

Appendix D

Geotechnical Test Results and Geotechnical Plots

Geotechnical Laboratory Test Results



LABORATORY REPORT



4043

Contract Number: PSL20/7226

Report Date: 08 January 2021
Client's Reference: C-16153
Client Name: Hydrock
Northern Assurance Buildings
9-21 Princess Street
Albert Square
Manchester
M2 4DN

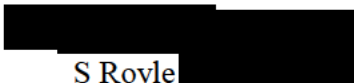
For the attention of: Cameron Adams

Contract Title: Himley Village, Bicester
Date Received: 10/12/2020
Date Commenced: 10/12/2020
Date Completed: 8/1/2021

Notes: Opinions and Interpretations are outside the UKAS Accreditation

A copy of the Laboratory Schedule of accredited tests as issued by UKAS is attached to this report. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced other than in full, without the prior written approval of the laboratory.

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Page 1 of

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
TP59	B2	B	0.50	1.00	Brown GRAVEL with many cobbles.
TP03	B4	B	1.50	2.00	Brown highly weathered MUDSTONE.
TP43	B3	B	1.00	1.50	Brown gravelly sandy CLAY.
TP83	B4	B	2.00	2.40	Brown slightly gravelly slightly sandy CLAY.
TP72	D2	D	0.50		Brown gravelly sandy CLAY.
TP72	D3	D	1.20		Brown gravelly sandy CLAY.
TP59	D3	D	1.20		Brown slightly gravelly sandy CLAY.
TP01	B3	B	1.00	1.50	Brown mottled grey slightly gravelly sandy CLAY.
TP03	D3	D	0.90		Brown mottled grey slightly gravelly sandy CLAY.
TP07	D3	D	1.00		Brown slightly gravelly sandy CLAY.
TP10	D4	D	1.70		Brown gravelly sandy CLAY.
TP10	D5	D	2.60		Brown mottled grey slightly gravelly slightly sandy CLAY.
TP10	D6	D	3.00		Grey slightly gravelly slightly sandy CLAY.
TP08	D2	D	0.60		Brown slightly gravelly slightly sandy CLAY.
TP15	B4	B	2.00	2.50	Brown mottled grey slightly gravelly slightly sandy CLAY.
TP17	B3	B	1.00	1.40	Brown GRAVEL of cobbles.
TP22	D2	D	0.60		Brown slightly gravelly slightly sandy CLAY.
TP22	B3	B	1.00	1.50	Brown mottled grey slightly sandy CLAY.
TP20	D3	D	0.70		Brown slightly gravelly slightly sandy CLAY.



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Professional Soils Laboratory

Himley Village, Bicester

Contract No:

PSL20/7226

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C-16153

SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
TP53	B5	B	1.80	2.40	Brown mottled grey slightly sandy CLAY.
TP55	D2	D	0.50		Brown mottled grey slightly gravelly slightly sandy CLAY.
TP57	D2	D	1.00		Brown mottled grey slightly gravelly slightly sandy CLAY.
TP75	D2	D	0.50		Brown mottled grey slightly gravelly slightly sandy CLAY.
TP52	D3	D	1.00		Brown mottled grey slightly gravelly sandy CLAY.
TP60	D2	D	1.00		Brown gravelly very sandy CLAY.
TP60	D3	D	1.30		Brown gravelly sandy CLAY.
TP50	D3	D	0.90		Brown gravelly very sandy CLAY.
TP40	D2	D	0.50		Brown mottled grey slightly gravelly sandy CLAY.
TP40	D6	D	3.20		Grey slightly gravelly sandy CLAY.
TP38	D2	D	1.00		Brown mottled grey gravelly sandy CLAY.
TP27	D2	D	1.00		Brown mottled grey slightly gravelly sandy CLAY.
TP25	D6	D	2.90		Brown mottled grey slightly gravelly slightly sandy CLAY.
TP13	B2	D	0.60	1.20	Brown mottled grey slightly gravelly slightly sandy CLAY.
TP13	D3	D	1.50		Brown slightly gravelly sandy CLAY.
TP13	D4	D	2.40		Grey slightly gravelly slightly sandy CLAY.
TP13	D5	D	2.80		Grey slightly gravelly slightly sandy CLAY.
TP12	D2	D	0.50		Brown gravelly sandy CLAY.
TP12	D3	D	1.30		Brown gravelly sandy CLAY.



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SUMMARY OF LABORATORY SOIL DESCRIPTIONS

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Description of Sample
TP12	D4	D	2.30		Brown slightly gravelly slightly sandy CLAY.
TP12	D5	D	3.30		Grey slightly gravelly slightly sandy CLAY.
TP78	D3	D	1.00		Brown slightly gravelly slightly sandy CLAY.
TP78	D4	D	2.00		Brown highly weathered MUDSTONE.
TP78	D5	D	2.20		Brown highly weathered MUDSTONE.
TP71	D4	D	1.40		Brown mottled grey slightly gravelly slightly sandy CLAY.
TP42	D4	D	2.40		Brown slightly gravelly sandy CLAY.
TP42	D5	D	3.30		Grey highly weathered MUDSTONE.
TP48	D3	D	1.30		Light brown gravelly very sandy CLAY.
TP64	B3	B	1.50	2.00	Brown very gravelly very sandy CLAY.
TP79	D2	D	1.00		Brown mottled grey slightly gravelly sandy CLAY.
TP83	D2	D	1.00		Brown slightly gravelly slightly sandy CLAY.
TP44	D5	D	2.40		Brown highly weathered MUDSTONE.
TP66	D2	D	1.10		Brown mottled grey slightly gravelly sandy CLAY.
TP67	B2	B	0.30	1.00	Brown GRAVEL of cobbles.
TP67	D6	D	2.40		Brown highly weathered MUDSTONE.
TP81	D2	D	0.50		Brown gravelly very sandy CLAY.



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Contract No:

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SUMMARY OF SOIL CLASSIFICATION TESTS

(BS1377 : PART 2 : 1990)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Moisture Content % Clause 3.2	Linear Shrinkage % Clause 6.5	Particle Density Mg/m ³ Clause 8.2	Liquid Limit % Clause 4.3/4	Plastic Limit % Clause 5.3	Plasticity Index % Clause 5.4	Passing .425mm %	Remarks
TP59	B2	B	0.50	1.00	3.1		2.75		NP			
TP03	B4	B	1.50	2.00	11		2.72	32	17	15	48	Low Plasticity CL
TP43	B3	B	1.00	1.50	19		2.66	41	20	21	84	Intermediate Plasticity CI
TP83	B4	B	2.00	2.40	26		2.67	62	26	36	95	High Plasticity CH
TP72	D2	D	0.50		16							
TP72	D3	D	1.20		17			38	18	20	87	Intermediate Plasticity CI
TP59	D3	D	1.20		23			42	20	22	94	Intermediate Plasticity CI
TP01	B3	B	1.00	1.50	18			40	19	21	90	Intermediate Plasticity CI
TP03	D3	D	0.90		17			39	19	20	96	Intermediate Plasticity CI
TP07	D3	D	1.00		23			44	21	23	92	Intermediate Plasticity CI
TP10	D4	D	1.70		14			37	18	19	81	Intermediate Plasticity CI
TP10	D5	D	2.60		29							
TP10	D6	D	3.00		24			53	23	30	98	High Plasticity CH
TP08	D2	D	0.60		25			60	25	35	94	High Plasticity CH
TP15	B4	B	2.00	2.50	24			54	24	30	97	High Plasticity CH
TP22	D2	D	0.60		21			55	24	31	97	High Plasticity CH
TP20	D3	D	0.70		32			67	28	39	96	High Plasticity CH
TP53	B5	B	1.80	2.40	24			55	25	30	100	High Plasticity CH
TP55	D2	D	0.50		27			64	27	37	97	High Plasticity CH

SYMBOLS : NP : Non Plastic

* : Liquid Limit and Plastic Limit Wet Sieved.



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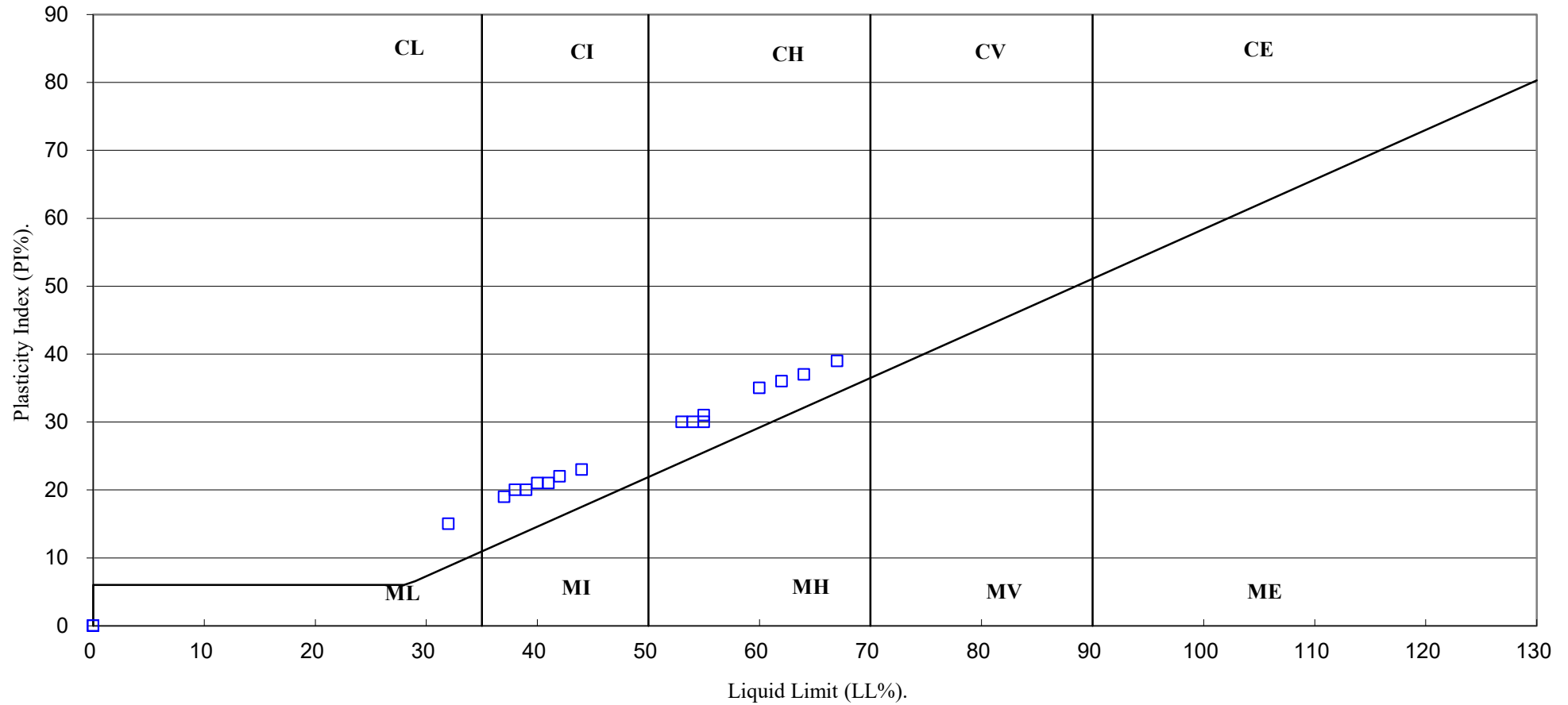
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PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.



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C-16153

SUMMARY OF SOIL CLASSIFICATION TESTS

(BS1377 : PART 2 : 1990)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Moisture Content % Clause 3.2	Linear Shrinkage % Clause 6.5	Particle Density Mg/m ³ Clause 8.2	Liquid Limit % Clause 4.3/4	Plastic Limit % Clause 5.3	Plasticity Index % Clause 5.4	Passing .425mm %	Remarks
TP57	D2	D	1.00		25			59	25	34	94	High Plasticity CH
TP75	D2	D	0.50		25			56	24	32	93	High Plasticity CH
TP52	D3	D	1.00		22			45	21	24	98	Intermediate Plasticity CI
TP60	D2	D	1.00		22			34	17	17	88	Low Plasticity CL
TP60	D3	D	1.30		24							
TP50	D3	D	0.90		15			30	15	15	83	Low Plasticity CL
TP40	D2	D	0.50		20			47	23	24	92	Intermediate Plasticity CI
TP40	D6	D	3.20		19			45	22	23	95	Intermediate Plasticity CI
TP38	D2	D	1.00		18			38	19	19	90	Intermediate Plasticity CI
TP27	D2	D	1.00		16			39	19	20	92	Intermediate Plasticity CI
TP25	D6	D	2.90		24			55	25	30	94	High Plasticity CH
TP13	B2	D	0.60	1.20	23			65	27	38	95	High Plasticity CH
TP13	D3	D	1.50		16							
TP13	D4	D	2.40		24							
TP13	D5	D	2.80		22							
TP12	D2	D	0.50		16							
TP12	D3	D	1.30		17			52	24	28	81	High Plasticity CH
TP12	D4	D	2.30		28							
TP12	D5	D	3.30		21							

SYMBOLS : NP : Non Plastic

* : Liquid Limit and Plastic Limit Wet Sieved.



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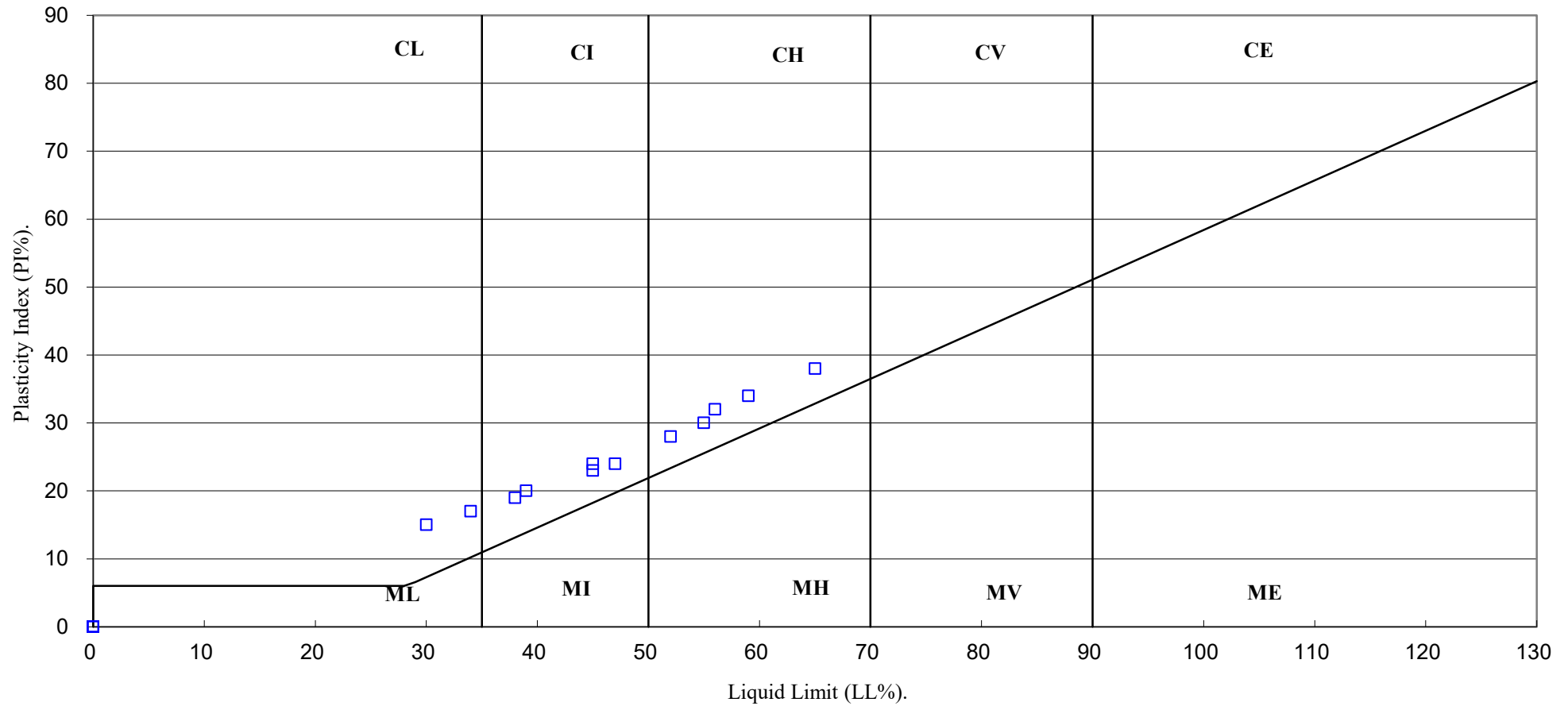
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PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.



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SUMMARY OF SOIL CLASSIFICATION TESTS

(BS1377 : PART 2 : 1990)

Hole Number	Sample Number	Sample Type	Top Depth m	Base Depth m	Moisture Content % Clause 3.2	Linear Shrinkage % Clause 6.5	Particle Density Mg/m ³ Clause 8.2	Liquid Limit % Clause 4.3/4	Plastic Limit % Clause 5.3	Plasticity Index % Clause 5.4	Passing .425mm %	Remarks
TP78	D3	D	1.00		21			54	24	30	97	High Plasticity CH
TP78	D4	D	2.00		11							
TP78	D5	D	2.20		4.8							
TP71	D4	D	1.40		28			57	25	32	94	High Plasticity CH
TP42	D4	D	2.40		27							
TP42	D5	D	3.30		16			40	22	18	84	Intermediate Plasticity CI
TP48	D3	D	1.30		15			31	16	15	78	Low Plasticity CL
TP64	B3	B	1.50		12			34	18	16	51	Low Plasticity CL
TP79	D2	D	1.00		21			48	23	25	94	Intermediate Plasticity CI
TP83	D2	D	1.00		21			53	24	29	91	High Plasticity CH
TP44	D5	D	2.40		14			38	21	17	94	Intermediate Plasticity CI
TP66	D2	D	1.10		24			42	20	22	93	Intermediate Plasticity CI
TP67	D6	D	2.40		14			30	17	13	71	Low Plasticity CL
TP81	D2	D	0.50		12			33	17	16	80	Low Plasticity CL

SYMBOLS : NP : Non Plastic

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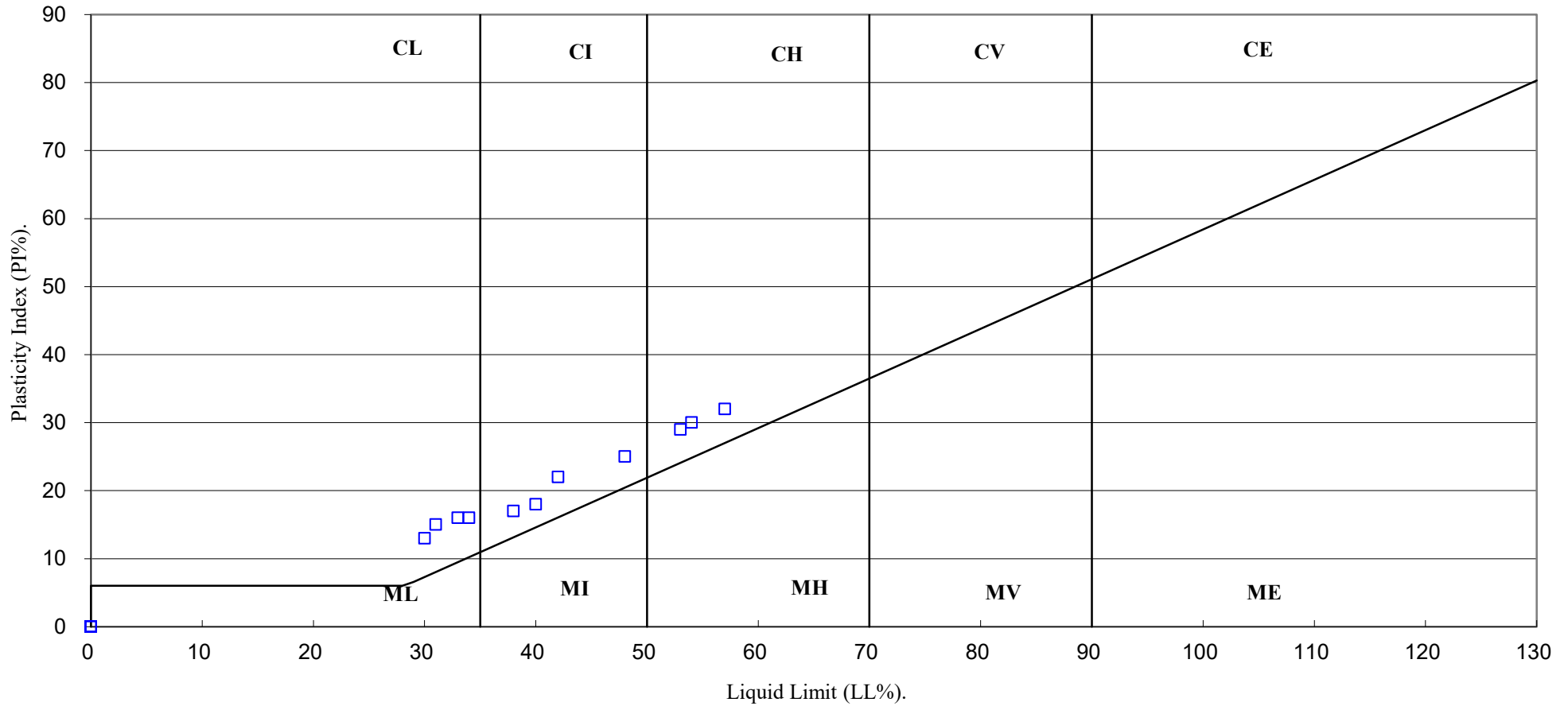
Contract No:

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PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION.



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PARTICLE SIZE DISTRIBUTION TEST

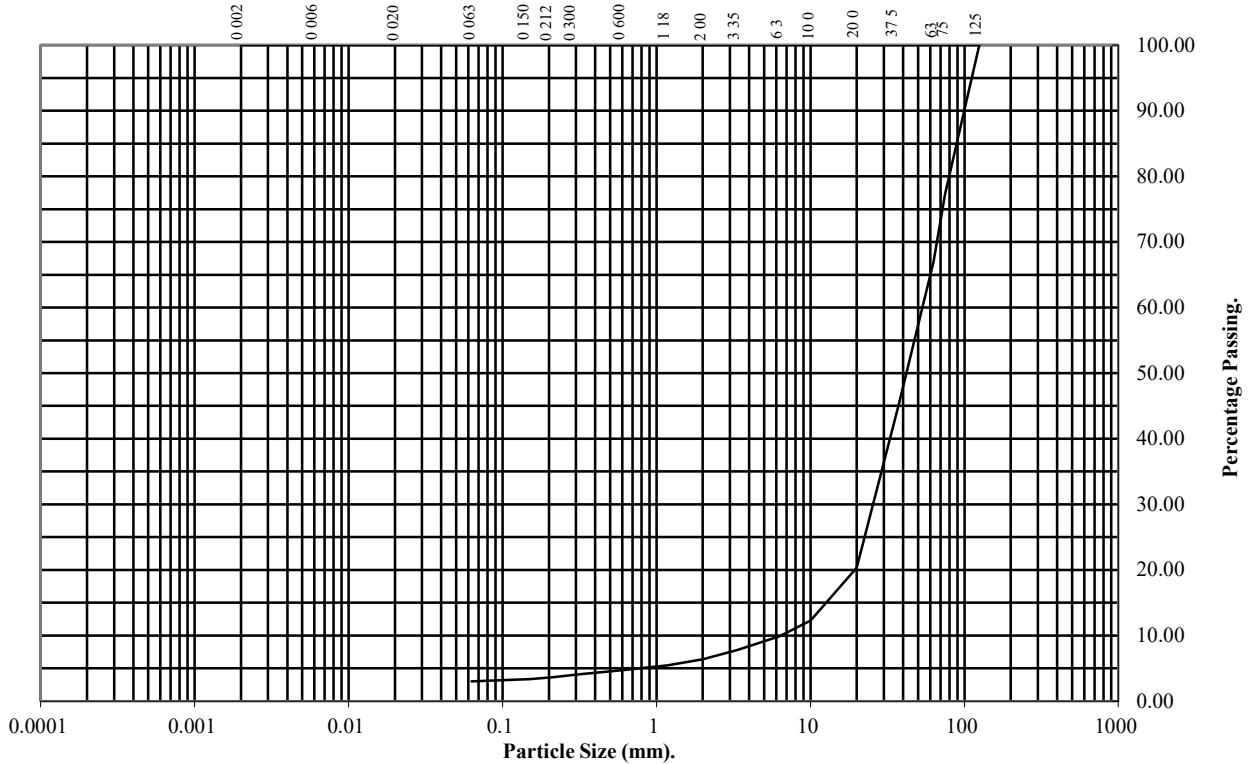
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP59 Top Depth (m): 0.50

Sample Number: B2 Base Depth(m): 1.00

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	77
63	67
37.5	45
20	20
10	12
6.3	10
3.35	8
2	6
1.18	5
0.6	5
0.3	4
0.212	4
0.15	3
0.063	3

Soil Fraction	Total Percentage
Cobbles	33
Gravel	61
Sand	3
Silt/Clay	3

Remarks:
See Summary of Soil Descriptions



Himley Village, Bicester

Contract No:
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PARTICLE SIZE DISTRIBUTION TEST

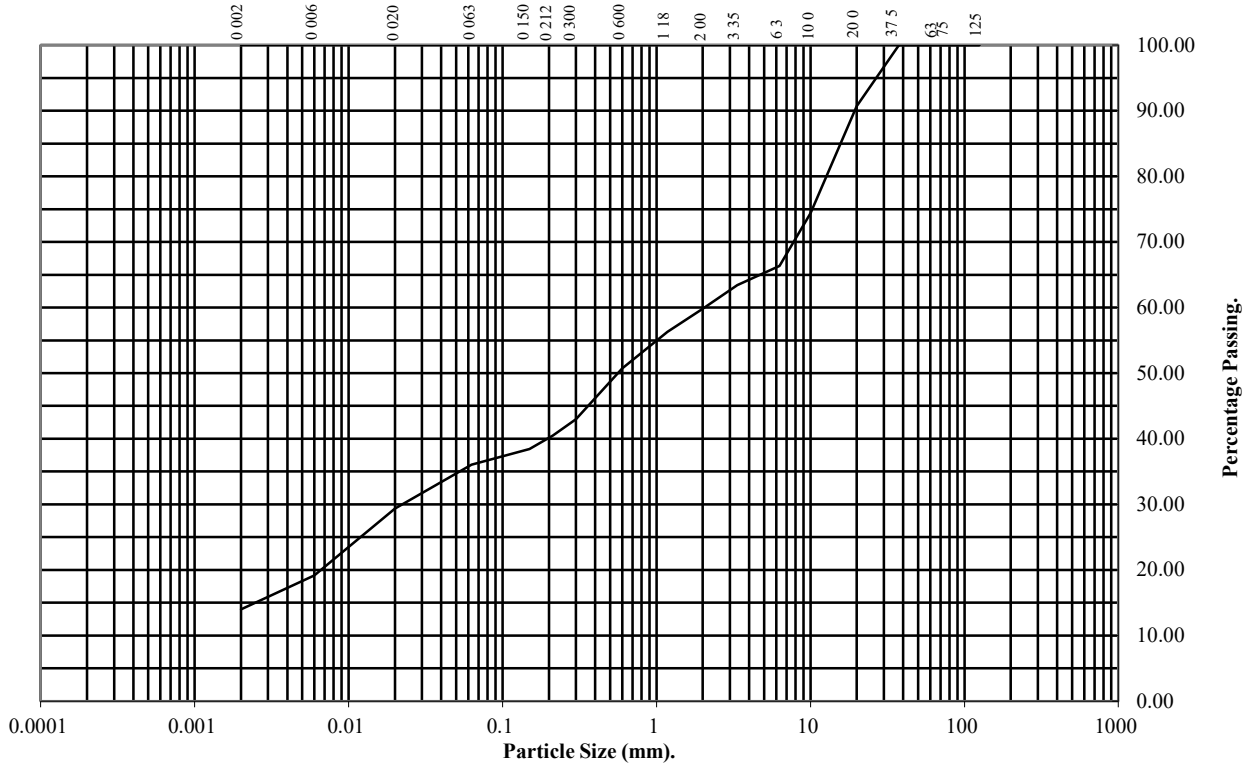
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: TP03 **Top Depth (m):** 1.50

Sample Number: B4 **Base Depth(m):** 2.00

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	91
10	74
6.3	66
3.35	63
2	60
1.18	56
0.6	51
0.3	43
0.212	40
0.15	38
0.063	36

Particle Diameter	Percentage Passing
0.02	29
0.006	19
0.002	14

Soil Fraction	Total Percentage
Cobbles	0
Gravel	40
Sand	24
Silt	22
Clay	14

Remarks:
See Summary of Soil Descriptions



Himley Village, Bicester

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PARTICLE SIZE DISTRIBUTION TEST

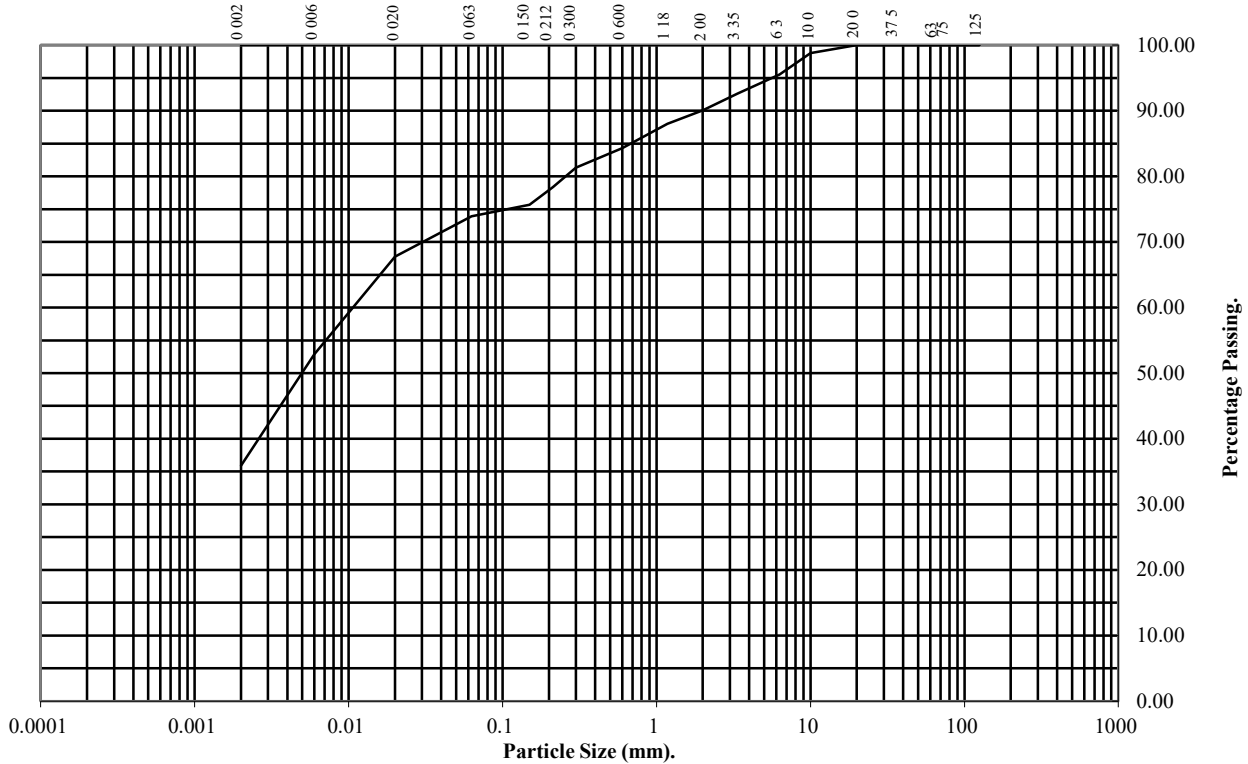
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: TP43 **Top Depth (m):** 1.00

Sample Number: B3 **Base Depth(m):** 1.50

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	99
6.3	96
3.35	93
2	90
1.18	88
0.6	84
0.3	81
0.212	78
0.15	76
0.063	74

Particle Diameter	Percentage Passing
0.02	68
0.006	53
0.002	36

Soil Fraction	Total Percentage
Cobbles	0
Gravel	10
Sand	16
Silt	38
Clay	36

Remarks:
See Summary of Soil Descriptions



Himley Village, Bicester

Contract No:
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PARTICLE SIZE DISTRIBUTION TEST

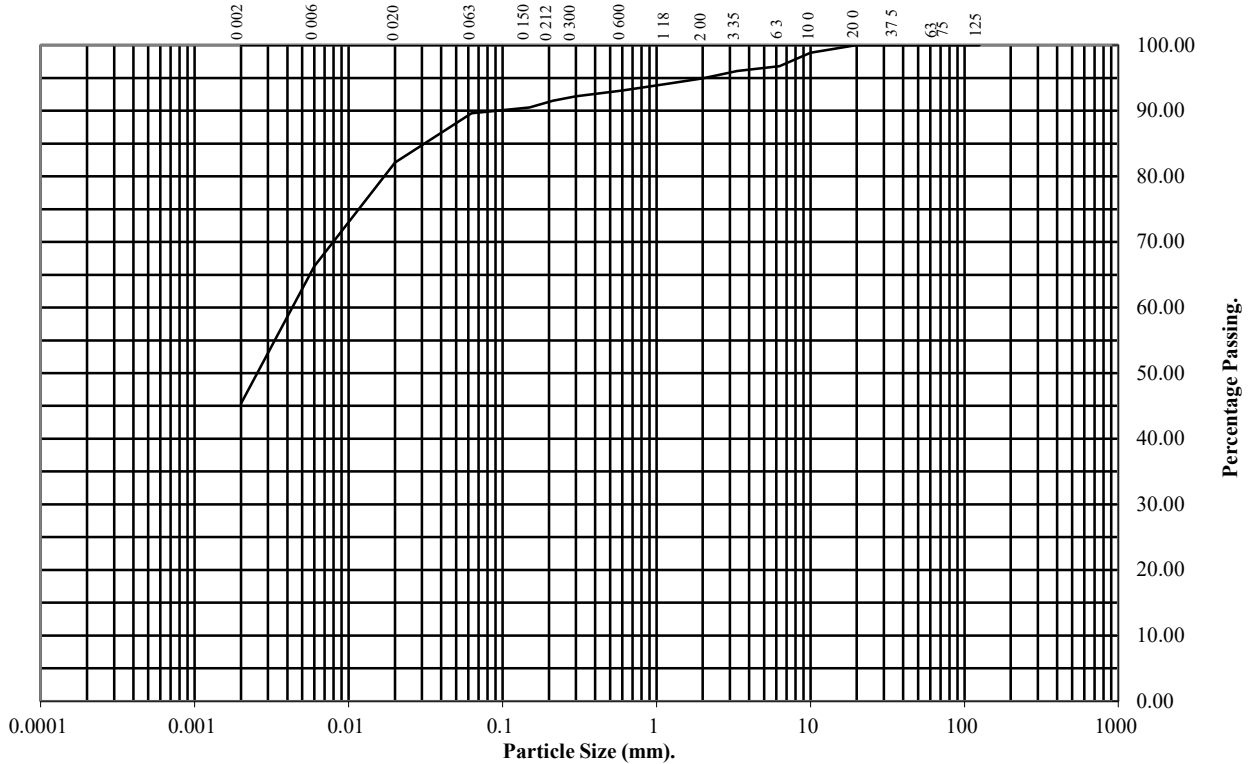
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: TP83 **Top Depth (m):** 2.00

Sample Number: B4 **Base Depth(m):** 2.40

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	99
6.3	97
3.35	96
2	95
1.18	94
0.6	93
0.3	92
0.212	92
0.15	91
0.063	90

Particle Diameter	Percentage Passing
0.02	82
0.006	66
0.002	45

Soil Fraction	Total Percentage
Cobbles	0
Gravel	5
Sand	5
Silt	45
Clay	45

Remarks:
See Summary of Soil Descriptions



Himley Village, Bicester

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PARTICLE SIZE DISTRIBUTION TEST

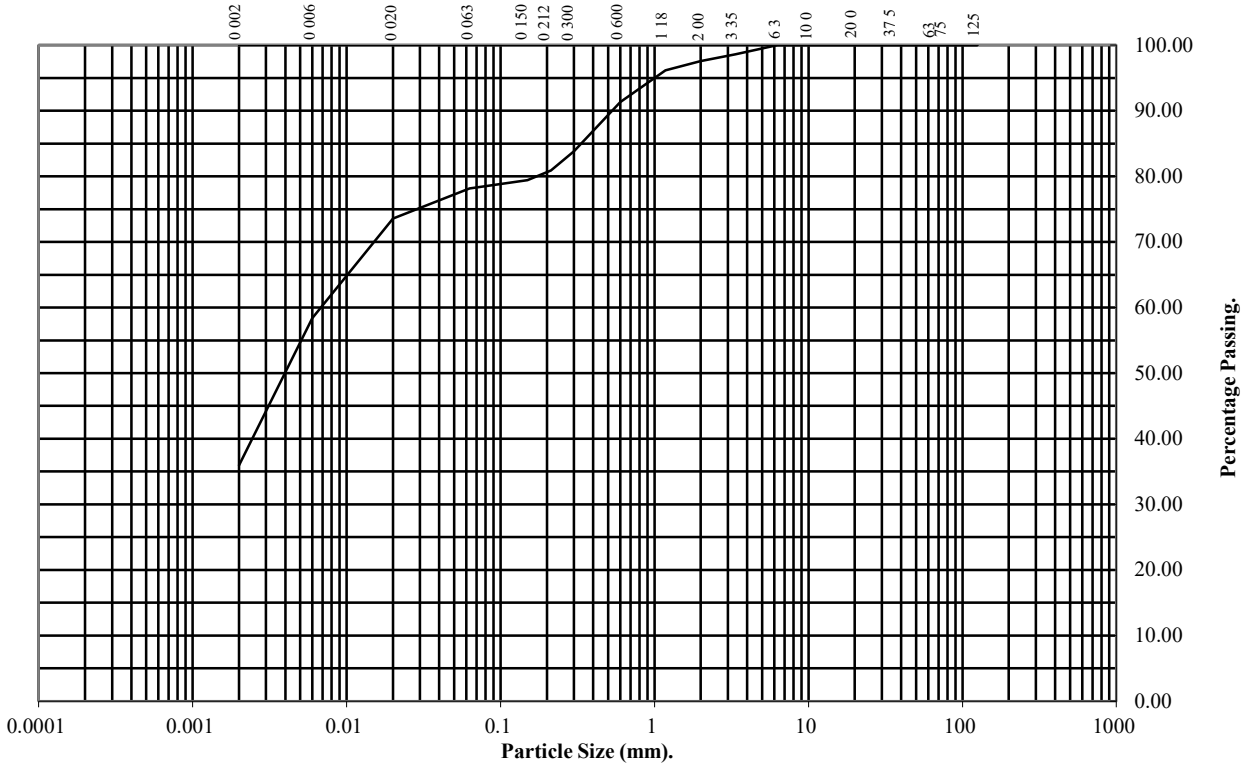
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: TP01 **Top Depth (m):** 1.00

Sample Number: B3 **Base Depth(m):** 1.50

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	99
2	98
1.18	96
0.6	91
0.3	84
0.212	81
0.15	79
0.063	78

Particle Diameter	Percentage Passing
0.02	74
0.006	58
0.002	36

Soil Fraction	Total Percentage
Cobbles	0
Gravel	2
Sand	20
Silt	42
Clay	36

Remarks:
See Summary of Soil Descriptions



Himley Village, Bicester

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PARTICLE SIZE DISTRIBUTION TEST

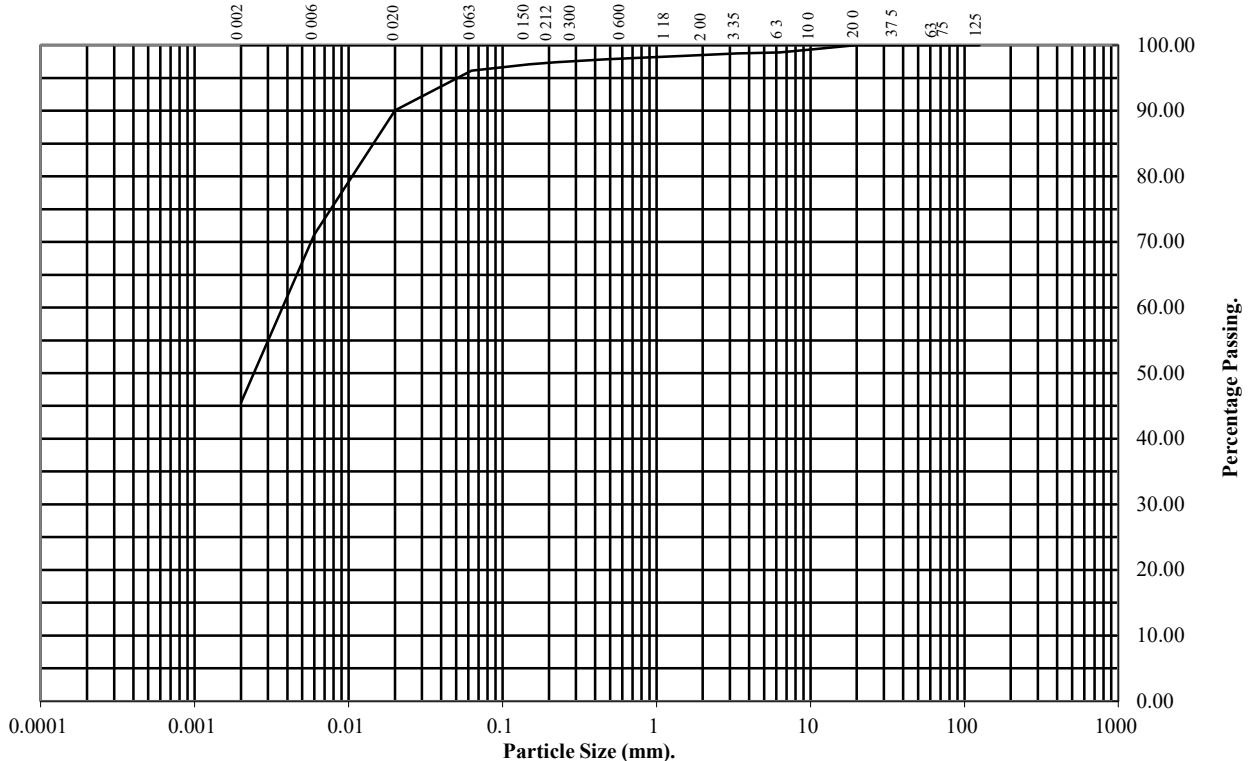
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: TP15 Top Depth (m): 2.00

Sample Number: B4 Base Depth(m): 2.50

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	99
6.3	99
3.35	99
2	98
1.18	98
0.6	98
0.3	98
0.212	97
0.15	97
0.063	96

Particle Diameter	Percentage Passing
0.02	90
0.006	71
0.002	46

Soil Fraction	Total Percentage
Cobbles	0
Gravel	2
Sand	2
Silt	50
Clay	46

Remarks:

See Summary of Soil Descriptions

PARTICLE SIZE DISTRIBUTION TEST

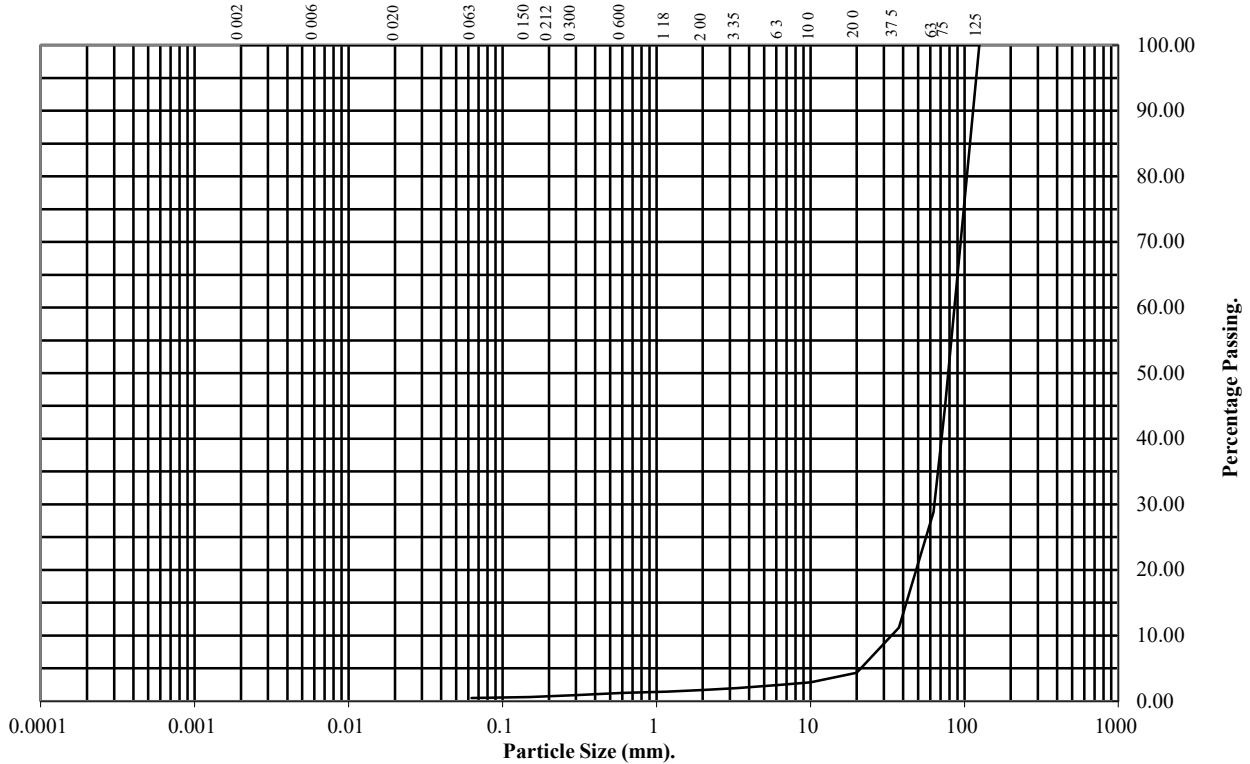
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP17 **Top Depth (m):** 1.00

Sample Number: B3 **Base Depth(m):** 1.40

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	45
63	29
37.5	11
20	4
10	3
6.3	2
3.35	2
2	2
1.18	1
0.6	1
0.3	1
0.212	1
0.15	1
0.063	0

Soil Fraction	Total Percentage
Cobbles	71
Gravel	27
Sand	2
Silt/Clay	0

Remarks:
See Summary of Soil Descriptions



Himley Village, Bicester

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PARTICLE SIZE DISTRIBUTION TEST

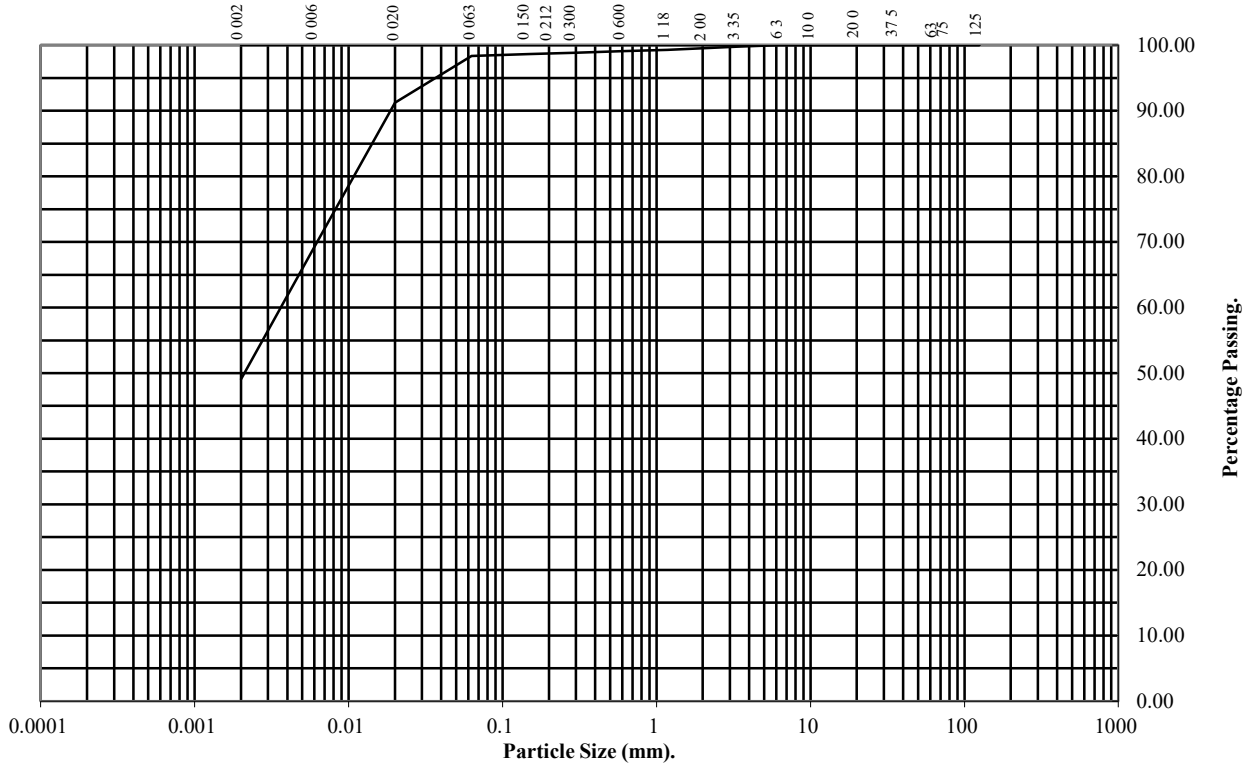
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: TP22 Top Depth (m): 1.00

Sample Number: B3 Base Depth(m): 1.50

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	100
2	100
1.18	99
0.6	99
0.3	99
0.212	99
0.15	99
0.063	98

Particle Diameter	Percentage Passing
0.02	91
0.006	69
0.002	49

Soil Fraction	Total Percentage
Cobbles	0
Gravel	0
Sand	2
Silt	49
Clay	49

Remarks:
See Summary of Soil Descriptions



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PARTICLE SIZE DISTRIBUTION TEST

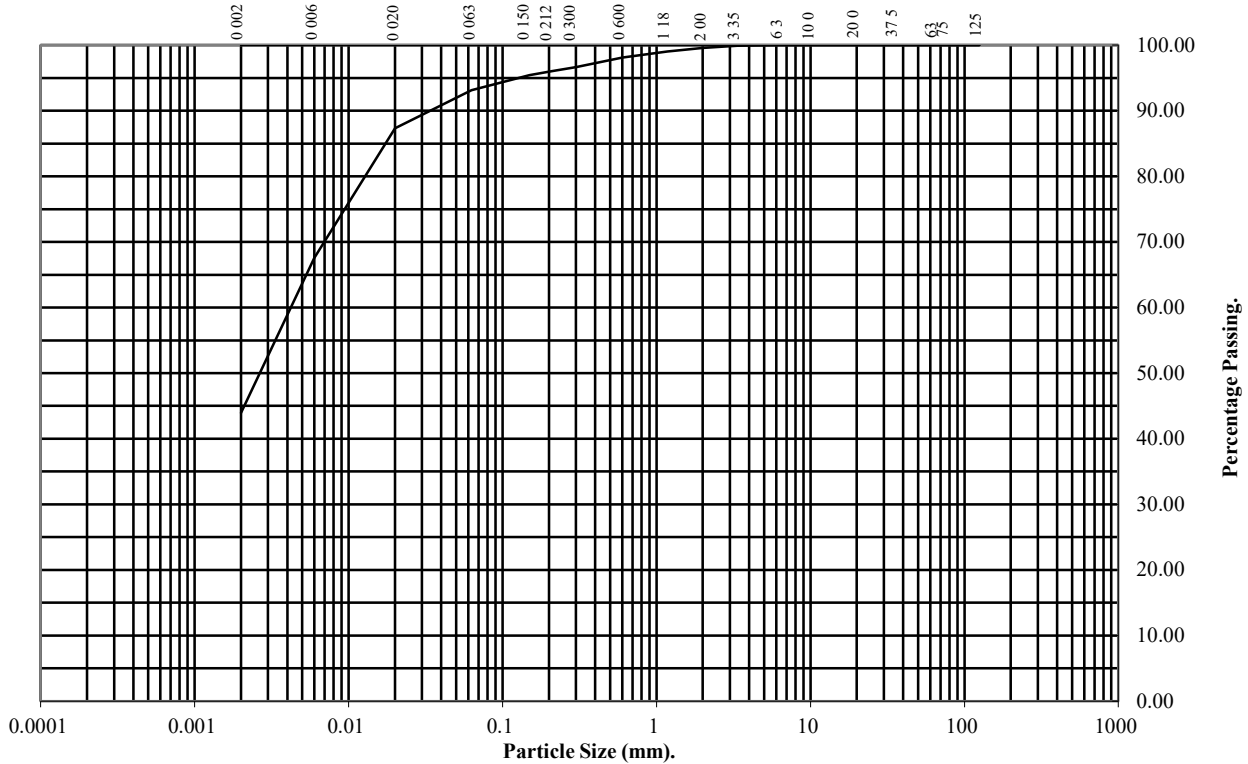
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: TP53 Top Depth (m): 1.80

Sample Number: B5 Base Depth(m): 2.40

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	100
10	100
6.3	100
3.35	100
2	100
1.18	99
0.6	98
0.3	97
0.212	96
0.15	95
0.063	93

Particle Diameter	Percentage Passing
0.02	87
0.006	68
0.002	44

Soil Fraction	Total Percentage
Cobbles	0
Gravel	0
Sand	7
Silt	49
Clay	44

Remarks:
See Summary of Soil Descriptions



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C-16153

PARTICLE SIZE DISTRIBUTION TEST

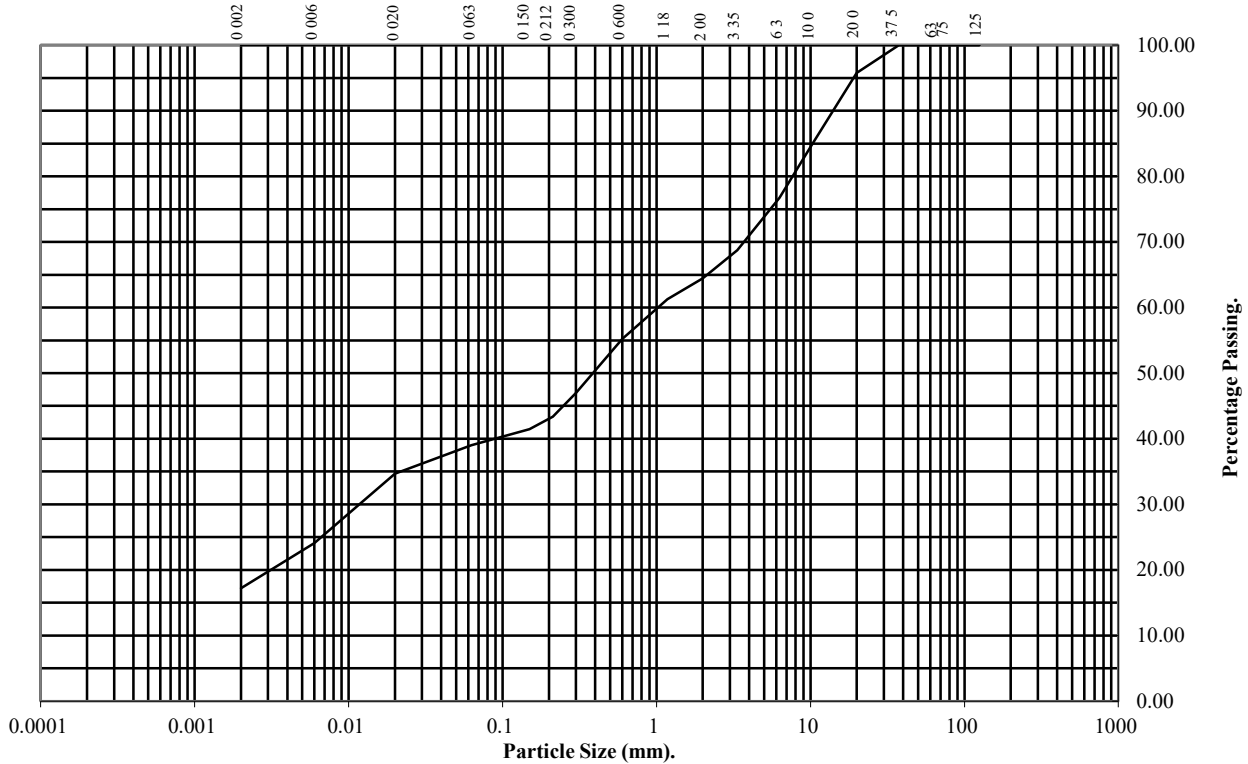
BS1377 : Part 2 : 1990

Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4

Hole Number: **TP64** Top Depth (m): **1.50**

Sample Number: **B3** Base Depth(m): **2.00**

Sample Type: **B**



BS Test Sieve (mm)	Percentage Passing
125	100
75	100
63	100
37.5	100
20	96
10	84
6.3	77
3.35	69
2	64
1.18	61
0.6	55
0.3	47
0.212	43
0.15	41
0.063	39

Particle Diameter	Percentage Passing
0.02	35
0.006	24
0.002	17

Soil Fraction	Total Percentage
Cobbles	0
Gravel	36
Sand	25
Silt	22
Clay	17

Remarks:
See Summary of Soil Descriptions



Himley Village, Bicester

Contract No:
PSL20/7226
Client Ref:
C-16153

PARTICLE SIZE DISTRIBUTION TEST

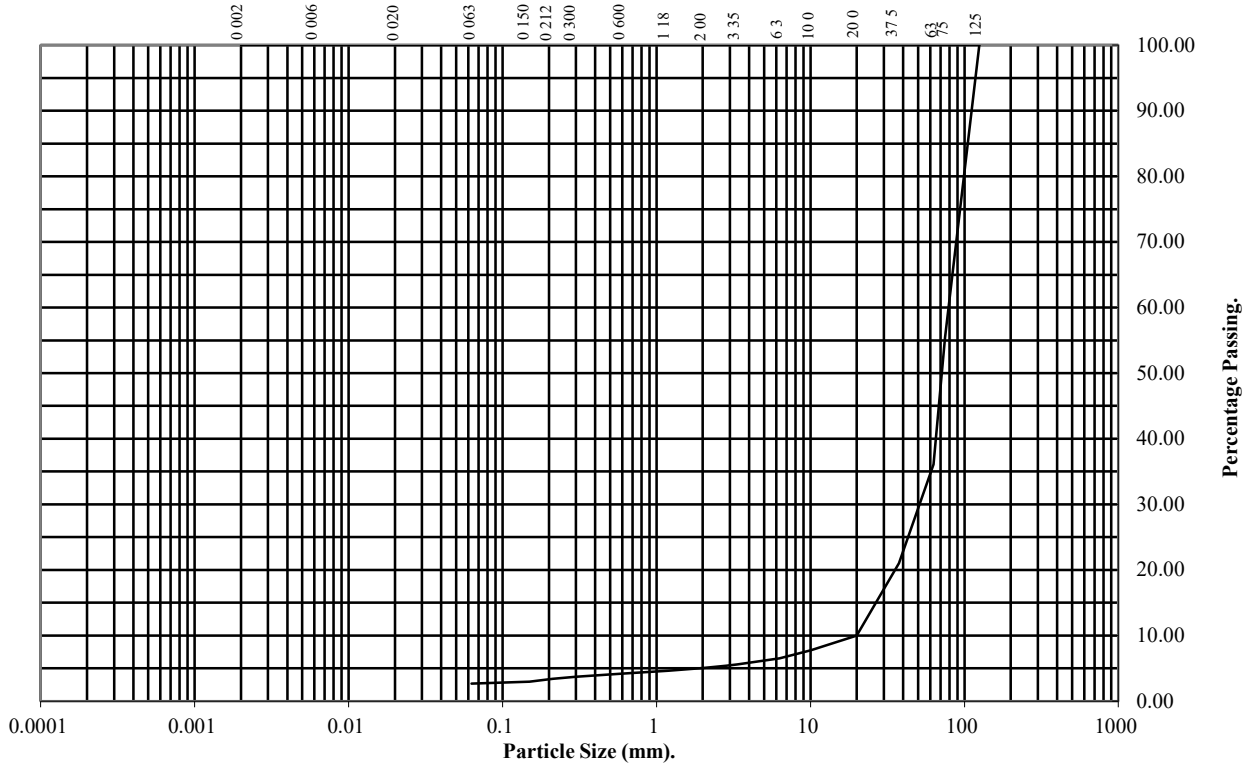
BS1377 : Part 2 : 1990

Wet Sieve, Clause 9.2

Hole Number: TP67 Top Depth (m): 0.30

Sample Number: B2 Base Depth(m): 1.00

Sample Type: B



BS Test Sieve (mm)	Percentage Passing
125	100
75	55
63	36
37.5	21
20	10
10	8
6.3	7
3.35	6
2	5
1.18	5
0.6	4
0.3	4
0.212	3
0.15	3
0.063	3

Soil Fraction	Total Percentage
Cobbles	64
Gravel	31
Sand	2
Silt/Clay	3

Remarks:
See Summary of Soil Descriptions



Himley Village, Bicester

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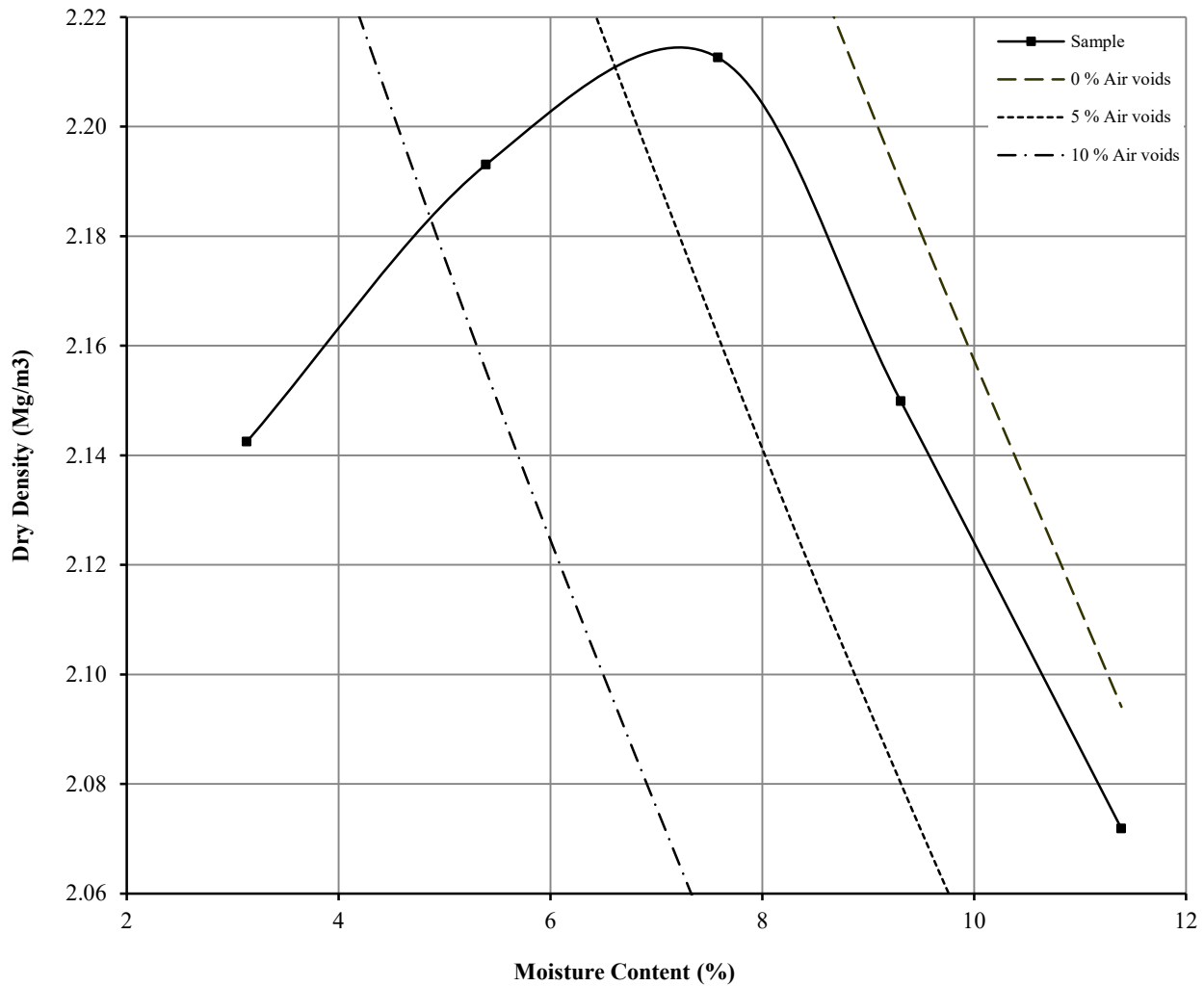
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

Non compliance with BS 1377 : Part 4 : Clause 3.7 : 1990

Hole Number: TP59 Top Depth (m) : 0.50

Sample Number: B2 Base Depth (m) : 1.00

Sample Type: B



Initial Moisture Content:	3.1	Method of Compaction:	Vibro	Separate Samples
Particle Density (Mg/m ³):	2.75	Measured	Material Retained on 37.5 mm Test Sieve (%):	55
Maximum Dry Density (Mg/m ³):	2.21		Material Retained on 20.0 mm Test Sieve (%):	22
Optimum Moisture Content (%):	8			
Remarks See summary of soil descriptions				



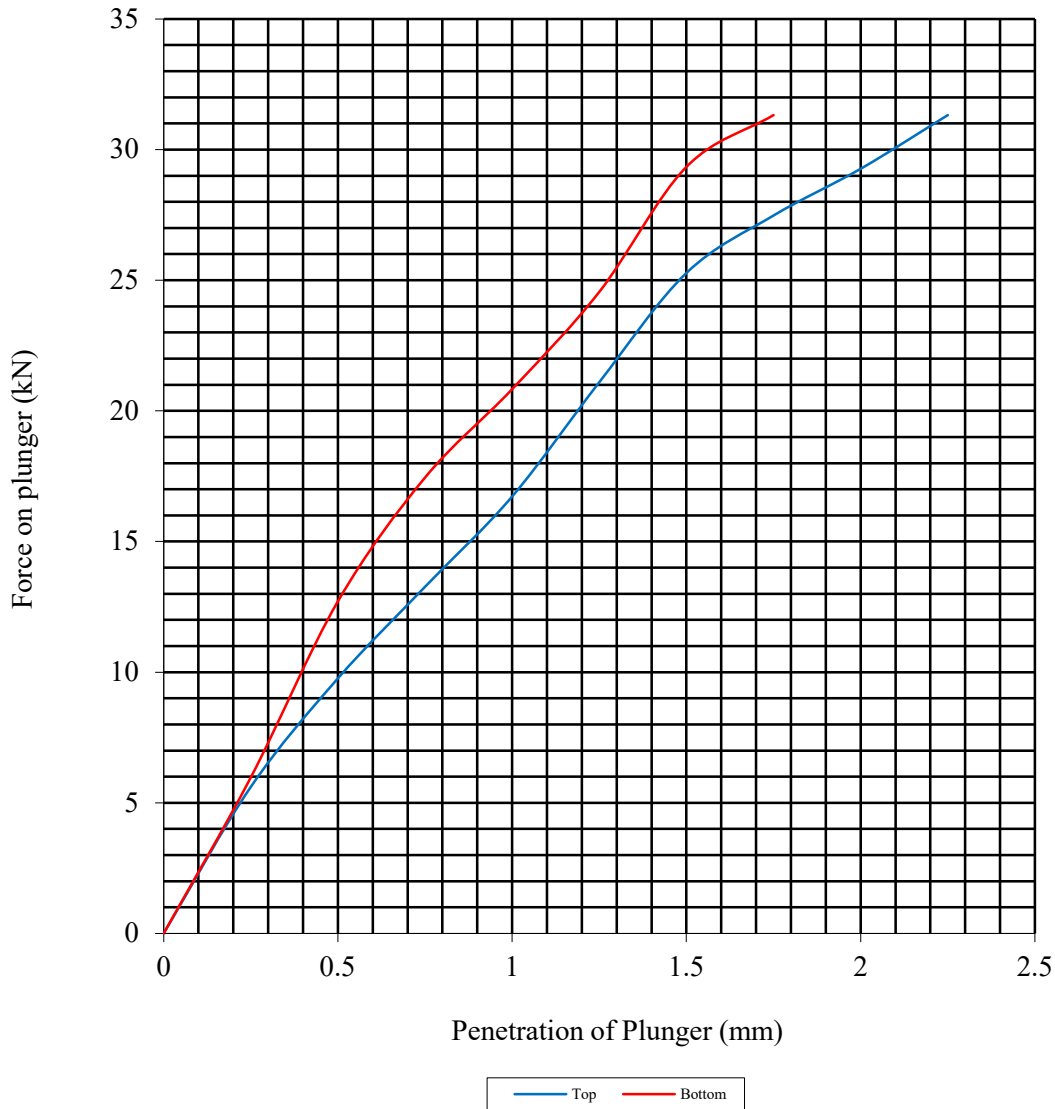
Himley Village, Bicester

Contract
PSL20/7226
Client Ref
C-16153

CALIFORNIA BEARING RATIO TEST

Non compliance with BS 1377 : Part 4 : 1990

Hole Number: TP59 Top Depth (m): 0.50
 Sample Number: B2 Base Depth (m): 1.00
 Sample Type: B



Initial Sample Conditions		Sample Preparation		Final Moisture Content %		C.B.R. Value %	
Moisture Content:	7.6	Surcharge Kg:	4.20	Sample Top	8.7	Sample Top	237.3
Bulk Density Mg/m ³ :	2.38	Soaking Time hrs	96	Sample Bottom	8.5	Sample Bottom	237.3
Dry Density Mg/m ³ :	2.21	Swelling mm:	0.00	Remarks : See Summary of Soil Descriptions. * Maximum load of CBR test achieved			
Percentage retained on 20mm BS test sieve:		77					
Compaction Conditions		Vibro at OMC					



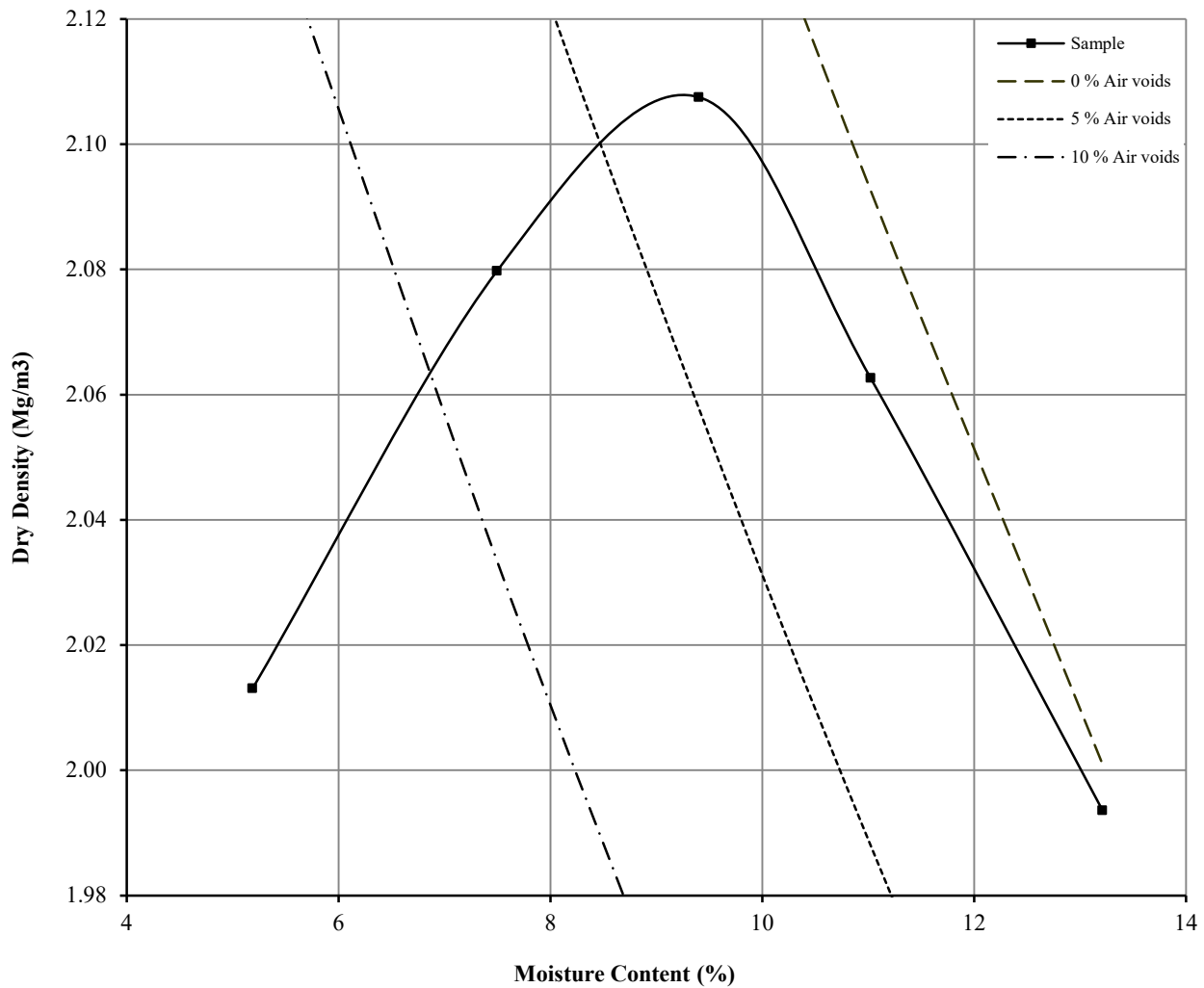
Himley Village, Bicester

Contract No:
PSL20/7226
Client Ref:
C-16153

DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.7 : 1990

Hole Number: TP03 Top Depth (m) : 1.50
 Sample Number: B4 Base Depth (m) : 2.00
 Sample Type: B



Initial Moisture Content:	11	Method of Compaction:	Vibro	Separate Samples
Particle Density (Mg/m ³):	2.72	Measured	Material Retained on 37.5 mm Test Sieve (%):	0
Maximum Dry Density (Mg/m ³):	2.11		Material Retained on 20.0 mm Test Sieve (%):	9
Optimum Moisture Content (%):	9			
Remarks See summary of soil descriptions				



Himley Village, Bicester

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CALIFORNIA BEARING RATIO TEST

BS 1377 : Part 4 : 1990

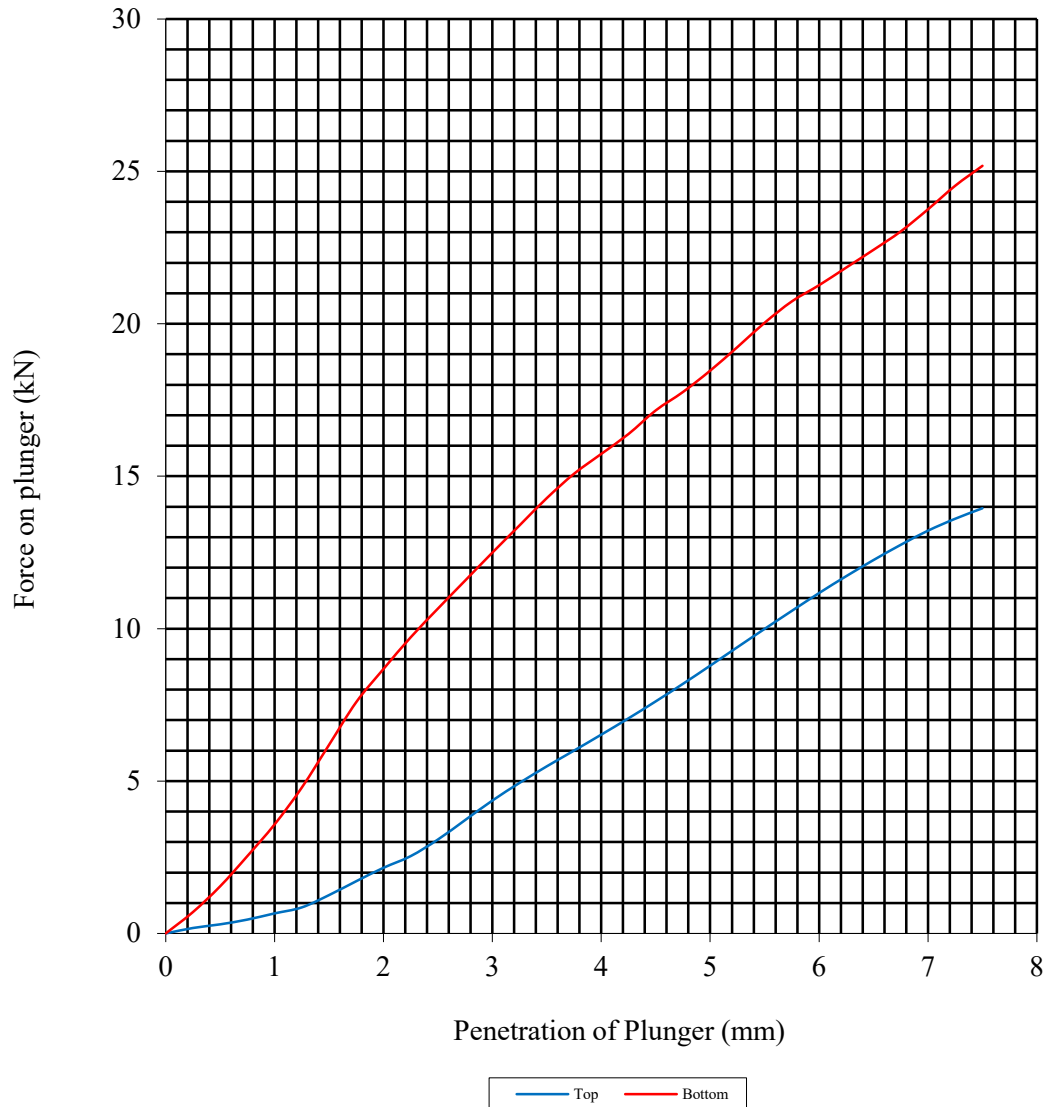
Hole Number: TP03

Top Depth (m): 1.50

Sample Number: B4

Base Depth (m): 2.00

Sample Type: B



Initial Sample Conditions		Sample Preparation		Final Moisture Content %		C.B.R. Value %	
Moisture Content:	9.4	Surcharge Kg:	4.20	Sample Top	12	Sample Top	43.9
Bulk Density Mg/m ³ :	2.31	Soaking Time hrs	96	Sample Bottom	10	Sample Bottom	92.3
Dry Density Mg/m ³ :	2.11	Swelling mm:	3.81	Remarks : See Summary of Soil Descriptions.			
Percentage retained on 20mm BS test sieve:	9						
Compaction Conditions		Vibro at OMC					



Himley Village, Bicester

Contract No:
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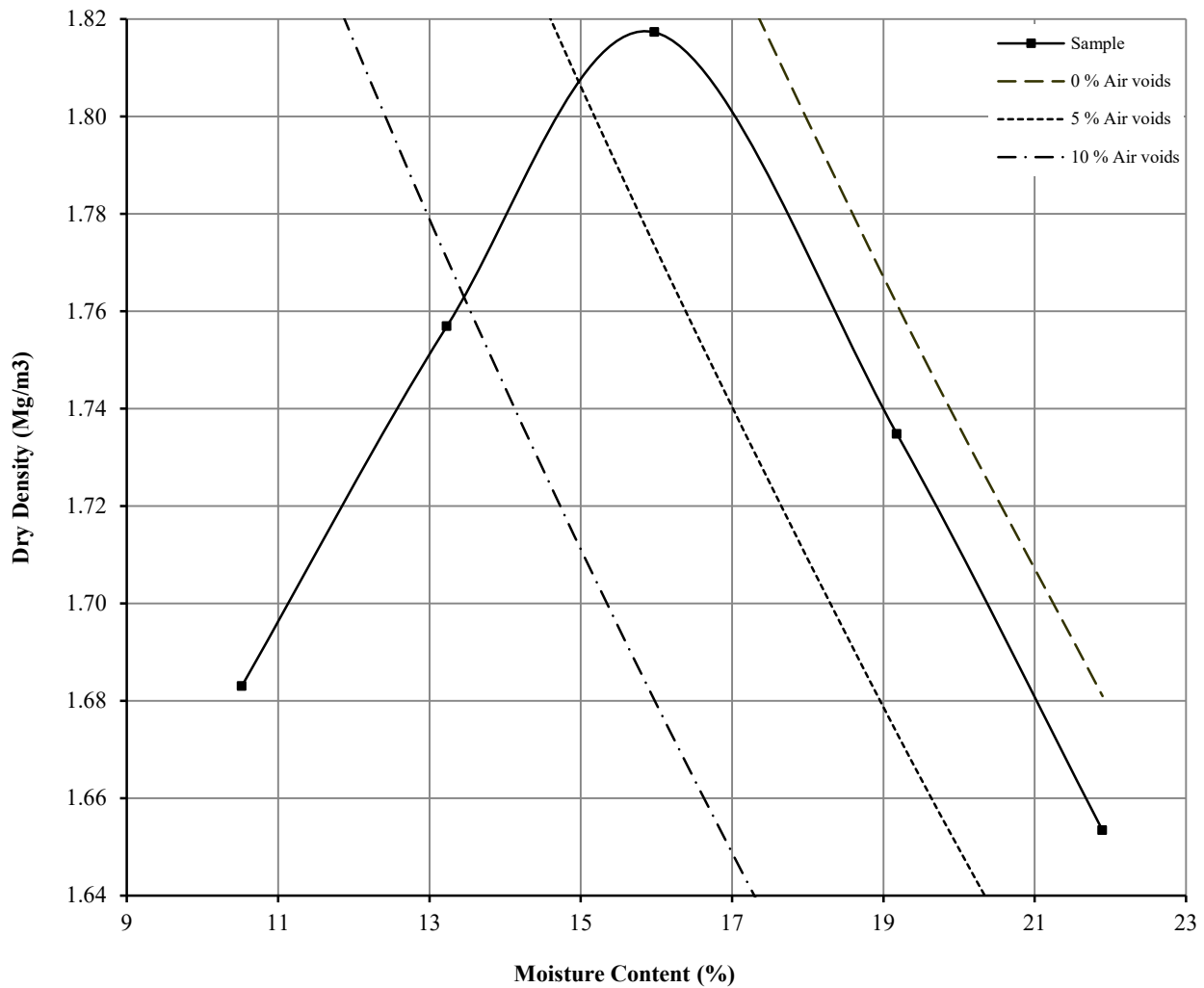
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.3 : 1990

Hole Number: TP43 Top Depth (m) : 1.00

Sample Number: B3 Base Depth (m) : 1.50

Sample Type: B



Initial Moisture Content:	19	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m ³):	2.66	Measured	Material Retained on 37.5 mm Test Sieve (%):	0
Maximum Dry Density (Mg/m ³):	1.82		Material Retained on 20.0 mm Test Sieve (%):	0
Optimum Moisture Content (%):	16			
Remarks See summary of soil descriptions				



Himley Village, Bicester

Contract
PSL20/7226
Client Ref
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CALIFORNIA BEARING RATIO TEST

BS 1377 : Part 4 : 1990

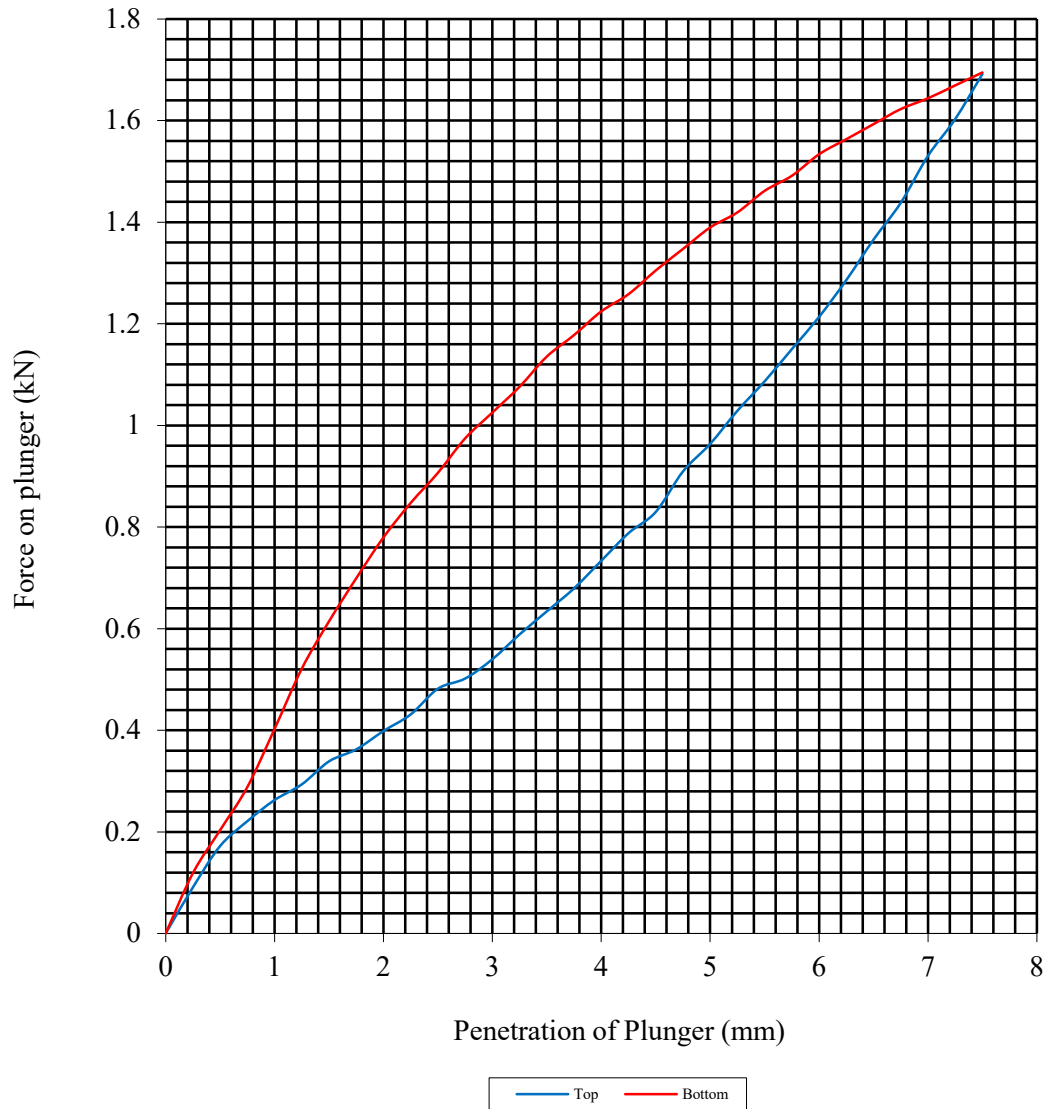
Hole Number: TP43

Top Depth (m): 1.00

Sample Number: B3

Base Depth (m): 1.50

Sample Type: B



Initial Sample Conditions		Sample Preparation		Final Moisture Content %		C.B.R. Value %	
Moisture Content:	16	Surcharge Kg:	4.20	Sample Top	20	Sample Top	4.8
Bulk Density Mg/m ³ :	2.12	Soaking Time hrs	96	Sample Bottom	20	Sample Bottom	6.9
Dry Density Mg/m ³ :	1.83	Swelling mm:	2.53	Remarks : See Summary of Soil Descriptions.			
Percentage retained on 20mm BS test sieve:	0						
Compaction Conditions	2.5kg at OMC						



Himley Village, Bicester

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UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

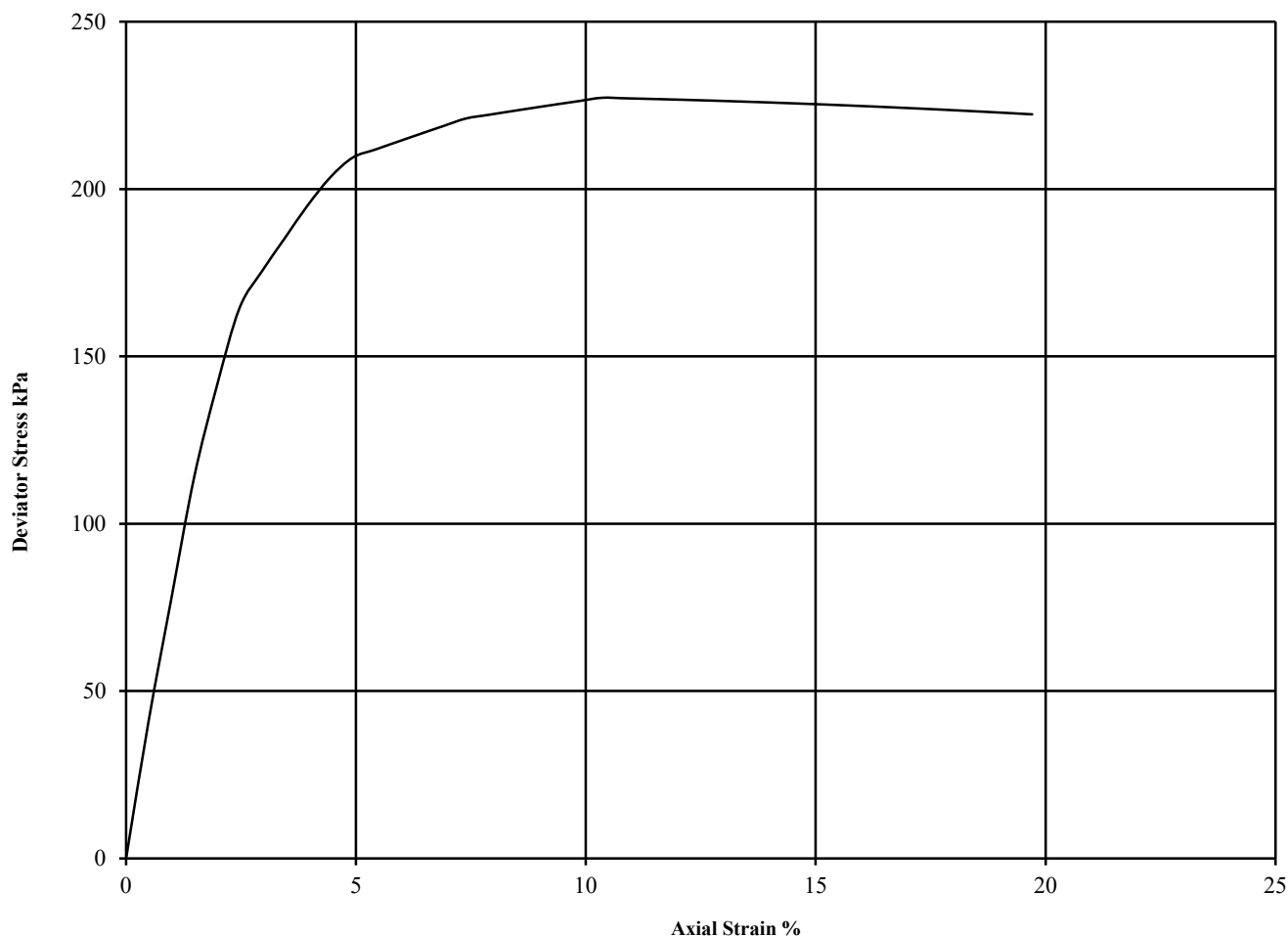
WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 8

Hole Number: TP43 Top Depth (m): 1.00

Sample Number: B3 Base Depth (m): 1.50

Sample Type B



Diameter (mm):		102		Height (mm):		207		Test:		UU Single Stage		Remarks:	
Specimen	Moisture Content (%)	Bulk Density (Mg/m ³)	Dry Density (Mg/m ³)	Cell Pressure (kPa)	Corr. Max. Deviator Stress (kPa)	Shear Strength Cu (kPa)	Failure Strain (%)	Mode of Failure					Disturbed Sample Remoulded at OMC Rate of strain = 2 %/min Latex Membrane used 0.2 mm thick, Correction applied 0.35 See summary of soil descriptions
				θ_3	$(\theta_1 - \theta_3)_f$	$\frac{1}{2}(\theta_1 - \theta_3)_f$							
1	16	2.13	1.83	35	227	114	10.3	Intermediate					



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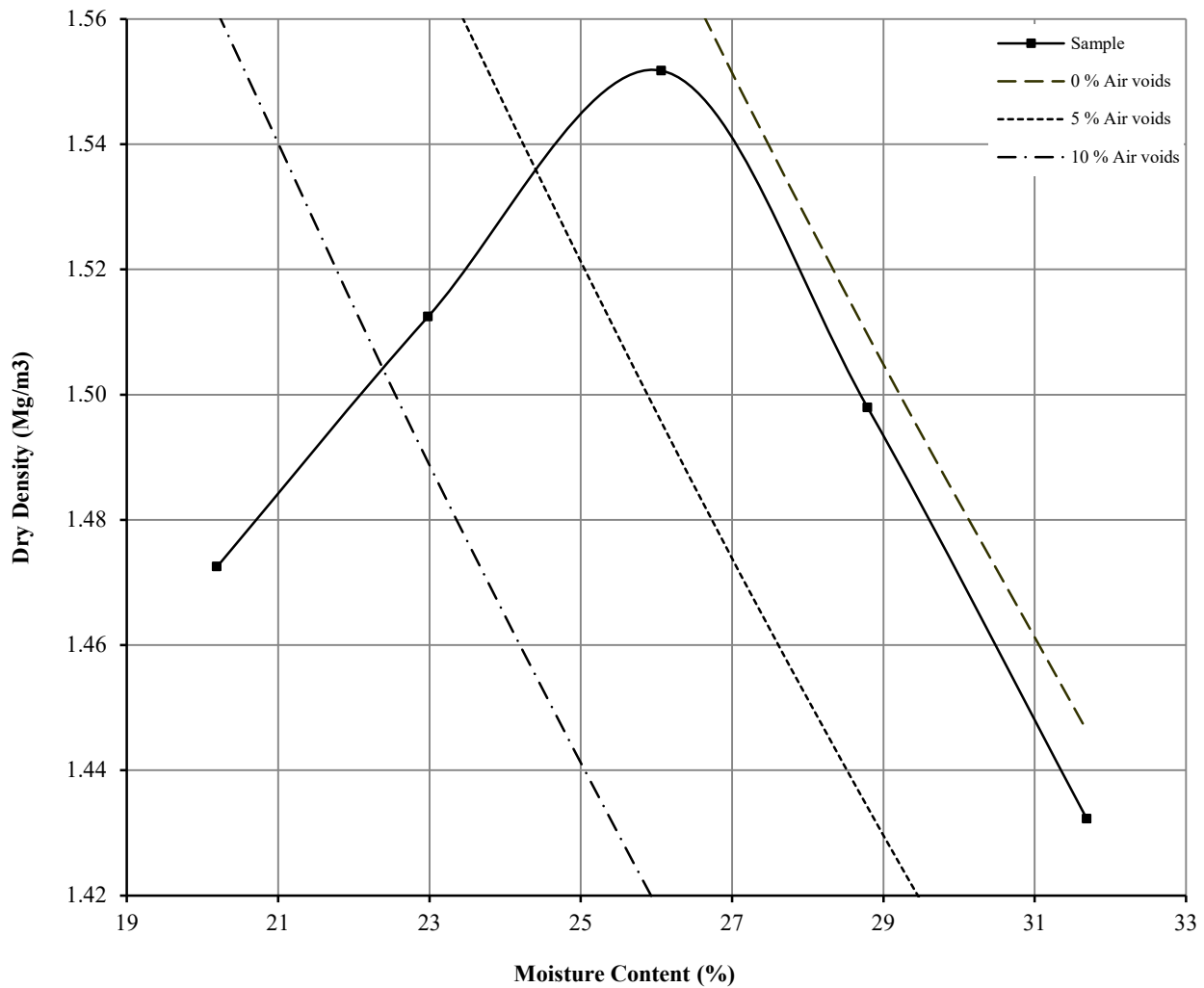
DRY DENSITY / MOISTURE CONTENT RELATIONSHIP

BS 1377 : Part 4 : Clause 3.3 : 1990

Hole Number: TP83 Top Depth (m) : 2.00

Sample Number: B4 Base Depth (m) : 2.40

Sample Type: B



Initial Moisture Content:	26	Method of Compaction:	2.5kg	Separate Samples
Particle Density (Mg/m ³):	2.67	Measured	Material Retained on 37.5 mm Test Sieve (%):	0
Maximum Dry Density (Mg/m ³):	1.55		Material Retained on 20.0 mm Test Sieve (%):	0
Optimum Moisture Content (%):	26			
Remarks See summary of soil descriptions				



Himley Village, Bicester

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CALIFORNIA BEARING RATIO TEST

BS 1377 : Part 4 : 1990

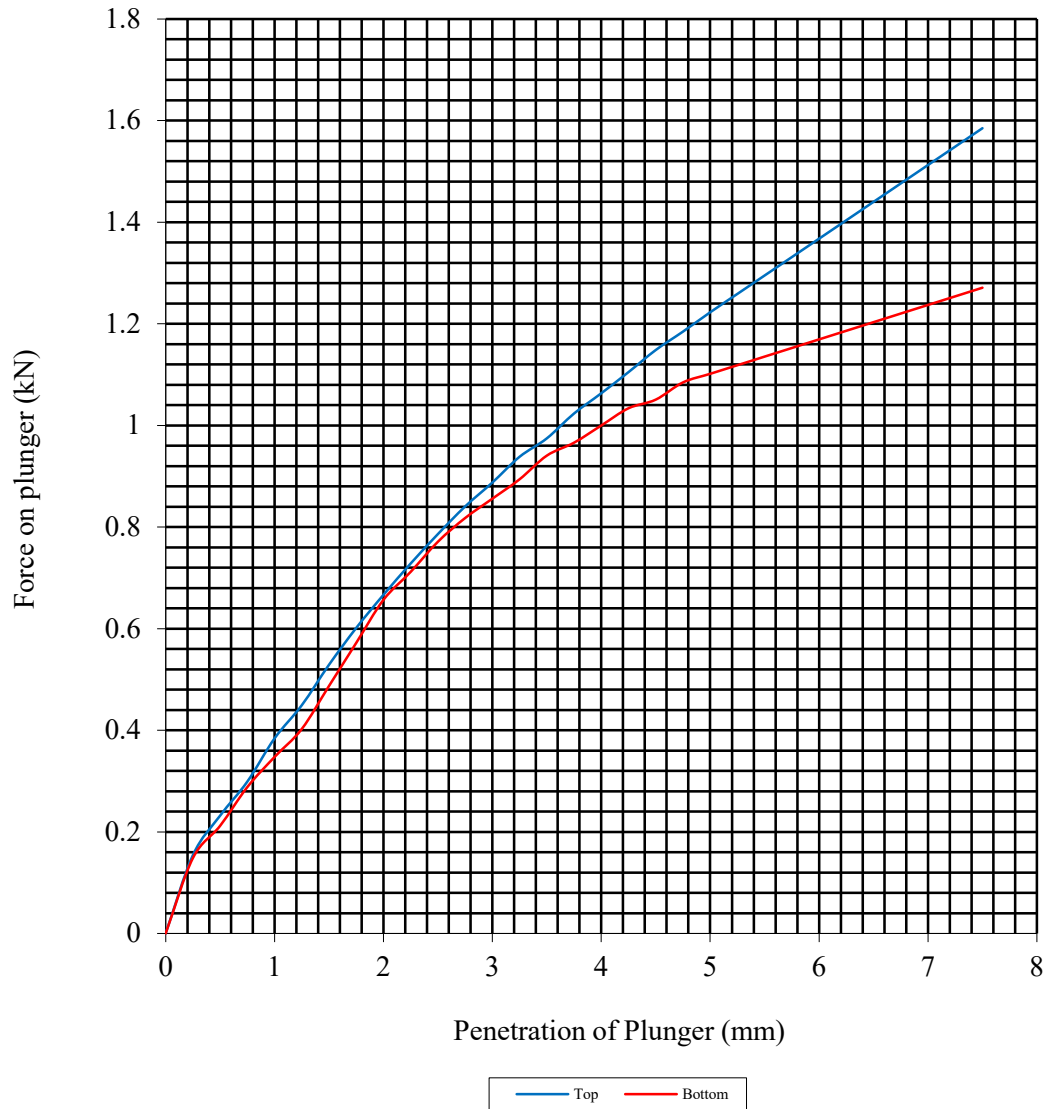
Hole Number: TP83

Top Depth (m): 2.00

Sample Number: B4

Base Depth (m): 2.40

Sample Type: B



Initial Sample Conditions		Sample Preparation		Final Moisture Content %		C.B.R. Value %	
Moisture Content:	26	Surcharge Kg:	4.20	Sample Top	28	Sample Top	6.1
Bulk Density Mg/m ³ :	1.95	Soaking Time hrs	96	Sample Bottom	27	Sample Bottom	5.8
Dry Density Mg/m ³ :	1.55	Swelling mm:	1.77	Remarks : See Summary of Soil Descriptions.			
Percentage retained on 20mm BS test sieve:	0						
Compaction Conditions	2.5kg at OMC						



PSL
Professional Soils Laboratory

Himley Village, Bicester

Contract No:
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C-16153

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION

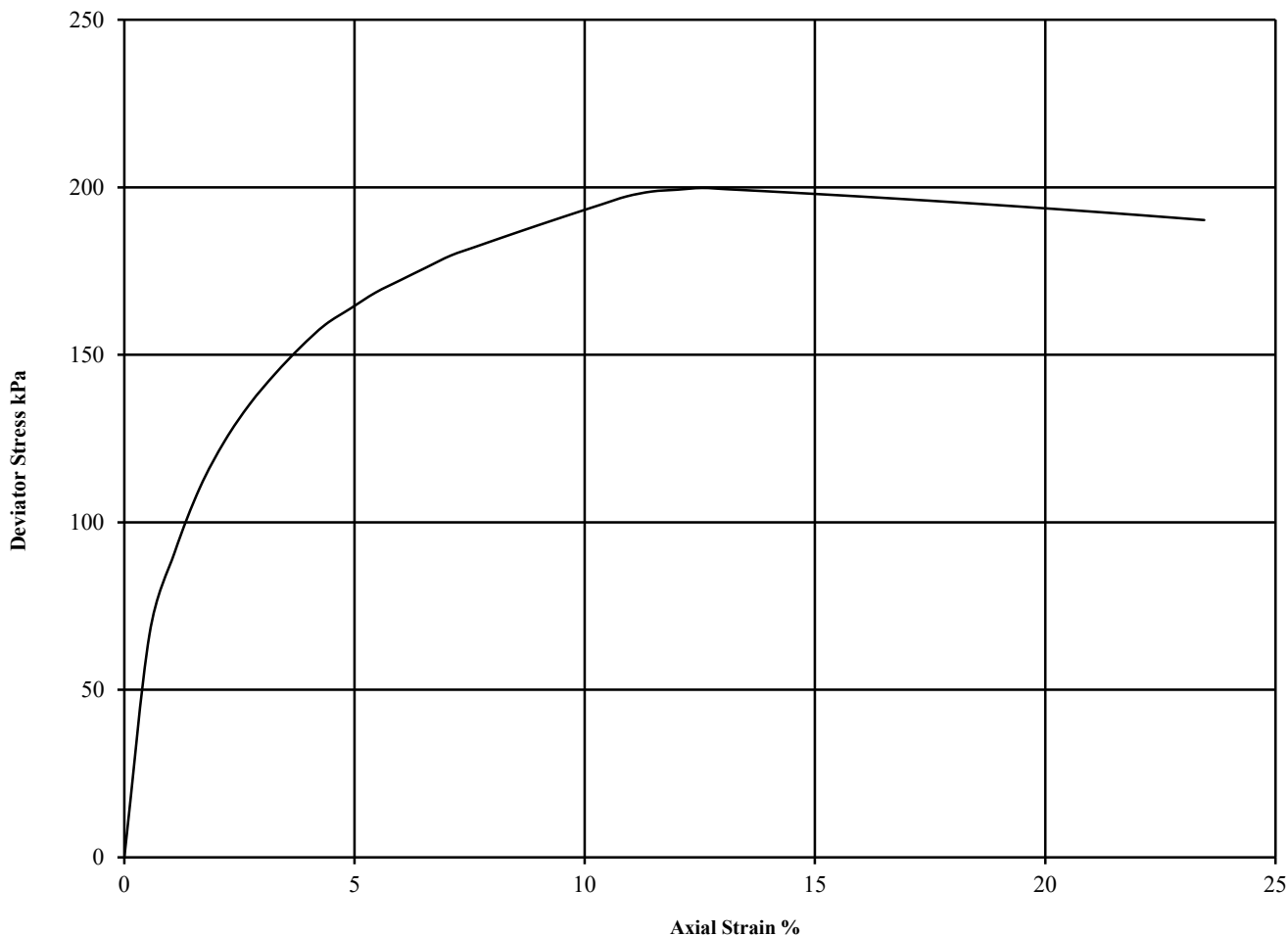
WITHOUT MEASUREMENT OF PORE PRESSURE

BS1377 : Part7 : 1990: Clause 8

Hole Number: **TP83** Top Depth (m): **2.00**

Sample Number: **B4** Base Depth (m): **4.00**

Sample Type **B**



Diameter (mm):		102	Height (mm):		187	Test:	UU Single Stage		Remarks:
Specimen	Moisture Content (%)	Bulk Density (Mg/m ³)	Dry Density (Mg/m ³)	Cell Pressure (kPa)	Corr. Max. Deviator Stress (kPa)	Shear Strength Cu (kPa)	Failure Strain (%)	Mode of Failure	Disturbed Sample Remoulded at OMC Rate of strain = 2 %/min Latex Membrane used 0.2 mm thick, Correction applied 0.35 See summary of soil descriptions
				θ_3	$(\theta_1 - \theta_3)_f$	$\frac{1}{2}(\theta_1 - \theta_3)_f$			
1	26	1.94	1.54	70	200	100	12.5	Intermediate	



Himley Village, Bicester

Contract No:

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DETERMINATION OF UNCONFINED COMPRESSIVE STRENGTH

ISRM Suggested Methods, pp 111 –116, 1981.

Hole Number	Sample Number	Sample Type	Top Depth (m)	Base Depth (m)	Sample Diameter (mm)	Sample Length (mm)	Height Ratio	Initial Mass (g)	Bulk Density (Mg/m)	Moisture Content (%)	Dry Density (Mg/m)	Load Failure (kN)	UCS (MPa)	Failure Mode	Date Tested	Remarks
R07	C1	C	2.70	2.90	90	159	1.8	2620	2.59	2.7	2.52	143.3	22.5	Brittle	06/01/21	
R07	C2	C	4.40	4.60	90	163	1.8	2684	2.59	3.3	2.51	198.8	31.2	Brittle	06/01/21	
R07	C3	C	4.40	5.00	90	165	1.8	2258	2.15	15	1.87	2.9	0.5	Brittle	06/01/21	



Himley Village, Bicester

Contract No:
PSL20/7226
Client Ref:
C-16153



Certificate of Analysis

Certificate Number 21-00112

Issued: 12-Jan-21

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

Our Reference 21-00112

Client Reference PSL20/7226

Order No (not supplied)

Contract Title C-16153 Himley Village, Bicester

Description 22 Soil samples.

Date Received 06-Jan-21

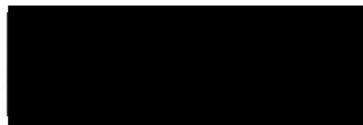
Date Started 06-Jan-21

Date Completed 12-Jan-21

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

Notes Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved By



Adam Fenwick
Contracts Manager



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Summary of Chemical Analysis Soil Samples

Our Ref 21-00112

Client Ref PSL20/7226

Contract Title C-16153 Himley Village, Bicester

Lab No	1783597	1783598	1783599	1783600	1783601	1783602	1783603	1783604	1783605	1783606	1783607
Sample ID	TP59	TP03	TP43	TP83	TP72	TP59	TP01	TP10	TP10	TP17	TP22
Depth	0.50-1.00	1.50-2.00	1.00-1.50	2.00-2.40	1.20	1.20	1.00-1.50	1.70	3.00	1.00-1.40	1.00-1.50
Other ID	B2	B4	B3	B4	D3	D3	B3	D4	D6	B3	B3
Sample Type	B	B	B	B	D	D	B	D	D	B	B
Sampling Date	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units	1783597	1783598	1783599	1783600	1783601	1783602	1783603	1783604	1783605	1783606	1783607
Metals														
Magnesium Aqueous Extract	DETSC 2076*	10	mg/l	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	15	< 10	< 10
Inorganics														
pH	DETSC 2008#		pH	8.4	8.5	8.1	7.8	7.9	8.1	8.1	8.0	7.4	8.4	7.8
Organic matter	DETSC 2002#	0.1	%	0.5	0.3	3.8	0.5							
Chloride Aqueous Extract	DETSC 2055	1	mg/l	11	4.7	4.4	4.7	3.6	4.2	9.1	6.8	6.3	3.7	4.7
Nitrate Aqueous Extract as NO3	DETSC 2055	1	mg/l	1.8	1.8	5.3	2.6	3.8	3.0	3.4	3.4	< 1.0	1.8	7.2
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	64	35	28	24	15	27	31	31	1200	16	78
Sulphur as S, Total	DETSC 2320	0.01	%	0.05	0.04	0.04	0.02	0.02	0.03	0.04	0.04	0.88	0.03	0.08
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.10	0.09	0.14	0.07	0.08	0.10	0.13	0.11	0.43	0.11	0.07

Summary of Chemical Analysis Soil Samples

Our Ref 21-00112

Client Ref PSL20/7226

Contract Title C-16153 Himley Village, Bicester

Lab No	1783608	1783609	1783610	1783611	1783612	1783613	1783614	1783615	1783616	1783617	1783618
Sample ID	TP53	TP52	TP40	TP12	TP78	TP71	TP71	TP83	TP44	TP67	TP81
Depth	1.80-2.40	1.00	3.20	1.30	0.20-0.60	1.40	3.30	1.00	2.40	2.40	0.50
Other ID	B5	D3	D6	D3	B2	D4	D6	D2	D5	D6	D2
Sample Type	B	D	D	D	B	D	D	D	D	D	D
Sampling Date	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units	1783608	1783609	1783610	1783611	1783612	1783613	1783614	1783615	1783616	1783617	1783618
Metals														
Magnesium Aqueous Extract	DETSC 2076*	10	mg/l	< 10	< 10	12	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Inorganics														
pH	DETSC 2008#		pH	8.2	8.0	7.5	7.9	8.3	8.0	7.9	7.9	8.0	8.2	8.2
Organic matter	DETSC 2002#	0.1	%											
Chloride Aqueous Extract	DETSC 2055	1	mg/l	5.4	3.7	4.9	4.0	8.2	8.8	20	8.5	11	7.3	6.1
Nitrate Aqueous Extract as NO3	DETSC 2055	1	mg/l	4.1	3.7	< 1.0	3.0	1.6	5.0	2.8	4.2	2.7	2.2	1.2
Sulphate Aqueous Extract as SO4	DETSC 2076#	10	mg/l	52	31	1200	21	46	16	45	15	24	12	13
Sulphur as S, Total	DETSC 2320	0.01	%	0.04	0.04	0.96	0.03	0.06	0.02	0.08	0.04	0.02	0.03	0.03
Sulphate as SO4, Total	DETSC 2321#	0.01	%	0.07	0.07	0.46	0.05	0.11	0.05	0.10	0.10	0.03	0.09	0.09

Information in Support of the Analytical Results

Our Ref 21-00112
 Client Ref PSL20/7226
 Contract C-16153 Himley Village, Bicester

Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
1783597	TP59 0.50-1.00 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), Organic Matter (Manual) (28 days), pH + Conductivity (7 days)	
1783598	TP03 1.50-2.00 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), Organic Matter (Manual) (28 days), pH + Conductivity (7 days)	
1783599	TP43 1.00-1.50 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), Organic Matter (Manual) (28 days), pH + Conductivity (7 days)	
1783600	TP83 2.00-2.40 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), Organic Matter (Manual) (28 days), pH + Conductivity (7 days)	
1783601	TP72 1.20 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	
1783602	TP59 1.20 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	
1783603	TP01 1.00-1.50 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	
1783604	TP10 1.70 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	
1783605	TP10 3.00 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	
1783606	TP17 1.00-1.40 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	
1783607	TP22 1.00-1.50 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	

Information in Support of the Analytical Results

Our Ref 21-00112
 Client Ref PSL20/7226
 Contract C-16153 Himley Village, Bicester

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
1783608	TP53 1.80-2.40 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	
1783609	TP52 1.00 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	
1783610	TP40 3.20 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	
1783611	TP12 1.30 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	
1783612	TP78 0.20-0.60 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	
1783613	TP71 1.40 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	
1783614	TP71 3.30 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	
1783615	TP83 1.00 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	
1783616	TP44 2.40 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	
1783617	TP67 2.40 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	
1783618	TP81 0.50 SOIL		PT 500ml	Sample date not supplied, Anions 2:1 (30 days), Total Sulphur ICP (7 days), Total Sulphate ICP (30 days), Metals ICP Prep (182 days), pH + Conductivity (7 days)	

Information in Support of the Analytical Results

Our Ref 21-00112

Client Ref PSL20/7226

Contract C-16153 Himley Village, Bicester

Key: P-Plastic T-Tub

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

Soil Analysis Notes

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

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

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

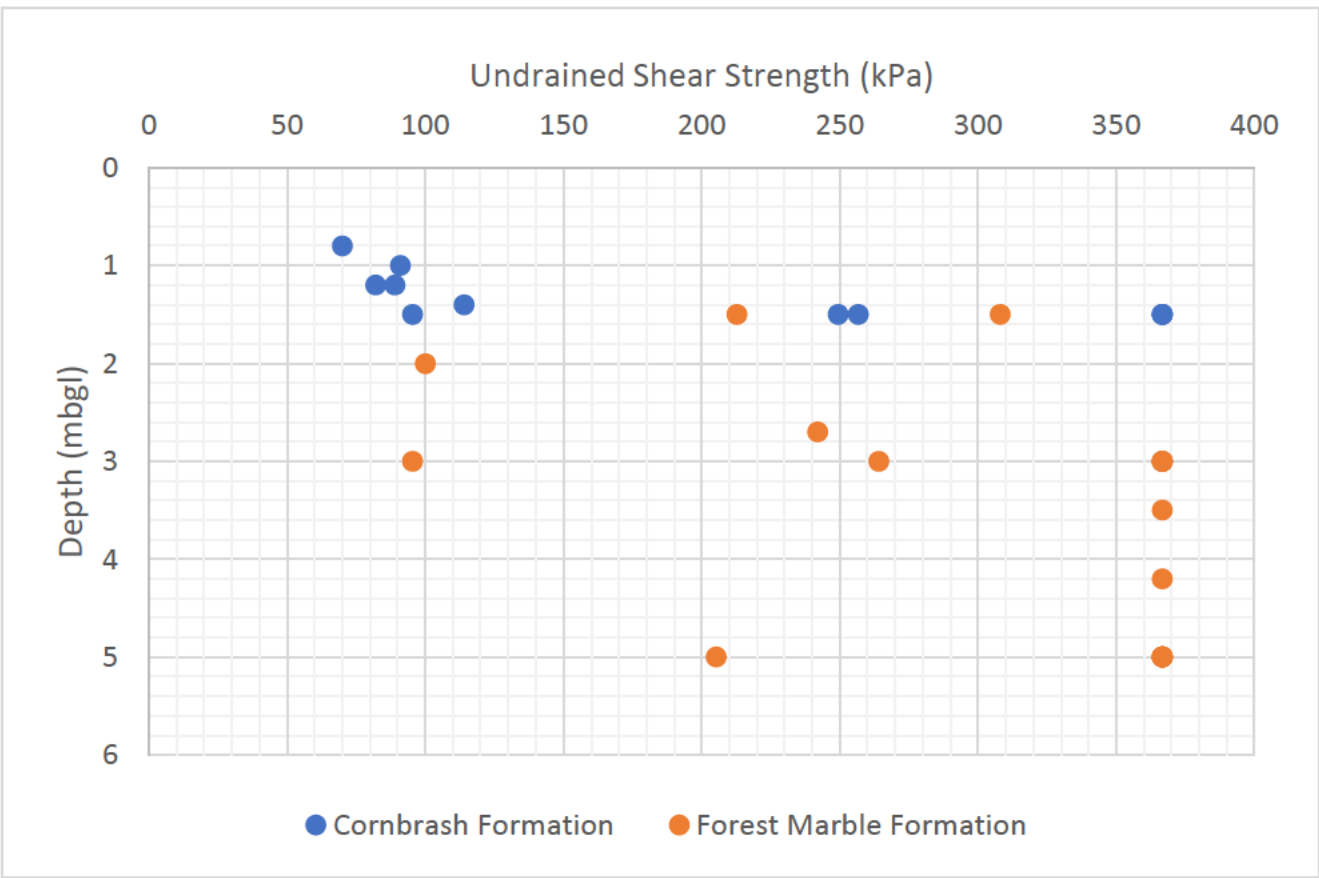
Disposal

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

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

End of Report

Geotechnical Plots



Appendix E

Site Monitoring Data and Ground Gas Risk Assessment

Site Monitoring Data

Site: C-16153 Himley, Bicester - Monito Job number: C-16153 Client: Countryside Properties PLC Gas analyser: Barnabas Mapuranga Equipment check OK: OK (G502105) Service in date: 06/07/2021				Notes on site conditions: Wet and muddy bogs Weather: Overcast															
Date	Time	Borehole	Single or dual cast	Response zone depth (m)	Depth to water or depth of hole	Atmospheric pressure (hPa)	Atm pressure falling / rising	Relative BH pressure (hPa)	Gas flow* (l/hr)	Gas flow* (absolute value) (l/hr)	CH ₄ (%v/v)	CH ₄ (%LEL)	CO ₂ (%v/v)	O ₂ (%v/v)	Notes on condition of borehole and surrounding ground				
11/01/21	15:27	RO1	S	5.28	1.18	1005	F	1	0.0	0.0	0	0	0	0	0.6	0.6	20.8	21.8	Good
11/01/21	15:20	RO2	S	5.26	1.04	1006	F	0	1.1	1.1	0	0	0	0	2.2	2.2	17.4	17.4	Good
11/01/21	15:12	RO3	S	4.32	1.01	1006	F	1	0.2	0.2	0	0	0	0	1.4	1.4	17.7	17.7	Good
11/01/21	15:38	RO4	S	3.65	1.15	1005	F	0	0.0	0.0	0	0	0	0	0.4	0.4	22	22	Good
11/01/21	15:01	RO5	S	4.98	0.91	1006	F	0	0.0	0.0	0.1	0	2	0	2.2	2.2	18.7	18.7	Good
11/01/21	14:47	RO6	S	5.19	1	1007	F	1	0.0	0.0	0	0	0	0	1	0.9	21.3	21.3	Good
11/01/21	14:38	RO7	S	4.95	0.73	1006	F	0	0.0	0.0	0	0	0	0	0.7	0.4	20.9	21	Good
11/01/21	14:30	RO8	S	3.38	0.53	1006	F	0	0.0	0.0	0	0	0	0	0.3	0.2	20.7	20.8	Good

Site: C-16153 Himley, Bicester			Notes on site conditions: Wet and muddy bogs																
Job number: C-16153 Himley, Bicester			Weather: Showers																
Client: Countryside Properties PLC																			
Gas analyser: GA5000			User: Barnabas M																
Equipment check OK: OK (G507130)																			
Service in date: 06/01/2021																			
Date	Time	Borehole	Single or dual gas tap	Response zone depth (m)	Depth to water or depth of hole if dry (m)	Atmospheric pressure (hPa)	Atm pressure falling / rising	Relative BH pressure (hPa)	Gas flow* (l/hr)	Gas flow* (absolute value) (l/hr)	CH ₄ (%v/v)	CH ₄ (%LEL)	CO ₂ (%v/v)	O ₂ (%v/v)	Notes on condition of borehole and surrounding ground				
03/12/20	11:03	RO1	S	5.3	1.11	979	F	3	1.8	1.8	0	0	0	0	1.2	1.3	19.1	18.6	Good
03/12/20	10:47	RO2	S	5.26	1.13	980	F	1	0.6	0.6	0	0	0	0	1.9	1.9	15.2	15.2	Good
03/12/20	10:33	RO3	S	4.32	1.06	981	F	0	0.2	0.2	0	0	0	0	0.8	0.8	19.7	19.8	Good
03/12/20	11:15	RO4	S	3.64	1.19	979	F	0	0.1	0.1	0	0	0	0	1.1	1.1	21.1	21.6	Good
03/12/20	10:10	RO5	S	4.97	0.88	981	F	0	0.3	0.3	0	0	0	0	0.6	0.6	19.5	19.5	Good
03/12/20	12:20	RO6	S	5.19	0.94	976	F	0	0.1	0.1	0	0	0	0	0.3	0.2	21.9	22.1	Good
03/12/20	12:05	RO7	S	4.96	0.78	977	F	0	0.1	0.1	0	0	0	0	1	0.8	21.3	21.4	Good
03/12/20	11:50	RO8	S	3.38	0.34	977	F	0	0.1	0.1	0	0	0	0	0.2	0.1	21.9	22.1	Good

Site: C-16153 Himley, Bicester - Monitoring			Notes on site conditions: Wet and muddy bogs																	
Job number: C-16153			Weather: Partly Cloudy																	
Client: Countryside Properties PLC																				
Gas analyser: GA5000			User: Barnabas M																	
Equipment check OK: OK (G507130)																				
Service in date: 06/01/2021																				
Date	Time	Borehole	Single or dual	Response zone depth (m)	Depth to water or depth of hole if dry (m)	Atmospheric pressure (hPa)	Atm pressure falling / rising	Relative BH pressure (hPa)	Gas flow* (l/hr)	Gas flow* (absolute value) (l/hr)	CH ₄ (%v/v)	CH ₄ (%LEL)	CO ₂ (%v/v)	O ₂ (%v/v)	Notes on condition of borehole and surrounding ground					
04/01/21	14:05	RO1	S	5.28	1.05	1011	R	0	0.0	0.0	0	0	0	0	1.1	0.8	20.1	20.2	Good	
04/01/21	13:51	RO2	S	5.26	0.7	1011	R	0	0.0	0.0	0	0	0	0	1.8	1.8	19.2	19.2	Good	
04/01/21	13:34	RO3	S	4.32	0.88	1011	R	-3	0.7	0.7	0	0	0	0	1.5	1.5	15.9	15.9	Good	
04/01/21	14:17	RO4	S	3.65	1.32	1012	R	0	0.0	0.0	0	0	0	0	1	1	21.3	21.3	Good	
04/01/21	13:06	RO5	S	4.98	0.96	1012	R	0	0.0	0.0	0	0	0	0	1.9	1.9	19	19	Good	
04/01/21	12:36	RO6	S	5.19	1.04	1013	R	0	0.0	0.0	0	0	0	0	0.8	0.5	21.2	21.5	Good	
04/01/21	12:25	RO7	S	4.95	0.61	1013	R	-4	1.2	1.2	0	0	0	0	1	1	19.6	19.6	Good	
04/01/21	12:13	RO8	S	3.38	0.52	1013	R	0	0.0	0.0	0	0	0	0	0.4	0.2	20.3	20.4	Good	

Site: C-16153 Himley, Bicester - Monitoring			Notes on site conditions: Wet and muddy bogs																
Job number: C-16153			Weather: Partly Cloudy																
Client: Countryside Properties PLC																			
Gas analyser: GA5000			User: Barnabas M																
Equipment check OK: OK (G507130)																			
Service in date: 06/01/2021																			
Date	Time	Borehole	Single or dual gas tap	Response zone depth (m)	Depth to water or depth of hole if dry (m)	Atmospheric pressure (hPa)	Atm pressure falling / rising	Relative BH pressure (hPa)	Gas flow* (l/hr)	Gas flow* (absolute value) (l/hr)	CH ₄ (%v/v)	CH ₄ (%LEL)	CO ₂ (%v/v)	O ₂ (%v/v)	Notes on condition of borehole and surrounding ground				
09/12/20	11:00	RO1	S	5.28	1.17	998	R	-1	1.5	1.5	0	0	0	0	1.2	1.1	19.7	19.8	Good
09/12/20	10:45	RO2	S	5.26	1.17	998	R	-2	0.8	0.8	0	0	0	0	2	2	15.7	15.7	Good
09/12/20	10:32	RO3	S	4.32	1.06	998	R	-2	0.0	0.0	0	0	0	0	1.1	1.1	20.1	20.1	Good
09/12/20	11:12	RO4	S	3.65	1.23	998	R	0	1.6	1.6	0	0	0	0	0.6	0.2	21.4	21.9	Good
09/12/20	10:19	RO5	S	4.98	0.89	998	R	0	0.0	0.0	0	0	0	0	1	1	20.8	20.8	Good
09/12/20	09:55	RO6	S	5.19	0.98	999	R	0	0.0	0.0	0	0	0	0	0.4	0.2	21.7	21.8	Good
09/12/20	09:43	RO7	S	4.95	0.59	999	R	0	0.0	0.0	0	0	0	0	1	0.9	20.9	20.9	Good
09/12/20	09:25	RO8	S	3.38	0.35	998	R	-21	0.0	0.0	0.1	0.1	2	2	0.6	0.6	19.8	19.8	Good

Ground Gas Risk Assessment

Ground Gas Risk Assessment



Job Number C-16153 Data All Data
 Job Name Himley Village Bicester
 Client Countryside Properties PLC

Max CH4	Max CO2	Worst Case Flow	Worst Case GSV Methane	Worst Case GSV CO ₂
0.1	2.2	1.8	0.0018	0.0396

Number of Readings	32
Number of Monitoring Rounds	4
Number of Readings with Flow Rate	32

NHBC Assessment				
	Methane		Carbon Dioxide	
	Max Value	GSV	Max Value	GSV
Green	32	32	32	32
Amber 1	0	0	0	0
Amber 2	0	0	0	0
Red	0	0	0	0

CIRIA C665 Assessment				
	Methane		Carbon Dioxide	
	Max Value	GSV	Max Value	GSV
CS1	32	32	32	32
CS2	0	0	0	0
CS3	N/A	0	N/A	0
CS4	N/A	0	N/A	0
CS5	N/A	0	N/A	0
CS6	N/A	0	N/A	0

Location	Pressure Trend	Date	Relative Pressure (mb)	Flow Rate (l/hr)	Atmos. Pressure (m.bar)	CH ₄ (% vol)		(%LEL)		CO ₂ (% vol)		O ₂ (% vol)		GSV - CH4	GSV - CO ₂
						Initial	Steady	Initial	Steady	Initial	Steady	Initial	Steady		
RO1	Falling	03/12/20	3.00	1.8	979	0.0	0.0	0.0	0.0	1.2	1.3	19.1	18.6	0.0000	0.0234
RO2	Falling	03/12/20	1.00	0.6	980	0.0	0.0	0.0	0.0	1.9	1.9	15.2	15.2	0.0000	0.0114
RO3	Falling	03/12/20	0.00	0.2	981	0.0	0.0	0.0	0.0	0.8	0.8	19.7	19.8	0.0000	0.0016
RO4	Falling	03/12/20	0.00	0.1	979	0.0	0.0	0.0	0.0	1.1	1.1	21.1	21.6	0.0000	0.0011
RO5	Falling	03/12/20	0.00	0.3	981	0.0	0.0	0.0	0.0	0.6	0.6	19.5	19.5	0.0000	0.0018
RO6	Falling	03/12/20	0.00	0.1	976	0.0	0.0	0.0	0.0	0.3	0.2	21.9	22.1	0.0000	0.0002
RO7	Falling	03/12/20	0.00	0.1	977	0.0	0.0	0.0	0.0	1.0	0.8	21.3	21.4	0.0000	0.0008
RO8	Falling	03/12/20	0.00	0.1	977	0.0	0.0	0.0	0.0	0.2	0.1	21.9	22.1	0.0000	0.0001
RO1	Rising	09/12/20	0.00	1.5	998	0.0	0.0	0.0	0.0	1.2	1.1	19.7	19.8	0.0000	0.0165
RO2	Rising	09/12/20	0.00	0.8	998	0.0	0.0	0.0	0.0	2.0	2.0	15.7	15.7	0.0000	0.0160
RO3	Rising	09/12/20	0.00	0.1	998	0.0	0.0	0.0	0.0	1.1	1.1	20.1	20.1	0.0000	0.0011
RO4	Rising	09/12/20	0.00	1.6	998	0.0	0.0	0.0	0.0	0.6	0.2	21.4	21.9	0.0000	0.0032
RO5	Rising	09/12/20	0.00	0.1	998	0.0	0.0	0.0	0.0	1.0	1.0	20.8	20.8	0.0000	0.0010
RO6	Rising	09/12/20	0.00	0.1	999	0.0	0.0	0.0	0.0	0.4	0.2	21.7	21.8	0.0000	0.0002
RO7	Rising	09/12/20	0.00	0.1	999	0.0	0.0	0.0	0.0	1.0	0.9	20.9	20.9	0.0000	0.0009
RO8	Rising	09/12/20	0.00	0.1	998	0.1	0.1	2.0	2.0	0.6	0.6	19.8	19.8	0.0001	0.0006
RO1	Rising	04/01/21	0.00	0.1	1011	0.0	0.0	0.0	0.0	1.1	0.8	20.1	20.2	0.0000	0.0008
RO2	Rising	04/01/21	0.00	0.1	1011	0.0	0.0	0.0	0.0	1.8	1.8	19.2	19.2	0.0000	0.0018
RO3	Rising	04/01/21	0.00	0.7	1011	0.0	0.0	0.0	0.0	1.5	1.5	15.9	15.9	0.0000	0.0105
RO4	Rising	04/01/21	0.00	0.1	1012	0.0	0.0	0.0	0.0	1.0	1.0	21.3	21.3	0.0000	0.0010
RO5	Rising	04/01/21	0.00	0.1	1012	0.0	0.0	0.0	0.0	1.9	1.9	19.0	19.0	0.0000	0.0019
RO6	Rising	04/01/21	0.00	0.1	1013	0.0	0.0	0.0	0.0	0.8	0.5	21.2	21.5	0.0000	0.0005
RO7	Rising	04/01/21	0.00	1.2	1013	0.0	0.0	0.0	0.0	1.0	1.0	19.6	19.6	0.0000	0.0120
RO8	Rising	04/01/21	0.00	0.1	1013	0.0	0.0	0.0	0.0	0.4	0.2	20.3	20.4	0.0000	0.0002
RO1	Falling	11/01/21	1.00	0.1	1005	0.0	0.0	0.0	0.0	0.6	0.6	20.8	21.8	0.0000	0.0006
RO2	Falling	11/01/21	0.00	1.1	1006	0.0	0.0	0.0	0.0	2.2	2.2	17.4	17.4	0.0000	0.0242
RO3	Falling	11/01/21	1.00	0.2	1006	0.0	0.0	0.0	0.0	1.4	1.4	17.7	17.7	0.0000	0.0028
RO4	Falling	11/01/21	0.00	0.1	1005	0.0	0.0	0.0	0.0	0.4	0.4	22.0	22.0	0.0000	0.0004
RO5	Falling	11/01/21	0.00	0.1	1006	0.1	0.0	2.0	0.0	2.2	2.2	18.7	18.7	0.0000	0.0022
RO6	Falling	11/01/21	1.00	0.1	1007	0.0	0.0	0.0	0.0	1.0	0.9	21.3	21.3	0.0000	0.0009
RO7	Falling	11/01/21	0.00	0.1	1006	0.0	0.0	0.0	0.0	0.7	0.4	20.9	21.0	0.0000	0.0004
RO8	Falling	11/01/21	0.00	0.1	1006	0.0	0.0	0.0	0.0	0.3	0.2	20.7	20.8	0.0000	0.0002

Hydrock Bulk Gases Ternary Plot Analysis



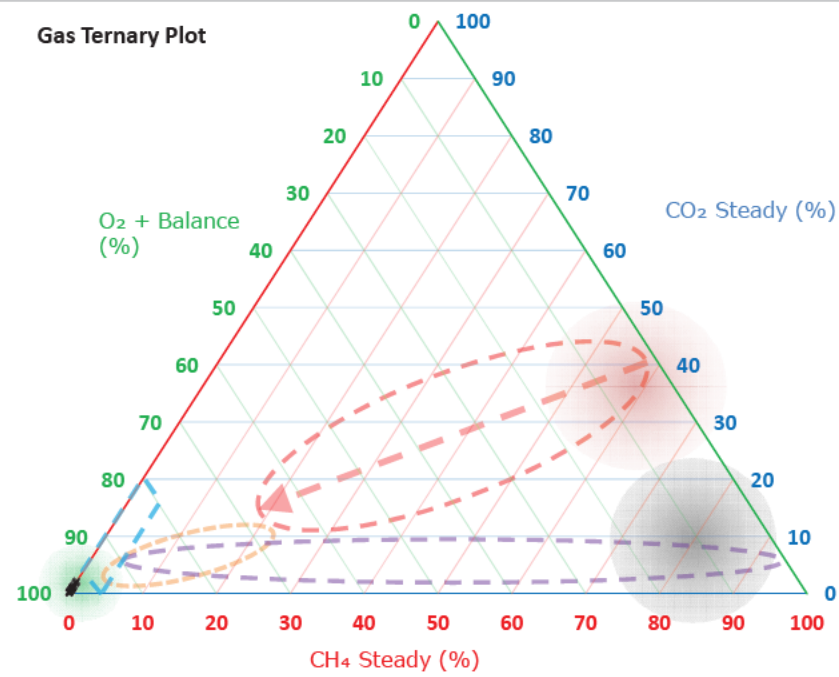
Client:	Countryside Properties PLC
Site Name:	Himley Village, Bicester
Contract Number:	C-16153
Assessment Date:	22/01/2021

Screened Strata:	All data
Site Zone:	Whole Site

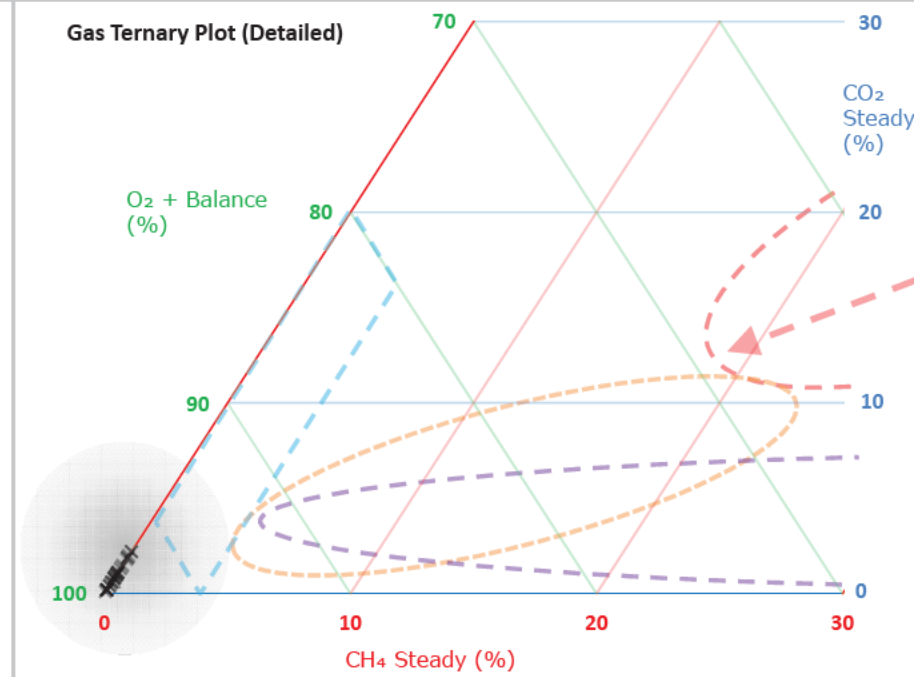
Locations

RO1	RO2	RO3	RO4	RO5	RO6	RO7	RO8	(blank)
-----	-----	-----	-----	-----	-----	-----	-----	---------

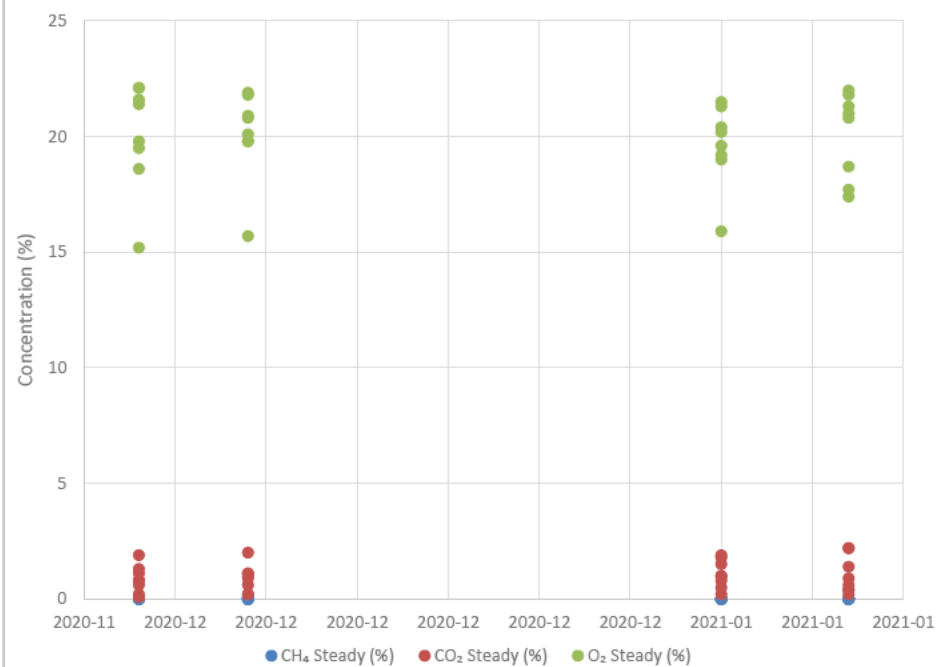
Gas Ternary Plot



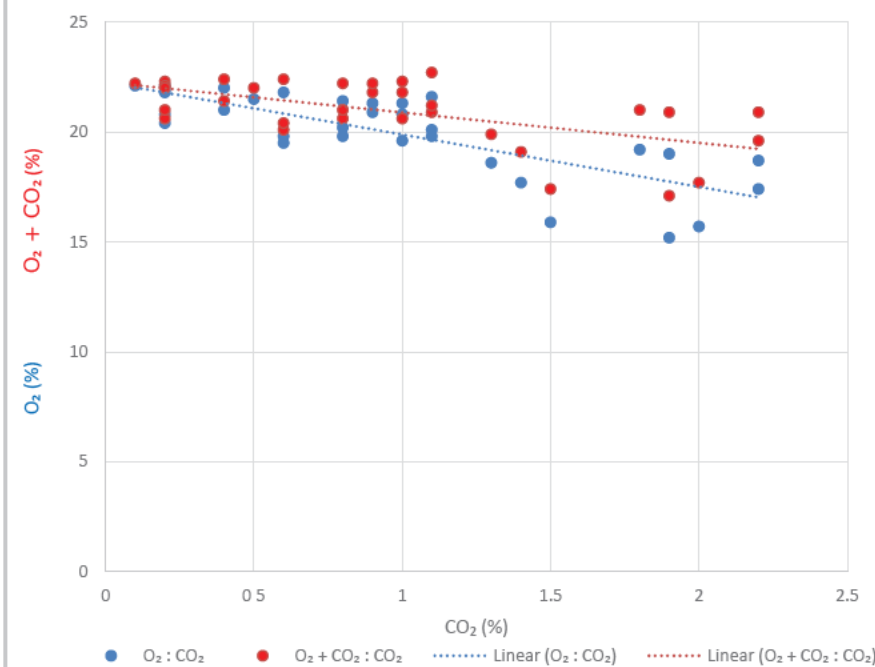
Gas Ternary Plot (Detailed)



Bulk Gases Time-Plot



CO₂ / O₂ relationship



Key:

	Indicative of landfill gas migration (assuming source composition 60% methane / 40% carbon dioxide) as it displaces air from the ground. Assumes no chemical changes. Below 20% methane and 13% carbon dioxide relationship for landfill gas migration unclear. Arrow shows direction of dilution with fresh air
	Microbial respiration of organic material in soil. Zero methane and low flow. (Direct consumption of oxygen to produce carbon dioxide)
	Potentially indicative of methane outgassing from groundwater to borehole headspace (Hydrock dataset).
	Potentially indicative of microbial degradation of LNAPL vapours in unsaturated zone. (Hydrock dataset)
	Indicative of a landfill gas source (e.g 60% CH ₄ / 40% CO ₂)
	Indicative of geogenic gas (e.g mine-workings)
	Fresh air

Additional Notes

A direct linear downwards relationship between CO₂ and O₂ indicates depletion of oxygen to produce carbon dioxide via microbial respiration using the following equation:
 $CH_2O + O_2 \rightarrow CO_2 + H_2O$ In this scenario CO₂ + O₂ should be around 21% (i.e. the O₂ concentration in the atmosphere)

There may also be trace amounts of methane up to about 3% caused by anaerobic decomposition in small anaerobic hotspots or the reduction of carbon dioxide by methanogens. Oxygen concentrations may be depleted but in this scenario oxygen deficient air is not likely to be emitted quickly from the ground and it does not pose a risk.

After: Wilson et al, 2018. Ground Gas Information Sheet No. 1
 Hydrock datasets (methane outgassing / LNAPL vapour degradation)

Appendix F

Contamination Test Results and Statistical Analysis

Contamination Test Results



Cameron Adams
Hydrock Consultants Ltd
2-4 Hawthorne Park
Holdenby Road
Spratton
Northamptonshire
NN6 8LD


t: 01604842888
f: 01604842666
e: cameronadams@hydrock.com

i2 Analytical Ltd.
7 Woodshots Meadow,
Croxley Green
Business Park,
Watford,
Herts,
WD18 8YS

t: 01923 225404
f: 01923 237404
e: reception@i2analytical.com

Analytical Report Number : 20-42280

Project / Site name:	Himley Village, Bicester	Samples received on:	18/11/2020
Your job number:	C-16153	Samples instructed on/ Analysis started on:	18/11/2020
Your order number:	PO03378	Analysis completed by:	25/11/2020
Report Issue Number:	1	Report issued on:	25/11/2020
Samples Analysed:	10 soil samples		

Signed: 

Rachel Bradley
Deputy Quality Manager
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 20-42280
 Project / Site name: Himley Village, Bicester
 Your Order No: PO03378

Lab Sample Number				1689195	1689196	1689197	1689198
Sample Reference				TP72	TP58	TP01	TP02
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.10	0.20	0.10	0.40
Date Sampled				12/11/2020	12/11/2020	12/11/2020	12/11/2020
Time Taken				0900	0900	0900	0900
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	18	17	24	14
Total mass of sample received	kg	0.001	NONE	1.5	1.5	1.5	1.5

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.9	8.1	7.9	8.4
Free Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.0091	0.0087	0.014	0.015
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.029	0.019	0.029	0.0049

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	< 0.80	< 0.80



Analytical Report Number: 20-42280
 Project / Site name: Himley Village, Bicester
 Your Order No: PO03378

Lab Sample Number	1689195	1689196	1689197	1689198
Sample Reference	TP72	TP58	TP01	TP02
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	0.10	0.20	0.10	0.40
Date Sampled	12/11/2020	12/11/2020	12/11/2020	12/11/2020
Time Taken	0900	0900	0900	0900
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	

Heavy Metals / Metalloids

Element	Unit	Limit of detection	Accreditation Status	1689195	1689196	1689197	1689198
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	19	16	19	12
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.1	1	1.2	0.75
Boron (water soluble)	mg/kg	0.2	MCERTS	1.3	1	2.2	0.3
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	0.5	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	27	24	30	19
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	27	25	31	19
Copper (aqua regia extractable)	mg/kg	1	MCERTS	19	16	15	6
Lead (aqua regia extractable)	mg/kg	1	MCERTS	27	16	22	8.8
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	20	20	26	16
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	55	53	60	34
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	69	61	56	20

Monoaromatics & Oxygenates

Compound	Unit	Limit of detection	Accreditation Status	1689195	1689196	1689197	1689198
Benzene	µg/kg	1	MCERTS	-	-	-	-
Toluene	µg/kg	1	MCERTS	-	-	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-	-	-
p & m-xylene	µg/kg	1	MCERTS	-	-	-	-
o-xylene	µg/kg	1	MCERTS	-	-	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-	-	-

Petroleum Hydrocarbons

Compound	Unit	Limit of detection	Accreditation Status	1689195	1689196	1689197	1689198
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	-	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	-	-	-
TPH-CWG - Aliphatic > EC35 - EC44	mg/kg	8.4	NONE	-	-	-	-

Compound	Unit	Limit of detection	Accreditation Status	1689195	1689196	1689197	1689198
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	-	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	-	-	-
TPH-CWG - Aromatic > EC35 - EC44	mg/kg	8.4	NONE	-	-	-	-



Analytical Report Number: 20-42280
 Project / Site name: Himley Village, Bicester
 Your Order No: PO03378

Lab Sample Number	1689195	1689196	1689197	1689198
Sample Reference	TP72	TP58	TP01	TP02
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	0.10	0.20	0.10	0.40
Date Sampled	12/11/2020	12/11/2020	12/11/2020	12/11/2020
Time Taken	0900	0900	0900	0900
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	

SVOCs

Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	1689195	1689196	1689197	1689198
Aniline	mg/kg	0.1	NONE	-	-	-	-
Phenol	mg/kg	0.2	ISO 17025	-	-	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	-	-
Isophorone	mg/kg	0.2	MCERTS	-	-	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-
Azobenzene	mg/kg	0.3	MCERTS	-	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Carbazole	mg/kg	0.3	MCERTS	-	-	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-
Anthraquinone	mg/kg	0.3	MCERTS	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-



Analytical Report Number: 20-42280
 Project / Site name: Himley Village, Bicester
 Your Order No: PO03378

Lab Sample Number	1689195	1689196	1689197	1689198			
Sample Reference	TP72	TP58	TP01	TP02			
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied			
Depth (m)	0.10	0.20	0.10	0.40			
Date Sampled	12/11/2020	12/11/2020	12/11/2020	12/11/2020			
Time Taken	0900	0900	0900	0900			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	-

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 20-42280
 Project / Site name: Himley Village, Bicester
 Your Order No: PO03378

Lab Sample Number				1689199	1689200	1689201	1689202
Sample Reference				TP06	TP10	TP08	TP15
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.10	0.40	0.20	0.50
Date Sampled				12/11/2020	12/11/2020	12/11/2020	12/11/2020
Time Taken				0900	0900	0900	0900
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	19	15	20	19
Total mass of sample received	kg	0.001	NONE	1.5	1.5	1.5	1.5

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.9	8.4	8.1	8.4
Free Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.0061	0.0048	0.0088	0.0075
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.024	0.0052	0.026	0.0092

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	< 0.80	< 0.80



Analytical Report Number: 20-42280
 Project / Site name: Himley Village, Bicester
 Your Order No: PO03378

Lab Sample Number	1689199	1689200	1689201	1689202			
Sample Reference	TP06	TP10	TP08	TP15			
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied			
Depth (m)	0.10	0.40	0.20	0.50			
Date Sampled	12/11/2020	12/11/2020	12/11/2020	12/11/2020			
Time Taken	0900	0900	0900	0900			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Heavy Metals / Metalloids							
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	17	8	21	17
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.2	0.85	1.4	1.3
Boron (water soluble)	mg/kg	0.2	MCERTS	1.6	0.5	1.4	0.3
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	29	19	34	30
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	30	19	35	30
Copper (aqua regia extractable)	mg/kg	1	MCERTS	16	5.9	21	12
Lead (aqua regia extractable)	mg/kg	1	MCERTS	20	8.6	25	13
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	23	16	29	23
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	58	33	70	50
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	59	31	68	37

Monoaromatics & Oxygenates

	Units	Limit of detection	Accreditation Status				
Benzene	µg/kg	1	MCERTS	-	< 1.0	-	-
Toluene	µg/kg	1	MCERTS	-	< 1.0	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	< 1.0	-	-
p & m-xylene	µg/kg	1	MCERTS	-	< 1.0	-	-
o-xylene	µg/kg	1	MCERTS	-	< 1.0	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	< 1.0	-	-

Petroleum Hydrocarbons

	Units	Limit of detection	Accreditation Status				
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	-	< 0.001	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	< 0.001	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	< 0.001	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	< 1.0	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	< 2.0	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	< 8.0	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	< 8.0	-	-
TPH-CWG - Aliphatic > EC35 - EC44	mg/kg	8.4	NONE	-	< 8.4	-	-

	Units	Limit of detection	Accreditation Status				
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	< 0.001	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	< 0.001	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	< 0.001	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	< 1.0	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	< 2.0	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	< 10	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	< 10	-	-
TPH-CWG - Aromatic > EC35 - EC44	mg/kg	8.4	NONE	-	< 8.4	-	-



Analytical Report Number: 20-42280
 Project / Site name: Himley Village, Bicester
 Your Order No: PO03378

Lab Sample Number				1689199	1689200	1689201	1689202
Sample Reference				TP06	TP10	TP08	TP15
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.10	0.40	0.20	0.50
Date Sampled				12/11/2020	12/11/2020	12/11/2020	12/11/2020
Time Taken				0900	0900	0900	0900
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
SVOCs							
Aniline	mg/kg	0.1	NONE	< 0.1	-	-	-
Phenol	mg/kg	0.2	ISO 17025	< 0.2	-	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	< 0.1	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	< 0.2	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	< 0.1	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	< 0.2	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	< 0.1	-	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	< 0.05	-	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	< 0.2	-	-	-
Isophorone	mg/kg	0.2	MCERTS	< 0.2	-	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	< 0.3	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	< 0.3	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	< 0.1	-	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	< 0.1	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	< 0.1	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	< 0.1	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	< 0.2	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	< 0.1	-	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	< 0.1	-	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	< 0.1	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	< 0.1	-	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	< 0.2	-	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	< 0.2	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	< 0.3	-	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	< 0.2	-	-	-
Fluorene	mg/kg	0.05	MCERTS	< 0.05	-	-	-
Azobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	< 0.2	-	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	< 0.3	-	-	-
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	-	-	-
Anthracene	mg/kg	0.05	MCERTS	< 0.05	-	-	-
Carbazole	mg/kg	0.3	MCERTS	< 0.3	-	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	< 0.2	-	-	-
Anthraquinone	mg/kg	0.3	MCERTS	< 0.3	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	-	-	-
Pyrene	mg/kg	0.05	MCERTS	< 0.05	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	< 0.3	-	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	-	-	-
Chrysene	mg/kg	0.05	MCERTS	< 0.05	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	-	-	-



Analytical Report Number: 20-42280
 Project / Site name: Himley Village, Bicester
 Your Order No: PO03378

Lab Sample Number	1689199	1689200	1689201	1689202			
Sample Reference	TP06	TP10	TP08	TP15			
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied			
Depth (m)	0.10	0.40	0.20	0.50			
Date Sampled	12/11/2020	12/11/2020	12/11/2020	12/11/2020			
Time Taken	0900	0900	0900	0900			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	-	-	-

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	ND	-	-	-
SVOC % Match	%	N/A	NONE	0.00	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number: 20-42280
 Project / Site name: Himley Village, Bicester
 Your Order No: PO03378

Lab Sample Number				1689203	1689204
Sample Reference				TP17	TP21
Sample Number				None Supplied	None Supplied
Depth (m)				0.30	0.40
Date Sampled				13/11/2020	13/11/2020
Time Taken				0900	0900
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Stone Content	%	0.1	NONE	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	21	18
Total mass of sample received	kg	0.001	NONE	1.5	1.5

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected
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General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.2	8.4
Free Cyanide	mg/kg	1	MCERTS	< 1	< 1
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.0097	0.0098
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.022	0.006

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80
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Analytical Report Number: 20-42280
 Project / Site name: Himley Village, Bicester
 Your Order No: PO03378

Lab Sample Number				1689203	1689204
Sample Reference				TP17	TP21
Sample Number				None Supplied	None Supplied
Depth (m)				0.30	0.40
Date Sampled				13/11/2020	13/11/2020
Time Taken				0900	0900
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Heavy Metals / Metalloids					
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	20	20
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.3	1.2
Boron (water soluble)	mg/kg	0.2	MCERTS	1.6	0.6
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	33	30
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	33	31
Copper (aqua regia extractable)	mg/kg	1	MCERTS	18	15
Lead (aqua regia extractable)	mg/kg	1	MCERTS	22	15
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	27	28
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	65	61
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	60	52

Monoaromatics & Oxygenates

	µg/kg	1	MCERTS	-	-
Benzene	µg/kg	1	MCERTS	-	-
Toluene	µg/kg	1	MCERTS	-	-
Ethylbenzene	µg/kg	1	MCERTS	-	-
p & m-xylene	µg/kg	1	MCERTS	-	-
o-xylene	µg/kg	1	MCERTS	-	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	-	-

Petroleum Hydrocarbons

	mg/kg	0.001	MCERTS	-	-
TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	-	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	-	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	-	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	-	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	-	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	-	-
TPH-CWG - Aliphatic > EC35 - EC44	mg/kg	8.4	NONE	-	-

	mg/kg	0.001	MCERTS	-	-
TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	-	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	-	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	-	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	-	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	-	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	-	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	-	-
TPH-CWG - Aromatic > EC35 - EC44	mg/kg	8.4	NONE	-	-



Analytical Report Number: 20-42280
 Project / Site name: Himley Village, Bicester
 Your Order No: PO03378

Lab Sample Number				1689203	1689204
Sample Reference				TP17	TP21
Sample Number				None Supplied	None Supplied
Depth (m)				0.30	0.40
Date Sampled				13/11/2020	13/11/2020
Time Taken				0900	0900
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
SVOCs					
Aniline	mg/kg	0.1	NONE	-	-
Phenol	mg/kg	0.2	ISO 17025	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	-
Isophorone	mg/kg	0.2	MCERTS	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-
Naphthalene	mg/kg	0.05	MCERTS	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-
Azobenzene	mg/kg	0.3	MCERTS	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-
Carbazole	mg/kg	0.3	MCERTS	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-
Anthraquinone	mg/kg	0.3	MCERTS	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-



Analytical Report Number: 20-42280
 Project / Site name: Himley Village, Bicester
 Your Order No: PO03378

Lab Sample Number				1689203	1689204
Sample Reference				TP17	TP21
Sample Number				None Supplied	None Supplied
Depth (m)				0.30	0.40
Date Sampled				13/11/2020	13/11/2020
Time Taken				0900	0900
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	-	-
SVOC % Match	%	N/A	NONE	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number : 20-42280
Project / Site name: Himley Village, Bicester

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1689195	TP72	None Supplied	0.1	Brown loam and sand with gravel and vegetation.
1689196	TP58	None Supplied	0.2	Brown loam and sand with gravel and vegetation.
1689197	TP01	None Supplied	0.1	Brown loam and clay with gravel and vegetation.
1689198	TP02	None Supplied	0.4	Brown clay and sand with gravel and vegetation.
1689199	TP06	None Supplied	0.1	Brown loam and clay with gravel and vegetation.
1689200	TP10	None Supplied	0.4	Brown clay and sand with gravel.
1689201	TP08	None Supplied	0.2	Brown loam and clay with gravel and vegetation.
1689202	TP15	None Supplied	0.5	Brown clay and sand with gravel.
1689203	TP17	None Supplied	0.3	Brown loam and clay with gravel and vegetation.
1689204	TP21	None Supplied	0.4	Brown clay and sand with gravel.



Analytical Report Number : 20-42280
Project / Site name: Himley Village, Bicester

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Hexavalent chromium in soil (Lower Level)	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazine followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Fraction of Organic Carbon in soil	Determination of fraction of organic carbon in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Tentatively identified compounds (SVOC) in soil	Determination of semi-volatile organic compounds total ion count in soil by extraction with dichloromethane and hexane followed by GC-MS followed by a full library scan.	In-house method based on USEPA 8270	L064-PL	D	NONE
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L0738-PL	W	MCERTS
TPH Chromatogram in Soil	TPH Chromatogram in Soil.	In-house method	L064-PL	D	NONE



Analytical Report Number : 20-42280
 Project / Site name: Himley Village, Bicester

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Cr (III) in soil	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	MCERTS
TPH in (Soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method, TPH with carbon banding and silica gel split/cleanup.	L076-PL	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
 For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
 Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Sample Deviation Report

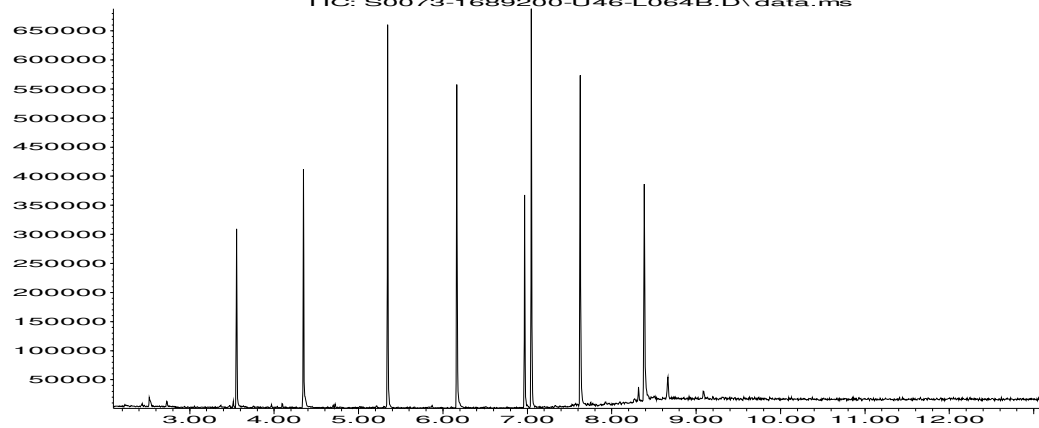


Analytical Report Number : 20-42280
Project / Site name: Himley Village, Bicester

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
TP01	None Supplied	S	1689197	c	Free cyanide in soil	L080-PL	c
TP02	None Supplied	S	1689198	c	Free cyanide in soil	L080-PL	c
TP06	None Supplied	S	1689199	c	Free cyanide in soil	L080-PL	c
TP08	None Supplied	S	1689201	c	Free cyanide in soil	L080-PL	c
TP10	None Supplied	S	1689200	c	Free cyanide in soil	L080-PL	c
TP15	None Supplied	S	1689202	c	Free cyanide in soil	L080-PL	c
TP58	None Supplied	S	1689196	c	Free cyanide in soil	L080-PL	c
TP72	None Supplied	S	1689195	c	Free cyanide in soil	L080-PL	c

Abundance

TIC: S0073-1689200-U46-L064B.D\data.ms



Time-->

TEST CERTIFICATE

Specification for Topsoil

i2 Analytical Ltd
7 Woodshots Meadow
Croxley Green Business Park
Watford Herts WD18 8YS



Tested in Accordance with: BS 3882: 2015

Client: Hydrock Consultants Ltd
Client Address: 2-4 Hawthorne Park, Holdenby Road,
Spratton, Northamptonshire,
NN6 8LD

Contact: Cameron Adams
Site Address: Himley Village, Bicester

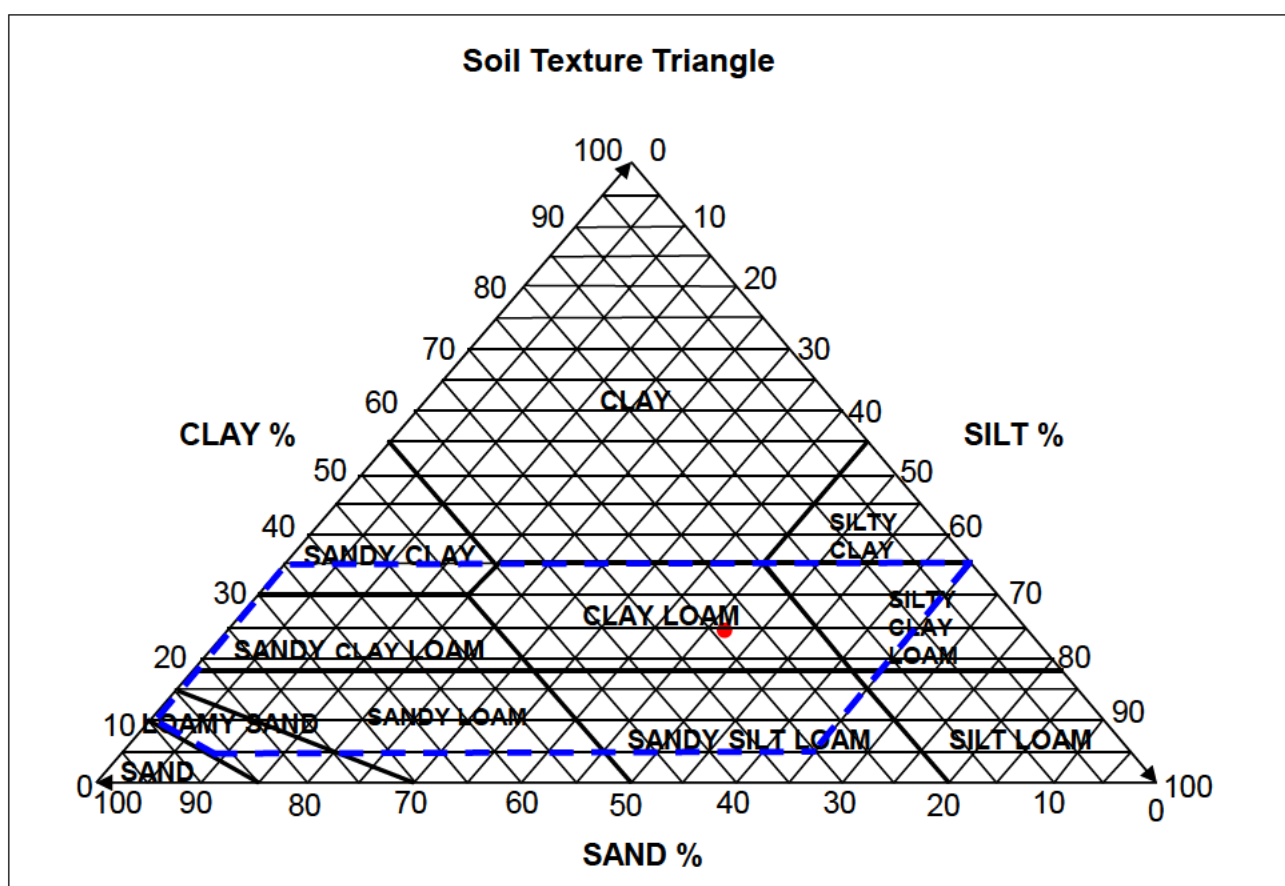
Client Reference: C-16153
Job Number: 20-42651
Date Sampled: 12/11/2020
Date Received: 18/11/2020
Date Tested: 25/11/2020
Sampled By: Not Given

Testing carried out at i2 Analytical Limited, ul. Pionierow 39, 41-711 Ruda Slaska, Poland

Test Results:

Laboratory Reference: 1691355
Hole No.: TP10
Sample Reference: Not Given
Sample Description: CLAY LOAM

Depth Top [m]: 0.00
Depth Base [m]: 0.30
Sample Type: D



Sample Proportion	% dry mass
Sand	29.1
Silt	45.3
Clay	25.6

Remarks:

Opinions and interpretations expressed herein are outside of the scope of the UKAS Accreditation. This report may not be reproduced other than in full without the prior written approval of the issuing laboratory. The results included within the report relate only to the sample(s) submitted for testing.

Signed:



Aleksandra Jurochn k
PL Technical Reviewer
for and on behalf of i2 Analytical Ltd

Date Reported: 27/11/2020

GF 286.7



Cameron Adams
Hydrock Consultants Ltd
2-4 Hawthorne Park
Holdenby Road
Spratton
Northamptonshire
NN6 8LD

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Herts,
WD18 8YS

t: 01923 225404
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e: reception@i2analytical.com

Analytical Report Number : 20-42651

Project / Site name:	Himley Village, Bicester	Samples received on:	18/11/2020
Your job number:	C-16153	Samples instructed on/ Analysis started on:	18/11/2020
Your order number:	PO03378	Analysis completed by:	27/11/2020
Report Issue Number:	1	Report issued on:	27/11/2020
Samples Analysed:	1 soil sample		

Signed: 

Karolina Marek
PL Head of Reporting Team
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

Excel copies of reports are only valid when accompanied by this PDF certificate.

Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.



i2 Analytical

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Certificate of Analysis									
BS 3882:2015 Specification For Topsoil									
Pass BS 3882 for Low fertility;				client					
Report No:	20-42651				Hydrock Consultants Ltd 01604842888				
Location	Himley Village, Bicester								
Lab Reference (Sample Number)	1691355								
Sampling Date	12/11/2020								
Sample ID	TP10								
Depth (m)	0.00-0.30			Compliant with range (Y/N)					
		unit	Result	Multi-P	Acid	Calc	Low-F	Low-F(a)	Low-F(c)
Soil texture	<2mm fraction	%m/m	CLAY LOAM	Y	Y	Y	Y	Y	Y
Maximum coarse fragment content:	>2mm	%m/m	9.50	Y	Y	Y	Y	Y	Y
	>20mm	%m/m	0.00	Y	Y	Y	Y	Y	Y
	>50mm	%m/m	0.00	Y	Y	Y	Y	Y	Y
Mass loss on ignition	Clay 5-20%	%	6.40	-	-	-	-	-	-
	Clay 20-35%		Y	Y	Y	Y	Y	Y	Y
Soil pH:		pH	8.80	N	N	Y	Y	N	Y
Carbonate:		%m/m	5.20	-	-	Y	-	-	Y
Available plant nutrients	Nitrogen	%m/m	0.13	N	N	N	-	-	-
	Extractable Phosphate (as P)	mg/l	20.00	Y	Y	Y	Y	Y	Y
	Extractable Potassium	mg/l	211.00	Y	Y	Y	-	-	-
	Extractable Magnesium	mg/l	84.00	Y	Y	Y	-	-	-
Carbon: Nitrogen Ratio:		:1	30.00	N	N	N	Y	Y	N
Conductivity		us/cm	1600.00	Y	-	-	-	-	-
Phytotoxic contaminants:	** Total Zinc	mg/kg	89.00	Y	Y	Y	Y	Y	Y
	** Total Copper	mg/kg	25.00	Y	Y	Y	Y	Y	Y
	** Total Nickel	mg/kg	32.00	Y	Y	Y	Y	Y	Y
Visible contaminants:	>2mm	%m/m	0.00	Y	Y	Y	Y	Y	Y
	Plastics	%m/m	0.00	Y	Y	Y	Y	Y	Y
	Sharps	no. in 1 kg	0.00	Y	Y	Y	Y	Y	Y
Compliancy:				Fail	Fail	Fail	Pass	Fail	Fail

Results are expressed on a dry weight basis, after correct on for moisture content where applicable
Stated limits are for guidance only and I2 cannot be held responsible for any discrepancies with current leg station

** = MCERTS accredited



Analytical Report Number : 20-42651
Project / Site name: Himley Village, Bicester

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1691355	TP10	None Supplied	0.00-0.30	Brown loam and clay with gravel.

Analytical Report Number : 20-42651
Project / Site name: Himley Village, Bicester

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Geotechnical Testing in Soil	See attached geotechnical report	See attached geotechnical report		W	NONE
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Textural Classification Diagram	Textural classification Diagram	BS3882:2015		D	NONE
Carbon to Nitrogen Ratio (Topsoil - BS3882:2015)	Carbon to Nitrogen ratio (:1) calculated using Loss on Ignition.	BS3882:2015	L01TS2015	W	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Kjeldahl nitrogen in soil	Determination of total nitrogen using the Kjeldahl-digestion method and colorimetric determination.	In house method based on BS 7755-3.7:1995 &	L087-PL	D	NONE
Topsoil	See attached report.	BS 3882: 2015	PL	W	NONE
Mass loss on ignition (Topsoil - BS3882)	Determination of Loss on Ignition as per BS 3882:2015.	BS3882:2015	L047-PL	D	NONE
Carbonate (Topsoil - BS3882)	Determination of Carbonate as per BS 3882:2015.	BS3882:2015	L034-PL	D	NONE
Phosphorus as PO4 (BS3882/BS8601)	Determination of the extractable phosphorus in soil, in accordance with BS3882:2007 methodology.	BS3882:2015 & BS8601:2013	L082-PL	D	NONE
Coarse Fragment and Contaminant Analysis	Determination of >2mm contaminants	BS3882:2007 & BS8601:2013 & PAS 100:2005	L01TS	D	NONE
Nitrogen (TKN)	Determination of total nitrogen by Kjeldahl method.	BS3882:2007	L087-PL	D	NONE
Conductivity (BS3882/BS8601)	Determination of the conductivity of soil in accordance with BS 3882:2007 methodology	BS3882:2007 & BS8601:2013	L099-PL	D	NONE
pH (BS3882/BS8601)	Determination of the pH of soil in accordance with BS 3882:2007 methodology	BS3882:2007 & BS8601:2013	L099-PL	D	NONE
Extractable/Available Metals (BS3882/BS8601)	Determination of the extractable metals in soil, in accordance with BS3882:2007 methodology.	BS3882:2007 & BS8601:2013	L038-PL	D	NONE

Analytical Report Number : 20-42651
Project / Site name: Himley Village, Bicester

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sodium (exchangeable %)	Determination of exchangeable sodium (%) by calculation, in accordance with BS3882:2007 methodology.	BS3882:2007	L028-PL	D	NONE
Textural Classification (BS3882/BS8601)	Determination of the textural classification of soil following BS3882:2007 methodology.	BS3882:2007 & BS8601:2013	L01TS	D	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.



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Analytical Report Number : 20-43045

Project / Site name:	Himley Village, Bicester	Samples received on:	23/11/2020
Your job number:	C 16153	Samples instructed on/ Analysis started on:	23/11/2020
Your order number:	PO03378	Analysis completed by:	01/12/2020
Report Issue Number:	1	Report issued on:	01/12/2020
Samples Analysed:	2 soil samples		

Signed: 

Zina Abdul Razzak
Senior Quality Specialist
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 20-43045
 Project / Site name: Himley Village, Bicester
 Your Order No: PO03378

Lab Sample Number				1693358	1693359
Sample Reference				TP33	TP35
Sample Number				1	1
Depth (m)				0.10	0.10
Date Sampled				16/11/2020	16/11/2020
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
Stone Content	%	0.1	NONE	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	32	16
Total mass of sample received	kg	0.001	NONE	1.5	1.5

Monoaromatics & Oxygenates

Benzene	µg/kg	1	MCERTS	< 1.0	-
Toluene	µg/kg	1	MCERTS	< 1.0	-
Ethylbenzene	µg/kg	1	MCERTS	< 1.0	-
p & m-xylene	µg/kg	1	MCERTS	< 1.0	-
o-xylene	µg/kg	1	MCERTS	< 1.0	-
MTBE (Methyl Tertiary Butyl Ether)	µg/kg	1	MCERTS	< 1.0	-

Petroleum Hydrocarbons

TPH-CWG - Aliphatic >EC5 - EC6	mg/kg	0.001	MCERTS	< 0.001	-
TPH-CWG - Aliphatic >EC6 - EC8	mg/kg	0.001	MCERTS	< 0.001	-
TPH-CWG - Aliphatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-
TPH-CWG - Aliphatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	-
TPH-CWG - Aliphatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	-
TPH-CWG - Aliphatic >EC16 - EC21	mg/kg	8	MCERTS	< 8.0	-
TPH-CWG - Aliphatic >EC21 - EC35	mg/kg	8	MCERTS	< 8.0	-
TPH-CWG - Aliphatic > EC35 - EC44	mg/kg	8.4	NONE	< 8.4	-

TPH-CWG - Aromatic >EC5 - EC7	mg/kg	0.001	MCERTS	< 0.001	-
TPH-CWG - Aromatic >EC7 - EC8	mg/kg	0.001	MCERTS	< 0.001	-
TPH-CWG - Aromatic >EC8 - EC10	mg/kg	0.001	MCERTS	< 0.001	-
TPH-CWG - Aromatic >EC10 - EC12	mg/kg	1	MCERTS	< 1.0	-
TPH-CWG - Aromatic >EC12 - EC16	mg/kg	2	MCERTS	< 2.0	-
TPH-CWG - Aromatic >EC16 - EC21	mg/kg	10	MCERTS	< 10	-
TPH-CWG - Aromatic >EC21 - EC35	mg/kg	10	MCERTS	< 10	-
TPH-CWG - Aromatic > EC35 - EC44	mg/kg	8.4	NONE	< 8.4	-

SVOCs

Aniline	mg/kg	0.1	NONE	-	< 0.1
Phenol	mg/kg	0.2	ISO 17025	-	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	-	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	-	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	-	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	-	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	-	< 0.2
Isophorone	mg/kg	0.2	MCERTS	-	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	-	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	-	< 0.05



Analytical Report Number: 20-43045
 Project / Site name: Himley Village, Bicester
 Your Order No: PO03378

Lab Sample Number				1693358	1693359
Sample Reference				TP33	TP35
Sample Number				1	1
Depth (m)				0.10	0.10
Date Sampled				16/11/2020	16/11/2020
Time Taken				None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status		
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	-	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	-	< 0.1
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	-	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	-	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	-	< 0.05
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	-	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	< 0.3
Diethyl phthalate	mg/kg	0.2	MCERTS	-	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	-	< 0.2
Fluorene	mg/kg	0.05	MCERTS	-	< 0.05
Azobenzene	mg/kg	0.3	MCERTS	-	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	-	< 0.05
Anthracene	mg/kg	0.05	MCERTS	-	< 0.05
Carbazole	mg/kg	0.3	MCERTS	-	< 0.3
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	-	< 0.3
Fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05
Pyrene	mg/kg	0.05	MCERTS	-	< 0.05
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	< 0.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	< 0.05
Chrysene	mg/kg	0.05	MCERTS	-	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	< 0.05

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	-	ND
SVOC % Match	%	N/A	NONE	-	0.00000

U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number : 20-43045

Project / Site name: Himley Village, Bicester

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1693358	TP33	1	0.1	Brown clay.
1693359	TP35	1	0.1	Brown clay.

Analytical Report Number : 20-43045

Project / Site name: Himley Village, Bicester

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Tentatively identified compounds (SVOC) in soil	Determination of semi-volatile organic compounds total ion count in soil by extraction with dichloromethane and hexane followed by GC-MS followed by a full library scan.	In-house method based on USEPA 8270	L064-PL	D	NONE
BTEX and MTBE in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
TPH Chromatogram in Soil	TPH Chromatogram in Soil.	In-house method	L064-PL	D	NONE
TPHCWG (Soil)	Determination of hexane extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L088/76-PL	W	MCERTS
TPH in (Soil)	Determination of TPH bands by HS-GC-MS/GC-FID	In-house method, TPH with carbon banding and silica gel split/cleanup.	L076-PL	D	NONE

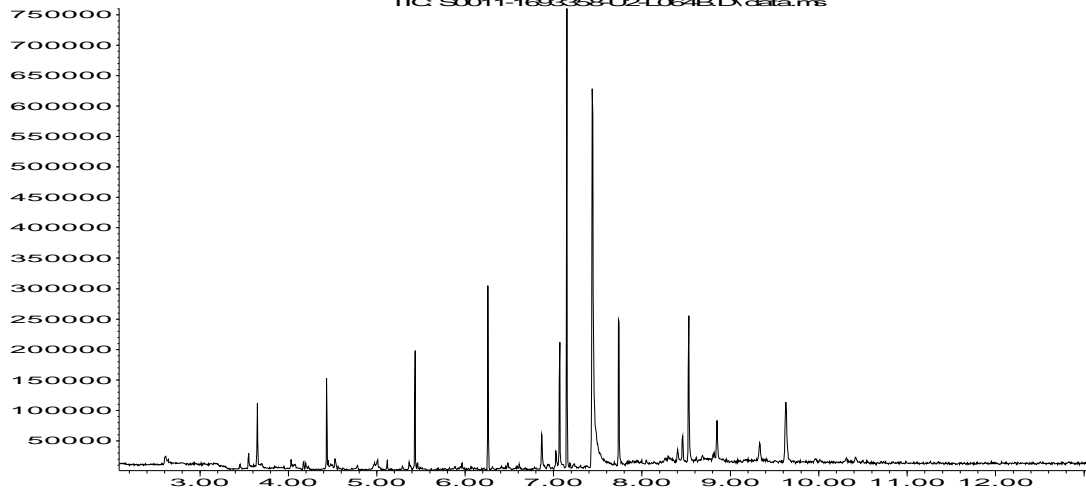
For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Abundance

TIC S0011-1693358-U2-L064B.D\data.ms



Time-->

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Analytical Report Number : 20-43409

Project / Site name:	Himley Village, Bicester	Samples received on:	23/11/2020
Your job number:	C-16153	Samples instructed on/ Analysis started on:	23/11/2020
Your order number:	PO03498	Analysis completed by:	30/11/2020
Report Issue Number:	1	Report issued on:	30/11/2020
Samples Analysed:	11 soil samples		

Signature

Karolina Marek
PL Head of Reporting Team
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 20-43409
 Project / Site name: Himley Village, Bicester
 Your Order No: PO03498

Lab Sample Number	1695550	1695551	1695552	1695553			
Sample Reference	TP53	TP54	TP56	TP74			
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied			
Depth (m)	0.10	0.40	0.10	0.20			
Date Sampled	17/11/2020	17/11/2020	17/11/2020	17/11/2020			
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	18	13	20	14
Total mass of sample received	kg	0.001	NONE	1.5	1.5	1.5	1.5

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.2	8.4	8	8.4
Free Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.01	0.0086	0.012	0.011
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.026	0.012	0.022	0.011

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	< 0.80	< 0.80



Analytical Report Number: 20-43409
 Project / Site name: Himley Village, Bicester
 Your Order No: PO03498

Lab Sample Number				1695550	1695551	1695552	1695553
Sample Reference				TP53	TP54	TP56	TP74
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.10	0.40	0.10	0.20
Date Sampled				17/11/2020	17/11/2020	17/11/2020	17/11/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				

Heavy Metals / Metalloids

Element	Units	Limit of detection	Accreditation Status	1695550	1695551	1695552	1695553
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	21	21	24	19
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.4	1.6	1.7	1.2
Boron (water soluble)	mg/kg	0.2	MCERTS	2	0.7	1.4	0.9
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	36	40	44	30
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	36	40	44	30
Copper (aqua regia extractable)	mg/kg	1	MCERTS	19	15	22	12
Lead (aqua regia extractable)	mg/kg	1	MCERTS	29	19	31	18
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	26	30	34	25
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	70	81	85	65
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	84	70	100	60

SVOCs

Compound	Units	Limit of detection	Accreditation Status	1695550	1695551	1695552	1695553
Aniline	mg/kg	0.1	NONE	-	-	-	-
Phenol	mg/kg	0.2	ISO 17025	-	-	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	-	-
Isophorone	mg/kg	0.2	MCERTS	-	-	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	-	-

Analytical Report Number: 20-43409
 Project / Site name: Himley Village, Bicester
 Your Order No: PO03498

Lab Sample Number	1695550	1695551	1695552	1695553			
Sample Reference	TP53	TP54	TP56	TP74			
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied			
Depth (m)	0.10	0.40	0.10	0.20			
Date Sampled	17/11/2020	17/11/2020	17/11/2020	17/11/2020			
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-
Azobenzene	mg/kg	0.3	MCERTS	-	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Carbazole	mg/kg	0.3	MCERTS	-	-	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-
Anthraquinone	mg/kg	0.3	MCERTS	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	-

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 20-43409
 Project / Site name: Himley Village, Bicester
 Your Order No: PO03498

Lab Sample Number	1695554	1695555	1695556	1695557			
Sample Reference	TP50	TP40	TP26	TP24			
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied			
Depth (m)	0.10	0.30	0.20	0.10			
Date Sampled	18/11/2020	18/11/2020	19/11/2020	19/11/2020			
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	22	18	11	17
Total mass of sample received	kg	0.001	NONE	1.5	1.5	1.5	1.5

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	7.9	8.3	8.5	8.2
Free Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.013	0.0078	0.015	0.016
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.027	0.013	0.015	0.019

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	< 0.80	< 0.80

Analytical Report Number: 20-43409
 Project / Site name: Himley Village, Bicester
 Your Order No: PO03498

Lab Sample Number				1695554	1695555	1695556	1695557
Sample Reference				TP50	TP40	TP26	TP24
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.10	0.30	0.20	0.10
Date Sampled				18/11/2020	18/11/2020	19/11/2020	19/11/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Heavy Metals / Metalloids							
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	21	20	16	19
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.3	1.4	1	1.3
Boron (water soluble)	mg/kg	0.2	MCERTS	1.4	1	1.6	1.8
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	36	36	24	32
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	36	36	25	33
Copper (aqua regia extractable)	mg/kg	1	MCERTS	22	19	13	14
Lead (aqua regia extractable)	mg/kg	1	MCERTS	27	18	17	26
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	27	32	20	24
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	73	71	53	64
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	84	70	50	59

SVOCs

Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Aniline	mg/kg	0.1	NONE	-	-	< 0.1	-
Phenol	mg/kg	0.2	ISO 17025	-	-	< 0.2	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	< 0.1	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	< 0.2	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	< 0.2	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	< 0.1	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	< 0.2	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	< 0.1	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	< 0.3	-
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	< 0.05	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	< 0.2	-
Isophorone	mg/kg	0.2	MCERTS	-	-	< 0.2	-
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	< 0.3	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	< 0.3	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	< 0.3	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	-
Naphthalene	mg/kg	0.05	MCERTS	-	-	< 0.05	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	< 0.3	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	< 0.1	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	< 0.1	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	< 0.1	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	< 0.1	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	< 0.2	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	< 0.1	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	< 0.1	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	< 0.1	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	< 0.1	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	< 0.05	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	< 0.05	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	< 0.2	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	< 0.2	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	< 0.3	-

Analytical Report Number: 20-43409
 Project / Site name: Himley Village, Bicester
 Your Order No: PO03498

Lab Sample Number	1695554	1695555	1695556	1695557			
Sample Reference	TP50	TP40	TP26	TP24			
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied			
Depth (m)	0.10	0.30	0.20	0.10			
Date Sampled	18/11/2020	18/11/2020	19/11/2020	19/11/2020			
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	< 0.2	-
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	< 0.2	-
Fluorene	mg/kg	0.05	MCERTS	-	-	< 0.05	-
Azobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	< 0.2	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-	< 0.05	-
Anthracene	mg/kg	0.05	MCERTS	-	-	< 0.05	-
Carbazole	mg/kg	0.3	MCERTS	-	-	< 0.3	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	< 0.2	-
Anthraquinone	mg/kg	0.3	MCERTS	-	-	< 0.3	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	< 0.05	-
Pyrene	mg/kg	0.05	MCERTS	-	-	< 0.05	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	< 0.3	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	< 0.05	-
Chrysene	mg/kg	0.05	MCERTS	-	-	< 0.05	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	< 0.05	-
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	< 0.05	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	< 0.05	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	< 0.05	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	< 0.05	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	< 0.05	-

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	-	-	ND	-
SVOC % Match	%	N/A	NONE	-	-	0	-

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 20-43409
 Project / Site name: Himley Village, Bicester
 Your Order No: PO03498

Lab Sample Number	1695558	1695559	1695560			
Sample Reference	TP13	TP05	TP78			
Sample Number	None Supplied	None Supplied	None Supplied			
Depth (m)	0.20	0.20	0.10			
Date Sampled	19/11/2020	19/11/2020	20/11/2020			
Time Taken	None Supplied	None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status			
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	19	18	22
Total mass of sample received	kg	0.001	NONE	1.5	1.5	1.5

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.2	8.2	8.2
Free Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1
Water Soluble SO ₄ 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.015	0.019	0.024
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.019	0.015	0.033

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	< 0.80

Analytical Report Number: 20-43409
 Project / Site name: Himley Village, Bicester
 Your Order No: PO03498

Lab Sample Number				1695558	1695559	1695560
Sample Reference				TP13	TP05	TP78
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				0.20	0.20	0.10
Date Sampled				19/11/2020	19/11/2020	20/11/2020
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status			
Heavy Metals / Metalloids						
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	18	16	20
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.3	1.1	1.3
Boron (water soluble)	mg/kg	0.2	MCERTS	1.1	1.2	1.3
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	33	28	32
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	34	28	32
Copper (aqua regia extractable)	mg/kg	1	MCERTS	15	16	19
Lead (aqua regia extractable)	mg/kg	1	MCERTS	22	16	43
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	23	22	25
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	63	52	65
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	62	46	62

SVOCs

Aniline	mg/kg	0.1	NONE	-	-	< 0.1
Phenol	mg/kg	0.2	ISO 17025	-	-	< 0.2
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	< 0.1
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	< 0.2
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	< 0.2
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	< 0.1
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	< 0.2
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	< 0.1
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	< 0.3
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	< 0.05
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3
4-Methylphenol	mg/kg	0.2	NONE	-	-	< 0.2
Isophorone	mg/kg	0.2	MCERTS	-	-	< 0.2
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	< 0.3
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	< 0.3
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	< 0.3
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3
Naphthalene	mg/kg	0.05	MCERTS	-	-	< 0.05
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	< 0.3
4-Chloroaniline	mg/kg	0.1	NONE	-	-	< 0.1
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	< 0.1
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	< 0.1
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	< 0.1
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	< 0.2
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	< 0.1
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	< 0.1
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	< 0.1
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	< 0.1
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	-	-	< 0.05
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	< 0.2
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	< 0.2
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	< 0.3

Analytical Report Number: 20-43409
 Project / Site name: Himley Village, Bicester
 Your Order No: PO03498

Lab Sample Number				1695558	1695559	1695560
Sample Reference				TP13	TP05	TP78
Sample Number				None Supplied	None Supplied	None Supplied
Depth (m)				0.20	0.20	0.10
Date Sampled				19/11/2020	19/11/2020	20/11/2020
Time Taken				None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status			
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	< 0.2
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	< 0.2
Fluorene	mg/kg	0.05	MCERTS	-	-	< 0.05
Azobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	< 0.2
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	< 0.3
Phenanthrene	mg/kg	0.05	MCERTS	-	-	< 0.05
Anthracene	mg/kg	0.05	MCERTS	-	-	< 0.05
Carbazole	mg/kg	0.3	MCERTS	-	-	< 0.3
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	< 0.2
Anthraquinone	mg/kg	0.3	MCERTS	-	-	< 0.3
Fluoranthene	mg/kg	0.05	MCERTS	-	-	< 0.05
Pyrene	mg/kg	0.05	MCERTS	-	-	< 0.05
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	< 0.3
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	< 0.05
Chrysene	mg/kg	0.05	MCERTS	-	-	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	< 0.05

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	-	-	ND
SVOC % Match	%	N/A	NONE	-	-	0

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 20-43409

Project / Site name: Himley Village, Bicester

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1695550	TP53	None Supplied	0.1	Brown loam and clay with gravel and vegetation.
1695551	TP54	None Supplied	0.4	Brown loam and clay with gravel and vegetation.
1695552	TP56	None Supplied	0.1	Brown loam and clay with gravel and vegetation.
1695553	TP74	None Supplied	0.2	Brown loam and clay with gravel and vegetation.
1695554	TP50	None Supplied	0.1	Brown loam and clay with gravel and vegetation.
1695555	TP40	None Supplied	0.3	Brown loam and clay with gravel and vegetation.
1695556	TP26	None Supplied	0.2	Brown clay and loam with gravel and vegetation.
1695557	TP24	None Supplied	0.1	Brown clay and loam with gravel and vegetation.
1695558	TP13	None Supplied	0.2	Brown clay and loam with gravel and vegetation.
1695559	TP05	None Supplied	0.2	Brown clay and loam with gravel and vegetation.
1695560	TP78	None Supplied	0.1	Brown loam and sand with vegetation and gravel.

Analytical Report Number : 20-43409

Project / Site name: Himley Village, Bicester

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Hexavalent chromium in soil (Lower Level)	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Fraction of Organic Carbon in soil	Determination of fraction of organic carbon in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Tentatively identified compounds (SVOC) in soil	Determination of semi-volatile organic compounds total ion count in soil by extraction with dichloromethane and hexane followed by GC-MS followed by a full library scan.	In-house method based on USEPA 8270	L064-PL	D	NONE
Cr (III) in soil	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Sample Deviation Report



Analytical Report Number : 20-43409
 Project / Site name: Himley Village, Bicester

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
TP40	None Supplied	S	1695555	c	Free cyanide in soil	L080-PL	c
TP50	None Supplied	S	1695554	c	Free cyanide in soil	L080-PL	c
TP53	None Supplied	S	1695550	c	Free cyanide in soil	L080-PL	c
TP54	None Supplied	S	1695551	c	Free cyanide in soil	L080-PL	c
TP56	None Supplied	S	1695552	c	Free cyanide in soil	L080-PL	c
TP74	None Supplied	S	1695553	c	Free cyanide in soil	L080-PL	c

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Analytical Report Number : 20-43412

Project / Site name:	Himley Village, Bicester	Samples received on:	23/11/2020
Your job number:	C-16153	Samples instructed on/ Analysis started on:	23/11/2020
Your order number:	PO03498	Analysis completed by:	01/12/2020
Report Issue Number:	1	Report issued on:	01/12/2020
Samples Analysed:	10:1 WAC sample		

Signature

Karolina Marek
PL Head of Reporting Team
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.



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Waste Acceptance Criteria Analytical Results							
Report No:	20-43412						
							Client: HYDROCK
Location	Himley Village, Bicester						
Lab Reference (Sample Number)	1695565 / 1695566						
Sampling Date	20/11/2020						
Sample ID	TP78						
Depth (m)	0.10						
Landfill Waste Acceptance Criteria Limits							
					Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Solid Waste Analysis							
TOC (%)**	3.3				3%	5%	6%
Loss on Ignition (%) **	10.9				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	210				500	--	--
Total PAH (WAC-17) (mg/kg)	< 0.85				100	--	--
pH (units)**	7.9				--	>6	--
Acid Neutralisation Capacity (mol / kg)	1.2				--	To be evaluated	To be evaluated
Eluate Analysis							
	10:1			10:1	Limit values for compliance leaching test		
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	< 0.0010			< 0.0100	0.5	2	25
Barium *	0.0080			0.0641	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	< 0.0004			< 0.0040	0.5	10	70
Copper *	0.0060			0.048	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	< 0.0004			< 0.0040	0.5	10	30
Nickel *	0.0009			0.0072	0.4	10	40
Lead *	0.0061			0.049	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0039			0.031	4	50	200
Chloride *	2.2			18	800	15000	25000
Fluoride	0.57			4.5	10	150	500
Sulphate *	2.5			20	1000	20000	50000
TDS*	50			400	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	9.36			74.8	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	1.2						
Dry Matter (%)	78						
Moisture (%)	22						
Results are expressed on a dry weight basis, after correction for moisture content where applicable. * = UKAS accredited (liquid eluate analysis only)							
Stated limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation ** = MCERTS accredited							

Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3.
This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.



Analytical Report Number : 20-43412

Project / Site name: Himley Village, Bicester

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1695565	TP78	None Supplied	0.1	Brown loam and sand with vegetation and gravel.

Analytical Report Number : 20-43412

Project / Site name: Himley Village, Bicester

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
BS EN 12457-2 (10:1) Leachate Prep	10:1 (as recieved, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-2.	L043-PL	W	NONE
Acid neutralisation capacity of soil	Determination of acid neutralisation capacity by addition of acid or alkali followed by electronic probe.	In-house method based on Guidance on Sampling and Testing of Wastes to Meet Landfill Waste Acceptance"	L046-PL	W	NONE
Loss on ignition of soil @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace.	In house method.	L047-PL	D	MCERTS
Mineral Oil (Soil) C10 - C40	Determination of mineral oil fraction extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L076-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270. MCERTS accredited except Coronene.	L064-PL	D	NONE
PCB's By GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	MCERTS
pH at 20oC in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In house method.	L005-PL	W	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
BTEX in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Total BTEX in soil (Poland)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073-PL	W	MCERTS
Metals in leachate by ICP-OES	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025
Chloride 10:1 WAC	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
Fluoride 10:1 WAC	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination"	L033B-PL	W	ISO 17025
Sulphate 10:1 WAC	Determination of sulphate in leachate by ICP-OES	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil"	L039-PL	W	ISO 17025



Analytical Report Number : 20-43412
Project / Site name: Himley Village, Bicester

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total dissolved solids 10:1 WAC	Determination of total dissolved solids in water by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L004-PL	W	ISO 17025
Monohydric phenols 10:1 WAC	Determination of phenols in leachate by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
Dissolved organic carbon 10:1 WAC	Determination of dissolved inorganic carbon in leachate by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.



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Analytical Report Number : 20-44366

Project / Site name:	Himley Village, Bicester	Samples received on:	27/11/2020
Your job number:	C-16153	Samples instructed on/ Analysis started on:	27/11/2020
Your order number:	PO3498	Analysis completed by:	04/12/2020
Report Issue Number:	1	Report issued on:	04/12/2020
Samples Analysed:	1 soil sample		

Signed: 

Agnieszka Czerwińska
Technical Reviewer (Reporting Team)
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 20-44366
 Project / Site name: Himley Village, Bicester
 Your Order No: PO3498

Lab Sample Number					1700969
Sample Reference					TP42
Sample Number					None Supplied
Depth (m)					None Supplied
Date Sampled					20/11/2020
Time Taken					None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	MCERTS	Result
Stone Content	%	0.1	NONE		< 0.1
Moisture Content	%	0.01	NONE		17
Total mass of sample received	kg	0.001	NONE		0.5

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected
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General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.4
Free Cyanide	mg/kg	1	MCERTS	< 1
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.0073
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.029

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0
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Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80
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Analytical Report Number: 20-44366
 Project / Site name: Himley Village, Bicester
 Your Order No: PO3498

Lab Sample Number	1700969			
Sample Reference	TP42			
Sample Number	None Supplied			
Depth (m)	None Supplied			
Date Sampled	20/11/2020			
Time Taken	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	21
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.1
Boron (water soluble)	mg/kg	0.2	MCERTS	0.5
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2
Chromium (III)	mg/kg	1	NONE	29
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	30
Copper (aqua regia extractable)	mg/kg	1	MCERTS	13
Lead (aqua regia extractable)	mg/kg	1	MCERTS	25
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	25
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	63
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	53

U/S = Unsuitable Sample I/S = Insufficient Sample



Analytical Report Number : 20-44366
Project / Site name: Himley Village, Bicester

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1700969	TP42	None Supplied	None Supplied	Brown loam and clay.

Analytical Report Number : 20-44366
Project / Site name: Himley Village, Bicester

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Hexavalent chromium in soil (Lower Level)	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazine followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Fraction of Organic Carbon in soil	Determination of fraction of organic carbon in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Cr (III) in soil	In-house method by calculation from total Cr and Cr VI.	In-house method by calculation	L080-PL	W	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.
For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.
Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Sample Deviation Report



Analytical Report Number : 20-44366
Project / Site name: Himley Village, Bicester

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
TP42	None Supplied	S	1700969	c	Free cyanide in soil	L080-PL	c



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Analytical Report Number : 20-44770

Project / Site name:	Himley Vilage, Bicester	Samples received on:	27/11/2020
Your job number:	C-16153	Samples instructed on/ Analysis started on:	01/12/2020
Your order number:	PO03677	Analysis completed by:	09/12/2020
Report Issue Number:	1	Report issued on:	09/12/2020
Samples Analysed:	13 soil samples		

Signed: 

Karolina Marek
PL Head of Reporting Team
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement. Application of uncertainty of measurement would provide a range within which the true result lies. An estimate of measurement uncertainty can be provided on request.



Analytical Report Number: 20-44770
 Project / Site name: Himley Vilage, Bicester
 Your Order No: PO03677

Lab Sample Number	1703035	1703036	1703037	1703038			
Sample Reference	TP48	TP64	TP68	TP79			
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied			
Depth (m)	0.20	0.10	0.10	0.10			
Date Sampled	24/11/2020	25/11/2020	25/11/2020	26/11/2020			
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	17	17	18	17
Total mass of sample received	kg	0.001	NONE	1	1	1	1

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.7	8.4	8.4	8.2
Free Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.0079	0.01	0.0091	0.0073
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.013	0.033	0.035	0.035

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	< 0.80	< 0.80

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	18	16	18	18
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1.1	0.99	1.2	1.3
Boron (water soluble)	mg/kg	0.2	MCERTS	1.5	0.7	0.9	1.4
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	28	25	29	30
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	28	26	29	30
Copper (aqua regia extractable)	mg/kg	1	MCERTS	13	11	18	18
Lead (aqua regia extractable)	mg/kg	1	MCERTS	26	27	66	44
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	21	19	22	22
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	58	54	59	61
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	53	51	63	58



Analytical Report Number: 20-44770
 Project / Site name: Himley Vilage, Bicester
 Your Order No: PO03677

Lab Sample Number	1703035	1703036	1703037	1703038
Sample Reference	TP48	TP64	TP68	TP79
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)	0.20	0.10	0.10	0.10
Date Sampled	24/11/2020	25/11/2020	25/11/2020	26/11/2020
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	

SVOCs

Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	1703035	1703036	1703037	1703038
Aniline	mg/kg	0.1	NONE	-	< 0.1	-	-
Phenol	mg/kg	0.2	ISO 17025	-	< 0.2	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	< 0.1	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	< 0.2	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	< 0.2	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	< 0.1	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	< 0.2	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	< 0.1	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	< 0.3	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	< 0.3	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	< 0.2	-	-
Isophorone	mg/kg	0.2	MCERTS	-	< 0.2	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	-	< 0.3	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	< 0.3	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	< 0.3	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	< 0.3	-	-
Naphthalene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	< 0.3	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	< 0.1	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	< 0.1	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	< 0.1	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	< 0.1	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	< 0.2	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	< 0.1	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	< 0.1	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	< 0.1	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	< 0.1	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	< 0.2	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	< 0.2	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	< 0.3	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	-	< 0.2	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	-	< 0.2	-	-
Fluorene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Azobenzene	mg/kg	0.3	MCERTS	-	< 0.3	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	< 0.2	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	< 0.3	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Anthracene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Carbazole	mg/kg	0.3	MCERTS	-	< 0.3	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	< 0.2	-	-
Anthraquinone	mg/kg	0.3	MCERTS	-	< 0.3	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Pyrene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	< 0.3	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Chrysene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05	-	-

Analytical Report Number: 20-44770
 Project / Site name: Himley Vilage, Bicester
 Your Order No: PO03677

Lab Sample Number	1703035	1703036	1703037	1703038			
Sample Reference	TP48	TP64	TP68	TP79			
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied			
Depth (m)	0.20	0.10	0.10	0.10			
Date Sampled	24/11/2020	25/11/2020	25/11/2020	26/11/2020			
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	< 0.05	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	< 0.05	-	-

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	-	1-Naphthalenamine, N-phenyl-	-	-
SVOC % Match	%	N/A	NONE	-	96	-	-
SVOCs TICs Compound Name		N/A	NONE	-	Naphthalene, 1,4-dimethyl-	-	-
SVOC % Match	%	N/A	NONE	-	93	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 20-44770
 Project / Site name: Himley Vilage, Bicester
 Your Order No: PO03677

Lab Sample Number	1703039	1703040	1703041	1703042			
Sample Reference	TP80	TP82	TP45	TP65			
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied			
Depth (m)	0.30	0.20	0.10	0.40			
Date Sampled	26/11/2020	26/11/2020	26/11/2020	26/11/2020			
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	13	17	16	14
Total mass of sample received	kg	0.001	NONE	0.9	1	1	1

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected

General Inorganics

pH - Automated	pH Units	N/A	MCERTS	8.4	8.3	8.1	7.7
Free Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.012	0.0092	0.0097	0.012
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.026	0.027	0.03	0.015

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0

Speciated PAHs

Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	< 0.80	< 0.80

Heavy Metals / Metalloids

Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	15	17	18	16
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	1	1.1	1.1	0.98
Boron (water soluble)	mg/kg	0.2	MCERTS	1.1	0.8	0.6	1.3
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	25	26	28	24
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	25	27	29	25
Copper (aqua regia extractable)	mg/kg	1	MCERTS	9.9	13	12	7.5
Lead (aqua regia extractable)	mg/kg	1	MCERTS	27	33	26	15
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	20	21	24	21
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	50	54	59	52
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	43	53	55	38

Analytical Report Number: 20-44770
 Project / Site name: Himley Vilage, Bicester
 Your Order No: PO03677

Lab Sample Number				1703039	1703040	1703041	1703042
Sample Reference				TP80	TP82	TP45	TP65
Sample Number				None Supplied	None Supplied	None Supplied	None Supplied
Depth (m)				0.30	0.20	0.10	0.40
Date Sampled				26/11/2020	26/11/2020	26/11/2020	26/11/2020
Time Taken				None Supplied	None Supplied	None Supplied	None Supplied
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
SVOCs							
Aniline	mg/kg	0.1	NONE	-	-	-	-
Phenol	mg/kg	0.2	ISO 17025	-	-	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	-	-
Isophorone	mg/kg	0.2	MCERTS	-	-	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-
Naphthalene	mg/kg	0.05	MCERTS	-	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-	-
Azobenzene	mg/kg	0.3	MCERTS	-	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Carbazole	mg/kg	0.3	MCERTS	-	-	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	-	-
Anthraquinone	mg/kg	0.3	MCERTS	-	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-

Analytical Report Number: 20-44770
 Project / Site name: Himley Vilage, Bicester
 Your Order No: PO03677

Lab Sample Number	1703039	1703040	1703041	1703042			
Sample Reference	TP80	TP82	TP45	TP65			
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied			
Depth (m)	0.30	0.20	0.10	0.40			
Date Sampled	26/11/2020	26/11/2020	26/11/2020	26/11/2020			
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	-

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number: 20-44770
 Project / Site name: Himley Vilage, Bicester
 Your Order No: PO03677

Lab Sample Number	1703043	1703044	1703045	1703046			
Sample Reference	TP67	TP81	TP43	TP83			
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied			
Depth (m)	0.10	0.20	0.10	0.10			
Date Sampled	26/11/2020	26/11/2020	25/11/2020	25/11/2020			
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	Result	Result	Result	Result
Stone Content	%	0.1	NONE	< 0.1	< 0.1	< 0.1	< 0.1
Moisture Content	%	0.01	NONE	20	16	20	16
Total mass of sample received	kg	0.001	NONE	1	1	1	1

Asbestos in Soil	Type	N/A	ISO 17025	Not-detected	Not-detected	Not-detected	Not-detected

General Inorganics

Parameter	Units	N/A	MCERTS	7.8	7.8	7.9	8
pH - Automated	pH Units	N/A	MCERTS	7.8	7.8	7.9	8
Free Cyanide	mg/kg	1	MCERTS	< 1	< 1	< 1	< 1
Water Soluble SO4 16hr extraction (2:1 Leachate Equivalent)	g/l	0.00125	MCERTS	0.016	0.02	0.0084	0.037
Fraction Organic Carbon (FOC)	N/A	0.001	MCERTS	0.037	0.032	0.035	0.028

Total Phenols

Total Phenols (monohydric)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0

Speciated PAHs

Parameter	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Naphthalene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Fluorene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Chrysene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(a)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	< 0.05	< 0.05	< 0.05	< 0.05

Total PAH

Speciated Total EPA-16 PAHs	mg/kg	0.8	MCERTS	< 0.80	< 0.80	< 0.80	< 0.80

Heavy Metals / Metalloids

Parameter	mg/kg	1	MCERTS	16	17	18	17
Arsenic (aqua regia extractable)	mg/kg	1	MCERTS	16	17	18	17
Beryllium (aqua regia extractable)	mg/kg	0.06	MCERTS	0.99	1.1	1.1	1.1
Boron (water soluble)	mg/kg	0.2	MCERTS	1.4	2.2	1.8	0.9
Cadmium (aqua regia extractable)	mg/kg	0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2
Chromium (hexavalent)	mg/kg	1.2	MCERTS	< 1.2	< 1.2	< 1.2	< 1.2
Chromium (III)	mg/kg	1	NONE	24	28	32	27
Chromium (aqua regia extractable)	mg/kg	1	MCERTS	24	28	32	28
Copper (aqua regia extractable)	mg/kg	1	MCERTS	14	15	13	15
Lead (aqua regia extractable)	mg/kg	1	MCERTS	28	33	28	37
Mercury (aqua regia extractable)	mg/kg	0.3	MCERTS	< 0.3	< 0.3	< 0.3	< 0.3
Nickel (aqua regia extractable)	mg/kg	1	MCERTS	19	22	22	22
Selenium (aqua regia extractable)	mg/kg	1	MCERTS	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium (aqua regia extractable)	mg/kg	1	MCERTS	49	56	62	57
Zinc (aqua regia extractable)	mg/kg	1	MCERTS	50	54	56	55

Analytical Report Number: 20-44770
 Project / Site name: Himley Vilage, Bicester
 Your Order No: PO03677

Lab Sample Number	1703043	1703044	1703045	1703046		
Sample Reference	TP67	TP81	TP43	TP83		
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied		
Depth (m)	0.10	0.20	0.10	0.10		
Date Sampled	26/11/2020	26/11/2020	25/11/2020	25/11/2020		
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied		
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status	Accreditation Status	Accreditation Status	Accreditation Status
SVOCs						
Aniline	mg/kg	0.1	NONE	-	-	-
Phenol	mg/kg	0.2	ISO 17025	-	-	-
2-Chlorophenol	mg/kg	0.1	MCERTS	-	-	-
Bis(2-chloroethyl)ether	mg/kg	0.2	MCERTS	-	-	-
1,3-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-
1,2-Dichlorobenzene	mg/kg	0.1	MCERTS	-	-	-
1,4-Dichlorobenzene	mg/kg	0.2	MCERTS	-	-	-
Bis(2-chloroisopropyl)ether	mg/kg	0.1	MCERTS	-	-	-
2-Methylphenol	mg/kg	0.3	MCERTS	-	-	-
Hexachloroethane	mg/kg	0.05	MCERTS	-	-	-
Nitrobenzene	mg/kg	0.3	MCERTS	-	-	-
4-Methylphenol	mg/kg	0.2	NONE	-	-	-
Isophorone	mg/kg	0.2	MCERTS	-	-	-
2-Nitrophenol	mg/kg	0.3	MCERTS	-	-	-
2,4-Dimethylphenol	mg/kg	0.3	MCERTS	-	-	-
Bis(2-chloroethoxy)methane	mg/kg	0.3	MCERTS	-	-	-
1,2,4-Trichlorobenzene	mg/kg	0.3	MCERTS	-	-	-
Naphthalene	mg/kg	0.05	MCERTS	-	-	-
2,4-Dichlorophenol	mg/kg	0.3	MCERTS	-	-	-
4-Chloroaniline	mg/kg	0.1	NONE	-	-	-
Hexachlorobutadiene	mg/kg	0.1	MCERTS	-	-	-
4-Chloro-3-methylphenol	mg/kg	0.1	NONE	-	-	-
2,4,6-Trichlorophenol	mg/kg	0.1	MCERTS	-	-	-
2,4,5-Trichlorophenol	mg/kg	0.2	MCERTS	-	-	-
2-Methylnaphthalene	mg/kg	0.1	NONE	-	-	-
2-Chloronaphthalene	mg/kg	0.1	MCERTS	-	-	-
Dimethylphthalate	mg/kg	0.1	MCERTS	-	-	-
2,6-Dinitrotoluene	mg/kg	0.1	MCERTS	-	-	-
Acenaphthylene	mg/kg	0.05	MCERTS	-	-	-
Acenaphthene	mg/kg	0.05	MCERTS	-	-	-
2,4-Dinitrotoluene	mg/kg	0.2	MCERTS	-	-	-
Dibenzofuran	mg/kg	0.2	MCERTS	-	-	-
4-Chlorophenyl phenyl ether	mg/kg	0.3	ISO 17025	-	-	-
Diethyl phthalate	mg/kg	0.2	MCERTS	-	-	-
4-Nitroaniline	mg/kg	0.2	MCERTS	-	-	-
Fluorene	mg/kg	0.05	MCERTS	-	-	-
Azobenzene	mg/kg	0.3	MCERTS	-	-	-
Bromophenyl phenyl ether	mg/kg	0.2	MCERTS	-	-	-
Hexachlorobenzene	mg/kg	0.3	MCERTS	-	-	-
Phenanthrene	mg/kg	0.05	MCERTS	-	-	-
Anthracene	mg/kg	0.05	MCERTS	-	-	-
Carbazole	mg/kg	0.3	MCERTS	-	-	-
Dibutyl phthalate	mg/kg	0.2	MCERTS	-	-	-
Anthraquinone	mg/kg	0.3	MCERTS	-	-	-
Fluoranthene	mg/kg	0.05	MCERTS	-	-	-
Pyrene	mg/kg	0.05	MCERTS	-	-	-
Butyl benzyl phthalate	mg/kg	0.3	ISO 17025	-	-	-
Benzo(a)anthracene	mg/kg	0.05	MCERTS	-	-	-
Chrysene	mg/kg	0.05	MCERTS	-	-	-
Benzo(b)fluoranthene	mg/kg	0.05	MCERTS	-	-	-

Analytical Report Number: 20-44770
 Project / Site name: Himley Vilage, Bicester
 Your Order No: PO03677

Lab Sample Number	1703043	1703044	1703045	1703046			
Sample Reference	TP67	TP81	TP43	TP83			
Sample Number	None Supplied	None Supplied	None Supplied	None Supplied			
Depth (m)	0.10	0.20	0.10	0.10			
Date Sampled	26/11/2020	26/11/2020	25/11/2020	25/11/2020			
Time Taken	None Supplied	None Supplied	None Supplied	None Supplied			
Analytical Parameter (Soil Analysis)	Units	Limit of detection	Accreditation Status				
Benzo(k)fluoranthene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(a)pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Indeno(1,2,3-cd)pyrene	mg/kg	0.05	MCERTS	-	-	-	-
Dibenz(a,h)anthracene	mg/kg	0.05	MCERTS	-	-	-	-
Benzo(ghi)perylene	mg/kg	0.05	MCERTS	-	-	-	-

SVOCs TICs

SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-
SVOCs TICs Compound Name		N/A	NONE	-	-	-	-
SVOC % Match	%	N/A	NONE	-	-	-	-

U/S = Unsuitable Sample I/S = Insufficient Sample

Analytical Report Number : 20-44770
Project / Site name: Himley Vilage, Bicester

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1703035	TP48	None Supplied	0.2	Brown loam and clay with gravel and vegetation.
1703036	TP64	None Supplied	0.1	Brown loam and clay with gravel and vegetation.
1703037	TP68	None Supplied	0.1	Brown loam and clay with gravel and vegetation.
1703038	TP79	None Supplied	0.1	Brown loam and clay with gravel and vegetation.
1703039	TP80	None Supplied	0.3	Brown loam and clay with gravel and vegetation.
1703040	TP82	None Supplied	0.2	Brown loam and clay with gravel and vegetation.
1703041	TP45	None Supplied	0.1	Brown loam and clay with gravel and vegetation.
1703042	TP65	None Supplied	0.4	Brown loam and clay with gravel and vegetation.
1703043	TP67	None Supplied	0.1	Brown loam and clay with gravel and vegetation.
1703044	TP81	None Supplied	0.2	Brown loam and clay with gravel and vegetation.
1703045	TP43	None Supplied	0.1	Brown loam and clay with gravel and vegetation.
1703046	TP83	None Supplied	0.1	Brown loam and clay with gravel and vegetation.

Analytical Report Number : 20-44770
Project / Site name: Himley Village, Bicester

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Sulphate, water soluble, in soil (16hr extraction)	Determination of water soluble sulphate by ICP-OES. Results reported directly (leachate equivalent) and corrected for extraction ratio (soil equivalent).	In house method.	L038-PL	D	MCERTS
Metals in soil by ICP-OES	Determination of metals in soil by aqua-regia digestion followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil.	L038-PL	D	MCERTS
Asbestos identification in soil	Asbestos Identification with the use of polarised light microscopy in conjunction with disperion staining techniques.	In house method based on HSG 248	A001-PL	D	ISO 17025
Boron, water soluble, in soil	Determination of water soluble boron in soil by hot water extract followed by ICP-OES.	In-house method based on Second Site Properties version 3	L038-PL	D	MCERTS
Hexavalent chromium in soil (Lower Level)	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazine followed by colorimetry.	In-house method	L080-PL	W	MCERTS
Free cyanide in soil	Determination of free cyanide by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (Skalar)	L080-PL	W	MCERTS
Fraction of Organic Carbon in soil	Determination of fraction of organic carbon in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Monohydric phenols in soil	Determination of phenols in soil by extraction with sodium hydroxide followed by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton (skalar)	L080-PL	W	MCERTS
Speciated EPA-16 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
pH in soil (automated)	Determination of pH in soil by addition of water followed by automated electrometric measurement.	In house method.	L099-PL	D	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Semi-volatile organic compounds in soil	Determination of semi-volatile organic compounds in soil by extraction in dichloromethane and hexane followed by GC-MS.	In-house method based on USEPA 8270	L064-PL	D	MCERTS
Tentatively identified compounds (SVOC) in soil	Determination of semi-volatile organic compounds total ion count in soil by extraction with dichloromethane and hexane followed by GC-MS followed by a full library scan.	In-house method based on USEPA 8270	L064-PL	D	NONE
Cr (III) in soil		In-house method by calculation from total Cr and Cr VI.	L080-PL	W	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Sample Deviation Report



Analytical Report Number : 20-44770
 Project / Site name: Himley Vilage, Bicester

Sample ID	Other ID	Sample Type	Lab Sample Number	Sample Deviation	Test Name	Test Ref	Test Deviation
TP43	None Supplied	S	1703045	c	Free cyanide in soil	L080-PL	c
TP43	None Supplied	S	1703047	c	None Supplied	None Supplied	None Supplied
TP48	None Supplied	S	1703035	c	Free cyanide in soil	L080-PL	c
TP64	None Supplied	S	1703036	c	Free cyanide in soil	L080-PL	c
TP68	None Supplied	S	1703037	c	Free cyanide in soil	L080-PL	c
TP83	None Supplied	S	1703046	c	Free cyanide in soil	L080-PL	c



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Analytical Report Number : 20-44776

Project / Site name:	Himley Vilage, Bicester	Samples received on:	27/11/2020
Your job number:	C-16153	Samples instructed on/ Analysis started on:	01/12/2020
Your order number:	PO03677	Analysis completed by:	09/12/2020
Report Issue Number:	1	Report issued on:	09/12/2020
Samples Analysed:	10:1 WAC sample		

Signed: 

Karolina Marek
PL Head of Reporting Team
For & on behalf of i2 Analytical Ltd.

Standard Geotechnical, Asbestos and Chemical Testing Laboratory located at: ul. Pionierów 39, 41 -711 Ruda Śląska, Poland.

Accredited tests are defined within the report, opinions and interpretations expressed herein are outside the scope of accreditation.

Standard sample disposal times, unless otherwise agreed with the laboratory, are :

soils	- 4 weeks from reporting
leachates	- 2 weeks from reporting
waters	- 2 weeks from reporting
asbestos	- 6 months from reporting

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Any assessments of compliance with specifications are based on actual analytical results with no contribution from uncertainty of measurement.
Application of uncertainty of measurement would provide a range within which the true result lies.
An estimate of measurement uncertainty can be provided on request.



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Waste Acceptance Criteria Analytical Results							
Report No:	20-44776						
				Client: HYDROCK			
Location		Himley Village, Bicester					
Lab Reference (Sample Number)		1703083 / 1703084			Landfill Waste Acceptance Criteria		
Sampling Date		26/11/2020			Limits		
Sample ID		TP80			Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
Depth (m)		0.30					
Solid Waste Analysis							
TOC (%)**	2.6				3%	5%	6%
Loss on Ignition (%) **	5.2				--	--	10%
BTEX (µg/kg) **	< 10				6000	--	--
Sum of PCBs (mg/kg) **	< 0.007				1	--	--
Mineral Oil (mg/kg)	< 10				500	--	--
Total PAH (WAC-17) (mg/kg)	< 0.85				100	--	--
pH (units)**	8.4				--	>6	--
Acid Neutralisation Capacity (mol / kg)	4.8				--	To be evaluated	To be evaluated
Eluate Analysis							
	10:1			10:1	Limit values for compliance leaching test		
(BS EN 12457 - 2 preparation utilising end over end leaching procedure)	mg/l			mg/kg	using BS EN 12457-2 at L/S 10 l/kg (mg/kg)		
Arsenic *	0.0036			0.0296	0.5	2	25
Barium *	0.0085			0.0703	20	100	300
Cadmium *	< 0.0001			< 0.0008	0.04	1	5
Chromium *	< 0.0004			< 0.0040	0.5	10	70
Copper *	0.0056			0.046	2	50	100
Mercury *	< 0.0005			< 0.0050	0.01	0.2	2
Molybdenum *	< 0.0004			< 0.0040	0.5	10	30
Nickel *	0.0008			0.0064	0.4	10	40
Lead *	0.0027			0.023	0.5	10	50
Antimony *	< 0.0017			< 0.017	0.06	0.7	5
Selenium *	< 0.0040			< 0.040	0.1	0.5	7
Zinc *	0.0054			0.045	4	50	200
Chloride *	1.3			11	800	15000	25000
Fluoride	0.64			5.3	10	150	500
Sulphate *	3.8			31	1000	20000	50000
TDS*	72			600	4000	60000	100000
Phenol Index (Monohydric Phenols) *	< 0.010			< 0.10	1	-	-
DOC	6.35			52.5	500	800	1000
Leach Test Information							
Stone Content (%)	< 0.1						
Sample Mass (kg)	0.90						
Dry Matter (%)	87						
Moisture (%)	13						
Results are expressed on a dry weight basis, after correction for moisture content where applicable. * = UKAS accredited (liquid eluate analysis only)							
Standard limits are for guidance only and i2 cannot be held responsible for any discrepancies with current legislation ** = MCERTS accredited							
Landfill WAC analysis (specifically leaching test results) must not be used for hazardous waste classification purposes as defined by the Waste (England and Wales) Regulations 2011 (as amended) and EA Guidance WM3. This analysis is only applicable for landfill acceptance criteria (The Environmental Permitting (England and Wales) Regulations) and does not give any indication as to whether a waste may be hazardous or non-hazardous.							



Analytical Report Number : 20-44776
Project / Site name: Himley Vilage, Bicester

* These descriptions are only intended to act as a cross check if sample identities are questioned. The major constituent of the sample is intended to act with respect to MCERTS validation. The laboratory is accredited for sand, clay and loam (MCERTS) soil types. Data for unaccredited types of solid should be interpreted with care.

Stone content of a sample is calculated as the % weight of the stones not passing a 10 mm sieve. Results are not corrected for stone content.

Lab Sample Number	Sample Reference	Sample Number	Depth (m)	Sample Description *
1703083	TP80	None Supplied	0.3	Brown loam and clay with gravel and vegetation.

Analytical Report Number : 20-44776
Project / Site name: Himley Village, Bicester

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
BS EN 12457-2 (10:1) Leachate Prep	10:1 (as recieved, moisture adjusted) end over end extraction with water for 24 hours. Eluate filtered prior to analysis.	In-house method based on BSEN12457-2.	L043-PL	W	NONE
Acid neutralisation capacity of soil	Determination of acid neutralisation capacity by addition of acid or alkali followed by electronic probe.	In-house method based on Guidance an Sampling and Testing of Wastes to Meet Landfill Waste Acceptance""	L046-PL	W	NONE
Loss on ignition of soil @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace.	In house method.	L047-PL	D	MCERTS
Mineral Oil (Soil) C10 - C40	Determination of mineral oil fraction extractable hydrocarbons in soil by GC-MS/GC-FID.	In-house method with silica gel split/clean up.	L076-PL	D	NONE
Moisture Content	Moisture content, determined gravimetrically. (30 oC)	In house method.	L019-UK/PL	W	NONE
Speciated WAC-17 PAHs in soil	Determination of PAH compounds in soil by extraction in dichloromethane and hexane followed by GC-MS with the use of surrogate and internal standards.	In-house method based on USEPA 8270. MCERTS accredited except Coronene.	L064-PL	D	NONE
PCB's By GC-MS in soil	Determination of PCB by extraction with acetone and hexane followed by GC-MS.	In-house method based on USEPA 8082	L027-PL	D	MCERTS
pH at 20oC in soil	Determination of pH in soil by addition of water followed by electrometric measurement.	In house method.	L005-PL	W	MCERTS
Stones content of soil	Standard preparation for all samples unless otherwise detailed. Gravimetric determination of stone > 10 mm as % dry weight.	In-house method based on British Standard Methods and MCERTS requirements.	L019-UK/PL	D	NONE
Total organic carbon (Automated) in soil	Determination of organic matter in soil by oxidising with potassium dichromate followed by titration with iron (II) sulphate.	In house method.	L009-PL	D	MCERTS
BTEX in soil (Monoaromatics)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073B-PL	W	MCERTS
Total BTEX in soil (Poland)	Determination of BTEX in soil by headspace GC-MS.	In-house method based on USEPA8260	L073-PL	W	MCERTS
Metals in leachate by ICP-OES	Determination of metals in leachate by acidification followed by ICP-OES.	In-house method based on MEWAM 2006 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025
Chloride 10:1 WAC	Determination of Chloride colorimetrically by discrete analyser.	In house based on MEWAM Method ISBN 0117516260.	L082-PL	W	ISO 17025
Fluoride 10:1 WAC	Determination of fluoride in leachate by 1:1ratio with a buffer solution followed by Ion Selective Electrode.	In-house method based on Use of Total Ionic Strength Adjustment Buffer for Electrode Determination"	L033B-PL	W	ISO 17025
Sulphate 10:1 WAC	Determination of sulphate in leachate by ICP-OES	In-house method based on MEWAM 1986 Methods for the Determination of Metals in Soil""	L039-PL	W	ISO 17025

Analytical Report Number : 20-44776
Project / Site name: Himley Village, Bicester

Water matrix abbreviations: Surface Water (SW) Potable Water (PW) Ground Water (GW)

Analytical Test Name	Analytical Method Description	Analytical Method Reference	Method number	Wet / Dry Analysis	Accreditation Status
Total dissolved solids 10:1 WAC	Determination of total dissolved solids in water by electrometric measurement.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L004-PL	W	ISO 17025
Monohydric phenols 10:1 WAC	Determination of phenols in leachate by distillation followed by colorimetry.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L080-PL	W	ISO 17025
Dissolved organic carbon 10:1 WAC	Determination of dissolved inorganic carbon in leachate by TOC/DOC NDIR Analyser.	In-house method based on Examination of Water and Wastewater 20th Edition: Clesceri, Greenberg & Eaton	L037-PL	W	NONE

For method numbers ending in 'UK' analysis have been carried out in our laboratory in the United Kingdom.

For method numbers ending in 'PL' analysis have been carried out in our laboratory in Poland.

Soil analytical results are expressed on a dry weight basis. Where analysis is carried out on as-received the results obtained are multiplied by a moisture correction factor that is determined gravimetrically using the moisture content which is carried out at a maximum of 30oC.

Statistical Analysis

Assessment of Chemicals of Potential Concern to Plant Life



All values in mg/kg unless otherwise stated								Soil Type													
								Location & Depth		TP02	TP10	TP15	TP21	TP54	TP40	TP80	TP65				
										0.4	0.4	0.5	0.4	0.4	0.3	0.3	0.4				
Chemical of Potential Concern	Lab. RL	No. Samples	Min. Value	Max. Value	No. Samples > or = GAC	GAC	US ₉₅	Result of Significance Test													
Arsenic	1	8	8	21	0	250	22.99101	POTENTIALLY SUITABLE FOR USE	12	8	17	20	21	20	15	16					
Boron	0.2	8	0.3	1.3	0	3	1.300301	POTENTIALLY SUITABLE FOR USE	0.3	0.5	0.3	0.6	0.7	1	1.1	1.3					
Chromium (III)	1	8	19	40	0	400	39.56839	POTENTIALLY SUITABLE FOR USE	19	19	30	30	40	36	25	24					
Chromium (VI)	1.2	8	1.2	1.20001	0	25	1.200007	POTENTIALLY SUITABLE FOR USE	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2					
Copper	1	8	5.9	19	0	135	18.67585	POTENTIALLY SUITABLE FOR USE	6	5.9	12	15	15	19	9.9	7.5					
Nickel	1	8	16	32	0	75	32.74346	POTENTIALLY SUITABLE FOR USE	16	16	23	28	30	32	20	21					
Zinc	1	8	20	70	0	300	72.68082	POTENTIALLY SUITABLE FOR USE	20	31	37	52	70	70	43	38					
pH (su)	Mean 8.3								8.4	8.4	8.4	8.4	8.4	8.3	8.4	7.7					

Risk parameter Plant life pH 7

Data set Natural Soils

Client Countryside Properties PLC

Site Himley Village, Bicester

Job no. C-16153

Lab. report no(s). 20-43409-1, 20-44770-1, 20-42280-1

Legend: Values in blue are at or below the laboratory reporting limit (where a single value is indicated) and are considered as being at the detection limit for the purposes of statistical analysis, as a conservative estimate. Values in red are equal to, or greater than, the generic assessment criterion (GAC).
 MG denotes Made Ground
 NAT denotes natural ground

Assessment of Chemicals of Potential Concern to Human Health



All values in mg/kg unless otherwise stated									Soil Type: NAT								
Chemical of Potential Concern	Lab. RL	No. Samples	Min. Value	Max. Value	No. Samples > or = GAC	GAC	US ₉₅	Location & Depth	Result of Significance Test	TP02	TP10	TP15	TP21	TP54	TP40	TP80	TP65
										0.4	0.4	0.5	0.4	0.4	0.3	0.4	
Arsenic	1	8	8	21	0	37	19.109195	POTENTIALLY SUITABLE FOR USE	12	8	17	20	21	20	15	16	
Beryllium	0.06	8	0.75	1.6	0	73	1.3294437	POTENTIALLY SUITABLE FOR USE	0.75	0.85	1.3	1.2	1.6	1.4	1	0.98	
Boron	0.2	8	0.3	1.3	0	300	0.9750446	POTENTIALLY SUITABLE FOR USE	0.3	0.5	0.3	0.6	0.7	1	1.1	1.3	
Cadmium	0.2	8	0.2	0.200001	0	14	0.2000004	POTENTIALLY SUITABLE FOR USE	0.2	0.200001	0.2	0.2	0.2	0.2	0.2	0.2	
Chromium (III)	1	8	19	40	0	890	32.957769	POTENTIALLY SUITABLE FOR USE	19	19	30	30	40	36	25	24	
Chromium (VI)	1.2	8	1.2	1.20001	0	6.1	1.2000036	POTENTIALLY SUITABLE FOR USE	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	
Copper	1	8	5.9	19	0	2500	14.49872	POTENTIALLY SUITABLE FOR USE	6	5.9	12	15	15	19	9.9	7.5	
Lead	2	8	8.6	27	0	200	19.553758	POTENTIALLY SUITABLE FOR USE	8.8	8.6	13	15	19	18	27	15	
Mercury, inorganic	0.3	8	0.3	0.30001	0	170	0.3000036	POTENTIALLY SUITABLE FOR USE	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	
Nickel	1	8	16	32	0	130	27.376173	POTENTIALLY SUITABLE FOR USE	16	16	23	28	30	32	20	21	
Selenium	1	8	1	1.00001	0	360	1.0000036	POTENTIALLY SUITABLE FOR USE	1	1	1	1	1	1	1	1	
Vanadium	1	8	33	81	0	410	65.165118	POTENTIALLY SUITABLE FOR USE	34	33	50	61	81	71	50	52	
Zinc	1	8	20	70	0	3900	57.101669	POTENTIALLY SUITABLE FOR USE	20	31	37	52	70	70	43	38	
Cyanide (free)	1	8	1	1.00001	0	790	1.0000036	POTENTIALLY SUITABLE FOR USE	1	1	1	1	1	1	1	1	
Phenol (total)	1	8	1	1.00001	0	290	1.0000036	POTENTIALLY SUITABLE FOR USE	1	1	1	1	1	1	1	1	
Acenaphthene	0.05	8	0.05	0.05	0	220	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
Acenaphthylene	0.05	8	0.05	0.05	0	180	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
Anthracene	0.05	8	0.05	0.05	0	2400	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
Benz(a)anthracene	0.05	8	0.05	0.05	0	4.2	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
Benzo(a)pyrene	0.05	8	0.05	0.05	0	1.5	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
Benzo(b)fluoranthene	0.05	8	0.05	0.05	0	7.6	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
Benzo(g,h)perylene	0.05	8	0.05	0.05	0	64	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
Benzo(k)fluoranthene	0.05	8	0.05	0.05	0	12	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
Chrysene	0.05	8	0.05	0.05	0	7.7	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
Dibenz(a,h)anthracene	0.05	8	0.05	0.05	0	1.1	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
Fluoranthene	0.05	8	0.05	0.05	0	290	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
Fluorene	0.05	8	0.05	0.05	0	170	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
Indeno(1,2,3-cd)pyrene	0.05	8	0.05	0.05	0	4.3	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
Naphthalene	0.05	8	0.05	0.05	0	2.2	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
Phenanthrene	0.05	8	0.05	0.05	0	97	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
Pyrene	0.05	8	0.05	0.05	0	620	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	
Asbestos identified	Y/N								N	N	N	N	N	N	N	N	
FOC (dimensionless)	0.011375	(mean)							0.005	0.005	0.009	0.006	0.012	0.013	0.026	0.015	
SOM (calculated)	1.96%	(mean)							0.86%	0.86%	1.55%	1.03%	2.07%	2.24%	4.48%	2.59%	
pH (su)	8.3	(mean)							8.4	8.4	8.4	8.4	8.4	8.3	8.4	7.7	

Risk parameter Human health - residential with plant uptake (1%SOM)

Data set Natural Soils

Client Countryside Properties PLC

Site Himley Village, Bicester

Job no. C-16153

Lab. report no(s). 20-43409-1, 20-44770-1, 20-42280-1

Legend: Values in blue are at or below the laboratory reporting limit (where a single value is indicated) and are considered as being at the detection limit for the purposes of statistical analysis, as a conservative estimate. Values in red are equal to, or greater than, the generic assessment criterion (GAC).
 MG denotes Made Ground
 NAT denotes natural ground

Assessment of Chemicals of Potential Concern to Plant Life



All values in mg/kg unless otherwise stated								Soil Type	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	
Chemical of Potential Concern	Lab. RL	No. Samples	Min. Value	Max. Value	No. Samples > or = GAC	GAC	US ₉₅	Location & Depth	TP42	TP53	TP56	TP74	TP50	TP26	TP24	TP13	TP05	TP78	TP48	TP64	TP68	TP79	TP82
									0.2	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.2	0.1	0.2	0.1	0.1
								Result of Significance Test															
Arsenic	1	26	16	24	0	250	20.19259	POTENTIALLY SUITABLE FOR USE	21	21	24	19	21	16	19	18	16	20	18	16	18	18	17
Boron	0.2	26	0.5	2.2	0	3	1.721039	POTENTIALLY SUITABLE FOR USE	0.5	2	1.4	0.9	1.4	1.6	1.8	1.1	1.2	1.3	1.5	0.7	0.9	1.4	0.8
Chromium (III)	1	26	24	44	0	400	33.74646	POTENTIALLY SUITABLE FOR USE	29	36	44	30	36	24	32	33	28	32	28	25	29	30	26
Chromium (VI)	1.2	26	1.2	1.2	0	25	1.2	POTENTIALLY SUITABLE FOR USE	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Copper	1	26	11	22	0	135	18.54678	POTENTIALLY SUITABLE FOR USE	13	19	22	12	22	13	14	15	16	19	13	11	18	18	13
Nickel	1	26	19	34	0	75	26.36605	POTENTIALLY SUITABLE FOR USE	25	26	34	25	27	20	24	23	22	25	21	19	22	22	21
Zinc	1	26	46	100	0	300	71.13389	POTENTIALLY SUITABLE FOR USE	53	84	100	60	84	50	59	62	46	62	53	51	63	58	53
pH (su)	Mean	8.2							8.4	8.2	8	8.4	7.9	8.5	8.2	8.2	8.2	8.2	8.7	8.4	8.4	8.2	8.3

Risk parameter Plant life pH 7

Data set Topsoil

Client Countryside Properties PLC

Site Himley Village, Bicester

Job no. C-16153

Lab. report no(s). 20-44366-1, 20-43409-1, 20-44770-1, 20-42280-1

Legend: Values in blue are at or below the laboratory reporting limit (where a single value is indicated) and are considered as being at the detection limit for the purposes of statistical analysis, as a conservative estimate.

Values in red are equal to, or greater than, the generic assessment criterion (GAC).

MG denotes Made Ground

NAT denotes natural ground

TS denotes Topsoil

Assessment of Chemicals of Potential Concern to Plant Life



All values in mg/kg unless otherwise stated								Soil Type	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	
Chemical of Potential Concern	Lab. RL	No. Samples	Min. Value	Max. Value	No. Samples > or = GAC	GAC	US ₉₅	Location & Dept	Result of Significance Test	TP45	TP67	TP81	TP43	TP83	TP72	TP58	TP01	TP06	TP08	TP17
										0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.3
Arsenic	1	26	16	24	0	250	20.19259		POTENTIALLY SUITABLE FOR USE	18	16	17	18	17	19	16	19	17	21	20
Boron	0.2	26	0.5	2.2	0	3	1.721039		POTENTIALLY SUITABLE FOR USE	0.6	1.4	2.2	1.8	0.9	1.3	1	2.2	1.6	1.4	1.6
Chromium (III)	1	26	24	44	0	400	33.74646		POTENTIALLY SUITABLE FOR USE	28	24	28	32	27	27	24	30	29	34	33
Chromium (VI)	1.2	26	1.2	1.2	0	25	1.2		POTENTIALLY SUITABLE FOR USE	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Copper	1	26	11	22	0	135	18.54678		POTENTIALLY SUITABLE FOR USE	12	14	15	13	15	19	16	15	16	21	18
Nickel	1	26	19	34	0	75	26.36605		POTENTIALLY SUITABLE FOR USE	24	19	22	22	22	20	20	26	23	29	27
Zinc	1	26	46	100	0	300	71.13389		POTENTIALLY SUITABLE FOR USE	55	50	54	56	55	69	61	56	59	68	60
Mean	8.2																			
pH (su)	8.2									8.1	7.8	7.8	7.9	8	7.9	8.1	7.9	7.9	8.1	8.2
Risk parameter Plant life pH 7 Data set Topsoil Client Countryside Properties PLC Site Himley Village, Bicester Job no. C-16153 Lab. report no(s). 20-44366-1, 20-43409-1, 20-44770-1, 20-42280-1																				

Assessment of Chemicals of Potential Concern to Human Health



All values in mg/kg unless otherwise stated									Soil Type: TS														
Chemical of Potential Concern	Lab. RL	No. Samples	Min. Value	Max. Value	No. Samples > or = GAC	GAC	US ₉₅	Result of Significance Test	Location & Depth														
									TP42	TP53	TP56	TP74	TP50	TP26	TP24	TP13	TP05	TP78	TP48	TP64	TP68	TP79	TP82
									0.2	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.2
Arsenic	1	26	16	24	0	37	19.139666	POTENTIALLY SUITABLE FOR USE	21	21	24	19	21	16	19	18	16	20	18	16	18	18	17
Beryllium	0.06	26	0.99	1.7	0	73	1.2453978	POTENTIALLY SUITABLE FOR USE	1.1	1.4	1.7	1.2	1.3	1	1.3	1.3	1.1	1.3	1.1	0.99	1.2	1.3	1.1
Boron	0.2	26	0.5	2.2	0	300	1.4813154	POTENTIALLY SUITABLE FOR USE	0.5	2	1.4	0.9	1.4	1.6	1.8	1.1	1.2	1.3	1.5	0.7	0.9	1.4	0.8
Cadmium	0.2	26	0.2	0.5	0	14	0.2312462	POTENTIALLY SUITABLE FOR USE	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Chromium (III)	1	26	24	44	0	890	31.420862	POTENTIALLY SUITABLE FOR USE	29	36	44	30	36	24	32	33	28	32	28	25	29	30	26
Chromium (VI)	1.2	26	1.2	1.2	0	6.1	1.2	POTENTIALLY SUITABLE FOR USE	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Copper	1	26	11	22	0	2500	16.904106	POTENTIALLY SUITABLE FOR USE	13	19	22	12	22	13	14	15	16	19	13	11	18	18	13
Lead	2	26	16	66	0	200	31.762157	POTENTIALLY SUITABLE FOR USE	25	29	31	18	27	17	26	22	16	43	26	27	66	44	33
Mercury, inorganic	0.3	26	0.3	0.3	0	170	0.3	POTENTIALLY SUITABLE FOR USE	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Nickel	1	26	19	34	0	130	24.599363	POTENTIALLY SUITABLE FOR USE	25	26	34	25	27	20	24	23	22	25	21	19	22	22	21
Selenium	1	26	1	1,000.1	0	360	1,000.104	POTENTIALLY SUITABLE FOR USE	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Vanadium	1	26	49	85	0	410	63.481548	POTENTIALLY SUITABLE FOR USE	63	70	85	65	73	53	64	63	52	65	58	54	59	61	54
Zinc	1	26	46	100	0	3900	64.852909	POTENTIALLY SUITABLE FOR USE	53	84	100	60	84	50	59	62	46	62	53	51	63	58	53
Cyanide (free)	1	26	1	1,000.1	0	790	1,000.104	POTENTIALLY SUITABLE FOR USE	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Phenol (total)	1	26	1	1,000.1	0	290	1,000.001	POTENTIALLY SUITABLE FOR USE	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Acenaphthene	0.05	26	0.05	0.05	0	220	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Acenaphthylene	0.05	26	0.05	0.05	0	180	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Anthracene	0.05	26	0.05	0.05	0	2400	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Benz(a)anthracene	0.05	26	0.05	0.05	0	4.2	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Benzo(a)pyrene	0.05	26	0.05	0.05	0	1.5	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Benzo(b)fluoranthene	0.05	26	0.05	0.05	0	7.6	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Benzo(g,h)perylene	0.05	26	0.05	0.05	0	64	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Benzo(k)fluoranthene	0.05	26	0.05	0.05	0	12	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Chrysene	0.05	26	0.05	0.05	0	7.7	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Dibenz(a,h)anthracene	0.05	26	0.05	0.05	0	1.1	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Fluoranthene	0.05	26	0.05	0.05	0	290	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Fluorene	0.05	26	0.05	0.05	0	170	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Indeno(1,2,3-cd)pyrene	0.05	26	0.05	0.05	0	4.3	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Naphthalene	0.05	26	0.05	0.05	0	2.2	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Phenanthrene	0.05	26	0.05	0.05	0	97	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Pyrene	0.05	26	0.05	0.05	0	620	0.05	POTENTIALLY SUITABLE FOR USE	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Asbestos identified	Y/N								N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
FOC (dimensionless)	0.025769	(mean)							0.029	0.026	0.022	0.011	0.027	0.015	0.019	0.019	0.015	0.033	0.013	0.033	0.035	0.035	0.027
SOM (calculated)	4.44%	(mean)							5.00%	4.48%	3.79%	1.90%	4.65%	2.59%	3.28%	3.28%	2.59%	5.69%	2.24%	5.69%	6.03%	6.03%	4.65%
pH (su)	8.2	(mean)							8.4	8.2	8	8.4	7.9	8.5	8.2	8.2	8.2	8.2	8.7	8.4	8.4	8.2	8.3

Risk parameter Human health - residential with plant uptake (1%SOM)

Data set Topsoil

Client Countryside Properties PLC

Site Himley Village, Bicester

Job no. C-16153

Lab. report no(s). 20-44366-1, 20-43409-1, 20-44770-1, 20-42280-1

Legend: Values in blue are at or below the laboratory reporting limit (where a single value is indicated) and are considered as being at the detection limit for the purposes of statistical analysis, as a conservative estimate.

Values in red are equal to, or greater than, the generic assessment criterion (GAC).

MG denotes Made Ground

NAT denotes natural ground

TS denotes Topsoil

Assessment of Chemicals of Potential Concern to Human Health



All values in mg/kg unless otherwise stated									Soil Type	TS	TS	TS	TS	TS	TS	TS	TS	TS	TS	
Chemical of Potential Concern	Lab. RL	No. Samples	Min. Value	Max. Value	No. Samples > or = GAC	GAC	US ₉₅	Result of Significance Test	Location & Depth	TP45	TP67	TP81	TP43	TP83	TP72	TP58	TP01	TP06	TP08	TP17
										0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1
Arsenic	1	26	16	24	0	37	19.139666	POTENTIALLY SUITABLE FOR USE		18	16	17	18	17	19	16	19	17	21	20
Beryllium	0.06	26	0.99	1.7	0	73	1.2453978	POTENTIALLY SUITABLE FOR USE		1.1	0.99	1.1	1.1	1.1	1.1	1	1.2	1.2	1.4	1.3
Boron	0.2	26	0.5	2.2	0	300	1.4813154	POTENTIALLY SUITABLE FOR USE		0.6	1.4	2.2	1.8	0.9	1.3	1	2.2	1.6	1.4	1.6
Cadmium	0.2	26	0.2	0.5	0	14	0.2312462	POTENTIALLY SUITABLE FOR USE		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.2	0.2	0.2
Chromium (III)	1	26	24	44	0	890	31.420862	POTENTIALLY SUITABLE FOR USE		28	24	28	32	27	27	24	30	29	34	33
Chromium (VI)	1.2	26	1.2	1.2	0	6.1	1.2	POTENTIALLY SUITABLE FOR USE		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Copper	1	26	11	22	0	2500	16.904106	POTENTIALLY SUITABLE FOR USE		12	14	15	13	15	19	16	15	16	21	18
Lead	2	26	16	66	0	200	31.762157	POTENTIALLY SUITABLE FOR USE		26	28	33	28	37	27	16	22	20	25	22
Mercury, inorganic	0.3	26	0.3	0.3	0	170	0.3	POTENTIALLY SUITABLE FOR USE		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Nickel	1	26	19	34	0	130	24.599363	POTENTIALLY SUITABLE FOR USE		24	19	22	22	22	20	20	26	23	29	27
Selenium	1	26	1	1,000.1	0	360	1,000.0104	POTENTIALLY SUITABLE FOR USE		1	1	1	1	1	1	1	1	1	1	1
Vanadium	1	26	49	85	0	410	63.481548	POTENTIALLY SUITABLE FOR USE		59	49	56	62	57	55	53	60	58	70	65
Zinc	1	26	46	100	0	3900	64.852909	POTENTIALLY SUITABLE FOR USE		55	50	54	56	55	69	61	56	59	68	60
Cyanide (free)	1	26	1	1,000.1	0	790	1,000.0104	POTENTIALLY SUITABLE FOR USE		1	1	1	1	1	1	1	1	1	1	1
Phenol (total)	1	26	1	1,000.01	0	290	1,000.0001	POTENTIALLY SUITABLE FOR USE		1	1	1	1	1	1	1	1	1	1	1
Acenaphthene	0.05	26	0.05	0.05	0	220	0.05	POTENTIALLY SUITABLE FOR USE		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Acenaphthylene	0.05	26	0.05	0.05	0	180	0.05	POTENTIALLY SUITABLE FOR USE		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Anthracene	0.05	26	0.05	0.05	0	2400	0.05	POTENTIALLY SUITABLE FOR USE		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Benz(a)anthracene	0.05	26	0.05	0.05	0	4.2	0.05	POTENTIALLY SUITABLE FOR USE		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Benzo(a)pyrene	0.05	26	0.05	0.05	0	1.5	0.05	POTENTIALLY SUITABLE FOR USE		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Benzo(b)fluoranthene	0.05	26	0.05	0.05	0	7.6	0.05	POTENTIALLY SUITABLE FOR USE		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Benzo(g,h)perylene	0.05	26	0.05	0.05	0	64	0.05	POTENTIALLY SUITABLE FOR USE		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Benzo(k)fluoranthene	0.05	26	0.05	0.05	0	12	0.05	POTENTIALLY SUITABLE FOR USE		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Chrysene	0.05	26	0.05	0.05	0	7.7	0.05	POTENTIALLY SUITABLE FOR USE		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Dibenz(a,h)anthracene	0.05	26	0.05	0.05	0	1.1	0.05	POTENTIALLY SUITABLE FOR USE		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Fluoranthene	0.05	26	0.05	0.05	0	290	0.05	POTENTIALLY SUITABLE FOR USE		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Fluorene	0.05	26	0.05	0.05	0	170	0.05	POTENTIALLY SUITABLE FOR USE		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Indeno(1,2,3-cd)pyrene	0.05	26	0.05	0.05	0	4.3	0.05	POTENTIALLY SUITABLE FOR USE		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Naphthalene	0.05	26	0.05	0.05	0	2.2	0.05	POTENTIALLY SUITABLE FOR USE		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Phenanthrene	0.05	26	0.05	0.05	0	97	0.05	POTENTIALLY SUITABLE FOR USE		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Pyrene	0.05	26	0.05	0.05	0	620	0.05	POTENTIALLY SUITABLE FOR USE		0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Asbestos identified	Y/N									N	N	N	N	N	N	N	N	N	N	N
FOC (dimensionless)	0.025769	(mean)								0.03	0.037	0.032	0.035	0.028	0.029	0.019	0.029	0.024	0.026	0.022
SOM (calculated)	4.44%	(mean)								5.17%	6.38%	5.52%	6.03%	4.83%	5.00%	3.28%	5.00%	4.14%	4.48%	3.79%
pH (su)	8.2	(mean)								8.1	7.8	7.8	7.9	8	7.9	8.1	7.9	7.9	8.1	8.2

Risk parameter Human health - residential with plant uptake (1%SOM)

Data set Topsoil

Client Countryside Properties PLC

Site Himley Village, Bicester

Job no. C-16153

Lab. report no(s). 20-44366-1, 20-43409-1, 20-44770-1, 20-42280-1