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Geo-Environmental

Borehole Falling Head Test

Geo-Environmental Services Limited
Unit 7 Danworth Farm, Cuckfield Road,

Project Name : Yapton Lane, Walberton

Job No. : GE19427

Client : LandQuest UK (Southern Limited)

Date : 27/11/2020

Borehole reference	WS1
Borehole depth (m)	3.00
Borehole Diameter (m)	0.10
Depth to standing water (m)	

Test 1

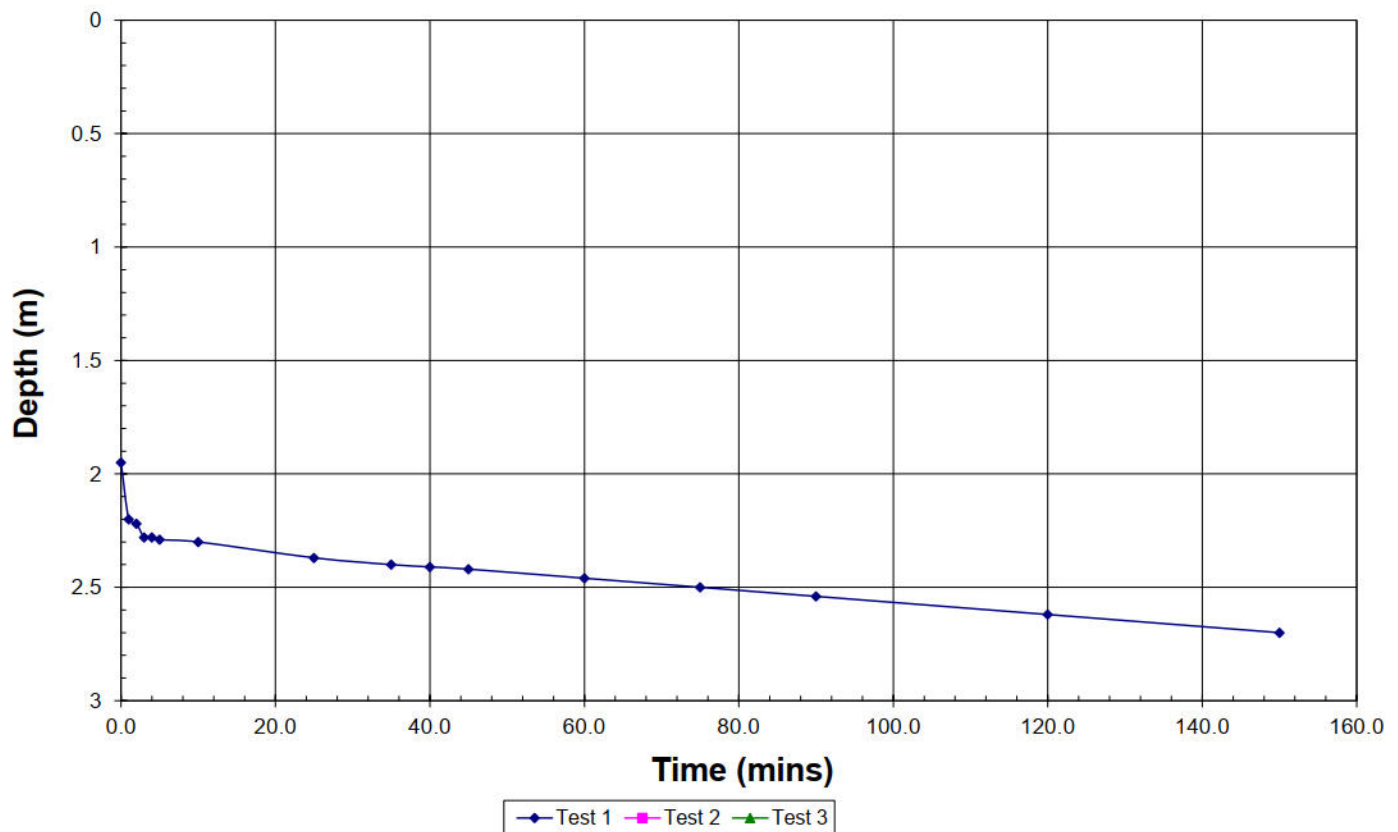
Time (min)	Depth (m)
0.0	1.95
1.0	2.2
2.0	2.22
3.0	2.28
4.0	2.28
5.0	2.29
10.0	2.3
25.0	2.37
35.0	2.4
40.0	2.41
45.0	2.42
60.0	2.46
75.0	2.5
90.0	2.54
120.0	2.62
150.0	2.7

Test 2

Time (min)	Depth (m)

Test 3

Time (min)	Depth (m)





Geo-Environmental

Borehole Falling Head Test

Geo-Environmental Services Limited

Unit 7 Danworth Farm, Cuckfield Road,
[REDACTED]

Project Name : Yapton Lane, Walberton

Job No. : GE19427

Client : LandQuest UK (Southern Limited)

Date : 27/11/2020

Borehole reference	WS2
Borehole depth (m)	3.00
Borehole Diameter (m)	0.10
Depth to standing water (m)	2.70

Test 1

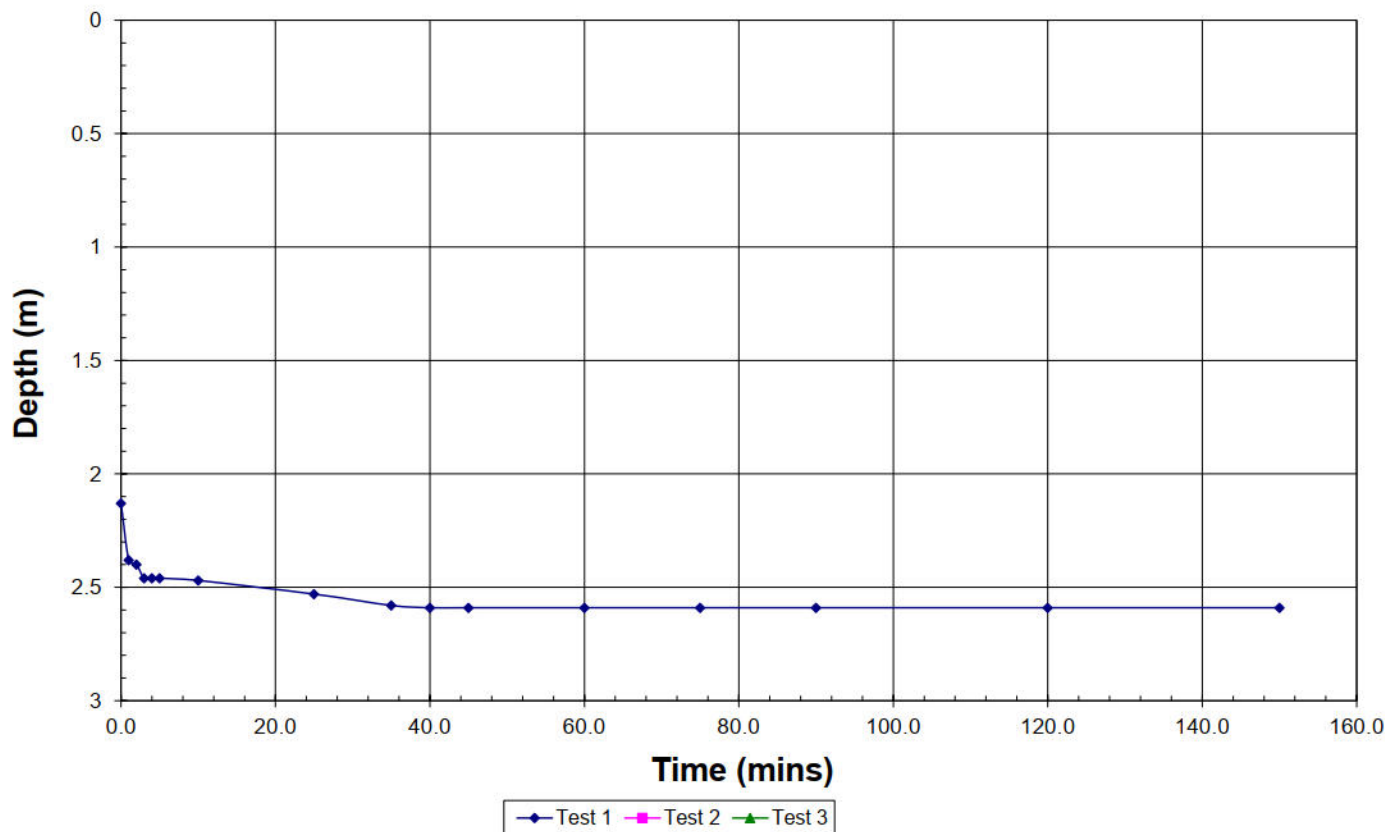
Time (min)	Depth (m)
0.0	2.13
1.0	2.38
2.0	2.4
3.0	2.46
4.0	2.46
5.0	2.46
10.0	2.47
25.0	2.53
35.0	2.58
40.0	2.59
45.0	2.59
60.0	2.59
75.0	2.59
90.0	2.59
120.0	2.59
150.0	2.59

Test 2

Time (min)	Depth (m)

Test 3

Time (min)	Depth (m)



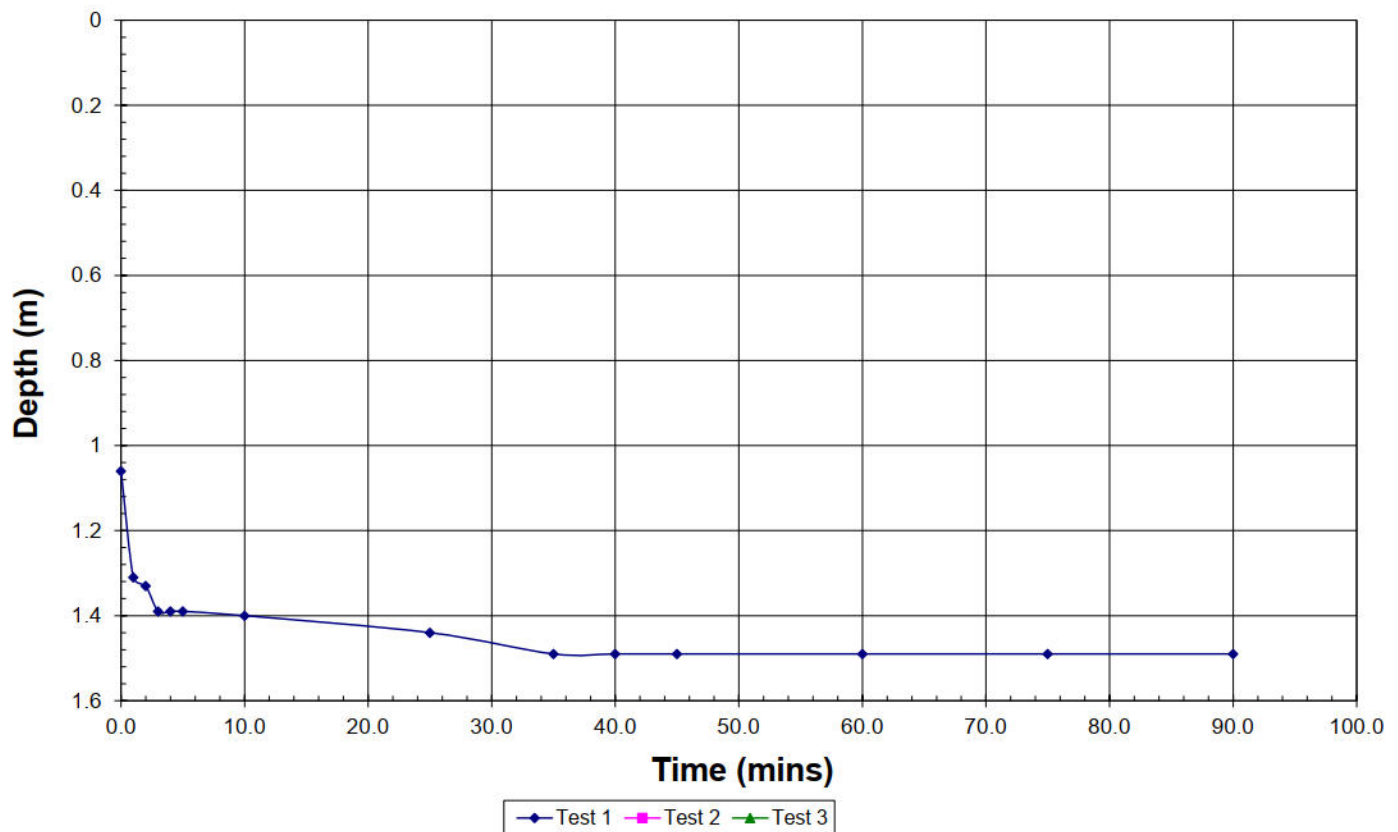


Geo-Environmental Services Limited
Unit 7 Danworth Farm, Cuckfield Road,

Unit 7 Danworth Farm, Cuckfield Road,

Job No. : GE19427

Date : 27/11/2020



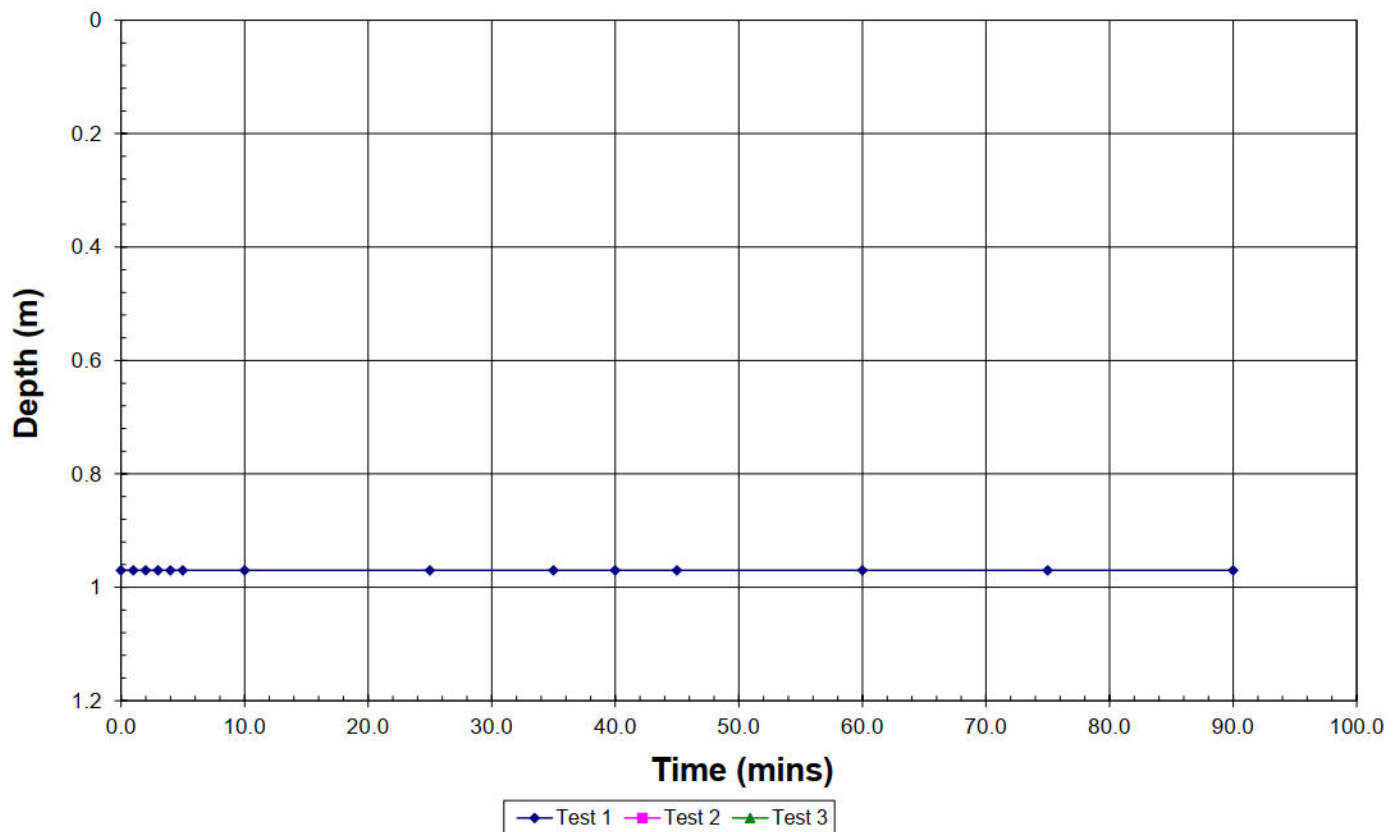


Geo-Environmental Services Limited

Unit 7 Danworth Farm, Cuckfield Road,

Job No. : GE19427

Date : 27/11/2020

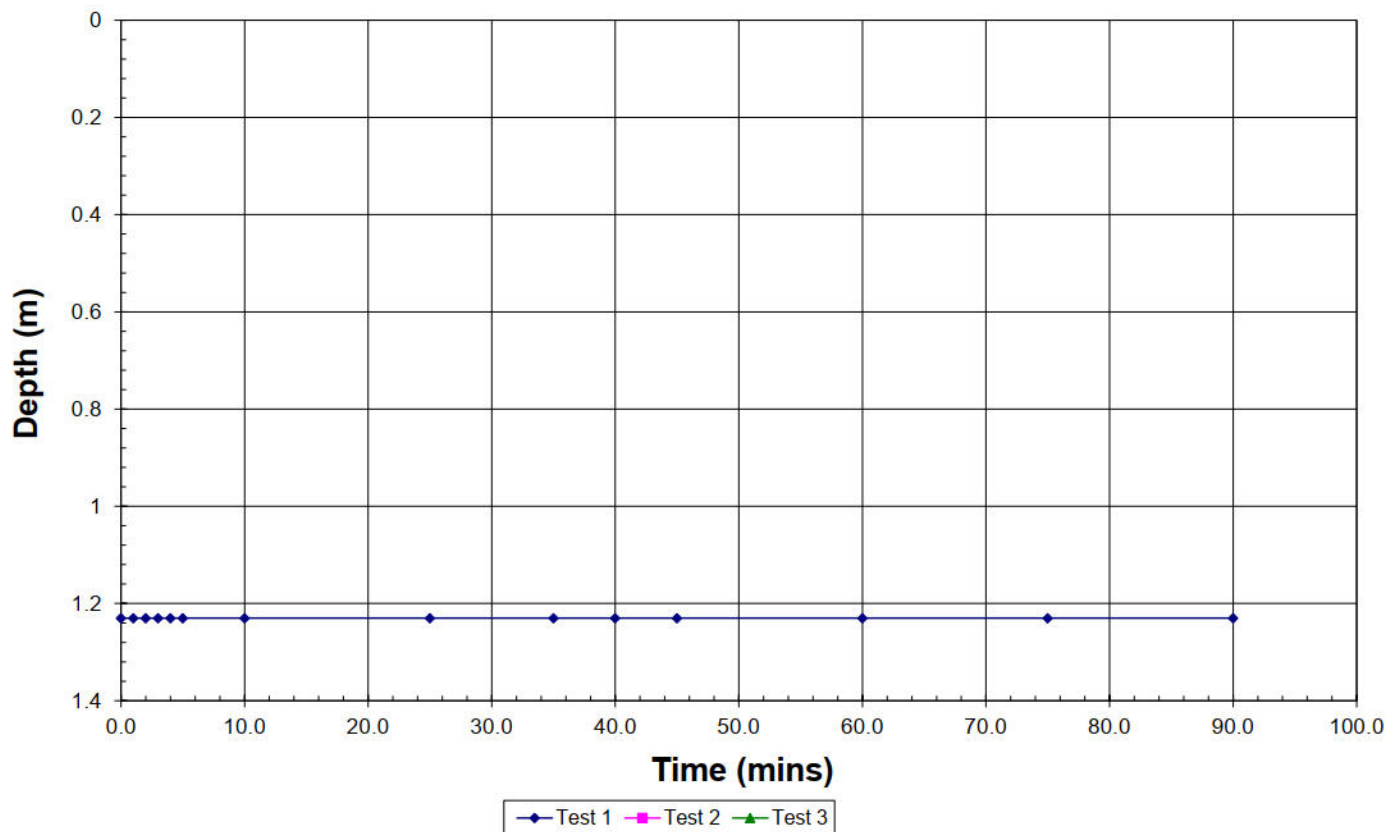




Geo-Environmental Services Limited
Unit 7 Danworth Farm, Cuckfield Road,

Job No. : GE19427

Date : 27/11/2020



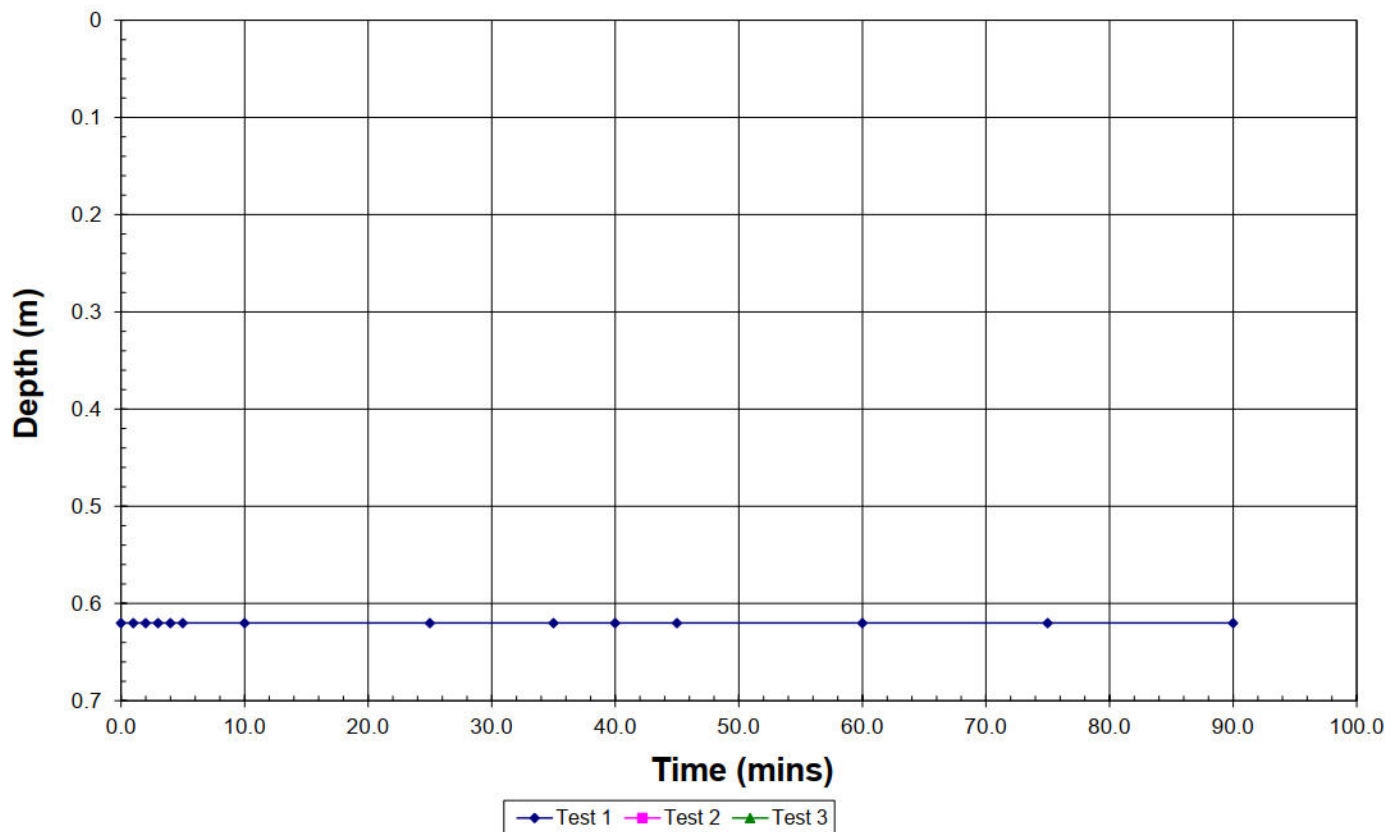


Geo-Environmental Services Limited
Unit 7 Danworth Farm, Cuckfield Road,

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Job No. : GE19427

Date : 27/11/2020





Geo-Environmental

Borehole Falling Head Test

Geo-Environmental Services Limited

Unit 7 Danworth Farm, Cuckfield Road,

Project Name : Yapton Lane, Walberton

Job No. : GE19427

Client : LandQuest UK (Southern Limited)

Date : 27/11/2020

Borehole reference	WS7
Borehole depth (m)	3.00
Borehole Diameter (m)	0.10
Depth to standing water (m)	2.25

Test 1

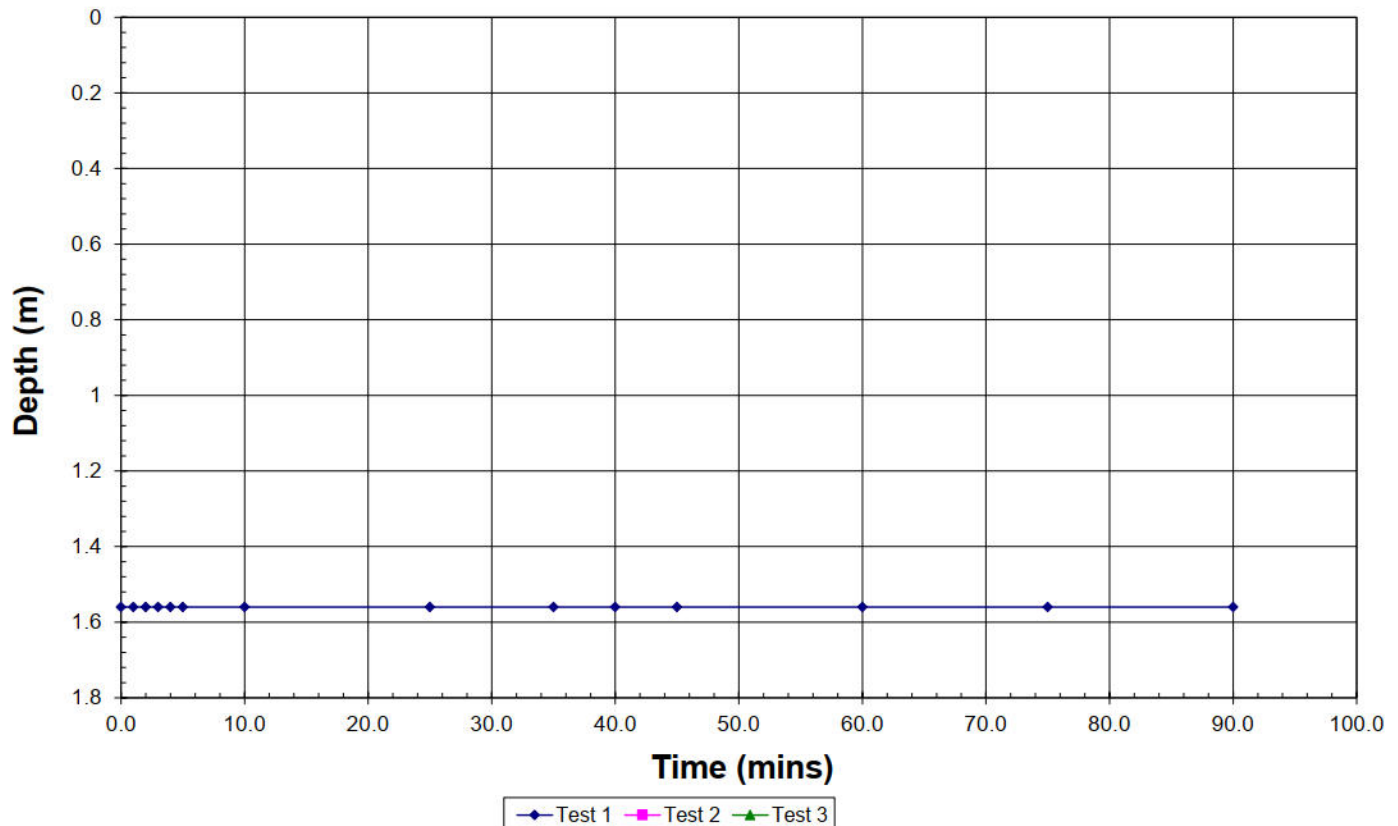
Time (min)	Depth (m)
0.0	1.56
1.0	1.56
2.0	1.56
3.0	1.56
4.0	1.56
5.0	1.56
10.0	1.56
25.0	1.56
35.0	1.56
40.0	1.56
45.0	1.56
60.0	1.56
75.0	1.56
90.0	1.56

Test 2

Time (min)	Depth (m)

Test 3

Time (min)	Depth (m)



26th April 2021

Our ref: GE19427a/RG01/210426

Darren Harman
LandQuest UK (Southern) Limited



By email only

Dear Darren,

RE: Yapton Lane, Walberton – Trial Pit Soakage Testing

Geo-Environmental Services Limited (Geo-Environmental) was instructed by LandQuest UK (Southern) Limited to undertake trial pit soakage testing at the above named site.

We write to present the results of the supplementary soakage testing undertaken. The soakage tests were undertaken in accordance with BRE Digest 365 'Soakaway Design' BRE, with three testing cycles completed where possible.

Scope of Works

The supplementary soakage testing was undertaken following discussion between the Client and farmer, who has decades of experience of farming the site and had made referenced to a band/zone of more gravelly strata which crossed the site. This supplementary investigation was undertaken to target this zone, as indicated by the farmer.

The following scope of works was agreed with the Client:

- Excavation of 5No. trial pits to a depth of between 1.25m and 1.95m bgl.
- Undertake soakage testing in general accordance with BRE365 within each of the trial pits.

The intrusive investigation was undertaken on 12th April 2021 with the works supervised by a Geo-Environmental Engineer. Testing was limited to a single day as agreed with the Client, i.e. to establish feasibility of infiltration.

Site Description

The site comprised part of an open agricultural field which was generally flat and level, and planted with crops at the time of the investigation.

The site was bounded by mature trees and hedgerows and contained a single mature tree towards the southern boundary.

The area surrounding the site comprised commercial and residential properties to the north, a nursery to the south and open fields to the east and west.

The site was accessed via a locked gate in the north east corner of the site

Geo-Environmental Services Ltd
Unit 7 Danworth Farm, Cuckfield Road, Hurstpierpoint, West Sussex BN6 9GL



neers | Site Investigations

Geo-Environmental Services Ltd incorporated in England number 3214980 VAT number 679544479



Ground Conditions

The ground conditions encountered during the investigation were broadly consistent with the published sequence of strata. In summary, ground conditions typically comprised a mantle of Topsoil overlying soils inferred to be of the River Terrace Deposits.

Topsoil was encountered in all locations to a depth of 0.30m bgl and typically consisted of brown slightly sandy slightly gravelly clay or silty slightly gravelly clay with frequent rootlets.

Soils inferred to be the River Terrace Deposits were encountered from beneath the Topsoil to depths of 1.9m bgl (maximum depth of investigation). The deposits typically comprised clay with low to moderate proportions of sand and gravel. The colouration of these deposits was typically brown, yellowish brown and cream. Clays were noted to range in consistency between soft and very stiff. Groundwater was not encountered within any trial pits.

Figure 2 presents the trial pit locations. For more detailed description of the ground conditions, reference should be made to the exploratory hole logs enclosed in Appendix A.

Soakage Testing

The soakage testing was undertaken in general accordance with BRE Digest 365, where possible, with three filling and inundation cycles completed within one trial pit (TP302) with an infiltration rate calculated for each test using the standard methodology contained in BRE Digest 365 'Soakaway Design'. The results of the testing undertaken in trial pits TP301-TP305 are summarised in Table 1 below with the results presented in Appendix B.

Location	Test Number	Depth of Pit (m bgl)	Calculated infiltration rate (m/s)
TP301	1	1.65	1.3×10^{-5}
	-	-	-
	-	-	-
TP302	1	1.95	1.2×10^{-4}
	2	1.90*	4.1×10^{-5}
	3	1.85*	4.3×10^{-5}
TP303	1	1.90	Insufficient fall in water to complete test
	2	-	-
	-	-	-
TP304	1	1.35	8.4×10^{-5}
	2	1.35	Insufficient fall in water to complete test
	-	-	-
TP305	1	1.60	3.3×10^{-5}
	-	-	Insufficient fall in water to complete test
	-	-	-

*Soakage pits partially backfilled between tests.

Table 1 Summary of Soakage Testing Results

Whilst soakage testing has been undertaken and it was possible to derive infiltration rates for many of the test cycles, three complete cycles could only be achieved in one of the five trial pits (TP302), with the first or second test cycle in TP303 and TP305 failing to achieve sufficient fall in water level to complete that test cycle. Where infiltration rates have been derived, the values are considered potentially uncharacteristically high for the soils encountered and thus might reflect subtle variations in composition such as sand or gravel content, soil layering or the like. It may also be possible that, if present, field drainage/land drains could have provided some level of assistance in draining water from the pits albeit that no land drains were encountered within the trial pits. It is

considered potentially unrealistic to rely upon the results of these soakage tests as characteristic of the potential for infiltration of storm water during peak storm events which could result in an overly optimistic design. As such, these results should be used with due caution.

Winter groundwater monitoring

Groundwater monitoring was commenced in November 2020 is ongoing on the site at the time of writing. From the monitoring data acquired to date, groundwater appeared to reach a seasonal shallow depth around early February 2021, with groundwater at depths as shallow as 1.05m bgl recorded in WS04. Monitoring records to date are presented in Table 2 below.

Location	Date	GWL (m bgl)
WS01	30/11/20	2.70
	14/12/20	2.45
	05/01/21	2.40
	19/01/21	2.40
	01/02/21	1.90
	15/02/21	2.25
	02/03/21	2.49
	17/03/21	2.54
WS02	30/11/20	2.80
	14/12/20	2.50
	05/01/21	2.40
	19/01/21	2.45
	01/02/21	1.63
	15/02/21	Dry at 1.70
	02/03/21	Dry at 1.70
	17/03/21	Dry at 1.70
WS03	30/11/20	Dry at 1.70
	14/12/20	Dry at 1.70
	05/01/21	Dry at 1.70
	19/01/21	Dry at 1.70
	01/02/21	1.15
	15/02/21	1.38
	02/03/21	1.63
	17/03/21	1.64
WS04	30/11/20	1.80
	14/12/20	1.50
	05/01/21	1.60
	19/01/21	1.45
	01/02/21	1.05
	15/02/21	1.35
	02/03/21	1.50
	17/03/21	1.55
WS05	30/11/20	2.25
	14/12/20	1.90
	05/01/21	1.90
	19/01/21	1.85
	01/02/21	1.61
	15/02/21	1.90
	02/03/21	2.15

Location	Date	GWL (m bgl)
	17/03/21	2.16
WS06	30/11/20	2.70
	14/12/20	1.40
	05/01/21	1.40
	19/01/21	1.35
	01/02/21	1.50
	15/02/21	1.80
	02/03/21	2.06
	17/03/21	2.05
WS07	30/11/20	2.20
	14/12/20	2.00
	05/01/21	2.00
	19/01/21	1.95
	01/02/21	2.00
	15/02/21	2.35
	02/03/21	2.60
	17/03/21	2.59

Table 2 Summary of groundwater monitoring records to date

The groundwater monitoring data indicate that, in some areas of the site, there could be limited unsaturated zone into which any soakaway, or similar infiltration device could drain and this could further limit the viability and operability of soakaways and infiltration devices on this site.

Closure

We trust we have interpreted your request correctly and provided sufficient information for your current requirements. If you have any questions or queries in relation the information provided at this stage, please do not hesitate to contact the undersigned.

Yours sincerely
For and on Behalf of Geo-Environmental



ROBERT GARDNER BSc (Hons), MSc, FGS
Consultant Engineer



- Enc Figure 1 – Site Location Plan
 Figure 2 – Exploratory Hole Location Plan
 Appendix A – Exploratory Hole Logs
 Appendix B – Soakage Testing Results

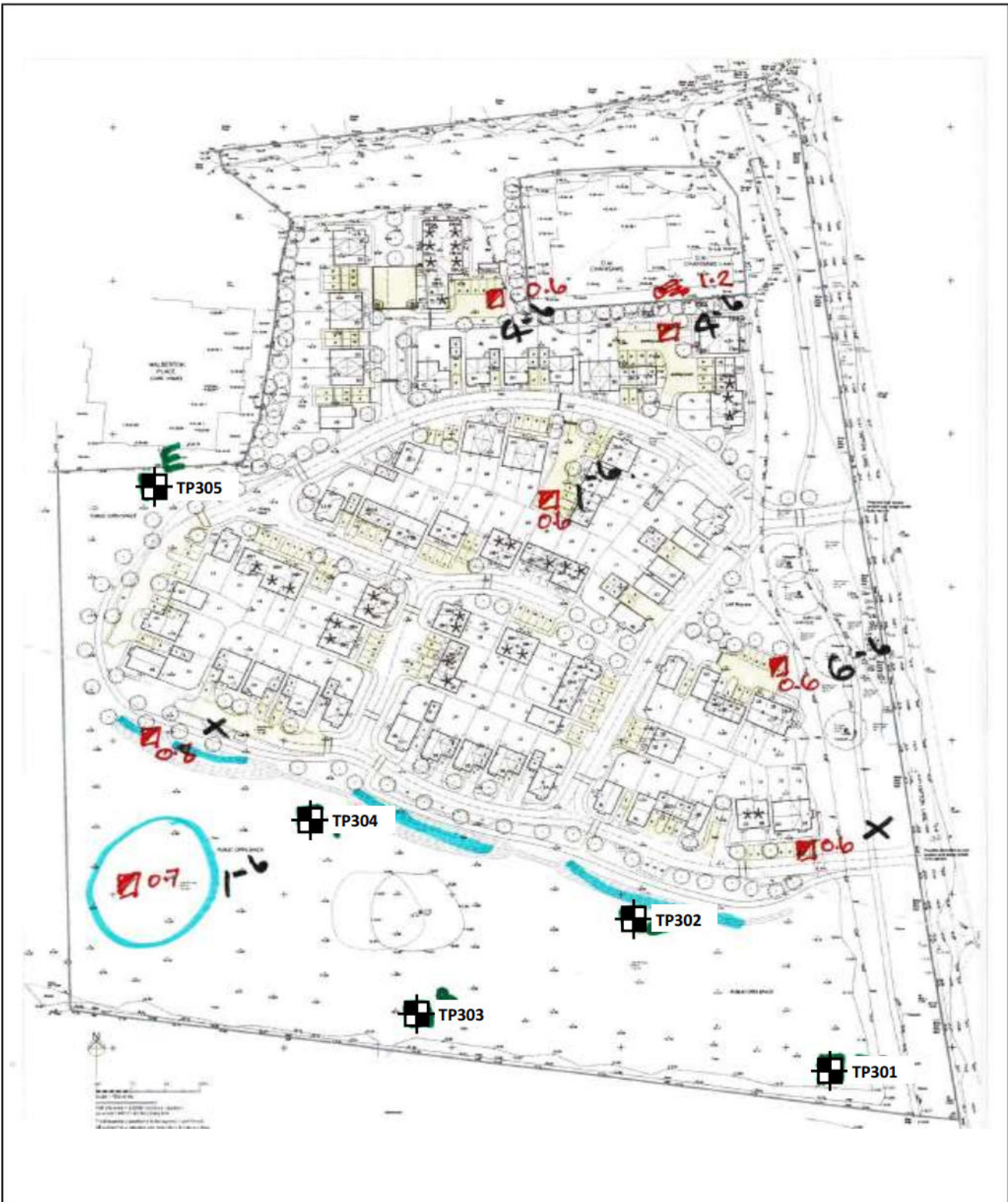


FIGURES





Project:	Yapton Lane, Walberton BN18 0AS			Title	Site Location (Google Image)	
Client:	LandQuest UK			Geo-Environmental Services Ltd Unit 7 Danworth Farm, Cuckfield Road Hurstpierpoint, West Sussex BN6 9GL +44(0)1273 832972 www.gesl.net  Geo-Environmental		
Ref No:	GE19427	Revision:	0			
Drawn:	RG	Date:	19/11/2020			
Figure:	1	Scale:	NTS			



Project:	Yapton Lane, Walberton BN18 0AS			Title	Exploartory Hole Locations (Trial Pits)		
Client:	LandQuest UK			Geo-Environmental Services Ltd Unit 7 Danworth Farm, Cuckfield Road Hurstpierpoint, West Sussex BN6 9GL +44(0)1273 832972 www.gesl.net		 Geo-Environmental	
Ref No:	GE19427a	Revision:	1				
Drawn:	RG	Date:	12/04/2021				
Figure:	2	Scale:	NTS				



APPENDICES





Unit 7, Danworth Farm
Hurstpierpoint
BN6 9GL

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Trial Pit Log

Trial Pit No
TP301
Sheet 1 of 1

Project Name: Yapton Lane, Walberton

Project No.
GE19427

Co-ords: 497655.65 - 105401.04
Level: 12.74

Date
12/04/2021

Location: Yapton Lane, Walberton BN18 0AS

Dimensions (m): 1.80

Depth
1.65

0.50



Scale
1:25

Logged
RG

Client: LandQuest UK

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.30	12.44		Crops over brown silty slightly sandy slightly gravelly CLAY with frequent rootlets. Sand is fine. Gravel is fmc subangular. TOPSOIL	
				1.20	11.54		Firm light brown slightly silty slightly sandy CLAY. Sand is fine. RIVER TERRACE DEPOSITS	1
				1.65	11.09		Firm light brown and yellowish brown slightly sandy gravelly CLAY. Sand is fine. Gravel is fmc subangular flint. RIVER TERRACE DEPOSITS	2
							End of Pit at 1.65m	3
								4
								5

Depth Strike	Water Strikes	Remarks Dry
	Rose to (m) (g)	
		Stability





Unit 7, Danworth Farm
Hurstpierpoint
BN6 9GL

Geo-Environmental www.gesl.net

Trial Pit Log

Trial Pit No
TP302
Sheet 1 of 1

Project Name: Yapton Lane, Walberton

Project No.
GE19427

Co-ords: 497609.87 - 105440.58
Level: 13.11

Date
12/04/2021

Location: Yapton Lane, Walberton BN18 0AS

Dimensions (m):

1.95

Depth
1.95

0.50

Scale
1:25

Logged
RG

Client: LandQuest UK

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.30	12.81		Crops over brown silty slightly sandy slightly gravelly CLAY with frequent rootlets. Sand is fine. Gravel is fmc subangular. TOPSOIL	
				1.20	11.91		Firm light brown slightly silty slightly sandy CLAY. Sand is fine. RIVER TERRACE DEPOSITS	1
				1.95	11.16		Firm light brown and yellowish brown slightly sandy gravelly CLAY. Sand is fine. Gravel is fmc subangular flint. RIVER TERRACE DEPOSITS	2
							End of Pit at 1.95m	3
								4
								5

Depth Strike	Water Strikes	Remarks Dry
	Rosen to (m)	
		Stability





Unit 7, Danworth Farm
Hurstpierpoint
BN6 9GL

Geo-Environmental www.gesl.net

Trial Pit Log

Trial Pit No

TP303

Sheet 1 of 1

Project Name: Yapton Lane, Walberton

Project No.
GE19427

Co-ords: 497546.35 - 105411.05
Level: 13.11

Date
12/04/2021

Location: Yapton Lane, Walberton BN18 0AS

Dimensions (m): 1.87

Depth
1.90

0.50



Scale
1:25

Logged
RG

Client: LandQuest UK

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.30	12.81		Crops over brown silty slightly sandy slightly gravelly CLAY with frequent rootlets. Sand is fine. Gravel is fmc subangular. TOPSOIL	
							Firm light brown slightly silty slightly sandy CLAY. Sand is fine. RIVER TERRACE DEPOSITS	
				1.10	12.01		Firm light brown and yellowish brown slightly sandy gravelly CLAY. Sand is fine. Gravel is fmc subangular flint. RIVER TERRACE DEPOSITS	1
				1.90	11.21		End of Pit at 1.90m	2
								3
								4
								5

Depth Strike	Water Strikes	Remarks	Dry
	Rose to (m)	Stability	





Unit 7, Danworth Farm
Hurstpierpoint
BN6 9GL

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Trial Pit Log

Trial Pit No
TP304
Sheet 1 of 1

Project Name: Yapton Lane, Walberton

Project No.
GE19427

Co-ords: 497515.71 - 105465.34
Level: 13.14

Date
12/04/2021

Location: Yapton Lane, Walberton BN18 0AS

Dimensions (m): 1.35

Depth
1.35

0.50



Scale
1:25

Logged
RG

Client: LandQuest UK

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.30	12.84		Crops over brown silty slightly sandy slightly gravelly CLAY with frequent rootlets. Sand is fine. Gravel is fmc subangular. TOPSOIL	
				0.90	12.24		Firm light brown slightly silty slightly sandy CLAY. Sand is fine. RIVER TERRACE DEPOSITS	
				1.35	11.79		Firm light brown and yellowish brown slightly sandy gravelly CLAY. Sand is fine. Gravel is fmc subangular flint. RIVER TERRACE DEPOSITS	1
							End of Pit at 1.35m	
								2
								3
								4
								5

Depth Strike	Water Strikes	Remarks Dry
	Rose to (m) (g)	
		Stability





Unit 7, Danworth Farm
Hurstpierpoint
BN6 9GL

Geo-Environmental www.gesl.net

Trial Pit Log

Trial Pit No

TP305

Sheet 1 of 1

Project Name: Yapton Lane, Walberton

Project No.
GE19427

Co-ords: 497464.71 - 105572.82
Level: 13.32

Date
12/04/2021

Location: Yapton Lane, Walberton BN18 0AS

Dimensions (m): 1.60

Depth
1.60

0.50



Scale
1:25

Logged
RG

Client: LandQuest UK

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
	Depth	Type	Results					
				0.30	13.02		Crops over brown silty slightly sandy slightly gravelly CLAY with frequent rootlets. Sand is fine. Gravel is fmc subangular. TOPSOIL	
							Firm light brown slightly silty slightly sandy CLAY. Sand is fine. RIVER TERRACE DEPOSITS	
				1.10	12.22		Firm light brown and yellowish brown slightly sandy gravelly CLAY. Sand is fine. Gravel is fmc subangular flint. RIVER TERRACE DEPOSITS	1
				1.60	11.72		End of Pit at 1.60m	2
								3
								4
								5

Depth Strike	Water Strikes	Remarks	Dry
	Rose to (m)	Stability	



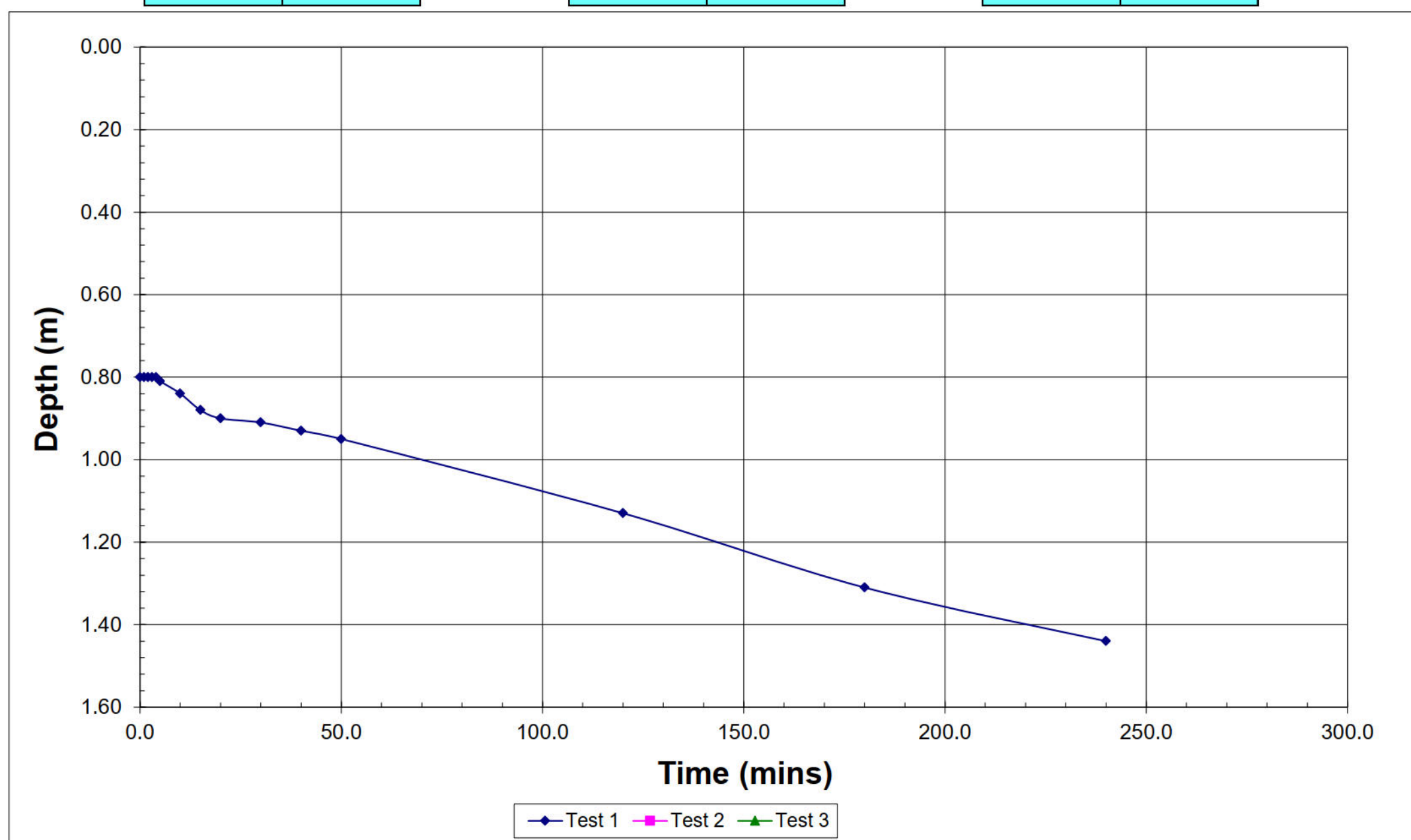
 Geo-Environmental	Soakaway Test Results BRE Digest 365) (after	Geo-Environmental Services Limited Unit 7 Danworth Farm, Cuckfield Road, Hurstpierpoint, West Sussex BN6 9GL
Project Name : Yapton Lane, Walberton		Job No. : GE19427a
Client : LandQuest UK		Date : 15/04/2021

Pit reference	TP301
Pit depth (m)	1.65
Pit width (m)	0.50
Pit length (m)	1.80
Depth to standing water (m)	

Test 1	
Time (min)	Depth (m)
0.0	0.80
1.0	0.80
2.0	0.80
3.0	0.80
4.0	0.80
5.0	0.81
10.0	0.84
15.0	0.88
20.0	0.90
30.0	0.91
40.0	0.93
50.0	0.95
120.0	1.13
180.0	1.31
240.0	1.44

Test 2	
Time (min)	Depth (m)

Test 3	
Time (min)	Depth (m)



Max. depth (m)	1.65	1.65	1.65
Effective depth (m)	0.85	1.65	1.65
75% effective depth (m)	1.01	0.41	0.41
50% effective depth (m)	1.23	0.83	0.83
25% effective depth (m)	1.44	1.24	1.24
t75 (min)	70.00		
t50 (min)	160.00		
t25 (min)	240.00		
Vp 75-25	0.38	0.74	0.74
ap 50	2.855	4.695	4.695
tp 75-25	170.00	0.00	0.00

Soil infiltration rate (m/s)	1.3E-05		
Soil infiltration rate (mm/hr)	4.73E+01		

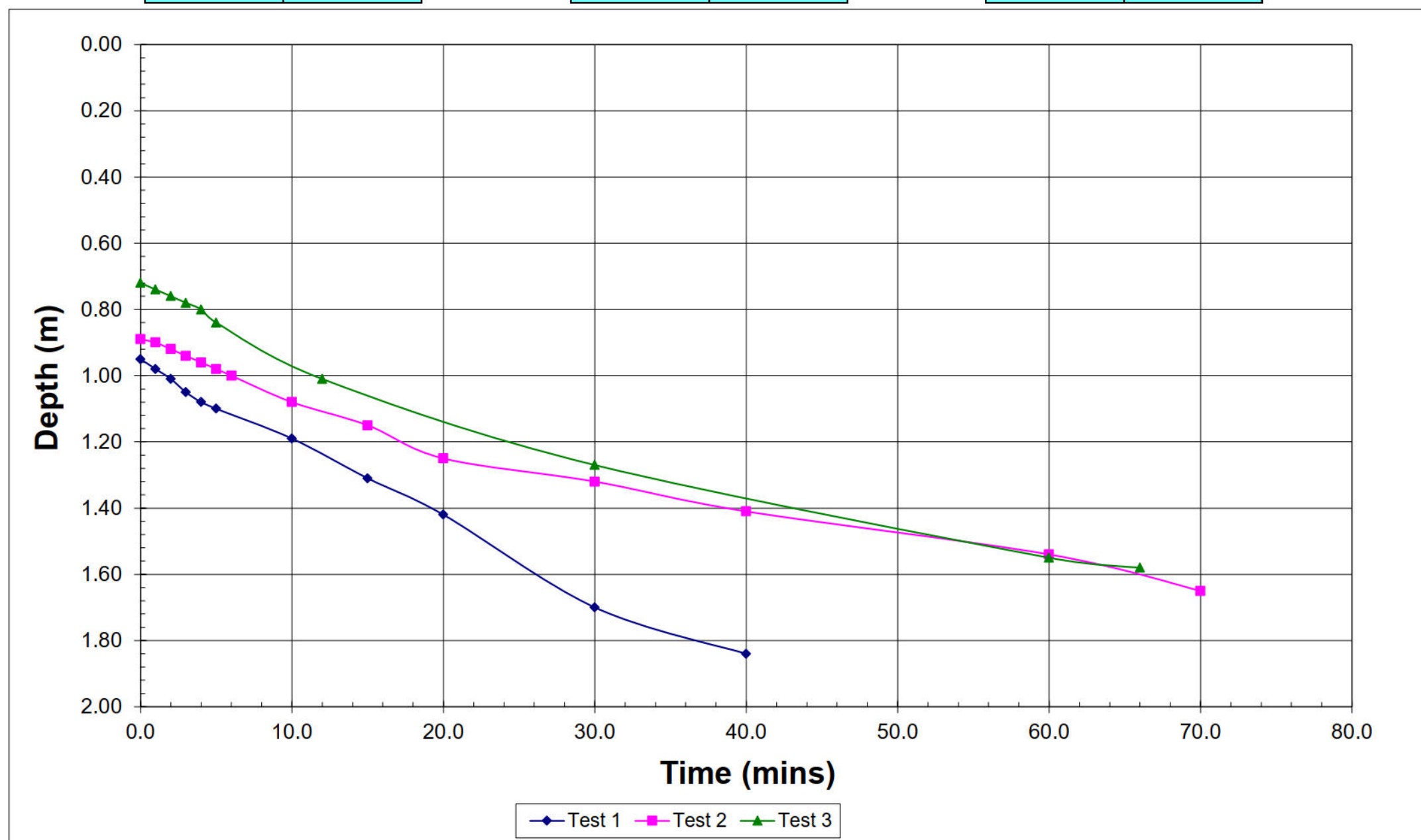
 Geo-Environmental	Soakaway Test Results BRE Digest 365) (after	Geo-Environmental Services Limited Unit 7 Danworth Farm, Cuckfield Road, Hurstpierpoint, West Sussex BN6 9GL
Project Name : Yapton Lane, Walberton		Job No. : GE19427a
Client : LandQuest UK		Date : 15/04/2021

Pit reference	TP302	Test 2	Test 3
Pit depth (m)	1.95	1.90	1.85
Pit width (m)	0.50		
Pit length (m)	1.95		
Depth to standing water (m)			

Test 1	
Time (min)	Depth (m)
0.0	0.95
1.0	0.98
2.0	1.01
3.0	1.05
4.0	1.08
5.0	1.10
10.0	1.19
15.0	1.31
20.0	1.42
30.0	1.70
40.0	1.84

Test 2	
Time (min)	Depth (m)
0.0	0.89
1.0	0.90
2.0	0.92
3.0	0.94
4.0	0.96
5.0	0.98
6.0	1.00
10.0	1.08
15.0	1.15
20.0	1.25
30.0	1.32
40.0	1.41
60.0	1.54
70.0	1.65

Test 3	
Time (min)	Depth (m)
0.0	0.72
1.0	0.74
2.0	0.76
3.0	0.78
4.0	0.80
5.0	0.84
12.0	1.01
30.0	1.27
60.0	1.55
66.0	1.58



Max. depth (m)	1.95	1.90	1.85
Effective depth (m)	1.00	1.06	1.23
75% effective depth (m)	1.20	1.14	1.00
50% effective depth (m)	1.45	1.40	1.29
25% effective depth (m)	1.70	1.65	1.57
t75 (min)	10.00	14.00	12.00
t50 (min)	22.00	40.00	32.00
t25 (min)	30.00	70.00	65.00
Vp 75-25	0.49	0.49	0.55
ap 50	3.425	3.572	3.9885
tp 75-25	20.00	56.00	53.00

Soil infiltration rate (m/s)	1.2E-04	4.1E-05	4.3E-05
Soil infiltration rate (mm/hr)	4.27E+02	1.48E+02	1.56E+02



Soakaway Test Results

BRE Digest 365)

(after

Geo-Environmental Services Limited
Unit 7 Danworth Farm, Cuckfield Road,

Unit 7 Danworth Farm, Cuckfield Road,

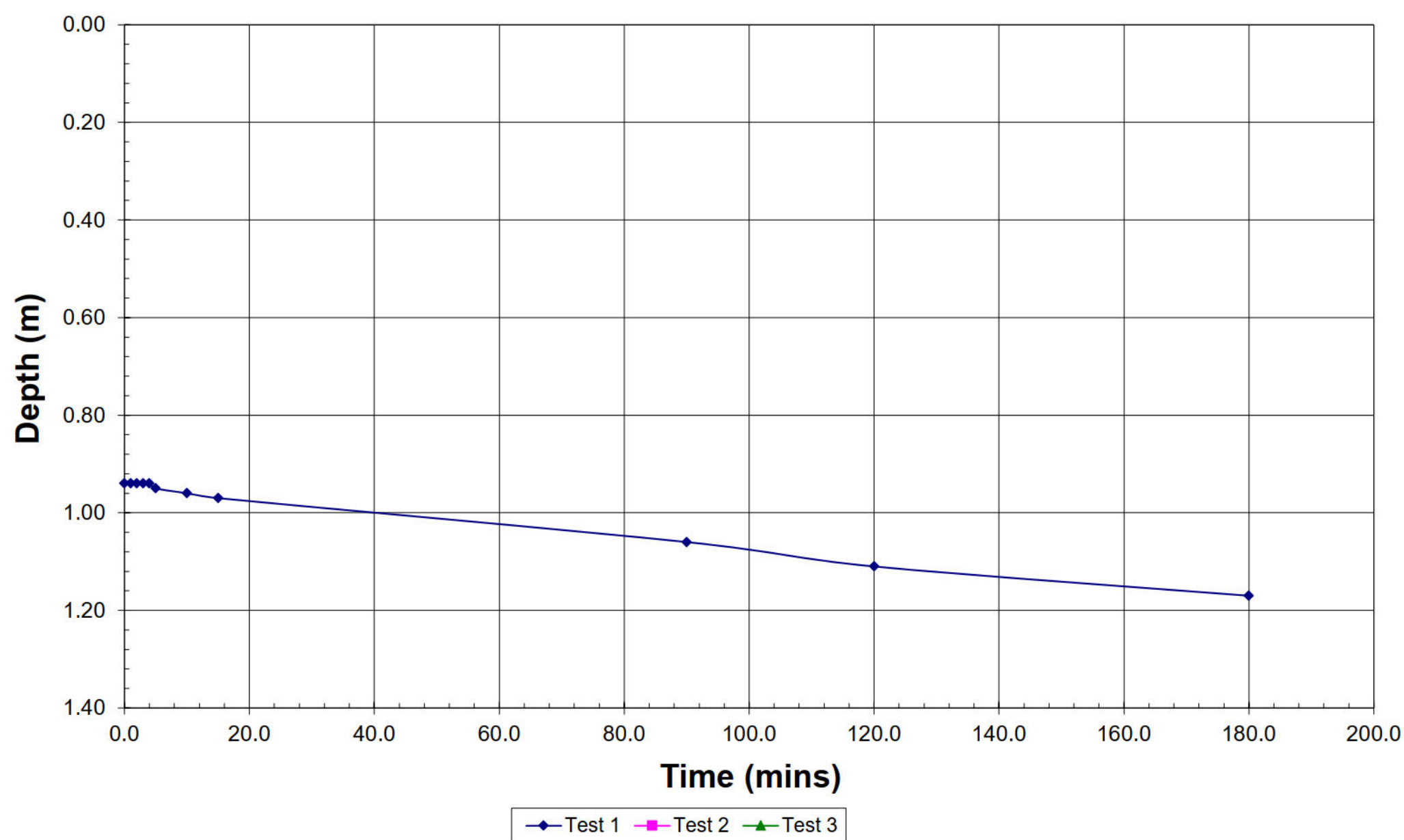
Project Name : Yapton Lane, Walberton

Client : LandQuest UK

Job No. : GE19427a

Date : 15/04/2021

Pit reference	TP303
Pit depth (m)	1.90
Pit width (m)	0.50
Pit length (m)	1.90
Depth to standing water (m)	

[illegible][illegible][illegible]

Max. depth (m)	1.90	1.90	1.90
Effective depth (m)	0.96	1.90	1.90
75% effective depth (m)	1.18	0.48	0.48
50% effective depth (m)	1.42	0.95	0.95
25% effective depth (m)	1.66	1.43	1.43
t75 (min)			
t50 (min)			
t25 (min)			
Vp 75-25	0.46	0.90	0.90
ap 50	3.254	5.51	5.51
tp 75-25	0.00	0.00	0.00

Soil infiltration rate (m/s)	Insufficient fall in water to complete test	
Soil infiltration rate (mm/hr)	Insufficient fall in water to complete test	

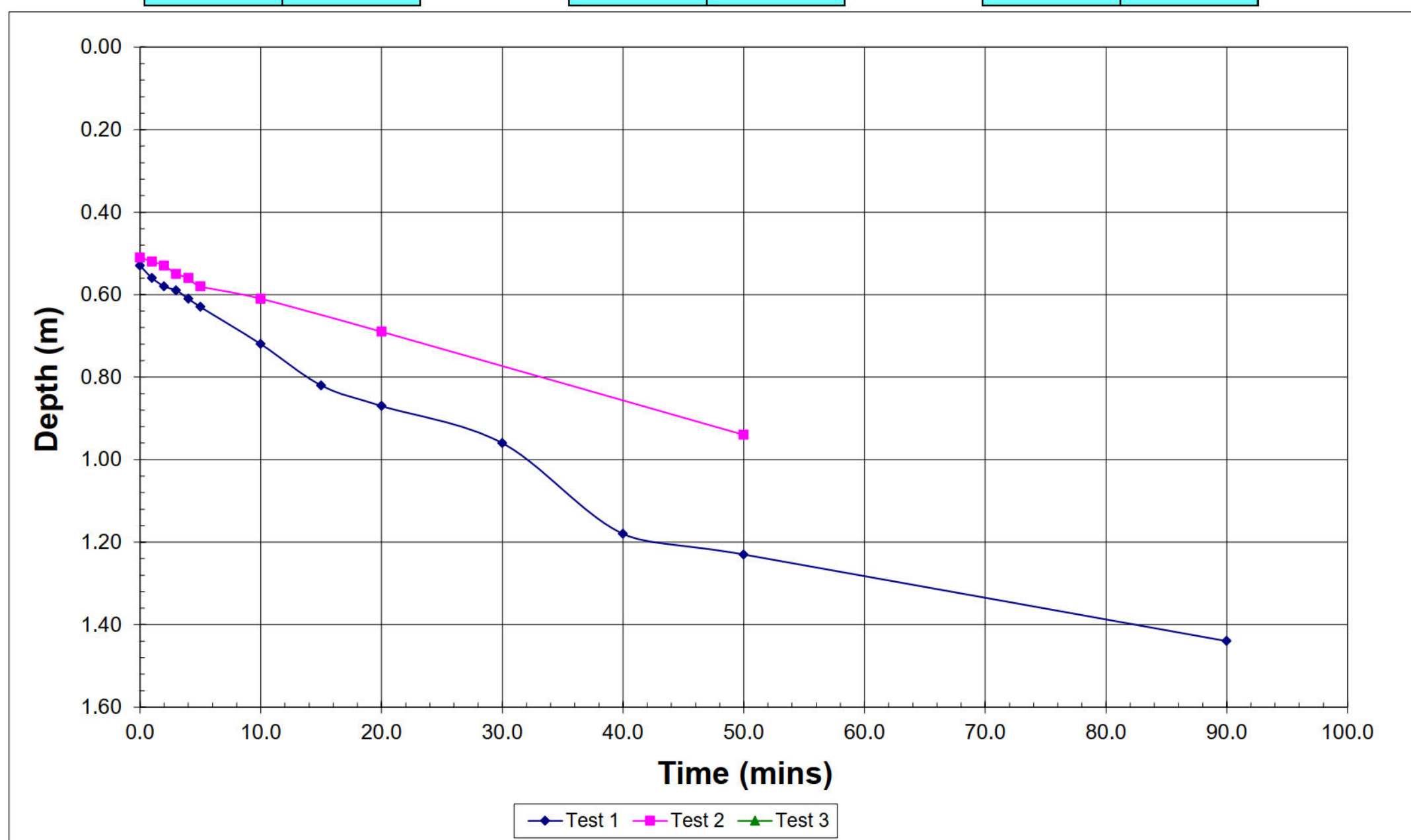
 Geo-Environmental	Soakaway Test Results BRE Digest 365) (after	Geo-Environmental Services Limited Unit 7 Danworth Farm, Cuckfield Road,
Project Name : Yapton Lane, Walberton Client : LandQuest UK		Job No. : GE19427a Date : 15/04/2021

Pit reference	TP304
Pit depth (m)	1.35
Pit width (m)	0.50
Pit length (m)	1.70
Depth to standing water (m)	

Test 1	
Time (min)	Depth (m)
0.0	0.53
1.0	0.56
2.0	0.58
3.0	0.59
4.0	0.61
5.0	0.63
10.0	0.72
15.0	0.82
20.0	0.87
30.0	0.96
40.0	1.18
50.0	1.23
90.0	1.44

Test 2	
Time (min)	Depth (m)
0.0	0.51
1.0	0.52
2.0	0.53
3.0	0.55
4.0	0.56
5.0	0.58
10.0	0.61
20.0	0.69
50.0	0.94

Test 3	
Time (min)	Depth (m)



Max. depth (m)	1.35	1.35	1.35
Effective depth (m)	0.82	0.84	1.35
75% effective depth (m)	0.74	0.72	0.34
50% effective depth (m)	0.94	0.93	0.68
25% effective depth (m)	1.15	1.14	1.01
t75 (min)	12.00	28.00	
t50 (min)	28.00	54.00	
t25 (min)	38.00		
Vp 75-25	0.35	0.36	0.57
ap 50	2.654	2.698	3.82
tp 75-25	26.00	-28.00	0.00

Soil infiltration rate (m/s)	8.4E-05	-7.9E-05	
Soil infiltration rate (mm/hr)	3.03E+02	-2.84E+02	

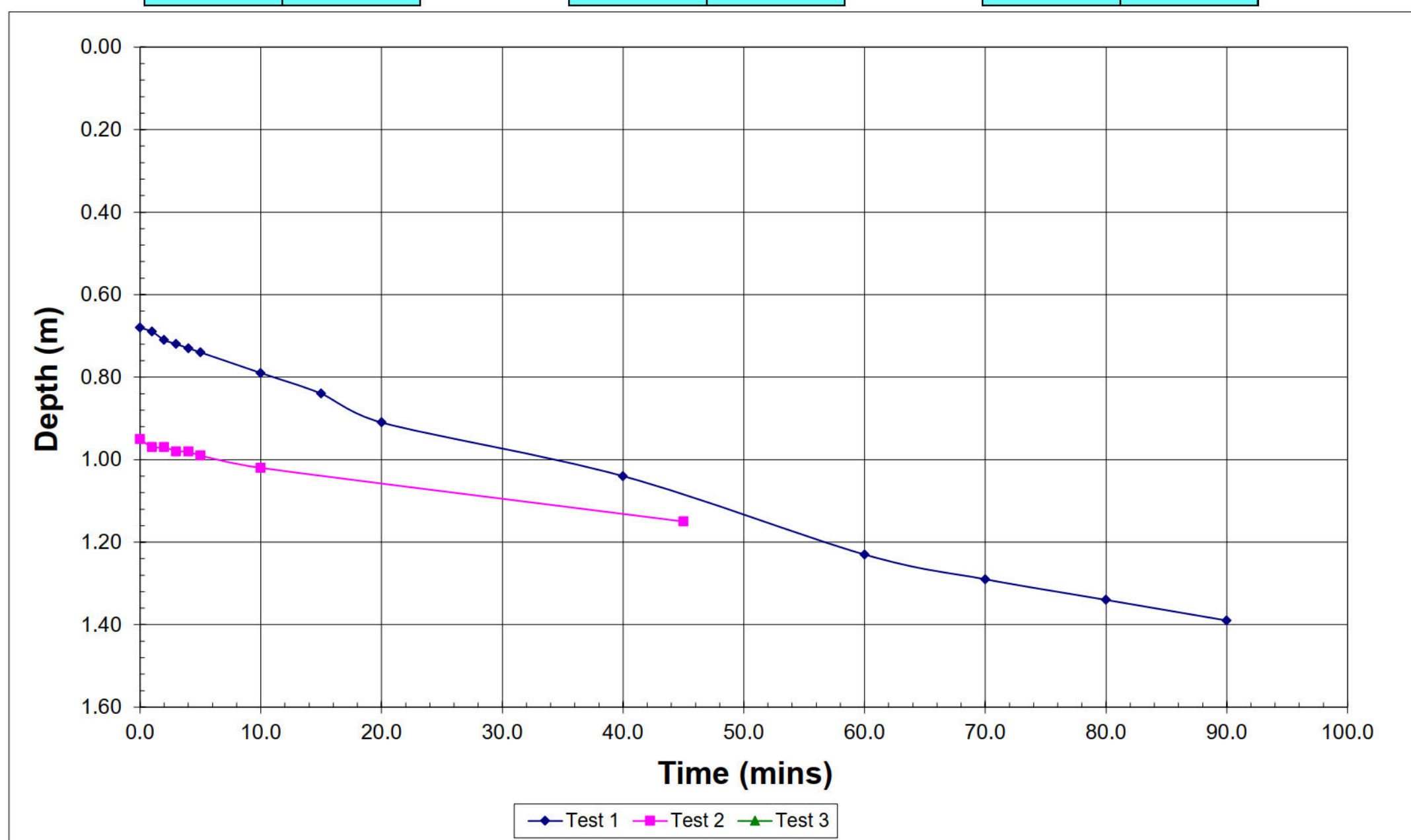
 Geo-Environmental	Soakaway Test Results BRE Digest 365)	(after	Geo-EnvironmentalServices Limited Unit 7 Danworth Farm, Cuckfield Road,
Project Name : Yapton Lane, Walberton			Job No. : GE19427a
Client : LandQuest UK			Date : 15/04/2021

Pit reference	TP305
Pit depth (m)	1.60
Pit width (m)	0.50
Pit length (m)	1.60
Depth to standing water (m)	

Test 1	
Time (min)	Depth (m)
0.0	0.68
1.0	0.69
2.0	0.71
3.0	0.72
4.0	0.73
5.0	0.74
10.0	0.79
15.0	0.84
20.0	0.91
40.0	1.04
60.0	1.23
70.0	1.29
80.0	1.34
90.0	1.39

Test 2	
Time (min)	Depth (m)
0.0	0.95
1.0	0.97
2.0	0.97
3.0	0.98
4.0	0.98
5.0	0.99
10.0	1.02
45.0	1.15

Test 3	
Time (min)	Depth (m)

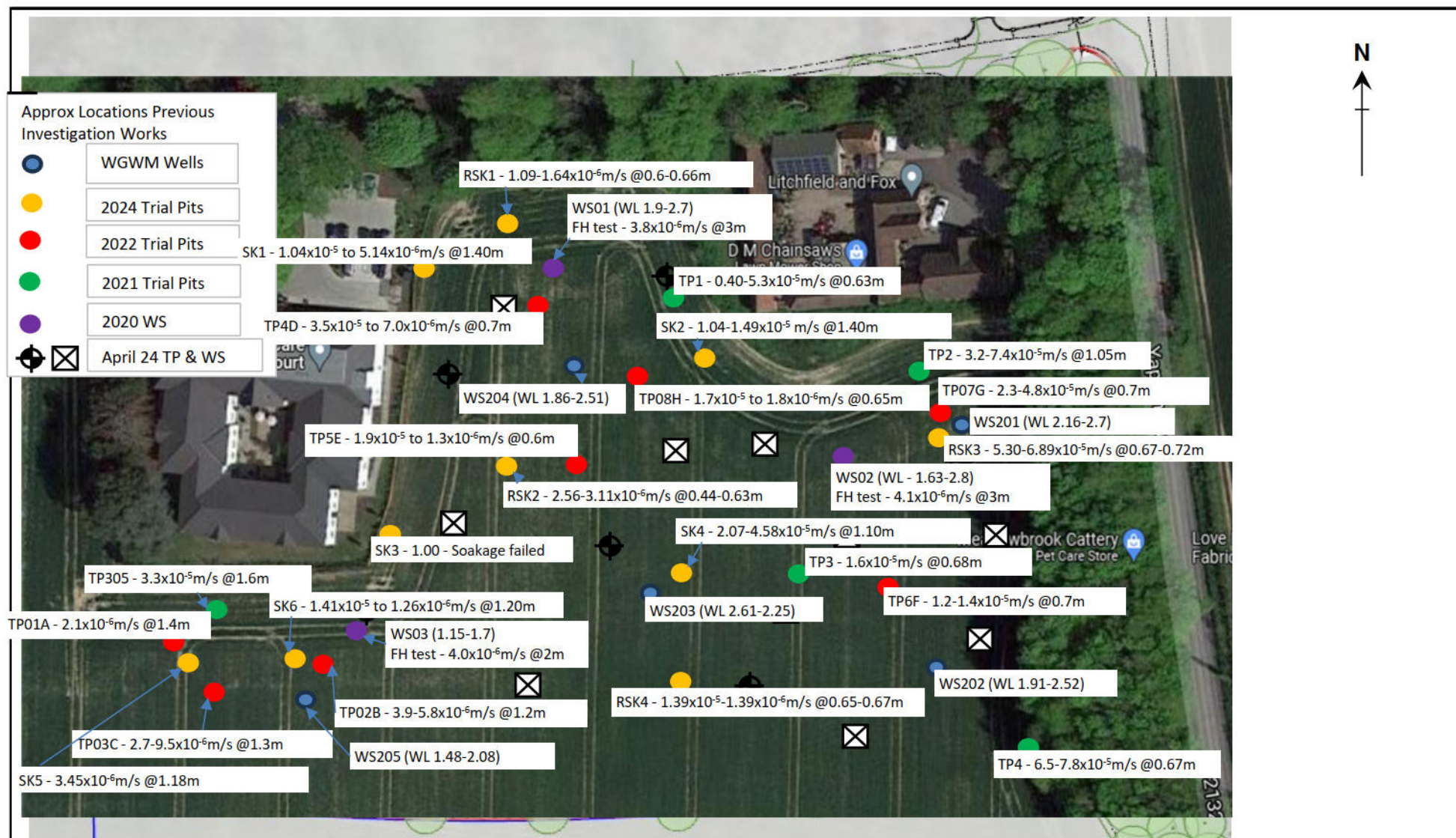


Max. depth (m)	1.60	1.60	1.60
Effective depth (m)	0.92	0.65	1.60
75% effective depth (m)	0.91	1.11	0.40
50% effective depth (m)	1.14	1.28	0.80
25% effective depth (m)	1.37	1.44	1.20
t75 (min)	20.00		
t50 (min)	50.00		
t25 (min)	88.00		
Vp 75-25	0.37	0.26	0.64
ap 50	2.732	2.165	4.16
tp 75-25	68.00	0.00	0.00

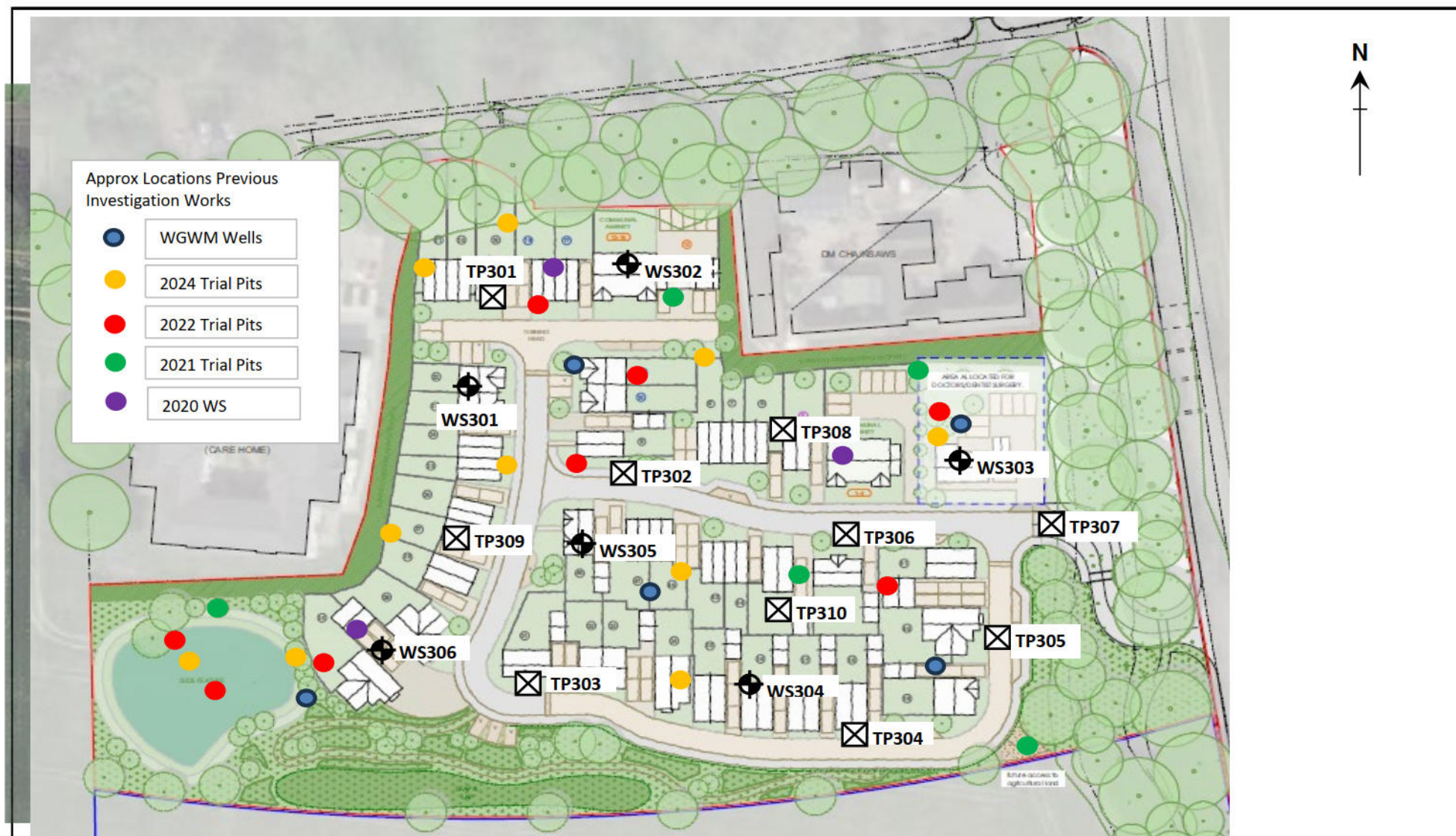
Soil infiltration rate (m/s)	3.3E-05		
Soil infiltration rate (mm/hr)	1.19E+02		

Project: Yapton Lane, Walberton (Winter Groundwater Monitoring)
Ref: GE19427
Client: LandQuest UK (Southern) Limited

Location	Date	GWL (m bgl)
WS01	30/11/20	2.70
WS02	30/11/20	2.80
WS03	30/11/20	Dry at 1.70
WS04	30/11/20	1.80
WS05	30/11/20	2.25
WS06	30/11/20	2.70
WS07	30/11/20	2.20
WS01	14/12/20	2.45
WS02	14/12/20	2.50
WS03	14/12/20	Dry at 1.70
WS04	14/12/20	1.50
WS05	14/12/20	1.90
WS06	14/12/20	1.40
WS07	14/12/20	2.00
WS01	05/01/21	2.40
WS02	05/01/21	2.40
WS03	05/01/21	Dry at 1.70
WS04	05/01/21	1.60
WS05	05/01/21	1.90
WS06	05/01/21	1.40
WS07	05/01/21	2.00
WS01	19/01/21	2.40
WS02	19/01/21	2.45
WS03	19/01/21	Dry at 1.70
WS04	19/01/21	1.45
WS05	19/01/21	1.85
WS06	19/01/21	1.35
WS07	19/01/21	1.95



Project:	Land off Yapton Lane, Walberton, BN18 0AS			Title	Review of Soakage Testing Results and Water Levels from WGWM (m bgl)	
Client:	Elivia Homes Southern			Geo-Environmental Services Ltd Unit 7 Danworth Farm, Cuckfield Road Hurstpierpoint, West Sussex BN6 9GL +44(0)1273 832972 www.gesl.net	 Geo-Environmental	
Ref No:	GE20521	Revision:	1			
Drawn:	LL	Date:	01/05/2024			
Figure:	4	Scale:	Not to scale			

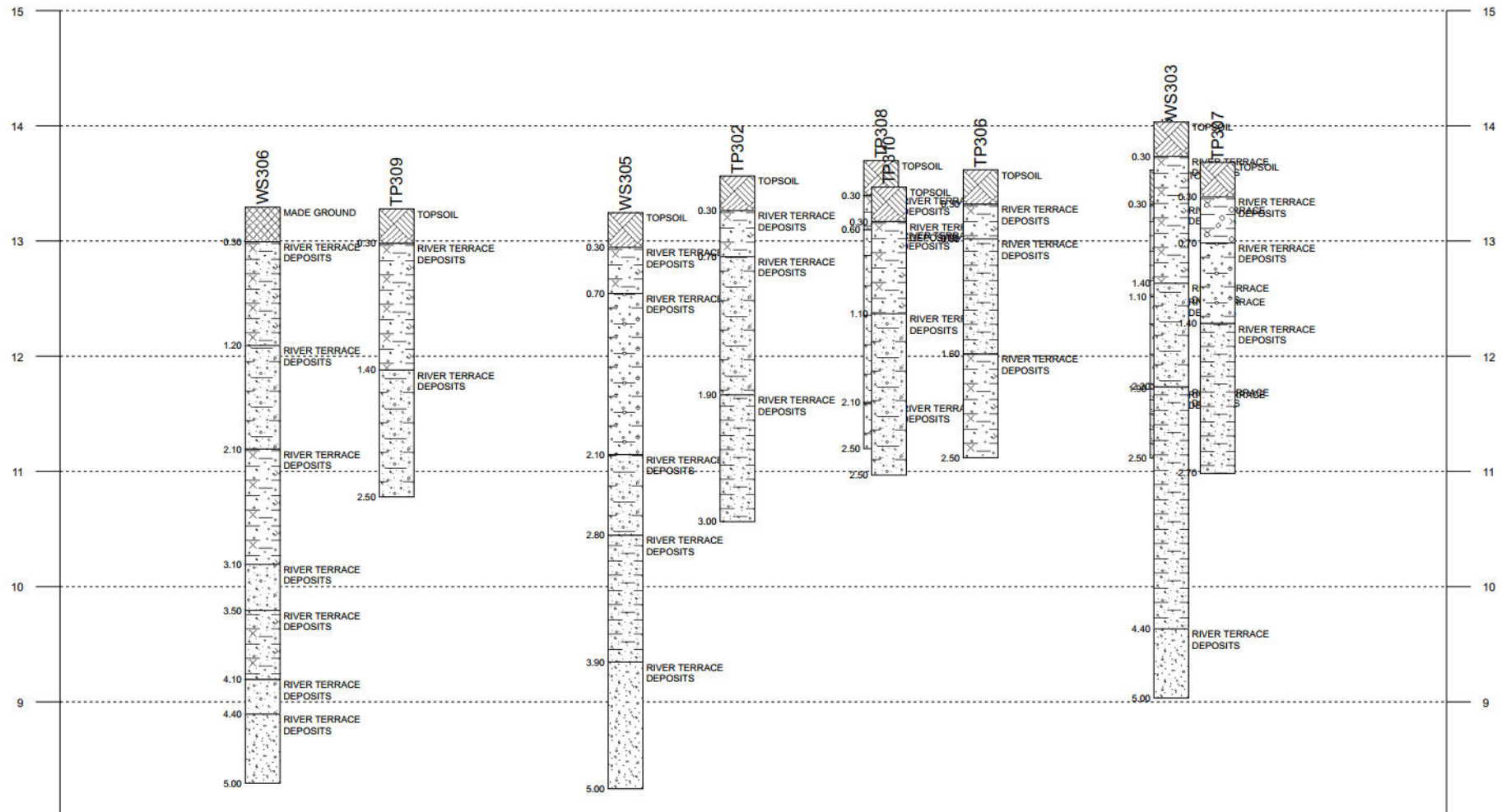
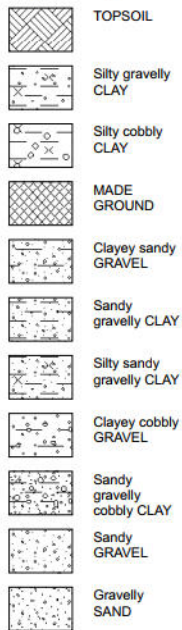


Project:	Land off Yapton Lane, Walberton, BN18 0AS			Title	Proposed Exploratory Hole Locations (Proposed Development Plan)	
Client:	Elivia Homes Southern			Geo-Environmental Services Ltd Unit 7 Danworth Farm, Cuckfield Road Hurstpierpoint, West Sussex BN6 9GL +44(0)1273 832972 www.gesl.net	 Geo-Environmental	
Ref No:	GE20521	Revision:	1			
Drawn:	LL	Date:	03/04/2024			
Figure:	2	Scale:	Not to scale			

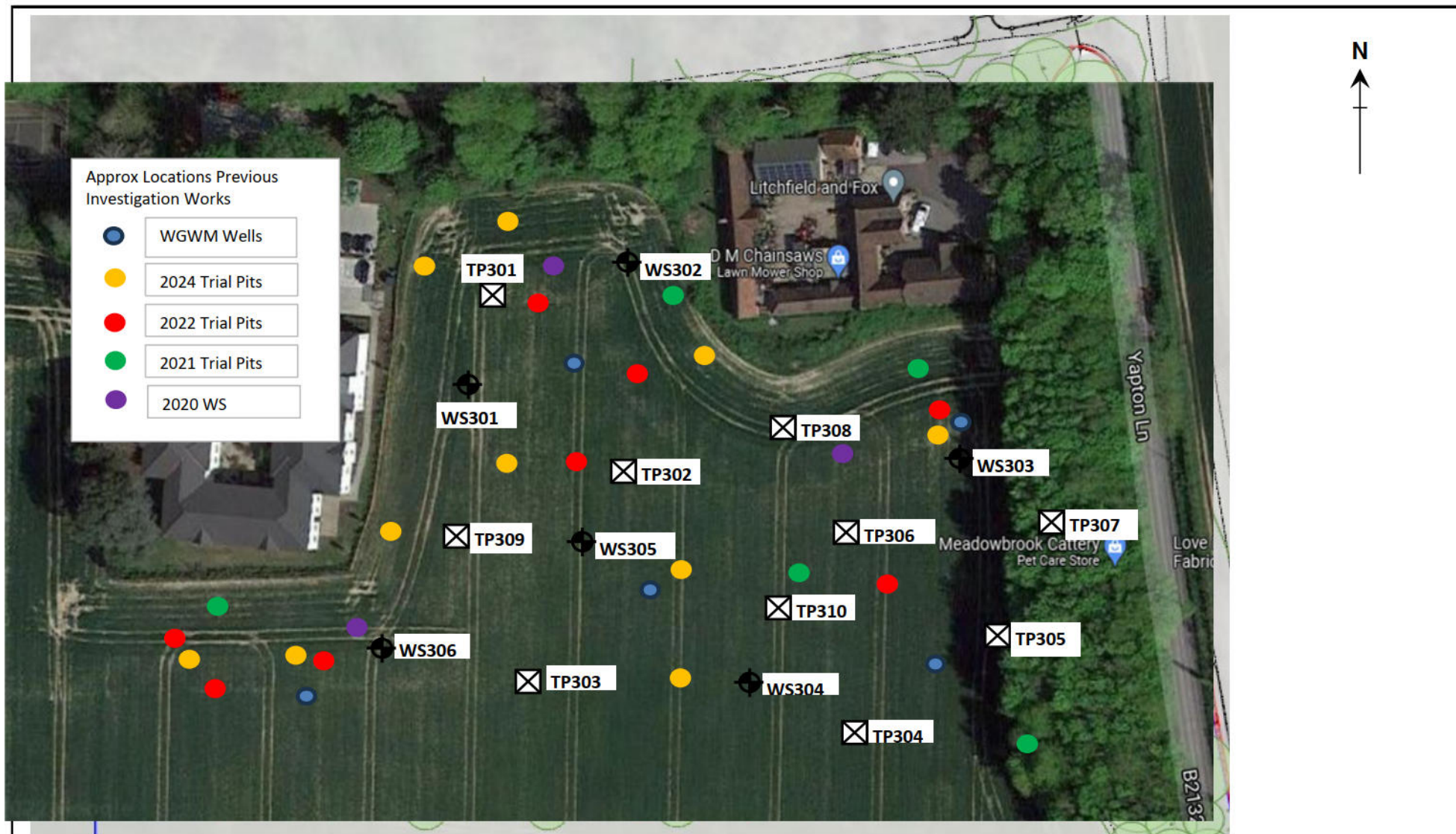
Project Id: GE22437
 Project Title: Yapton Lane, Walberton
 Location: Walberton, West Sussex BN18 0AS
 Client: Elivia Homes Southern

Title: Section line 1
 Vertical Scale: 1:54
 Horizontal Scale: 1:973
 Engineer: LL

Legend Key



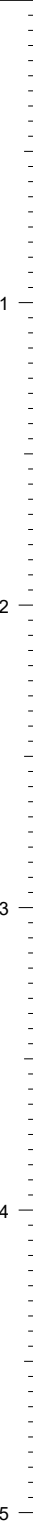
Chainage (m)	0.00	7.30	28.24	64.03	81.53	103.98	119.54	148.34	156.59	167.90
Offset (m)		10.93	3.34	1.91	16.91	18.98	1.56	12.46	0.96	
Elevation (mAOD)		13.29	13.28	13.25	13.56	13.70	13.62	13.64	13.68	



Project:	Land off Yapton Lane, Walberton, BN18 0AS			Title	Proposed Exploratory Hole Locations (Aerial)	
Client:	Elivia Homes Southern			Geo-Environmental Services Ltd Unit 7 Danworth Farm, Cuckfield Road Hurstpierpoint, West Sussex BN6 9GL +44(0)1273 832972 www.gesl.net  Geo-Environmental		
Ref No:	GE20521	Revision:	1			
Drawn:	LL	Date:	03/04/2024			
Figure:	3	Scale:	Not to scale			

 Geo-Environmental	Contract Name: Yapton Lane, Walberton			Client: Elivia Homes Southern			Trial Pit ID: TP301		
	Contract Number: GE22437	Date Started: 08/04/2024	Logged By: KOD	Checked By: LL	Status: FINAL	Sheet 1 of 1			
	Easting: 497527.0	Northing: 105639.2	Ground Level: 13.57mOD	Plant Used: JCB 3CX	Date Printed: 01/05/2024	Scale: 1:25			
Trial Pit Log		Weather: Dry, cloudy, cool		Hole Termination:		Stability: Localised spalling			
Samples & In Situ Testing			Strata Details					Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description			
0.20	ES1	PP=1.1kg/cm2	13.27	(0.30)		Weeds overlying dark brown slightly gravelly silty CLAY with frequent rootlets and roots 1-2mm. Gravel is fine to coarse sub angular flint. TOPSOIL		0.5	
0.50	D1			0.30		Firm orangish brown slightly gravelly silty CLAY with some rootlets and roots 1-2mm. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS			
0.70	ES2			(0.50)					
1.00	D2		12.77	0.80		Orangish brown sandy very clayey GRAVEL/very gravelly CLAY with black ferruginous fragments. Sand is fine to coarse. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS		1.0	
1.50	D3			(1.10)				1.5	
2.00	D4			1.90		Cream very sandy very gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS		2.0	
2.50	D5	11.67	(1.10)				2.5		
3.00	D6		10.57	3.00				3.0	
3.00	ES3				End of Trial Pit at 3.00m		3.5		
Dimensions:					Photo:				
Final Depth:	3.00m				 PhotoofPit				
Final Width:	0.60m								
Final Length:	2.40m								
Remarks					 PhotoofSpoil				
Water Strikes (mbgl)									
Depth Strike	Rose to		Time Elapsed (mins)						
2.90	2.90		5						

 Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net		Borehole Log				Borehole No. WS306 Sheet 1 of 2	
Project Name: Yapton Lane, Walberton		Project No. GE22437		Co-ords: 497493E - 105579N		Hole Type WLS	
Location: Walberton, West Sussex BN18 0AS				Level: 13.29		Scale 1:25	
Client: Elivia Homes Southern				Dates: 05/04/2024		Logged By KOD	

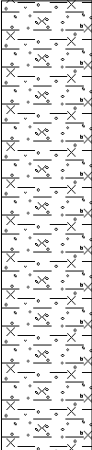
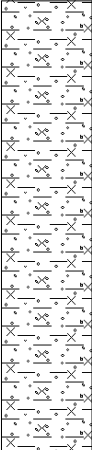
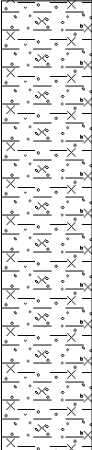
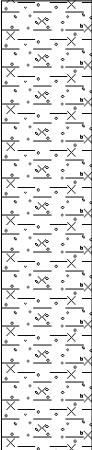
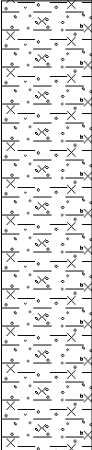
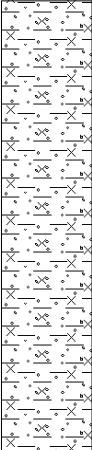
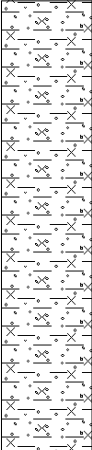
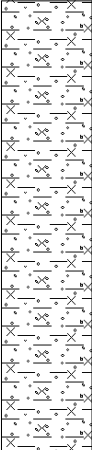
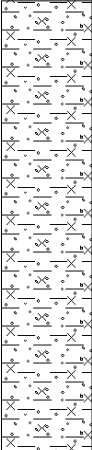
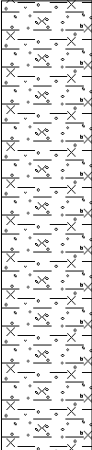
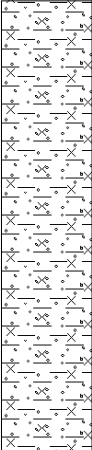
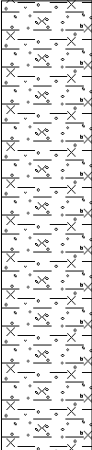
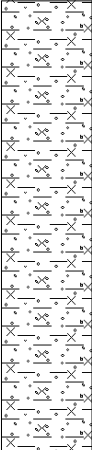
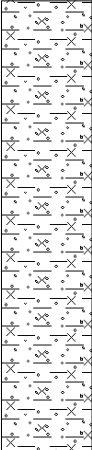
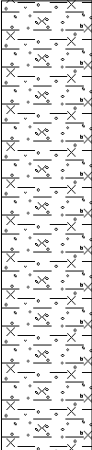
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description				
		Depth (m)	Type	Results								
		0.20	ES	1.3kg/cm2	0.30	12.99		Weeds overlying dark brown slightly gravelly very silty CLAY with rare brick fragments. MADE GROUND				
		0.50	D				1.00 1.00 1.00	1.20		12.09		Firm orangish brown slightly sandy slightly gravelly silty CLAY with frequent black ferruginous fragments and some rootlets and roots 1-2mm. Sand is fine. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS
		0.50	PP									
		0.60	ES									
		1.50	D	N=33 (5,8/7,8,8,10)	1.20	12.09		Brown and grey slightly sandy very gravelly silty CLAY. Sand is fine. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS				
		2.00	D				N=4 (1,0/1,1,1,1)	2.10		11.19		Soft orangish brown and pale brown slightly gravelly silty CLAY. RIVER TERRACE DEPOSITS
		2.00	SPT									
		2.50	D	0.5kg/cm2	3.10	10.19		<u>Some orange sandy lenses</u>				
		2.50	PP									
		3.00	D				N=7 (2,1/2,2,1,2)	3.10		10.19		<u>Poor recovery</u>
		3.00	SPT									
		3.30	D									
		3.50			9.79			Pale brown silty sandy gravelly CLAY. Sand is fine. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS				
		4.00	D	N=7 (1,1/2,1,2,2)	4.10	9.19		Pale brown and cream sandy GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS				
		4.00	SPT									
4.20	D											
4.40			8.89			Orangish brown slightly gravelly fine SAND. Gravel is fine to medium sub rounded flint. RIVER TERRACE DEPOSITS						
4.60	ES											
5.00	D		5.00	8.29		Continued on Next Sheet		5				

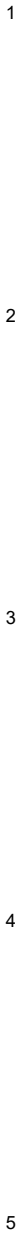
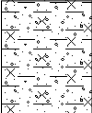
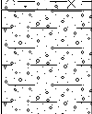
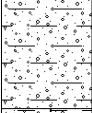
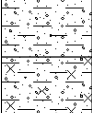
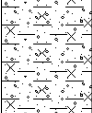
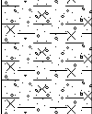
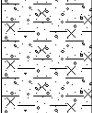
Dynamic Sampling Run Details			Water Strike Details (mbgl)		Remarks
Depth Top	Depth Base	Diameter	Depth Strike	Rose To	
			2.30	1.95	
					Collapse to 2.65m bgl.


 Status
 FINAL

 Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net			Borehole Log					Borehole No. WS306 Sheet 2 of 2	
Project Name: Yapton Lane, Walberton			Project No. GE22437		Co-ords: 497493E - 105579N			Hole Type WLS	
Location: Walberton, West Sussex BN18 0AS			Level: 13.29			Scale 1:25			
Client: Elivia Homes Southern			Dates: 05/04/2024			Logged By KOD			
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		5.00	SPT	N=17 (1,0/2,5,5,5)				End of Borehole at 5.00m	
									6
									7
									8
									9
									10
Dynamic Sampling Run Details		Water Strike Details (mbgl)		Remarks					
Depth Top	Depth Base	Diameter	Depth Strike	Rose To	Collapse to 2.65m bgl.				
			2.30	1.95					
					 Status FINAL				

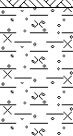
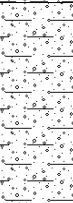
 Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net		Borehole Log				Borehole No. WS305 Sheet 2 of 2				
Project Name: Yapton Lane, Walberton		Project No. GE22437		Co-ords: 497549E - 105593N		Hole Type WLS				
Location: Walberton, West Sussex BN18 0AS				Level: 13.25		Scale 1:25				
Client: Elivia Homes Southern				Dates: 05/04/2024		Logged By KOD				
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
		5.00	SPT	N=23 (4,6/6,5,5,7)				End of Borehole at 5.00m		
									6	
									7	
									8	
									9	
									10	
Dynamic Sampling Run Details		Water Strike Details (mbgl)		Remarks						
Depth Top	Depth Base	Diameter	Depth Strike							Rose To
			2.30	1.90	Collapse to 2.10m bgl. Clay unsuitable for pocket penetrometer testing.					
					 Status FINAL					

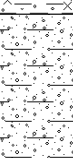
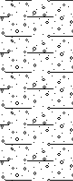
 Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net		Borehole Log				Borehole No. WS304 Sheet 1 of 2			
Project Name: Yapton Lane, Walberton		Project No. GE22437		Co-ords: 497583E - 105575N		Hole Type WLS			
Location: Walberton, West Sussex BN18 0AS				Level: 13.31		Scale 1:25			
Client: Elivia Homes Southern				Dates: 05/04/2024		Logged By KOD			
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.20	ES	0.7kg/cm2	0.30	13.01		Weeds overlying slightly gravelly very silty CLAY with frequent rootlets and roots 1-2mm. TOPSOIL	1
		0.50	D					Soft orangish brown slightly gravelly very silty CLAY with some rootlets and roots 1-2mm. RIVER TERRACE DEPOSITS	
		0.50	PP						
		0.70	ES		Soft orangish brown slightly gravelly very silty CLAY with some rootlets and roots 1-2mm. RIVER TERRACE DEPOSITS				
		1.00	D				Soft orangish brown slightly gravelly very silty CLAY with some rootlets and roots 1-2mm. RIVER TERRACE DEPOSITS		
		1.00	SPT					N=15 (5,7/6,4,3,2)	
		1.50	D		Soft orangish brown slightly gravelly very silty CLAY with some rootlets and roots 1-2mm. RIVER TERRACE DEPOSITS				
		2.00	D				Soft orangish brown slightly gravelly very silty CLAY with some rootlets and roots 1-2mm. RIVER TERRACE DEPOSITS		
		2.00	SPT					N=3 (1,0/0,1,1,1)	
		2.20	D		Soft orangish brown slightly gravelly very silty CLAY with some rootlets and roots 1-2mm. RIVER TERRACE DEPOSITS				
		2.50	D				Soft orangish brown slightly gravelly very silty CLAY with some rootlets and roots 1-2mm. RIVER TERRACE DEPOSITS		
		3.00	D						Soft orangish brown slightly gravelly very silty CLAY with some rootlets and roots 1-2mm. RIVER TERRACE DEPOSITS
		3.00	SPT	N=6 (1,0/0,0,2,4)					
		3.50	D		Soft orangish brown slightly gravelly very silty CLAY with some rootlets and roots 1-2mm. RIVER TERRACE DEPOSITS				
		3.80	ES				Soft orangish brown slightly gravelly very silty CLAY with some rootlets and roots 1-2mm. RIVER TERRACE DEPOSITS		
4.00	D		Soft orangish brown slightly gravelly very silty CLAY with some rootlets and roots 1-2mm. RIVER TERRACE DEPOSITS						
4.00	PP				Soft orangish brown slightly gravelly very silty CLAY with some rootlets and roots 1-2mm. RIVER TERRACE DEPOSITS				
4.00	SPT	1.6kg/cm2 N=6 (1,0/1,0,2,3)							
4.40	D		Soft orangish brown slightly gravelly very silty CLAY with some rootlets and roots 1-2mm. RIVER TERRACE DEPOSITS						
4.50	D				Soft orangish brown slightly gravelly very silty CLAY with some rootlets and roots 1-2mm. RIVER TERRACE DEPOSITS				
5.00	D						Soft orangish brown slightly gravelly very silty CLAY with some rootlets and roots 1-2mm. RIVER TERRACE DEPOSITS		
5.00	D	Continued on Next Sheet	5						
Dynamic Sampling Run Details		Water Strike Details (mbgl)		Remarks					
Depth Top	Depth Base	Diameter	Depth Strike	Rose To	Hole collapse to 1.95m bgl.				
			2.30	2.30					
					 Status FINAL				

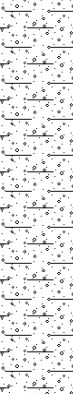
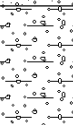
 Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net				Borehole Log				Borehole No. WS302 Sheet 1 of 2		
Project Name: Yapton Lane, Walberton				Project No. GE22437		Co-ords: 497563E - 105647N		Hole Type WLS		
Location: Walberton, West Sussex BN18 0AS						Level: 13.73		Scale 1:25		
Client: Elivia Homes Southern						Dates: 05/04/2024		Logged By KOD		
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
		0.10	ES	0.7kg/cm2	0.30	13.43		Weeds overlying dark brown slightly sandy silty gravelly CLAY with frequent rootlets. Sand is fine. Gravel is fine to medium sub angular flint. TOPSOIL		
		0.40	ES							
		0.50	D							
		0.50	PP	N=19 (5,8/7,5,4,3)	0.70	13.03		Soft orangish brown slightly sandy silty gravelly CLAY with some rootlets and roots 1-2mm. Sand is fine. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS		
		1.00	D							
		1.00	SPT							
		1.30	ES	0.4kg/cm2	1.40	12.33		Orangish brown clayey sandy GRAVEL/very gravelly CLAY. Sand is fine. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS <i>Some rootlets and roots 1-2mm.</i>		
		1.50	D							
		1.50	PP							
		2.00	D	N=22 (2,3/4,6,6,6)	1.60	12.13		Soft orangish brown sandy gravelly CLAY. Sand is fine. Gravel is fine to medium sub angular flint. RIVER TERRACE DEPOSITS		
		2.00	SPT							
		2.50	D							
		3.00	D	N=20 (4,4/6,6,4,4)	3.10	10.63		Pale brown to cream silty sandy very gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS		
		3.00	SPT							
		3.50	D							
4.00	D	N=7 (1,0/1,0,2,4)	3.80	9.93		Cream clayey SAND and GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS				
4.00	SPT									
4.50	D									
4.50	D	9.33	9.33		Pale orangish brown sandy very gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS					
5.00	D				Orangish brown slightly gravelly fine SAND. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS					
Continued on Next Sheet									5	
Dynamic Sampling Run Details		Water Strike Details (mbgl)		Remarks						
Depth Top	Depth Base	Diameter	Depth Strike							Rose To
			3.70	2.40	Some clays too gravelly for pocket penetrometer testing. Hole collapse to 3.25m bgl.					
										
					Status FINAL					

 Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net			Borehole Log					Borehole No. WS302 Sheet 2 of 2		
Project Name: Yapton Lane, Walberton			Project No. GE22437		Co-ords: 497563E - 105647N			Hole Type WLS		
Location: Walberton, West Sussex BN18 0AS			Level: 13.73			Scale 1:25				
Client: Elivia Homes Southern			Dates: 05/04/2024			Logged By KOD				
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
		5.00	SPT	N=14 (1,0/1,3,5,5)				End of Borehole at 5.00m		
									6	
									7	
									8	
									9	
									10	
Dynamic Sampling Run Details		Water Strike Details (mbgl)		Remarks						
Depth Top	Depth Base	Diameter	Depth Strike							Rose To
			3.70	2.40	Some clays too gravelly for pocket penetrometer testing. Hole collapse to 3.25m bgl.					
					 Status FINAL					

 Unit 7, Danworth Farm Hurstpierpoint BN6 9GL www.gesl.net			Borehole Log				Borehole No. WS301 Sheet 2 of 2		
Project Name: Yapton Lane, Walberton			Project No. GE22437		Co-ords: 497512E - 105626N		Hole Type WLS		
Location: Walberton, West Sussex BN18 0AS			Level: 13.55		Scale 1:25				
Client: Elivia Homes Southern			Dates: 05/04/2024		Logged By KOD				
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		5.00	SPT	N=17 (3,5/4,5,5,3)				End of Borehole at 5.00m	
									6
									7
									8
									9
									10
Dynamic Sampling Run Details		Water Strike Details (mbgl)		Remarks					
Depth Top	Depth Base	Diameter	Depth Strike	Rose To	Hole collapse to 2.45m bgl.				
			4.00	2.15					
					 Status FINAL				

 Geo-Environmental	Contract Name: Yapton Lane, Walberton			Client: Elivia Homes Southern			Trial Pit ID: TP310			
	Contract Number: GE22437	Date Started: 08/04/2024	Logged By: KOD	Checked By: LL	Status: FINAL	Sheet 1 of 1				
	Easting: 497590.4	Northing: 105589.3	Ground Level: 13.47mOD	Plant Used: JCB	Date Printed: 01/05/2024	Scale: 1:25				
Trial Pit Log		Weather: Warm, dry, clear		Hole Termination:		Stability: Sides unstable below water table				
Samples & In Situ Testing				Strata Details					Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description				
0.10	ES1	PP=1.1kg/cm2	13.17	(0.30)		Weeds overlying dark brown slightly gravelly silty CLAY with some rootlets and roots. TOPSOIL			0.5	
0.50	D1			(0.80)		Firm orangish brown slightly gravelly silty CLAY with some rootlets and some black flecking. RIVER TERRACE DEPOSITS				
0.80	ES2	PP=1.2kg/cm2	12.37	1.10		Orangish brown sandy very clayey cobbly GRAVEL/very gravelly CLAY with frequent black ferruginous fragments. RIVER TERRACE DEPOSITS			1.0	
1.00	D2									
1.50	D3			(1.40)		End of Trial Pit at 2.50m			1.5	
1.80	ES3									
2.00	D4									
2.50	D5		10.97	2.50					2.5	
									3.0	
									3.5	
Dimensions:						Photo:				
Final Depth:	2.50m					 PhotoofPit				
Final Width:	0.60m									
Final Length:	2.40m									
Remarks						 PhotoofSpoil				
Terminated due to pit collapse.										
Water Strikes (mbgl)										
Depth Strike		Rose to		Time Elapsed (mins)						

 Geo-Environmental	Contract Name: Yapton Lane, Walberton			Client: Elivia Homes Southern			Trial Pit ID: TP309			
	Contract Number: GE22437	Date Started: 08/04/2024	Logged By: KOD	Checked By: LL	Status: FINAL	Sheet 1 of 1				
	Easting: 497512.6	Northing: 105595.0	Ground Level: 13.28mOD	Plant Used: JCB	Date Printed: 01/05/2024	Scale: 1:25				
Trial Pit Log		Weather: Cloudy, cool, drizzle			Hole Termination:		Stability: Sides unstable below water table			
Samples & In Situ Testing				Strata Details					Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description				
0.10	ES1	PP=0.6kg/cm2	12.98	(0.30)		Weeds overlying dark brown slightly gravelly silty CLAY with frequent rootlets and roots 1-2mm. TOPSOIL			0.5	
0.50	D1			0.30		Soft becoming firm orangish brown slightly gravelly silty CLAY with some black ferruginous fragments and some rootlets and roots 1-2mm. RIVER TERRACE DEPOSITS				
0.70	ES2			(1.10)						
1.00	D2	PP=1.2kg/cm2	11.88	1.40		Orangish brown sandy very clayey GRAVEL/very gravelly CLAY with frequent black ferruginous fragments. RIVER TERRACE DEPOSITS			1.5	
1.50	D3									
2.00	D4					(1.10)				
2.50	D5		10.78	2.50		End of Trial Pit at 2.50m			2.5	
2.50	ES3									
Dimensions:						Photo:				
Final Depth:	2.50m									
Final Width:	0.60m									
Final Length:	2.30m									
Remarks										
Terminated at 2.5m bgl due to collapse.										
Water Strikes (mbgl)										
Depth Strike		Rose to		Time Elapsed (mins)						

 Geo-Environmental	Contract Name: Yapton Lane, Walberton			Client: Elivia Homes Southern			Trial Pit ID: TP308		
	Contract Number: GE22437	Date Started: 08/04/2024	Logged By: KOD	Checked By: LL	Status: FINAL	Sheet 1 of 1			
	Easting: 497586.7	Northing: 105617.1	Ground Level: 13.70mOD	Plant Used: JCB 3CX	Date Printed: 01/05/2024	Scale: 1:25			
Trial Pit Log		Weather: Warm, dry, clear			Hole Termination:		Stability: Sides unstable below water table		
Samples & In Situ Testing			Strata Details					Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description			
0.10	ES1	PP=1.1kg/cm2	13.40	(0.30)		Weeds and some crop overlying dark brown slightly gravelly silty CLAY with frequent rootlets and roots 1-2mm. TOPSOIL	0.5		
0.50	D1			(0.30)		Firm orangish brown slightly gravelly silty CLAY with some rootlets. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS			
0.50	ES2			(0.60)		Orangish brown slightly sandy clayey silty GRAVEL with frequent black ferruginous fragments. RIVER TERRACE DEPOSITS			
1.00	D2			(1.50)			1.0		
1.50	D3								
2.00	D4								
2.50	D5		11.60	2.10		Cream and brown clayey sandy cobbly GRAVEL. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS	2.0		
2.50	ES3			(0.40)					
			11.20	2.50		End of Trial Pit at 2.50m	2.5		
							3.0		
							3.5		
Dimensions:						Photo:			
Final Depth:	2.50m			 PhotoofPit					
Final Width:	0.60m								
Final Length:	2.30m								
Remarks						 PhotoofSpoil			
Terminated at 2.5m bgl due to collapse.									
Water Strikes (mbgl)									
Depth Strike	Rose to		Time Elapsed (mins)						
2.40	2.40		1						

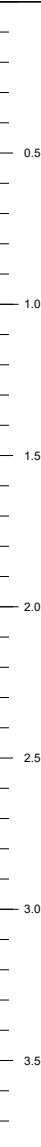
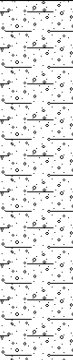
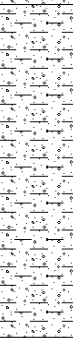
 Geo-Environmental	Contract Name: Yapton Lane, Walberton			Client: Elivia Homes Southern			Trial Pit ID: TP307		
	Contract Number: GE22437	Date Started: 08/04/2024	Logged By: KOD	Checked By: LL	Status: FINAL	Sheet 1 of 1			
	Easting: 497640.9	Northing: 105601.7	Ground Level: 13.68mOD	Plant Used: JCB	Date Printed: 01/05/2024	Scale: 1:25			
Trial Pit Log		Weather: Dry, cool, cloudy		Hole Termination:		Stability: Sides unstable below water table			
Samples & In Situ Testing			Strata Details					Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description			
0.10	ES1	PP=1.4kg/cm2	13.38	(0.30)		Weeds and crop overlying dark brown slightly gravelly silty CLAY. Gravel is fine to coarse sub angular flint. TOPSOIL	0.5		
0.50	B1			(0.40)		Firm orangish brown slightly cobbly slightly gravelly sandy silty CLAY with some rootlets and roots 1-3mm. Gravel and cobbles is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS			
0.50	D1			(0.70)		Orangish brown sandy cobbly, bouldery very clayey flint GRAVEL with black ferruginous fragments. Sand is fine to coarse. Gravel cobbles and boulders are fine to coarse sub angular flint. RIVER TERRACE DEPOSITS			
0.60	ES2								
1.00	D2			(0.70)					
1.50	D3	12.28	1.40		Off white to cream very sandy very gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS <i>Frequent roots 1-30mm.</i>	1.5			
2.00	D4				(1.30)				
2.50	D5		10.98	2.70		End of Trial Pit at 2.70m	2.0		
2.50	ES3								
Dimensions:						Photo:			
Final Depth:	2.70m					 PhotoofPit			
Final Width:	0.60m								
Final Length:	2.20m								
Remarks						 PhotoofSpoil			
Terminated at 2.7m bgl due to collapse.									
Water Strikes (mbgl)									
Depth Strike	Rose to		Time Elapsed (mins)						

 Geo-Environmental	Contract Name: Yapton Lane, Walberton			Client: Elivia Homes Southern			Trial Pit ID: TP306			
	Contract Number: GE22437	Date Started: 08/04/2024	Logged By: KOD	Checked By: LL	Status: FINAL	Sheet 1 of 1				
	Easting: 497604.0	Northing: 105597.9	Ground Level: 13.62mOD	Plant Used: JCB 3CX	Date Printed: 01/05/2024	Scale: 1:25				
Trial Pit Log		Weather: Warm, clear, dry		Hole Termination:		Stability: Sides unstable below water table				
Samples & In Situ Testing			Strata Details					Water	Backfill	
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description				
0.20	ES1	PP=1.1kg/cm2	13.32	(0.30)		Weeds overlying dark brown slightly gravelly CLAY with abundant rootlets and roots 1-3mm. TOPSOIL		0.5		
0.50	D1			13.02	0.30		Firm orangish brown slightly gravelly silty CLAY with frequent rootlets and roots 1-2mm. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS			
0.50	D2				0.60		Orangish brown sandy very gravelly CLAY/very clayey GRAVEL with abundant black ferruginous fragments. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS			
0.70	ES2		12.02	(1.00)						
1.00	D3									
1.50	D4									
1.50	ES3	11.12	2.50		Interbedded pale brown to cream very sandy very gravelly CLAY and brown very sandy very gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS		2.0			
2.00	D5									
2.50	D6									
				End of Trial Pit at 2.50m				2.5		
								3.0		
								3.5		
Dimensions:					Photo:					
Final Depth:	2.50m				 					
Final Width:	0.60m									
Final Length:	2.40m									
Remarks										
Terminated at 2.5m bgl due to pit collapse										
Water Strikes (mbgl)										
Depth Strike		Rose to		Time Elapsed (mins)						

 Geo-Environmental	Contract Name: Yapton Lane, Walberton			Client: Elivia Homes Southern			Trial Pit ID: TP305			
	Contract Number: GE22437	Date Started: 08/04/2024	Logged By: KOD	Checked By: LL	Status: FINAL	Sheet 1 of 1				
	Easting: 497634.5	Northing: 105584.6	Ground Level: 13.62mOD	Plant Used: JCB 3CX	Date Printed: 01/05/2024	Scale: 1:25				
Trial Pit Log		Weather: Cool, dry, cloudy.		Hole Termination:		Stability: Sides unstable below water table				
Samples & In Situ Testing				Strata Details					Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description				
0.20	ES1	PP=0.8kg/cm2	13.32	(0.30)		Weeds and some crop overlying dark slightly gravelly silty CLAY with abundant rootlets and roots 1-2mm TOPSOIL	0.5			
0.40	ES2			0.30		Firm orangish brown slightly gravelly sandy silty CLAY with some rootlets. RIVER TERRACE DEPOSITS				
0.50	B1		(0.80)							
0.50	D1									
1.00	D2		12.52	1.10		Orangish brown sandy very clayey cobbly GRAVEL/very gravelly CLAY with black ferruginous fragments. Sand is fine to coarse. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS	1.0			
1.50	D3	11.72	1.90	(0.80)		Pale brown to cream very sandy very gravelly cobbly CLAY. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS	1.5			
1.50	ES3									
2.00	D4	(0.60)			Wet.	2.0				
2.50	D5	11.12	2.50			End of Trial Pit at 2.50m	2.5			
							3.0			
							3.5			
Dimensions:					Photo:					
Final Depth:	2.50m									
Final Width:	0.60m									
Final Length:	2.50m									
Remarks										
Terminated at 2.5m bgl due to collapse.										
Water Strikes (mbgl)										
Depth Strike	Rose to		Time Elapsed (mins)							
2.30	2.40		10							

 Geo-Environmental	Contract Name: Yapton Lane, Walberton			Client: Elivia Homes Southern			Trial Pit ID: TP304				
	Contract Number: GE22437	Date Started: 08/04/2024	Logged By: KOD	Checked By: LL	Status: FINAL	Sheet 1 of 1					
	Easting: 497605.1	Northing: 105560.6	Ground Level: 13.32mOD	Plant Used: JCB 3CX	Date Printed: 01/05/2024	Scale: 1:25					
Trial Pit Log											
Weather: Dry, cool, cloudy			Hole Termination:			Stability: Sides unstable below water table					
Samples & In Situ Testing			Strata Details						Water	Backfill	
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description					
0.10	ES1	PP=1.0kg/cm2	13.02	(0.30)		Grass and some weeds overlying dark brown slightly gravelly silty CLAY with abundant rootlets and roots. Gravel is fine to coarse sub angular flint. TOPSOIL			0.5		
0.50	B1			0.30		Firm orangish brown slightly gravelly sandy silty CLAY with frequent rootlets. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS					
0.50	D1		(0.60)								
1.00	D2		12.42	0.90		Orangish brown sandy gravelly silty CLAY with frequent black ferruginous fragments and some rootlets and roots 1-2mm. Sand is fine to coarse. Gravel and cobbles are fine to coarse sub angular flint. RIVER TERRACE DEPOSITS					1.0
1.20	ES2		(1.30)					1.5			
1.50	D3		11.12	2.20					2.0		
2.00	D4				End of Trial Pit at 2.20m			2.5			
								3.0			
									3.5		
Dimensions:										Photo:	
Final Depth:	2.20m									 PhotoofPit	
Final Width:	0.60m										
Final Length:	2.40m										
Remarks											
Terminated at 2.2m bgl due to pit collapse											
Water Strikes (mbgl)											
Depth Strike	Rose to				Time Elapsed (mins)						
2.00	2.00				10						
 PhotoofSpoil											

 Geo-Environmental	Contract Name: Yapton Lane, Walberton			Client: Elivia Homes Southern			Trial Pit ID: TP303		
	Contract Number: GE22437	Date Started: 08/04/2024	Logged By: KOD	Checked By: LL	Status: FINAL	Sheet 1 of 1			
	Easting: 497527.6	Northing: 105570.5	Ground Level: 13.18mOD	Plant Used: JCB 3CX	Date Printed: 01/05/2024	Scale: 1:25			
Trial Pit Log		Weather: Warm, dry, cloudy			Hole Termination:		Stability: Sides unstable below water table		
Samples & In Situ Testing				Strata Details				Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description			
0.20	ES1	PP=1kg/cm2	12.88	(0.30)		Weeds overlying dark brown slightly gravelly silty CLAY with frequent rootlets and roots. TOPSOIL			
0.50 0.50	B1 D1			0.30		Firm orangish brown slightly gravelly sandy silty CLAY with some rootlets. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS			
0.80	ES2		12.48	0.70		Orangish brown sandy clayey silty GRAVEL with black ferruginous fragments. RIVER TERRACE DEPOSITS			
1.00	D2			(1.00)					
1.50	D3		11.48	1.70		Cream and brown very sandy very gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS			
2.00 2.00	D4 ES3	(0.90)							
2.50	D5		10.58	2.60		End of Trial Pit at 2.60m			
Dimensions:					Photo:				
Final Depth:	2.60m				 PhotoofPit				
Final Width:	0.60m								
Final Length:	2.50m								
Remarks					 PhotoofSpoil				
Terminated at 2.6m bgl due to collapse.									
Water Strikes (mbgl)									
Depth Strike	Rose to		Time Elapsed (mins)						
1.90	1.90		2						

 Geo-Environmental	Contract Name: Yapton Lane, Walberton			Client: Elivia Homes Southern			Trial Pit ID: TP302						
	Contract Number: GE22437	Date Started: 08/04/2024	Logged By: KOD	Checked By: LL	Status: FINAL	Sheet 1 of 1							
	Easting: 497564.5	Northing: 105613.1	Ground Level: 13.56mOD	Plant Used: JCB 3CX	Date Printed: 01/05/2024	Scale: 1:25							
Trial Pit Log			Weather: Warm, dry, clear			Hole Termination:			Stability: Localised spalling				
Samples & In Situ Testing						Strata Details						Water	Backfill
Depths	Sample ID	Test Result	Reduced Level	Depth (m) (Thickness)	Legend	Strata Description							
0.20	ES1	PP=1.1kg/cm2	13.26	(0.30)		Weeds overlying dark brown slightly gravelly silty CLAY with frequent rootlets and roots 1-3mm. TOPSOIL							
0.50 0.50	B1 D1			0.30 (0.40)		Firm orangish brown slightly gravelly sandy silty CLAY with some rootlets. RIVER TERRACE DEPOSITS							
1.00	D2		12.86	0.70		Orangish brown slightly sandy gravelly silty CLAY with frequent black ferruginous fragments. Sand is fine to coarse. Gravel is fine to coarse sub angular flint. RIVER TERRACE DEPOSITS							
1.30	ES2			(1.20)		Cream very sandy very gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse sub angular flint and fine sub rounded chalk. RIVER TERRACE DEPOSITS							
1.50	D3												
2.00	D4		11.66	1.90	(1.10)						End of Trial Pit at 3.00m		
2.50	D5	10.56	3.00										
3.00	D6												
Dimensions:						Photo:							
Final Depth:	3.00m					 PhotoofPit							
Final Width:	0.60m												
Final Length:	2.40m												
Remarks						 PhotoofSpoil							
Water Strikes (mbgl)													
Depth Strike		Rose to		Time Elapsed (mins)									
2.40		2.50		5									

19th March 2021

Our ref: GE19427/RG01/210319

Darren Harman
LandQuest UK (Southern) Limited

Dear Darren,



RE: Yapton Lane, Walberton – Trial Pit Soakage Testing

Geo-Environmental Services Limited (Geo-Environmental) was instructed by LandQuest UK (Southern) Limited to undertake trial pit soakage testing at the above named site.

We are pleased to present the results of the soakage testing undertaken. The soakage tests were undertaken broadly in accordance with BRE Digest 365 'Soakaway Design' BRE, with three testing cycles completed where possible.

Scope of Works

The following scope of works was agreed with the Client:

- Excavation of 7No. trial pits to a depth of between 0.6m and 1.2m bgl.
- Undertake soakage testing in general accordance with BRE365 within each of the trial pits.

The intrusive investigation was undertaken on 17th March 2021 with the works supervised by a Geo-Environmental Engineer.

Site Description

The site comprised part of an open agricultural field which was generally flat and level and planted with crops at the time of the investigation.

The site was bounded by mature trees and hedgerows and contained a single mature tree towards the southern boundary.

The area surrounding the site comprised commercial and residential properties to the north, a nursery to the south and open fields to the east and west.

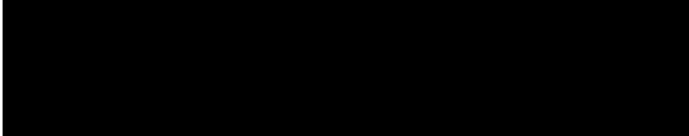
The site was accessed via a locked gate in the north east corner of the site

Ground Conditions

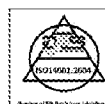
The ground conditions encountered during the investigation were broadly consistent with the published sequence of strata. In summary, ground conditions typically comprised a mantle of Topsoil overlying soils inferred to be of the River Terrace Deposits.

Topsoil was encountered in all locations to a depth of 0.30m bgl and typically consisted of brown slightly sandy slightly gravelly clay or silty slightly gravelly clay with frequent rootlets.

Geo-Environmental Services Ltd



9GL



Geo-Environmental Services Ltd incorporated in England number 3214980 VAT number 679544479

Soils inferred to be the River Terrace Deposits were encountered from beneath the Topsoil to depths of 1.2m bgl (maximum depth of investigation). The deposits typically comprised clay with low to moderate proportions of sand and gravel. The colouration of these deposits was typically brown, yellowish brown and cream. Clays were noted to range in consistency between soft and very stiff. Groundwater was not encountered within any trial pits.

Figure 2 presents the trial pit locations. For more a detailed description of the ground conditions, reference should be made to the exploratory hole logs enclosed in Appendix A.

Soakage Testing

The soakage testing was undertaken in general accordance with BRE Digest 365, where possible, with three filling and inundation cycles completed within two trial pits (TP1 and TP2) with an infiltration rate calculated for each test using the standard methodology contained in BRE Digest 365 'Soakaway Design'. The results of the testing undertaken in investigation locations TP1-TP7 are summarised in Table 1 below with the results presented in Appendix B.

Location	Test Number	Depth of Pit (m bgl)	Calculated infiltration rate (m/s)
TP1	1	0.63	5.3×10^{-5}
	2	0.63	4.9×10^{-5}
	3	0.63	4.0×10^{-5}
TP2	1	1.05	7.4×10^{-5}
	2	1.05	3.2×10^{-5}
	3	1.05	3.9×10^{-5}
TP3	1	0.68	1.6×10^{-5}
	2	0.68	Insufficient fall in water to complete test
	-	-	-
TP4	1	0.67	7.8×10^{-5}
	2	0.67	6.5×10^{-5}
	-	-	-
TP5	1	0.77	2.0×10^{-5}
	2	0.77	Insufficient fall in water to complete test
	-	-	-
TP6	1	0.84	Insufficient fall in water to complete test
	-	-	-
	-	-	-
TP7	1	0.83	1.2×10^{-5}
	-	-	-
	-	-	-

Table 1 Summary of Soakage Testing Results

Whilst soakage testing has been undertaken and it was possible to derive infiltration rates for many of the test cycles. Three complete cycles could only be achieved in two of the seven trial pits, with the second test cycle in several pits failing to achieve sufficient fall in water level to complete that test cycle. Additionally, it was not possible to complete the first test cycle in TP6. Where infiltration rates have been derived, the values are considered potentially uncharacteristically high for the soils encountered and thus might reflect subtle variations in composition such as sand or gravel content, soil layering or the like. It may also be possible that, if present, field drainage/land drains could have provided some level of assistance in draining water from the pits albeit that no land drains were encountered within the trial pits. It is considered potentially unrealistic to rely upon the

results of these soakage tests as characteristic of the potential for infiltration of storm water during peak storm events which could result in an overly optimistic design. As such, these results should be used with due caution.

Winter groundwater monitoring

Groundwater monitoring was commenced in November 2020 is ongoing on the site at the time of writing. From the monitoring data acquired to date, groundwater appeared to reach a seasonal shallow depth around early February 2021, with groundwater at depths as shallow as 1.05m bgl recorded in WS04. Monitoring records to date are presented in Table 2 below.

Location	Date	GWL (m bgl)
WS01	30/11/20	2.70
	14/12/20	2.45
	05/01/21	2.40
	19/01/21	2.40
	01/02/21	1.90
	15/02/21	2.25
	02/03/21	2.49
	17/03/21	2.54
WS02	30/11/20	2.80
	14/12/20	2.50
	05/01/21	2.40
	19/01/21	2.45
	01/02/21	1.63
	15/02/21	Dry at 1.70
	02/03/21	Dry at 1.70
	17/03/21	Dry at 1.70
WS03	30/11/20	Dry at 1.70
	14/12/20	Dry at 1.70
	05/01/21	Dry at 1.70
	19/01/21	Dry at 1.70
	01/02/21	1.15
	15/02/21	1.38
	02/03/21	1.63
	17/03/21	1.64
WS04	30/11/20	1.80
	14/12/20	1.50
	05/01/21	1.60
	19/01/21	1.45
	01/02/21	1.05
	15/02/21	1.35
	02/03/21	1.50
	17/03/21	1.55
WS05	30/11/20	2.25
	14/12/20	1.90
	05/01/21	1.90
	19/01/21	1.85
	01/02/21	1.61
	15/02/21	1.90
	02/03/21	2.15
	17/03/21	2.16



Location	Date	GWL (m bgl)
WS06	30/11/20	2.70
	14/12/20	1.40
	05/01/21	1.40
	19/01/21	1.35
	01/02/21	1.50
	15/02/21	1.80
	02/03/21	2.06
	17/03/21	2.05
WS07	30/11/20	2.20
	14/12/20	2.00
	05/01/21	2.00
	19/01/21	1.95
	01/02/21	2.00
	15/02/21	2.35
	02/03/21	2.60
	17/03/21	2.59

Table 2 Summary of groundwater monitoring records to date

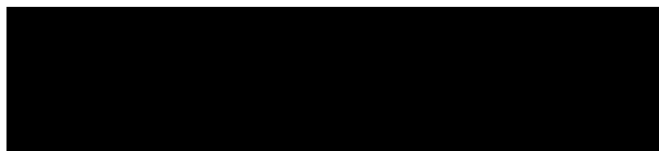
The groundwater monitoring data indicate that, in some areas of the site, there could be limited unsaturated zone into which any soakaway, or similar infiltration device could drain and this could further limit the viability and operability of soakaways on this site.

Closure

We trust we have interpreted your request correctly and provided sufficient information for your current requirements. If you have any questions or queries in relation the information provided at this stage, please do not hesitate to contact the undersigned.

Yours sincerely

For and on Behalf of Geo-Environmental

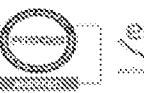
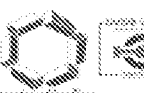


ROBERT GARDNER BSc (Hons), MSc, FGS

Consultant Engineer

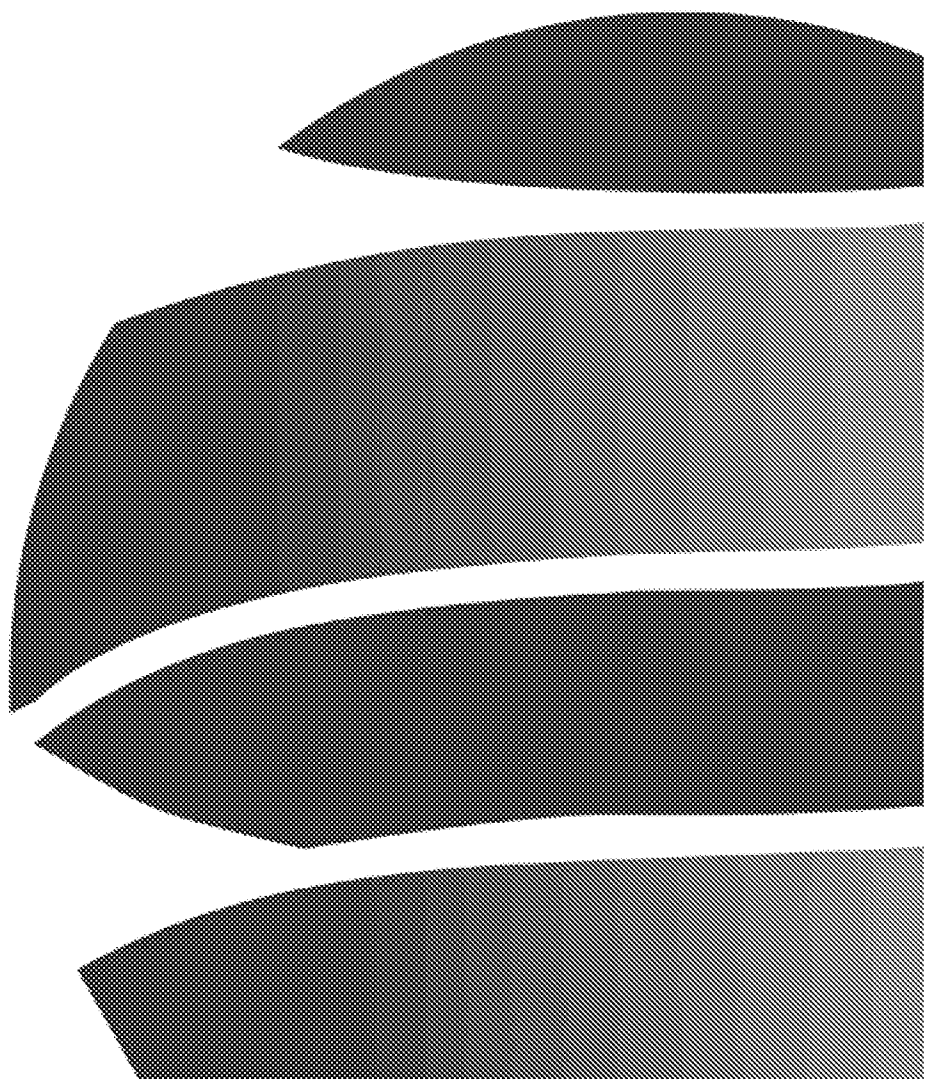


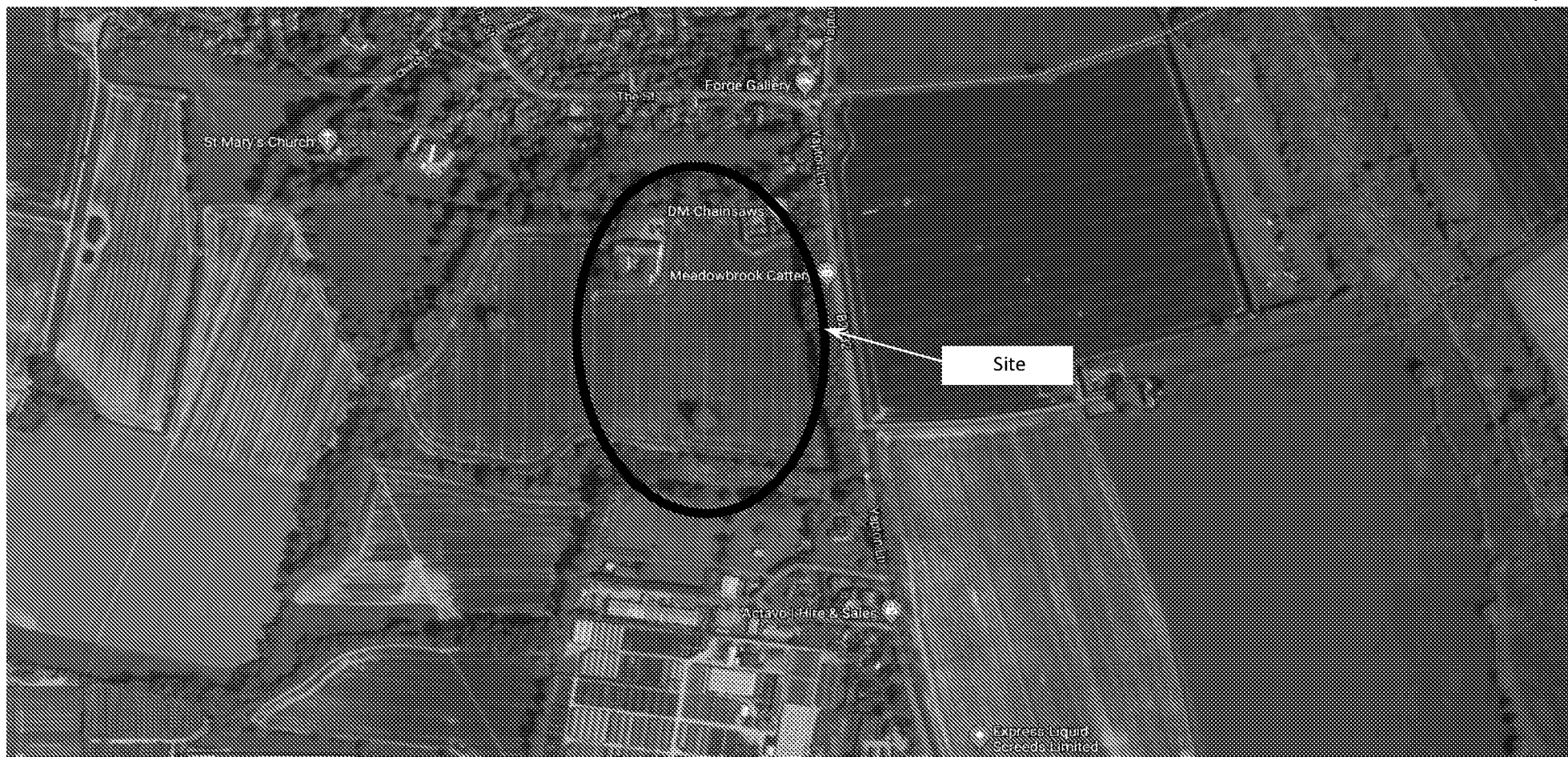
- Enc Figure 1 – Site Location Plan
 Figure 2 – Exploratory Hole Location Plan
 Appendix A – Exploratory Hole Logs
 Appendix B – Soakage Testing Results





FIGURES

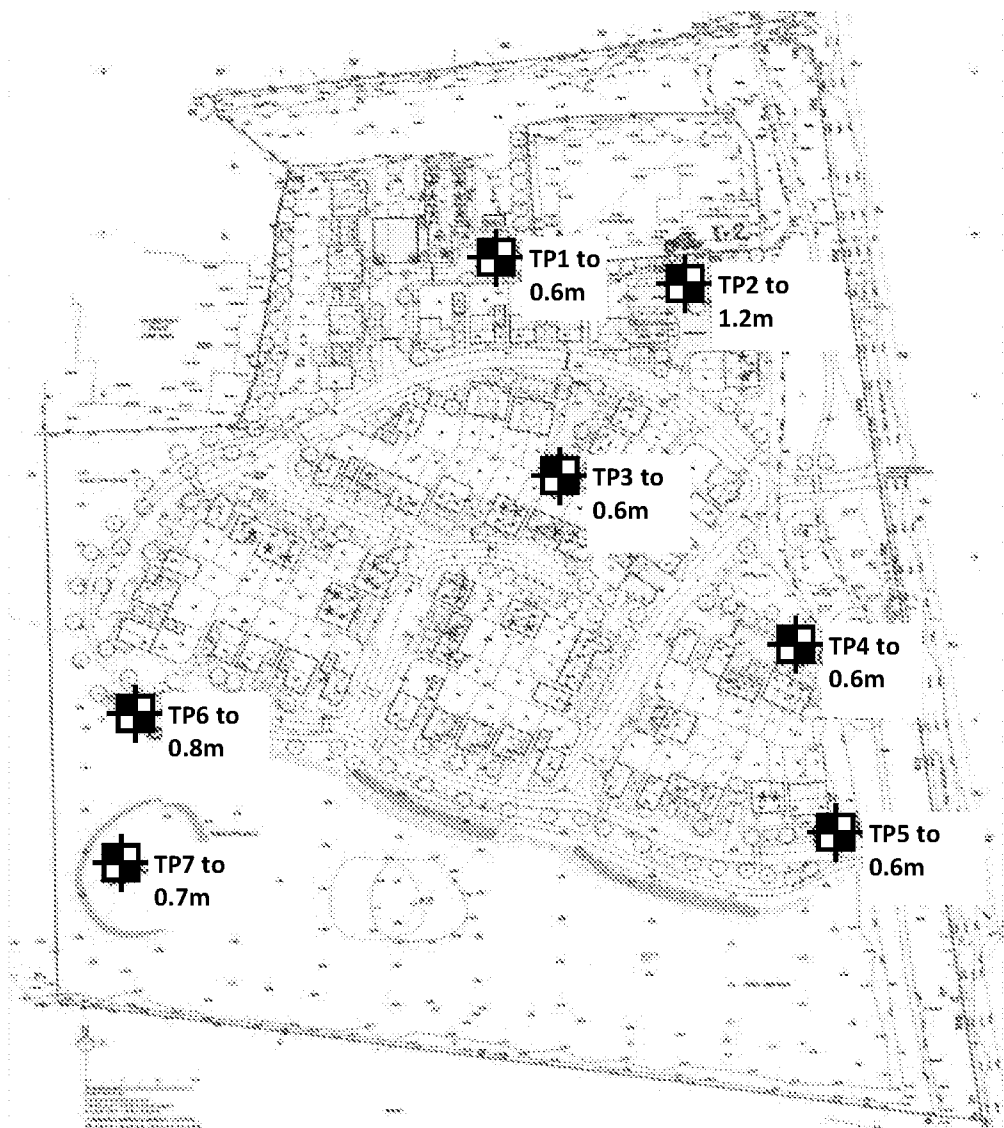




Project:	Yapton Lane, Walberton BN18 0AS			Title	Site Location (Google Image)	
Client:	LandQuest UK			Geo-Environmental Services Ltd Unit 7 Danworth Farm, Cuckfield Road Hurstpierpoint, West Sussex BN6 9GL +44(0)1273 832972 www.gesl.net  Geo-Environmental		
Ref No:	GE19427	Revision:	0			
Drawn:	LL	Date:	19/11/2020			
Figure:	1	Scale:	NTS			



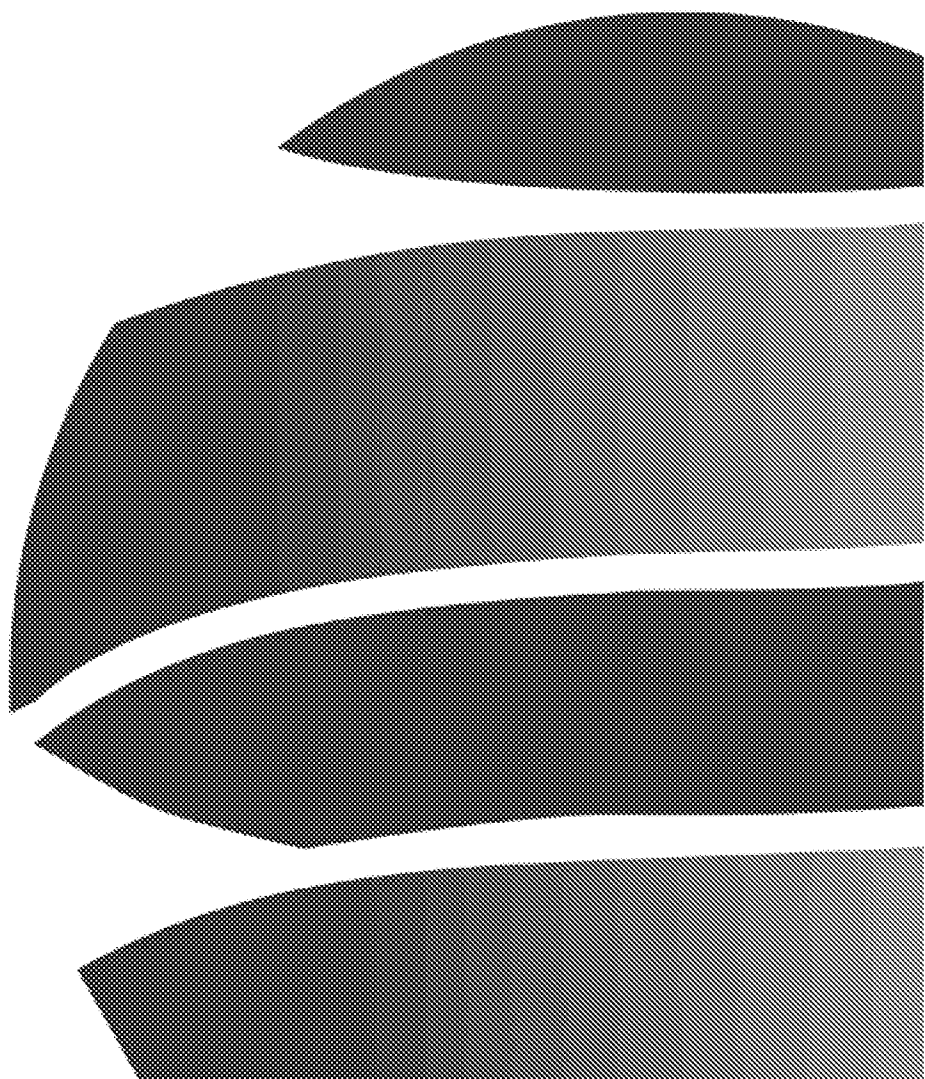
Geo-Environmental

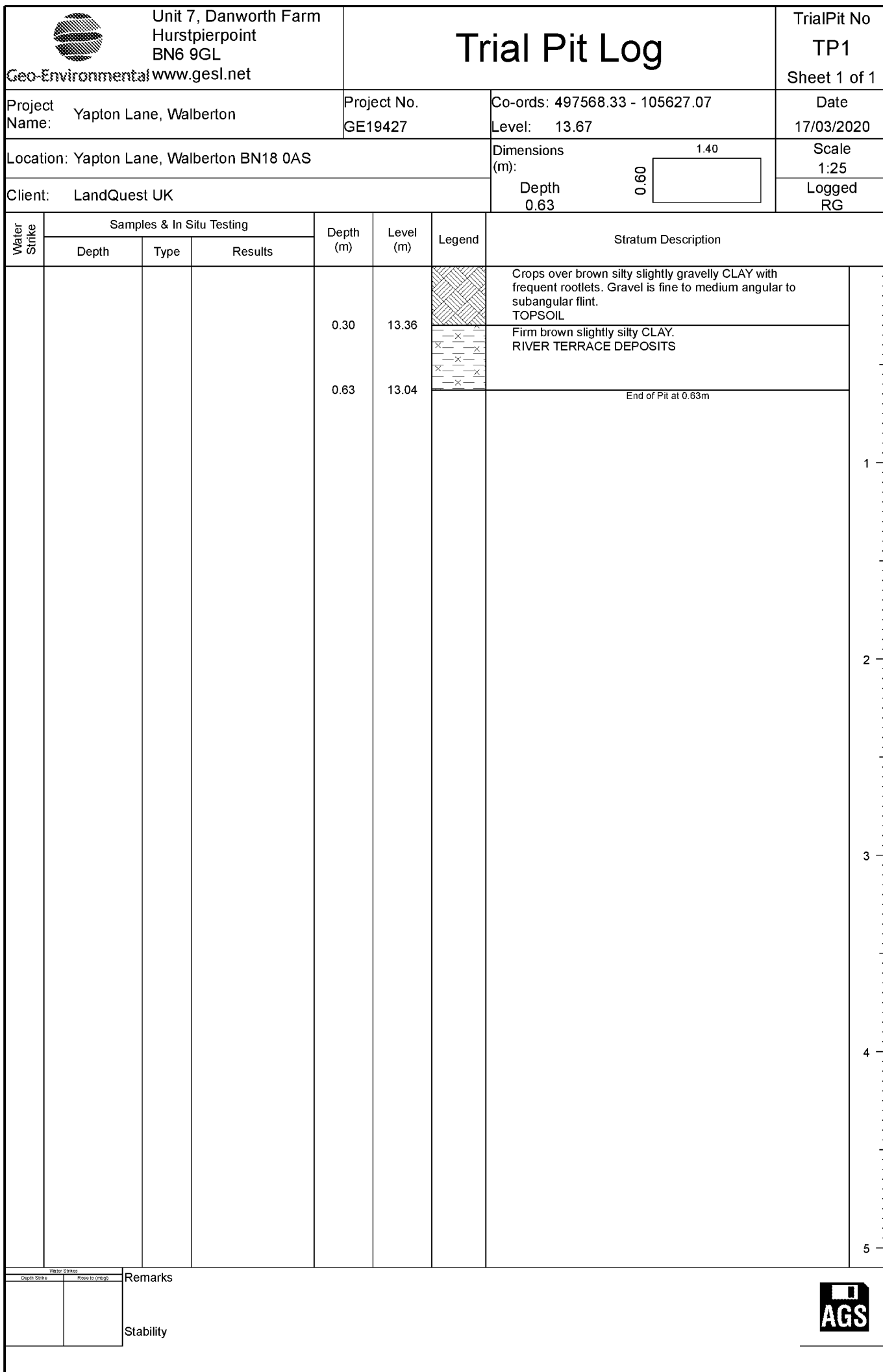


Project:	Yapton Lane, Walberton BN18 OAS			Title	Proposed Exploratory Hole Location (Soakage Testing)	
Client:	LandQuest UK			Geo-Environmental Services Ltd Unit 7 Danworth Farm, Cuckfield Road Hurstpierpoint, West Sussex BN6 9GL +44(0)1273 832972 www.gesl.net		 Geo-Environmental
Ref No:	GE19427	Revision:	0			
Drawn:	LL	Date:	16/03/2021			
Figure:	2	Scale:	NTS			



APPENDIX - I - Exploratory Hole Logs







Unit 7, Danworth Farm
Hurstpierpoint
BN6 9GL

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Trial Pit Log

Trial Pit No

TP2

Sheet 1 of 1

Project Name: Yapton Lane, Walberton

Project No.
GE19427

Co-ords: 497626.49 - 105630.44
Level: 13.95

Date
17/03/2020

Location: Yapton Lane, Walberton BN18 0AS

Dimensions (m): 1.50

Depth
1.05

0.60

Scale
1:25

Logged
RG

Client: LandQuest UK

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				0.30	13.65		Crops over brown silty slightly gravelly CLAY with frequent rootlets. Gravel is fine to medium angular to subangular flint. TOPSOIL
				1.10	12.85		Firm brown slightly silty CLAY. RIVER TERRACE DEPOSITS
				1.20	12.75		Stiff brown, light brown, yellowish brown and cream silty sandy very gravelly CLAY. Sand is fmc of flint and chalk. Gravel is fmc angular to subangular flint. RIVER TERRACE DEPOSITS
							End of Pit at 1.05m

Remarks Base of trial pit partially collapsed near base to 1.05m bgl.

Stability





Unit 7, Danworth Farm
Hurstpierpoint
BN6 9GL

Geo-Environmental www.gesl.net

Trial Pit Log

Trial Pit No

TP3

Sheet 1 of 1

Project Name: Yapton Lane, Walberton

Project No.
GE19427

Co-ords: 497565.16 - 105566.53
Level: 13.13

Date
17/03/2020

Location: Yapton Lane, Walberton BN18 0AS

Dimensions (m): 1.10

Depth
0.68

0.60

Scale
1:25

Logged
RG

Client: LandQuest UK

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				0.30	12.83		Crops over brown silty slightly gravelly CLAY with frequent rootlets. Gravel is fine to medium angular to subangular flint. TOPSOIL
				0.68	12.45		Stiff brown, light brown, yellowish brown and cream silty sandy very gravelly CLAY. Sand is fmc of flint and chalk. Gravel is fmc angular to subangular flint. RIVER TERRACE DEPOSITS
							End of Pit at 0.68m

Water Strike		Remarks
Depth Strike	Notes to (relog)	
Stability		





Unit 7, Danworth Farm
Hurstpierpoint
BN6 9GL

Geo-Environmental www.gesl.net

Trial Pit Log

Trial Pit No

TP4

Sheet 1 of 1

Project Name: Yapton Lane, Walberton

Project No.
GE19427

Co-ords: 497632.20 - 105535.16
Level:

Date
17/03/2020

Location: Yapton Lane, Walberton BN18 0AS

Dimensions (m): 1.20

Depth
0.67

0.60

Scale
1:25

Logged
RG

Client: LandQuest UK

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				0.30			Crops over brown silty slightly gravelly CLAY with frequent rootlets. Gravel is fine to medium angular to subangular flint. TOPSOIL
				0.67			Firm becoming stiff brown slightly gravelly CLAY. Gravel is fine angular to subangular flint. RIVER TERRACE DEPOSITS
							End of Pit at 0.67m

Water Strike	Remarks
Depth Strike	Notes to (re)log
	Stability





Unit 7, Danworth Farm
Hurstpierpoint
BN6 9GL

Geo-Environmental www.gesl.net

Trial Pit Log

Trial Pit No

TP5

Sheet 1 of 1

Project Name: Yapton Lane, Walberton

Project No.
GE19427

Co-ords: 497631.94 - 105457.30
Level: 13.17

Date
17/03/2020

Location: Yapton Lane, Walberton BN18 0AS

Dimensions (m): 1.20

Depth
0.77

0.60

Scale
1:25

Logged
RG

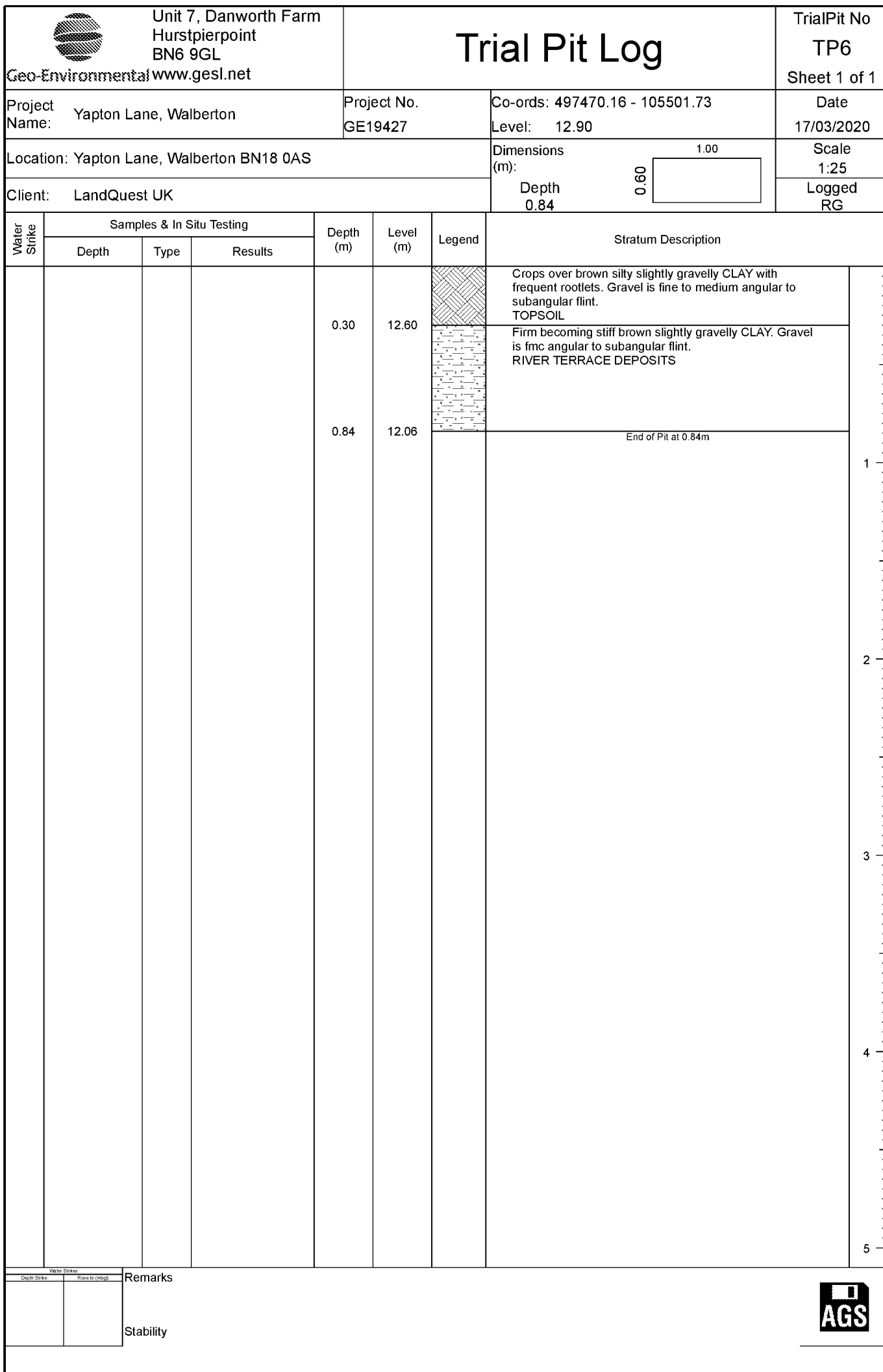
Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				0.30	12.87		Crops over brown silty slightly gravelly CLAY with frequent rootlets. Gravel is fine to medium angular to subangular flint. TOPSOIL
				0.77	12.40		Firm brown slightly silty CLAY. RIVER TERRACE DEPOSITS
							End of Pit at 0.77m

Depth Strike	Notes to (relog)

Remarks

Stability







Unit 7, Danworth Farm
Hurstpierpoint
BN6 9GL

Geo-Environmental www.gesl.net

Trial Pit Log

Trial Pit No

TP7

Sheet 1 of 1

Project Name: Yapton Lane, Walberton

Project No.
GE19427

Co-ords: 497468.87 - 105452.21
Level: 12.54

Date
17/03/2020

Location: Yapton Lane, Walberton BN18 0AS

Dimensions (m): 1.30

Depth
0.83

0.60

Scale
1:25

Logged
RG

Client: LandQuest UK

Water Strike	Samples & In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description
	Depth	Type	Results				
				0.30	12.24		Crops over brown silty slightly gravelly CLAY with frequent rootlets. Gravel is fine to medium angular to subangular flint. TOPSOIL
				0.83	11.71		Firm becoming stiff brown slightly gravelly CLAY. Gravel is fmc angular to subangular flint RIVER TERRACE DEPOSITS
							End of Pit at 0.83m

Water Strike	
Depth Strike	Notes to (relog)

Remarks

Stability





APPENDIX - . - Soakage Testing Results

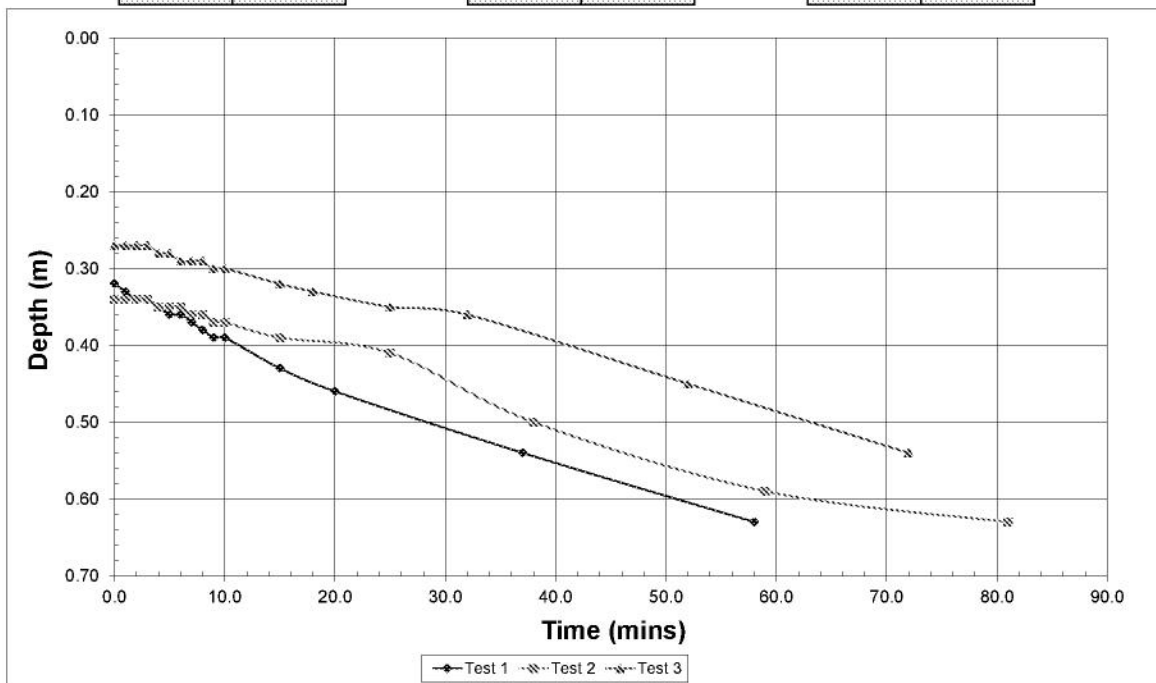
 Geo-Environmental	Soakaway Test Results (after BRE Digest 365)	Geo-Environmental Services Limited Unit 7 Danworth Farm, Cuckfield Road, Hurstpierpoint, West Sussex BN6 9GL
Project Name : Yapton Lane, Walberton Client : LandQuest UK		Job No. : GE19427 Date : 17/03/2021

Pit reference	TP1
Pit depth (m)	0.63
Pit width (m)	0.60
Pit length (m)	1.40
Depth to standing water (m)	

Test 1	
Time (min)	Depth (m)
0.0	0.32
1.0	0.33
2.0	0.34
3.0	0.34
4.0	0.35
5.0	0.36
6.0	0.36
7.0	0.37
8.0	0.38
9.0	0.39
10.0	0.39
15.0	0.43
20.0	0.46
37.0	0.54
56.0	0.63

Test 2	
Time (min)	Depth (m)
0.0	0.34
1.0	0.34
2.0	0.34
3.0	0.34
4.0	0.35
5.0	0.35
6.0	0.35
7.0	0.36
8.0	0.36
9.0	0.37
10.0	0.37
15.0	0.39
25.0	0.41
38.0	0.50
59.0	0.59
81.0	0.63

Test 3	
Time (min)	Depth (m)
0.0	0.27
1.0	0.27
2.0	0.27
3.0	0.27
4.0	0.28
5.0	0.28
6.0	0.29
7.0	0.29
8.0	0.29
9.0	0.30
10.0	0.30
15.0	0.32
18.0	0.33
25.0	0.35
32.0	0.36
52.0	0.45
72.0	0.54



Max. depth (m)	0.63	0.63	0.63
Effective depth (m)	0.31	0.29	0.36
75% effective depth (m)	0.40	0.41	0.36
50% effective depth (m)	0.48	0.49	0.45
25% effective depth (m)	0.55	0.56	0.54
t75 (min)	12.00	25.00	32.00
t50 (min)	26.00	38.00	52.00
t25 (min)	40.00	54.00	72.00
Vp 75-25	0.13	0.12	0.15
ap 50	1.46	1.42	1.56
tp 75-25	28.00	29.00	40.00

Soil infiltration rate (m/s)	5.3E-05	4.9E-05	4.0E-05
Soil infiltration rate (mm/hr)	1.91E+02	1.77E+02	1.45E+02

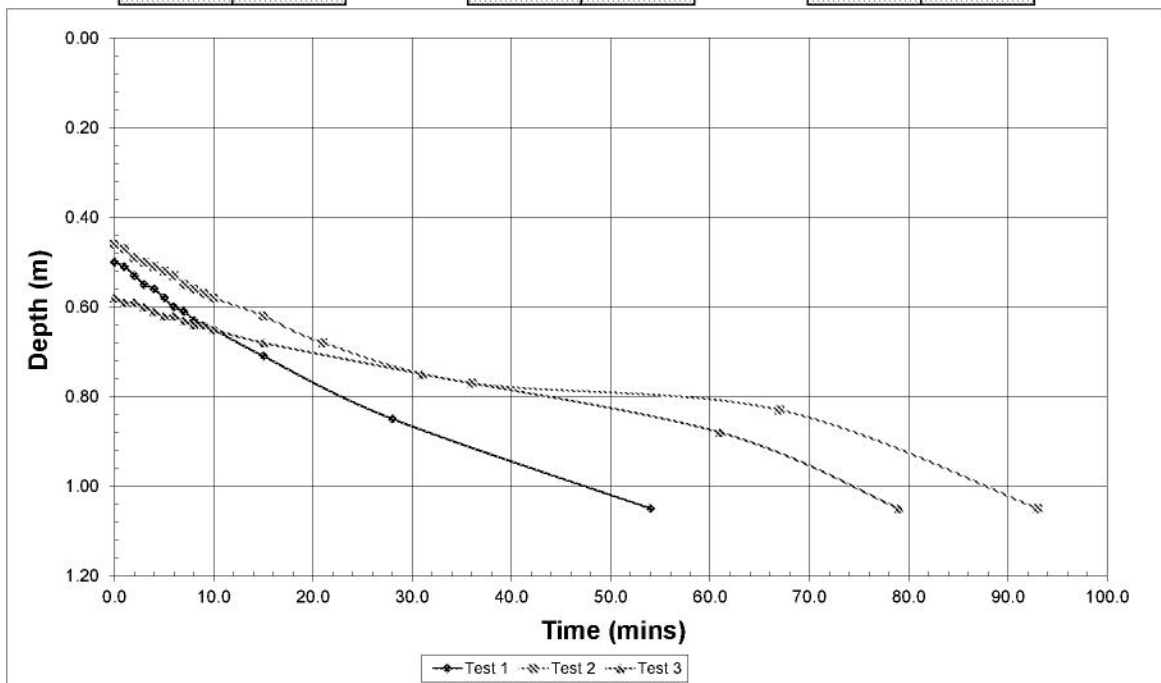
 Geo-Environmental	Soakaway Test Results (after BRE Digest 365)	Geo-Environmental Services Limited Unit 7 Danworth Farm, Cuckfield Road, Hurstpierpoint, West Sussex BN6 9GL 
Project Name : Yapton Lane, Walberton Client : LandQuest UK		Job No. : GE19427 Date : 17/03/2021

Pit reference	TP2
Pit depth (m)	1.05
Pit width (m)	0.60
Pit length (m)	1.50
Depth to standing water (m)	

Test 1	
Time (min)	Depth (m)
0.0	0.50
1.0	0.51
2.0	0.53
3.0	0.55
4.0	0.56
5.0	0.58
6.0	0.60
7.0	0.61
8.0	0.63
9.0	0.64
10.0	0.65
15.0	0.71
28.0	0.85
54.0	1.05

Test 2	
Time (min)	Depth (m)
0.0	0.46
1.0	0.47
2.0	0.49
3.0	0.50
4.0	0.51
5.0	0.52
6.0	0.53
7.0	0.55
8.0	0.56
9.0	0.57
10.0	0.58
15.0	0.62
21.0	0.66
36.0	0.77
67.0	0.83
93.0	1.05

Test 3	
Time (min)	Depth (m)
0.0	0.58
1.0	0.59
2.0	0.59
3.0	0.60
4.0	0.61
5.0	0.62
6.0	0.62
7.0	0.63
8.0	0.64
9.0	0.64
10.0	0.65
15.0	0.68
31.0	0.75
61.0	0.88
79.0	1.05



Max. depth (m)	1.05	1.05	1.05
Effective depth (m)	0.55	0.59	0.47
75% effective depth (m)	0.64	0.61	0.70
50% effective depth (m)	0.78	0.76	0.82
25% effective depth (m)	0.91	0.90	0.93
t75 (min)	9.00	15.00	20.00
t50 (min)	20.00	36.00	50.00
t25 (min)	36.00	64.00	68.00
Vp 75-25	0.25	0.27	0.21
ap 50	2.055	2.139	1.887
tp 75-25	27.00	49.00	48.00

Soil infiltration rate (m/s)	7.4E-05	4.2E-05	3.9E-05
Soil infiltration rate (mm/hr)	2.68E+02	1.52E+02	1.40E+02

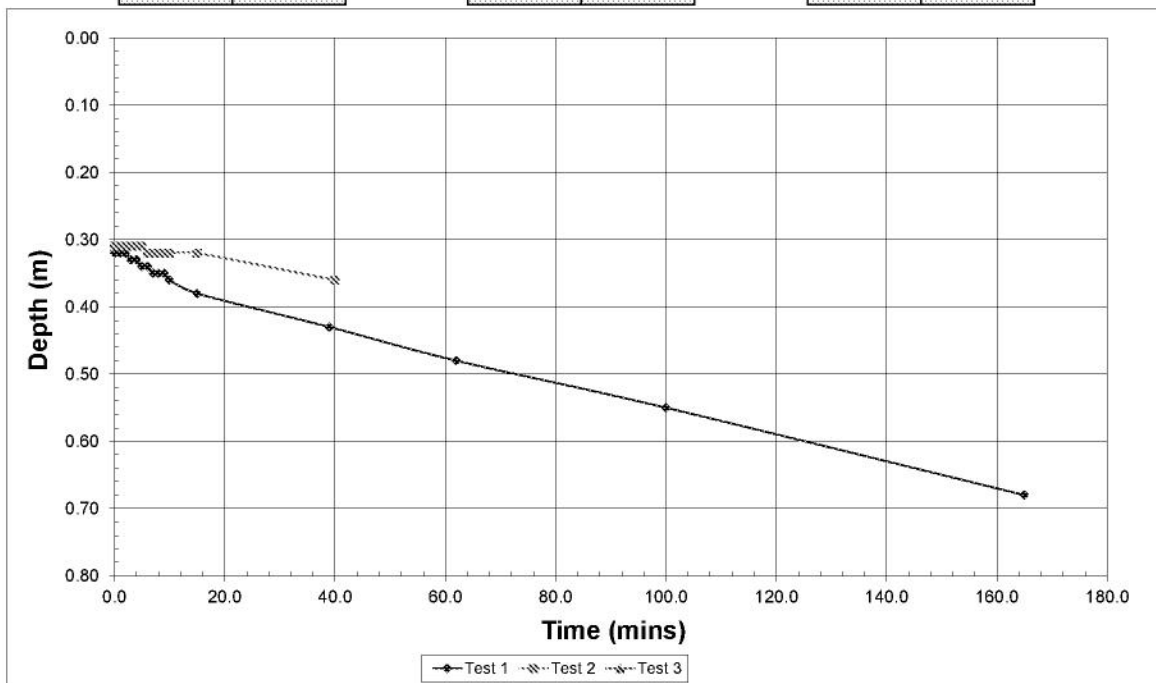
 Geo-Environmental	Soakaway Test Results (after BRE Digest 365)	Geo-Environmental Services Limited Unit 7 Danworth Farm, Cuckfield Road, Hurstpierpoint, West Sussex BN6 9GL	
Project Name : Yapton Lane, Walberton		Job No. : GE19427	
Client : LandQuest UK		Date : 17/03/2021	

Pit reference	TP3
Pit depth (m)	0.68
Pit width (m)	0.60
Pit length (m)	1.10
Depth to standing water (m)	

Test 1	
Time (min)	Depth (m)
0.0	0.32
1.0	0.32
2.0	0.32
3.0	0.33
4.0	0.33
5.0	0.34
6.0	0.34
7.0	0.35
8.0	0.35
9.0	0.35
10.0	0.36
15.0	0.38
39.0	0.43
62.0	0.48
100.0	0.55
165.0	0.68

Test 2	
Time (min)	Depth (m)
0.0	0.31
1.0	0.31
2.0	0.31
3.0	0.31
4.0	0.31
5.0	0.31
6.0	0.32
7.0	0.32
8.0	0.32
9.0	0.32
10.0	0.32
15.0	0.32
40.0	0.36

Test 3	
Time (min)	Depth (m)



Max. depth (m)	0.68	0.68	0.68
Effective depth (m)	0.36	0.37	0.68
75% effective depth (m)	0.41	0.40	0.17
50% effective depth (m)	0.50	0.50	0.34
25% effective depth (m)	0.59	0.59	0.51
t75 (min)	28.00		
t50 (min)	72.00		
t25 (min)	124.00		
Vp 75-25	0.12	0.12	0.22
ap 50	1.272	1.289	1.816
tp 75-25	96.00	0.00	0.00

Soil infiltration rate (m/s)	1.6E-05	
Soil infiltration rate (mm/hr)	5.84E+01	

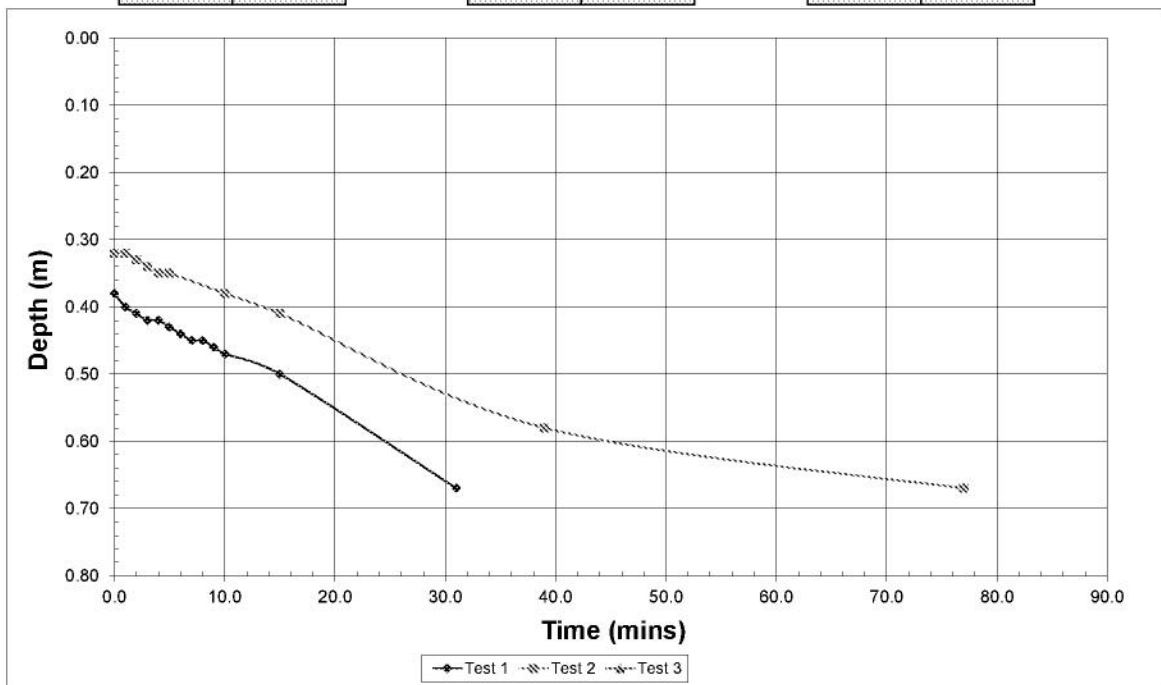
 Geo-Environmental	Soakaway Test Results (after BRE Digest 365)	Geo-Environmental Services Limited Unit 7 Danworth Farm, Cuckfield Road, Hurstpierpoint, West Sussex BN6 9GL 
Project Name : Yapton Lane, Walberton Client : LandQuest UK		Job No. : GE19427 Date : 17/03/2021

Pit reference	TP4
Pit depth (m)	0.67
Pit width (m)	0.60
Pit length (m)	1.20
Depth to standing water (m)	

Test 1	
Time (min)	Depth (m)
0.0	0.38
1.0	0.40
2.0	0.41
3.0	0.42
4.0	0.42
5.0	0.43
6.0	0.44
7.0	0.45
8.0	0.45
9.0	0.46
10.0	0.47
15.0	0.50
31.0	0.67

Test 2	
Time (min)	Depth (m)
0.0	0.32
1.0	0.32
2.0	0.33
3.0	0.34
4.0	0.35
5.0	0.35
10.0	0.38
15.0	0.41
39.0	0.58
77.0	0.67

Test 3	
Time (min)	Depth (m)



Max. depth (m)	0.67	0.67	0.67
Effective depth (m)	0.29	0.35	0.67
75% effective depth (m)	0.45	0.41	0.17
50% effective depth (m)	0.53	0.50	0.34
25% effective depth (m)	0.60	0.58	0.50
t75 (min)	7.00	15.00	
t50 (min)	18.00	26.00	
t25 (min)	25.00	39.00	
Vp 75-25	0.10	0.13	0.24
ap 50	1.242	1.35	1.926
tp 75-25	18.00	24.00	0.00

Soil infiltration rate (m/s)	7.8E-05	6.5E-05
Soil infiltration rate (mm/hr)	2.80E+02	2.33E+02

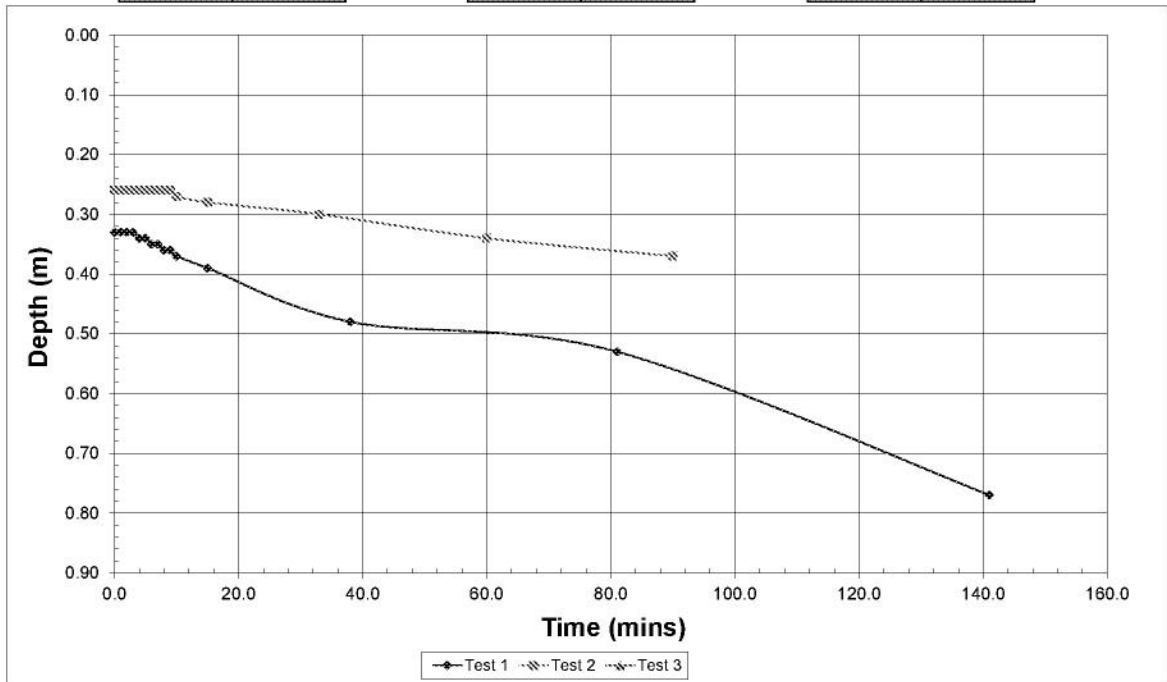
 Geo-Environmental	Soakaway Test Results (after BRE Digest 365)	Geo-Environmental Services Limited Unit 7 Danworth Farm, Cuckfield Road, Hurstpierpoint, West Sussex BN6 9GL	
Project Name : Yapton Lane, Walberton		Job No. : GE19427	
Client : LandQuest UK		Date : 17/03/2021	

Pit reference	TP5
Pit depth (m)	0.77
Pit width (m)	0.60
Pit length (m)	1.20
Depth to standing water (m)	

Test 1	
Time (min)	Depth (m)
0.0	0.33
1.0	0.33
2.0	0.33
3.0	0.33
4.0	0.34
5.0	0.34
6.0	0.35
7.0	0.35
8.0	0.36
9.0	0.36
10.0	0.37
15.0	0.39
38.0	0.48
81.0	0.53
141.0	0.77

Test 2	
Time (min)	Depth (m)
0.0	0.26
1.0	0.26
2.0	0.26
3.0	0.26
4.0	0.26
5.0	0.26
6.0	0.26
7.0	0.26
8.0	0.26
9.0	0.26
10.0	0.27
15.0	0.28
33.0	0.30
60.0	0.34
90.0	0.37

Test 3	
Time (min)	Depth (m)



Max. depth (m)	0.77	0.77	0.77
Effective depth (m)	0.44	0.51	0.77
75% effective depth (m)	0.44	0.39	0.19
50% effective depth (m)	0.55	0.52	0.39
25% effective depth (m)	0.66	0.64	0.58
t75 (min)	28.00		
t50 (min)	88.00		
t25 (min)	116.00		
Vp 75-25	0.18	0.18	0.28
ap 50	1.512	1.638	2.106
tp 75-25	88.00	0.00	0.00

Soil infiltration rate (m/s)	2.0E-05	
Soil infiltration rate (mm/hr)	7.14E+01	