



SM/C4304/8800

24th September 2019

Hollins Strategic Land
Suite 4
1 King Street
Manchester
M2 6AW

For the attention of Matthew Symonds,

Dear Matthew,

Re: Berry Hill Road, Adderbury - Infiltration Testing

We are writing to report on the results of the soil infiltration tests undertaken at Berry Hill Road, Adderbury.

The aim of the supplementary investigation was to provide infiltration rates in general accordance with BRE 365 in order to inform drainage design at the site.

Site Works

Three trial pits (SA101 to SA103) were excavated to depths of between 1.50m bgl and 2.10m bgl using a JCB 3CX between on the 10th September 2019. The locations of the trial pits are shown on the appended Exploratory Hole Location Plan (Drawing No. C4304/02).

Ground Conditions

The ground conditions on-site comprised an orange brown clayey sand topsoil, which was encountered from ground level to between 0.30mbgl and 0.40mbgl. The topsoil was underlain by orange brown very sandy clay to depths of 1.50mbgl (SA102). The gravel content increased gradually with depth in SA101 and SA103, becoming gravelly very sandy clay from 0.80m to depths of 2.10m bgl.

Gravel primarily comprises fine to medium angular light grey limestone (assumed to be weathered bedrock), with minor quantities of mudstone. The pits were stable throughout excavations.

Due to the increase in limestone gravel content with depth in SA101 and SA103, it is assumed the limestone bedrock is relatively shallow, therefore there is a potential for fractures present with the bedrock, resulting in fracture flow.

No groundwater was recorded during the excavation of the trial pits.

Results

The tests were undertaken within the very sandy clay, with increasing gravel content with depth in SA101 and SA103. Tests were repeated three times, where feasible, within the available timescales. The results of the infiltration tests indicate poor drainage conditions in the north of the site and good drainage conditions in the southern half of the site, as shown in the table below.

Location	Infiltration Rate (m/s)			BRE 365 Compliant?
	TEST 1	TEST 2	TEST 3	
SA101	1.66x10 ⁻⁴	1.45x10 ⁻⁴	1.30x10 ⁻⁴	Yes
SA102	2.76x10 ⁻⁶	-	-	No
SA103	1.66x10 ⁻⁴	1.48x10 ⁻⁴	1.68x10 ⁻⁴	Yes

*Est. T = Estimated Time.

Discussion

The results show considerable variations in infiltration rate between the locations despite the soakaway tests apparently discharging into similar stratum. The tests in SA101 and SA103 were able to be repeated three times with infiltration rates ranging between 1.30x10⁻⁴ m/s to 1.68x10⁻⁴ m/s, indicating good drainage conditions and compliance with BRE 365.

In contrast, poor infiltration was recorded in SA102 over a 3.0 hour period and therefore by extrapolation would not be expected to drain to 25% of the maximum fill volume in 24 hours and therefore would not be compliant with BRE 365.

It is noted that both SA101 and SA103 were completed in the southern half of the site at a higher elevation to SA102, which was completed in a depression in the north of the site. It was also noted that there was an increase in gravel content with depth in SA103 and SA101, compared to SA102 which contained rare gravel fragments. The difference in infiltration rates may be at least partially accounted for by difference in gravel content and location on the site.

Due to the increasing presence of limestone gravel with depth in SA101 and SA103 it is reasonable to assume the limestone bedrock is relatively shallow. BGS borehole records approximately 40-50m north west of the site show the limestone bedrock has been encountered from 2.00mbgl, therefore it is possible that competent bedrock is present below at shallow depths below the tested depth. Based on the information available, the significantly higher infiltration rates measured in SA101 and SA103 may be a result of drainage directly into the underlying limestone bedrock by fracture flow.

In accordance with CIRIA C753 "The SUDS Manual", infiltration viability should be given full consideration where rates of 10⁻⁶ m/s or greater exist on the site. Where rates are less than this value, the soils can still usefully be used for interception delivery, but disposal of significant volumes of runoff may not be appropriate unless a large area is available, or some form of attenuation can be incorporated.

Based on the infiltration rates obtained, soakaway drainage is likely to be feasible at the site positioned within the tested strata or underlying bedrock, particularly in the vicinity of SA101 and SA103. Note that for soakaway construction purposes, breaking equipment may potentially require locally to penetrate intact rock quality strata. We recommend the design of soakaway drainage is carried out in accordance with BRE 365 and CIRIA C753. Consideration should also be given to future maintenance, where infiltration capacity can be reduced as a result of blinding through ingress of fines.

It is also suggested that the findings of this report are discussed with the Local Authority at the earliest opportunity, to confirm the adequacy of proposed testing and to allow their inspection of any test results.

We trust the above meets your requirements. However, if you have any queries, then please do not hesitate to contact the undersigned.

Yours sincerely

For Brownfield Solutions Ltd



S Murray MGeol (Hons)
Project Engineer
s.murray@brownfield-solutions.co.uk

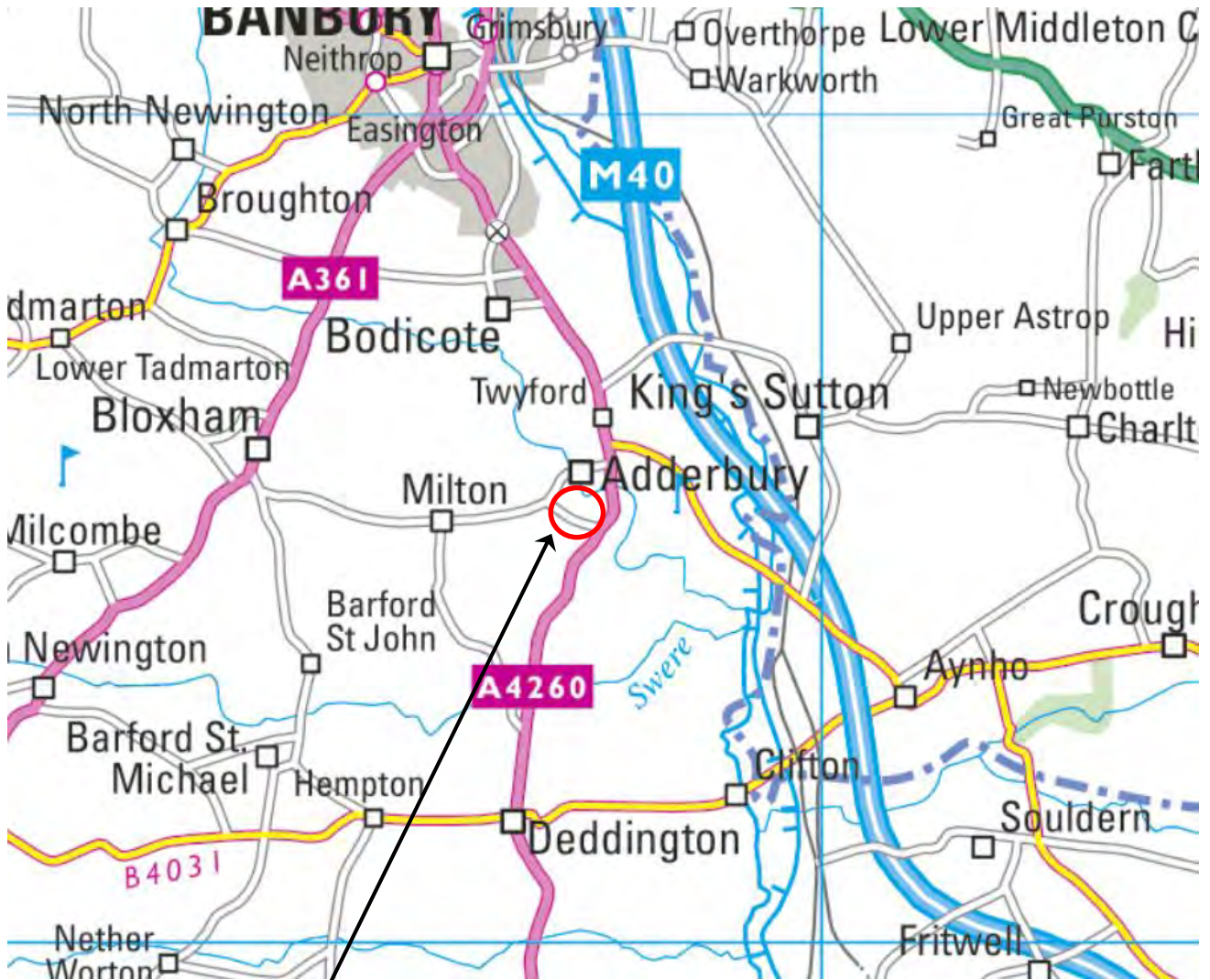
Checked and approved by



A J Stokoe
BSc (Hons) CSci MEnvSc FGS
Principal Project Engineer
a.stokoe@brownfield-solutions.co.uk

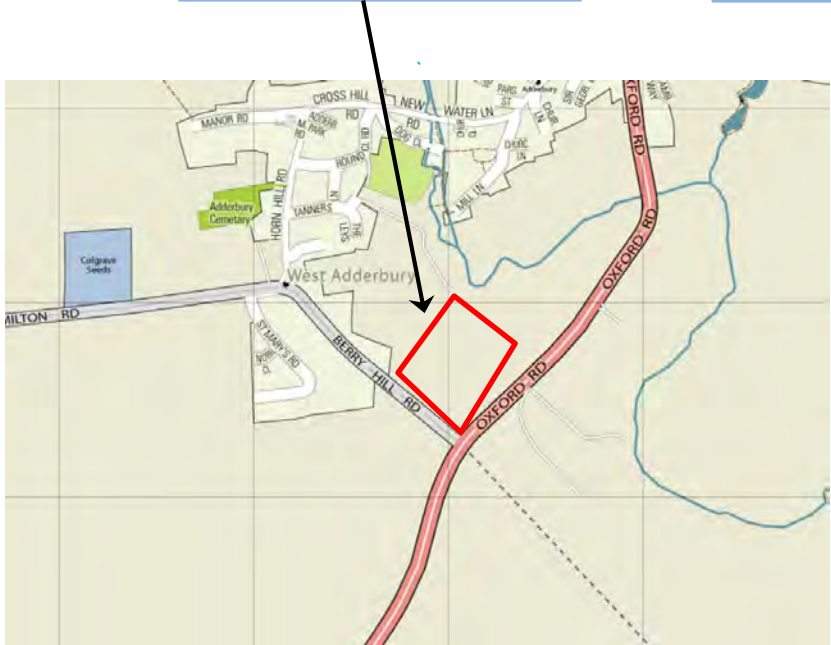
CSci
Chartered
Scientist

Enc C4304/01-Location Plan
C4304/02- Exploratory Location Plan
Infiltration test Results
Trial Pit Logs



SITE LOCATION

NEAREST POSTCODE: OX17 3HF



REV	DATE	DESCRIPTION	BY	CKD



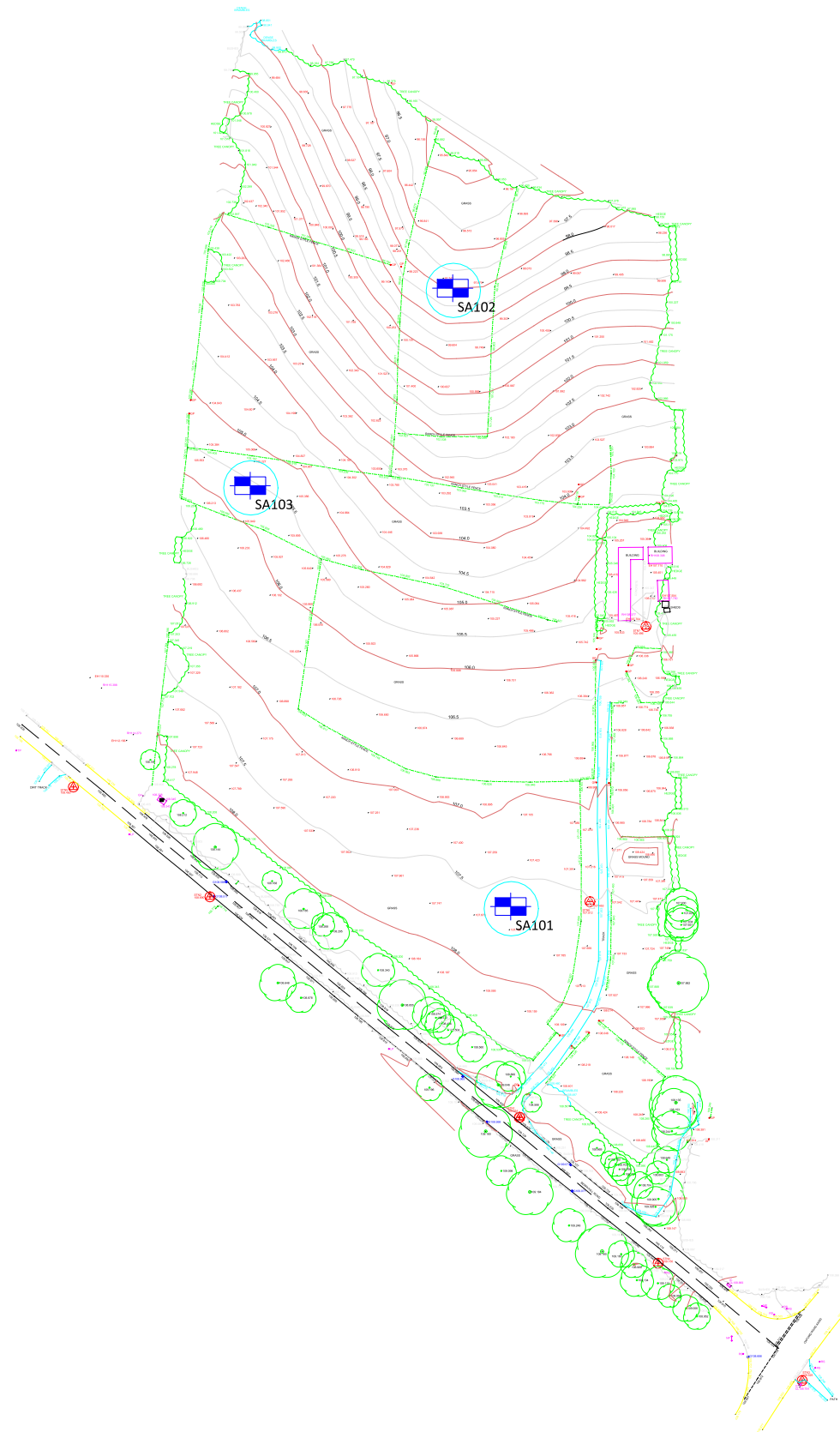
CLIENT
HOLLINS STRATEGIC LAND

PROJECT TITLE
BERRY HILL ROAD, ADDERBURY

DRAWING TITLE
SITE LOCATION PLAN

DRAWING No.	REVISION	SCALE	DATE
C4304/01	-	NTS	24/09/19

DRAWN BY	CHECKED BY
SJD	JCM



KEY



TRIAL PIT



SOAKAWAY INFILTRATION TEST

NOTES

1. ALL DIMENSIONS TO BE CHECKED ON SITE BEFORE COMMENCING WORKS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT & ENGINEER FOR VERIFICATION. FIGURED DIMENSIONS ONLY ARE TO BE TAKEN FROM THIS DRAWING.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ENGINEERS REPORTS. THIS DRAWING IS COPYRIGHT OF BSL.
3. DRAWING NOT FOR CONSTRUCTION PURPOSES.

REV	DATE	DESCRIPTION	BY	CKD



CLIENT
HOLLINS STRATEGIC LAND

PROJECT TITLE
BERRY HILL RD, ADDERBURY

DRAWING TITLE
EXPLORATORY HOLE PLAN

DRAWING No.	REVISION	SCALE	DATE
C4304/02	-	NTS	19/09/19
DRAWN BY SM		CHECKED BY AJS	

Percolation Test **HOLLINS STRATEGIC LAND**

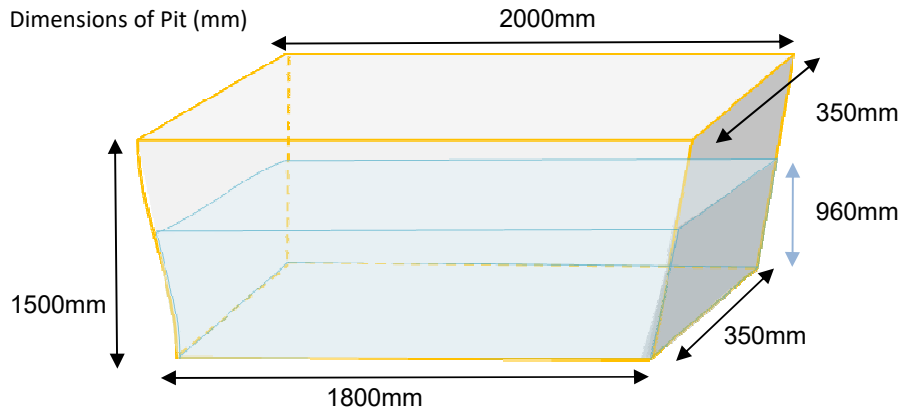
SA101
Test 1

Berry Hill Road, Adderbury
C4304



BROWNFIELD SOLUTIONS LTD
GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE

Test Pit Construction



Date of Test:
10/09/2019


Logged By:
SM

Checked By:
AJS

Strata Description	Orange brown very sandy CLAY underlain by orange brown slightly gravelly sandy CLAY. Gravel is fine to medium angular of limestone.		
Depth of Pit	1500mm		
Depth of Water (start)	960mm		
Pit Details	Open with no stone filling, Backfilled with arisings. See Associated Log for Stratum Details		
Void Ratio	1	Volume of Pit (m ³)	0.638
Infill Volume (m ³)	N/A	Water Volume (m ³)	0.638

Site Recorded Data

Time (mins)	Depth to water (mm)	Depth of water (mm)	Time (mins)	Depth to water (mm)	Depth of water (mm)
0.00	540	960	17.0	1500	0
0.20	660	840	End of Test	End of Test	End of Test
0.40	730	770			
1.00	790	710			
2.00	820	680			
3.00	850	650			
4.00	910	590			
5.00	970	530			
6.00	1030	470			
7.00	1090	410			
8.00	1120	380			
9.00	1150	350			
10.00	1180	320			
11.00	1200	300			

Percolation Test SA101 Test 1	HOLLINS STRATEGIC LAND			 BROWNFIELD SOLUTIONS LTD <small>GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE</small>		
	Berry Hill Road, Adderbury					
	C4304					
	12.00	1230	270			
	13.00	1310	190			
	15.00	1410	90			
	16.00	1460	40			

Percolation Test **HOLLINS STRATEGIC LAND**

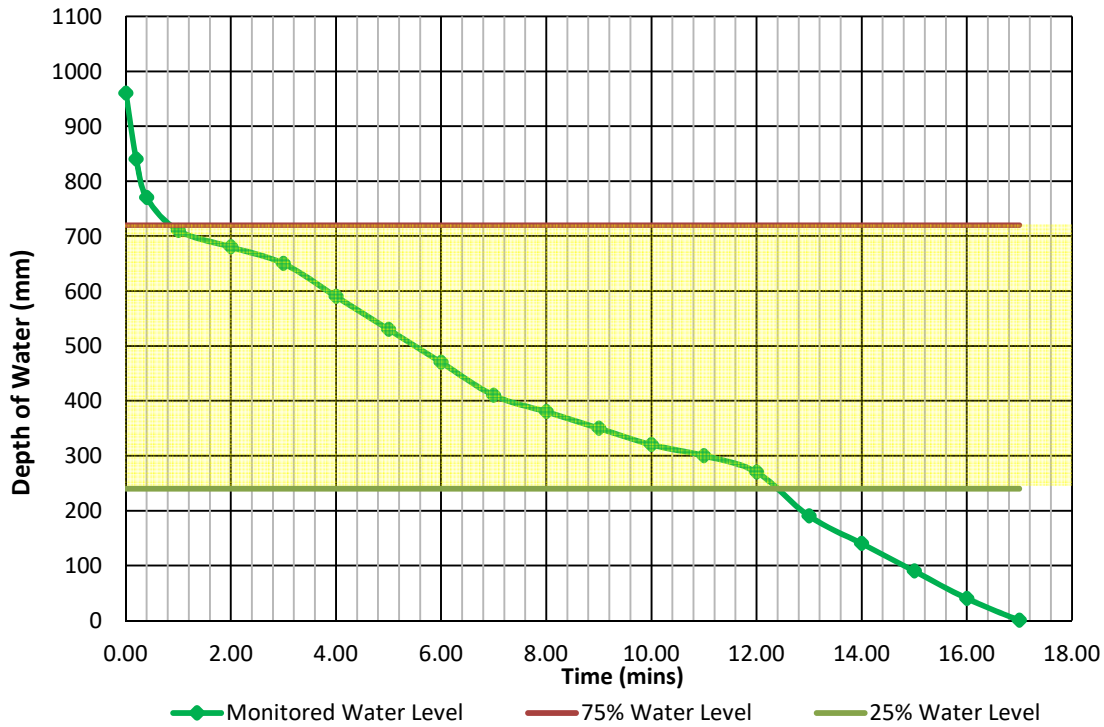
SA101
Test 1
Berry Hill Road, Adderbury
C4304



BROWNFIELD SOLUTIONS LTD
GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE

Data Analysis

Graph of Depth vs Time




Soil Infiltration Rate Calculation

Water Level 1 (mm)	720
Water Level 2 (mm)	240
Time to Drain from Level 1 to Level 2 (mins)	11.5
Volume of water discharged (m ³)	0.3192
Discharge Area (m ²)	2.79
Soil Infiltration Rate (m/min)	0.009948574
Soil Infiltration Rate (m/sec)	1.66E-04

Compliance Check

Water Level at 75% effective depth (mm)	720
Water Level at 25% effective	240

Percolation Test	HOLLINS STRATEGIC LAND		 BROWNFIELD SOLUTIONS LTD <small>GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE</small>
	SA101 Test 1	Berry Hill Road, Adderbury	
	C4304		
	depth (mm)		240
	Compliant with BRE 365		

Percolation Test **HOLLINS STRATEGIC LAND**

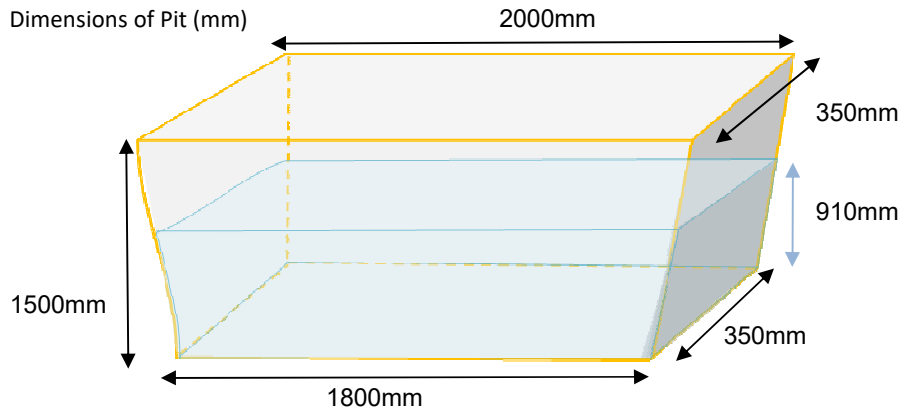
SA101
Test 2

Berry Hill Road, Adderbury
C4304



BROWNFIELD SOLUTIONS LTD
GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE

Test Pit Construction



Date of Test:
10/09/2019

Logged By:
SM

Checked By:
AJS

Strata Description	Orange brown very sandy CLAY underlain by orange brown slightly gravelly sandy CLAY. Gravel is fine to medium angular of limestone.		
Depth of Pit	1500mm		
Depth of Water (start)	910mm		
Pit Details	Open with no stone filling, Backfilled with arisings. See Associated Log for Stratum Details		
Void Ratio	1	Volume of Pit (m ³)	0.605
Infill Volume (m ³)	N/A	Water Volume (m ³)	0.605

Site Recorded Data

Time (mins)	Depth to water (mm)	Depth of water (mm)	Time (mins)	Depth to water (mm)	Depth of water (mm)
0.00	590	910	17.0	1430	70
0.20	670	830	18.0	1500	0
0.40	750	750	End of Test	End of Test	End of Test
1.00	800	700			
2.00	840	660			
3.00	890	610			
4.00	930	570			
5.00	970	530			
6.00	1010	490			
7.00	1050	450			
8.00	1090	410			
9.00	1120	380			
10.00	1150	350			

Percolation Test

HOLLINS STRATEGIC LAND

SA101
Test 2

Berry Hill Road, Adderbury

C4304



**BROWNFIELD
SOLUTIONS LTD**
GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE

11.00	1170	330
12.00	1200	300
13.00	1240	260
15.00	1330	170
16.00	1380	120

Percolation Test **HOLLINS STRATEGIC LAND**

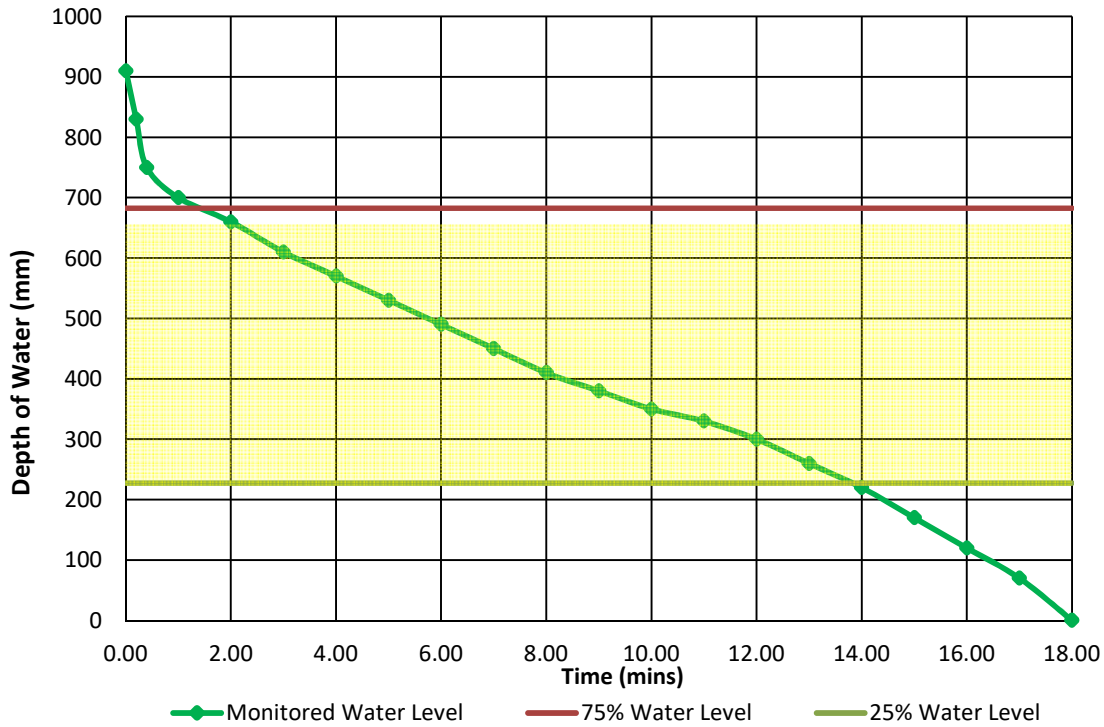
SA101
Test 2
Berry Hill Road, Adderbury
C4304



BROWNFIELD SOLUTIONS LTD
GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE

Data Analysis

Graph of Depth vs Time




Soil Infiltration Rate Calculation

Water Level 1 (mm)	680
Water Level 2 (mm)	227
Time to Drain from Level 1 to Level 2 (mins)	13
Volume of water discharged (m ³)	0.301245
Discharge Area (m ²)	2.67075
Soil Infiltration Rate (m/min)	0.008676474
Soil Infiltration Rate (m/sec)	1.45E-04

Compliance Check

Water Level at 75% effective depth (mm)	682.5
Water Level at 25% effective	227.5

Percolation Test	HOLLINS STRATEGIC LAND	 BROWNFIELD SOLUTIONS LTD <small>GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE</small>
SA101 Test 2	Berry Hill Road, Adderbury	
	C4304	
	depth (mm)	<input type="text" value="227.5"/>
	<input type="text" value="Compliant with BRE 365"/>	

Percolation Test **HOLLINS STRATEGIC LAND**

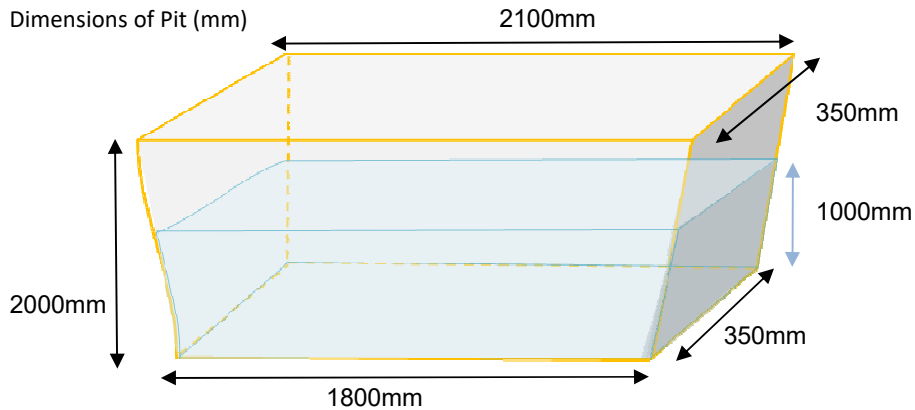
SA102
Test 1

Berry Hill Road, Adderbury
C4304



BROWNFIELD SOLUTIONS LTD
GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE

Test Pit Construction



Date of Test:
10/09/2019

Logged By:
SM

Checked By:
AJS

Strata Description	Orange brown very sandy CLAY.		
Depth of Pit	2000mm		
Depth of Water (start)	1000mm		
Pit Details	Open with no stone filling, Backfilled with arisings. See Associated Log for Stratum Details		
Void Ratio	1	Volume of Pit (m ³)	0.683
Infill Volume (m ³)	N/A	Water Volume (m ³)	0.683

Site Recorded Data

Time (mins)	Depth to water (mm)	Depth of water (mm)	Time (mins)	Depth to water (mm)	Depth of water (mm)
0.00	1000	1000	45.0	1200	800
0.20	1030	970	55.0	1210	790
0.40	1060	940	60.0	1230	770
1.00	1070	930	75.0	1240	760
2.00	1070	930	90.0	1260	740
3.00	1080	920	105.0	1270	730
4.00	1090	910	120.0	1290	710
5.00	1100	900	136.0	1300	700
6.00	1100	900	152.0	1310	690
7.00	1110	890	165.0	1310	690
8.00	1120	880	180.0	1320	680
9.00	1120	880	1700.0	1750	250
10.00	1130	870	End of Test	End of Test	End of Test
15.00	1150	850			

Percolation Test

HOLLINS STRATEGIC LAND

SA102
Test 1

Berry Hill Road, Adderbury

C4304



**BROWNFIELD
SOLUTIONS LTD**
GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE

20.00	1160	840
25.00	1170	830
35.00	1190	810
40.00	1200	800

Percolation Test **HOLLINS STRATEGIC LAND**

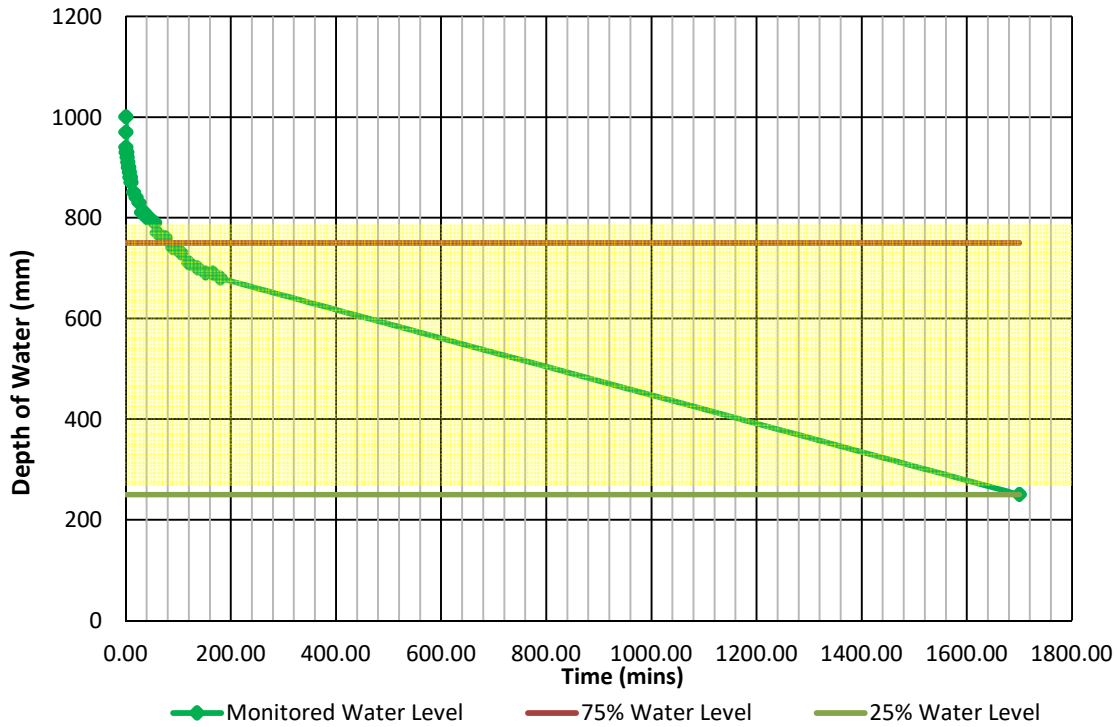
SA102
Test 1
Berry Hill Road, Adderbury
C4304



BROWNFIELD SOLUTIONS LTD
GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE

Data Analysis

Graph of Depth vs Time



Soil Infiltration Rate Calculation


Water Level 1 (mm)	840
Water Level 2 (mm)	680
Time to Drain from Level 1 to Level 2 (mins)	160
Volume of water discharged (m ³)	0.1092
Discharge Area (m ²)	4.126
Soil Infiltration Rate (m/min)	0.000165414

Soil Infiltration Rate (m/sec)	2.76E-06
--------------------------------	----------

Compliance Check

Water Level at 75% effective

750

Percolation Test	HOLLINS STRATEGIC LAND		 BROWNFIELD SOLUTIONS LTD <small>GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE</small>
	SA102	Berry Hill Road, Adderbury	
Test 1	C4304		
	depth (mm)		750
	Water Level at 25% effective depth (mm)		250
Test not BRE 365 compliant - insufficient time to drain past 25% effective depth			

Percolation Test **HOLLINS STRATEGIC LAND**

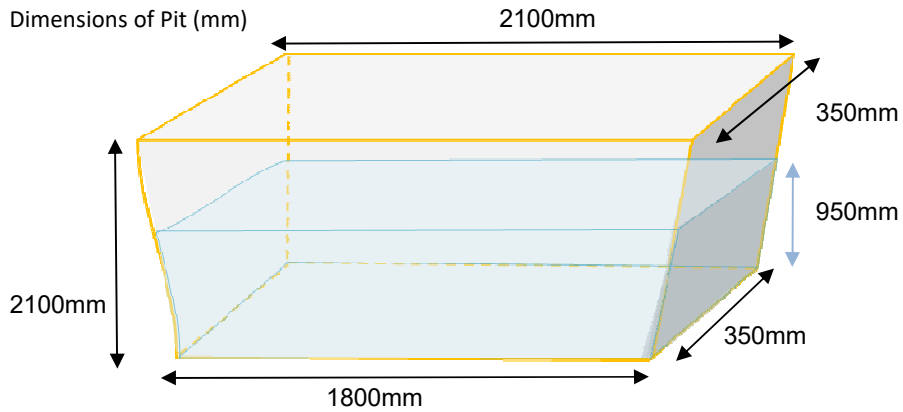
SA103
Test 1

Berry Hill Road, Adderbury
C4304



BROWNFIELD SOLUTIONS LTD
GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE

Test Pit Construction



Date of Test:
10/09/2019


Logged By:
SM

Checked By:
AJS

Strata Description	Orange brown very sandy CLAY underlain by orange brown slightly gravelly sandy CLAY. Gravel is fine to medium angular of limestone.		
Depth of Pit	2100mm		
Depth of Water (start)	950mm		
Pit Details	Open with no stone filling, Backfilled with arisings. See Associated Log for Stratum Details		
Void Ratio	1	Volume of Pit (m ³)	0.648
Infill Volume (m ³)	N/A	Water Volume (m ³)	0.648

Site Recorded Data

Time (mins)	Depth to water (mm)	Depth of water (mm)	Time (mins)	Depth to water (mm)	Depth of water (mm)
0.00	1150	950			
0.20	1260	840			
0.40	1320	780			
1.00	1400	700			
2.00	1460	640			
3.00	1580	520			
4.00	1630	470			
5.00	1660	440			
6.00	1710	390			
7.00	1740	360			
8.00	1760	340			
9.00	1820	280			
10.00	1860	240			
11.00	1910	190			

Percolation Test SA103 Test 1	HOLLINS STRATEGIC LAND			 BROWNFIELD SOLUTIONS LTD <small>GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE</small>
	Berry Hill Road, Adderbury			
	C4304			
	12.00	1960	140	
	13.00	1990	110	
	15.00	2100	0	
	End of Test	End of Test	End of Test	

Percolation Test **HOLLINS STRATEGIC LAND**

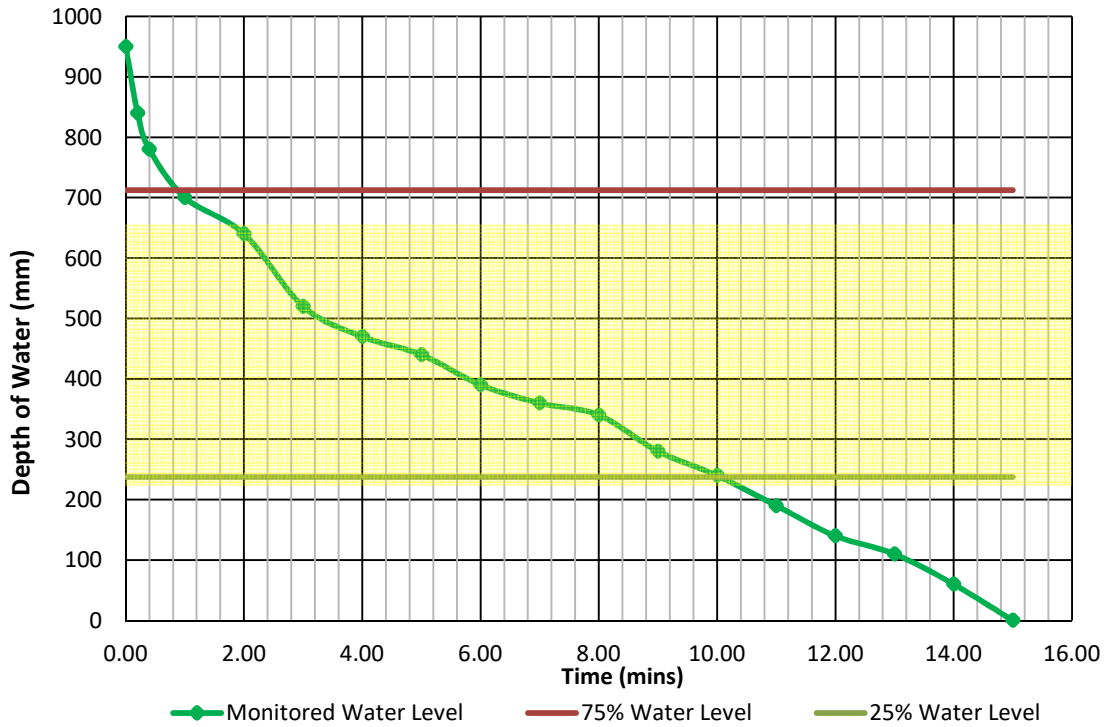
SA103
Test 1
Berry Hill Road, Adderbury
C4304



BROWNFIELD SOLUTIONS LTD
GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE

Data Analysis

Graph of Depth vs Time




Soil Infiltration Rate Calculation

Water Level 1 (mm)	712
Water Level 2 (mm)	240
Time to Drain from Level 1 to Level 2 (mins)	11.5
Volume of water discharged (m ³)	0.32214
Discharge Area (m ²)	2.8196
Soil Infiltration Rate (m/min)	0.009934804
Soil Infiltration Rate (m/sec)	1.66E-04

Compliance Check

Water Level at 75% effective depth (mm)	712.5
Water Level at 25% effective	237.5

Percolation Test	HOLLINS STRATEGIC LAND		 BROWNFIELD SOLUTIONS LTD <small>GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE</small>
	SA103	Berry Hill Road, Adderbury	
	Test 1	C4304	
	depth (mm)	237.5	
	Compliant with BRE 365		

Percolation Test **HOLLINS STRATEGIC LAND**

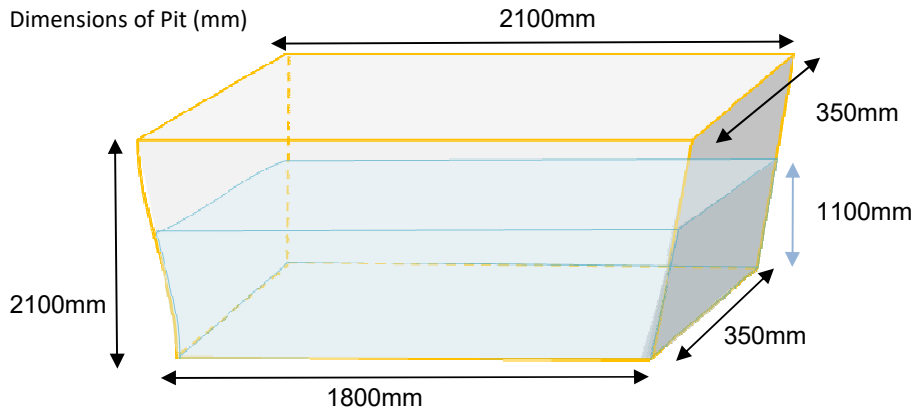
SA103
Test 2

Berry Hill Road, Adderbury
C4304



BROWNFIELD SOLUTIONS LTD
GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE

Test Pit Construction



Date of Test:
10/09/2019

Logged By:
SM

Checked By:
AJS

Strata Description	Orange brown very sandy CLAY underlain by orange brown slightly gravelly sandy CLAY. Gravel is fine to medium angular of limestone.		
Depth of Pit	2100mm		
Depth of Water (start)	1100mm		
Pit Details	Open with no stone filling, Backfilled with arisings. See Associated Log for Stratum Details		
Void Ratio	1	Volume of Pit (m ³)	0.751
Infill Volume (m ³)	N/A	Water Volume (m ³)	0.751

Site Recorded Data

Time (mins)	Depth to water (mm)	Depth of water (mm)	Time (mins)	Depth to water (mm)	Depth of water (mm)
0.00	1000	1100	17.0	2050	50
0.20	1150	950	18.0	2100	0
0.40	1210	890	End of Test	End of Test	End of Test
1.00	1300	800			
2.00	1400	700			
3.00	1480	620			
4.00	1530	570			
5.00	1580	520			
6.00	1620	480			
7.00	1680	420			
8.00	1720	380			
9.00	1790	310			
10.00	1840	260			
11.00	1880	220			

Percolation Test

HOLLINS STRATEGIC LAND

SA103
Test 2

Berry Hill Road, Adderbury

C4304



**BROWNFIELD
SOLUTIONS LTD**
GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE

12.00	1900	200			
13.00	1920	180			
15.00	1970	130			
16.00	1990	110			

Percolation Test **HOLLINS STRATEGIC LAND**

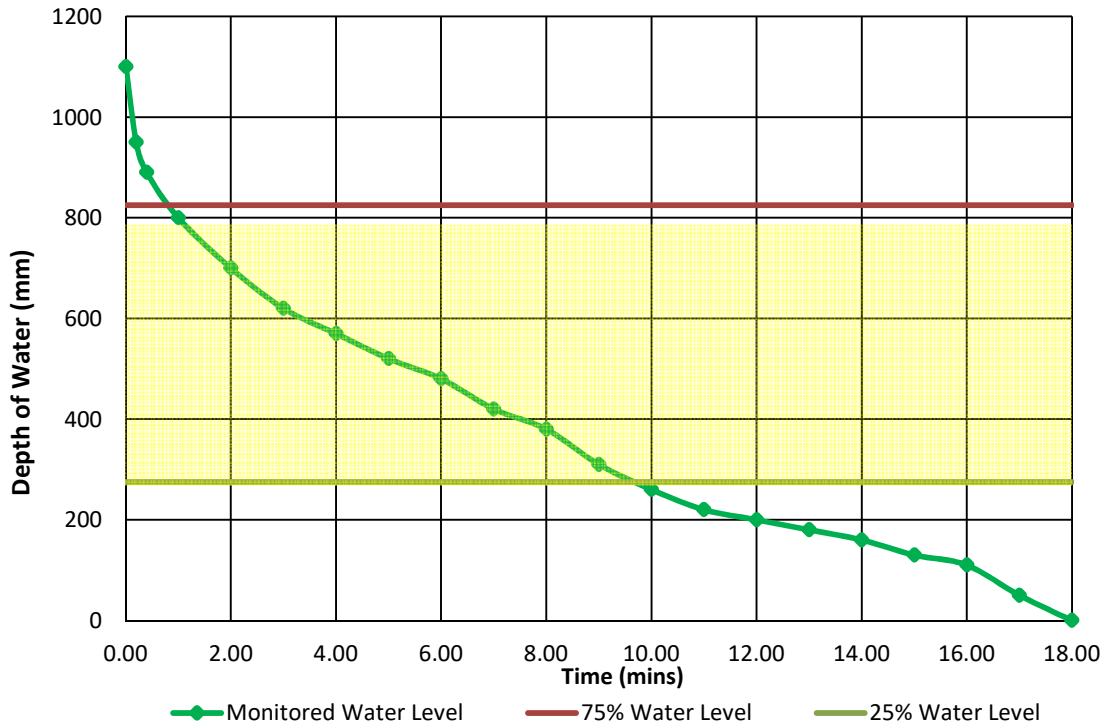
SA103
Test 2
Berry Hill Road, Adderbury
C4304



BROWNFIELD SOLUTIONS LTD
GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE

Data Analysis

Graph of Depth vs Time




Soil Infiltration Rate Calculation

Water Level 1 (mm)	800
Water Level 2 (mm)	275
Time to Drain from Level 1 to Level 2 (mins)	13
Volume of water discharged (m ³)	0.3583125
Discharge Area (m ²)	3.1025
Soil Infiltration Rate (m/min)	0.008883965
Soil Infiltration Rate (m/sec)	1.48E-04

Compliance Check

Water Level at 75% effective depth (mm)	825
Water Level at 25% effective	275

Percolation Test	HOLLINS STRATEGIC LAND		 BROWNFIELD SOLUTIONS LTD <small>GEO-ENVIRONMENTAL ENGINEERING EXCELLENCE</small>
	SA103	Berry Hill Road, Adderbury	
	Test 2	C4304	
	depth (mm)	<input type="text" value="275"/>	
	<input type="text" value="Compliant with BRE 365"/>		

Trial Pit Log

No.
SA101
Sheet 1 of 1

PROJECT NO: C4304

CO-ORDS:

Hole Type
TP

PROJECT NAME: BERRY HILL ROAD, ADDERBURY


LEVEL:

Scale
1:25

CLIENT: HOLLINS STRATEGIC LAND

DATES: -

Logged **Checked**
SM AIS

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m OD)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.20	D		0.40		Orange brown clayey SAND with rootlets (TOPSOIL).	
							Firm to stiff orange brown very sandy CLAY.	
		0.80	D		1.00		Stiff to very stiff orange brown slightly gravelly very sandy CLAY. Gravel is fine to medium angular of limestone and rare mudstone. <i>Gravel content gradually increases with depth.</i>	
					1.50		End of Borehole at 1.50m	

Remarks

1. No Groundwater encountered.
2. Backfilled with arisings.

ES = Environmental Sample
D = Disturbed Sample
B = Bulk Sample
LB=Large Bulk Sample
U = Undisturbed Sample
UT = Undisturbed Thin Wall Sample
SPT = Standard Penetration Test
PID = Photoionization Detector (ppm)
PPM = Part Per Million
HSV = Hand Shear Vane

Trial Pit Log

No.
SA102
Sheet 1 of 1

PROJECT NO: C4304

CO-ORDS:

Hole Type
TP

PROJECT NAME: BERRY HILL ROAD, ADDERBURY


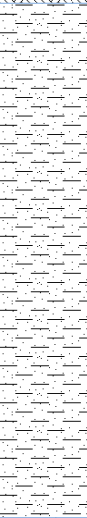
LEVEL:

Scale
1:25

CLIENT: HOLLINS STRATEGIC LAND

DATES: -

Logged **Checked**
SM AIS

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m OD)	Legend	Stratum Description
		Depth (m)	Type	Results				
		0.30	D		0.30		Orange brown clayey SAND with rootlets (TOPSOIL).	
		1.50	D		2.00		Stiff orange brown very sandy CLAY.	
							End of Borehole at 2.00m	

Remarks

1. No Groundwater encountered.
2. Backfilled with arisings.

ES = Environmental Sample
D = Disturbed Sample
B = Bulk Sample
LB=Large Bulk Sample
U = Undisturbed Sample
UT = Undisturbed Thin Wall Sample
SPT = Standard Penetration Test
PID = Photoionization Detector (ppm)
PPM = Part Per Million
HSV = Hand Shear Vane

Trial Pit Log

No.
SA103
Sheet 1 of 1

PROJECT NO: C4304

CO-ORDS:

Hole Type
TP

PROJECT NAME: BERRY HILL ROAD, ADDERBURY

LEVEL:

Scale
1:25

CLIENT: HOLLINS STRATEGIC LAND

DATES: -

Logged **Checked**
SM AIS

Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m OD)	Legend	Stratum Description	
		Depth (m)	Type	Results					
							Orange brown clayey SAND with rootlets (TOPSOIL).		
				0.40			Stiff orange brown very sandy CLAY.		
				0.80			Stiff to very stiff orange brown slightly gravelly very sandy CLAY. Gravel is fine to medium angular of limestone and rare mudstone. <i>Gravel content gradually increases with depth.</i>	1.0	
		1.80	D						
				2.10			End of Borehole at 2.10m	2.0	
								3.0	
								4.0	
								5.0	

Remarks

1. No Groundwater encountered.
2. Backfilled with arisings.

ES = Environmental Sample
D = Disturbed Sample
B = Bulk Sample
LB=Large Bulk Sample
U = Undisturbed Sample
UT = Undisturbed Thin Wall Sample
SPT = Standard Penetration Test
PID = Photoionization Detector (ppm)
PPM = Part Per Million
HSV = Hand Shear Vane