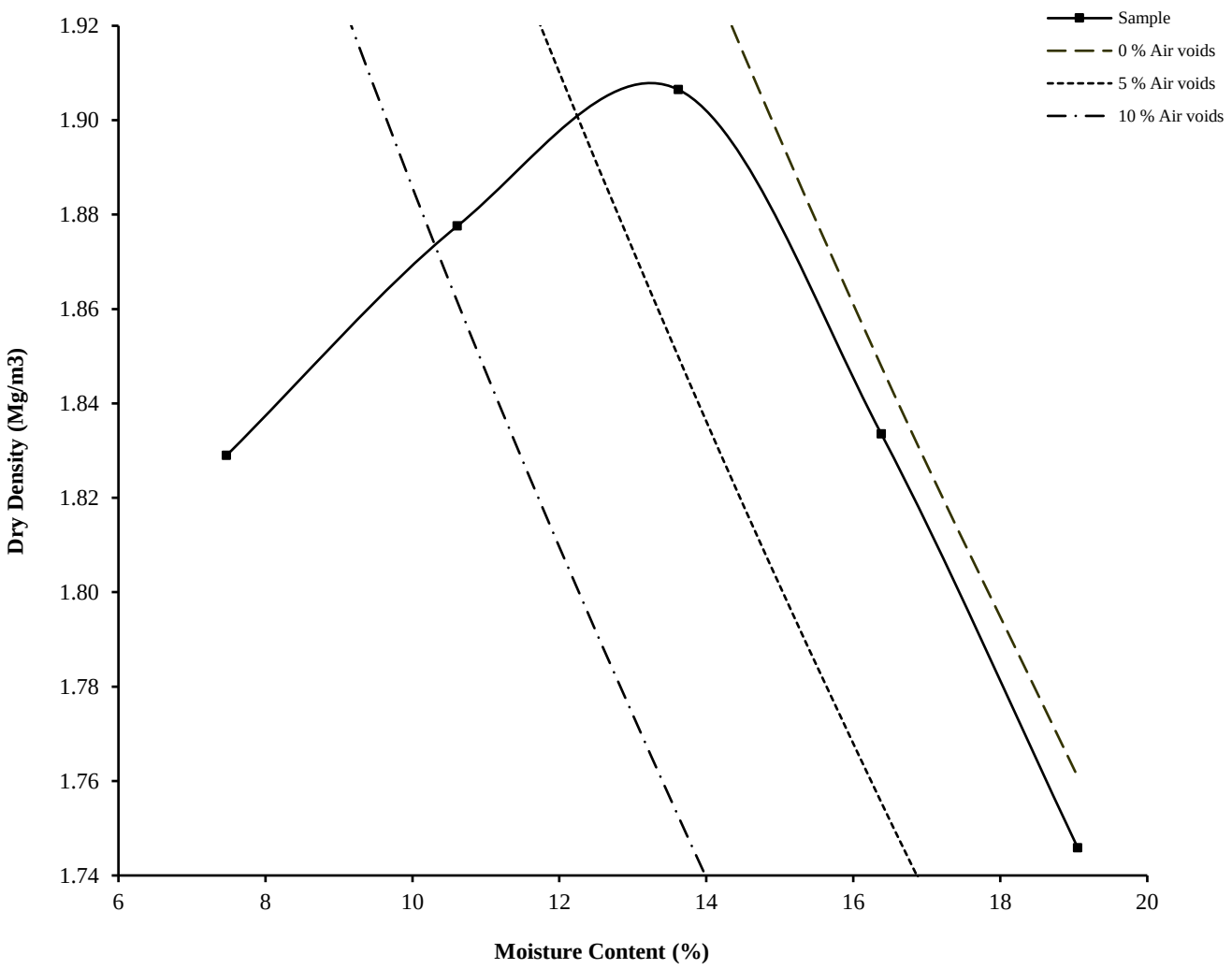


Initial Moisture Content:		19	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.65	Actual	Material Retained on 37.5 mm Test Sieve (%):		2
Maximum Dry Density (Mg/m3):		1.77	Material Retained on 20.0 mm Test Sieve (%):		3
Optimum Moisture Content (%):		16			
Remarks See summary of soil descriptions					

DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : 1990

Hole Number:	**TP12(SPB)**	**Top Depth (m) :**	**1.30**
Sample Number:		**Base Depth (m) :**	**1.80**
Sample Type:	**B**		



Initial Moisture Content:		19	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.65	Actual	Material Retained on 37.5 mm Test Sieve (%):		2
Maximum Dry Density (Mg/m3):		1.91	Material Retained on 20.0 mm Test Sieve (%):		3
Optimum Moisture Content (%):		14			
Remarks See summary of soil descriptions					

UKAS TESTING 4043	PSL Professional Soils Laboratory	**Capitol Park, Junction 37 (M1), Dodworth**	**Contract** **PSL17/1324** **Client Ref** **2450**

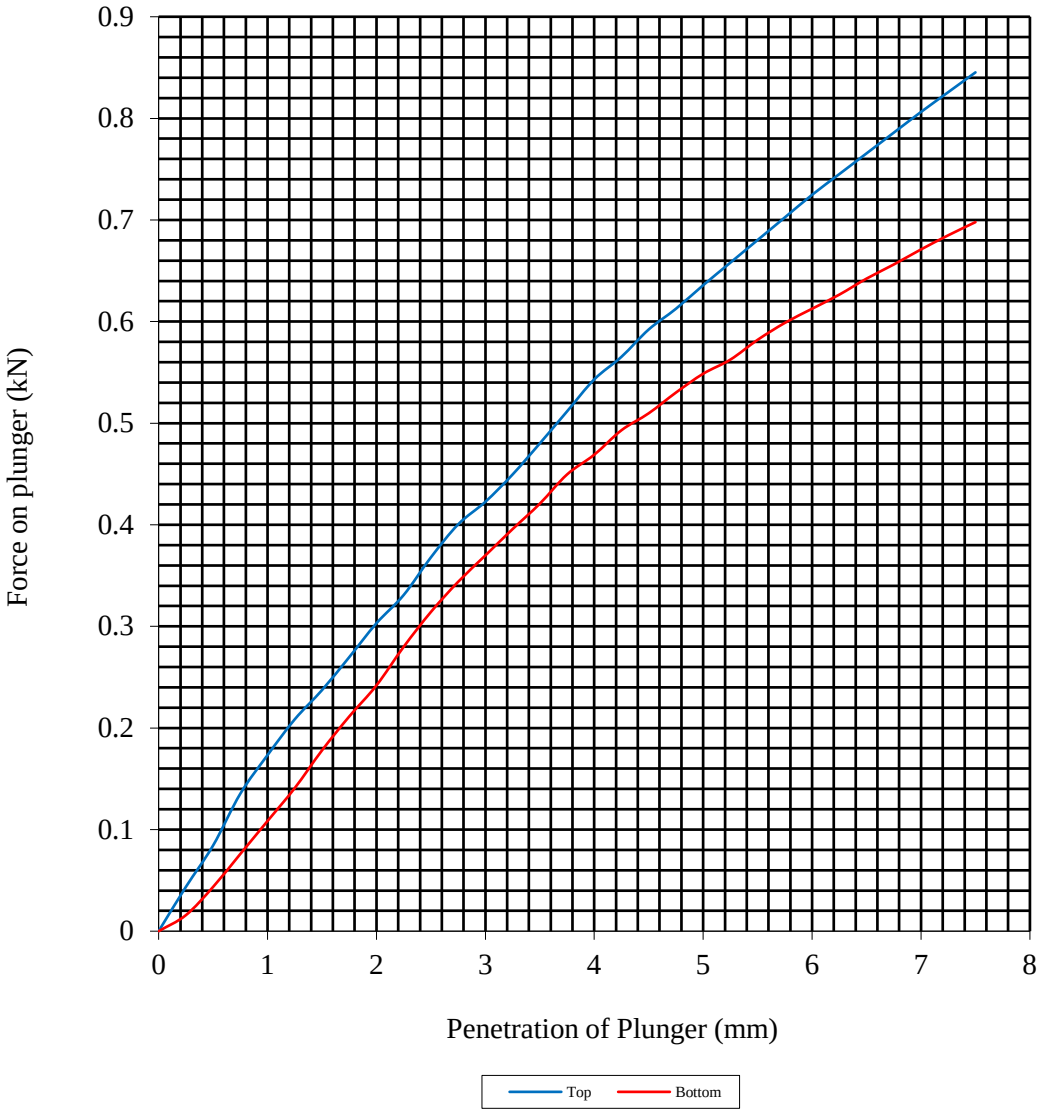
CALIFORNIA BEARING RATIO TEST

BS 1377 : Part 4 : 1990

Hole Number: TP12(SPB) **Top Depth (m):** 1.30

Sample Number: **Base Depth (m):** 1.80

Sample Type: B



Initial Sample Conditions		Sample Preparation		Final Moisture Content %		C.B.R. Value %	
Moisture Content:	19	Surcharge Kg:	14kg	Sample Top	19	Sample Top	3.2
Bulk Density Mg/m3:	2.06	Soaking Time hrs	0	Sample Bottom	19	Sample Bottom	2.7
Dry Density Mg/m3:	1.73	Swelling mm:	0	Remarks: See summary of soil descriptions.			
Percentage retained on 20mm BS test sieve:			5				
Compaction Conditions		2.5kg					

UKAS TESTING 4043

PSL Professional Soils Laboratory

Capitol Park, Junction 37 (M1), Dodworth

Contract No: PSL17/1324

Client Ref: 2450

PARTICLE SIZE DISTRIBUTION TEST

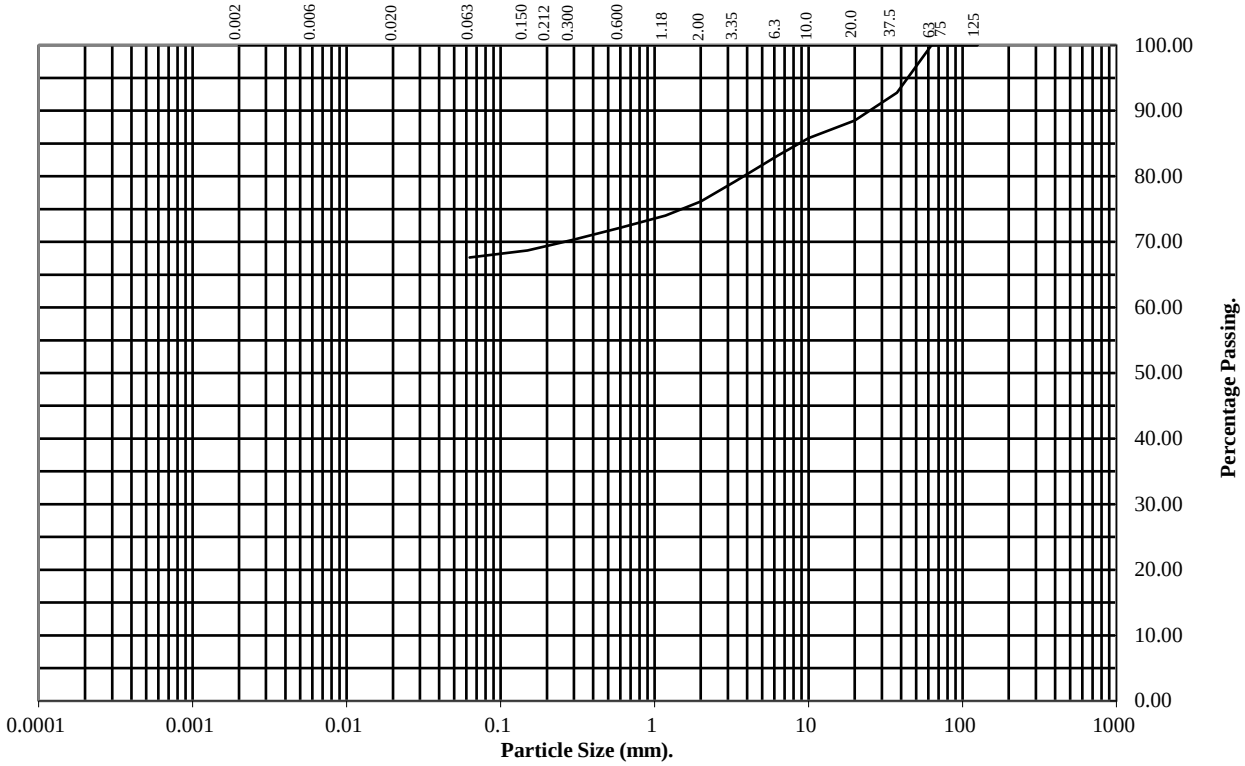
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: **TP13** **Top Depth (m):** **0.50**

Sample Number: **Base Depth(m):** **1.00**

Sample Type: **B**



BS Test Sieve	Percentage Passing
125	100
75	100
63	100
37.5	93
20	89
10	86
6.3	83
3.35	79
2	76
1.18	74
0.6	72
0.3	70
0.212	70
0.15	69
0.063	68

Soil Fraction	Total Percentage
Cobbles	0
Gravel	24
Sand	8
Silt/Clay	68

Remarks:

See summary of soil descriptions.

UKAS TESTING 4043

PSL Professional Soils Laboratory

Capitol Park, Junction 37 (M1), Dodworth

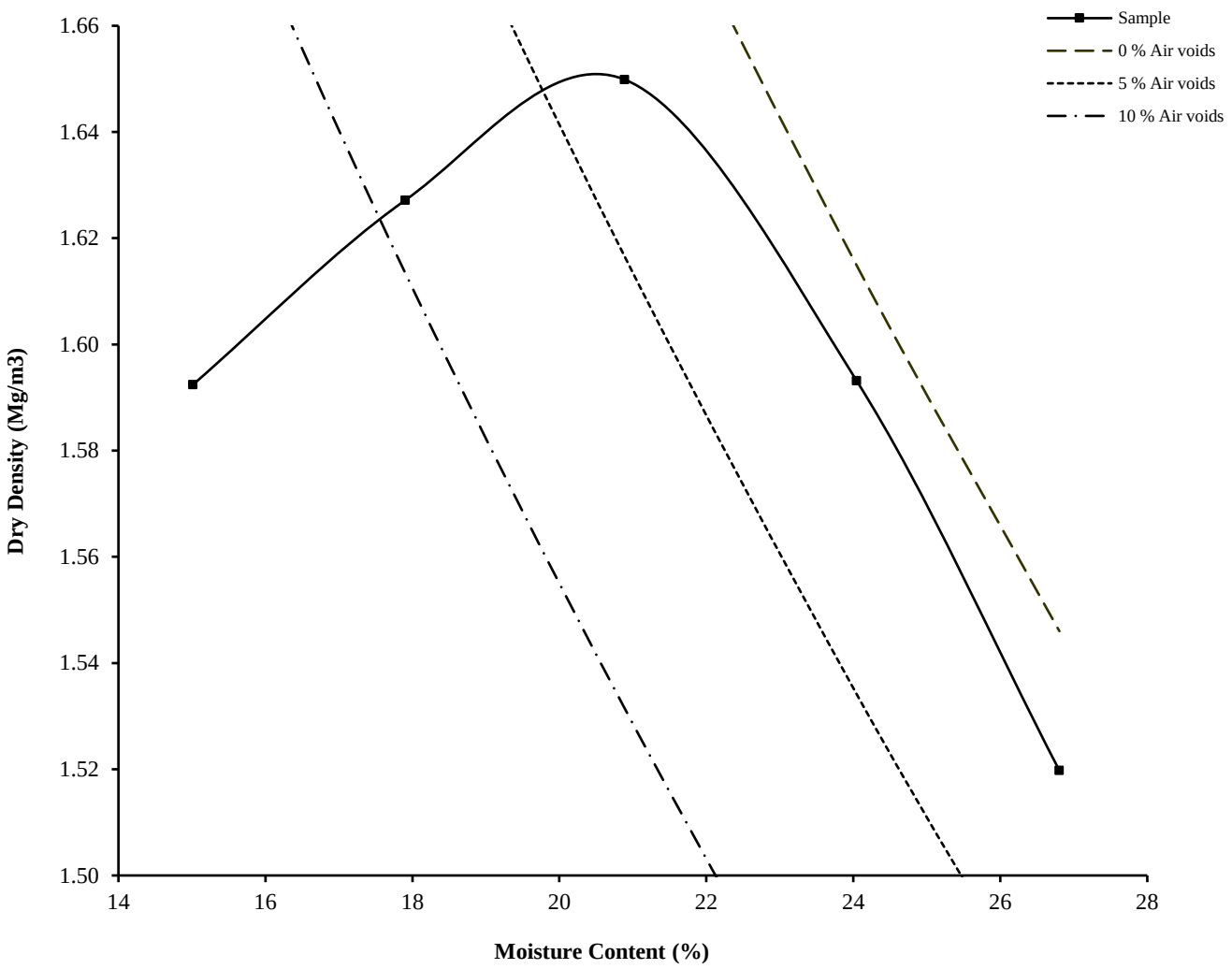
Contract No: **PSL17/1324**

Client Ref: **2450**

DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : 1990

Hole Number:	**TP13**	**Top Depth (m) :**	**0.50**
Sample Number:		**Base Depth (m) :**	**1.00**
Sample Type:	**B**		



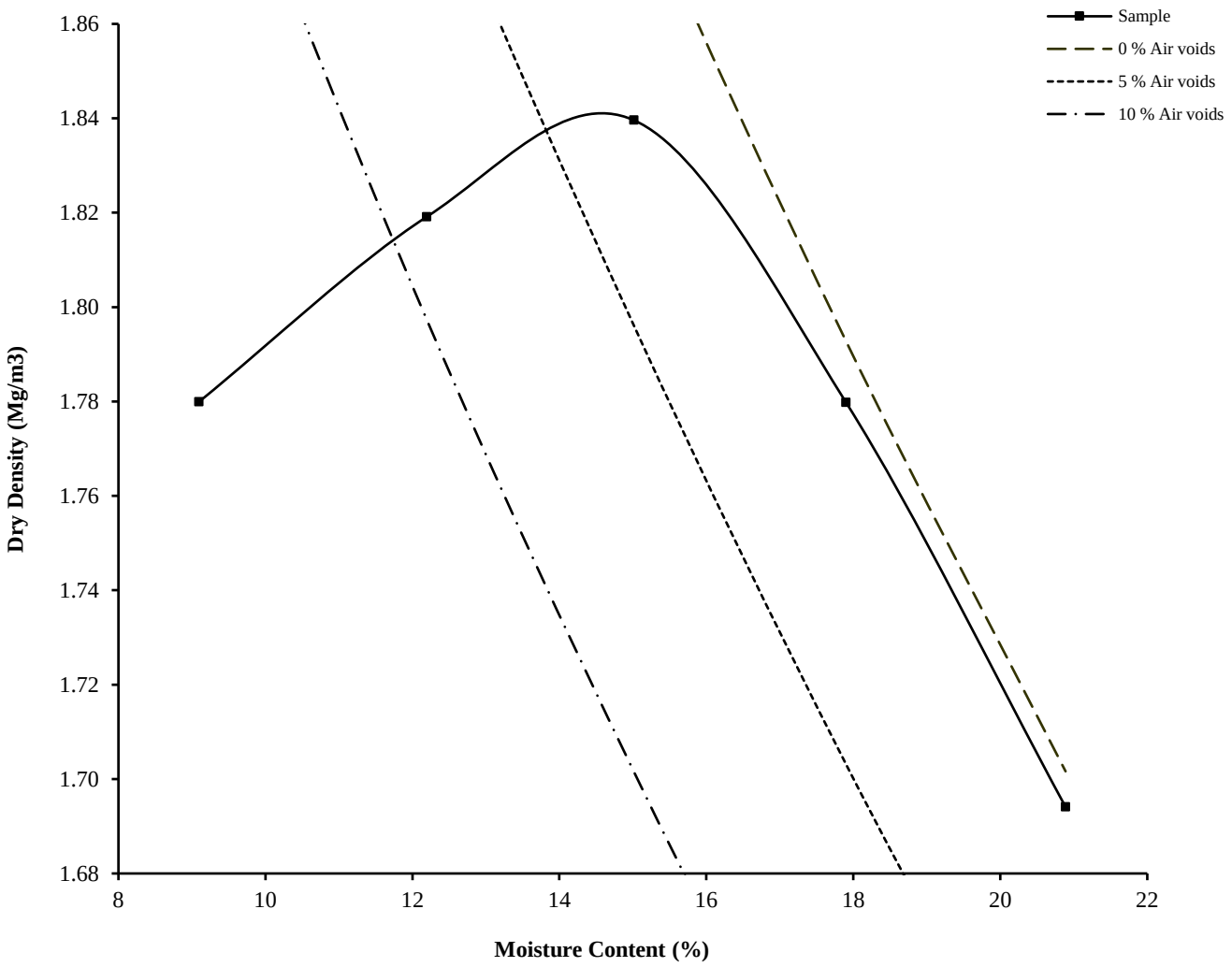
Initial Moisture Content:		24	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.64	Actual	Material Retained on 37.5 mm Test Sieve (%):		7
Maximum Dry Density (Mg/m3):		1.65	Material Retained on 20.0 mm Test Sieve (%):		4
Optimum Moisture Content (%):		21			
Remarks See summary of soil descriptions					

UKAS TESTING 4043	PSL Professional Soils Laboratory	**Capitol Park, Junction 37 (M1), Dodworth**	**Contract** **PSL17/1324** **Client Ref** **2450**

DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : 1990

Hole Number:	**TP13**	**Top Depth (m) :**	**0.50**
Sample Number:		**Base Depth (m) :**	**1.00**
Sample Type:	**B**		



Initial Moisture Content:		24	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.64	Actual	Material Retained on 37.5 mm Test Sieve (%):		7
Maximum Dry Density (Mg/m3):		1.84	Material Retained on 20.0 mm Test Sieve (%):		4
Optimum Moisture Content (%):		15			
Remarks See summary of soil descriptions					

UKAS TESTING 4043	PSL Professional Soils Laboratory	**Capitol Park, Junction 37 (M1), Dodworth**	**Contract** **PSL17/1324** **Client Ref** **2450**

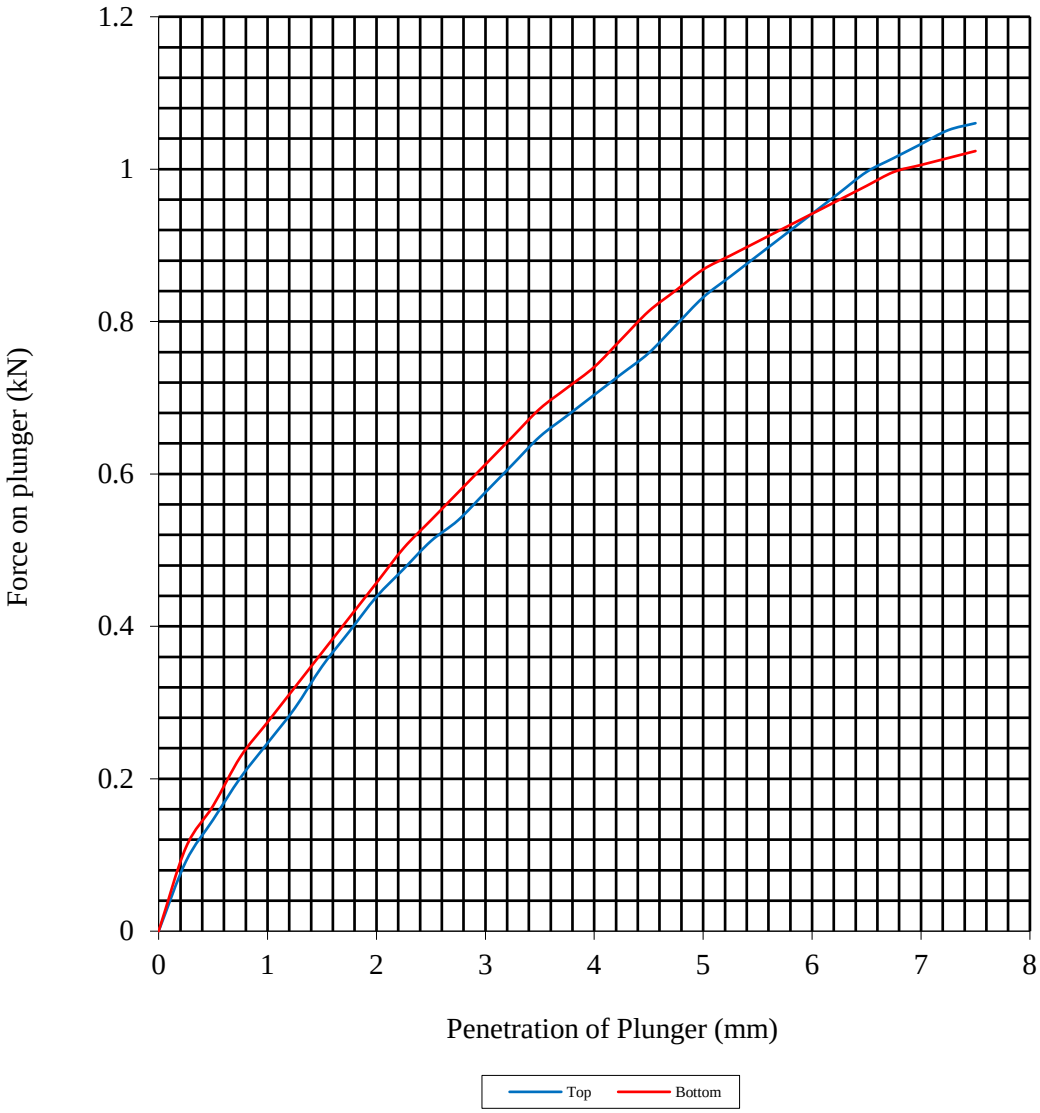
CALIFORNIA BEARING RATIO TEST

BS 1377 : Part 4 : 1990

Hole Number: TP13 **Top Depth (m):** 0.50

Sample Number: **Base Depth (m):** 1.00

Sample Type: B



Initial Sample Conditions		Sample Preparation		Final Moisture Content %		C.B.R. Value %	
Moisture Content:	24	Surcharge Kg:	14kg	Sample Top	24	Sample Top	4.2
Bulk Density Mg/m3:	1.97	Soaking Time hrs	0	Sample Bottom	24	Sample Bottom	4.3
Dry Density Mg/m3:	1.59	Swelling mm:	0	Remarks: See summary of soil descriptions.			
Percentage retained on 20mm BS test sieve:			11				
Compaction Conditions		2.5kg					

UKAS TESTING 4043

PSL Professional Soils Laboratory

Capitol Park, Junction 37 (M1), Dodworth

Contract No: PSL17/1324

Client Ref: 2450

PARTICLE SIZE DISTRIBUTION TEST

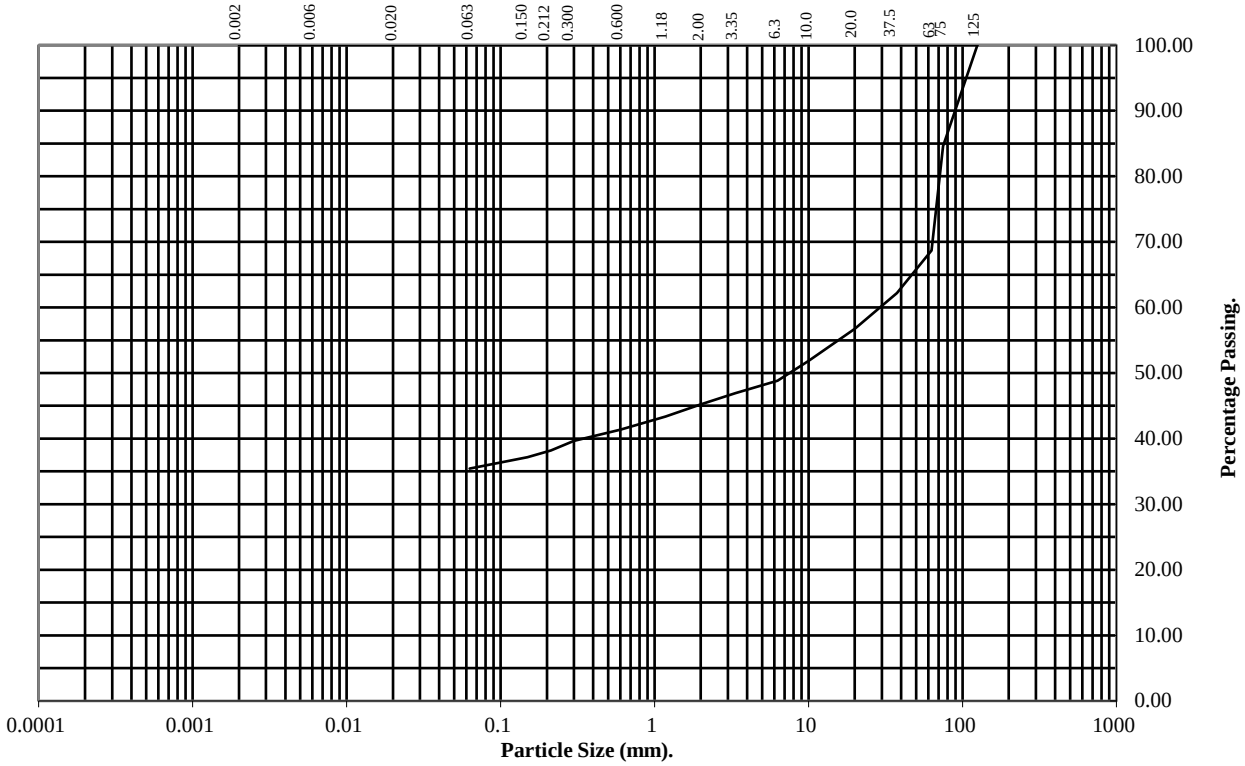
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: **TP20(SPA)** **Top Depth (m):** **1.00**

Sample Number: **Base Depth(m):** **1.50**

Sample Type: **B**



BS Test Sieve	Percentage Passing
125	100
75	85
63	69
37.5	62
20	57
10	52
6.3	49
3.35	47
2	45
1.18	43
0.6	41
0.3	40
0.212	38
0.15	37
0.063	35

Soil Fraction	Total Percentage
Cobbles	31
Gravel	24
Sand	10
Silt/Clay	35

Remarks:

See summary of soil descriptions.

UKAS TESTING 4043

PSL Professional Soils Laboratory

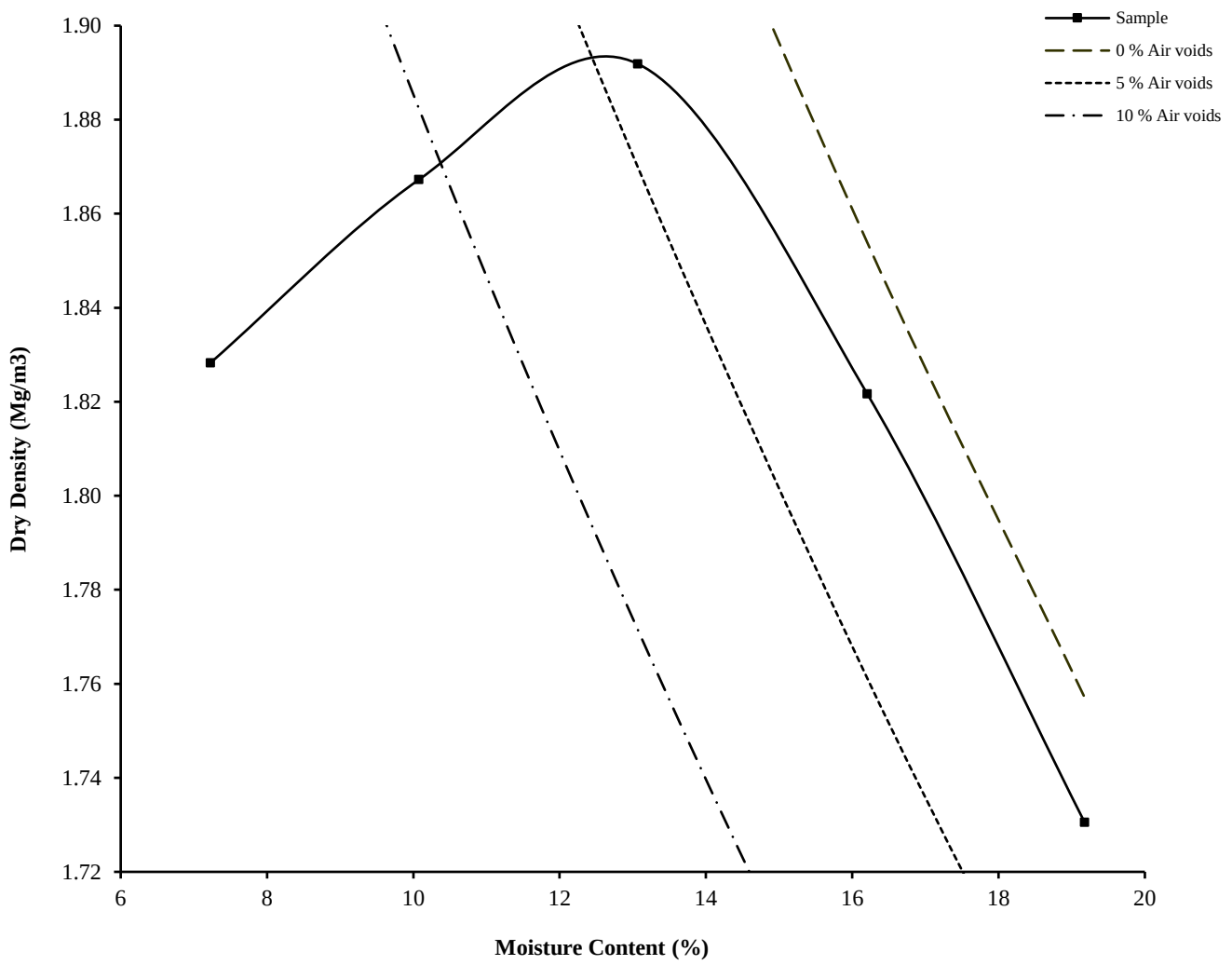
Capitol Park, Junction 37 (M1), Dodworth

Contract No:
PSL17/1324
Client Ref:
2450

DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : 1990

Hole Number:	**TP20(SPA)**	**Top Depth (m) :**	**1.00**
Sample Number:		**Base Depth (m) :**	**1.50**
Sample Type:	**B**		



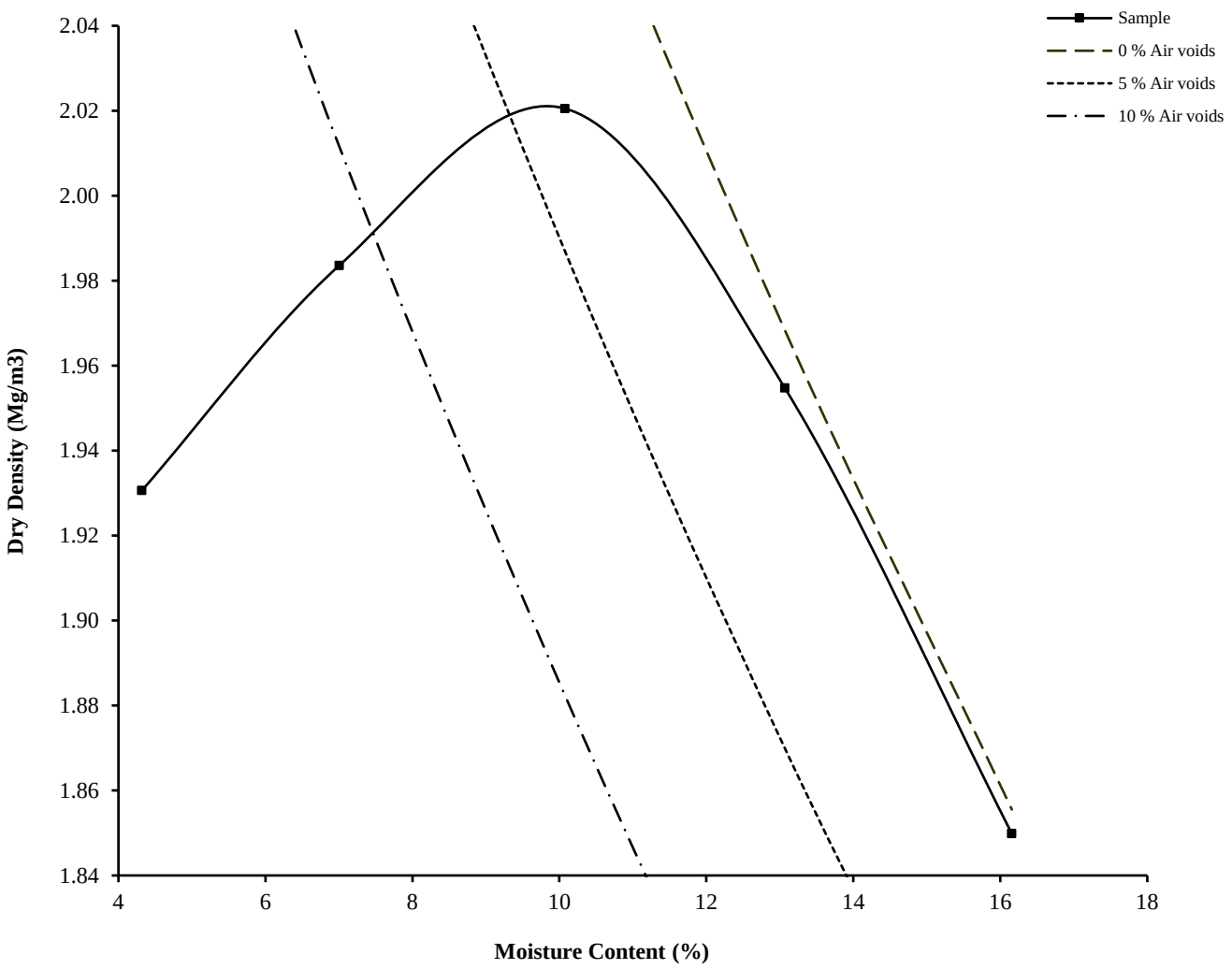
Initial Moisture Content:		13	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m3):	2.65	Actual	Material Retained on 37.5 mm Test Sieve (%):		38
Maximum Dry Density (Mg/m3):		1.89	Material Retained on 20.0 mm Test Sieve (%):		5
Optimum Moisture Content (%):		13			
Remarks See summary of soil descriptions					

UKAS TESTING 4043	PSL Professional Soils Laboratory	**Capitol Park, Junction 37 (M1), Dodworth**	**Contract** **PSL17/1324** **Client Ref** **2450**

DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : 1990

Hole Number:	**TP20(SPA)**	**Top Depth (m) :**	**1.00**
Sample Number:		**Base Depth (m) :**	**1.50**
Sample Type:	**B**		



Initial Moisture Content:		13	Method of Compaction:	4.5kg	Separate Samples
Particle Density (Mg/m3):	2.65	Actual	Material Retained on 37.5 mm Test Sieve (%):		38
Maximum Dry Density (Mg/m3):		2.02	Material Retained on 20.0 mm Test Sieve (%):		5
Optimum Moisture Content (%):		10			
Remarks See summary of soil descriptions					

UKAS TESTING 4043	PSL Professional Soils Laboratory	**Capitol Park, Junction 37 (M1), Dodworth**	**Contract** **PSL17/1324** **Client Ref** **2450**

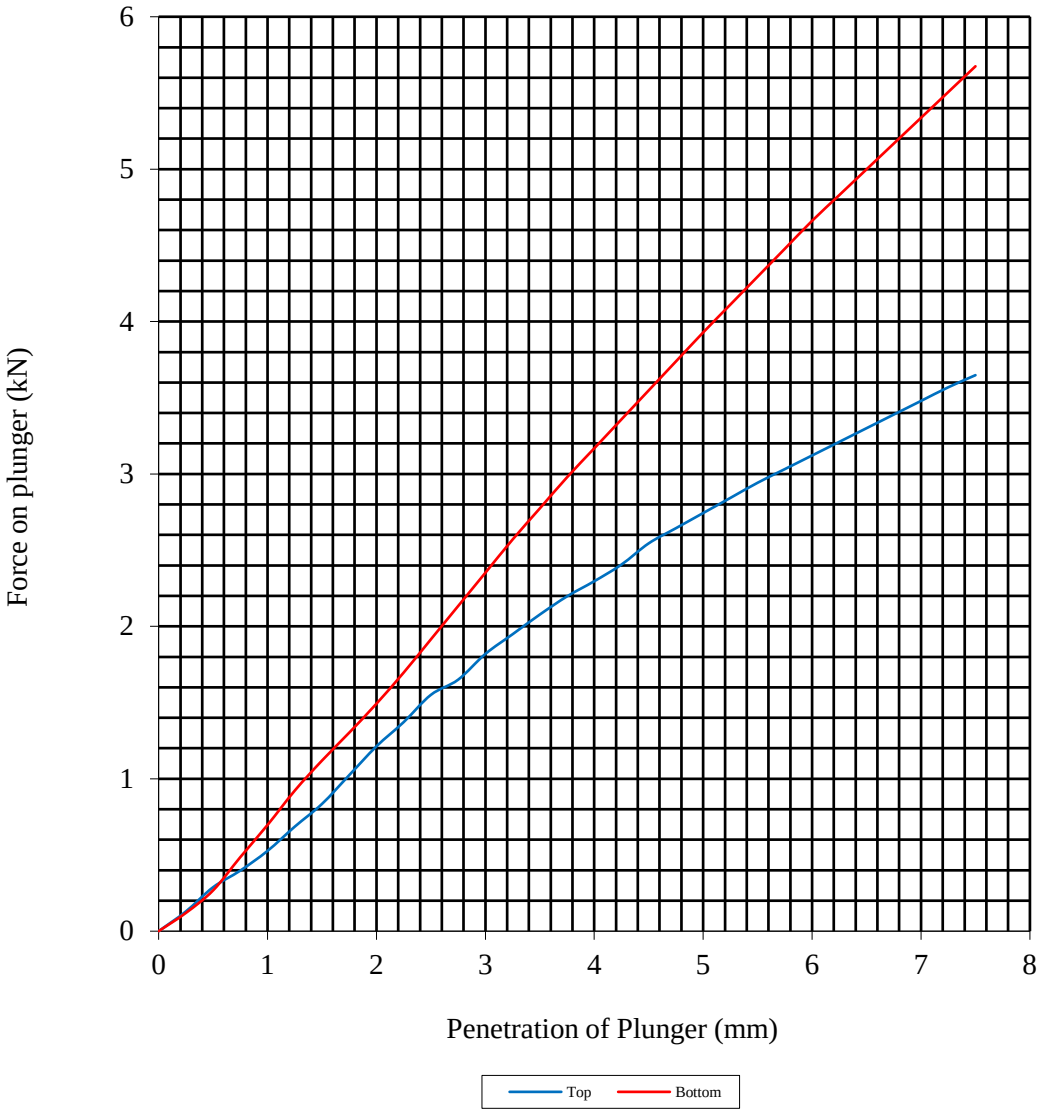
CALIFORNIA BEARING RATIO TEST

Non compliance with BS 1377 : Part 4 : 1990

Hole Number: TP20(SPA) **Top Depth (m):** 1.00

Sample Number: **Base Depth (m):** 1.50

Sample Type: B



Initial Sample Conditions		Sample Preparation		Final Moisture Content %		C.B.R. Value %	
Moisture Content:	13	Surcharge Kg:	14kg	Sample Top	13	Sample Top	13.7
Bulk Density Mg/m3:	2.13	Soaking Time hrs	0	Sample Bottom	13	Sample Bottom	19.6
Dry Density Mg/m3:	1.89	Swelling mm:	0	Remarks: See summary of soil descriptions.			
Percentage retained on 20mm BS test sieve:			43				
Compaction Conditions		2.5kg					

UKAS TESTING 4043

PSL Professional Soils Laboratory

Capitol Park, Junction 37 (M1), Dodworth

Contract No: PSL17/1324

Client Ref: 2450

Certificate of Analysis

Certificate Number 17-95470

30-Mar-17

Client Professional Soils Laboratory Ltd
5/7 Hexthorpe Road
Hexthorpe
DN4 0AR

Our Reference 17-95470

Client Reference PSL17/1324

Order No (not supplied)

Contract Title Capitol Park, Junction 37 (M1) Dodworth

Description 12 Soil samples.

Date Received Saturday, March 25, 2017

Date Started Saturday, March 25, 2017

Date Completed Thursday, March 30, 2017

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

Notes Opinions and interpretations are outside the scope of UKAS 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. Observations and interpretations are outside the scope of ISO 17025. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By

Rob Brown
Business Manager

UKAS TESTING
2139

Summary of Chemical Analysis
Soil Samples

Our Ref 17-95470
Client Ref PSL17/1324
Contract Title Capitol Park, Junction 37 (M1) Dodworth

	Lab No	1149812	1149813	1149814	1149815	1149816	1149817	1149818	1149819	1149820	1149821	1149822	1149823
	Sample ID	TP02	TP03	TP04	TP08	TP11	TP14	TP15	TP19	BH01	TP12(SPB	TP13	TP20(SP
	Depth	0.20-0.50	0.10-0.20	0.00-0.50	0.20-0.40	2.10-2.60	1.10-1.50	0.30-0.80	2.50-2.60	0.00-1.00	1.30-1.80	0.50-1.00	1.00-1.50
	Other ID												
	Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampling Date	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s
	Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s
Test	**Method**	**LOD**	**Units**										
Inorganics													
pH	DETSC 2008#			6.8	6.9	6.9	7.1	7.4	5.5	7.1	7.6	7.0	7.0	7.1	7.7
Chloride	DETSC 2055	1	mg/kg	3.4	< 1.0	5.1		36.1		2.5	8.5		10.7		2.4
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	15	11	24	31	31	82	40	43	< 10	94	41	13
Sulphur as S, Total	DETSC 2320	0.01	%	0.01	< 0.01	0.01		0.01		< 0.01	0.02		0.05		0.01
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.03	0.02	0.03		0.04		0.04	0.05		0.07		0.04

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

Information in Support of the Analytical Results

Our Ref 17-95470
Client Ref PSL17/1324
Contract Capitol Park, Junction 37 (M1) Dodworth

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
1149812	TP02 0.20-0.50 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), Total Sulphur ICP (365 days), Total Sulphate ICP (730 days), Metals ICP Prep (365 days), pH + Conductivity (7 days)	
1149813	TP03 0.10-0.20 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), Total Sulphur ICP (365 days), Total Sulphate ICP (730 days), Metals ICP Prep (365 days), pH + Conductivity (7 days)	
1149814	TP04 0.00-0.50 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), Total Sulphur ICP (365 days), Total Sulphate ICP (730 days), Metals ICP Prep (365 days), pH + Conductivity (7 days)	
1149815	TP08 0.20-0.40 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), pH + Conductivity (7 days)	
1149816	TP11 2.10-2.60 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), Total Sulphur ICP (365 days), Total Sulphate ICP (730 days), Metals ICP Prep (365 days), pH + Conductivity (7 days)	
1149817	TP14 1.10-1.50 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), pH + Conductivity (7 days)	
1149818	TP15 0.30-0.80 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), Total Sulphur ICP (365 days), Total Sulphate ICP (730 days), Metals ICP Prep (365 days), pH + Conductivity (7 days)	
1149819	TP19 2.50-2.60 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), Total Sulphur ICP (365 days), Total Sulphate ICP (730 days), Metals ICP Prep (365 days), pH + Conductivity (7 days)	
1149820	BH01 0.00-1.00 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), pH + Conductivity (7 days)	
1149821	TP12(SPB) 1.30-1.80 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), Total Sulphur ICP (365 days), Total Sulphate ICP (730 days), Metals ICP Prep (365 days), pH + Conductivity (7 days)	
1149822	TP13 0.50-1.00 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), pH + Conductivity (7 days)	
1149823	TP20(SPA) 1.00-1.50 SOIL		PT 1L	Sample date not supplied, Anions 2:1 (365 days), Total Sulphur ICP (365 days), Total Sulphate ICP (730 days), Metals ICP Prep (365 days), pH + Conductivity (7 days)	

Key: P-Plastic 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 17-95470
Client Ref PSL17/1324
Contract Capitol Park, Junction 37 (M1) Dodworth

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

Appendix E Gas and Groundwater Monitoring Results

GAS AND GROUNDWATER MONITORING RESULTS

Site: Unit A, Junction 37, Barnsley
Job No: 2450 **Client:** Commercial Development Projects Limited
Visit No: 1 **Date:** 20/03/2017

CIVIL & STRUCTURAL ENGINEERING

Monitoring Location	Gas Concentration								Gas Emission Rate		GWL	Base of Standpipe
	Peak			Steady			Highest	Lowest				
BH	CH_4		CO_2	CH_4		CO_2	H_2S	O_2	Litre/Hour			
	% lel	%v/v	%	% lel	%v/v	%	ppm	%	Peak	Steady	(m) bgl	
BH02	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
BH04	25.1	1.1	3.8	25.1	1.1	3.8	1	2.4	0.0	0.0	Dry	4.16

Ambient Concentration (% volume): CH_4 0.0 %v/v; CO_2 0.0 %v/v; O_2 20.9 %v/v

Barometric Pressure: Start NR; End NR
Barometric Pressure Trend: Falling
Weather: NR

Monitoring Equipment: Gas Data GFM 430
Serial Number of Equipment: 10301
Date of Last Calibration: 21/07/2016
Operator: AN

Key	Remarks
NR - Not Recorded NA - Not Applicable	

Checked: **Approved:**

GAS AND GROUNDWATER MONITORING RESULTS

Site: Unit A, Junction 37, Barnsley
Job No: 2450 **Client:** Commercial Development Projects Limited
Visit No: 2 **Date:** 28/03/2017

CIVIL & STRUCTURAL ENGINEERING

Monitoring Location	Gas Concentration								Gas Emission Rate		GWL	Base of Standpipe
	Peak			Steady			Highest	Lowest				
BH	CH_4		CO_2	CH_4		CO_2	H_2S	O_2	Litre/Hour			
	% lel	%v/v	%	% lel	%v/v	%	ppm	%	Peak	Steady	(m) bgl	
BH02	0.0	0.0	3.6	0.0	0.0	3.6	0	9.2	9.0	0.0	Dry	3.88
BH04	0.0	0.0	2.4	0.0	0.0	2.4	0	14.4	0.0	0.0	Dry	4.16

Ambient Concentration (% volume): CH_4 0.0 %v/v; CO_2 0.0 %v/v; O_2 21.0 %v/v

Barometric Pressure: Start 999; End 997
Barometric Pressure Trend: Falling
Weather: Sunny

Monitoring Equipment: Gas Data GFM 430
Serial Number of Equipment: 10301
Date of Last Calibration: 21/07/2016
Operator: JP

Key	Remarks
NR - Not Recorded NA - Not Applicable	

Checked: **Approved:**

GAS AND GROUNDWATER MONITORING RESULTS

Site: Unit A, Junction 37, Barnsley
Job No: 2450 **Client:** Commercial Development Projects Limited
Visit No: 3 **Date:** 05/04/2017

CIVIL & STRUCTURAL ENGINEERING

Monitoring Location	Gas Concentration								Gas Emission Rate		GWL	Base of Standpipe
	Peak			Steady			Highest	Lowest				
BH	CH_4		CO_2	CH_4		CO_2	H_2S	O_2	Litre/Hour			
	% lel	%v/v	%	% lel	%v/v	%	ppm	%	Peak	Steady	(m) bgl	
BH02	0.0	0.0	4.7	0.0	0.0	4.7	0	6.0	0.0	0.0	Dry	3.88
BH04	0.0	0.0	1.9	0.0	0.0	1.9	0	19.9	0.0	0.0	Dry	4.16

Ambient Concentration (% volume): CH_4 0.0 %v/v; CO_2 0.0 %v/v; O_2 20.9 %v/v

Barometric Pressure: Start 1012; End 1009
Barometric Pressure Trend: Rising
Weather: Sunny spells

Monitoring Equipment: Gas Data GFM 430
Serial Number of Equipment: 10301
Date of Last Calibration: 21/07/2016
Operator: JP

Key	Remarks
NR - Not Recorded NA - Not Applicable	

Checked: **Approved:**

GAS AND GROUNDWATER MONITORING RESULTS

Site: Unit A, Junction 37, Barnsley
Job No: 2450 **Client:** Commercial Development Projects Limited
Visit No: 4 **Date:** 12/04/2017

CIVIL & STRUCTURAL ENGINEERING

Monitoring Location	Gas Concentration								Gas Emission Rate		GWL	Base of Standpipe
	Peak			Steady			Highest	Lowest				
BH	CH_4		CO_2	CH_4		CO_2	H_2S	O_2	Litre/Hour			
	% lel	%v/v	%	% lel	%v/v	%	ppm	%	Peak	Steady	(m) bgl	
BH02	0.0	0.0	5.5	0.0	0.0	5.5	0	10.0	5.2	0.5	NR	3.88
BH04	0.0	0.0	3.6	0.0	0.0	3.6	1	19.1	0.0	0.0	Dry	4.16

Ambient Concentration (% volume): CH_4 0.0 %v/v; CO_2 0.0 %v/v; O_2 21.0 %v/v

Barometric Pressure: Start 997; End 994
Barometric Pressure Trend: Falling
Weather: Dry and overcast

Monitoring Equipment: Gas Data GFM 430
Serial Number of Equipment: 10301
Date of Last Calibration: 21/07/2016
Operator: JP

Key	Remarks
NR - Not Recorded NA - Not Applicable	BH04 - Appears to have been driven over, and the cover is pushed into the ground. Not damaged but unable to remove bung to measure GWL.

Checked: **Approved:**

GAS AND GROUNDWATER MONITORING RESULTS

Site: Unit A, Junction 37, Barnsley
Job No: 2450 **Client:** Commercial Development Projects Limited
Visit No: 5 **Date:** 20/04/2017

CIVIL & STRUCTURAL ENGINEERING

Monitoring Location	Gas Concentration								Gas Emission Rate		GWL	Base of Standpipe
	Peak			Steady			Highest	Lowest				
BH	CH_4		CO_2	CH_4		CO_2	H_2S	O_2	Litre/Hour			
	% lel	%v/v	%	% lel	%v/v	%	ppm	%	Peak	Steady	(m) bgl	
BH02	0.0	0.0	4.9	0.0	0.0	4.8	0	8.8	0.0	0.0	NR	3.88
BH04	0.0	0.0	3.8	0.0	0.0	3.8	1	19.1	0.0	0.0	Dry	4.16

Ambient Concentration (% volume): CH_4 0.0 %v/v; CO_2 0.0 %v/v; O_2 21.1 %v/v

Barometric Pressure: Start 1013; End NR
Barometric Pressure Trend: Rising
Weather: Sunny spells ans breezy

Monitoring Equipment: Gas Data GFM 430
Serial Number of Equipment: 10301
Date of Last Calibration: 21/07/2016
Operator: JP

Key	Remarks
NR - Not Recorded NA - Not Applicable	

Checked: **Approved:**

GAS AND GROUNDWATER MONITORING RESULTS

Site: Unit A, Junction 37, Barnsley
Job No: 2450 **Client:** Commercial Development Projects Limited
Visit No: 6 **Date:** 25/04/2017

CIVIL & STRUCTURAL ENGINEERING

Monitoring Location	Gas Concentration								Gas Emission Rate		GWL	Base of Standpipe
	Peak			Steady			Highest	Lowest				
BH	CH_4		CO_2	CH_4		CO_2	H_2S	O_2	Litre/Hour			
	% lel	%v/v	%	% lel	%v/v	%	ppm	%	Peak	Steady	(m) bgl	
BH02	0.0	0.0	4.7	0.0	0.0	4.7	0	15.9	0.0	0.0	NR	3.88
BH04	0.0	0.0	4.4	0.0	0.0	4.4	0	19.3	0.0	0.0	Dry	4.16

Ambient Concentration (% volume): CH_4 0.0 CO_2 0.0 %v/v
O_2 20.9

Barometric Pressure: **Start** 997
End 995
Barometric Pressure Trend: Falling
Weather: Sunny spells and breezy

Monitoring Equipment: Gas Data GFM 430
Serial Number of Equipment: 10301
Date of Last Calibration: 21/07/2016
Operator: JP

Key	Remarks
NR - Not Recorded NA - Not Applicable	

Checked: **Approved:**

SUMMARY OF GROUND GAS MONITORING

BH NO.	Peak CH4 (% v/v) MIN	Peak CH4 (% v/v) MAX	Steady CH4 (% v/v) MIN	Steady CH4 (% v/v) MAX	Peak CO2 (% v/v) MIN	Peak CO2 (% v/v) MAX	Steady CO2 (% v/v) MIN	Steady CO2 (% v/v) MAX	O2 (% v/v) MIN	O2 (% v/v) MAX	max limiting bh flow rate for CH4	max limiting bh flow rate for CO2*	Peak Flow (l/hr) MAX	Steady Flow (l/hr) MAX	SWL (m bgl) MIN	SWL (m bgl) MAX
BH02	0	0	0	0	3.6	5.5	3.6	5.5	6	15.9	0	0.0275	9	0.5	0.00	0.00
BH04	0	1.1	0	1.1	1.9	4.4	1.9	4.4	2.4	19.9	0	0	0	0	0.00	0.00

* Based on peak CO2 and steady flows.

	VISIT 1	VISIT 2	VISIT 3	VISIT 4	VISIT 5	VISIT 6
MB Start	NR	999	1012	997	1013	997
MB Finish	NR	997	1009	994	NR	995
Pressure Change	Falling	Falling	Rising	Falling	Rising	Falling

Appendix F Notes on Limitations

General

JPG (Leeds) Limited have prepared this report solely for the use of the Client and those parties with whom a warranty agreement has been executed, or with whom an assignment has been agreed. Should any third party wish to use or rely upon the contents of the report, written approval must be sought from JPG (Leeds) Limited; a charge may be levied against such approval.

JPG (Leeds) Limited accepts no responsibility or liability for:

a) the consequences of this document being used for any purpose or project other than for which it was commissioned, and

b) this document to any third party with whom an agreement has not been executed.

Phase I Desk Study Reports

The work undertaken to provide the basis of this report comprised a study of available documented information from a variety of sources (including the Client), together with (where appropriate) a brief walk over inspection of the site and meetings and discussions with relevant authorities and other interested parties. The opinions given in this report have been dictated by the finite data on which they are based and are relevant only to the purpose for which the report was commissioned. The information reviewed should not be considered exhaustive and has been accepted in good faith as providing true and representative data pertaining to site conditions. Should additional information become available which may affect the opinions expressed in this report, JPG (Leeds) Limited reserves the right to review such information and, if warranted, to modify the opinions accordingly.

It should be noted that any risks identified in this report are perceived risks based on the information reviewed; actual risks can only be assessed following a physical investigation of the site.

Phase II Geo-Environmental Investigations

The investigation of the site has been carried out to provide sufficient information concerning the type and degree of contamination, geotechnical characteristics and ground and groundwater conditions to allow a reasonable assessment of the environmental risks together with engineering and development implications. The objectives of the investigation have been limited to establishing the risks associated with potential human targets, building materials, the environment (including adjacent land), and to surface and groundwater.

The amount of exploratory work and chemical testing undertaken has necessarily been restricted by the short timescale available, and the locations of exploratory holes have been restricted to the areas unoccupied by the building(s) on the site and by buried services. A more comprehensive investigation may be required if the site is to be redeveloped as, in addition to risk assessment, a number of important engineering and environmental issues may need to be resolved.

For these reasons if costs have been included in relation to site remediation these must be considered as tentative only and must, in any event, be confirmed by a qualified quantity surveyor.

The exploratory holes undertaken, which investigate only a small volume of the ground in relation to the size of the site, can only provide a general indication of site conditions. The opinions provided and recommendations given in this report are based on the ground conditions apparent at the site of each of the exploratory holes. There may be exceptional ground conditions elsewhere on the site which have not been disclosed by this investigation and which have therefore not been taken into account in this report.

The comments made on groundwater conditions are based on observations made at the time that site work was carried out. It should be noted that groundwater levels will vary owing to seasonal, tidal and weather related effects.

The number of sampling points and the methods of sampling and testing do not preclude the existence of localised "hotspots" of contamination where concentrations may be significantly higher than those actually encountered.

The risk assessment and opinions provided, inter alia, take in to consideration currently available guidance values relating to acceptable contamination concentrations; no liability can be accepted for the retrospective effects of any future changes or amendments to these values.

The scope of the investigation was selected on the basis of the specific development proposed by the Client and may be inappropriate to another form of development or scheme.

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