

Sample Photographs BH3, 19.20m to 20.20m Depth



19.20m

20.20m

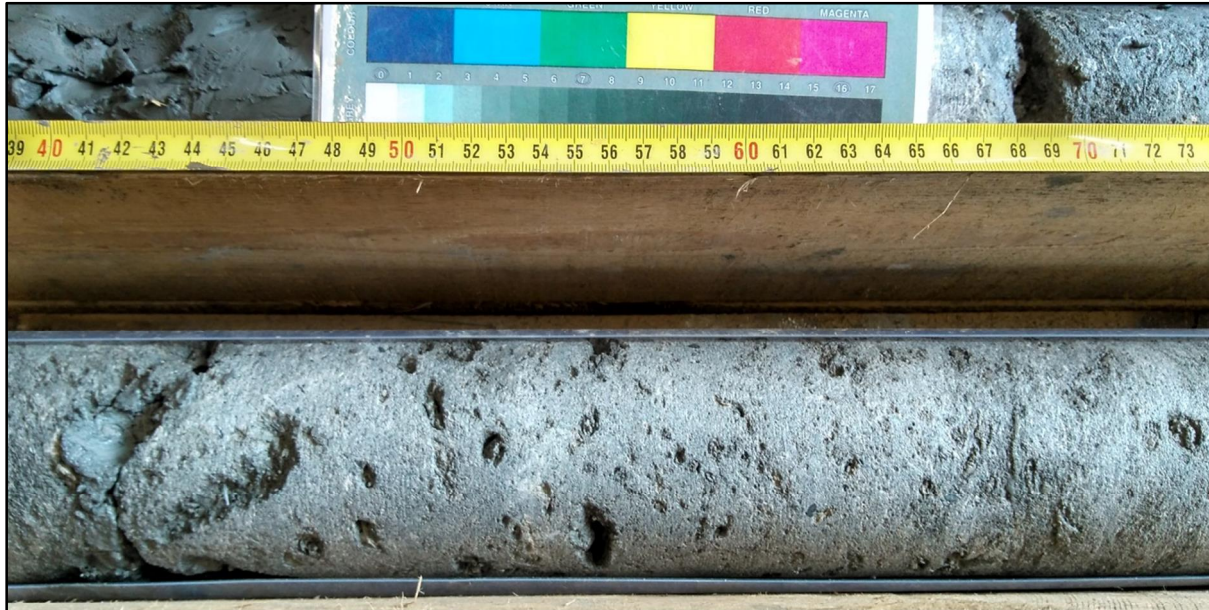
Project: Begbroke Science Park, Kidlington

Client: Oxford University Development

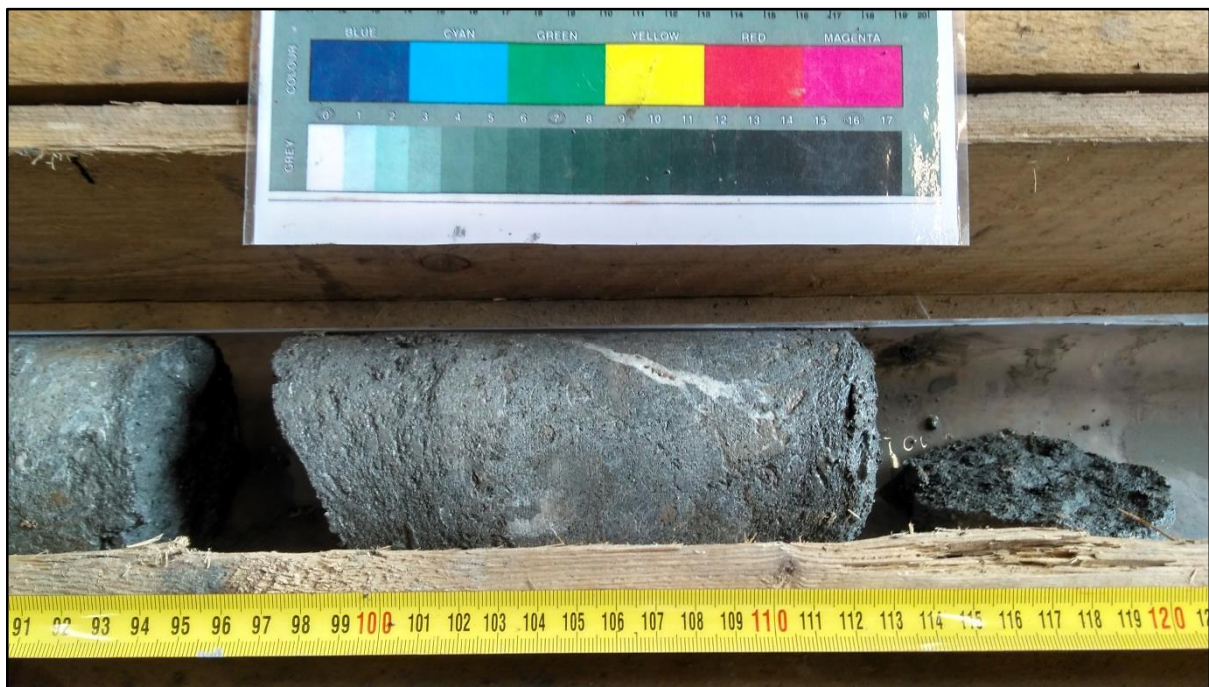
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Additional Close Up Core Photographs BH3



BH3, 10.40m-10.70, bioturbation/bivalve burrows in Cornbrash Formation.



BH2, 10.00-10.10m, calcite veins near base of Cornbrash Formation

Project: Begbroke Science Park, Kidlington

Client: Oxford University Development

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GROUND ENGINEERING L I M I T E D Tel: 01733-566566 www.groundengineering.co.uk					Site: BEGBROKE SCIENCE PARK, KIDLINGTON					BOREHOLE BH4		
					Date: 16/06/21		Hole Size: 150mm dia to 6.00m 120mm dia to 10.00m			447763 mE 213523 mN Ground Level: 68.40m. O.D.		
Samples/Tests		Core Details			(Date)	Description of Strata	Legend	Depth m	O.D. Level m			
Depth m	TCR	SCR	RQD	FI	Water							
0.10	D1					MADE GROUND - Grey and red brown GRAVEL of angular granite, brick and ash.		0.20	68.20			
0.30	D2					MADE GROUND - Light brown and brown, silty SAND AND GRAVEL. Gravel of angular to sub-rounded brick, concrete, flint, limestone and ash.		0.40	68.00			
0.50	D3						Brown and orange brown, slightly gravelly, silty SAND. Gravel of limestone, flint, quartz, quartzite and ironstone. (SUMMERTOWN - RADLEY SAND AND GRAVEL MEMBER)		0.90	67.50		
1.00	D4					Medium dense, orange brown, silty SAND AND GRAVEL. Gravel of angular to rounded limestone, flint, quartz, quartzite and ironstone. (SUMMERTOWN - RADLEY SAND AND GRAVEL MEMBER)		1.70	66.70			
1.20-2.00	U1						Very dense, orange brown and yellow brown, slightly silty, sandy GRAVEL with occasional cobbles of limestone. Gravel of angular to rounded limestone, flint, quartz, quartzite and ironstone. Occasional fossil belemnite fragments. (SUMMERTOWN - RADLEY SAND AND GRAVEL MEMBER)		4.30	64.10		
2.15-2.32	S		50*					4.50	63.90			
3.20	D5					Stiff, orange brown, grey and dark grey mottled, slightly gravelly CLAY. Gravel of angular to sub-rounded limestone, flint and quartzite. (KELLAWAYS CLAY MEMBER)			4.50	63.90		
3.35-3.46	S		50*				Stiff, closely fissured, dark blue grey CLAY with occasional gravel size pyrite nodules. Rare grey silt partings and fossil traces. (KELLAWAYS CLAY MEMBER)		7.70	60.70		
4.20	D6					Weak to medium strong, thinly to medium bedded, grey, argillaceous, shelly LIMESTONE. Horizontal beds of very stiff, dark grey clay; 15mm thick at 8.10m, 10mm thick at 8.72m, 30mm thick at 9.00m and 5mm thick at 9.35m. (CORNBASH LIMESTONE)			10.00	58.40		
4.20-5.20	U2							Stiff, orange brown, grey and dark grey mottled, slightly gravelly CLAY. Gravel of angular to sub-rounded limestone, flint and quartzite. (KELLAWAYS CLAY MEMBER)		7.70	60.70	
4.35-4.58	S		50*			Stiff, orange brown, grey and dark grey mottled, slightly gravelly CLAY. Gravel of angular to sub-rounded limestone, flint and quartzite. (KELLAWAYS CLAY MEMBER)			7.70	60.70		
5.20-6.00	U3						Weak to medium strong, thinly to medium bedded, grey, argillaceous, shelly LIMESTONE. Horizontal beds of very stiff, dark grey clay; 15mm thick at 8.10m, 10mm thick at 8.72m, 30mm thick at 9.00m and 5mm thick at 9.35m. (CORNBASH LIMESTONE)		10.00	58.40		
5.35-5.65	S		N34			Weak to medium strong, thinly to medium bedded, grey, argillaceous, shelly LIMESTONE. Horizontal beds of very stiff, dark grey clay; 15mm thick at 8.10m, 10mm thick at 8.72m, 30mm thick at 9.00m and 5mm thick at 9.35m. (CORNBASH LIMESTONE)			10.00	58.40		
6.00							Weak to medium strong, thinly to medium bedded, grey, argillaceous, shelly LIMESTONE. Horizontal beds of very stiff, dark grey clay; 15mm thick at 8.10m, 10mm thick at 8.72m, 30mm thick at 9.00m and 5mm thick at 9.35m. (CORNBASH LIMESTONE)		10.00	58.40		
6.15-6.45	S		N44			Weak to medium strong, thinly to medium bedded, grey, argillaceous, shelly LIMESTONE. Horizontal beds of very stiff, dark grey clay; 15mm thick at 8.10m, 10mm thick at 8.72m, 30mm thick at 9.00m and 5mm thick at 9.35m. (CORNBASH LIMESTONE)			10.00	58.40		
7.00		90	42	33	>20		Weak to medium strong, thinly to medium bedded, grey, argillaceous, shelly LIMESTONE. Horizontal beds of very stiff, dark grey clay; 15mm thick at 8.10m, 10mm thick at 8.72m, 30mm thick at 9.00m and 5mm thick at 9.35m. (CORNBASH LIMESTONE)		10.00	58.40		
8.50		100	86	68	12	Weak to medium strong, thinly to medium bedded, grey, argillaceous, shelly LIMESTONE. Horizontal beds of very stiff, dark grey clay; 15mm thick at 8.10m, 10mm thick at 8.72m, 30mm thick at 9.00m and 5mm thick at 9.35m. (CORNBASH LIMESTONE)			10.00	58.40		
		96	92	80	7		Weak to medium strong, thinly to medium bedded, grey, argillaceous, shelly LIMESTONE. Horizontal beds of very stiff, dark grey clay; 15mm thick at 8.10m, 10mm thick at 8.72m, 30mm thick at 9.00m and 5mm thick at 9.35m. (CORNBASH LIMESTONE)		10.00	58.40		

REMARKS Borehole completed at 10.00m depth

1. Starter pit excavated to 1.20m depth
2. No live roots observed
3. Window sampled 117mm dia to 2.20m, open hole to 4.20m, 107mm dia to 5.20m, 87mm dia to 6.00m then reamed out with roller bit and cored 92mm dia to 10.00m depth
4. Casing installed to 6.00m depth

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KEY TCR - Total Core Recovery % (of core run) SCR - Solid Core Recovery % (of core run) RQD - Rock Quality Designation % (of core run) FI - Fracture Index Water Strike c Level on completion Water Rise c w Level Casing Withdrawn Standpipe Level	Groundwater Strikes					Groundwater Observations				
	Depth m						Date			
	No	Struck	Rose to	Rate	Cased	Sealed	Date	Hole	Casing	Water
						16/06/21	10.00	6.00	NA	

Sample Photographs BH4, 1.20m to 5.20m Depth



Project: Begbroke Science Park, Kidlington

Client: Oxford University Development

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Sample Photographs BH4, 5.20m to 7.00m Depth



Project: Begbroke Science Park, Kidlington

Client: Oxford University Development

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Sample Photographs BH4, 7.00m to 10.00m Depth



Project: Begbroke Science Park, Kidlington

Client: Oxford University Development

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Additional Close Up Core Photographs BH4



BH4, 6.80m, example of close fissures in Kellaways Clay Member



BH4, 8.45-8.70m, abundant bivalves in Cornbrash Formation

Project: Begbroke Science Park, Kidlington

Client: Oxford University Development

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Borehole Number	Depth (m)	Casing Depth (m)	Depth to Water (m)	Type of Test *	Seating Drive Blows/ Penetration (mm)	Test Drive: 300mm Blows for each successive 75 mm Penetration				N Value	Extra-polated Value
BH1	1.20 - 1.58			S	17/150	11	18	16	8/5		165
	2.20 - 2.44	1.20		S	21/150	28	22/15			358	
	3.20 - 3.58	2.20		S	16/150	13	14	18	5/5		120
	4.20 - 4.65	3.20		S	4/150	3	4	5	4	16	
	5.20 - 5.65	4.20		S	8/150	6	8	8	11	33	
	6.20 - 6.65	5.20		S	6/150	4	5	5	8	22	
	7.20 - 7.55	6.20		S	14/150	8	9	12	29/50		73
BH2	1.20 - 1.65			S	7/150	5	6	5	5	21	
	2.20 - 2.65			S	2/150	2	1	2	1	6	
	3.20 - 3.58			S	15/150	10	12	16	12/40		61
	4.20 - 4.65	3.20		S	8/150	6	4	5	6	21	
	5.20 - 5.65	3.20		S	7/150	5	5	4	5	19	
	6.20 - 6.65	3.20		S	10/150	7	8	11	11	37	
	7.20 - 7.65	3.20		S	15/150	9	12	12	16	49	
BH3	1.20 - 1.65			S	1/150	1	0	1	2	4	
	2.20 - 2.58			S	21/150	16	16	12	6/5		134
	3.20 - 3.57	2.20		S	21/150	16	18	16/70			68
	4.20 - 4.65	3.20		S	9/150	4	7	10	10	31	
	5.20 - 5.65	4.20		S	11/150	7	8	9	10	34	
	6.20 - 6.65	4.20		S	12/150	9	11	11	12	43	
	7.20 - 7.65	4.20		S	12/150	7	9	11	20	47	
BH4	2.00 - 2.32			S	23/150	21	22	7/15			113
	3.20 - 3.46	2.20		S	25/150	30	20/35			159	
	4.20 - 4.58	3.20		S	23/150	17	10	10	13/5		232
	5.20 - 5.65	4.20		S	6/150	5	7	12	10	34	
	6.00 - 6.45	4.20		S	11/150	10	12	10	12	44	

* C denotes test using a solid cone
S denotes test using a split barrel sampler

Results of Standard/Cone Penetration Tests

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BEGBROKE SCIENCE PARK, KIDLINGTON



Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

Dynamic sampling
Unit 8
Victory parkway
Victory rd
Derby
DE24 8ZF

Hammer Ref: RE.01
Test Date: 26/05/2021
Report Date: 26/05/2021
File Name: RE.01.spt
Test Operator: AP

Instrumented Rod Data

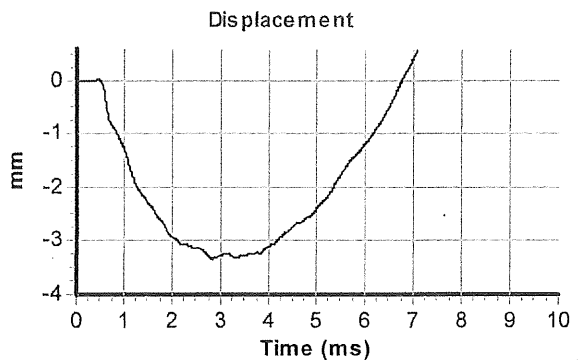
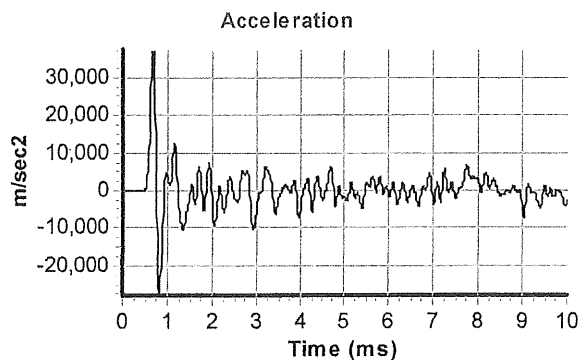
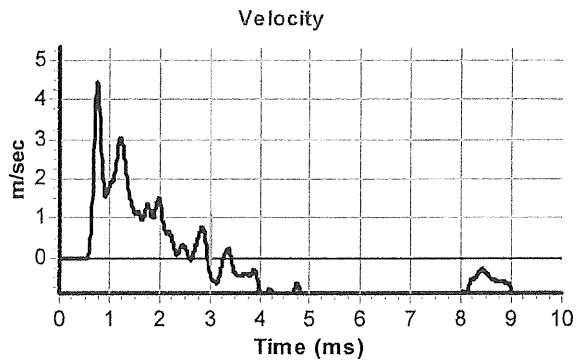
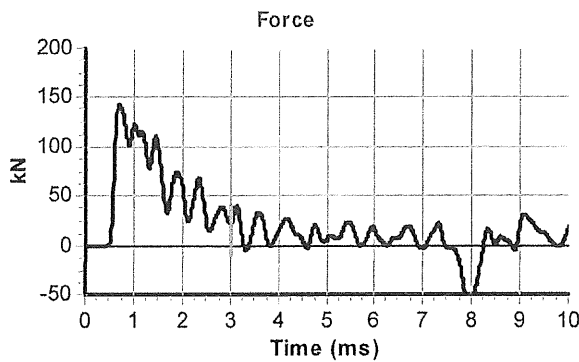
Diameter d_r (mm): 54
Wall Thickness t_r (mm): 6.5
Assumed Modulus E_a (GPa): 208
Accelerometer No.1: 62901
Accelerometer No.2: 62902

Hammer Information

Hammer Mass m (kg): 63.5
Falling Height h (mm): 760
String Length L (m): 15.0

Comments / Location

Hammer tested at Dynamic samplings yard.



Calculations

Area of Rod A (mm²): 970
Theoretical Energy E_{theor} (J): 473
Measured Energy E_{meas} (J): 307

Energy Ratio E_r (%):

65

Signed: A.parker
Title: Associate Director

The recommended calibration interval is 12 months

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
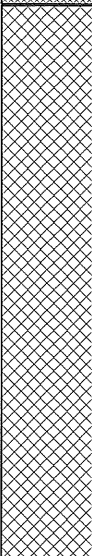



Site: BEGBROKE SCIENCE PARK, KIDLINGTON

TRIAL PIT
TP1

Date: 17/06/21

Pit Size: 1.70m L x 0.60m W x 3.80m D.

447954 mE 213636 mN
Ground Level: 68.70m. O.D.

Samples and in-situ Tests			(Date) Water	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result					
				MADE GROUND - ASPHALT.		0.15	68.55
0.40 0.50-0.70	ES1 B1			MADE GROUND - Light brown, grey and red brown, slightly silty, sandy GRAVEL with abundant cobbles. Gravel and cobbles of brick, concrete, asphalt, flint and limestone.			
1.50-1.70	B2						
1.80	ES2						
2.10-2.50	B3			MADE GROUND - Firm, grey and brown mottled, slightly gravelly, silty CLAY. Gravel of limestone and brick. ...Geotextile at base		2.00	66.70
2.20	D1			Orange brown, silty SAND AND GRAVEL. Gravel of angular to rounded limestone, flint, quartz, quartzite and ironstone.		2.10	66.60
3.00-3.30 3.00	B4 D2			(SUMMERTOWN - RADLEY SAND AND GRAVEL MEMBER)			
3.50-3.70 3.50	B5 D3			Yellow brown and orange brown, slightly silty, sandy GRAVEL with occasional cobbles of limestone. Gravel of angular to rounded limestone, flint, quartz, quartzite, ironstone and occasional fossil belemnite fragments. (SUMMERTOWN - RADLEY SAND AND GRAVEL MEMBER)		3.40	65.30
3.80	D4			Pit completed at 3.80m depth		3.80	64.90

KEY

- D - Disturbed Sample
- B - Bulk Sample
- U - Undisturbed Sample
- R - Root Sample
- W - Water Sample
- ES - Environmental Sample
- ∇ - Water Strike
- ∇ - Water Rise
- ∇c - Level on completion
- MP - Mackintosh Probe
- P() - Hand Penetrometer
- Cohesion () kPa
- V - Vane Shear Test
- Cohesion () kPa

REMARKS

1. No live roots observed
2. Pit dry
3. Pit sides stable

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Trial Pit TP1 Photographs



Woven geotextile layer
with thin clay layer
above.



Project: Begbroke Science Park, Kidlington

Client: Oxford University Development

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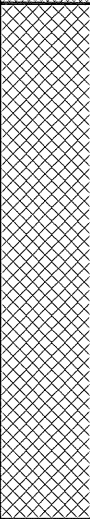



Site: BEGBROKE SCIENCE PARK, KIDLINGTON

TRIAL PIT
TP2

Date: 17/06/21

Pit Size: 1.80m L x 0.60m W x 3.70m D.

447991 mE 213618 mN
Ground Level: 68.90m. O.D.

Samples and in-situ Tests			(Date)	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result	Water				
0.10-0.30	B1			MADE GROUND - ASPHALT		0.10	68.80
0.20	D1			MADE GROUND - Grey, slightly silty, sandy GRAVEL with abundant cobbles of brick, concrete and asphalt. Gravel of brick, concrete, asphalt, flint, limestone and ash.			
0.20	ES1						
0.40-0.70	B2						
0.60	D2						
0.60	ES2						
1.40-1.60	B3			MADE GROUND - Firm, brown and grey mottled, slightly gravelly, silty CLAY. Gravel of limestone and ash. Geotextile at base.		1.80	67.10
1.50	D3						
1.50	ES3						
1.80	D4						
1.80	ES4						
2.10-2.30	B4			Orange brown, silty SAND AND GRAVEL. Gravel of angular to rounded limestone, ironstone, flint, quartz and quartzite.		2.00	66.90
2.10	D5						
2.90	D6			(SUMMERTOWN - RADLEY SAND AND GRAVEL MEMBER)		3.20	65.70
3.00-3.20	B5						
3.50-3.70	B6			Orange brown and yellow brown, very sandy GRAVEL with occasional cobbles of limestone. Gravel of angular to rounded limestone, flint, quartz, quartzite, ironstone and occasional fossil belemnite fragments. (SUMMERTOWN - RADLEY SAND AND GRAVEL MEMBER)		3.20	65.70
3.50	D7						
				Pit completed at 3.70m depth			

KEY

- D - Disturbed Sample
- B - Bulk Sample
- U - Undisturbed Sample
- R - Root Sample
- W - Water Sample
- ES - Environmental Sample
- ∇ - Water Strike
- ∇ - Water Rise
- ∇c - Level on completion
- MP - Mackintosh Probe
- P() - Hand Penetrometer
- Cohesion () kPa
- V - Vane Shear Test
- Cohesion () kPa

REMARKS

1. No live roots observed
2. Pit dry
3. Pit sides stable

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Trial Pit TP2 Photographs

Woven geotextile layer
with thin clay layer
above.



Project: Begbroke Science Park, Kidlington

Client: Oxford University Development

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Site: BEGBROKE SCIENCE PARK, KIDLINGTON

TRIAL PIT
TP3

Date: 16/06/21

Pit Size: 2.20m L x 0.60m W x 2.00m D.

447916 mE 213628 mN
Ground Level: 68.50m. O.D.

Samples and in-situ Tests			(Date)	Description of Strata	Legend	Depth m	O. D. Level m
Depth m	Type	Result	Water				
0.10	D1			MADE GROUND - Light brown, slightly gravelly, silty SAND. Gravel of flint, ironstone, limestone and rare brick.		0.30	68.20
0.50	D2			Brown and orange brown, slightly gravelly, silty SAND. Gravel of angular to rounded flint, limestone, quartz, quartzite and ironstone. (SUMMERTOWN - RADLEY SAND AND GRAVEL MEMBER)		1.10	67.40
1.20	D3			Orange brown, silty, gravelly SAND. Gravel of angular to rounded limestone, ironstone, flint, quartz and quartzite. (SUMMERTOWN - RADLEY SAND AND GRAVEL MEMBER)		1.70	66.80
1.70-2.00 1.80	B1 D4			Orange brown and yellow brown, silty SAND AND GRAVEL. Gravel of angular to rounded flint, quartz, quartzite, ironstone and limestone. (SUMMERTOWN - RADLEY SAND AND GRAVEL MEMBER)		2.00	66.50
2.00	D5			Pit completed at 2.00m depth			

KEY

- D - Disturbed Sample
- B - Bulk Sample
- U - Undisturbed Sample
- R - Root Sample
- W - Water Sample
- ES - Environmental Sample
- ∇ - Water Strike
- ∇ - Water Rise
- ∇c - Level on completion
- MP - Mackintosh Probe
- P() - Hand Penetrometer Cohesion () kPa
- V - Vane Shear Test Cohesion () kPa

REMARKS

1. Live roots observed to 1.90m depth
2. Pit dry
3. Pit sides stable
4. Soakaway testing undertaken at 2.00m depth

Project No
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SOAKAWAY TEST RESULTS

BRE DIGEST 365 - SOIL INFILTRATION RATE

Project: Begbroke Science Park, Kidlington

Project No: C15387

Date of Test : 16/06/2021

Sheet No: 1/3

Trial Pit: TP3 (FIRST FILLING)

Depth: 2.00

Length: 2.20

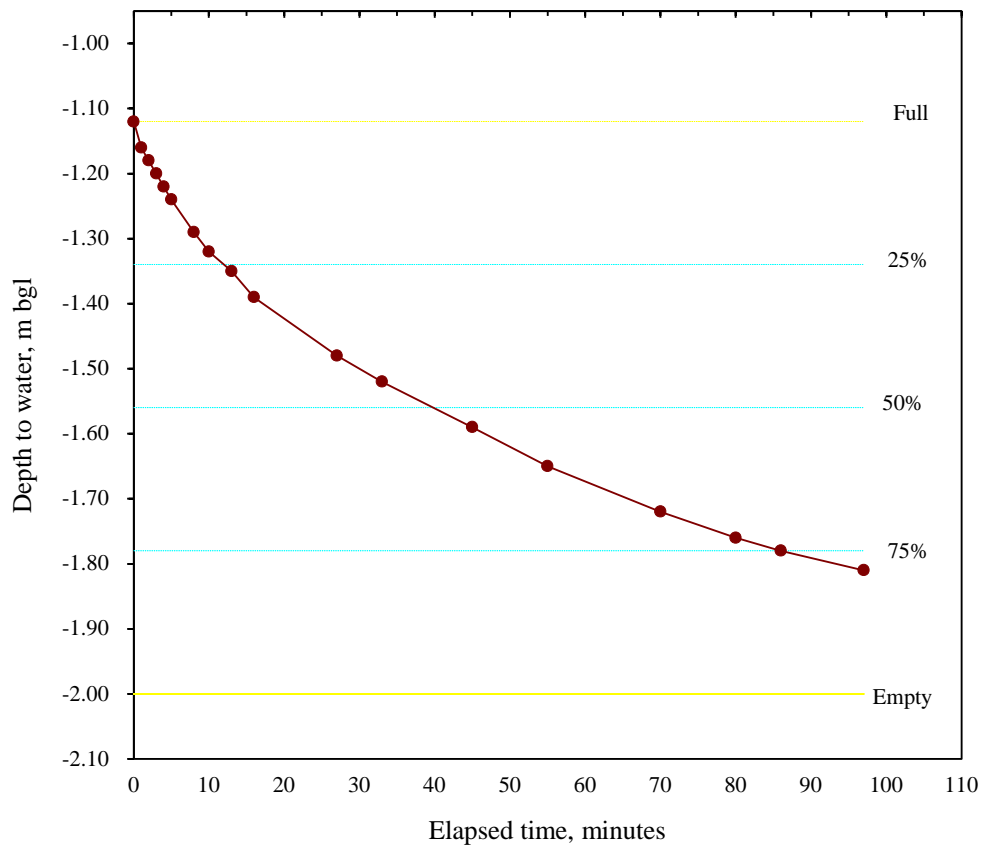
Width: 0.60

Description of Stratum under test: Brown and yellow brown, slightly silty, gravelly SAND

Depth to water prior to test: Dry
(below ground level)

DEPTH TO WATER vs ELAPSED TIME

Elapsed Time min	Depth to Water m
0.00	1.12
1.00	1.16
2.00	1.18
3.00	1.20
4.00	1.22
5.00	1.24
8.00	1.29
10.00	1.32
13.00	1.35
16.00	1.39
27.00	1.48
33.00	1.52
45.00	1.59
55.00	1.65
70.00	1.72
80.00	1.76
86.00	1.78
97.00	1.81



All dimensions given in metres

$$f = \frac{(V_{75} - V_{25})}{A_{50}(T_{75} - T_{25})}$$

$V_{75} - V_{25} = 0.58$
 $A_{50} = 3.78$
 $T_{75} - T_{25} = 74$

Soil Infiltration Rate

$f = \underline{\underline{3.46E-05}} \text{ m/s}$

SOAKAWAY TEST RESULTS

BRE DIGEST 365 - SOIL INFILTRATION RATE

Project: Begbroke Science Park, Kidlington

Project No: C15387

Date of Test : 16/06/2021

Sheet No: 2/3

Trial Pit: TP3 (SECOND FILLING)

Depth: 2.00

Length: 2.20

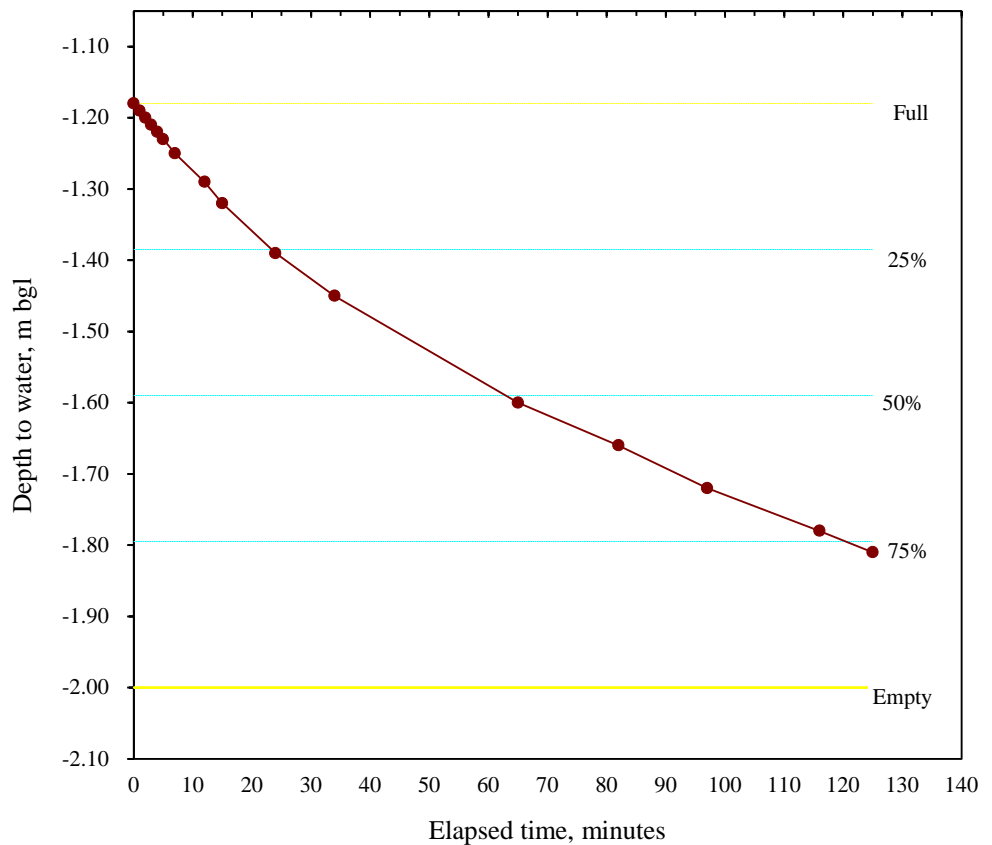
Width: 0.60

Description of Stratum under test: Brown and yellow brown, slightly silty, gravelly SAND

Depth to water prior to test: Dry
(below ground level)

DEPTH TO WATER vs ELAPSED TIME

Elapsed Time min	Depth to Water m
0.00	1.18
1.00	1.19
2.00	1.20
3.00	1.21
4.00	1.22
5.00	1.23
7.00	1.25
12.00	1.29
15.00	1.32
24.00	1.39
34.00	1.45
65.00	1.60
82.00	1.66
97.00	1.72
116.00	1.78
125.00	1.81



All dimensions given in metres

$$f = \frac{(V_{75} - V_{25})}{A_{50}(T_{75} - T_{25})}$$

$V_{75} - V_{25} = 0.54$
 $A_{50} = 3.62$
 $T_{75} - T_{25} = 96$
 $f = \underline{\underline{2.60E-05}} \text{ m/s}$

Soil Infiltration Rate

SOAKAWAY TEST RESULTS

BRE DIGEST 365 - SOIL INFILTRATION RATE

Project: Begbroke Science Park, Kidlington

Project No: C15387

Date of Test : 16/06/2021

Sheet No: 3/3

Trial Pit: TP3 (THIRD FILLING)

Depth: 2.00

Length: 2.20

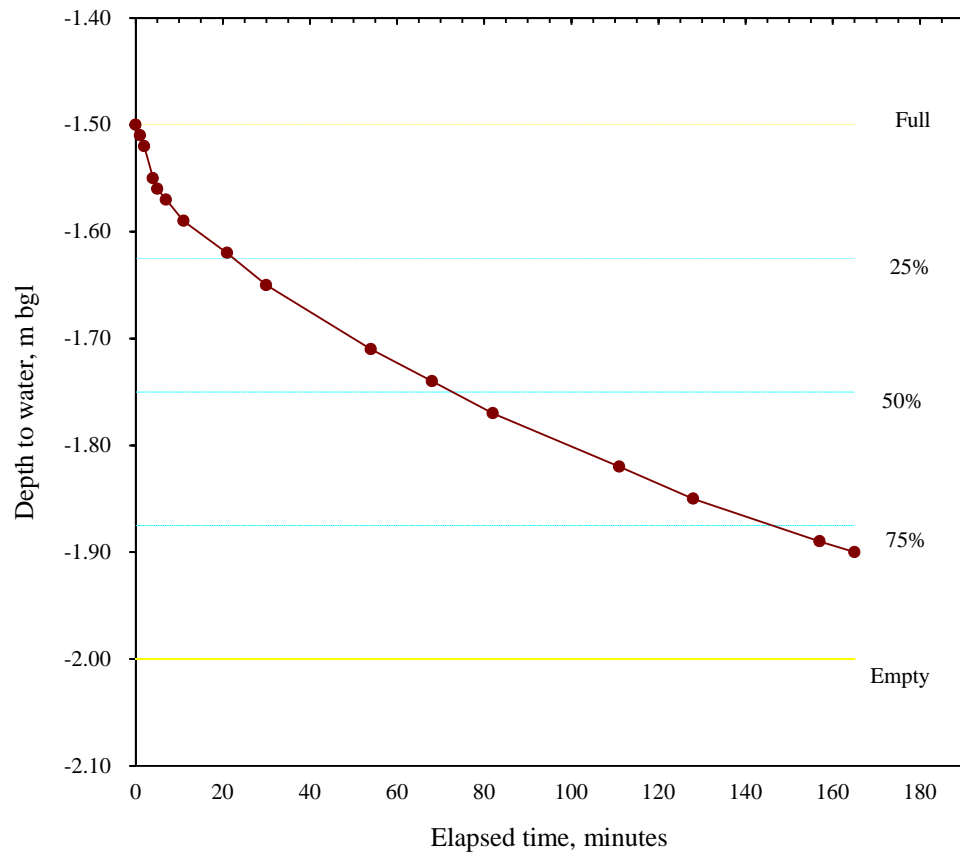
Width: 0.60

Description of Stratum under test: Brown and yellow brown, slightly silty, gravelly SAND

Depth to water prior to test: Dry
(below ground level)

DEPTH TO WATER vs ELAPSED TIME

Elapsed Time min	Depth to Water m
0.00	1.50
1.00	1.51
2.00	1.52
4.00	1.55
5.00	1.56
7.00	1.57
11.00	1.59
21.00	1.62
30.00	1.65
54.00	1.71
68.00	1.74
82.00	1.77
111.00	1.82
128.00	1.85
157.00	1.89
165.00	1.90



All dimensions given in metres

$$f = \frac{(V_{75} - V_{25})}{A_{50}(T_{75} - T_{25})}$$

$V_{75} - V_{25} = 0.33$
 $A_{50} = 2.72$
 $T_{75} - T_{25} = 125$
 $f = \underline{1.62E-05} \text{ m/s}$

Soil Infiltration Rate

Trial Pit TP3 Photographs



Project: Begbroke Science Park, Kidlington

Client: Oxford University Development

**GROUND
ENGINEERING
LIMITED**

Peterborough Tel : 01733 566566

Project No.

C15387

GROUND ENGINEERING

L I M I T E D
Tel: 01733-566566
www.groundengineering.co.uk

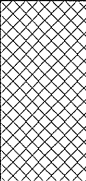


Site: BEGBROKE SCIENCE PARK, KIDLINGTON

TRIAL PIT
TP4

Date: 16/06/21

Pit Size: 1.70m L x 0.60m W x 2.00m D.

447787 mE 213588 mN
Ground Level: 68.65m. O.D.

Samples and in-situ Tests			(Date)	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result	Water				
0.30	D1			MADE GROUND - Light brown, silty, gravelly SAND. Gravel of flint, ironstone and rare brick.		0.60	68.05
0.70	D2			Brown and orange brown, slightly gravelly, silty SAND. Gravel of angular to rounded limestone, ironstone, flint, quartz and quartzite. (SUMMERTOWN - RADLEY SAND AND GRAVEL MEMBER)		1.30	67.35
1.40-1.70 1.40	B1 D3			Brown and orange brown, silty SAND AND GRAVEL with occasional cobbles of limestone. Gravel of angular to rounded flint, quartz, quartzite, limestone and ironstone. (SUMMERTOWN - RADLEY SAND AND GRAVEL MEMBER)		2.00	66.65
1.80	D4						
2.00	D5						
				Pit completed at 2.00m depth			

KEY

- D - Disturbed Sample
- B - Bulk Sample
- U - Undisturbed Sample
- R - Root Sample
- W - Water Sample
- ES - Environmental Sample
- ∇ - Water Strike
- ▼ - Water Rise
- ▼c - Level on completion
- MP - Mackintosh Probe
- P() - Hand Penetrometer Cohesion () kPa
- V - Vane Shear Test Cohesion () kPa

REMARKS

1. Live roots observed to 0.30m depth
2. Pit dry
3. Pit sides stable
4. Soakaway testing undertaken at 2.00m depth

Project No
15387

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SOAKAWAY TEST RESULTS

BRE DIGEST 365 - SOIL INFILTRATION RATE

Project: Begbroke Science Park, Kidlington

Project No: C15387

Date of Test : 16/06/2021

Sheet No: 1/3

Trial Pit: TP4 (FIRST FILLING)

Depth: 2.00

Length: 1.70

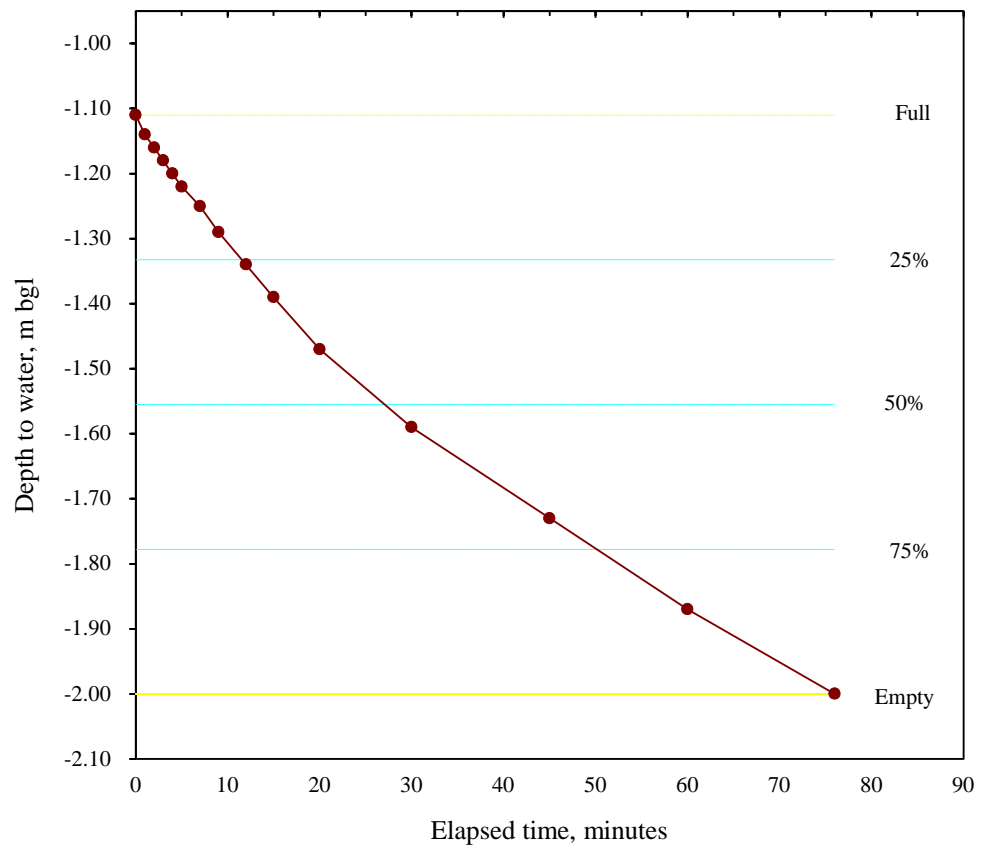
Width: 0.60

Description of Stratum under test: Light brown, slightly silty SAND AND GRAVEL.

Depth to water prior to test: Dry
(below ground level)

DEPTH TO WATER vs ELAPSED TIME

Elapsed Time min	Depth to Water m
0.00	1.11
1.00	1.14
2.00	1.16
3.00	1.18
4.00	1.20
5.00	1.22
7.00	1.25
9.00	1.29
12.00	1.34
15.00	1.39
20.00	1.47
30.00	1.59
45.00	1.73
60.00	1.87
76.00	2.00



All dimensions given in metres

$$f = \frac{(V_{75} - V_{25})}{A_{50}(T_{75} - T_{25})}$$

$V_{75} - V_{25} = 0.45$
 $A_{50} = 3.07$
 $T_{75} - T_{25} = 44$
 $f = \underline{5.61E-05} \text{ m/s}$

Soil Infiltration Rate

SOAKAWAY TEST RESULTS

BRE DIGEST 365 - SOIL INFILTRATION RATE

Project: Begbroke Science Park, Kidlington

Project No: C15387

Date of Test : 16/06/2021

Sheet No: 2/3

Trial Pit: TP4 (SECOND FILLING)

Depth: 2.00

Length: 1.70

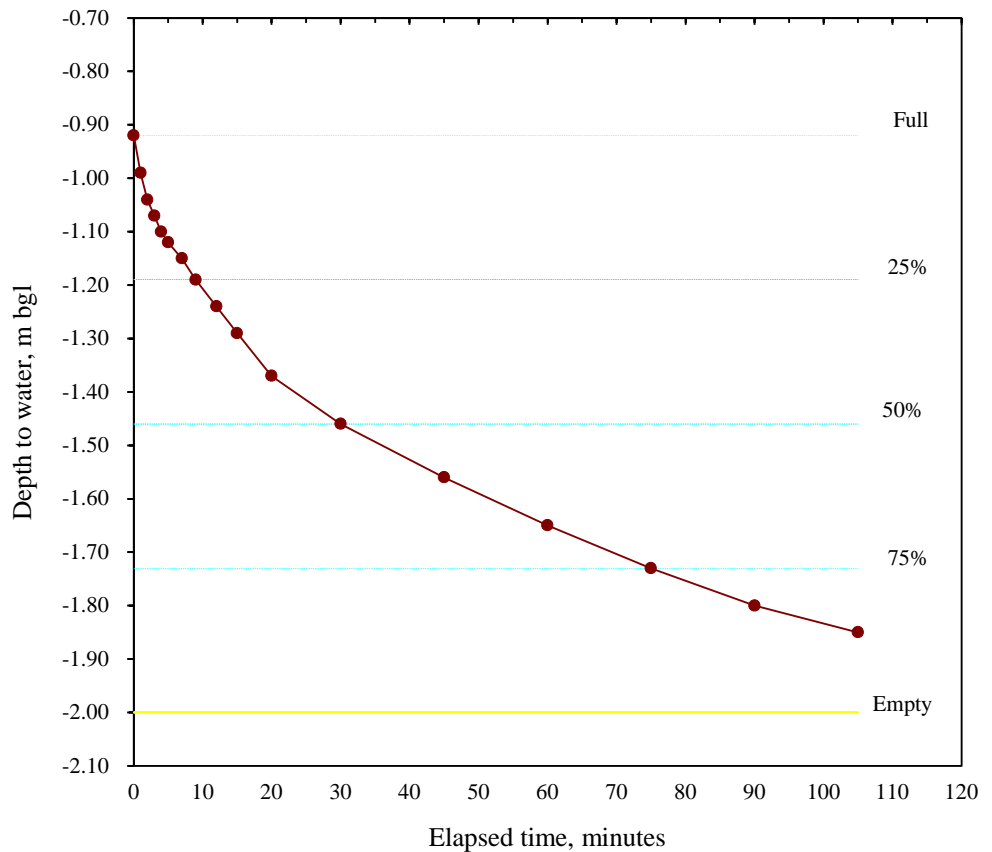
Width: 0.60

Description of Stratum under test: Light brown, slightly silty SAND AND GRAVEL.

Depth to water prior to test: Dry
(below ground level)

DEPTH TO WATER vs ELAPSED TIME

Elapsed Time min	Depth to Water m
0.00	0.92
1.00	0.99
2.00	1.04
3.00	1.07
4.00	1.10
5.00	1.12
7.00	1.15
9.00	1.19
12.00	1.24
15.00	1.29
20.00	1.37
30.00	1.46
45.00	1.56
60.00	1.65
75.00	1.73
90.00	1.80
105.00	1.85



All dimensions given in metres

$$f = \frac{(V_{75} - V_{25})}{A_{50}(T_{75} - T_{25})}$$

$V_{75} - V_{25} = 0.55$
 $A_{50} = 3.50$
 $T_{75} - T_{25} = 66$
 $f = \underline{\underline{3.97E-05}} \text{ m/s}$

Soil Infiltration Rate

SOAKAWAY TEST RESULTS

BRE DIGEST 365 - SOIL INFILTRATION RATE

Project: Begbroke Science Park, Kidlington

Project No: C15387

Date of Test : 16/06/2021

Sheet No: 3/3

Trial Pit: TP4 (THIRD FILLING)

Depth: 2.00

Length: 1.70

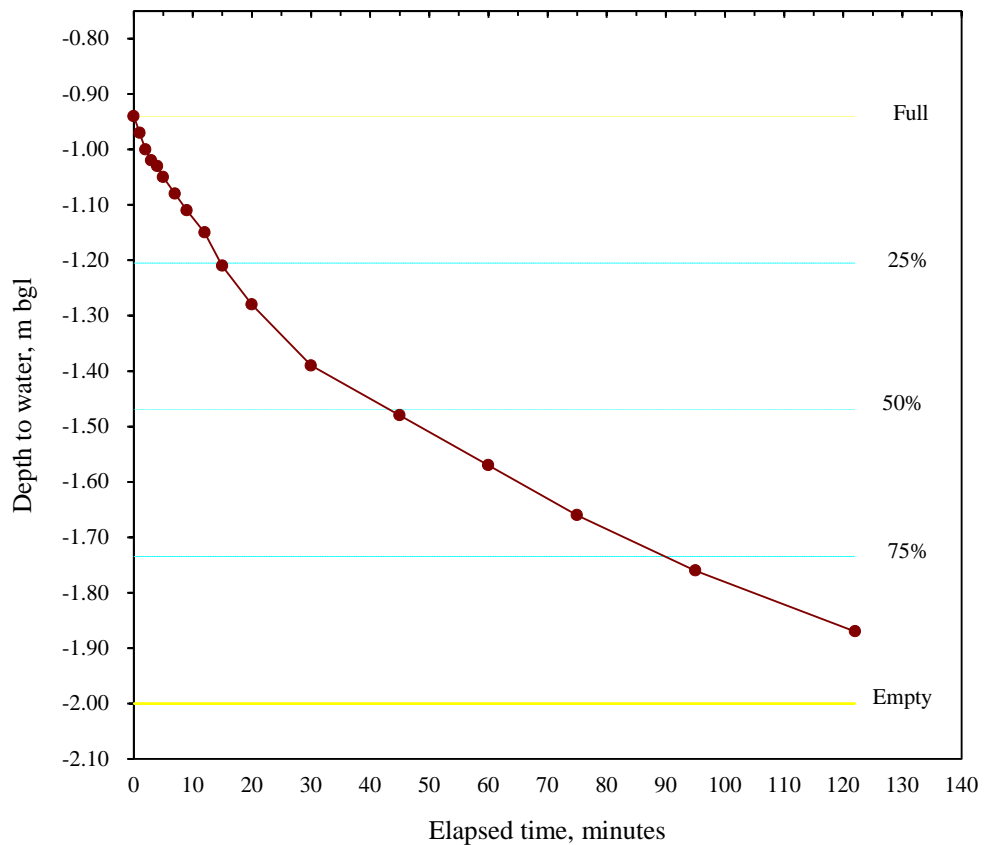
Width: 0.60

Description of Stratum under test: Light brown, slightly silty SAND AND GRAVEL.

Depth to water prior to test: Dry
(below ground level)

DEPTH TO WATER vs ELAPSED TIME

Elapsed Time min	Depth to Water m
0.00	0.94
1.00	0.97
2.00	1.00
3.00	1.02
4.00	1.03
5.00	1.05
7.00	1.08
9.00	1.11
12.00	1.15
15.00	1.21
20.00	1.28
30.00	1.39
45.00	1.48
60.00	1.57
75.00	1.66
95.00	1.76
122.00	1.87



All dimensions given in metres

$$f = \frac{(V_{75} - V_{25})}{A_{50}(T_{75} - T_{25})}$$

$V_{75} - V_{25} = 0.54$
 $A_{50} = 3.46$
 $T_{75} - T_{25} = 75$
 $f = \underline{\underline{3.47E-05}} \text{ m/s}$

Soil Infiltration Rate

Trial Pit TP4 Photographs



Project: Begbroke Science Park, Kidlington

Client: Oxford University Development

**GROUND
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LIMITED**

Peterborough Tel : 01733 566566

Project No.

C15387

GROUND ENGINEERING LIMITED Tel: 01733-566566 www.groundengineering.co.uk			Site: BEGBROKE SCIENCE PARK, KIDLINGTON		TRIAL PIT TP5		
Date: 17/06/21			Pit Size: 2.00m L x 0.60m W x 4.00m D.		447757 mE 213545 mN Ground Level: 68.30m. O.D.		
Samples and in-situ Tests			(Date)	Description of Strata	Legend	Depth m	O. D. Level m
Depth m	Type	Result	Water				
0.10	D1			MADE GROUND - Grey GRAVEL. Gravel of angular granite and asphalt.		0.20	68.10
0.20-0.40	ACM1			MADE GROUND - Light brown, slightly silty SAND AND GRAVEL. Gravel of concrete and limestone. Fragment of cement-bound chrysolite-type asbestos sheet met at 0.20m to 0.40m depth, identified by subsequent laboratory microscopy. Orange brown, clayey, gravelly SAND. Gravel of angular to rounded flint, limestone, ironstone and quartz. (SUMMERTOWN - RADLEY SAND AND GRAVEL MEMBER)		0.40	67.90
0.30	D2					0.90	67.40
0.50	D3			Dense, orange brown and yellow brown, silty, gravelly SAND. Gravel of angular to rounded limestone, ironstone, flint, quartz and quartzite. ...0.10m thick, red brown, iron-cemented layer at 2.00m depth. (SUMMERTOWN - RADLEY SAND AND GRAVEL MEMBER)			
1.00-1.50	B1						
1.00	D4	100					
1.06-1.21	MP1						
1.46-1.63	MP2	100					
1.50	D5						
2.20-2.50	B2						
2.20	D6						
2.80-3.00	B3			Yellow brown, slightly silty, very sandy GRAVEL with occasional cobbles of limestone. Gravel of angular to rounded limestone, ironstone, flint, quartz and quartzite. (SUMMERTOWN - RADLEY SAND AND GRAVEL MEMBER)		2.80	65.50
2.80	D7						
3.70-4.00	B4		▼ c				
4.00	D8		1 ▼				
				Pit completed at 4.00m depth		4.00	64.30

- KEY**
- D - Disturbed Sample
 - B - Bulk Sample
 - U - Undisturbed Sample
 - R - Root Sample
 - W - Water Sample
 - ES - Environmental Sample
 - ▼ Water Strike
 - ▼ Water Rise
 - ▼c Level on completion
 - MP - Mackintosh Probe
 - P() - Hand Penetrometer Cohesion () kPa
 - V - Vane Shear Test Cohesion () kPa

- REMARKS**
1. Live roots observed to 1.80m depth
 2. Water struck at 3.90m depth
 3. Water standing at 3.60m on completion
 4. ACM1 - Fragment of possible asbestos contaminated material, double bagged.

Project No
15387

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Trial Pit TP5 Photographs



Project: Begbroke Science Park, Kidlington

Client: Oxford University Development

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Project No.

C15387

Samples and in-situ Tests			(Date)	Description of Strata	Legend	Depth m	O.D. Level m
Depth m	Type	Result	Water				
0.20	D1			MADE GROUND - Light brown, silty, slightly gravelly SAND. Gravel of brick, flint and ironstone.		0.30	67.90
0.70	D2			Firm, friable, brown and orange brown mottled, slightly gravelly, sandy, silty CLAY. Gravel of angular to sub-rounded flint, limestone and ironstone. (SUMMERTOWN - RADLEY SAND AND GRAVEL MEMBER)		0.80	67.40
1.36-1.64 1.40-1.60 1.50	MP1 B1 D3	100		Medium dense, light brown and orange brown, silty, gravelly SAND. Gravel of angular to rounded limestone, ironstone, flint, quartz and quartzite. (SUMMERTOWN - RADLEY SAND AND GRAVEL MEMBER)		2.30	65.90
1.70-2.00 1.80	B2 D4			Yellow brown, slightly silty, very sandy GRAVEL with occasional cobbles of limestone. Gravel of angular to rounded limestone, ironstone, flint, quartz, quartzite and occasional fossil belemnite fragments. (SUMMERTOWN - RADLEY SAND AND GRAVEL MEMBER)		3.60	64.60
2.50-2.80 2.50	B3 D5						
3.40-3.60 3.40	B4 D6		∇c				
3.60	D7		1 ∇				
				Pit completed at 3.60m depth			

- KEY**
- D - Disturbed Sample
 - B - Bulk Sample
 - U - Undisturbed Sample
 - R - Root Sample
 - W - Water Sample
 - ES - Environmental Sample
 - ∇ - Water Strike
 - ∇ - Water Rise
 - ∇c - Level on completion
 - MP - Mackintosh Probe
 - P() - Hand Penetrometer Cohesion () kPa
 - V - Vane Shear Test Cohesion () kPa

- REMARKS**
1. Live roots observed to 3.20m depth
 2. Water seepage at 3.60m depth
 3. Water standing at 3.40m on completion