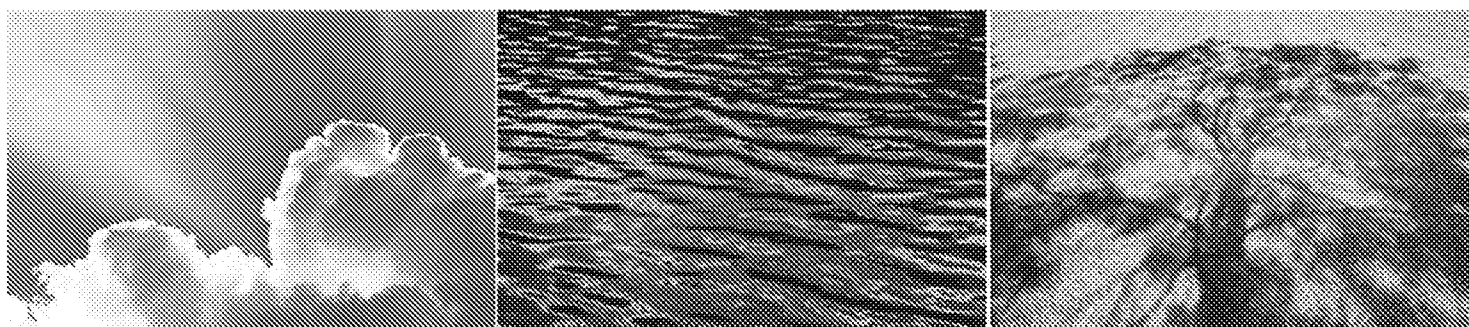


Soakage Test Report



Desk Studies | Risk Assessments | Site Investigations | Geotechnical | Contamination Investigations | Remediation Design and Validation

Site: Sunny Mead Farm, North End Road, Yapton BN18 0DL

Client: Mr Roy Daniells

Report Date: November 2018

Project Reference: J13840

Southern Testing Head Office
East Grinstead
Tel: 01403 251100

ST Consult Midlands
Northampton
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ST Consult North West
Warrington
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ST Consult South West
Swindon
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FS 29280

EMS 506775

CHS 506776

A INTRODUCTION

1 Authority

Our authority for carrying out this work is contained in a completed project order form received October the 19th 2018 from Mr. Roy Daniells in relation to Sothern Testing Laboratories Ltd. quotation – Q182029.

2 Location

The site is located on the eastern side of North End Road, Yapton, approximately 2.0 km west of Ford Railway Station and approximately 2.2 km east of Banham Railway Station. The approximate National Grid Reference of the site is SU 98141 04368.

3 Investigation Brief

In accordance with the Client's instructions, and our quotation, the following was included in our brief for this soakage investigation:

3 No. Preliminary soakage tests were carried out across the site using a modified version of the BRE 365 Digest method.

A forth Preliminary soakage test was attempted, however ground conditions encountered on site prevented this.

The fieldwork was carried out on Wednesday 7th November 2018 at which time the weather was generally variable, with scattered short periods of sunshine amongst heavy rain conditions. The rainfall in the South of England for the preceding three months was generally drier than normal, with approximately 30% of the normal.

4 Scope

This report presents our exploratory hole logs and test results only. As with any site there may be differences in soil conditions between exploratory hole positions.

This report is not an engineering design and the figures and calculations contained in the report should be used by the Engineer, taking note that variations will apply, according to variations in design loading, in techniques used, and in site conditions. Our figures therefore should not supersede the Engineer's design.

Contamination issues are not considered in this report.

The site investigation was conducted and this report has been prepared for the sole internal use and reliance of Mr. Roy Daniells and their appointed Engineers. This report shall not be relied upon or transferred to any other parties without the express written authorisation of Southern Testing Laboratories Limited. If an unauthorised third party comes into possession of this report they rely on it at their peril and the authors owe them no duty of care and skill.

S F Pratt MSc CGeol
(Countersigned)

N Harris BEng GMICE
(Signed)

For and on behalf of Southern Testing Laboratories Limited

B FIELDWORK

5 General Site Description

The site is situated on the eastern side of North End Road, Yapton, and forms a roughly rectangular shape and is currently occupied by a single storey structure and outbuilding to the eastern area of the site, with a swimming pool approximately in the central southern area of the site and a temporary greenhouse type structure within the central western area of the site. The site falls gently towards the west at approximately 5 degrees.

A proportion of the site along the boundary is overgrown. A mixed paved driveway is present along the southern boundary leading from North End Road to the current structures on site.

The site contained a wide variety of mixed vegetation and trees including; mature oak, sycamore, ash, eucalyptus, laurel, palm and beach trees, laurel, poplar, privet, spindle, honeysuckle and hornbeam hedging.

The site fall gently towards the west at approximately 5 degrees, with apparent foul waste services crossing the site in an east to west direction and in a north to south direction towards the pumping station.

The site is bound to North End Road to the west, Railway land to the north and residential land to the east and south.

6 Geology

The British Geological Survey Map indicates that the site geology consists of Raised Beach Deposits over River Terrace Deposits over Lewes Nodular Chalk Formation.

Raised Beach Deposits

The beach deposits consist of uniformly graded, often buff, silty sand, which lie beneath a superficial cover of (usually) clayey gravel. They are above 4 m thick and are dated to the second warm interglacial period (the Hoxnian). They rest on a wave-cut platform which falls gently from its maximum elevation of just over 30 m AOD to about 25 m AOD over a distance of 1 to 2 km. Where the base platform is in chalk there is often a thin superficial gravelly layer and the upper 150 mm or so of the chalk is hard and calcreted. At the interface between the chalk and the overlying beach large solution features may be found.

The lower beach deposits, which comprise fine uniform silty sands with some gravel, rest on a platform which falls from about +15 m AOD, to present sea level, over a distance of up to 15 km. They lie beneath a superficial cover of brickearth or Coombe deposits.

As the deposits are up to about 5 m thick, the ground level at the inner margin is about +20 m AOD, and a slight change in slope can sometimes be detected at this point. There is a former cliff at the margin, usually in soft Tertiary clays which have been highly degraded but which may have been up to 10 to 12 m high. Highly variable soil conditions must be anticipated in the region of the ancient cliffs.

The beaches were formed in a complex marine transgression which is traditionally considered to belong to the Ipswichian Interglacial (about 80,000 years ago) and there are also deep local cryoturbation and solution features.

River Terrace Deposits (Brickearth)

Brickearth (loess deposit) is a recent deposit which is so called as it is suited to brick manufacture. It is predominantly an Aeolian deposit; formed during cold, dry climatic conditions. There is evidence that brickearth has been reworked as part of 'sheet flooding' which helped incorporate flint gravels into the deposit. Brickearth consists mainly of ferruginous silty clay, which is often sandy and may contain some finely divided chalk, scattered flints and gravelly seams, or other locally derived material. It is usually poorly consolidated and may contain numerous hollow root tubes and worm burrows.

Lewes Nodular Chalk Formation

The Lewes Nodular Chalk Formation is characterised by bands of orange-stained, hard, medium to very high density chalk interbedded with soft greyer low density chalk. There are some well-developed hardgrounds noted such as the Top Rock and Chalk Rock. A number of persistent marl and flint horizons are included within this formation. Fracturing is variable, although commonly steeply inclined and curvilinear in nature. Horizons of sub-horizontal sheet flints are also present.

7 Soils as Found

The soils encountered are described in detail in the attached exploratory hole logs (Appendix A), but in general comprised a covering of Topsoil over sandy Clay over gravelly Sand over weathered Chalk. A summary is given below.

Depth	Thickness	Soil Type	Description
GL to 0.20/0.25m	0.20m to 0.25m	TOPSOIL	Dark to grey brown sandy clayey TOPSOIL with occasional roots
0.20/0.25m to 1.00/1.60m	0.78m to 1.40m	Sandy CLAY	Firm to stiff, Orange to mid brown desiccated friable, sandy CLAY with occasional roots and flint gravels.
1.00/1.60m to	0.45m to 1.35m	Gravelly SAND	Orange brown gravelly SAND.

Depth	Thickness	Soil Type	Description
1.45m/2.95m			Gravel is flint. (WLS01 WLS02)
0.23m to 1.30m	1.07m	Sandy CLAY	Firm, friable, desiccated, mid brown, sandy CLAY with frequent white chalk speckling (WLS04)
2.95/1.30m to 3.00m+	0.05m+ to 1.7m+	Weathered CHALK	WEATHERED CHALK recovered as cream to light grey, silty clayey GRAVEL

8 Soakage Test Method

Falling Head Tests (After the BRE 365 Method)

The BRE365 paper on soakaway design allows for the design of trench soakaways as well as traditional square and circular soakaways.

The test to measure the soil infiltration rate is normally carried out in pits which are excavated to the full depth of the proposed soakaway. The trial pits are filled and allowed to drain to empty or near empty, three times, on the same day or on consecutive days. In this case, due to access restraints, testing was carried out in windowless sampler boreholes.

The pit or borehole is considered full when the water level is the same as the proposed inlet invert. The time for the water level to fall from $\frac{3}{4}$ full to $\frac{1}{4}$ full is obtained and the soil infiltration rate is obtained from the following formula:

$$f = \frac{V_{p75-25}}{a_{p50} \times t_{p75-25}}$$

Where: f = soil infiltration rate (in this case expressed in l/m²/minute)

V_{p75-25} = the effective storage volume of water in the borehole between 75% and 25% effective depth;

a_{p50} = the internal surface area of the borehole up to 50% effective depth and excluding the base area;

t_{p75-25} = the time for the water level to fall from 75% to 25% effective depth.

The soakage rate in this report is expressed as l/m²/minute, which is a convenient rate to use. The BRE use a unit of m/sec, which is the value in l/m²/minute divided by 60,000.

Because of time and cost constraints testing was restricted to one day.

9 Soakage Test Results & Discussion

A total of three soakage tests were carried out across the site, at the locations shown on the attached site plan (Figure 1). It is noted that the current site usage, layout and overgrowth constrained the positions of potential suitable testing locations. The full results of the soakage tests are appended, however, the soakage rate from each borehole is summarised in the table below.

Results of Preliminary BRE 365 Soakage tests				
Pit	Depth (m)	f l/m ² /min	BRE Units (m/sec)	Comments
WLS02	3	0.025	4.19E-7	Exploratory hole collapsed during testing to 1.34m bgl between the 120 and 180 minute reading. Non-compliant value calculated.
WLS03	3	5.25	8.75E-5	Groundwater rested at 2.34m bgl. Three fillings completed. Non-compliant value calculated.
WLS04	3	10.13	1.69E-4	Groundwater rested at 1.87m bgl. Three fillings completed. Non-compliant value calculated.

The BRE Digest 365 indicates that 3 fillings must be carried out. Where 3 fillings have not been carried out, a reduction factor should be applied.

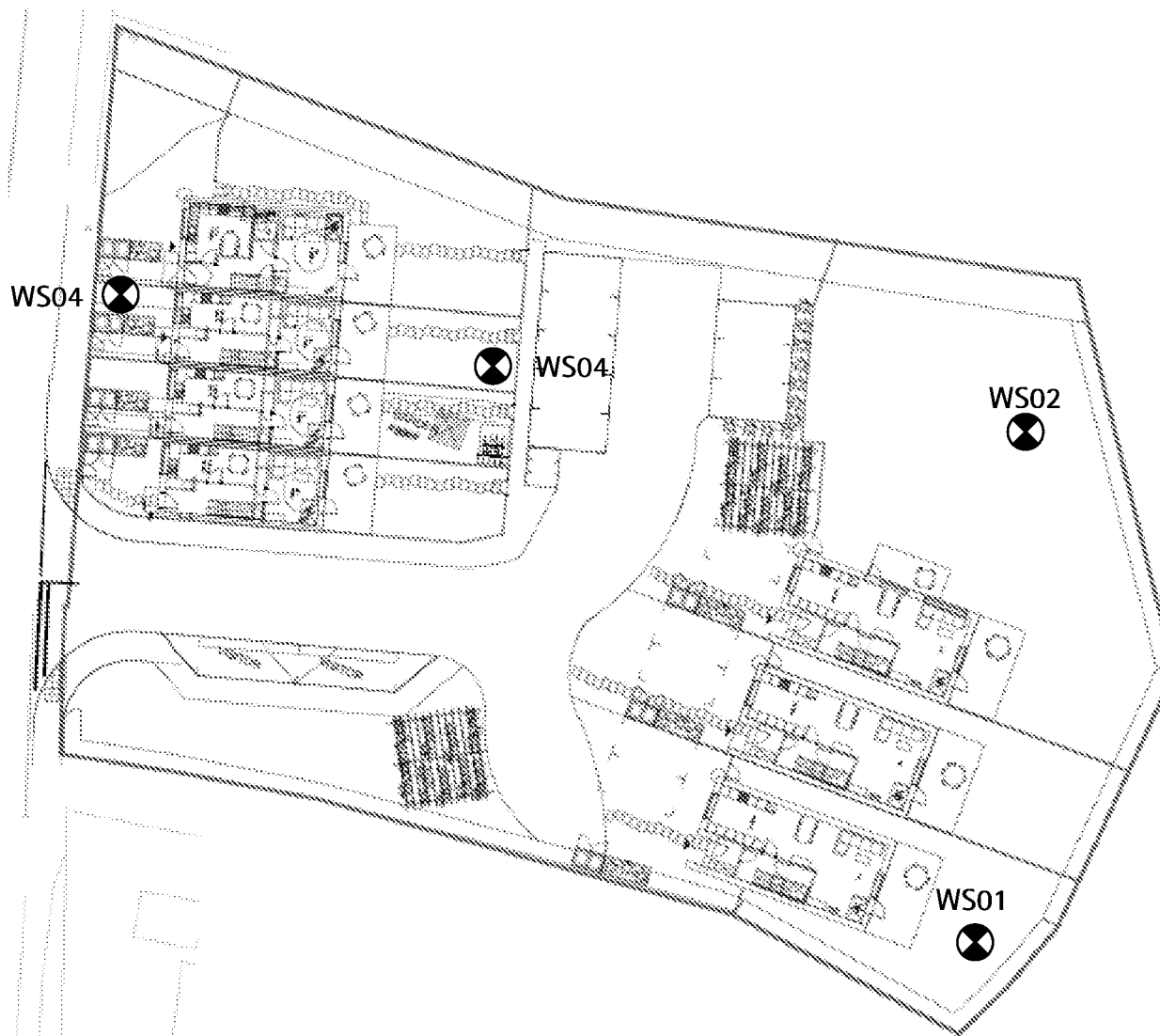
It should be noted that due to a high groundwater level, testing was restricted in some locations to the zone above the groundwater & therefor non-compliant values have been resulted.

It is noted that these values are only preliminary and must be confirmed prior to instalment of any soakaway or drainage scheme. This may be requested when suitable access for a Loaded Land Rover with trailer and a rubber-tyred JCB backhoe excavator into the proposed locations of the soakaway/s.

Any soakaway scheme will require the approval of the Environment Agency, Building Control and, where applicable, the adopting Highways Authority.

Groundwater levels can vary considerably from season to season and year to year, often rising in wet or winter weather, and falling in periods of drought. As such, a high groundwater table may affect the storage capacity of soakaways (where applicable). Water levels at the time of the investigation would likely be close to a seasonal low. In addition, it should be noted that an unsaturated zone may be required between the base of soakaways and the groundwater table, by the Environment Agency.

APPENDIX A – EXPLORATORY HOLE LOGS & SITE PLAN



NB: Positions of Boreholes and/or Trial Pits are only indicative unless dimensioned

Site: Sunny Mead Farm, North End Road, Yapton, Arundel, BN18 0DL

Date: 09 November 2018

STL: J13840

Fig No: 1

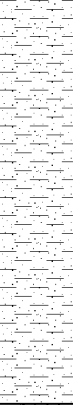
Exploratory Hole Location Plan

 Southern Testing

Southern Testing: Keeble House, Stuart Way, East Grinstead, West Sussex RH19 4QA
ST Consult: Twigden Barns, Brixworth Road, Creton, Northampton NN6 8NN

 ST Consult

 Southern Testing ST Consult				Start - End Date 07/11/2018		Project ID: J13840		Hole Type: WLS		WLS01 Sheet 1 of 1	
Project Name: Sunny Mead Farm				Remarks:		Co-ordinates:		Level:		Logger: NH	
Location: Sunny Mead Farm, North End Road, Yapton, Arundel, BN18 0DL				No groundwater encountered. Preliminary BRE 365 Test performed in exploratory hole. Exploratory hole collapsed during introduction of water during testing. Hole redrilled and cased. Casing partially pulled for testing. Hole collapsed for second time.							
Client: Mr. Roy Daniells											

Well	Water Strikes	Samples and Insitu Testing			Level (m AOD)	Thickness (m)	Legend	Depth (m bgl)	Stratum Description	
		Depth (m bgl)	Type	Results						
										
		0.50	HP	UCS(kPa)=200.0		(0.25)		0.25	Moss and leaf debris over grey brown fine sandy clayey TOPSOIL with occasional roots and rare clinker. Firm to stiff, friable, desiccated, fine sandy CLAY with occasional roots and rare flint gravel.	
		1.00	HP	UCS(kPa)=260.0		(1.35)			From 1.20m - Becoming less friable with depth. Increase of flint gravels to occasional occurrence.	1
		1.50	HP	UCS(kPa)=600.0		(1.35)		1.60	Orangish brown, slightly clayey gravelly, fine to medium grained SAND. Gravels are fine to medium subangular flint.	2
						(0.05)		2.95 3.00	WEATHERED CHALK recovered as cream silty clayey GRAVEL. Gravel is fine to medium, extremely weak to very weak, subrounded to subangular CHALK. End of Borehole at 3.00m	3
										4
										5

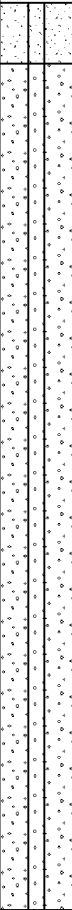
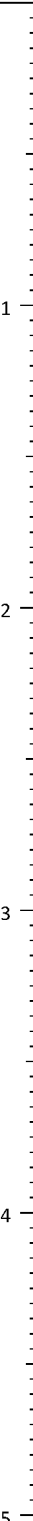
Hole Details		Casing Details		Waterstrike (m bgl)						Standing/Chiselling (m bgl)			
Depth (m bgl)	Dia. (mm)	Depth (m bgl)	Dia. (mm)	Date	Depth Strike	Depth Casing	Depth Sealed	Rose to:	Time (mins)	From	To	Time	Remarks
3.00	150												

 Southern Testing ST Consult					Start - End Date 07/11/2018		Project ID: J13840		Hole Type: WLS		WLS02 Sheet 1 of 1	
Project Name: Sunny Mead Farm					Remarks:		Co-ordinates:		Level:		Logger: NH	
Location: Sunny Mead Farm, North End Road, Yapton, Arundel, BN18 0DL					No groundwater encountered. Preliminary BRE 365 Test performed in exploratory hole. Exploratory hole collapsed to 1.34m bgl during testing.							
Client: Mr. Roy Daniells												

Well	Water Strikes	Samples and Insitu Testing			Level (m AOD)	Thickness (m)	Legend	Depth (m bgl)	Stratum Description		
		Depth (m bgl)	Type	Results							
		0.22				(0.22)		0.22	Leaf debris over dark to grey brown fine sandy clayey TOPSOIL with occasional roots.	1	
									Firm to stiff, friable, desiccated, fine sandy CLAY with occasional roots and rare flint gravel.		
		0.50	HP	UCS(kPa)=600.0		(0.78)					
		1.00	HP	UCS(kPa)=520.0							From 0.90m - Becoming sandier with depth.
						(0.45)		1.00	Orangish brown, gravelly fine to medium grained SAND. Gravels are fine to medium subangular flint.		
								1.45	At 1.20m - Coarse flints encountered.		
		1.50	HP	UCS(kPa)=500.0		(1.55)			WEATHERED CHALK recovered as cream silty clayey GRAVEL. Gravel is fine to medium, extremely weak to very weak, subrounded to subangular CHALK with rare flint.	2	
								3.00	End of Borehole at 3.00m	3	
										4	
										5	

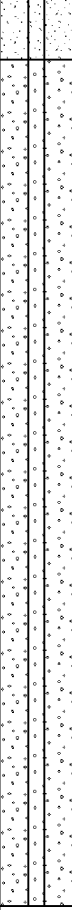
Hole Details		Casing Details		Waterstrike (m bgl)						Standing/Chiselling (m bgl)			
Depth (m bgl)	Dia. (mm)	Depth (m bgl)	Dia. (mm)	Date	Depth Strike	Depth Casing	Depth Sealed	Rose to:	Time (mins)	From	To	Time	Remarks
3.00	150												

 Southern Testing ST Consult				Start - End Date 07/11/2018		Project ID: J13840		Hole Type: WLS		WLS03 Sheet 1 of 1	
Project Name: Sunny Mead Farm				Remarks:		Co-ordinates:		Level:		Logger: NH	
Location: Sunny Mead Farm, North End Road, Yapton, Arundel, BN18 0DL				Groundwater encountered. Preliminary BRE 365 Test performed in exploratory hole.							
Client: Mr. Roy Daniells											

Well	Water Strikes	Samples and Insitu Testing			Level (m AOD)	Thickness (m)	Legend	Depth (m bgl)	Stratum Description	
		Depth (m bgl)	Type	Results						
							0.20	Grass over dark brown fine sandy clayey TOPSOIL with rare roots and brick fragments.		
							0.20	Firm, friable, desiccated, mid brown, fine sandy CLAY with occasional roots and rare flint gravel.		
							1.40			
							1.60	WEATHERED CHALK recovered as cream silty clayey GRAVEL. Gravel is fine to medium, extremely weak to very weak, subrounded to subangular CHALK with rare flint.		
		1.00	HP	UCS(kPa)=30.0				From 1.10m - Becoming less friable with depth	1	
		1.50	HP	UCS(kPa)=130.0						
		2.00	HP	UCS(kPa)=140.0					2	
							3.00	End of Borehole at 3.00m	3	
									4	
									5	

Hole Details		Casing Details		Waterstrike (m bgl)						Standing/Chiselling (m bgl)			
Depth (m bgl)	Dia. (mm)	Depth (m bgl)	Dia. (mm)	Date	Depth Strike	Depth Casing	Depth Sealed	Rose to:	Time (mins)	From	To	Time	Remarks
3.00	150				2.60			2.34	30				

 Southern Testing ST Consult				Start - End Date 07/11/2018		Project ID: J13840		Hole Type: WLS		WLS04 Sheet 1 of 1	
Project Name: Sunny Mead Farm				Remarks:		Co-ordinates:		Level:		Logger: NH	
Location: Sunny Mead Farm, North End Road, Yapton, Arundel, BN18 0DL				Groundwater encountered. Preliminary BRE 365 Test performed in exploratory hole.							
Client: Mr. Roy Daniells											

Well	Water Strikes	Samples and Insitu Testing			Level (m AOD)	Thickness (m)	Legend	Depth (m bgl)	Stratum Description	
		Depth (m bgl)	Type	Results						
										
		0.50	HP	UCS(kPa)=80.0		(0.23)		0.23	Grass over dark brown fine sandy clayey TOPSOIL with occasional roots	
		1.00	HP	UCS(kPa)=30.0		(1.07)		1.30	Firm, friable, desiccated, mid brown, fine sandy CLAY with frequent white chalk speckling, occasional roots and infrequent flint gravel.	
		1.00	SPT()	N=13 (1,1/3,3,3,4)					From 0.85m - Becoming less friable with depth. Increase in chalk content.	
		1.20	HP	UCS(kPa)=130.0						
	2.00	SPT()	N=10 (3,2/2,2,3,3)		(1.70)			WEATHERED CHALK recovered as cream to light grey, silty clayey GRAVEL. Gravel is fine to medium, extremely weak to very weak, subrounded to subangular CHALK with rare flint.		
	3.00	SPT()	N=12 (2,1/2,2,4,4)				3.00	End of Borehole at 3.00m		

Hole Details		Casing Details		Waterstrike (m bgl)						Standing/Chiselling (m bgl)			
Depth (m bgl)	Dia. (mm)	Depth (m bgl)	Dia. (mm)	Date	Depth Strike	Depth Casing	Depth Sealed	Rose to:	Time (mins)	From	To	Time	Remarks
3.00	150				2.55			1.87	30				

APPENDIX B – SOAKAGE TEST RESULTS

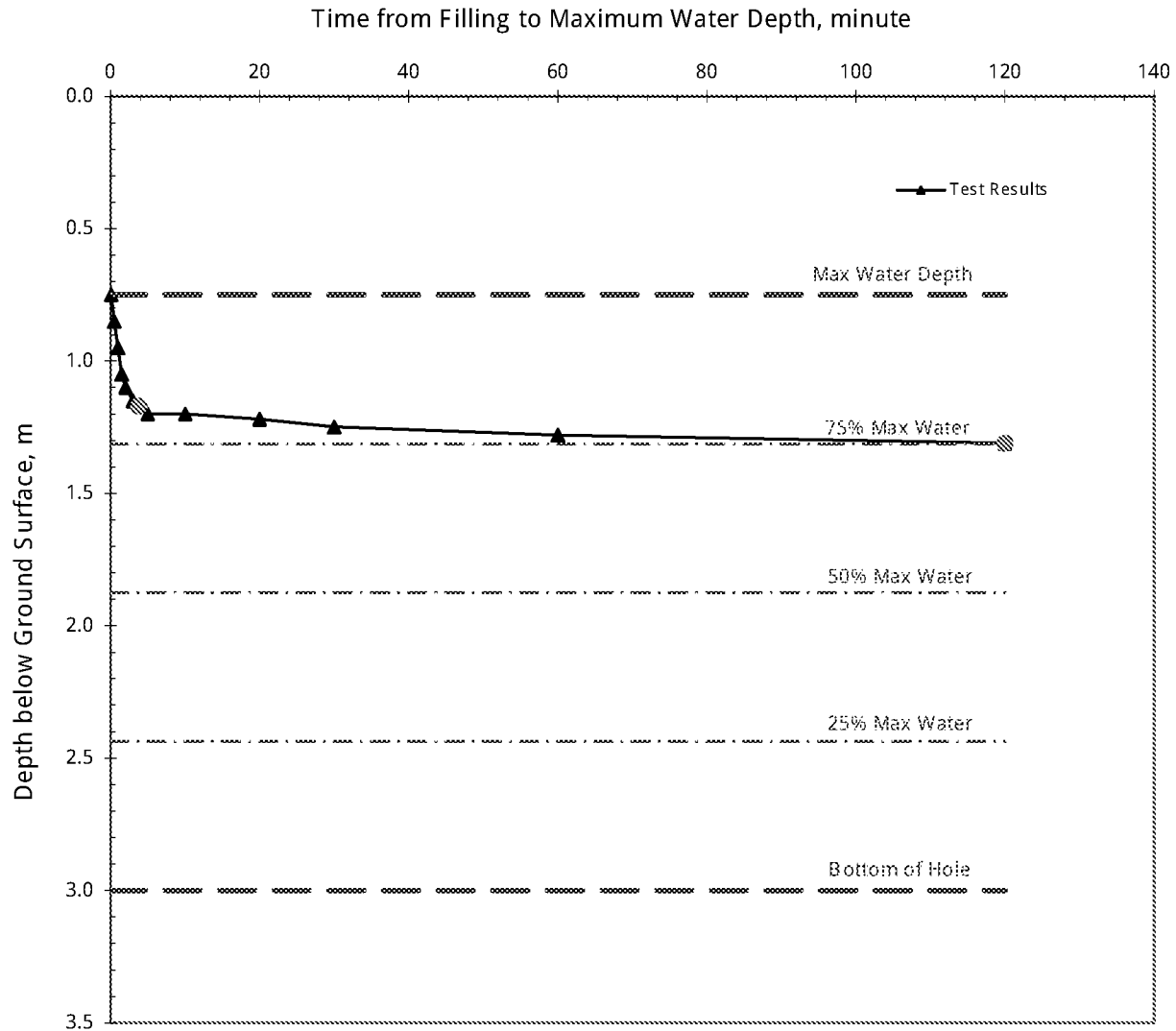
Summary Sheet

Results of Preliminary Falling-Head Soakage Tests

Site : Sunny Mead Farm, North End Road, Yapton, Aru					J ob No : J 13840		
Client : Roy Daniells					O S Reference : SU 98191 04366		
Tested By : AA/RA				Engineer: NH		Test Date : 07/Nov/2018	
Hole No	Test No	Hole Depth m	Soakage Rate for Each Test litre/m ² /min	Soakage Rate for Each Hole litre/m ² /min m/sec		Water Level at Finish of Test	Remarks
WLS02	No 1	3.00	0.025	0.025	4.19E-7	Pit was not emptied; Non compliant value was calculated.	Exploratory hole collapsed during 2 and 3 hour reading.
WLS03	No 1	3.00	6.59	5.25	8.75E-5	Pit was not emptied; Non compliant value was calculated.	Depth to existing ground water level was 2.34m.
WLS03	No 2	3.00	5.89			Pit was not emptied; Non compliant value was calculated.	
WLS03	No 3	3.00	5.25			Pit was not emptied; Non compliant value was calculated.	
WLS04	No 1	3.00	19.82	10.13	1.69E-4	Pit was not emptied; Non compliant value was calculated.	Depth to existing ground water level was 1.87m.
WLS04	No 2	3.00	11.63			Pit was not emptied; Non compliant value was calculated.	
WLS04	No 3	3.00	10.13			Pit was not emptied; Non compliant value was calculated.	
Mean Value of All Calculated Soakage Rates :				5.13 litre/m ² /min	8.56E-5 m/sec		

Preliminary Falling-Head Soakage Test

Test Hole No: WLS02
Test No: Test No 1 (Initial)



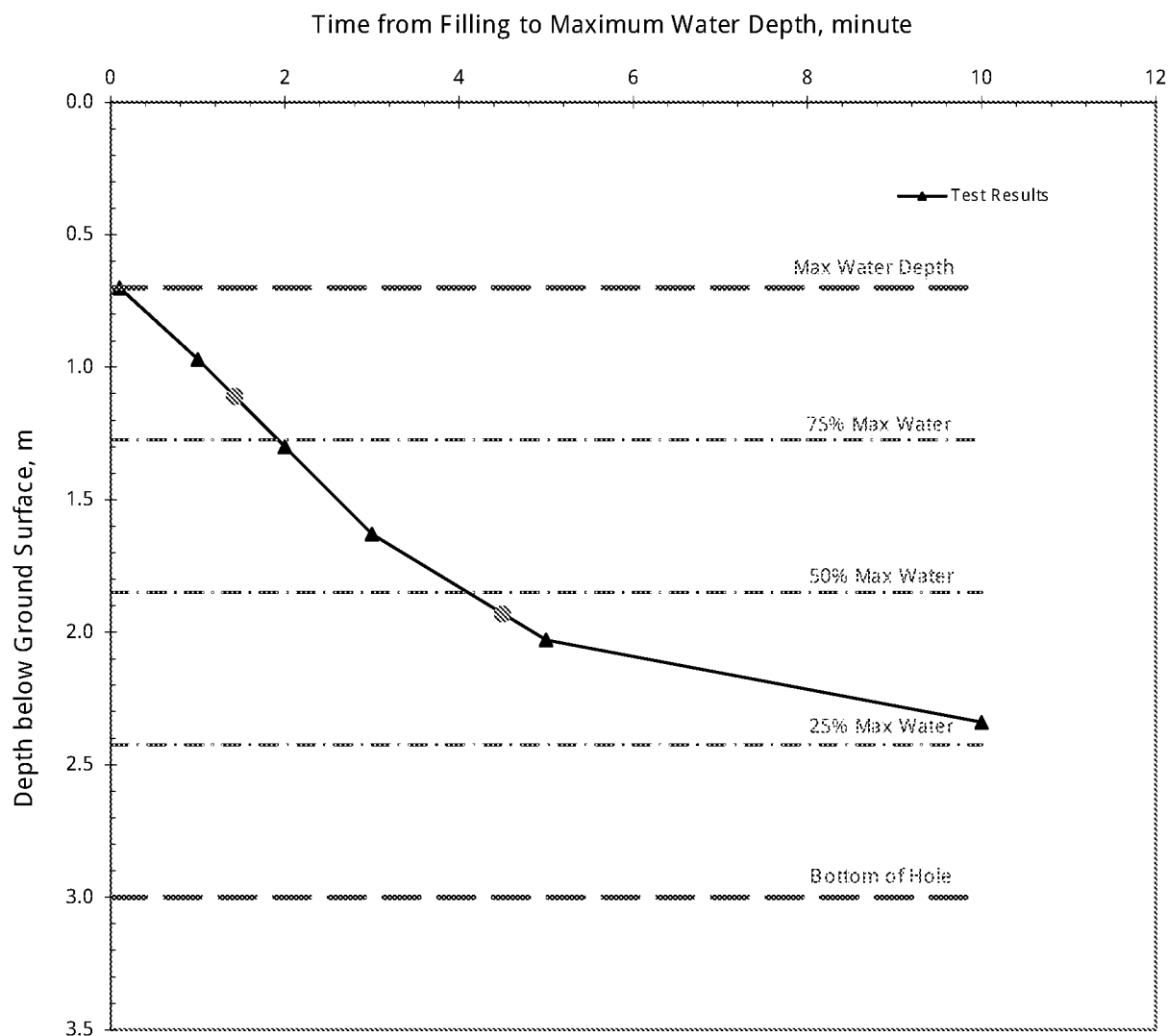
Diameter of Borehole, m	0.150	Depth to Water at Start of Test, m	0.750
Depth to End of Borehole Casing, m		Max Water Dropdown during Test, m	0.560
Depth to Borehole Base, m	3.000	Total Soakage Test Time, min	120.0
Depth to Top of Permeable Soils, m		Mean Internal Discharge Area, m ²	0.847
Depth to Groundwater Surface, m		Discharge Rate, litre/min	0.021
Depth to Top of Granular Fill, m		Soakage Rate, litre/m ² /min	0.025
Voids Assumed within Borehole, %	100%	BRE Soil Infiltration Rate, m/sec	4.19E-07

Comments: Exploratory hole collapsed during 2 and 3 hour reading.
Water level did not fall to 75% max water depth, calculations were based on actual fall of water level achieved.
Result not compliant with BRE365 requirement since water did not fall to 25% max water depth.

Client: Roy Daniells	Job No: J 13840	Test Date: 07/Nov/2018
Site: Sunny Mead Farm, North End Road, Yaptor	Tested By: AA/RA	Engineer: NH Fig. S1

Preliminary Falling-Head Soakage Test

Test Hole No: WLS03
Test No: Test No 1 (Initial)



Diameter of Borehole, m	0.150	Depth to Water at Start of Test, m	0.700
Depth to End of Borehole Casing, m		Max Water Dropdown during Test, m	1.640
Depth to Borehole Base, m	3.000	Total Soakage Test Time, min	10.0
Depth to Top of Permeable Soils, m		Mean Internal Discharge Area, m ²	0.715
Depth to Groundwater Surface, m	2.340	Discharge Rate, litre/min	4.711
Depth to Top of Granular Fill, m		Soakage Rate, litre/m ² /min	6.59
Voids Assumed within Borehole, %	100%	BRE Soil Infiltration Rate, m/sec	1.10E-04

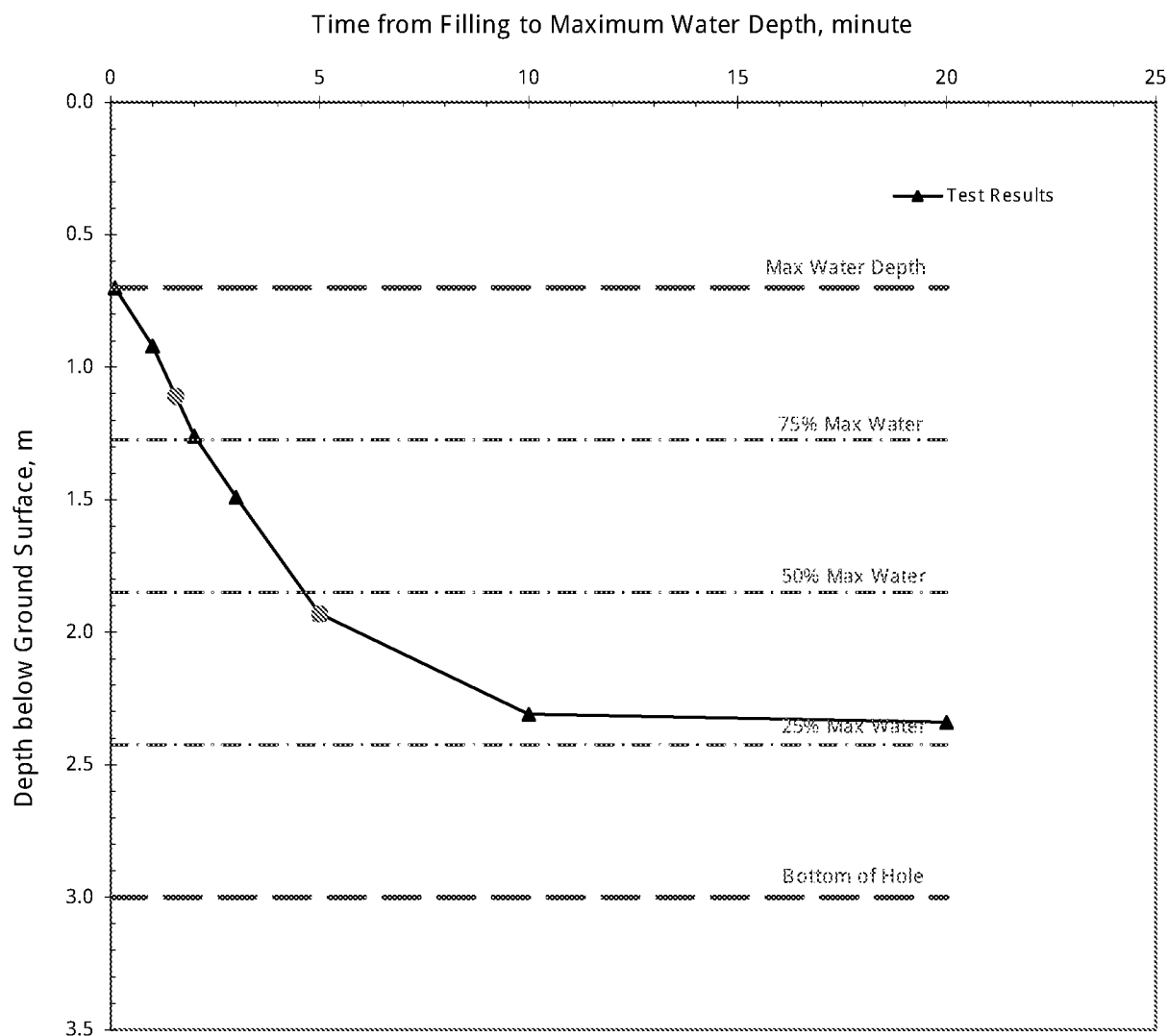
Comments:

Water level fell to 50% -- 25% max water depth, calculations were based on actual fall of water level achieved.
Result not compliant with BRE365 requirement since water did not fall to 25% max water depth.

Client: Roy Daniells	Job No: J 13840	Test Date: 07/Nov/2018
Site: Sunny Mead Farm, North End Road, Yapton	Tested By: AA/RA	Engineer: NH Fig. S2

Preliminary Falling-Head Soakage Test

Test Hole No: WLS03
Test No: Test No 2 (Repeated)



Diameter of Borehole, m	0.150	Depth to Water at Start of Test, m	0.700
Depth to End of Borehole Casing, m		Max Water Dropdown during Test, m	1.640
Depth to Borehole Base, m	3.000	Total Soakage Test Time, min	20.0
Depth to Top of Permeable Soils, m		Mean Internal Discharge Area, m ²	0.715
Depth to Groundwater Surface, m	2.340	Discharge Rate, litre/min	4.211
Depth to Top of Granular Fill, m		Soakage Rate, litre/m ² /min	5.89
Voids Assumed within Borehole, %	100%	BRE Soil Infiltration Rate, m/sec	9.81E-05

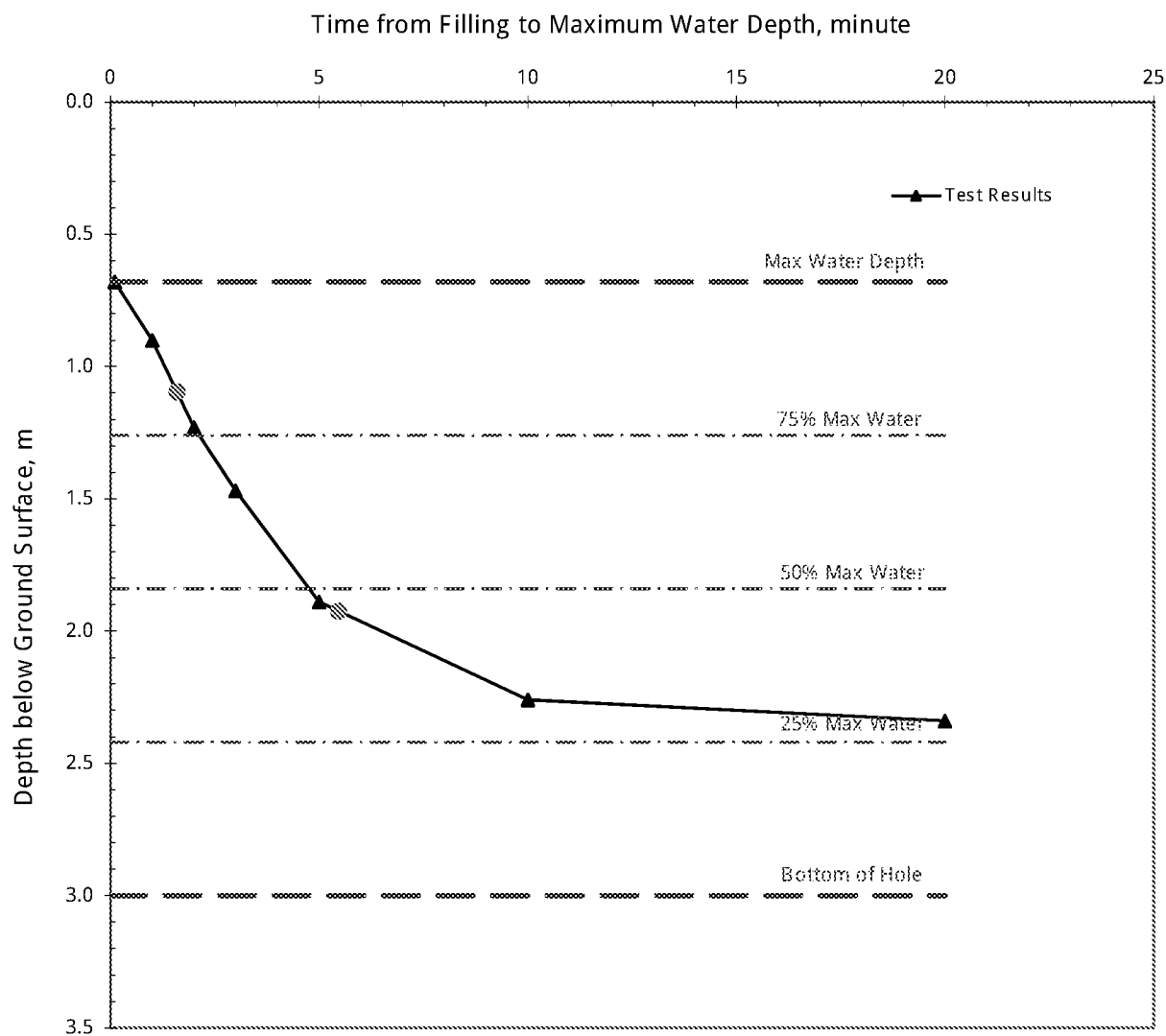
Comments:

Water level fell to 50% -- 25% max water depth, calculations were based on actual fall of water level achieved.
Result not compliant with BRE365 requirement since water did not fall to 25% max water depth.

Client: Roy Daniells	Job No: J 13840	Test Date: 07/Nov/2018
Site: Sunny Mead Farm, North End Road, Yapton	Tested By: AA/RA	Engineer: NH Fig. S3

Preliminary Falling-Head Soakage Test

Test Hole No: WLS03
Test No: Test No 3 (Repeated)



Diameter of Borehole, m	0.150	Depth to Water at Start of Test, m	0.680
Depth to End of Borehole Casing, m		Max Water Dropdown during Test, m	1.660
Depth to Borehole Base, m	3.000	Total Soakage Test Time, min	20.0
Depth to Top of Permeable Soils, m		Mean Internal Discharge Area, m ²	0.720
Depth to Groundwater Surface, m	2.340	Discharge Rate, litre/min	3.778
Depth to Top of Granular Fill, m		Soakage Rate, litre/m ² /min	5.25
Voids Assumed within Borehole, %	100%	BRE Soil Infiltration Rate, m/sec	8.75E-05

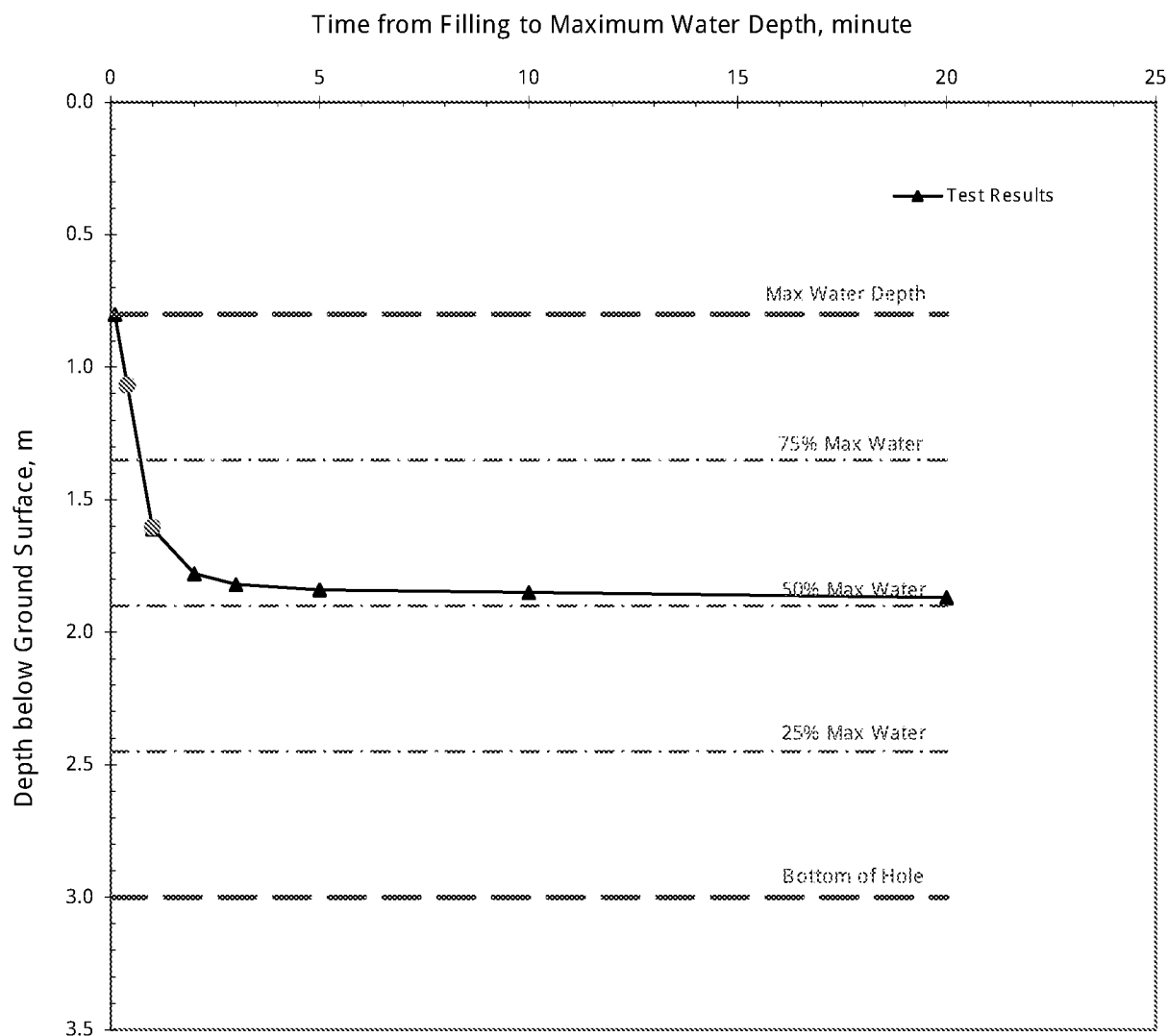
Comments:

Water level fell to 50% -- 25% max water depth, calculations were based on actual fall of water level achieved.
Result not compliant with BRE365 requirement since water did not fall to 25% max water depth.

Client: Roy Daniells	Job No: J 13840	Test Date: 07/Nov/2018
Site: Sunny Mead Farm, North End Road, Yapton	Tested By: AA/RA	Engineer: NH Fig. S4

Preliminary Falling-Head Soakage Test

Test Hole No: WLS04
 Test No: Test No 1 (Initial)



Diameter of Borehole, m	0.150	Depth to Water at Start of Test, m	0.800
Depth to End of Borehole Casing, m		Max Water Dropdown during Test, m	1.070
Depth to Borehole Base, m	3.000	Total Soakage Test Time, min	20.0
Depth to Top of Permeable Soils, m		Mean Internal Discharge Area, m ²	0.802
Depth to Groundwater Surface, m	1.870	Discharge Rate, litre/min	15.904
Depth to Top of Granular Fill, m		Soakage Rate, litre/m ² /min	19.82
Voids Assumed within Borehole, %	100%	BRE Soil Infiltration Rate, m/sec	3.30E-04

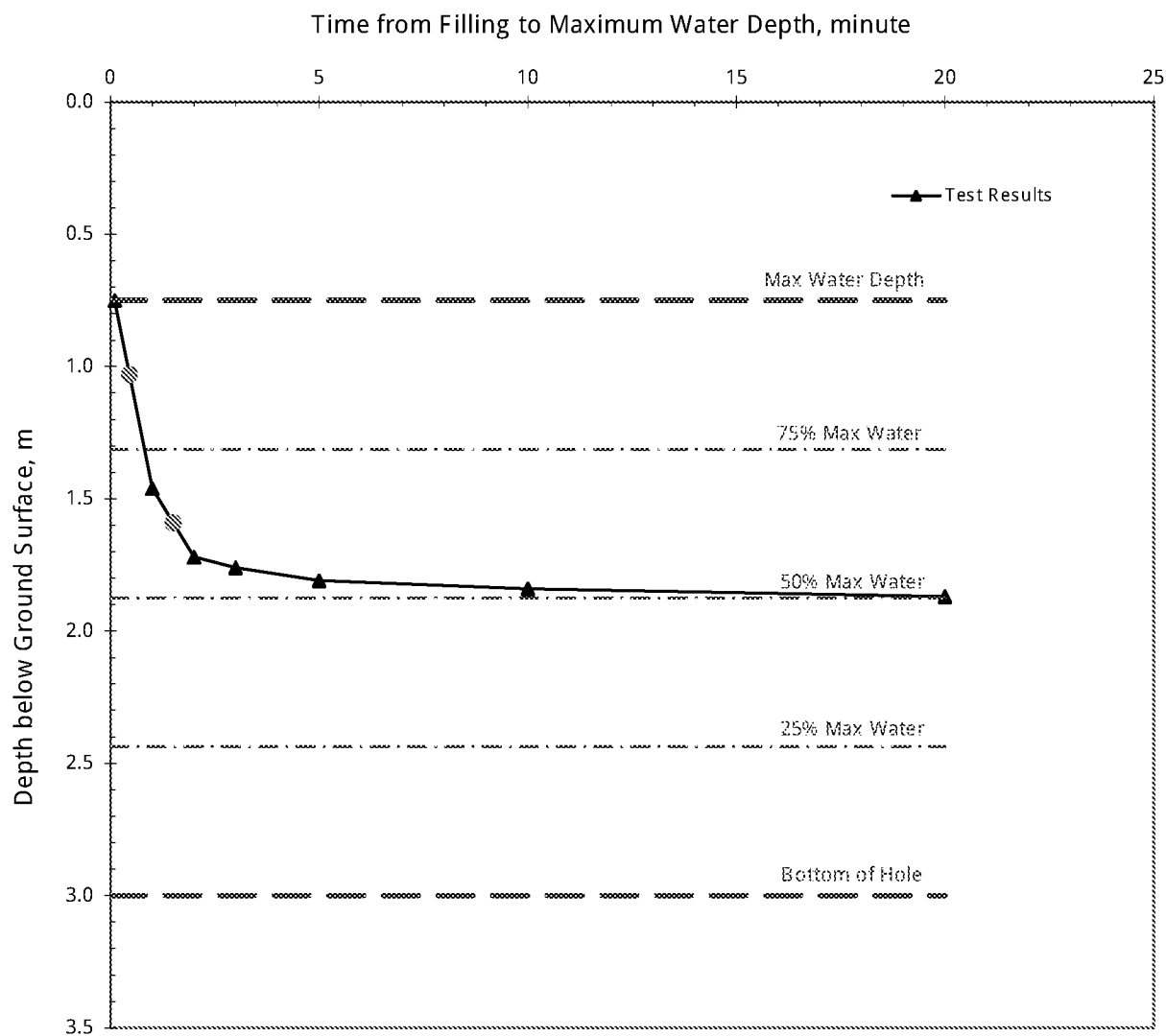
Comments:

Water level fell to 75% -- 50% max water depth, calculations were based on actual fall of water level achieved.
 Result not compliant with BRE365 requirement since water did not fall to 25% max water depth.

Client: Roy Daniells	Job No: J 13840	Test Date: 07/Nov/2018
Site: Sunny Mead Farm, North End Road, Yapton	Tested By: AA/RA	Engineer: NH Fig. S5

Preliminary Falling-Head Soakage Test

Test Hole No: WLS04
Test No: Test No 2 (Repeated)



Diameter of Borehole, m	0.150	Depth to Water at Start of Test, m	0.750
Depth to End of Borehole Casing, m		Max Water Dropdown during Test, m	1.120
Depth to Borehole Base, m	3.000	Total Soakage Test Time, min	20.0
Depth to Top of Permeable Soils, m		Mean Internal Discharge Area, m ²	0.814
Depth to Groundwater Surface, m	1.870	Discharge Rate, litre/min	9.469
Depth to Top of Granular Fill, m		Soakage Rate, litre/m ² /min	11.63
Voids Assumed within Borehole, %	100%	BRE Soil Infiltration Rate, m/sec	1.94E-04

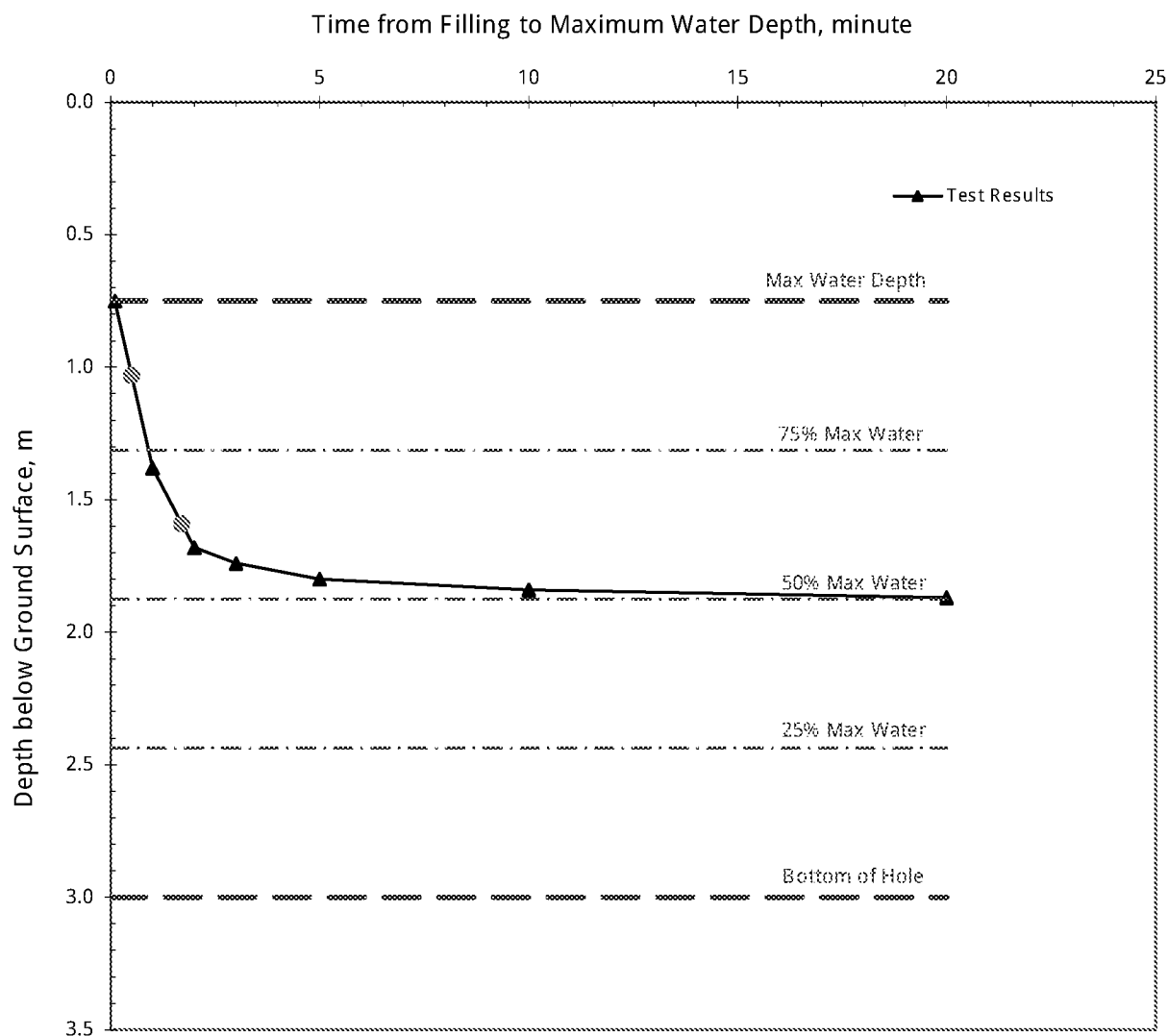
Comments:

Water level fell to 75% -- 50% max water depth, calculations were based on actual fall of water level achieved.
Result not compliant with BRE365 requirement since water did not fall to 25% max water depth.

Client: Roy Daniells	Job No: J 13840	Test Date: 07/Nov/2018
Site: Sunny Mead Farm, North End Road, Yapton	Tested By: AA/RA	Engineer: NH Fig. S6

Preliminary Falling-Head Soakage Test

Test Hole No: WLS04
Test No: Test No 3 (Repeated)



Diameter of Borehole, m	0.150	Depth to Water at Start of Test, m	0.750
Depth to End of Borehole Casing, m		Max Water Dropdown during Test, m	1.120
Depth to Borehole Base, m	3.000	Total Soakage Test Time, min	20.0
Depth to Top of Permeable Soils, m		Mean Internal Discharge Area, m ²	0.814
Depth to Groundwater Surface, m	1.870	Discharge Rate, litre/min	8.247
Depth to Top of Granular Fill, m		Soakage Rate, litre/m ² /min	10.13
Voids Assumed within Borehole, %	100%	BRE Soil Infiltration Rate, m/sec	1.69E-04

Comments:

Water level fell to 75% -- 50% max water depth, calculations were based on actual fall of water level achieved.
Result not compliant with BRE365 requirement since water did not fall to 25% max water depth.

Client: Roy Daniells	Job No: J 13840	Test Date: 07/Nov/2018
Site: Sunny Mead Farm, North End Road, Yapton	Tested By: AA/RA	Engineer: NH Fig. S7