Sample Summary

Report No.: 21-32578, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
230021	CP04 0.50	04/03/2021	10/03/2021		
230022	CP04 2.50	04/03/2021	10/03/2021	Silty clayey loam	
230023	CP04 3.50	04/03/2021	10/03/2021		
230024	CP04 4.50	04/03/2021	10/03/2021		
230025	CP04 5.50	04/03/2021	10/03/2021		
230026	CP04 6.50	04/03/2021	10/03/2021		
230027	CP04 7.50	04/03/2021	10/03/2021		
230028	CP04 8.50	04/03/2021	10/03/2021		
230029	CP04 9.50	04/03/2021	10/03/2021		
230030	CP04 1.50	04/03/2021	10/03/2021		

Results Summary

Report No.: 21-32578, issue number 1

ELAB Reference	230022
Customer Reference	
Sample ID	
Sample Type	SOIL
Sample Location	CP04
Sample Depth (m)	2.50
Sampling Date	04/03/2021

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Metals				
Arsenic	M	mg/kg	1	12.1
Cadmium	M	mg/kg	0.5	< 0.5
Chromium	M	mg/kg	5	26.3
Copper	M	mg/kg	5	21.0
Lead	M	mg/kg	5	11.4
Mercury	M	mg/kg	0.5	< 0.5
Nickel	M	mg/kg	5	29.2
Selenium	M	mg/kg	1	< 1.0
Zinc	M	mg/kg	5	48.0
Inorganics				
Total Sulphide	N	mg/kg	2	< 2
Acid Soluble Sulphate (SO4)	U	%	0.02	0.02
Water Soluble Boron	N	mg/kg	0.5	< 0.5
Miscellaneous				
Fraction of Organic Carbon	N		0.0001	0.0020
pH	M	pH units	0.1	8.3
Polyaromatic hydrocarbons				
Naphthalene	M	mg/kg	0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	< 0.1
Pyrene	M	mg/kg	0.1	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1
Chrysene	M	mg/kg	0.1	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	< 0.4

Results Summary

Report No.: 21-32578, issue number 1

ELAB Reference	230022
Customer Reference	
Sample ID	
Sample Type	SOIL
Sample Location	CP04
Sample Depth (m)	2.50
Sampling Date	04/03/2021

Determinand	Codes	Units	LOD	
TPH CWG				
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0
>C21-C35 Aliphatic	N	mg/kg	1	< 1.0
>C35-C40 Aliphatic	N	mg/kg	1	< 1.0
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aromatic	N	mg/kg	1	< 1.0
>C10-C12 Aromatic	N	mg/kg	1	< 1.0
>C12-C16 Aromatic	N	mg/kg	1	< 1.0
>C16-C21 Aromatic	N	mg/kg	1	< 1.0
>C21-C35 Aromatic	N	mg/kg	1	1.4
>C35-C40 Aromatic	N	mg/kg	1	< 1.0
Total (>C5-C40) Ali/Aro	N	mg/kg	1	1.4
Total Petroleum Hydrocarbons				
PAH Fingerprint	N	n/a	0	n/a
TPH Fingerprint	N	n/a	0	n/a

Unit A2, Windmill Road, Ponswood Industrial Estate, St Leonards on Sea, East Sussex, TN38 9BY
Tel: +44 (0)1424 718618, Email: info@elab-uk.co.uk, Web: www.elab-uk.co.uk

Results Summary

Report No.: 21-32578, issue number 1

Asbestos Results

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #)
in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client.

Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos Identification	Gravimetric Analysis Total (%)	Gravimetric Analysis by ACM Type (%)	Free Fibre Analysis (%)	Total Asbestos (%)
230022	2.50	CP04	Brown Soil,Stones	No asbestos detected	n/t	n/t	n/t	n/t

Method Summary

Report No.: 21-32578, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Sulphide	N	As submitted sample	11/03/2021	109	Colorimetry
pH	M	Air dried sample	15/03/2021	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	12/03/2021	115	Ion Chromatography
PAH (GC-FID)	M	As submitted sample	11/03/2021	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	15/03/2021	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	15/03/2021	181	GC-MS
Water soluble boron	N	Air dried sample	11/03/2021	202	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	12/03/2021	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	11/03/2021	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	15/03/2021	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	11/03/2021	214	GC-FID
Asbestos identification	U	Air dried sample	12/03/2021	280	Microscopy
Aqua regia extractable metals	M	Air dried sample	11/03/2021	300	ICPMS

Tests marked N are not UKAS accredited

Report Information

Report No.: 21-32578, issue number 1

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination.

Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed.

ELAB are unable to provide an interpretation or opinion on the content of this report.

The results relate only to the sample received.

PCB congener results may include any coeluting PCBs

Uncertainty of measurement for the determinands tested are available upon request

Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.

Deviation Codes

a	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
f	Sample age exceeds stability time (sampling to receipt)
g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month

All water samples will be retained for 7 days following the date of the test report

Charges may apply to extended sample storage

Unit A2
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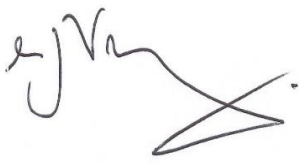
2683

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-32479
Issue:	1
Date of Issue:	09/03/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	05/03/2021
Date Approved:	09/03/2021
Details:	Cottam Parkway Station
Approved by:	

Mike Varley, Technical Manager

Sample Summary

Report No.: 21-32479, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
229443	CP05 0.20	01/03/2021	05/03/2021	Silty loam	
229444	CP05 0.70	01/03/2021	05/03/2021	Silty clayey loam	
229445	CP05 1.20	01/03/2021	05/03/2021		
229446	CP05 2.50	01/03/2021	05/03/2021		
229447	CP05 2.50	01/03/2021	05/03/2021		
229448	CP05 5.50	01/03/2021	05/03/2021	Silty clayey loam	

Results Summary

Report No.: 21-32479, issue number 1

				ELAB Reference	229443	229444	229448
				Customer Reference			
				Sample ID			
				Sample Type	SOIL	SOIL	SOIL
				Sample Location	CP05	CP05	CP05
				Sample Depth (m)	0.20	0.70	5.50
				Sampling Date	01/03/2021	01/03/2021	01/03/2021
Determinand	**Codes**	**Units**	**LOD**			
Soil sample preparation parameters						
Material removed	N	%	0.1	< 0.1	< 0.1	< 0.1
Description of Inert material removed	N		0	None	None	None
Metals						
Arsenic	M	mg/kg	1	10.0	11.1	9.2
Cadmium	M	mg/kg	0.5	< 0.5	< 0.5	< 0.5
Chromium	M	mg/kg	5	32.2	42.2	34.2
Copper	M	mg/kg	5	25.6	19.1	18.5
Lead	M	mg/kg	5	54.5	18.2	14.9
Mercury	M	mg/kg	0.5	< 0.5	< 0.5	< 0.5
Nickel	M	mg/kg	5	24.6	28.7	31.6
Selenium	M	mg/kg	1	< 1.0	< 1.0	< 1.0
Zinc	M	mg/kg	5	77.4	41.6	53.6
Inorganics						
Total Sulphide	N	mg/kg	2	< 2	< 2	< 2
Acid Soluble Sulphate (SO4)	U	%	0.02	0.03	0.02	0.04
Water Soluble Boron	N	mg/kg	0.5	1.0	0.9	1.3
Miscellaneous						
Fraction of Organic Carbon	N		0.0001	0.0121	0.0035	0.0028
pH	M	pH units	0.1	6.8	7.0	8.4
Polyaromatic hydrocarbons						
Naphthalene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	0.4	< 0.1	< 0.1
Anthracene	M	mg/kg	0.1	0.1	< 0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	0.6	< 0.1	< 0.1
Pyrene	M	mg/kg	0.1	0.5	< 0.1	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	0.3	< 0.1	< 0.1
Chrysene	M	mg/kg	0.1	0.3	< 0.1	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	0.3	< 0.1	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	0.3	< 0.1	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	0.2	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	0.1	< 0.1	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	0.1	< 0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	3.6	< 0.4	< 0.4

Results Summary

Report No.: 21-32479, issue number 1

			ELAB Reference	229443	229444	229448
			Customer Reference			
			Sample ID			
			Sample Type	SOIL	SOIL	SOIL
			Sample Location	CP05	CP05	CP05
			Sample Depth (m)	0.20	0.70	5.50
			Sampling Date	01/03/2021	01/03/2021	01/03/2021
Determinand	**Codes**	**Units**	**LOD**			
TPH CWG						
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C21-C35 Aliphatic	N	mg/kg	1	7.5	3.0	< 1.0
>C35-C40 Aliphatic	N	mg/kg	1	3.3	1.5	< 1.0
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01	< 0.01	< 0.01
>C8-C10 Aromatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C10-C12 Aromatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C12-C16 Aromatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C16-C21 Aromatic	N	mg/kg	1	< 1.0	< 1.0	< 1.0
>C21-C35 Aromatic	N	mg/kg	1	3.8	< 1.0	< 1.0
>C35-C40 Aromatic	N	mg/kg	1	2.0	< 1.0	< 1.0
Total (>C5-C40) Ali/Aro	N	mg/kg	1	16.6	4.4	< 1.0
Total Petroleum Hydrocarbons						
PAH Fingerprint	N	n/a	0	n/a	n/a	n/a
TPH Fingerprint	N	n/a	0	n/a	n/a	n/a

Results Summary

Report No.: 21-32479, issue number 1

ELAB Reference	229447
Customer Reference	
Sample ID	
Sample Type	WATER
Sample Location	CP05
Sample Depth (m)	2.50
Sampling Date	01/03/2021

Determinand	Codes	Units	LOD	
Anions				
Sulphate	U	mg/l	0.5	32.0
Miscellaneous				
pH	U	pH units	0.1	7.3

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Results Summary

Report No.: 21-32479, issue number 1

Asbestos Results

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #)
in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client.

Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos Identification	Gravimetric Analysis Total (%)	Gravimetric Analysis by ACM Type (%)	Free Fibre Analysis (%)	Total Asbestos (%)
229443	0.20	CP05	Brown soil, stones	No asbestos detected	n/t	n/t	n/t	n/t
229444	0.70	CP05	Brown soil (clay)	No asbestos detected	n/t	n/t	n/t	n/t
229448	5.50	CP05	Brown soil (clay), stones	No asbestos detected	n/t	n/t	n/t	n/t

Method Summary

Report No.: 21-32479, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Sulphide	N	As submitted sample	08/03/2021	109	Colorimetry
pH	M	Air dried sample	09/03/2021	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	09/03/2021	115	Ion Chromatography
PAH (GC-FID)	M	As submitted sample	08/03/2021	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	09/03/2021	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	09/03/2021	181	GC-MS
Water soluble boron	N	Air dried sample	08/03/2021	202	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	09/03/2021	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	08/03/2021	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	09/03/2021	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	08/03/2021	214	GC-FID
Asbestos identification	U	Air dried sample	08/03/2021	280	Microscopy
Aqua regia extractable metals	M	Air dried sample	08/03/2021	300	ICPMS
Water					
pH of waters	U		08/03/2021	113	Electromeric
Anions	U		08/03/2021	270	Ion Chromatography

Tests marked N are not UKAS accredited

Report Information

Report No.: 21-32479, issue number 1

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination.

Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed.

ELAB are unable to provide an interpretation or opinion on the content of this report.

The results relate only to the sample received.

PCB congener results may include any coeluting PCBs

Uncertainty of measurement for the determinands tested are available upon request

Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.

Deviation Codes

a	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
f	Sample age exceeds stability time (sampling to receipt)
g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month

All water samples will be retained for 7 days following the date of the test report

Charges may apply to extended sample storage

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2683

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-32810
Issue:	1
Date of Issue:	29/03/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	21-12093
Date Received:	24/03/2021
Date Approved:	29/03/2021
Details:	Cottam Parkway Station
Approved by:	

Mike Varley, Technical Manager

Sample Summary

Report No.: 21-32810, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
231425	CP05 Natural 6.50	01/03/2021	24/03/2021	Silty clayey loam	

Results Summary

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Report No.: 21-32810, issue number 1

ELAB Reference	231425
Customer Reference	Natural
Sample ID	
Sample Type	DISTURBED
Sample Location	CP05
Sample Depth (m)	6.50
Sampling Date	01/03/2021

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Anions				
Water Soluble Sulphate	M	g/l	0.02	0.04
Inorganics				
Acid Soluble Sulphate (SO4)	U	%	0.02	0.04

Method Summary

Report No.: 21-32810, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Acid Soluble Sulphate	U	Air dried sample	26/03/2021	115	Ion Chromatography
Water soluble anions	M	Air dried sample	25/03/2021	172	Ion Chromatography

Report Information

Report No.: 21-32810, issue number 1

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination.

Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed.

ELAB are unable to provide an interpretation or opinion on the content of this report.

The results relate only to the sample received.

PCB congener results may include any coeluting PCBs

Uncertainty of measurement for the determinands tested are available upon request

Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.

Deviation Codes

a	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
f	Sample age exceeds stability time (sampling to receipt)
g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month

All water samples will be retained for 7 days following the date of the test report

Charges may apply to extended sample storage

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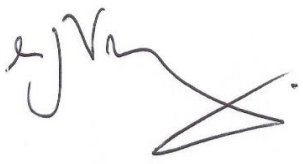
2683

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-32591
Issue:	1
Date of Issue:	17/03/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	11/03/2021
Date Approved:	17/03/2021
Details:	Cottam Parkway Station
Approved by:	

Mike Varley, Technical Manager

Any comments, opinions or interpretations expressed herein are outside the scope of UKAS accreditation (Accreditation Number 2683

Sample Summary

Report No.: 21-32591, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
230095	CP06 0.15	09/03/2021	11/03/2021	Silty loam	
230096	CP06 0.15	09/03/2021	11/03/2021	Sand	
230097	CP06 3.70	09/03/2021	11/03/2021		

Results Summary

Report No.: 21-32591, issue number 1

			ELAB Reference	230095	230096
			Customer Reference		
			Sample ID		
			Sample Type	SOIL	SOIL
			Sample Location	CP06	CP06
			Sample Depth (m)	0.15	0.15
			Sampling Date	09/03/2021	09/03/2021
Determinand	**Codes**	**Units**	**LOD**		
Soil sample preparation parameters					
Material removed	N	%	0.1	< 0.1	< 0.1
Description of Inert material removed	N		0	None	None
Metals					
Arsenic	M	mg/kg	1	9.5	5.6
Cadmium	M	mg/kg	0.5	< 0.5	< 0.5
Chromium	M	mg/kg	5	25.4	14.2
Copper	M	mg/kg	5	23.6	10.4
Lead	M	mg/kg	5	41.9	9.4
Mercury	M	mg/kg	0.5	< 0.5	< 0.5
Nickel	M	mg/kg	5	16.2	13.8
Selenium	M	mg/kg	1	< 1.0	< 1.0
Zinc	M	mg/kg	5	64.4	24.4
Inorganics					
Total Sulphide	N	mg/kg	2	< 2	< 2
Acid Soluble Sulphate (SO4)	U	%	0.02	0.05	0.02
Water Soluble Boron	N	mg/kg	0.5	0.9	< 0.5
Miscellaneous					
Fraction of Organic Carbon	N		0.0001	0.0282	0.0012
pH	M	pH units	0.1	6.7	8.5
Polyaromatic hydrocarbons					
Naphthalene	M	mg/kg	0.1	< 0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	0.2	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	0.4	< 0.1
Pyrene	M	mg/kg	0.1	0.4	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	0.2	< 0.1
Chrysene	M	mg/kg	0.1	0.3	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	0.3	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	0.4	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	0.2	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	0.2	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	2.9	< 0.4

Results Summary

Report No.: 21-32591, issue number 1

			ELAB Reference	230095	230096
			Customer Reference		
			Sample ID		
			Sample Type	SOIL	SOIL
			Sample Location	CP06	CP06
			Sample Depth (m)	0.15	0.15
			Sampling Date	09/03/2021	09/03/2021
Determinand	**Codes**	**Units**	**LOD**		
TPH CWG					
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01	< 0.01
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01	< 0.01
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0	< 1.0
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0	< 1.0
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0	< 1.0
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0	< 1.0
>C21-C35 Aliphatic	N	mg/kg	1	< 1.0	< 1.0
>C35-C40 Aliphatic	N	mg/kg	1	< 1.0	< 1.0
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01	< 0.01
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01	< 0.01
>C8-C10 Aromatic	N	mg/kg	1	< 1.0	< 1.0
>C10-C12 Aromatic	N	mg/kg	1	< 1.0	< 1.0
>C12-C16 Aromatic	N	mg/kg	1	< 1.0	< 1.0
>C16-C21 Aromatic	N	mg/kg	1	< 1.0	< 1.0
>C21-C35 Aromatic	N	mg/kg	1	< 1.0	< 1.0
>C35-C40 Aromatic	N	mg/kg	1	< 1.0	< 1.0
Total (>C5-C40) Ali/Aro	N	mg/kg	1	< 1.0	< 1.0
Total Petroleum Hydrocarbons					
PAH Fingerprint	N	n/a	0	n/a	n/a
TPH Fingerprint	N	n/a	0	n/a	n/a

Tests marked N are not UKAS accredited.

Results Summary

Report No.: 21-32591, issue number 1

ELAB Reference	230097
Customer Reference	
Sample ID	
Sample Type	WATER
Sample Location	CP06
Sample Depth (m)	3.70
Sampling Date	09/03/2021

Determinand	Codes	Units	LOD	
Anions				
Sulphate	U	mg/l	0.5	46.9
Miscellaneous				
pH	U	pH units	0.1	7.5

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Results Summary

Report No.: 21-32591, issue number 1

Asbestos Results

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #)
in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client.

Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos Identification	Gravimetric Analysis Total (%)	Gravimetric Analysis by ACM Type (%)	Free Fibre Analysis (%)	Total Asbestos (%)
230095	0.15	CP06	Brown Sandy Soil,Stones	No asbestos detected	n/t	n/t	n/t	n/t
230096	0.15	CP06	Brown Sandy Soil	No asbestos detected	n/t	n/t	n/t	n/t

Method Summary

Report No.: 21-32591, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Sulphide	N	As submitted sample	12/03/2021	109	Colorimetry
pH	M	Air dried sample	15/03/2021	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	15/03/2021	115	Ion Chromatography
PAH (GC-FID)	M	As submitted sample	12/03/2021	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	15/03/2021	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	15/03/2021	181	GC-MS
Water soluble boron	N	Air dried sample	12/03/2021	202	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	15/03/2021	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	12/03/2021	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	15/03/2021	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	12/03/2021	214	GC-FID
Asbestos identification	U	Air dried sample	15/03/2021	280	Microscopy
Aqua regia extractable metals	M	Air dried sample	12/03/2021	300	ICPMS
Water					
pH of waters	U		12/03/2021	113	Electromeric
Anions	U		12/03/2021	270	Ion Chromatography

Tests marked N are not UKAS accredited

Report Information

Report No.: 21-32591, issue number 1

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
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SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination.

Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed.

ELAB are unable to provide an interpretation or opinion on the content of this report.

The results relate only to the sample received.

PCB congener results may include any coeluting PCBs

Uncertainty of measurement for the determinands tested are available upon request

Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.

Deviation Codes

a	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
f	Sample age exceeds stability time (sampling to receipt)
g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month

All water samples will be retained for 7 days following the date of the test report

Charges may apply to extended sample storage

Unit A2
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East Sussex
TN38 9BY
Telephone: (01424) 718618

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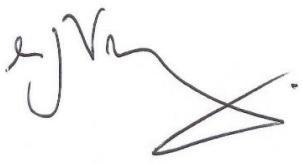
2683

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-32811
Issue:	1
Date of Issue:	29/03/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	21-12093
Date Received:	24/03/2021
Date Approved:	29/03/2021
Details:	Cottam Parkway Station
Approved by:	

Mike Varley, Technical Manager

Sample Summary

Report No.: 21-32811, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
231426	CP06 Natural 6.00	09/03/2021	24/03/2021	Silty clayey loam	

Results Summary

2683

Report No.: 21-32811, issue number 1

ELAB Reference	231426
Customer Reference	Natural
Sample ID	
Sample Type	DISTURBED
Sample Location	CP06
Sample Depth (m)	6.00
Sampling Date	09/03/2021

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Anions				
Water Soluble Sulphate	M	g/l	0.02	0.03
Inorganics				
Acid Soluble Sulphate (SO4)	U	%	0.02	0.05

Method Summary

Report No.: 21-32811, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Acid Soluble Sulphate	U	Air dried sample	26/03/2021	115	Ion Chromatography
Water soluble anions	M	Air dried sample	25/03/2021	172	Ion Chromatography

Report Information

Report No.: 21-32811, issue number 1

Key

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U/S	Unsuitable sample
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LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination.

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d	Sample not received in cooled condition
e	The container has been incorrectly filled
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g	Sample age exceeds stability time (sampling to analysis)

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Sample Retention and Disposal

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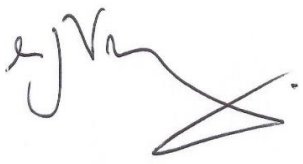
THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-33082
Issue:	1
Date of Issue:	15/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	08/04/2021
Date Approved:	15/04/2021
Details:	Cottam Parkway Station
Approved by:	

Mike Varley, Technical Manager

Sample Summary

Report No.: 21-33082, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
232849	TP01 0.40	23/03/2021	08/04/2021	Silty loam	

Results Summary

2683

Report No.: 21-33082, issue number 1

ELAB Reference	232849
Customer Reference	
Sample ID	
Sample Type	BULK
Sample Location	TP01
Sample Depth (m)	0.40
Sampling Date	23/03/2021

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Anions				
Water Soluble Sulphate	M	g/l	0.02	< 0.02
Inorganics				
Acid Soluble Sulphate (SO4)	U	%	0.02	0.02

Method Summary

Report No.: 21-33082, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Acid Soluble Sulphate	U	Air dried sample	15/04/2021	115	Ion Chromatography
Water soluble anions	M	Air dried sample	13/04/2021	172	Ion Chromatography

Report Information

Report No.: 21-33082, issue number 1

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n/t	Not tested
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LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination.

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The results relate only to the sample received.

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b	No time of sampling supplied (Waters Only)
c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
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g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

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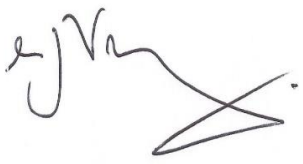
THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-32885
Issue:	1
Date of Issue:	06/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	29/03/2021
Date Approved:	06/04/2021
Details:	Cottam Parkway Station
Approved by:	

Mike Varley, Technical Manager

Sample Summary

Report No.: 21-32885, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
231869	TP01 0.50	23/03/2021	29/03/2021	Silty clayey loam	

Results Summary

Report No.: 21-32885, issue number 1

ELAB Reference	231869
Customer Reference	
Sample ID	
Sample Type	SOIL
Sample Location	TP01
Sample Depth (m)	0.50
Sampling Date	23/03/2021

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Metals				
Arsenic	M	mg/kg	1	8.3
Cadmium	M	mg/kg	0.5	< 0.5
Chromium	M	mg/kg	5	40.2
Copper	M	mg/kg	5	15.7
Lead	M	mg/kg	5	15.0
Mercury	M	mg/kg	0.5	< 0.5
Nickel	M	mg/kg	5	39.6
Selenium	M	mg/kg	1	< 1.0
Zinc	M	mg/kg	5	43.6
Inorganics				
Total Sulphide	N	mg/kg	2	< 2
Acid Soluble Sulphate (SO4)	U	%	0.02	< 0.02
Water Soluble Boron	N	mg/kg	0.5	< 0.5
Miscellaneous				
Fraction of Organic Carbon	N		0.0001	0.0032
pH	M	pH units	0.1	8.2
Polyaromatic hydrocarbons				
Naphthalene	M	mg/kg	0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	< 0.1
Pyrene	M	mg/kg	0.1	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1
Chrysene	M	mg/kg	0.1	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	< 0.4

Results Summary

Report No.: 21-32885, issue number 1

ELAB Reference	231869
Customer Reference	
Sample ID	
Sample Type	SOIL
Sample Location	TP01
Sample Depth (m)	0.50
Sampling Date	23/03/2021

Determinand	Codes	Units	LOD	
TPH CWG				
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0
>C21-C35 Aliphatic	N	mg/kg	1	< 1.0
>C35-C40 Aliphatic	N	mg/kg	1	< 1.0
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aromatic	N	mg/kg	1	< 1.0
>C10-C12 Aromatic	N	mg/kg	1	< 1.0
>C12-C16 Aromatic	N	mg/kg	1	< 1.0
>C16-C21 Aromatic	N	mg/kg	1	< 1.0
>C21-C35 Aromatic	N	mg/kg	1	< 1.0
>C35-C40 Aromatic	N	mg/kg	1	< 1.0
Total (>C5-C40) Ali/Aro	N	mg/kg	1	< 1.0
Total Petroleum Hydrocarbons				
PAH Fingerprint	N	n/a	0	n/a
TPH Fingerprint	N	n/a	0	n/a

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Results Summary

Report No.: 21-32885, issue number 1

Asbestos Results

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #) in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client.

Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos	Gravimetric Analysis Total	Gravimetric Analysis by ACM Type	Free Fibre Analysis	Total Asbestos
231869	0.50	TP01	Brown soil, stones	No asbestos detected	n/t	n/t	n/t	n/t

Method Summary

Report No.: 21-32885, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Sulphide	N	As submitted sample	30/03/2021	109	Colorimetry
pH	M	Air dried sample	01/04/2021	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	31/03/2021	115	Ion Chromatography
PAH (GC-FID)	M	As submitted sample	30/03/2021	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	31/03/2021	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	31/03/2021	181	GC-MS
Water soluble boron	N	Air dried sample	30/03/2021	202	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	31/03/2021	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	30/03/2021	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	31/03/2021	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	30/03/2021	214	GC-FID
Asbestos identification	U	Air dried sample	31/03/2021	280	Microscopy
Aqua regia extractable metals	M	Air dried sample	30/03/2021	300	ICPMS

Tests marked N are not UKAS accredited

Report Information

Report No.: 21-32885, issue number 1

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U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination.

Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed.

ELAB are unable to provide an interpretation or opinion on the content of this report.

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PCB congener results may include any coeluting PCBs

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Deviation Codes

a	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
f	Sample age exceeds stability time (sampling to receipt)
g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month

All water samples will be retained for 7 days following the date of the test report

Charges may apply to extended sample storage

Unit A2
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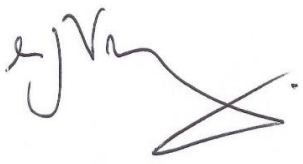
THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-33084
Issue:	1
Date of Issue:	15/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	08/04/2021
Date Approved:	15/04/2021
Details:	Cottam Parkway Station
Approved by:	

Mike Varley, Technical Manager

Sample Summary

Report No.: 21-33084, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
232850	TP02 1.00	23/03/2021	08/04/2021	Silty loam	

Results Summary

2683

Report No.: 21-33084, issue number 1

ELAB Reference	232850
Customer Reference	
Sample ID	
Sample Type	BULK
Sample Location	TP02
Sample Depth (m)	1.00
Sampling Date	23/03/2021

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Anions				
Water Soluble Sulphate	M	g/l	0.02	< 0.02
Inorganics				
Acid Soluble Sulphate (SO4)	U	%	0.02	< 0.02

Method Summary

Report No.: 21-33084, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Acid Soluble Sulphate	U	Air dried sample	15/04/2021	115	Ion Chromatography
Water soluble anions	M	Air dried sample	13/04/2021	172	Ion Chromatography

Report Information

Report No.: 21-33084, issue number 1

Key

U	hold UKAS accreditation
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N	do not currently hold UKAS accreditation
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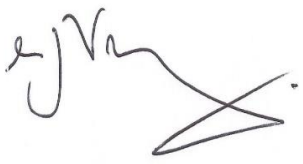
2683

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-32886
Issue:	1
Date of Issue:	06/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	29/03/2021
Date Approved:	06/04/2021
Details:	Cottam Parkway Station
Approved by:	

Mike Varley, Technical Manager

Sample Summary

Report No.: 21-32886, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
231870	TP02 1.50	23/03/2021	29/03/2021	Sandy silty loam	

Results Summary

Report No.: 21-32886, issue number 1

ELAB Reference	231870
Customer Reference	
Sample ID	
Sample Type	SOIL
Sample Location	TP02
Sample Depth (m)	1.50
Sampling Date	23/03/2021

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Metals				
Arsenic	M	mg/kg	1	10.9
Cadmium	M	mg/kg	0.5	< 0.5
Chromium	M	mg/kg	5	37.0
Copper	M	mg/kg	5	21.2
Lead	M	mg/kg	5	12.8
Mercury	M	mg/kg	0.5	< 0.5
Nickel	M	mg/kg	5	40.4
Selenium	M	mg/kg	1	< 1.0
Zinc	M	mg/kg	5	52.1
Inorganics				
Total Sulphide	N	mg/kg	2	< 2
Acid Soluble Sulphate (SO4)	U	%	0.02	< 0.02
Water Soluble Boron	N	mg/kg	0.5	< 0.5
Miscellaneous				
Fraction of Organic Carbon	N		0.0001	0.0017
pH	M	pH units	0.1	8.1
Polyaromatic hydrocarbons				
Naphthalene	M	mg/kg	0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	< 0.1
Pyrene	M	mg/kg	0.1	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1
Chrysene	M	mg/kg	0.1	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	< 0.4

Results Summary

Report No.: 21-32886, issue number 1

ELAB Reference	231870
Customer Reference	
Sample ID	
Sample Type	SOIL
Sample Location	TP02
Sample Depth (m)	1.50
Sampling Date	23/03/2021

Determinand	Codes	Units	LOD	
TPH CWG				
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0
>C21-C35 Aliphatic	N	mg/kg	1	< 1.0
>C35-C40 Aliphatic	N	mg/kg	1	< 1.0
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aromatic	N	mg/kg	1	< 1.0
>C10-C12 Aromatic	N	mg/kg	1	< 1.0
>C12-C16 Aromatic	N	mg/kg	1	< 1.0
>C16-C21 Aromatic	N	mg/kg	1	< 1.0
>C21-C35 Aromatic	N	mg/kg	1	< 1.0
>C35-C40 Aromatic	N	mg/kg	1	< 1.0
Total (>C5-C40) Ali/Aro	N	mg/kg	1	< 1.0
Total Petroleum Hydrocarbons				
PAH Fingerprint	N	n/a	0	n/a
TPH Fingerprint	N	n/a	0	n/a

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Results Summary

Report No.: 21-32886, issue number 1

Asbestos Results

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #) in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client.

Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos	Gravimetric Analysis Total	Gravimetric Analysis by ACM Type	Free Fibre Analysis	Total Asbestos
231870	1.50	TP02	Brown soil	No asbestos detected	n/t	n/t	n/t	n/t

Method Summary

Report No.: 21-32886, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Sulphide	N	As submitted sample	30/03/2021	109	Colorimetry
pH	M	Air dried sample	01/04/2021	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	31/03/2021	115	Ion Chromatography
PAH (GC-FID)	M	As submitted sample	30/03/2021	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	31/03/2021	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	31/03/2021	181	GC-MS
Water soluble boron	N	Air dried sample	30/03/2021	202	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	31/03/2021	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	30/03/2021	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	31/03/2021	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	30/03/2021	214	GC-FID
Asbestos identification	U	Air dried sample	01/04/2021	280	Microscopy
Aqua regia extractable metals	M	Air dried sample	30/03/2021	300	ICPMS

Tests marked N are not UKAS accredited

Report Information

Report No.: 21-32886, issue number 1

Key

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g	Sample age exceeds stability time (sampling to analysis)

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Sample Retention and Disposal

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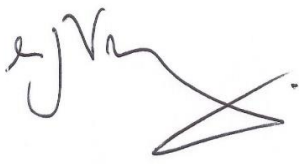
THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-32895
Issue:	1
Date of Issue:	06/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	29/03/2021
Date Approved:	06/04/2021
Details:	Cottam Parkway Station
Approved by:	

Mike Varley, Technical Manager

Sample Summary

Report No.: 21-32895, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
231893	TP03 Natural 0.40	23/03/2021	29/03/2021	Silty loam	

Results Summary

Report No.: 21-32895, issue number 1

ELAB Reference	231893
Customer Reference	Natural
Sample ID	
Sample Type	SOIL
Sample Location	TP03
Sample Depth (m)	0.40
Sampling Date	23/03/2021

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Metals				
Arsenic	M	mg/kg	1	10.7
Cadmium	M	mg/kg	0.5	< 0.5
Chromium	M	mg/kg	5	42.1
Copper	M	mg/kg	5	17.1
Lead	M	mg/kg	5	14.6
Mercury	M	mg/kg	0.5	< 0.5
Nickel	M	mg/kg	5	35.4
Selenium	M	mg/kg	1	< 1.0
Zinc	M	mg/kg	5	52.8
Inorganics				
Total Sulphide	N	mg/kg	2	< 2
Acid Soluble Sulphate (SO4)	U	%	0.02	0.02
Water Soluble Boron	N	mg/kg	0.5	< 0.5
Miscellaneous				
Fraction of Organic Carbon	N		0.0001	0.0023
pH	M	pH units	0.1	7.7
Polyaromatic hydrocarbons				
Naphthalene	M	mg/kg	0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	< 0.1
Pyrene	M	mg/kg	0.1	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1
Chrysene	M	mg/kg	0.1	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	< 0.4

Results Summary

Report No.: 21-32895, issue number 1

ELAB Reference	231893
Customer Reference	Natural
Sample ID	
Sample Type	SOIL
Sample Location	TP03
Sample Depth (m)	0.40
Sampling Date	23/03/2021

Determinand	Codes	Units	LOD	
TPH CWG				
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0
>C21-C35 Aliphatic	N	mg/kg	1	< 1.0
>C35-C40 Aliphatic	N	mg/kg	1	< 1.0
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01
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>C10-C12 Aromatic	N	mg/kg	1	< 1.0
>C12-C16 Aromatic	N	mg/kg	1	< 1.0
>C16-C21 Aromatic	N	mg/kg	1	< 1.0
>C21-C35 Aromatic	N	mg/kg	1	< 1.0
>C35-C40 Aromatic	N	mg/kg	1	< 1.0
Total (>C5-C40) Ali/Aro	N	mg/kg	1	< 1.0
Total Petroleum Hydrocarbons				
PAH Fingerprint	N	n/a	0	n/a
TPH Fingerprint	N	n/a	0	n/a

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Results Summary

Report No.: 21-32895, issue number 1

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Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos	Gravimetric Analysis Total	Gravimetric Analysis by ACM Type	Free Fibre Analysis	Total Asbestos
231893	0.40	TP03 Natural	Brown Soil	No asbestos detected	n/t	n/t	n/t	n/t

Method Summary

Report No.: 21-32895, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Sulphide	N	As submitted sample	30/03/2021	109	Colorimetry
pH	M	Air dried sample	01/04/2021	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	31/03/2021	115	Ion Chromatography
PAH (GC-FID)	M	As submitted sample	30/03/2021	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	31/03/2021	181	GC-MS
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Total organic carbon/Total sulphur	N	Air dried sample	31/03/2021	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	30/03/2021	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	31/03/2021	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	30/03/2021	214	GC-FID
Asbestos identification	U	Air dried sample	01/04/2021	280	Microscopy
Aqua regia extractable metals	M	Air dried sample	30/03/2021	300	ICPMS

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Report Information

Report No.: 21-32895, issue number 1

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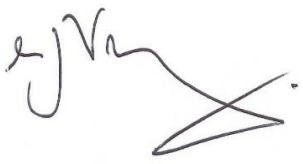
UKAS TESTING 2683

mCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-33086
Issue:	1
Date of Issue:	15/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	08/04/2021
Date Approved:	15/04/2021
Details:	Cottam Parkway Station
Approved by:	

Mike Varley, Technical Manager

Sample Summary

Report No.: 21-33086, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
232855	TP04 0.60	23/03/2021	08/04/2021	Silty loam	

Results Summary

2683

Report No.: 21-33086, issue number 1

ELAB Reference	232855
Customer Reference	
Sample ID	
Sample Type	BULK
Sample Location	TP04
Sample Depth (m)	0.60
Sampling Date	23/03/2021

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Anions				
Water Soluble Sulphate	M	g/l	0.02	< 0.02
Inorganics				
Acid Soluble Sulphate (SO4)	U	%	0.02	< 0.02

Method Summary

Report No.: 21-33086, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Acid Soluble Sulphate	U	Air dried sample	15/04/2021	115	Ion Chromatography
Water soluble anions	M	Air dried sample	13/04/2021	172	Ion Chromatography

Report Information

Report No.: 21-33086, issue number 1

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination.

Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed.

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The results relate only to the sample received.

PCB congener results may include any coeluting PCBs

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Sample Retention and Disposal

All soil samples will be retained for a period of one month

All water samples will be retained for 7 days following the date of the test report

Charges may apply to extended sample storage

Unit A2
Windmill Road
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TN38 9BY
Telephone: (01424) 718618

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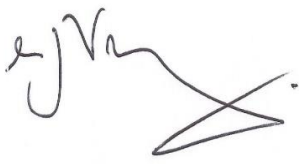
THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-33087
Issue:	1
Date of Issue:	15/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	08/04/2021
Date Approved:	15/04/2021
Details:	Cottam Parkway Station
Approved by:	

Mike Varley, Technical Manager

Sample Summary

Report No.: 21-33087, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
232856	TP05 0.50	24/03/2021	08/04/2021	Silty loam	

Results Summary

2683

Report No.: 21-33087, issue number 1

ELAB Reference	232856
Customer Reference	
Sample ID	
Sample Type	BULK
Sample Location	TP05
Sample Depth (m)	0.50
Sampling Date	24/03/2021

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Anions				
Water Soluble Sulphate	M	g/l	0.02	< 0.02
Inorganics				
Acid Soluble Sulphate (SO4)	U	%	0.02	0.02

Method Summary

Report No.: 21-33087, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Acid Soluble Sulphate	U	Air dried sample	15/04/2021	115	Ion Chromatography
Water soluble anions	M	Air dried sample	13/04/2021	172	Ion Chromatography

Report Information

Report No.: 21-33087, issue number 1

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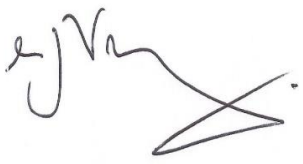
THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-33088
Issue:	1
Date of Issue:	15/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	08/04/2021
Date Approved:	15/04/2021
Details:	Cottam Parkway Station
Approved by:	

Mike Varley, Technical Manager

Sample Summary

Report No.: 21-33088, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
232857	TP06 1.00	24/03/2021	08/04/2021	Silty loam	

Results Summary

2683

Report No.: 21-33088, issue number 1

ELAB Reference	232857
Customer Reference	
Sample ID	
Sample Type	DISTURBED
Sample Location	TP06
Sample Depth (m)	1.00
Sampling Date	24/03/2021

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Anions				
Water Soluble Sulphate	M	g/l	0.02	< 0.02
Inorganics				
Acid Soluble Sulphate (SO4)	U	%	0.02	< 0.02

Method Summary

Report No.: 21-33088, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Acid Soluble Sulphate	U	Air dried sample	15/04/2021	115	Ion Chromatography
Water soluble anions	M	Air dried sample	13/04/2021	172	Ion Chromatography

Report Information

Report No.: 21-33088, issue number 1

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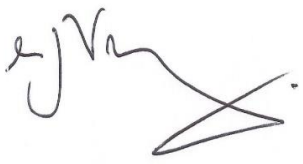
2683

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-32897
Issue:	1
Date of Issue:	06/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	29/03/2021
Date Approved:	06/04/2021
Details:	Cottam Parkway Station
Approved by:	

Mike Varley, Technical Manager

Sample Summary

Report No.: 21-32897, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
231900	TP06 Natural 0.25	23/03/2021	29/03/2021	Silty loam	

Results Summary

Report No.: 21-32897, issue number 1

ELAB Reference	231900
Customer Reference	Natural
Sample ID	
Sample Type	SOIL
Sample Location	TP06
Sample Depth (m)	0.25
Sampling Date	23/03/2021

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Metals				
Arsenic	M	mg/kg	1	12.1
Cadmium	M	mg/kg	0.5	< 0.5
Chromium	M	mg/kg	5	27.8
Copper	M	mg/kg	5	28.9
Lead	M	mg/kg	5	41.6
Mercury	M	mg/kg	0.5	< 0.5
Nickel	M	mg/kg	5	21.1
Selenium	M	mg/kg	1	< 1.0
Zinc	M	mg/kg	5	72.6
Inorganics				
Total Sulphide	N	mg/kg	2	< 2
Acid Soluble Sulphate (SO4)	U	%	0.02	0.03
Water Soluble Boron	N	mg/kg	0.5	< 0.5
Miscellaneous				
Fraction of Organic Carbon	N		0.0001	0.0271
pH	M	pH units	0.1	6.3
Polyaromatic hydrocarbons				
Naphthalene	M	mg/kg	0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	0.1
Pyrene	M	mg/kg	0.1	0.1
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1
Chrysene	M	mg/kg	0.1	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	0.5

Results Summary

Report No.: 21-32897, issue number 1

ELAB Reference	231900
Customer Reference	Natural
Sample ID	
Sample Type	SOIL
Sample Location	TP06
Sample Depth (m)	0.25
Sampling Date	23/03/2021

Determinand	Codes	Units	LOD	
TPH CWG				
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0
>C21-C35 Aliphatic	N	mg/kg	1	< 1.0
>C35-C40 Aliphatic	N	mg/kg	1	< 1.0
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aromatic	N	mg/kg	1	< 1.0
>C10-C12 Aromatic	N	mg/kg	1	< 1.0
>C12-C16 Aromatic	N	mg/kg	1	< 1.0
>C16-C21 Aromatic	N	mg/kg	1	< 1.0
>C21-C35 Aromatic	N	mg/kg	1	< 1.0
>C35-C40 Aromatic	N	mg/kg	1	< 1.0
Total (>C5-C40) Ali/Aro	N	mg/kg	1	< 1.0
Total Petroleum Hydrocarbons				
PAH Fingerprint	N	n/a	0	n/a
TPH Fingerprint	N	n/a	0	n/a

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Results Summary

Report No.: 21-32897, issue number 1

Asbestos Results

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Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos	Gravimetric Analysis Total	Gravimetric Analysis by ACM Type	Free Fibre Analysis	Total Asbestos
231900	0.25	TP06 Natural	Brown Soil,Root	No asbestos detected	n/t	n/t	n/t	n/t

Method Summary

Report No.: 21-32897, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Sulphide	N	As submitted sample	30/03/2021	109	Colorimetry
pH	M	Air dried sample	01/04/2021	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	31/03/2021	115	Ion Chromatography
PAH (GC-FID)	M	As submitted sample	30/03/2021	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	31/03/2021	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	31/03/2021	181	GC-MS
Water soluble boron	N	Air dried sample	30/03/2021	202	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	31/03/2021	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	30/03/2021	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	31/03/2021	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	30/03/2021	214	GC-FID
Asbestos identification	U	Air dried sample	01/04/2021	280	Microscopy
Aqua regia extractable metals	M	Air dried sample	30/03/2021	300	ICPMS

Tests marked N are not UKAS accredited

Report Information

Report No.: 21-32897, issue number 1

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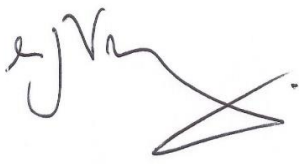
2683

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-32949
Issue:	1
Date of Issue:	07/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	31/03/2021
Date Approved:	07/04/2021
Details:	Cottam Parkway Station
Approved by:	

Mike Varley, Technical Manager

Sample Summary

Report No.: 21-32949, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
232148	WS01 0.10	25/03/2021	31/03/2021	Silty loam	

Results Summary

Report No.: 21-32949, issue number 1

ELAB Reference	232148
Customer Reference	
Sample ID	
Sample Type	SOIL
Sample Location	WS01
Sample Depth (m)	0.10
Sampling Date	25/03/2021

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Metals				
Arsenic	M	mg/kg	1	39.8
Cadmium	M	mg/kg	0.5	< 0.5
Chromium	M	mg/kg	5	33.3
Copper	M	mg/kg	5	31.5
Lead	M	mg/kg	5	58.8
Mercury	M	mg/kg	0.5	< 0.5
Nickel	M	mg/kg	5	23.8
Selenium	M	mg/kg	1	< 1.0
Zinc	M	mg/kg	5	93.1
Inorganics				
Total Sulphide	N	mg/kg	2	< 2
Acid Soluble Sulphate (SO4)	U	%	0.02	0.02
Water Soluble Boron	N	mg/kg	0.5	0.6
Miscellaneous				
Fraction of Organic Carbon	N		0.0001	0.0212
pH	M	pH units	0.1	6.7
Polyaromatic hydrocarbons				
Naphthalene	M	mg/kg	0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	< 0.1
Pyrene	M	mg/kg	0.1	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1
Chrysene	M	mg/kg	0.1	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	< 0.4

Results Summary

Report No.: 21-32949, issue number 1

ELAB Reference	232148
Customer Reference	
Sample ID	
Sample Type	SOIL
Sample Location	WS01
Sample Depth (m)	0.10
Sampling Date	25/03/2021

Determinand	Codes	Units	LOD	
TPH CWG				
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0
>C21-C35 Aliphatic	N	mg/kg	1	2.2
>C35-C40 Aliphatic	N	mg/kg	1	< 1.0
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aromatic	N	mg/kg	1	< 1.0
>C10-C12 Aromatic	N	mg/kg	1	< 1.0
>C12-C16 Aromatic	N	mg/kg	1	< 1.0
>C16-C21 Aromatic	N	mg/kg	1	< 1.0
>C21-C35 Aromatic	N	mg/kg	1	< 1.0
>C35-C40 Aromatic	N	mg/kg	1	< 1.0
Total (>C5-C40) Ali/Aro	N	mg/kg	1	2.2
Total Petroleum Hydrocarbons				
PAH Fingerprint	N	n/a	0	n/a
TPH Fingerprint	N	n/a	0	n/a

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Results Summary

Report No.: 21-32949, issue number 1

Asbestos Results

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in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client.

Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos Identification	Gravimetric Analysis Total (%)	Gravimetric Analysis by ACM Type (%)	Free Fibre Analysis (%)	Total Asbestos (%)
232148	0.10	WS01	Brown soil	No asbestos detected	n/t	n/t	n/t	n/t

Method Summary

Report No.: 21-32949, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Sulphide	N	As submitted sample	01/04/2021	109	Colorimetry
pH	M	Air dried sample	06/04/2021	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	06/04/2021	115	Ion Chromatography
PAH (GC-FID)	M	As submitted sample	01/04/2021	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	01/04/2021	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	01/04/2021	181	GC-MS
Water soluble boron	N	Air dried sample	01/04/2021	202	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	06/04/2021	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	01/04/2021	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	06/04/2021	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	01/04/2021	214	GC-FID
Asbestos identification	U	Air dried sample	07/04/2021	280	Microscopy
Aqua regia extractable metals	M	Air dried sample	01/04/2021	300	ICPMS

Tests marked N are not UKAS accredited

Report Information

Report No.: 21-32949, issue number 1

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination.

Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed.

ELAB are unable to provide an interpretation or opinion on the content of this report.

The results relate only to the sample received.

PCB congener results may include any coeluting PCBs

Uncertainty of measurement for the determinands tested are available upon request

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Deviation Codes

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b	No time of sampling supplied (Waters Only)
c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
f	Sample age exceeds stability time (sampling to receipt)
g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month

All water samples will be retained for 7 days following the date of the test report

Charges may apply to extended sample storage

Unit A2
Windmill Road
Ponswood Industrial Estate
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TN38 9BY
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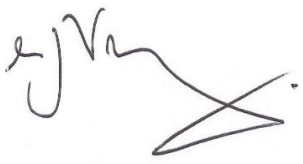
info@elab-uk.co.uk

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-32955
Issue:	1
Date of Issue:	06/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	31/03/2021
Date Approved:	06/04/2021
Details:	Cottam Parkway Station
Approved by:	

Mike Varley, Technical Manager

Sample Summary

Report No.: 21-32955, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
232154	WS01 1.50	25/03/2021	31/03/2021	Clayey loam	

Results Summary

Report No.: 21-32955, issue number 1

ELAB Reference	232154
Customer Reference	
Sample ID	
Sample Type	SOIL
Sample Location	WS01
Sample Depth (m)	1.50
Sampling Date	25/03/2021

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Anions				
Water Soluble Sulphate	M	g/l	0.02	0.02
Inorganics				
Acid Soluble Sulphate (SO4)	U	%	0.02	< 0.02

Tests marked N are not UKAS accredited.

Method Summary

Report No.: 21-32955, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Acid Soluble Sulphate	U	Air dried sample	06/04/2021	115	Ion Chromatography
Water soluble anions	M	Air dried sample	01/04/2021	172	Ion Chromatography

Report Information

Report No.: 21-32955, issue number 1

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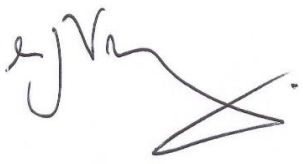
THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-32950
Issue:	1
Date of Issue:	07/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	31/03/2021
Date Approved:	07/04/2021
Details:	Cottam Parkway Substation
Approved by:	

Mike Varley, Technical Manager

Sample Summary

Report No.: 21-32950, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
232149	WS02 0.65	26/03/2021	31/03/2021	Silty clayey loam	

Results Summary

Report No.: 21-32950, issue number 1

ELAB Reference	232149
Customer Reference	
Sample ID	
Sample Type	SOIL
Sample Location	WS02
Sample Depth (m)	0.65
Sampling Date	26/03/2021

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Metals				
Arsenic	M	mg/kg	1	12.2
Cadmium	M	mg/kg	0.5	< 0.5
Chromium	M	mg/kg	5	43.9
Copper	M	mg/kg	5	18.4
Lead	M	mg/kg	5	14.5
Mercury	M	mg/kg	0.5	< 0.5
Nickel	M	mg/kg	5	42.9
Selenium	M	mg/kg	1	< 1.0
Zinc	M	mg/kg	5	51.3
Inorganics				
Total Sulphide	N	mg/kg	2	< 2
Acid Soluble Sulphate (SO4)	U	%	0.02	< 0.02
Water Soluble Boron	N	mg/kg	0.5	< 0.5
Miscellaneous				
Fraction of Organic Carbon	N		0.0001	0.0041
pH	M	pH units	0.1	7.1
Polyaromatic hydrocarbons				
Naphthalene	M	mg/kg	0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	< 0.1
Pyrene	M	mg/kg	0.1	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1
Chrysene	M	mg/kg	0.1	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	< 0.4

Results Summary

Report No.: 21-32950, issue number 1

ELAB Reference	232149
Customer Reference	
Sample ID	
Sample Type	SOIL
Sample Location	WS02
Sample Depth (m)	0.65
Sampling Date	26/03/2021

Determinand	Codes	Units	LOD	
TPH CWG				
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0
>C21-C35 Aliphatic	N	mg/kg	1	< 1.0
>C35-C40 Aliphatic	N	mg/kg	1	< 1.0
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aromatic	N	mg/kg	1	< 1.0
>C10-C12 Aromatic	N	mg/kg	1	< 1.0
>C12-C16 Aromatic	N	mg/kg	1	< 1.0
>C16-C21 Aromatic	N	mg/kg	1	< 1.0
>C21-C35 Aromatic	N	mg/kg	1	< 1.0
>C35-C40 Aromatic	N	mg/kg	1	< 1.0
Total (>C5-C40) Ali/Aro	N	mg/kg	1	< 1.0
Total Petroleum Hydrocarbons				
PAH Fingerprint	N	n/a	0	n/a
TPH Fingerprint	N	n/a	0	n/a

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Results Summary

Report No.: 21-32950, issue number 1

Asbestos Results

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #)
in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client.

Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos Identification	Gravimetric Analysis Total (%)	Gravimetric Analysis by ACM Type (%)	Free Fibre Analysis (%)	Total Asbestos (%)
232149	0.65	WS02	Brown soil, stones	No asbestos detected	n/t	n/t	n/t	n/t

Method Summary

Report No.: 21-32950, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Sulphide	N	As submitted sample	01/04/2021	109	Colorimetry
pH	M	Air dried sample	06/04/2021	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	06/04/2021	115	Ion Chromatography
PAH (GC-FID)	M	As submitted sample	01/04/2021	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	01/04/2021	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	01/04/2021	181	GC-MS
Water soluble boron	N	Air dried sample	01/04/2021	202	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	06/04/2021	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	01/04/2021	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	06/04/2021	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	01/04/2021	214	GC-FID
Asbestos identification	U	Air dried sample	07/04/2021	280	Microscopy
Aqua regia extractable metals	M	Air dried sample	01/04/2021	300	ICPMS

Tests marked N are not UKAS accredited

Report Information

Report No.: 21-32950, issue number 1

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Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month

All water samples will be retained for 7 days following the date of the test report

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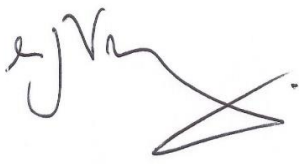
2683

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-32951
Issue:	1
Date of Issue:	07/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	31/03/2021
Date Approved:	07/04/2021
Details:	Cottam Parkway Station
Approved by:	

Mike Varley, Technical Manager

Sample Summary

Report No.: 21-32951, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
232150	WS03 0.10	26/03/2021	31/03/2021	Silty loam	

Results Summary

Report No.: 21-32951, issue number 1

ELAB Reference	232150
Customer Reference	
Sample ID	
Sample Type	SOIL
Sample Location	WS03
Sample Depth (m)	0.10
Sampling Date	26/03/2021

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Metals				
Arsenic	M	mg/kg	1	10.8
Cadmium	M	mg/kg	0.5	< 0.5
Chromium	M	mg/kg	5	35.8
Copper	M	mg/kg	5	24.4
Lead	M	mg/kg	5	38.6
Mercury	M	mg/kg	0.5	< 0.5
Nickel	M	mg/kg	5	25.0
Selenium	M	mg/kg	1	< 1.0
Zinc	M	mg/kg	5	69.0
Inorganics				
Total Sulphide	N	mg/kg	2	< 2
Acid Soluble Sulphate (SO4)	U	%	0.02	0.03
Water Soluble Boron	N	mg/kg	0.5	< 0.5
Miscellaneous				
Fraction of Organic Carbon	N		0.0001	0.0200
pH	M	pH units	0.1	6.4
Polyaromatic hydrocarbons				
Naphthalene	M	mg/kg	0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	0.7
Anthracene	M	mg/kg	0.1	0.2
Fluoranthene	M	mg/kg	0.1	1.1
Pyrene	M	mg/kg	0.1	1.0
Benzo(a)anthracene	M	mg/kg	0.1	0.6
Chrysene	M	mg/kg	0.1	0.6
Benzo(b)fluoranthene	M	mg/kg	0.1	0.5
Benzo(k)fluoranthene	M	mg/kg	0.1	0.7
Benzo(a)pyrene	M	mg/kg	0.1	0.5
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	0.4
Dibenzo(a,h)anthracene	M	mg/kg	0.1	0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	0.3
Total PAH(16)	M	mg/kg	0.4	6.9

Results Summary

Report No.: 21-32951, issue number 1

ELAB Reference	232150
Customer Reference	
Sample ID	
Sample Type	SOIL
Sample Location	WS03
Sample Depth (m)	0.10
Sampling Date	26/03/2021

Determinand	Codes	Units	LOD	
TPH CWG				
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0
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>C35-C40 Aliphatic	N	mg/kg	1	< 1.0
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>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aromatic	N	mg/kg	1	< 1.0
>C10-C12 Aromatic	N	mg/kg	1	< 1.0
>C12-C16 Aromatic	N	mg/kg	1	< 1.0
>C16-C21 Aromatic	N	mg/kg	1	< 1.0
>C21-C35 Aromatic	N	mg/kg	1	< 1.0
>C35-C40 Aromatic	N	mg/kg	1	< 1.0
Total (>C5-C40) Ali/Aro	N	mg/kg	1	< 1.0
Total Petroleum Hydrocarbons				
PAH Fingerprint	N	n/a	0	probable pyrogenic source
TPH Fingerprint	N	n/a	0	n/a

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Results Summary

Report No.: 21-32951, issue number 1

Asbestos Results

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Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos Identification	Gravimetric Analysis Total (%)	Gravimetric Analysis by ACM Type (%)	Free Fibre Analysis (%)	Total Asbestos (%)
232150	0.10	WS03	Brown soil, stones, clinker	No asbestos detected	n/t	n/t	n/t	n/t

Method Summary

Report No.: 21-32951, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Sulphide	N	As submitted sample	01/04/2021	109	Colorimetry
pH	M	Air dried sample	06/04/2021	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	06/04/2021	115	Ion Chromatography
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Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	06/04/2021	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	01/04/2021	214	GC-FID
Asbestos identification	U	Air dried sample	07/04/2021	280	Microscopy
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Report Information

Report No.: 21-32951, issue number 1

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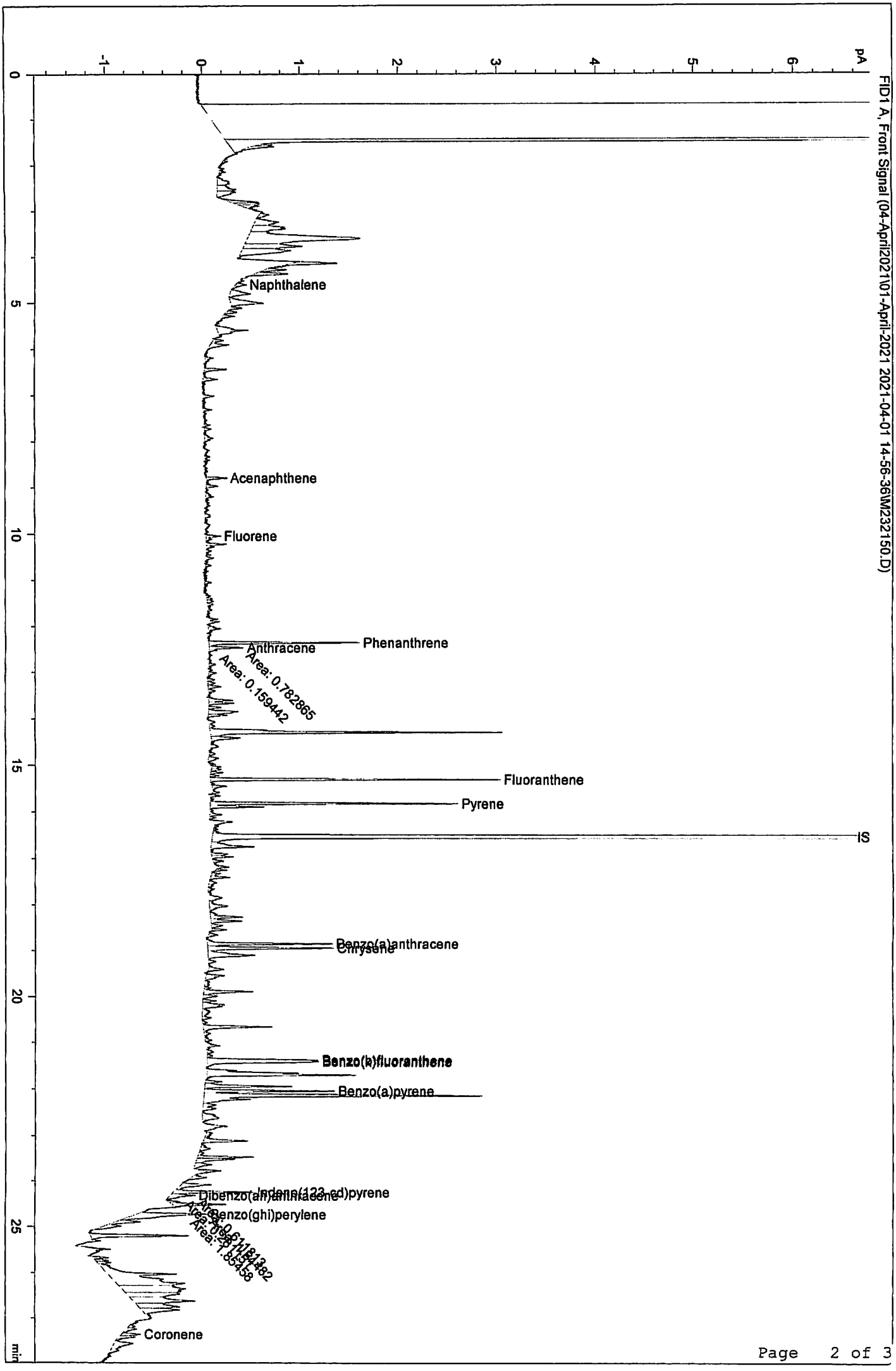
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-1
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1
2
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Naphthalene
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Fluorene
Phenanthrene
Anthracene
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Fluoranthene
Pyrene
IS
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Chrysene
Benzo(k)fluoranthene
Benzo(a)pyrene
Indeno(123-cd)pyrene
Dibenzo(ah)anthracene
Benzo(ghi)perylene
Area: 0.611543
Area: 0.29
Area: 1.65458
Coronene

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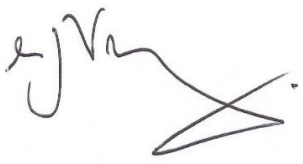
THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-32957
Issue:	1
Date of Issue:	06/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	31/03/2021
Date Approved:	06/04/2021
Details:	Cottam Parkway Station
Approved by:	

Mike Varley, Technical Manager

Sample Summary

Report No.: 21-32957, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
232156	WS04 1.00	25/03/2021	31/03/2021	Silty clayey loam	

Results Summary

2683

Report No.: 21-32957, issue number 1

ELAB Reference	232156
Customer Reference	
Sample ID	
Sample Type	SOIL
Sample Location	WS04
Sample Depth (m)	1.00
Sampling Date	25/03/2021

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Anions				
Water Soluble Sulphate	M	g/l	0.02	< 0.02
Inorganics				
Acid Soluble Sulphate (SO4)	U	%	0.02	< 0.02

Method Summary

Report No.: 21-32957, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Acid Soluble Sulphate	U	Air dried sample	06/04/2021	115	Ion Chromatography
Water soluble anions	M	Air dried sample	01/04/2021	172	Ion Chromatography

Report Information

Report No.: 21-32957, issue number 1

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination.

Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed.

ELAB are unable to provide an interpretation or opinion on the content of this report.

The results relate only to the sample received.

PCB congener results may include any coeluting PCBs

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Deviation Codes

a	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
f	Sample age exceeds stability time (sampling to receipt)
g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month

All water samples will be retained for 7 days following the date of the test report

Charges may apply to extended sample storage

Unit A2
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TN38 9BY
Telephone: (01424) 718618

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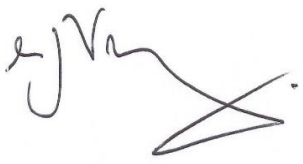
info@elab-uk.co.uk

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-33092
Issue:	1
Date of Issue:	15/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	08/04/2021
Date Approved:	15/04/2021
Details:	Cottam Parkway Station
Approved by:	

Mike Varley, Technical Manager

Sample Summary

Report No.: 21-33092, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
232869	WS04 0.70	26/03/2021	08/04/2021	Silty clayey loam	

Results Summary

2683

Report No.: 21-33092, issue number 1

ELAB Reference	232869
Customer Reference	
Sample ID	
Sample Type	SOIL
Sample Location	WS04
Sample Depth (m)	0.70
Sampling Date	26/03/2021

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Anions				
Water Soluble Sulphate	M	g/l	0.02	< 0.02
Inorganics				
Acid Soluble Sulphate (SO4)	U	%	0.02	< 0.02

Method Summary

Report No.: 21-33092, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Acid Soluble Sulphate	U	Air dried sample	15/04/2021	115	Ion Chromatography
Water soluble anions	M	Air dried sample	13/04/2021	172	Ion Chromatography

Report Information

Report No.: 21-33092, issue number 1

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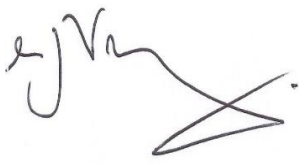
UKAS TESTING 2683

mCERTS THE ENVIRONMENT AGENCY'S MONITORING CERTIFICATION SCHEME

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-32952
Issue:	1
Date of Issue:	06/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	26/03/2021
Date Approved:	06/04/2021
Details:	Cottam Parkway Station
Approved by:	

Mike Varley, Technical Manager

Sample Summary

Report No.: 21-32952, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
232151	WS04 0.70	26/03/2021	26/03/2021	Clayey loam	

Results Summary

Report No.: 21-32952, issue number 1

ELAB Reference	232151
Customer Reference	
Sample ID	
Sample Type	SOIL
Sample Location	WS04
Sample Depth (m)	0.70
Sampling Date	26/03/2021

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Metals				
Arsenic	M	mg/kg	1	16.3
Cadmium	M	mg/kg	0.5	< 0.5
Chromium	M	mg/kg	5	19.1
Copper	M	mg/kg	5	9.5
Lead	M	mg/kg	5	12.3
Mercury	M	mg/kg	0.5	< 0.5
Nickel	M	mg/kg	5	20.6
Selenium	M	mg/kg	1	1.9
Zinc	M	mg/kg	5	51.3
Inorganics				
Total Sulphide	N	mg/kg	2	< 2
Acid Soluble Sulphate (SO4)	U	%	0.02	< 0.02
Water Soluble Boron	N	mg/kg	0.5	< 0.5
Miscellaneous				
Fraction of Organic Carbon	N		0.0001	0.0066
pH	M	pH units	0.1	8.3
Polyaromatic hydrocarbons				
Naphthalene	M	mg/kg	0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	< 0.1
Pyrene	M	mg/kg	0.1	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1
Chrysene	M	mg/kg	0.1	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	< 0.4

Results Summary

Report No.: 21-32952, issue number 1

ELAB Reference	232151
Customer Reference	
Sample ID	
Sample Type	SOIL
Sample Location	WS04
Sample Depth (m)	0.70
Sampling Date	26/03/2021

Determinand	Codes	Units	LOD	
TPH CWG				
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0
>C21-C35 Aliphatic	N	mg/kg	1	< 1.0
>C35-C40 Aliphatic	N	mg/kg	1	< 1.0
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aromatic	N	mg/kg	1	< 1.0
>C10-C12 Aromatic	N	mg/kg	1	< 1.0
>C12-C16 Aromatic	N	mg/kg	1	< 1.0
>C16-C21 Aromatic	N	mg/kg	1	< 1.0
>C21-C35 Aromatic	N	mg/kg	1	< 1.0
>C35-C40 Aromatic	N	mg/kg	1	< 1.0
Total (>C5-C40) Ali/Aro	N	mg/kg	1	< 1.0
Total Petroleum Hydrocarbons				
PAH Fingerprint	N	n/a	0	n/a
TPH Fingerprint	N	n/a	0	n/a

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Results Summary

Report No.: 21-32952, issue number 1

Asbestos Results

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #) in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client.

Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos	Gravimetric Analysis Total	Gravimetric Analysis by ACM Type	Free Fibre Analysis	Total Asbestos
232151	0.70	WS04	Brown soil	No asbestos detected	n/t	n/t	n/t	n/t

Method Summary

Report No.: 21-32952, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Sulphide	N	As submitted sample	01/04/2021	109	Colorimetry
pH	M	Air dried sample	06/04/2021	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	06/04/2021	115	Ion Chromatography
PAH (GC-FID)	M	As submitted sample	01/04/2021	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	01/04/2021	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	01/04/2021	181	GC-MS
Water soluble boron	N	Air dried sample	01/04/2021	202	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	06/04/2021	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	01/04/2021	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	06/04/2021	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	01/04/2021	214	GC-FID
Asbestos identification	U	Air dried sample	01/04/2021	280	Microscopy
Aqua regia extractable metals	M	Air dried sample	01/04/2021	300	ICPMS

Tests marked N are not UKAS accredited

Report Information

Report No.: 21-32952, issue number 1

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Sample Retention and Disposal

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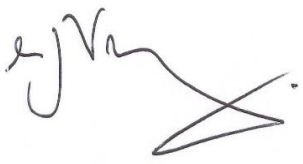
THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-32953
Issue:	1
Date of Issue:	08/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	31/03/2021
Date Approved:	08/04/2021
Details:	Cottam Parkway Station
Approved by:	

Mike Varley, Technical Manager

Sample Summary

Report No.: 21-32953, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
232152	WS05 0.20	26/03/2021	31/03/2021	Silty loam	

Results Summary

Report No.: 21-32953, issue number 1

ELAB Reference	232152
Customer Reference	
Sample ID	
Sample Type	SOIL
Sample Location	WS05
Sample Depth (m)	0.20
Sampling Date	26/03/2021

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Metals				
Arsenic	M	mg/kg	1	10.1
Cadmium	M	mg/kg	0.5	< 0.5
Chromium	M	mg/kg	5	27.8
Copper	M	mg/kg	5	53.2
Lead	M	mg/kg	5	57.4
Mercury	M	mg/kg	0.5	< 0.5
Nickel	M	mg/kg	5	21.4
Selenium	M	mg/kg	1	< 1.0
Zinc	M	mg/kg	5	108
Inorganics				
Total Sulphide	N	mg/kg	2	< 2
Acid Soluble Sulphate (SO4)	U	%	0.02	0.03
Water Soluble Boron	N	mg/kg	0.5	0.7
Miscellaneous				
Fraction of Organic Carbon	N		0.0001	0.0412
pH	M	pH units	0.1	5.8
Polyaromatic hydrocarbons				
Naphthalene	M	mg/kg	0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	0.1
Pyrene	M	mg/kg	0.1	0.1
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1
Chrysene	M	mg/kg	0.1	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	< 0.4

Results Summary

Report No.: 21-32953, issue number 1

ELAB Reference	232152
Customer Reference	
Sample ID	
Sample Type	SOIL
Sample Location	WS05
Sample Depth (m)	0.20
Sampling Date	26/03/2021

Determinand	Codes	Units	LOD	
TPH CWG				
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0
>C21-C35 Aliphatic	N	mg/kg	1	< 1.0
>C35-C40 Aliphatic	N	mg/kg	1	< 1.0
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aromatic	N	mg/kg	1	< 1.0
>C10-C12 Aromatic	N	mg/kg	1	< 1.0
>C12-C16 Aromatic	N	mg/kg	1	< 1.0
>C16-C21 Aromatic	N	mg/kg	1	< 1.0
>C21-C35 Aromatic	N	mg/kg	1	< 1.0
>C35-C40 Aromatic	N	mg/kg	1	< 1.0
Total (>C5-C40) Ali/Aro	N	mg/kg	1	< 1.0
Total Petroleum Hydrocarbons				
PAH Fingerprint	N	n/a	0	n/a
TPH Fingerprint	N	n/a	0	n/a

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Results Summary

Report No.: 21-32953, issue number 1

Asbestos Results

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Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos	Gravimetric Analysis Total	Gravimetric Analysis by ACM Type	Free Fibre Analysis	Total Asbestos
232152	0.20	WS05	Brown soil	No asbestos detected	n/t	n/t	n/t	n/t

Method Summary

Report No.: 21-32953, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Sulphide	N	As submitted sample	01/04/2021	109	Colorimetry
pH	M	Air dried sample	06/04/2021	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	06/04/2021	115	Ion Chromatography
PAH (GC-FID)	M	As submitted sample	01/04/2021	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	01/04/2021	181	GC-MS
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Water soluble boron	N	Air dried sample	01/04/2021	202	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	06/04/2021	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	01/04/2021	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	06/04/2021	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	01/04/2021	214	GC-FID
Asbestos identification	U	Air dried sample	07/04/2021	280	Microscopy
Aqua regia extractable metals	M	Air dried sample	01/04/2021	300	ICPMS

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Report No.: 21-32953, issue number 1

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Unit A2
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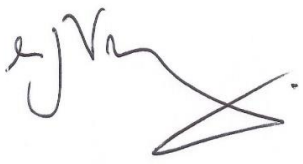
THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-32958
Issue:	1
Date of Issue:	06/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	31/03/2021
Date Approved:	06/04/2021
Details:	Cottam Parkway Station
Approved by:	

Mike Varley, Technical Manager

Sample Summary

Report No.: 21-32958, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
232157	WS06 1.00	25/03/2021	31/03/2021	Clayey loam	

Results Summary

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Report No.: 21-32958, issue number 1

ELAB Reference	232157
Customer Reference	
Sample ID	
Sample Type	SOIL
Sample Location	WS06
Sample Depth (m)	1.00
Sampling Date	25/03/2021

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Anions				
Water Soluble Sulphate	M	g/l	0.02	0.04
Inorganics				
Acid Soluble Sulphate (SO4)	U	%	0.02	0.02

Method Summary

Report No.: 21-32958, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Acid Soluble Sulphate	U	Air dried sample	06/04/2021	115	Ion Chromatography
Water soluble anions	M	Air dried sample	01/04/2021	172	Ion Chromatography

Report Information

Report No.: 21-32958, issue number 1

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
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S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination.

Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed.

ELAB are unable to provide an interpretation or opinion on the content of this report.

The results relate only to the sample received.

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b	No time of sampling supplied (Waters Only)
c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
f	Sample age exceeds stability time (sampling to receipt)
g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month

All water samples will be retained for 7 days following the date of the test report

Charges may apply to extended sample storage

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Order No:	Not Supplied
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Date Received:	31/03/2021
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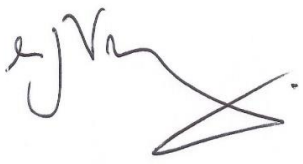
Details:	Cottam Parkway Station
Approved by:	

Mike Varley, Technical Manager

Sample Summary

Report No.: 21-32954, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
232153	WS06 1.00	31/03/2021	31/03/2021	Clayey loam	

Results Summary

Report No.: 21-32954, issue number 1

ELAB Reference	232153
Customer Reference	
Sample ID	
Sample Type	SOIL
Sample Location	WS06
Sample Depth (m)	1.00
Sampling Date	31/03/2021

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Metals				
Arsenic	M	mg/kg	1	13.8
Cadmium	M	mg/kg	0.5	< 0.5
Chromium	M	mg/kg	5	30.6
Copper	M	mg/kg	5	19.5
Lead	M	mg/kg	5	13.7
Mercury	M	mg/kg	0.5	< 0.5
Nickel	M	mg/kg	5	34.6
Selenium	M	mg/kg	1	< 1.0
Zinc	M	mg/kg	5	54.6
Inorganics				
Total Sulphide	N	mg/kg	2	< 2
Acid Soluble Sulphate (SO4)	U	%	0.02	< 0.02
Water Soluble Boron	N	mg/kg	0.5	< 0.5
Miscellaneous				
Fraction of Organic Carbon	N		0.0001	0.0032
pH	M	pH units	0.1	8.0
Polyaromatic hydrocarbons				
Naphthalene	M	mg/kg	0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	< 0.1
Pyrene	M	mg/kg	0.1	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1
Chrysene	M	mg/kg	0.1	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	< 0.4

Results Summary

Report No.: 21-32954, issue number 1

ELAB Reference	232153
Customer Reference	
Sample ID	
Sample Type	SOIL
Sample Location	WS06
Sample Depth (m)	1.00
Sampling Date	31/03/2021

Determinand	Codes	Units	LOD	
TPH CWG				
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0
>C21-C35 Aliphatic	N	mg/kg	1	< 1.0
>C35-C40 Aliphatic	N	mg/kg	1	< 1.0
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aromatic	N	mg/kg	1	< 1.0
>C10-C12 Aromatic	N	mg/kg	1	< 1.0
>C12-C16 Aromatic	N	mg/kg	1	< 1.0
>C16-C21 Aromatic	N	mg/kg	1	< 1.0
>C21-C35 Aromatic	N	mg/kg	1	< 1.0
>C35-C40 Aromatic	N	mg/kg	1	< 1.0
Total (>C5-C40) Ali/Aro	N	mg/kg	1	4.6
Total Petroleum Hydrocarbons				
PAH Fingerprint	N	n/a	0	n/a
TPH Fingerprint	N	n/a	0	n/a

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Results Summary

Report No.: 21-32954, issue number 1

Asbestos Results

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #)
in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client.

Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos Identification	Gravimetric Analysis Total (%)	Gravimetric Analysis by ACM Type (%)	Free Fibre Analysis (%)	Total Asbestos (%)
232153	1.00	WS06	Brown soil, stones	No asbestos detected	n/t	n/t	n/t	n/t

Method Summary

Report No.: 21-32954, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Sulphide	N	As submitted sample	01/04/2021	109	Colorimetry
pH	M	Air dried sample	06/04/2021	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	06/04/2021	115	Ion Chromatography
PAH (GC-FID)	M	As submitted sample	01/04/2021	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	01/04/2021	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	01/04/2021	181	GC-MS
Water soluble boron	N	Air dried sample	01/04/2021	202	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	06/04/2021	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	01/04/2021	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	06/04/2021	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	01/04/2021	214	GC-FID
Asbestos identification	U	Air dried sample	07/04/2021	280	Microscopy
Aqua regia extractable metals	M	Air dried sample	01/04/2021	300	ICPMS

Tests marked N are not UKAS accredited

Report Information

Report No.: 21-32954, issue number 1

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n/t	Not tested
<	means "less than"
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LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination.

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Deviation Codes

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d	Sample not received in cooled condition
e	The container has been incorrectly filled
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g	Sample age exceeds stability time (sampling to analysis)

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Sample Retention and Disposal

All soil samples will be retained for a period of one month

All water samples will be retained for 7 days following the date of the test report

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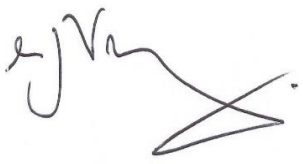
2683

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-32899
Issue:	1
Date of Issue:	07/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	29/03/2021
Date Approved:	07/04/2021
Details:	Cottam Parkway Station
Approved by:	

Mike Varley, Technical Manager

Sample Summary

Report No.: 21-32899, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
231911	WS07 Natural 0.20	24/03/2021	29/03/2021	Silty loam	

Results Summary

Report No.: 21-32899, issue number 1

ELAB Reference	231911
Customer Reference	Natural
Sample ID	
Sample Type	SOIL
Sample Location	WS07
Sample Depth (m)	0.20
Sampling Date	24/03/2021

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Metals				
Arsenic	M	mg/kg	1	8.4
Cadmium	M	mg/kg	0.5	< 0.5
Chromium	M	mg/kg	5	29.8
Copper	M	mg/kg	5	16.8
Lead	M	mg/kg	5	31.3
Mercury	M	mg/kg	0.5	< 0.5
Nickel	M	mg/kg	5	26.3
Selenium	M	mg/kg	1	< 1.0
Zinc	M	mg/kg	5	47.9
Inorganics				
Total Sulphide	N	mg/kg	2	< 2
Acid Soluble Sulphate (SO4)	U	%	0.02	0.02
Water Soluble Boron	N	mg/kg	0.5	< 0.5
Miscellaneous				
Fraction of Organic Carbon	N		0.0001	0.0114
pH	M	pH units	0.1	6.6
Polyaromatic hydrocarbons				
Naphthalene	M	mg/kg	0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	< 0.1
Pyrene	M	mg/kg	0.1	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1
Chrysene	M	mg/kg	0.1	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	< 0.4

Results Summary

Report No.: 21-32899, issue number 1

ELAB Reference	231911
Customer Reference	Natural
Sample ID	
Sample Type	SOIL
Sample Location	WS07
Sample Depth (m)	0.20
Sampling Date	24/03/2021

Determinand	Codes	Units	LOD	
TPH CWG				
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0
>C21-C35 Aliphatic	N	mg/kg	1	< 1.0
>C35-C40 Aliphatic	N	mg/kg	1	< 1.0
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aromatic	N	mg/kg	1	< 1.0
>C10-C12 Aromatic	N	mg/kg	1	< 1.0
>C12-C16 Aromatic	N	mg/kg	1	< 1.0
>C16-C21 Aromatic	N	mg/kg	1	< 1.0
>C21-C35 Aromatic	N	mg/kg	1	< 1.0
>C35-C40 Aromatic	N	mg/kg	1	< 1.0
Total (>C5-C40) Ali/Aro	N	mg/kg	1	< 1.0
Total Petroleum Hydrocarbons				
PAH Fingerprint	N	n/a	0	n/a
TPH Fingerprint	N	n/a	0	n/a

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Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos Identification	Gravimetric Analysis Total (%)	Gravimetric Analysis by ACM Type (%)	Free Fibre Analysis (%)	Total Asbestos (%)
231911	0.20	WS07 Natural	Brown soil, stones	No asbestos detected	n/t	n/t	n/t	n/t

Method Summary

Report No.: 21-32899, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Sulphide	N	As submitted sample	30/03/2021	109	Colorimetry
pH	M	Air dried sample	01/04/2021	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	31/03/2021	115	Ion Chromatography
PAH (GC-FID)	M	As submitted sample	30/03/2021	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	31/03/2021	181	GC-MS
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Total organic carbon/Total sulphur	N	Air dried sample	31/03/2021	210	IR
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Aromatic hydrocarbons in soil	N	As submitted sample	30/03/2021	214	GC-FID
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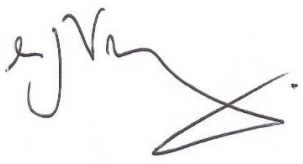
Approved by:	

Mike Varley, Technical Manager

Sample Summary

Report No.: 21-32900, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
231912	WS08 Natural 0.10	24/03/2021	29/03/2021	Silty loam	

Results Summary

Report No.: 21-32900, issue number 1

ELAB Reference	231912
Customer Reference	Natural
Sample ID	
Sample Type	SOIL
Sample Location	WS08
Sample Depth (m)	0.10
Sampling Date	24/03/2021

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Metals				
Arsenic	M	mg/kg	1	11.2
Cadmium	M	mg/kg	0.5	< 0.5
Chromium	M	mg/kg	5	28.2
Copper	M	mg/kg	5	37.0
Lead	M	mg/kg	5	33.9
Mercury	M	mg/kg	0.5	< 0.5
Nickel	M	mg/kg	5	24.7
Selenium	M	mg/kg	1	< 1.0
Zinc	M	mg/kg	5	58.5
Inorganics				
Total Sulphide	N	mg/kg	2	< 2
Acid Soluble Sulphate (SO4)	U	%	0.02	0.02
Water Soluble Boron	N	mg/kg	0.5	< 0.5
Miscellaneous				
Fraction of Organic Carbon	N		0.0001	0.0137
pH	M	pH units	0.1	6.5
Polyaromatic hydrocarbons				
Naphthalene	M	mg/kg	0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	0.1
Pyrene	M	mg/kg	0.1	0.1
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1
Chrysene	M	mg/kg	0.1	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	0.5

Results Summary

Report No.: 21-32900, issue number 1

ELAB Reference	231912
Customer Reference	Natural
Sample ID	
Sample Type	SOIL
Sample Location	WS08
Sample Depth (m)	0.10
Sampling Date	24/03/2021

Determinand	Codes	Units	LOD	
TPH CWG				
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0
>C21-C35 Aliphatic	N	mg/kg	1	< 1.0
>C35-C40 Aliphatic	N	mg/kg	1	< 1.0
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aromatic	N	mg/kg	1	< 1.0
>C10-C12 Aromatic	N	mg/kg	1	< 1.0
>C12-C16 Aromatic	N	mg/kg	1	< 1.0
>C16-C21 Aromatic	N	mg/kg	1	< 1.0
>C21-C35 Aromatic	N	mg/kg	1	< 1.0
>C35-C40 Aromatic	N	mg/kg	1	< 1.0
Total (>C5-C40) Ali/Aro	N	mg/kg	1	< 1.0
Total Petroleum Hydrocarbons				
PAH Fingerprint	N	n/a	0	n/a
TPH Fingerprint	N	n/a	0	n/a

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Results Summary

Report No.: 21-32900, issue number 1

Asbestos Results

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #) in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client.

Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos	Gravimetric Analysis Total	Gravimetric Analysis by ACM Type	Free Fibre Analysis	Total Asbestos
231912	0.10	WS08 Natural	Brown soil, stones	No asbestos detected	n/t	n/t	n/t	n/t

Method Summary

Report No.: 21-32900, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Sulphide	N	As submitted sample	30/03/2021	109	Colorimetry
pH	M	Air dried sample	01/04/2021	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	31/03/2021	115	Ion Chromatography
PAH (GC-FID)	M	As submitted sample	30/03/2021	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	31/03/2021	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	31/03/2021	181	GC-MS
Water soluble boron	N	Air dried sample	30/03/2021	202	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	31/03/2021	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	30/03/2021	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	31/03/2021	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	30/03/2021	214	GC-FID
Asbestos identification	U	Air dried sample	01/04/2021	280	Microscopy
Aqua regia extractable metals	M	Air dried sample	30/03/2021	300	ICPMS

Tests marked N are not UKAS accredited

Report Information

Report No.: 21-32900, issue number 1

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
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S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
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LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination.

Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed.

ELAB are unable to provide an interpretation or opinion on the content of this report.

The results relate only to the sample received.

PCB congener results may include any coeluting PCBs

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Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.

Deviation Codes

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c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
f	Sample age exceeds stability time (sampling to receipt)
g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month

All water samples will be retained for 7 days following the date of the test report

Charges may apply to extended sample storage

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Telephone: (01424) 718618

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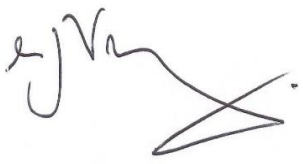
info@elab-uk.co.uk

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-32904
Issue:	1
Date of Issue:	06/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	29/03/2021
Date Approved:	06/04/2021
Details:	Cottam Parkway Station
Approved by:	

Mike Varley, Technical Manager

Sample Summary

Report No.: 21-32904, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
231959	WS12 Natural 0.20	23/03/2021	29/03/2021	Silty loam	

Results Summary

Report No.: 21-32904, issue number 1

ELAB Reference	231959
Customer Reference	Natural
Sample ID	
Sample Type	SOIL
Sample Location	WS12
Sample Depth (m)	0.20
Sampling Date	23/03/2021

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Metals				
Arsenic	M	mg/kg	1	13.0
Cadmium	M	mg/kg	0.5	< 0.5
Chromium	M	mg/kg	5	31.8
Copper	M	mg/kg	5	35.8
Lead	M	mg/kg	5	54.4
Mercury	M	mg/kg	0.5	< 0.5
Nickel	M	mg/kg	5	26.9
Selenium	M	mg/kg	1	< 1.0
Zinc	M	mg/kg	5	57.0
Inorganics				
Total Sulphide	N	mg/kg	2	< 2
Acid Soluble Sulphate (SO4)	U	%	0.02	0.02
Water Soluble Boron	N	mg/kg	0.5	0.6
Miscellaneous				
Fraction of Organic Carbon	N		0.0001	0.0149
pH	M	pH units	0.1	6.8
Polyaromatic hydrocarbons				
Naphthalene	M	mg/kg	0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	0.1
Anthracene	M	mg/kg	0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	0.2
Pyrene	M	mg/kg	0.1	0.2
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1
Chrysene	M	mg/kg	0.1	0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	0.7

Results Summary

Report No.: 21-32904, issue number 1

ELAB Reference	231959
Customer Reference	Natural
Sample ID	
Sample Type	SOIL
Sample Location	WS12
Sample Depth (m)	0.20
Sampling Date	23/03/2021

Determinand	Codes	Units	LOD	
TPH CWG				
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0
>C21-C35 Aliphatic	N	mg/kg	1	< 1.0
>C35-C40 Aliphatic	N	mg/kg	1	< 1.0
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aromatic	N	mg/kg	1	< 1.0
>C10-C12 Aromatic	N	mg/kg	1	< 1.0
>C12-C16 Aromatic	N	mg/kg	1	< 1.0
>C16-C21 Aromatic	N	mg/kg	1	< 1.0
>C21-C35 Aromatic	N	mg/kg	1	< 1.0
>C35-C40 Aromatic	N	mg/kg	1	< 1.0
Total (>C5-C40) Ali/Aro	N	mg/kg	1	< 1.0
Total Petroleum Hydrocarbons				
PAH Fingerprint	N	n/a	0	n/a
TPH Fingerprint	N	n/a	0	n/a

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Results Summary

Report No.: 21-32904, issue number 1

Asbestos Results

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #) in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client.

Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos	Gravimetric Analysis Total	Gravimetric Analysis by ACM Type	Free Fibre Analysis	Total Asbestos
231959	0.20	WS12 Natural	Brown soil, stones	No asbestos detected	n/t	n/t	n/t	n/t

Method Summary

Report No.: 21-32904, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Sulphide	N	As submitted sample	30/03/2021	109	Colorimetry
pH	M	Air dried sample	01/04/2021	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	31/03/2021	115	Ion Chromatography
PAH (GC-FID)	M	As submitted sample	30/03/2021	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	31/03/2021	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	31/03/2021	181	GC-MS
Water soluble boron	N	Air dried sample	30/03/2021	202	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	31/03/2021	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	30/03/2021	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	31/03/2021	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	30/03/2021	214	GC-FID
Asbestos identification	U	Air dried sample	01/04/2021	280	Microscopy
Aqua regia extractable metals	M	Air dried sample	30/03/2021	300	ICPMS

Tests marked N are not UKAS accredited

Report Information

Report No.: 21-32904, issue number 1

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
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SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination.

Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed.

ELAB are unable to provide an interpretation or opinion on the content of this report.

The results relate only to the sample received.

PCB congener results may include any coeluting PCBs

Uncertainty of measurement for the determinands tested are available upon request

Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.

Deviation Codes

a	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
f	Sample age exceeds stability time (sampling to receipt)
g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month

All water samples will be retained for 7 days following the date of the test report

Charges may apply to extended sample storage

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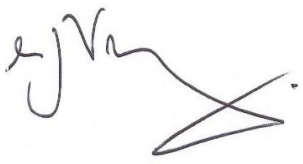
2683

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-32905
Issue:	1
Date of Issue:	06/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	29/03/2021
Date Approved:	06/04/2021
Details:	Cottam Parkway Station
Approved by:	

Mike Varley, Technical Manager

Sample Summary

Report No.: 21-32905, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
231960	WS13 Natural 0.10	23/03/2021	29/03/2021	Silty loam	

Results Summary

Report No.: 21-32905, issue number 1

ELAB Reference	231960
Customer Reference	Natural
Sample ID	
Sample Type	SOIL
Sample Location	WS13
Sample Depth (m)	0.10
Sampling Date	23/03/2021

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Metals				
Arsenic	M	mg/kg	1	13.8
Cadmium	M	mg/kg	0.5	< 0.5
Chromium	M	mg/kg	5	25.0
Copper	M	mg/kg	5	49.6
Lead	M	mg/kg	5	68.0
Mercury	M	mg/kg	0.5	< 0.5
Nickel	M	mg/kg	5	22.0
Selenium	M	mg/kg	1	< 1.0
Zinc	M	mg/kg	5	90.0
Inorganics				
Total Sulphide	N	mg/kg	2	< 2
Acid Soluble Sulphate (SO4)	U	%	0.02	0.05
Water Soluble Boron	N	mg/kg	0.5	0.9
Miscellaneous				
Fraction of Organic Carbon	N		0.0001	0.0585
pH	M	pH units	0.1	5.9
Polyaromatic hydrocarbons				
Naphthalene	M	mg/kg	0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	< 0.1
Pyrene	M	mg/kg	0.1	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1
Chrysene	M	mg/kg	0.1	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	< 0.4

Results Summary

Report No.: 21-32905, issue number 1

ELAB Reference	231960
Customer Reference	Natural
Sample ID	
Sample Type	SOIL
Sample Location	WS13
Sample Depth (m)	0.10
Sampling Date	23/03/2021

Determinand	Codes	Units	LOD	
TPH CWG				
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0
>C21-C35 Aliphatic	N	mg/kg	1	< 1.0
>C35-C40 Aliphatic	N	mg/kg	1	< 1.0
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aromatic	N	mg/kg	1	< 1.0
>C10-C12 Aromatic	N	mg/kg	1	< 1.0
>C12-C16 Aromatic	N	mg/kg	1	< 1.0
>C16-C21 Aromatic	N	mg/kg	1	< 1.0
>C21-C35 Aromatic	N	mg/kg	1	< 1.0
>C35-C40 Aromatic	N	mg/kg	1	< 1.0
Total (>C5-C40) Ali/Aro	N	mg/kg	1	< 1.0
Total Petroleum Hydrocarbons				
PAH Fingerprint	N	n/a	0	n/a
TPH Fingerprint	N	n/a	0	n/a

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Results Summary

Report No.: 21-32905, issue number 1

Asbestos Results

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Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos	Gravimetric Analysis Total	Gravimetric Analysis by ACM Type	Free Fibre Analysis	Total Asbestos
231960	0.10	WS13 Natural	Brown Soil,Root	No asbestos detected	n/t	n/t	n/t	n/t

Method Summary

Report No.: 21-32905, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Sulphide	N	As submitted sample	30/03/2021	109	Colorimetry
pH	M	Air dried sample	01/04/2021	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	31/03/2021	115	Ion Chromatography
PAH (GC-FID)	M	As submitted sample	30/03/2021	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	31/03/2021	181	GC-MS
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Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	31/03/2021	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	30/03/2021	214	GC-FID
Asbestos identification	U	Air dried sample	06/04/2021	280	Microscopy
Aqua regia extractable metals	M	Air dried sample	30/03/2021	300	ICPMS

Tests marked N are not UKAS accredited

Report Information

Report No.: 21-32905, issue number 1

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SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
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U/S	Unsuitable sample
n/t	Not tested
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>	means "greater than"
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Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

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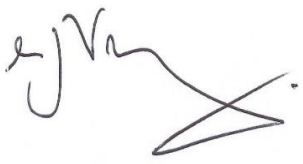
2683

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-32907
Issue:	1
Date of Issue:	06/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	29/03/2021
Date Approved:	06/04/2021
Details:	Cottam Parkway Station
Approved by:	

Mike Varley, Technical Manager

Sample Summary

Report No.: 21-32907, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
231976	WS16 Natural 0.60	23/03/2021	29/03/2021	Silty clayey loam	

Results Summary

Report No.: 21-32907, issue number 1

ELAB Reference	231976
Customer Reference	Natural
Sample ID	
Sample Type	SOIL
Sample Location	WS16
Sample Depth (m)	0.60
Sampling Date	23/03/2021

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Metals				
Arsenic	M	mg/kg	1	11.9
Cadmium	M	mg/kg	0.5	< 0.5
Chromium	M	mg/kg	5	40.6
Copper	M	mg/kg	5	23.0
Lead	M	mg/kg	5	15.5
Mercury	M	mg/kg	0.5	< 0.5
Nickel	M	mg/kg	5	45.3
Selenium	M	mg/kg	1	< 1.0
Zinc	M	mg/kg	5	54.5
Inorganics				
Total Sulphide	N	mg/kg	2	< 2
Acid Soluble Sulphate (SO4)	U	%	0.02	< 0.02
Water Soluble Boron	N	mg/kg	0.5	< 0.5
Miscellaneous				
Fraction of Organic Carbon	N		0.0001	0.0026
pH	M	pH units	0.1	6.9
Polyaromatic hydrocarbons				
Naphthalene	M	mg/kg	0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	< 0.1
Pyrene	M	mg/kg	0.1	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1
Chrysene	M	mg/kg	0.1	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	< 0.4

Results Summary

Report No.: 21-32907, issue number 1

ELAB Reference	231976
Customer Reference	Natural
Sample ID	
Sample Type	SOIL
Sample Location	WS16
Sample Depth (m)	0.60
Sampling Date	23/03/2021

Determinand	Codes	Units	LOD	
TPH CWG				
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0
>C10-C12 Aliphatic	N	mg/kg	1	< 1.0
>C12-C16 Aliphatic	N	mg/kg	1	< 1.0
>C16-C21 Aliphatic	N	mg/kg	1	< 1.0
>C21-C35 Aliphatic	N	mg/kg	1	< 1.0
>C35-C40 Aliphatic	N	mg/kg	1	< 1.0
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aromatic	N	mg/kg	1	< 1.0
>C10-C12 Aromatic	N	mg/kg	1	< 1.0
>C12-C16 Aromatic	N	mg/kg	1	1.1
>C16-C21 Aromatic	N	mg/kg	1	1.0
>C21-C35 Aromatic	N	mg/kg	1	< 1.0
>C35-C40 Aromatic	N	mg/kg	1	< 1.0
Total (>C5-C40) Ali/Aro	N	mg/kg	1	2.1
Total Petroleum Hydrocarbons				
PAH Fingerprint	N	n/a	0	n/a
TPH Fingerprint	N	n/a	0	n/a

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Results Summary

Report No.: 21-32907, issue number 1

Asbestos Results

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #) in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client.

Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos	Gravimetric Analysis Total	Gravimetric Analysis by ACM Type	Free Fibre Analysis	Total Asbestos
231976	0.60	WS16 Natural	Brown Soil	No asbestos detected	n/t	n/t	n/t	n/t

Method Summary

Report No.: 21-32907, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Sulphide	N	As submitted sample	30/03/2021	109	Colorimetry
pH	M	Air dried sample	01/04/2021	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	31/03/2021	115	Ion Chromatography
PAH (GC-FID)	M	As submitted sample	30/03/2021	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	31/03/2021	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	31/03/2021	181	GC-MS
Water soluble boron	N	Air dried sample	30/03/2021	202	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	31/03/2021	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	30/03/2021	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	31/03/2021	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	30/03/2021	214	GC-FID
Asbestos identification	U	Air dried sample	06/04/2021	280	Microscopy
Aqua regia extractable metals	M	Air dried sample	30/03/2021	300	ICPMS

Tests marked N are not UKAS accredited

Report Information

Report No.: 21-32907, issue number 1

Key

U	hold UKAS accreditation
M	hold MCERTS and UKAS accreditation
N	do not currently hold UKAS accreditation
^	MCERTS accreditation not applicable for sample matrix
*	UKAS accreditation not applicable for sample matrix
S	Subcontracted to approved laboratory UKAS Accredited for the test
SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
NS	Subcontracted to approved laboratory. UKAS accreditation is not applicable.
I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination.

Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed.

ELAB are unable to provide an interpretation or opinion on the content of this report.

The results relate only to the sample received.

PCB congener results may include any coeluting PCBs

Uncertainty of measurement for the determinands tested are available upon request

Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.

Deviation Codes

a	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
f	Sample age exceeds stability time (sampling to receipt)
g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month

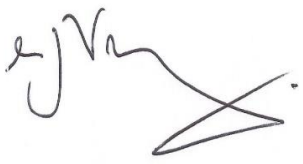
All water samples will be retained for 7 days following the date of the test report

Charges may apply to extended sample storage

Unit A2
Windmill Road
Ponswood Industrial Estate
St Leonards on Sea
East Sussex
TN38 9BY
Telephone: (01424) 718618

cs@elab-uk.co.uk
info@elab-uk.co.uk

THE ENVIRONMENTAL LABORATORY LTD

Analytical Report Number:	21-32909
Issue:	1
Date of Issue:	06/04/2021
Contact:	Sam Parry
Customer Details:	CC Geotechnical Ltd Unit 1 & 2 Deltic Place Deltic Way Liverpool MersevsideL33 7BA
Quotation No:	Q17-00806
Order No:	Not Supplied
Customer Reference:	CCG-C-21-12093
Date Received:	29/03/2021
Date Approved:	06/04/2021
Details:	Cottam Parkway Station
Approved by:	

Mike Varley, Technical Manager

Sample Summary

Report No.: 21-32909, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
231981	WS18 Natural 0.20	23/03/2021	29/03/2021	Silty loam	

Results Summary

Report No.: 21-32909, issue number 1

ELAB Reference	231981
Customer Reference	Natural
Sample ID	
Sample Type	SOIL
Sample Location	WS18
Sample Depth (m)	0.20
Sampling Date	23/03/2021

Determinand	Codes	Units	LOD	
Soil sample preparation parameters				
Material removed	N	%	0.1	< 0.1
Description of Inert material removed	N		0	None
Metals				
Arsenic	M	mg/kg	1	8.8
Cadmium	M	mg/kg	0.5	< 0.5
Chromium	M	mg/kg	5	27.4
Copper	M	mg/kg	5	20.9
Lead	M	mg/kg	5	27.5
Mercury	M	mg/kg	0.5	< 0.5
Nickel	M	mg/kg	5	23.0
Selenium	M	mg/kg	1	< 1.0
Zinc	M	mg/kg	5	40.3
Inorganics				
Total Sulphide	N	mg/kg	2	< 2
Acid Soluble Sulphate (SO4)	U	%	0.02	0.03
Water Soluble Boron	N	mg/kg	0.5	< 0.5
Miscellaneous				
Fraction of Organic Carbon	N		0.0001	0.0117
pH	M	pH units	0.1	6.5
Polyaromatic hydrocarbons				
Naphthalene	M	mg/kg	0.1	< 0.1
Acenaphthylene	M	mg/kg	0.1	< 0.1
Acenaphthene	M	mg/kg	0.1	< 0.1
Fluorene	M	mg/kg	0.1	< 0.1
Phenanthrene	M	mg/kg	0.1	< 0.1
Anthracene	M	mg/kg	0.1	< 0.1
Fluoranthene	M	mg/kg	0.1	< 0.1
Pyrene	M	mg/kg	0.1	< 0.1
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1
Chrysene	M	mg/kg	0.1	< 0.1
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1
Benzo[g,h,i]perylene	M	mg/kg	0.1	< 0.1
Total PAH(16)	M	mg/kg	0.4	< 0.4

Results Summary

Report No.: 21-32909, issue number 1

ELAB Reference	231981
Customer Reference	Natural
Sample ID	
Sample Type	SOIL
Sample Location	WS18
Sample Depth (m)	0.20
Sampling Date	23/03/2021

Determinand	Codes	Units	LOD	
TPH CWG				
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0
>C10-C12 Aliphatic	N	mg/kg	1	1.3
>C12-C16 Aliphatic	N	mg/kg	1	2.1
>C16-C21 Aliphatic	N	mg/kg	1	1.4
>C21-C35 Aliphatic	N	mg/kg	1	3.1
>C35-C40 Aliphatic	N	mg/kg	1	< 1.0
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01
>C8-C10 Aromatic	N	mg/kg	1	< 1.0
>C10-C12 Aromatic	N	mg/kg	1	< 1.0
>C12-C16 Aromatic	N	mg/kg	1	< 1.0
>C16-C21 Aromatic	N	mg/kg	1	< 1.0
>C21-C35 Aromatic	N	mg/kg	1	< 1.0
>C35-C40 Aromatic	N	mg/kg	1	< 1.0
Total (>C5-C40) Ali/Aro	N	mg/kg	1	7.9
Total Petroleum Hydrocarbons				
PAH Fingerprint	N	n/a	0	n/a
TPH Fingerprint	N	n/a	0	n/a

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Results Summary

Report No.: 21-32909, issue number 1

Asbestos Results

Analytical result only applies to the sample as submitted by the client. Any comments, opinions or interpretations (marked #) in this report are outside UKAS accreditation (Accreditation No2683). They are subjective comments only which must be verified by the client.

Elab No	Depth (m)	Clients Reference	Description of Sample Matrix #	Asbestos	Gravimetric Analysis Total	Gravimetric Analysis by ACM Type	Free Fibre Analysis	Total Asbestos
231981	0.20	WS18 Natural	Brown Soil,Stones	No asbestos detected	n/t	n/t	n/t	n/t

Method Summary

Report No.: 21-32909, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
Soil					
Sulphide	N	As submitted sample	30/03/2021	109	Colorimetry
pH	M	Air dried sample	01/04/2021	113	Electromeric
Acid Soluble Sulphate	U	Air dried sample	31/03/2021	115	Ion Chromatography
PAH (GC-FID)	M	As submitted sample	30/03/2021	133	GC-FID
Low range Aliphatic hydrocarbons soil	N	As submitted sample	31/03/2021	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	31/03/2021	181	GC-MS
Water soluble boron	N	Air dried sample	30/03/2021	202	Colorimetry
Total organic carbon/Total sulphur	N	Air dried sample	31/03/2021	210	IR
Aliphatic hydrocarbons in soil	N	As submitted sample	30/03/2021	214	GC-FID
Aliphatic/Aromatic hydrocarbons in soil	N	As submitted sample	01/04/2021	214	GC-FID
Aromatic hydrocarbons in soil	N	As submitted sample	30/03/2021	214	GC-FID
Asbestos identification	U	Air dried sample	06/04/2021	280	Microscopy
Aqua regia extractable metals	M	Air dried sample	30/03/2021	300	ICPMS

Tests marked N are not UKAS accredited

Report Information

Report No.: 21-32909, issue number 1

Key

U	hold UKAS accreditation
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SM	Subcontracted to approved laboratory MCERTS/UKAS Accredited for the test
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I/S	Insufficient Sample
U/S	Unsuitable sample
n/t	Not tested
<	means "less than"
>	means "greater than"
LOD	LOD refers to limit of detection, except in the case of pH soils and pH waters where it means limit of discrimination.

Soil sample results are expressed on an air dried basis (dried at < 30°C), and are uncorrected for inert material removed.

ELAB are unable to provide an interpretation or opinion on the content of this report.

The results relate only to the sample received.

PCB congener results may include any coeluting PCBs

Uncertainty of measurement for the determinands tested are available upon request

Unless otherwise stated, sample information has been provided by the client. This may affect the validity of the results.

Deviation Codes

a	No date of sampling supplied
b	No time of sampling supplied (Waters Only)
c	Sample not received in appropriate containers
d	Sample not received in cooled condition
e	The container has been incorrectly filled
f	Sample age exceeds stability time (sampling to receipt)
g	Sample age exceeds stability time (sampling to analysis)

Where a sample has a deviation code, the applicable test result may be invalid.

Sample Retention and Disposal

All soil samples will be retained for a period of one month

All water samples will be retained for 7 days following the date of the test report

Charges may apply to extended sample storage

APPENDIX H

DYNAMIC CONE PENETRATION TEST RESULTS

Dynamic Cone Penetrometer Strength Analysis Report

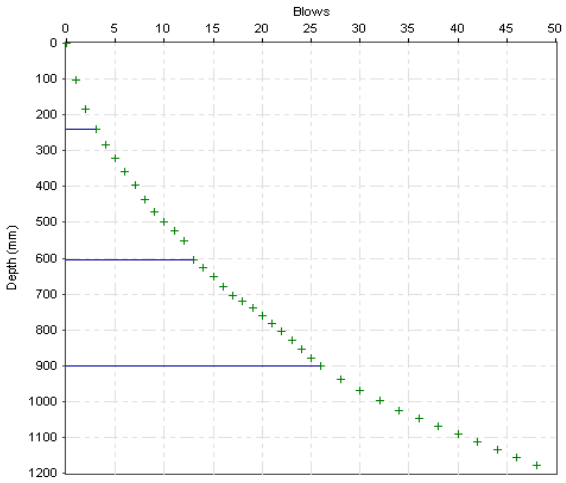
Site: COTTAM PARKWAY STATION
Location: TP01
Cone Angle: 60 degrees
Zero Error: 175
Test Date: 21/03/2021

Job Number: CCG-C-21-12039
Surface Type: -
Thickness (mm): -

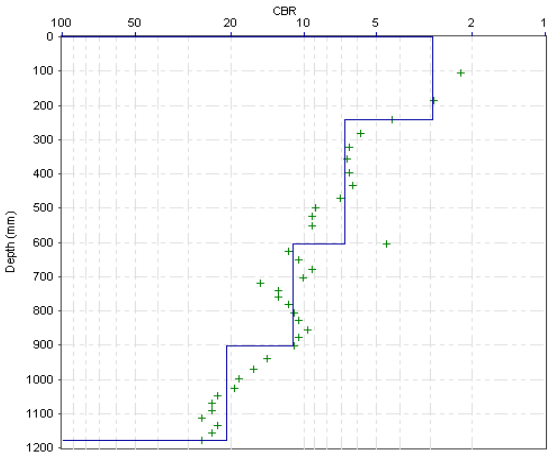
No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/b)
1	0	0	175	0
2	1	1	279	104.0
3	1	2	360	81.0
4	1	3	416	56.0
5	1	4	458	42.0
6	1	5	496	38.0
7	1	6	533	37.0
8	1	7	571	38.0
9	1	8	610	39.0
10	1	9	645	35.0
11	1	10	673	28.0
12	1	11	700	27.0
13	1	12	727	27.0
14	1	13	780	53.0
15	1	14	802	22.0
16	1	15	826	24.0
17	1	16	853	27.0
18	1	17	878	25.0
19	1	18	895	17.0
20	1	19	915	20.0

No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/b)
21	1	20	935	20.0
22	1	21	957	22.0
23	1	22	980	23.0
24	1	23	1004	24.0
25	1	24	1030	26.0
26	1	25	1054	24.0
27	1	26	1077	23.0
28	2	28	1113	18.0
29	2	30	1145	16.0
30	2	32	1173	14
31	2	34	1200	13.5
32	2	36	1223	11.5
33	2	38	1245	11
34	2	40	1267	11
35	2	42	1287	10
36	2	44	1310	11.5
37	2	46	1332	11
38	2	48	1352	10

Layer Boundaries: Chainage 1.000



Layer Boundaries Chart



CBR Chart

Layer Properties

No.	CBR value	Thickness	Depth	Depth (mmbgl)	Strength Coefficient
1	**3**	241	241	**416**	
2	**7**	364	605	**780**	
3	**11**	297	902	**1077**	
4	**21**	275	1177	**1352**	

CBR Derived by TDR equation $Log_{10}(CBR)=2.48-1.057 \times Log_{10}(penetration\ rate)$

Remarks Surface material description: Grassed TOPSOIL

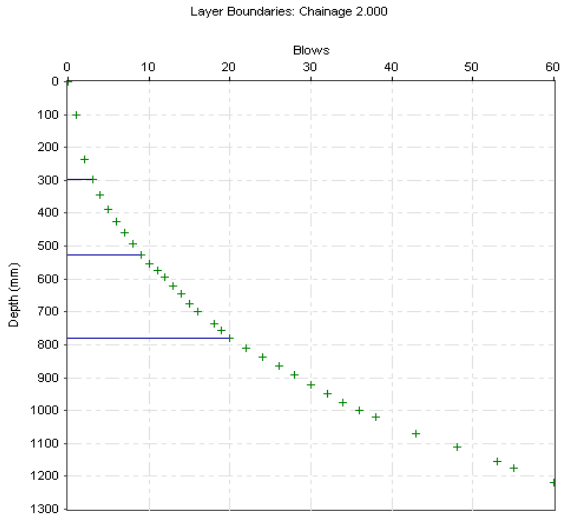
Dynamic Cone Penetrometer Strength Analysis Report

Site: COTTAM PARKWAY STATION
Location: TP02
Cone Angle: 60 degrees
Zero Error: 160
Test Date: 21/03/2021

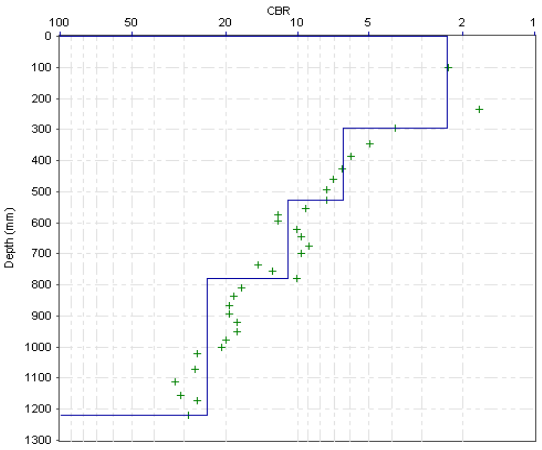
Job Number: CCG-C-21-12039
Surface Type: -
Thickness (mm): -

No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/b)
1	0	0	160	0
2	1	1	261	101.0
3	1	2	395	134.0
4	1	3	457	62.0
5	1	4	506	49.0
6	1	5	547	41.0
7	1	6	585	38.0
8	1	7	620	35.0
9	1	8	653	33.0
10	1	9	686	33.0
11	1	10	713	27.0
12	1	11	734	21.0
13	1	12	755	21.0
14	1	13	780	25.0
15	1	14	806	26.0
16	1	15	834	28.0
17	1	16	860	26.0
18	2	18	895	17.5
19	1	19	915	20.0
20	1	20	940	25.0

No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/b)
21	2	22	970	15.0
22	2	24	998	14.0
23	2	26	1025	13.5
24	2	28	1052	13.5
25	2	30	1081	14.5
26	2	32	1110	14.5
27	2	34	1136	13.0
28	2	36	1161	12.5
29	2	38	1181	10.0
30	5	43	1230	9.8
31	5	48	1271	8.2
32	5	53	1314	8.6
33	2	55	1334	10
34	5	60	1380	9.2



Layer Boundaries Chart



CBR Chart

Layer Properties

No.	CBR value	Thickness	Depth	Depth (mmbgl)	Strength Coefficient
1	**2**	297	297	**457**	
2	**6**	229	526	**686**	
3	**11**	254	780	**940**	
4	**24**	440	1220	**1380**	

CBR Derived by TDR equation $Log_{10}(CBR)=2.48-1.057 \times Log_{10}(penetration\ rate)$

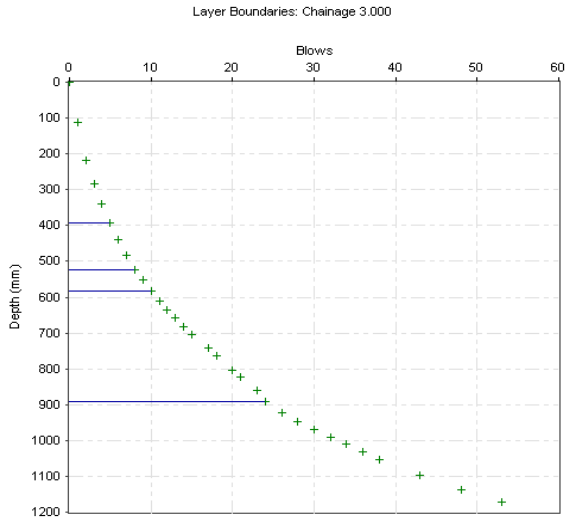
Remarks Surface material description: Grassed TOPSOIL

Dynamic Cone Penetrometer Strength Analysis Report

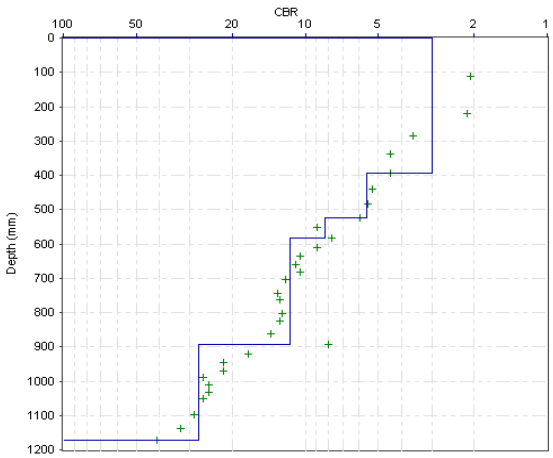
Site: COTTAM PARKWAY STATION
Location: TP03
Cone Angle: 60 degrees
Zero Error: 191
Test Date: 21/03/2021

Job Number: CCG-C-21-12039
Surface Type: -
Thickness (mm): -

No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/b)
1	0	0	191	0
2	1	1	302	111.0
3	1	2	410	108.0
4	1	3	476	66.0
5	1	4	530	54.0
6	1	5	584	54.0
7	1	6	630	46.0
8	1	7	674	44.0
9	1	8	715	41.0
10	1	9	743	28.0
11	1	10	775	32.0
12	1	11	803	28.0
13	1	12	827	24.0
14	1	13	850	23.0
15	1	14	874	24.0
16	1	15	895	21.0
17	2	17	934	19.5
18	1	18	954	20.0
19	2	20	995	20.5
20	1	21	1015	20.0
21	2	23	1052	18.5
22	1	24	1083	31.0
23	2	26	1113	15.0
24	2	28	1137	12.0
25	2	30	1161	12.0
26	2	32	1181	10.0
27	2	34	1202	10.5
28	2	36	1223	10.5
29	2	38	1243	10.0
30	5	43	1289	9.2
31	5	48	1330	8.2
32	5	53	1363	6.6



Layer Boundaries Chart



CBR Chart

Layer Properties

No.	CBR value	Thickness	Depth	Depth (mmbgl)	Strength Coefficient
1	**3**	393	393	**584**	
2	**6**	131	524	**715**	
3	**8**	60	584	**775**	
4	**12**	308	892	**1083**	
5	**27**	280	1172	**1363**	

CBR Derived by TDR equation $Log_{10}(CBR)=2.48-1.057 \times Log_{10}(penetration\ rate)$

Remarks Surface material description: Grassed TOPSOIL

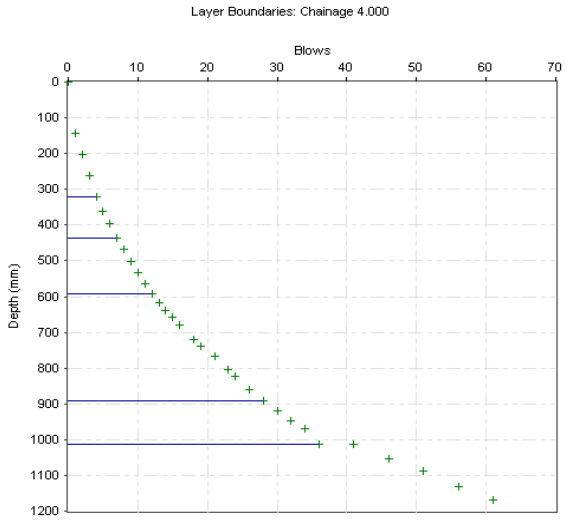
Dynamic Cone Penetrometer Strength Analysis Report

Site: COTTAM PARKWAY STATION
Location: TP04
Cone Angle: 60 degrees
Zero Error: 184
Test Date: 21/03/2021

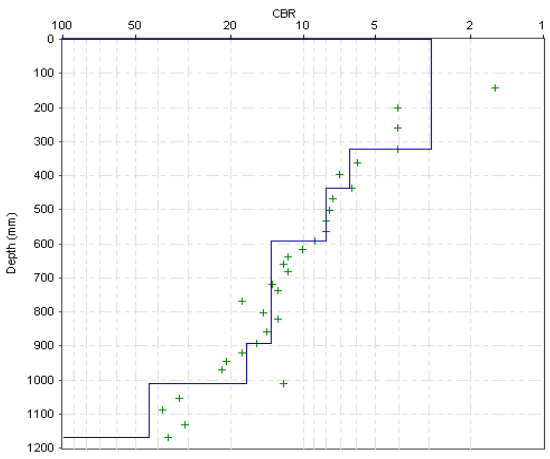
Job Number: CCG-C-21-12039
Surface Type: -
Thickness (mm): -

No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/b)
1	0	0	184	0
2	1	1	328	144.0
3	1	2	387	59.0
4	1	3	446	59.0
5	1	4	505	59.0
6	1	5	546	41.0
7	1	6	581	35.0
8	1	7	620	39.0
9	1	8	653	33.0
10	1	9	685	32.0
11	1	10	716	31.0
12	1	11	747	31.0
13	1	12	775	28.0
14	1	13	800	25.0
15	1	14	822	22.0
16	1	15	843	21.0
17	1	16	865	22.0
18	2	18	903	19.0
19	1	19	923	20.0
20	2	21	952	14.5

No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/b)
21	2	23	987	17.5
22	1	24	1007	20.0
23	2	26	1043	18.0
24	2	28	1076	16.5
25	2	30	1105	14.5
26	2	32	1130	12.5
27	2	34	1154	12.0
28	2	36	1196	21.0
29	5	41	1196	0.0
30	5	46	1237	8.2
31	5	51	1272	7
32	5	56	1315	8.6
33	5	61	1352	7.4



Layer Boundaries Chart



CBR Chart

Layer Properties

No.	CBR value	Thickness	Depth	Depth (mmbgl)	Strength Coefficient
1	**3**	321	321	**505**	
2	**6**	115	436	**620**	
3	**8**	155	591	**775**	
4	**14**	301	892	**1076**	
5	**17**	120	1012	**1196**	
6	**44**	156	1168	**1352**	

CBR Derived by TDR equation $Log_{10}(CBR)=2.48-1.057 \times Log_{10}(penetration\ rate)$

Remarks Surface material description: Grassed TOPSOIL

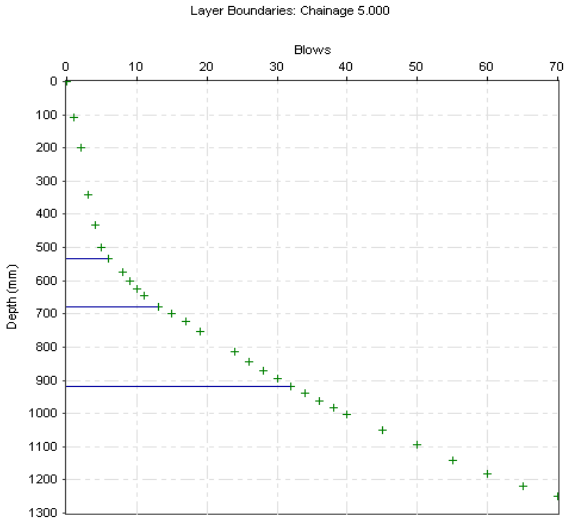
Dynamic Cone Penetrometer Strength Analysis Report

Site: COTTAM PARKWAY STATION
Location: TP05
Cone Angle: 60 degrees
Zero Error: 122
Test Date: 21/03/2021

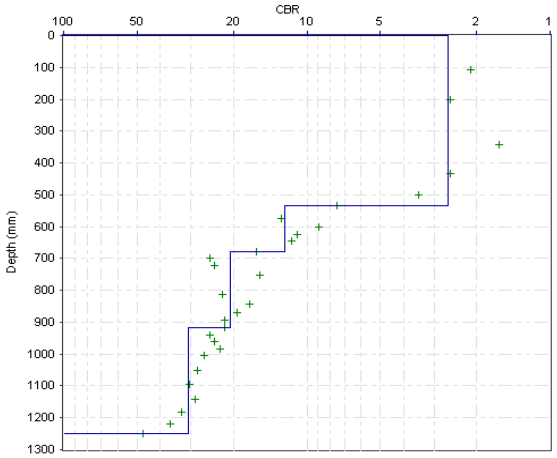
Job Number: CCG-C-21-12039
Surface Type: -
Thickness (mm): -

No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/b)
1	0	0	122	0
2	1	1	231	109.0
3	1	2	322	91.0
4	1	3	463	141.0
5	1	4	554	91.0
6	1	5	622	68.0
7	1	6	655	33.0
8	2	8	695	20.0
9	1	9	723	28.0
10	1	10	746	23.0
11	1	11	768	22.0
12	2	13	800	16.0
13	2	15	821	10.5
14	2	17	843	11.0
15	2	19	876	16.5
16	5	24	935	11.8
17	2	26	965	15.0
18	2	28	992	13.5
19	2	30	1016	12.0
20	2	32	1040	12.0

No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/b)
21	2	34	1061	10.5
22	2	36	1083	11.0
23	2	38	1106	11.5
24	2	40	1126	10.0
25	5	45	1173	9.4
26	5	50	1217	8.8
27	5	55	1263	9.2
28	5	60	1304	8.2
29	5	65	1341	7.4
30	5	70	1370	5.8



Layer Boundaries Chart



CBR Chart

Layer Properties

No.	CBR value	Thickness	Depth	Depth (mmbgl)	Strength Coefficient
1	**3**	533	533	**655**	
2	**12**	145	678	**800**	
3	**21**	240	918	**1040**	
4	**31**	330	1248	**1370**	

CBR Derived by TDR equation $Log_{10}(CBR)=2.48-1.057 \times Log_{10}(penetration\ rate)$

Remarks Surface material description: Grassed TOPSOIL

Dynamic Cone Penetrometer Strength Analysis Report

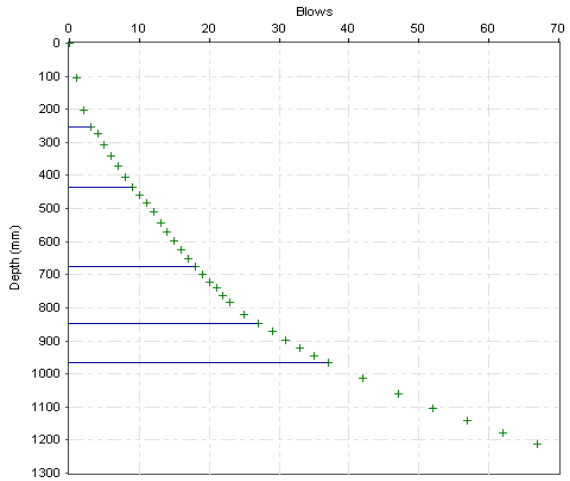
Site: COTTAM PARKWAY STATION
Location: TP06
Cone Angle: 60 degrees
Zero Error: 171
Test Date: 21/03/2021

Job Number: CCG-C-21-12039
Surface Type: -
Thickness (mm): -

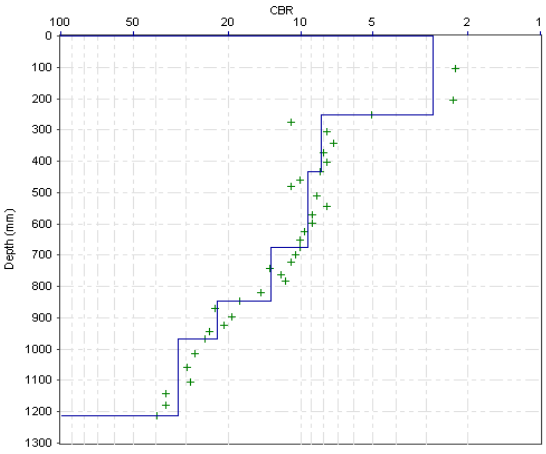
No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/b)
1	0	0	171	0
2	1	1	274	103.0
3	1	2	375	101.0
4	1	3	423	48.0
5	1	4	446	23.0
6	1	5	478	32.0
7	1	6	512	34.0
8	1	7	543	31.0
9	1	8	575	32.0
10	1	9	605	30.0
11	1	10	630	25.0
12	1	11	653	23.0
13	1	12	682	29.0
14	1	13	714	32.0
15	1	14	742	28.0
16	1	15	770	28.0
17	1	16	796	26.0
18	1	17	821	25.0
19	1	18	846	25.0
20	1	19	870	24.0

No.	Blows	Cumulative Blows	Penetration Depth (mm)	Penetration Rate (mm/b)
21	1	20	893	23.0
22	1	21	912	19.0
23	1	22	933	21.0
24	1	23	955	22.0
25	2	25	990	17.5
26	2	27	1019	14.5
27	2	29	1042	11.5
28	2	31	1069	13.5
29	2	33	1094	12.5
30	2	35	1116	11
31	2	37	1137	10.5
32	5	42	1185	9.6
33	5	47	1230	9
34	5	52	1276	9.2
35	5	57	1313	7.4
36	5	62	1350	7.4
37	5	67	1384	6.8

Layer Boundaries: Chainage 6.000



Layer Boundaries Chart



CBR Chart

Layer Properties

No.	CBR value	Thickness	Depth	Depth (mmbgl)	Strength Coefficient
1	**3**	252	252	**423**	
2	**8**	182	434	**605**	
3	**9**	241	675	**846**	
4	**13**	173	848	**1019**	
5	**22**	118	966	**1137**	
6	**33**	247	1213	**1384**	

CBR Derived by TDR equation $Log_{10}(CBR)=2.48-1.057 \times Log_{10}(penetration\ rate)$

Remarks Surface material description: Grassed TOPSOIL

APPENDIX I

NOTES ON LIMITATIONS

Notes on Limitations
For
Geoenvironmental and Geotechnical Consultancy Services

General

This document has been prepared by CC GEOTECHNICAL LTD within the terms of the contract, scope of work, and resources agreed in writing with the client. The limitations of liability of CC GEOTECHNICAL LTD for the contents of this document have been agreed with the Client, as set out in the terms and conditions of offer and related contract documentation.

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The findings and opinions are relevant to the dates when the assessment was undertaken, but should not necessarily be relied upon to represent conditions at a substantially later date. In particular, seasonal groundwater levels, with the effects of precipitation, may affect the conditions found during the investigation. The report should be read in conjunction with the further Notes on Limitations included in Appendix A.

Where opinions expressed in this report are based on current available guidance and legislation, no liability can be accepted by CC GEOTECHNICAL LTD for the effects of any future changes to such guidelines and legislation. Additional information, improved practices, new guidance, changes in legislation, or amendments to design proposals, may necessitate this report having to be reviewed in whole or in part after that date. Opinions and interpretations are not accredited by UKAS.

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1. the consequences of this document being used for any purpose or project other than for which it was commissioned

and/or

2. the consequences of use of this document by any party with whom an agreement has not been executed.

Phase I Environmental Audits / Desk Studies

The work undertaken to provide the basis of a Phase 1 Desk Study report comprises 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 a Desk Study report have been dictated by 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 the report, CC GEOTECHNICAL LTD reserves the right to review such information and 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 Environmental Audits

The investigation of the site has been carried out with the intention of providing sufficient information concerning the type and degree of contamination, and ground and groundwater conditions to allow a reasonable risk assessment to be made. The objectives of the investigation have been limited to establishing the risks associated to potential human targets, building materials, the environment (including adjacent land), and surface and groundwater.

The amount of exploratory work and chemical testing undertaken may have been restricted by the timescale available, and the locations of the exploratory holes may have been restricted to areas unoccupied by the building(s) on the site, and further restricted by the existence of 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 those 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, investigate only a small volume of the ground in relation to the size of the site, and can only provide a general indication of site conditions. 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.

Geoenvironmental Ground Investigations

The investigation of the site has been carried out to provide sufficient information within the agreed scope of the investigation, under the general headings of type and degree of contamination, geotechnical characteristics, and ground and groundwater conditions, to provide a reasonable assessment of the environmental risks together with engineering and development implications.

If costs have been included in relation to the site remediation, these must be confirmed by a qualified quantity surveyor.

The exploratory holes undertaken, investigate only a small volume of the ground in relation to the size of the site, and can only provide a general indication of the 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 ground conditions present 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, weather, or other effects.

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

Appendix C

Borehole logs

IAN FARMER ASSOCIATES

Site	Borehole Number
Preston Western Distributor Road, Preston	BH221

Boring Method	Casing Diameter	Ground Level (mOD)	Client	Job Number
Cable Percussion	200mm cased to 9.00m 150mm cased to 20.00m	21.39	Lancashire County Council	41455
	Location	**Dates**	**Engineer**	**Sheet**
	348934.4 E 431615.3 N	10/07/2014- 14/07/2014	Lancashire County Council	1/3

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
						(0.30)	Brown, slightly clayey, fine and medium SAND with rootlets.			
					21.09	0.30				
0.25	D1						Firm, in places stiff, brown mottled grey, slightly gravelly, silty CLAY of low plasticity with occasional brown, fine sand lenses. Gravel is subrounded, fine and medium including mudstone and quartz.			
0.25	J2									
0.50	D3									
0.50	J4									
1.20-1.65	U5 0.35		DRY	70 blows						
1.70	D6									
2.00-2.45	U7 0.25	1.50	DRY	90 blows						
						(3.90)				
2.50	D8									
2.80	D9									
3.00-1.20	B10									
3.00-3.45	U11 0.35	3.00	DRY	70 blows						
3.50	D12									
3.80	D13									
4.00-4.45	SPT N=14	4.00	DRY	1,2/3,3,4,4						
4.00-4.45	B14									
4.00-4.45	D15				17.19	4.20	Firm, brown, slightly gravelly, silty CLAY. Gravel is subrounded, fine and medium including mudstone.			
4.80	D16									
5.00-5.45	U17 0.45	4.50	DRY	60 blows			At 5.00m: very high plasticity.			
						(1.80)				
5.50	D18									
5.80	D19									
6.00-6.45	U20 0.35	6.00	MOIS	30 blows	15.39	6.00	Firm, brown, slightly sandy, silty CLAY.			
6.50	D21									
6.80	D22									
						(1.80)				
7.00-7.45	U23 0.45	7.00	DRY	35 blows						
7.50	D24									
7.80	D25				13.59	7.80				
8.00-8.45	SPT N=16	7.50	DRY	1,2/3,4,4,5			Firm, in places stiff, brown, silty CLAY of low plasticity with occasional brown, fine sand lenses.			

Remarks
Samples marked as J comprise 1 x amber jar and 1 x vial.
Borehole backfilled on completion - flagstone installed.
Excavating from 0.00m to 1.20m for 1.00 hour.

Scale (approx)	Logged By
1:40	TO

Figure No.
41455.BH221

IAN FARMER ASSOCIATES

Site	Borehole Number
Preston Western Distributor Road, Preston	BH221

Boring Method	Casing Diameter	Ground Level (mOD)	Client	Job Number
Cable Percussion	200mm cased to 9.00m 150mm cased to 20.00m	21.39	Lancashire County Council	41455
	Location	**Dates**	**Engineer**	**Sheet**
	348934.4 E 431615.3 N	10/07/2014- 14/07/2014	Lancashire County Council	2/3

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
8.00-8.45	B26									
8.00-8.45	D27									
8.80	D28					(2.20)				
9.00-9.45	U29 0.45	9.00	DRY	65 blows						
9.50	D30									
9.80	D31									
10.00-10.44	SPT 50/285	10.00	DRY	5,9/11,13,15,11	11.39	10.00	Very dense, brown, slightly silty, fine and medium SAND with rare fine gravel.			
10.00	D33									
10.00-10.45	B32									
10.00-10.45	D34									
11.00	D35									
11.50-11.95	SPT N=52	11.50	11.00	4,7/10,12,14,16		(3.00)				
11.50-11.95	B36									
11.50-11.95	D37									
12.50	D38						Below 12.50m: fine to coarse.			
13.00-13.45	SPT N=22	13.00	12.10	2,3/4,5,6,7	8.39	13.00	Medium dense, brown, slightly silty, slightly gravelly, fine to coarse SAND. Gravel is angular to subrounded, fine to coarse including mudstone.			
13.00-13.45	B39									
13.00-13.45	D40									
14.00	D41									
14.50-14.95	SPT N=20	14.50	13.00	2,3/4,5,5,6						
14.50-14.95	B42									
14.50-14.95	D43					(4.00)				
15.50	D44									
16.00-16.45	SPT N=23	16.00	14.50	2,4/5,5,6,7						

Remarks
Water added from 10.50m to 13.00m. Water added from 13.00m to 17.00m.

Scale (approx)	Logged By
1:40	TO

Figure No.
41455.BH221

IAN FARMER ASSOCIATES

Site	Borehole Number
Preston Western Distributor Road, Preston	BH221

Boring Method	Casing Diameter	Ground Level (mOD)	Client	Job Number
Cable Percussion	200mm cased to 9.00m 150mm cased to 20.00m	21.39	Lancashire County Council	41455
	Location	**Dates**	**Engineer**	**Sheet**
	348934.4 E 431615.3 N	10/07/2014- 14/07/2014	Lancashire County Council	3/3

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description
16.00-16.45	B45						
16.00-16.45	D46						
					4.39	17.00	
17.00	D47						Stiff, brown, silty CLAY of low to intermediate plasticity.
17.50-17.95	U48 0.45	17.50	WET	110 blows		(1.20)	
18.00	D49						
18.20	D50			Water strike(1) at 18.20m, no rise after 20 mins.	3.19	18.20	
18.20	W51						Dense, brown, slightly gravelly, fine to coarse SAND. Gravel is angular to subrounded, fine to coarse including mudstone,
18.50-18.95	SPT N=47	18.50	14.00	5,7/10,11,12,14			
18.50-18.95	B52						
18.50-18.95	D53						
						(2.25)	
19.50	D54						
20.00-20.45	SPT N=50	20.00	17.00	5,9/11,12,13,14			
20.00-20.45	B55						
					0.94	20.45	
							Complete at 20.45m

Legend

Water

Instr

▼1

Remarks
Chiselling from 18.00m to 18.20m for 0.50 hours.

Scale (approx)	Logged By
1:40	TO

Figure No.
41455.BH221

IAN FARMER ASSOCIATES

Site	Borehole Number
Preston Western Distributor Road, Preston	BH222

Boring Method	Casing Diameter	Ground Level (mOD)	Client	Job Number
Cable Percussion	200mm cased to 10.00m 150mm cased to 19.50m	22.61	Lancashire County Council	41455
	Location	**Dates**	**Engineer**	**Sheet**
	348980 E 431628.8 N	14/07/2014- 15/07/2014	Lancashire County Council	1/3

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						(0.40)	Brown, slightly clayey, fine and medium SAND with rootlets. (Topsoil).		
0.25	D1				22.21	0.40			
0.25	J2						Firm, brown mottled dark grey, slightly sandy, silty CLAY of low plasticity.		
0.40-1.20	B3								
0.50	D4								
0.50	J5								
						(1.30)			
1.20-1.65	U6 0.35		DRY	60 blows					
1.70	D7				20.91	1.70			
							Firm, in places stiff, brown, slightly gravelly, silty CLAY of low plasticity. Gravel is angular to subrounded, fine and medium including mudstone.		
2.00-2.45	U8 0.40	1.50	DRY	67 blows					
2.50	D9								
2.80	D10								
3.00-3.45	U11 0.40	3.00	DRY	70 blows					
3.50	D12								
3.80	D13								
4.00-4.45	SPT N=19	4.00	DRY	2,3/4,4,5,6					
4.00-4.45	B14								
4.00-4.45	D15								
4.80	D16								
5.00-5.45	U17 0.45	4.50	DRY	65 blows					
5.50	D18								
5.80	D19								
6.00-6.45	U20 0.45	6.00	DRY	60 blows					
6.50	D21								
6.80	D22								
7.00-7.45	U23 0.45	7.00	DRY	65 blows					
						(11.00)			
7.50	D24								
7.80	D25								
8.00-8.45	SPT N=23	7.50	DRY	2,3/5,5,6,7					

Remarks
Borehole backfilled on completion - flagstone installed.
Samples marked as J comprise 1 x amber jar and 1 x vial.
Excavating from 0.00m to 1.20m for 1.00 hour.

Scale (approx)	Logged By
1:40	DO

Figure No.
41455.BH222

IAN FARMER ASSOCIATES

Site	Borehole Number
Preston Western Distributor Road, Preston	BH222

Boring Method	Casing Diameter	Ground Level (mOD)	Client	Job Number
Cable Percussion	200mm cased to 10.00m 150mm cased to 19.50m	22.61	Lancashire County Council	41455
	Location	**Dates**	**Engineer**	**Sheet**
	348980 E 431628.8 N	14/07/2014- 15/07/2014	Lancashire County Council	2/3

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
8.00-8.45	B26						At 8.00m: intermediate plasticity.		
8.00-8.45	D27								
8.80	D28								
9.00-9.45	U29 0.45	9.00	DRY	70 blows					
9.50	D30								
9.80	D31								
10.00-10.45	U32 0.45	9.00	7.50	70 blows					
10.50	D33								
11.00	D34								
11.50-11.95	SPT N=22	11.50	DRY	2,4/4,5,6,7					
11.50-11.95	B35								
11.50-11.95	D36								
12.70	D37				9.91	12.70	Medium dense, brown, fine to coarse SAND with occasional clayey silt lenses.		
13.00-13.45	SPT N=18	13.00	DRY	1,2/3,4,5,6					
13.00-13.45	B38								
13.00-13.45	D39								
14.00	D40					(2.80)			
14.50-14.95	SPT N=15	14.50	14.00	1,2/3,3,4,5					
14.50-14.95	B41								
14.50-14.95	D42								
15.50	D43				7.11	15.50	Firm, in places stiff, brown, silty CLAY of low plasticity with occasional brown, fine sand lenses.		

Remarks
Water added from 13.00m to 15.50m.

Scale (approx)	Logged By
1:40	DO

Figure No.
41455.BH222

IAN FARMER ASSOCIATES

Site	Borehole Number
Preston Western Distributor Road, Preston	BH222

Boring Method	Casing Diameter	Ground Level (mOD)	Client	Job Number
Cable Percussion	200mm cased to 10.00m 150mm cased to 19.50m	22.61	Lancashire County Council	41455
	Location	**Dates**	**Engineer**	**Sheet**
	348980 E 431628.8 N	14/07/2014- 15/07/2014	Lancashire County Council	3/3

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
16.00-16.45	U44 0.40	16.00	WET	70 blows					
16.50	D45					(2.50)			
17.00	D46								
17.50-17.95	U47 0.35	17.50	WET	Slight Seepage(1) at 17.30m. 120 blows					▽1
18.00	D48				4.61	18.00	Medium dense, brown, clayey, fine to coarse SAND with firm clay pockets.		
18.70	D49								
19.00-19.45 19.00-19.50	U51 NR B50	19.00	WET	120 blows		(2.30)			
19.70	D52								
20.00-20.29 20.00-20.30 20.00-20.30	SPT 50/140 B53 D54	19.50	DRY	9,16/25,25	2.31	20.30	Below 20.29m: very dense. Complete at 20.30m		

Remarks
Chiselling from 17.10m to 17.30m for 0.50 hours.

Scale (approx)	Logged By
1:40	DO

Figure No.
41455.BH222

IAN FARMER ASSOCIATES

Site	Borehole Number
Preston Western Distributor Road, Preston	BH223

Boring Method	Casing Diameter	Ground Level (mOD)	Client	Job Number
Cable Percussion	150mm cased to 20.80m	20.65	Lancashire County Council	41455
	Location	**Dates**	**Engineer**	**Sheet**
	348940.1 E 431553.2 N	15/07/2014	Lancashire County Council	1/3

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						(0.30)	Grass over TOPSOIL: Brown, slightly clayey, fine and medium SAND with rootlets.		
					20.35	0.30			
0.25	D1						Firm locally stiff, brown mottled grey, slightly sandy, slightly gravelly, silty CLAY. Gravel is angular to subrounded, fine to coarse of mudstone.		
0.25	J2								
0.50	D4								
0.50	J5								
0.50-1.00	B3								
						(1.70)			
1.20-1.65	U6 0.45	1.20	DRY	64 blows					
1.70	D7								
1.80	D8								
					18.65	2.00			
2.00-2.45	U9 0.45	2.00	DRY	61 blows			Firm locally stiff, brown, slightly sandy, slightly gravelly, silty CLAY of low plasticity. Gravel is angular to subrounded, fine and medium of mudstone.		
2.50	D10								
2.80	D11								
3.00-3.45	U12 0.45	3.00	DRY	42 blows					
3.50	D13								
3.80	D14								
4.00-4.45	U15 0.45	4.00	DRY	40 blows					
4.50	D16								
4.80	D17								
5.00-5.45	U18 0.45	5.00	DRY	49 blows					
5.50	D19								
5.80	D20								
6.00-6.45	U21 0.45	6.00	DRY	53 blows					
6.50	D22								
6.80	D23								
7.00-7.45	U24 0.45	7.00	DRY	43 blows					
						(11.00)			
7.50	D25								
7.80	D26								

Remarks
Samples marked as J comprise 1 x amber jar and 1 x vial.
Borehole backfilled on completion - flagstone installed.
Please note the CPT at 20.80m has been exampled from 25 blows over 27mm
Excavating from 0.00m to 1.20m for 1.00 hour.

Scale (approx)	Logged By
1:40	TO

Figure No.
41455.BH223

IAN FARMER ASSOCIATES

Site	Borehole Number
Preston Western Distributor Road, Preston	BH223

Boring Method	Casing Diameter	Ground Level (mOD)	Client	Job Number
Cable Percussion	150mm cased to 20.80m	20.65	Lancashire County Council	41455
	Location	**Dates**	**Engineer**	**Sheet**
	348940.1 E 431553.2 N	15/07/2014	Lancashire County Council	2/3

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
8.00-8.45	U27 0.45	8.00	DRY	47 blows					
8.50	D28								
8.80	D29								
9.00-9.45	U30 0.45	9.00	DRY	46 blows					
9.50	D31								
9.80	D32								
10.00-10.45	U33 0.45	10.00	DRY	56 blows					
10.50	D34								
11.00	D35								1
11.50-11.95	U36 0.45	11.50	DRY	58 blows					
12.00	D37								
13.00-13.45	B38			Water strike(1) at 13.00m, rose to 11.30m in 20 mins, sealed at 15.20m.	7.65	13.00	Medium dense, brown, slightly clayey, fine and medium SAND.		1
13.00-13.45	D39								
13.00-13.45	SPT N=20	13.00	13.00	3,4/3,5,5,7					
14.00	D40					(2.20)			
14.50-14.95	SPT N=14	14.50	13.10	2,3/3,4,3,4					
14.50-14.95	B41								
14.50-14.95	D42								
15.20	D43				5.45	15.20	Firm locally stiff, brown, slightly sandy, silty CLAY of low plasticity.		
15.50-14.95	U44 0.45	15.00	DRY	54 blows					

Remarks

Scale (approx)	Logged By
1:40	TO

Figure No. 41455.BH223

IAN FARMER ASSOCIATES

Site	Borehole Number
Preston Western Distributor Road, Preston	BH223

Boring Method	Casing Diameter	Ground Level (mOD)	Client	Job Number
Cable Percussion	150mm cased to 20.80m	20.65	Lancashire County Council	41455
	Location	**Dates**	**Engineer**	**Sheet**
	348940.1 E 431553.2 N	15/07/2014	Lancashire County Council	3/3

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
16.00	D45					(2.60)			
17.00	D46								
17.00-17.45	U47 0.45	17.00	DRY	62 blows Water strike(2) at 17.10m, rose to 16.70m in 20 mins.					
17.50	D48								
17.80	D49				2.85	17.80	Dense, brown, very, sandy, angular to subrounded, fine and medium GRAVEL of sandstone and mudstone.		
18.00-18.45	SPT(C) N=40	18.00	17.20	5,8/9,10,10,11					
18.00-18.45	B50					(1.40)			
19.00	D51								
19.50-19.72	SPT 15/72	19.50	17.60	15,20/15	1.45	19.20	Weathered red brown SANDSTONE recovered as sandy, subangular, medium and coarse gravel with low cobble content. Between 19.50m and 19.95m: recovered as brown, gravelly sand. Gravel is angular to subrounded of sandstone and mudstone.		
19.50-19.73	D52								
19.70-20.00	B53					(1.60)			
20.50-20.80	D54								
20.80-20.87	SPT(C) 25*/38 25/27	20.80	13.10	25/25	-0.15	20.80	Complete at 20.80m		

Remarks
Chiselling from 20.00m to 20.80m for 1.00 hour.

Scale (approx)	Logged By
1:40	TO

Figure No.
41455.BH223

IAN FARMER ASSOCIATES

Site	Borehole Number
Preston Western Distributor Road, Preston	BH224

Boring Method	Casing Diameter	Ground Level (mOD)	Client	Job Number
Cable Percussion	150mm cased to 20.00m	21.22	Lancashire County Council	41455
	Location	**Dates**	**Engineer**	**Sheet**
	348995.8 E 431555.4 N	14/07/2014-15/07/2014	Lancashire County Council	1/3

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
						(0.30)	TOPSOIL.			
					20.92	0.30				
0.25	D1						Firm, brown mottled grey, slightly sandy, slightly gravelly CLAY of low plasticity with occasional grey, fine sand lenses. Gravel is angular to subrounded, fine and medium including mudstone and sandstone.			
0.25	J2									
0.50	D4									
0.50	J5									
0.50-1.00	B3									
1.20-1.65	U6 0.45	1.20	DRY	68 blows		(2.20)				
1.70	D7									
1.80	D8									
2.00-2.45	U9 0.45	2.00	DRY	38 blows						
2.50	D10				18.72	2.50				
2.80	D11						Firm, brown, slightly sandy, slightly gravelly CLAY of low plasticity. Gravel is angular to subrounded, fine and medium including mudstone and sandstone.			
3.00-3.45	SPT N=14	3.00	DRY	2,3/3,4,3,4					▽1	
3.00-3.45	B12			Seepage(1) at 3.10m, sealed at 3.40m.						
3.00-3.45	D13									
3.80	D14									
4.00-4.45	U15 0.45	4.00	DRY	48 blows		(4.00)				
4.50	D16									
4.80	D17									
5.00-5.45	U18 0.45	5.00	DRY	49 blows						
5.50	D19									
5.80	D20									
6.00-6.45	U21 0.45	6.00	DRY	52 blows						
6.50	D22				14.72	6.50				
6.80	D23						Firm, in places stiff, brown slightly gravelly CLAY. Gravel is angular to subrounded, fine and medium including mudstone.			
7.00-7.45	U24 0.45	7.00	DRY	54 blows						
7.50	D25					(2.30)				
7.80	D26									

Remarks
Samples marked as J comprise 1 x amber jar and 1 x vial.
Excavating from 0.00m to 1.20m for 1.00 hour.

Scale (approx)	Logged By
1:40	JC

Figure No. 41455.BH224