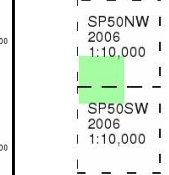


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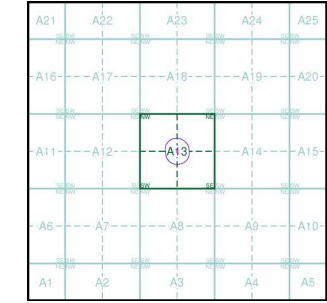
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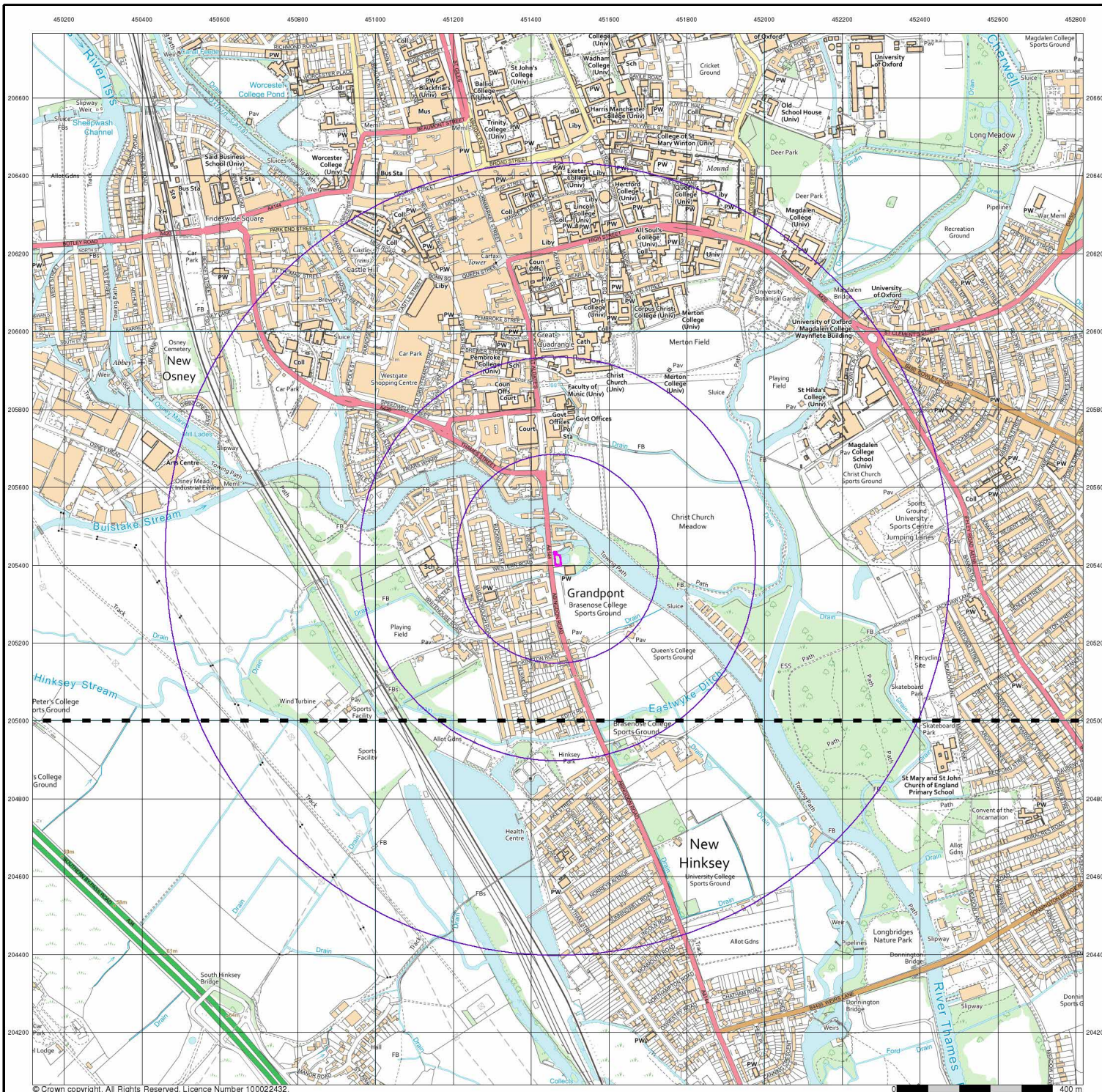
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# Envirocheck<sup>®</sup>

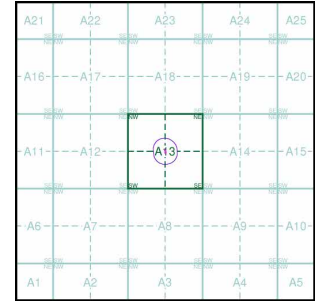
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	Title : <b>GENERAL SITE PHOTOGRAPHS</b>	Report Date : December 2020
RISK MANAGEMENT LIMITED Tel : 01883 343572	Project Name : Grandpont House, Abingdon Road, Oxford OX1 4LD	Plate <b>1</b> Job No : RML 7478






	<p>Title : <b>GENERAL SITE PHOTOGRAPHS</b></p>	<p>Report Date : December 2020</p>
<p>RISK MANAGEMENT LIMITED Tel : 01883 343572</p>	<p>Project Name : Grandpont House, Abingdon Road, Oxford OX1 4LD</p>	<p>Plate <b>2</b> Job No : RML 7478</p>





	<p>Title : <b>GENERAL SITE PHOTOGRAPHS</b></p>	<p>Report Date : December 2020</p>
<p>RISK MANAGEMENT LIMITED Tel : 01883 343572</p>	<p>Project Name : Grandpont House, Abingdon Road, Oxford OX1 4LD</p>	<p>Plate <b>3</b> Job No : RML 7478</p>

	Stratum Description	Legend
	<p>Crushed Stone MADE GROUND (fine to coarse sub-angular to rounded gravel with orange-brown clayey sand and brick fragments).</p>	
1	<p>MADE GROUND (dark brown silty sandy clay with brick fragments and gravel).</p>	
2	<p>Soil grey and dark brown, silty sandy CLAY with occasional organic material and some fine to coarse sub-angular to rounded gravel and roots.</p>	
3	<p>Medium-dense, to very dense brown slightly clayey sandy fine to coarse sub-angular to rounded GRAVEL. Borehole terminated at 3.00m depth</p>	
4		
5		

	Stratum Description	Legend
1	<p>Crushed Stone</p> <p>MADE GROUND (fine to coarse sub-angular to rounded gravel with orange-brown sand and brick fragments).</p>	
1	<p>MADE GROUND (dark brown silty sandy clay with brick fragments and gravel).</p>	
2	<p>Very soft grey and dark brown very silty CLAY with fine to coarse sub-angular to sub-rounded gravel and roots.</p>	
3	<p>Medium-dense, to very dense brown slightly clayey sandy fine to coarse sub-angular to rounded GRAVEL.</p> <p>Borehole terminated at 3.00m depth</p>	
4		
5		

	Stratum Description	Legend
	Topsoil	
	MADE GROUND (brown silty clay with brick fragments and roots).	
1	Firm brown silty CLAY with fine to coarse sub-angular to rounded gravel and roots.	
2	Soil grey and dark brown very silty sandy CLAY with occasional fine to coarse sub-angular to sub-rounded gravel and roots.	
3 4 5	Brown slightly clayey sandy fine to coarse sub-angular to rounded GRAVEL. Borehole terminated at 2.10m depth	



	Stratum Description	Legend
	Grass over Topsoil	
	MADE GROUND (dark brown silty clay with occasional brick fragments and gravel).	
1	So $\bar{O}$ grey and dark brown very silty sandy CLAY with occasional fine to coarse sub-angular to sub-rounded gravel and roots.	
	So $\bar{O}$ grey-blue, organic, very silty CLAY.	
2	Brown slightly clayey sandy fine to coarse sub-angular to rounded GRAVEL. Borehole terminated at 1.90m depth	
3		
4		
5		





# Standard Penetration Test (SPT) versus Depth Profile

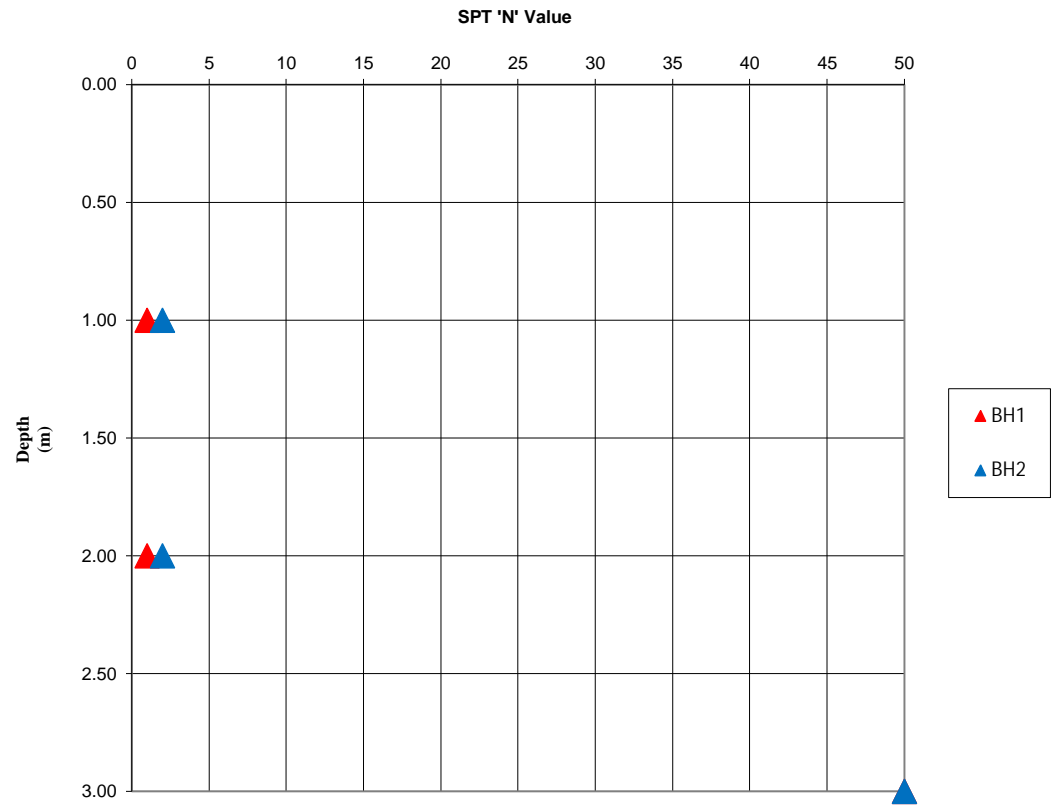
Risk Management Limited  
Tel : 01883 343572

Project Name : Grandpont House, Abingdon Road, Oxford OX1 4LD

Job No. : RML 7478

Date : December 2020

BH1		BH2			
Depth (m)	SPT 'N' value	Depth (m)	SPT 'N' value		
1.00	1	1.00	2		
2.00	1	2.00	2		
3.00	50	3.00	50		



NB : SPT 'N' values greater than 50 reported as 50 above





## FALLING HEAD PERMEABILITY TEST

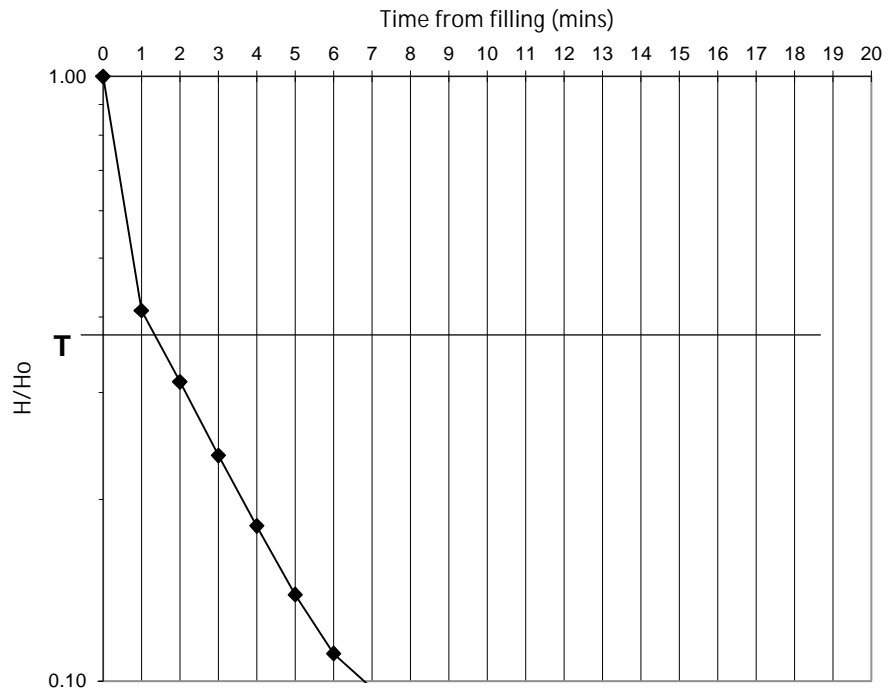
Risk Management Limited  
Tel : 01883 343572

Project Name : Grandpont House, Abingdon Road, Oxford  
OX1 4LD

### SOAKAWAY TEST SA1 (BH1)

Job No. RML 7478  
Date : December 2020

Test Depth		H <sub>0</sub> =	
1.44		1.44	
Depth (m)	Time (mins)	H	H/H <sub>0</sub>
0.000	0	1.44	1.00
0.850	1	0.59	0.41
0.990	2	0.45	0.31
1.100	3	0.34	0.24
1.180	4	0.26	0.18
1.240	5	0.20	0.14
1.280	6	0.16	0.11
1.300	7	0.14	0.10
1.310	8	0.13	0.09
1.320	9	0.12	0.08
1.330	10	0.11	0.08
1.360	15	0.08	0.06
1.380	20	0.06	0.04



Diameter of pipe =	0.054	(m)
Area (A) =	0.0023	(m <sup>2</sup> )
Intake factor (F) =	0.15	
Basic Time Factor (T) =	1.4	(min)
Permeability (k) =	1.90E-04	m/sec





Sample Details			Description	Classification Tests					Density Tests		Undrained Triaxial Compression Tests			Chemical Results				Other tests and comments
BH No.	Depth (m)	Sample No.		Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index	<425 mic (%)	Bulk (Mg/m <sup>3</sup> )	Dry (Mg/m <sup>3</sup> )	Cell Pressure kPa	Deviator Stress kPa	Mean Shear Stress kPa	pH	W/S SO <sub>4</sub> (g/l)	Total SO <sub>4</sub> (%)	Water SO <sub>4</sub> (g/l)	
BH1	1.00	D3																
	2.00	D5	Soft, grey and dark brown, silty sandy CLAY with occasional organic material and fine to coarse sub-angular to rounded gravel.	26	23	18	5	90	2.01	1.59	40	67	34	8.9				Class MI
	2.50	D6	Soft, grey and dark brown, organic, silty sandy CLAY with occasional organic material and fine to coarse sub-angular to rounded gravel.	46					1.79	1.22	50	60	30					
BH2	0.50	D2												8.6	<0.02			
	2.00	D5	Very soft, grey and dark brown, very silty CLAY with occasional fine to coarse sub-angular to sub-rounded gravel and roots.	29					1.83	1.42	40	38	19					
DIS3	0.50	D2												8.2				
	1.50	D4												8.6	0.03			
DIS4	1.00	D3	Soft, grey and dark brown, silty sandy CLAY with occasional fine to coarse sub-angular to sub-rounded gravel and roots.	20					2.01	1.67	20	64	32					
	1.50	D4	Soft, grey and dark brown, silty sandy CLAY with occasional fine to coarse sub-angular to sub-rounded gravel and roots.	33	45	27	18	60	2.16	1.62	30	77	39					Class MI

**SUMMARY OF GEOTECHNICAL TESTING**

Project Name : Grandpont House, Abingdon Road, Oxford OX1 4LD

Project No. RML 7478

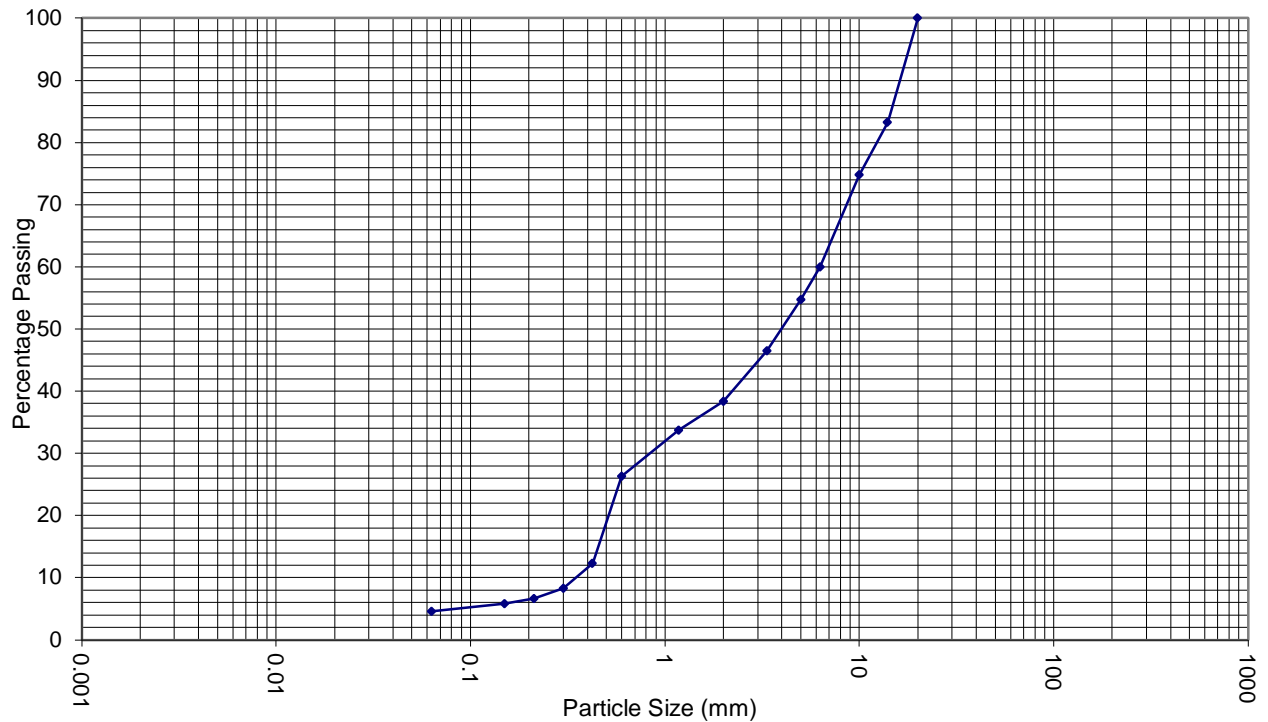
Borehole No. BH1

Sample No. D7

Depth (m) 3.00

Test Method : BS 1377 : Part 2 : 1990 : Clause 9

Sieve (mm)	Passing (%)	Sieve (mm)	Passing (%)
200	100	2	38
125	100	1.18	34
90	100	0.6	26
75	100	0.425	12
63	100	0.3	8
50	100	0.212	7
37.5	100	0.15	6
28	100	0.063	5
20	100	Pipette	
14	83	Particle Size	% Passing
10	75		
6.3	60		
5	55		
3.35	46		



CLAY	Fine	Medium	Coarse	Fine	Medium	Coarse	Fine	Medium	Coarse	COBBLES	BOULDERS
	SILT			SAND			GRAVEL				

Description :

Brown slightly clayey, sandy, fine to medium angular to sub-rounded GRAVEL.





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Ponswood Industrial Estate  
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TN38 9BY  
Telephone: (01424) 718618

[cs@elab-uk.co.uk](mailto:cs@elab-uk.co.uk)  
[info@elab-uk.co.uk](mailto:info@elab-uk.co.uk)

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## THE ENVIRONMENTAL LABORATORY LTD

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**Analytical Report Number:** 20-31282

**Issue:** 1

**Date of Issue:** 17/12/2020

**Contact:** Malcolm Price

**Customer Details:** Risk Management Ltd  
10 Coopers Place  
Combe Lane  
Godalming  
SurrevGU8 5SZ

**Quotation No:** Q19-01475

**Order No:** RML 7478

**Customer Reference:** RML 7478

**Date Received:** 10/12/2020

**Date Approved:** 17/12/2020

**Details:** Grandpont House, Abingdon Road, Oxford, OX1 4LD

**Approved by:** 

Mike Varley, Technical Manager

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

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## Sample Summary

Report No.: 20-31282, issue number 1

Elab No.	Client's Ref.	Date Sampled	Date Scheduled	Description	Deviations
222535	BH1 D3 1.00	04/12/2020	10/12/2020	Sandy silty loam	
222536	BH2 D2 0.50	04/12/2020	10/12/2020	Sandy silty loam	
222537	DIS3 D2 0.50	04/12/2020	10/12/2020	Silty loam	
222538	DIS3 D4 1.50	04/12/2020	10/12/2020	Silty loam	



# Results Summary

Report No.: 20-31282, issue number 1

ELAB Reference	222535	222536	222537	222538
Customer Reference	D3	D2	D2	D4
Sample ID				
Sample Type	SOIL	SOIL	SOIL	SOIL
Sample Location	BH1	BH2	DIS3	DIS3
Sample Depth (m)	1.00	0.50	0.50	1.50
Sampling Date	04/12/2020	04/12/2020	04/12/2020	04/12/2020

Determinand	Codes	Units	LOD				
<b>Soil sample preparation parameters</b>							
Moisture Content	N	%	0.1	21.9	n/t	23.6	n/t
Stones Content	N	%	0.1	17.9	n/t	17.0	n/t
Material removed	N	%	0.1	17.9	55.8	17.0	< 0.1
Description of Inert material removed	N		0	Stones	Stones	Stones	None
<b>Metals</b>							
Arsenic	M	mg/kg	1	27.9	n/t	34.8	n/t
Cadmium	M	mg/kg	0.5	< 0.5	n/t	< 0.5	n/t
Chromium	M	mg/kg	5	32.2	n/t	30.7	n/t
Copper	M	mg/kg	5	41.8	n/t	62.2	n/t
Lead	M	mg/kg	5	147	n/t	381	n/t
Mercury	M	mg/kg	0.5	0.9	n/t	2.5	n/t
Nickel	M	mg/kg	5	28.9	n/t	29.0	n/t
Selenium	M	mg/kg	1	< 1.0	n/t	< 1.0	n/t
Zinc	M	mg/kg	5	91.3	n/t	132	n/t
<b>Anions</b>							
Water Soluble Sulphate	M	g/l	0.02	n/t	< 0.02	n/t	0.03
<b>Inorganics</b>							
Free Cyanide	N	mg/kg	1	< 1.0	n/t	< 1.0	n/t
Hexavalent Chromium	N	mg/kg	0.8	< 0.8	n/t	< 0.8	n/t
Total Cyanide	M	mg/kg	1	< 1.0	n/t	< 1.0	n/t
<b>Miscellaneous</b>							
pH	M	pH units	0.1	8.9	8.6	8.2	8.6
Soil Organic Matter	U	%	0.1	1.6	n/t	4.4	n/t
<b>Phenols</b>							
Phenol	M	mg/kg	1	< 1	n/t	< 1	n/t
M,P-Cresol	N	mg/kg	1	< 1	n/t	< 1	n/t
O-Cresol	N	mg/kg	1	< 1	n/t	< 1	n/t
3,4-Dimethylphenol	N	mg/kg	1	< 1	n/t	< 1	n/t
2,3-Dimethylphenol	M	mg/kg	1	< 1	n/t	< 1	n/t
2,3,5-trimethylphenol	M	mg/kg	1	< 1	n/t	< 1	n/t
Total Monohydric Phenols	N	mg/kg	5	< 5	n/t	< 5	n/t
<b>Polyaromatic hydrocarbons</b>							
Naphthalene	M	mg/kg	0.1	< 0.1	n/t	< 0.1	n/t
Acenaphthylene	M	mg/kg	0.1	< 0.1	n/t	< 0.1	n/t
Acenaphthene	M	mg/kg	0.1	< 0.1	n/t	< 0.1	n/t
Fluorene	M	mg/kg	0.1	< 0.1	n/t	< 0.1	n/t
Phenanthrene	M	mg/kg	0.1	< 0.1	n/t	< 0.1	n/t
Anthracene	M	mg/kg	0.1	< 0.1	n/t	< 0.1	n/t
Fluoranthene	M	mg/kg	0.1	< 0.1	n/t	0.3	n/t
Pyrene	M	mg/kg	0.1	< 0.1	n/t	0.3	n/t
Benzo(a)anthracene	M	mg/kg	0.1	< 0.1	n/t	0.2	n/t
Chrysene	M	mg/kg	0.1	< 0.1	n/t	0.2	n/t
Benzo(b)fluoranthene	M	mg/kg	0.1	< 0.1	n/t	0.4	n/t
Benzo(k)fluoranthene	M	mg/kg	0.1	< 0.1	n/t	0.6	n/t
Benzo(a)pyrene	M	mg/kg	0.1	< 0.1	n/t	0.2	n/t
Indeno(1,2,3-cd)pyrene	M	mg/kg	0.1	< 0.1	n/t	0.2	n/t
Dibenzo(a,h)anthracene	M	mg/kg	0.1	< 0.1	n/t	< 0.1	n/t
Benzo[g,h,i]perylene	M	mg/kg	0.1	< 0.1	n/t	0.2	n/t
Total PAH(16)	M	mg/kg	0.4	< 0.4	n/t	2.9	n/t

# Results Summary

Report No.: 20-31282, issue number 1

ELAB Reference	222535	222536	222537	222538
Customer Reference	D3	D2	D2	D4
Sample ID				
Sample Type	SOIL	SOIL	SOIL	SOIL
Sample Location	BH1	BH2	DIS3	DIS3
Sample Depth (m)	1.00	0.50	0.50	1.50
Sampling Date	04/12/2020	04/12/2020	04/12/2020	04/12/2020

Determinand	Codes	Units	LOD				
<b>BTEX</b>							
Benzene	M	ug/kg	10	< 10.0	n/t	< 10.0	n/t
Toluene	M	ug/kg	10	< 10.0	n/t	< 10.0	n/t
Ethylbenzene	M	ug/kg	10	< 10.0	n/t	< 10.0	n/t
Xylenes	M	ug/kg	10	< 10.0	n/t	< 10.0	n/t
MTBE	N	ug/kg	10	< 10.0	n/t	< 10.0	n/t
<b>TPH CWG</b>							
>C5-C6 Aliphatic	N	mg/kg	0.01	< 0.01	n/t	< 0.01	n/t
>C6-C8 Aliphatic	N	mg/kg	0.01	< 0.01	n/t	< 0.01	n/t
>C8-C10 Aliphatic	N	mg/kg	1	< 1.0	n/t	< 1.0	n/t
>C10-C12 Aliphatic	M	mg/kg	1	< 1.0	n/t	< 1.0	n/t
>C12-C16 Aliphatic	M	mg/kg	1	< 1.0	n/t	< 1.0	n/t
>C16-C21 Aliphatic	M	mg/kg	1	< 1.0	n/t	< 1.0	n/t
>C21-C35 Aliphatic	M	mg/kg	1	< 1.0	n/t	< 1.0	n/t
>C35-C40 Aliphatic	M	mg/kg	1	< 1.0	n/t	< 1.0	n/t
Total aliphatic hydrocarbons (>C5 - C40)	N	mg/kg	1	< 1.0	n/t	< 1.0	n/t
>C5-C7 Aromatic	N	mg/kg	0.01	< 0.01	n/t	< 0.01	n/t
>C7-C8 Aromatic	N	mg/kg	0.01	< 0.01	n/t	< 0.01	n/t
>C8-C10 Aromatic	N	mg/kg	1	< 1.0	n/t	< 1.0	n/t
>C10-C12 Aromatic	M	mg/kg	1	< 1.0	n/t	< 1.0	n/t
>C12-C16 Aromatic	M	mg/kg	1	< 1.0	n/t	< 1.0	n/t
>C16-C21 Aromatic	M	mg/kg	1	< 1.0	n/t	< 1.0	n/t
>C21-C35 Aromatic	M	mg/kg	1	< 1.0	n/t	< 1.0	n/t
>C35-C40 Aromatic	M	mg/kg	1	< 1.0	n/t	< 1.0	n/t
Total aromatic hydrocarbons (>C5 - C40)	N	mg/kg	1	< 1.0	n/t	< 1.0	n/t
Total petroleum hydrocarbons (>C5 - C40)	N	mg/kg	1	< 1.0	n/t	< 1.0	n/t



## Results Summary

Report No.: 20-31282, 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 (%)
222535	1.00	BH1 D3	Brown Soil, Stones, Clinker, Glass	No asbestos detected	n/t	n/t	n/t	n/t
222537	0.50	DIS3 D2	Brown Soil, Stones, Clinker, Plant Material	No asbestos detected	n/t	n/t	n/t	n/t

## Method Summary

Report No.: 20-31282, issue number 1

Parameter	Codes	Analysis Undertaken On	Date Tested	Method Number	Technique
<b>Soil</b>					
Free cyanide	N	As submitted sample	14/12/2020	107	Colorimetry
Hexavalent chromium	N	As submitted sample	14/12/2020	110	Colorimetry
pH	M	Air dried sample	11/12/2020	113	Electromeric
Phenols in solids	M	As submitted sample	11/12/2020	121	HPLC
PAH (GC-FID)	M	As submitted sample	11/12/2020	133	GC-FID
Water soluble anions	M	Air dried sample	11/12/2020	172	Ion Chromatography
Low range Aliphatic hydrocarbons soil	N	As submitted sample	14/12/2020	181	GC-MS
Low range Aromatic hydrocarbons soil	N	As submitted sample	14/12/2020	181	GC-MS
BTEX in solids	M	As submitted sample	14/12/2020	181A	GC-MS
Total cyanide	M	As submitted sample	14/12/2020	204	Colorimetry
TPH CWG soil by gc-gc	M	As submitted sample	11/12/2020	271	
Asbestos identification	U	Air dried sample	14/12/2020	280	Microscopy
Aqua regia extractable metals	M	Air dried sample	11/12/2020	300	ICPMS
Soil organic matter	U	Air dried sample	11/12/2020	BS1377:P3	Titrimetry

Tests marked N are not UKAS accredited



## Report Information

Report No.: 20-31282, 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





## Undrained Shear Strength versus Depth Profile

Risk Management Limited  
Tel : 01883 343572

Project Name : Grandpont House, Abingdon Road, Oxford OX1 4LD

Job No. : RML 7478  
Date : December 2020

BH1		BH2		DIS4	
Depth (m)	Shear Strength (kN/m <sup>2</sup> )	Depth (m)	Shear Strength (kN/m <sup>2</sup> )	Depth (m)	Shear Strength (kN/m <sup>2</sup> )
2.00	10	2.00	19	1.00	32
2.50	20			1.50	39



