





**APPENDIX B – TOPOGRAPHICAL SITE SURVEY AND INFILTRATION TEST
RESULTS**



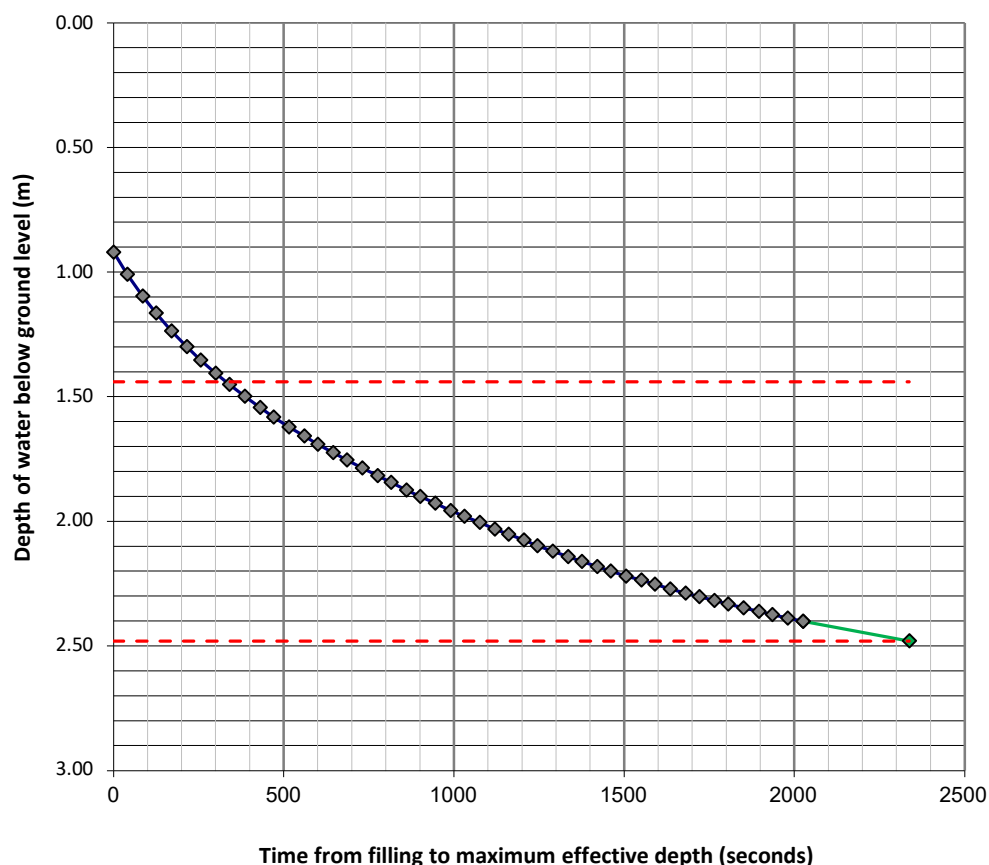
Client Chase New Homes	Project Friends School, Playing Fields	Job No CG/39877	
 <p>GEOTECHNICAL & GEOENVIRONMENTAL CONSULTANCY A PHENNA GROUP COMPANY</p>	Title Exploratory Hole Location Plan – Soakage Pits	Figure 1	
		Drafted by:	JMW
		Checked by:	DRAFT
		Approved by:	DRAFT

DATE:	April 2024	Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey, GU7 1XW Tel: 01483 310600	 GEOTECHNICAL & GEOENVIRONMENTAL CONSULTANCY A PHENNA GROUP COMPANY
PROJECT No:	CG/39877		
PROJECT NAME:	Friends School Playing Field		
CLIENT:	Chase New Homes		
TRIAL PIT ID:	SA01		
TEST NUMBER:	1		


SOAKAWAY TEST - SOIL INFILTRATION RATE/PERMEABILITY

Time Elapsed (s)	Time Elapsed (mins)	Distance to water surface from ground level (m)	Geology of test section		PIT LENGTH (L):	2.40 m
			Structureless Chalk	PIT WIDTH (W):	0.64 m	
				PIT DEPTH (D):	3.00 m	
INPUT PARAMETERS:			P ₂₅ achieved?		Extrapolated	
0	0.0	0.92	Maximum potential volume of water (V)		(m ³)	3.19
40	0.7	1.01	Pit volume between 75% & 25% depths (PV _{25/75}) = L x W x ½ ED		(m ³)	1.60
85	1.4	1.10	Maximum head of water lost during test (ED) = ED - Water depth @ time 0		(m)	2.08
125	2.1	1.16	Surface area of pit up to 50% effective depth (AP ₅₀)		(m ²)	9.68
170	2.8	1.24	Level of water in pit at 75% effective depth (P ₂₅)		(m)	1.44
215	3.6	1.30	Level of water in pit at 25% effective depth (P ₇₅)		(m)	2.48
255	4.3	1.35	Time at 75% effective depth (T ₇₅)		(s)	331
300	5.0	1.41	Time at 25% effective depth (T ₂₅)		(s)	2337
340	5.7	1.45	Time for outflow for 75% and 25% effective depth (T ₇₅ -T ₂₅)		(s)	2006
385	6.4	1.50	INDICATIVE SOIL INFILTRATION RATE (f) = $PV_{75-25} / (AP_{50} \times T_{75} - T_{25})$		(m/s)	8.2E-05
430	7.2	1.54	Test remarks			
470	7.8	1.58				
515	8.6	1.62	Test measurements taken with data loggers. Data has been processed to reduce the number of individual data points (as provided to the left and plotted below).			
560	9.3	1.66	Final data point(s) extrapolated from trend of results.			

600	10.0	1.69	Compiled by:	Adam Cadman	Checked by:	Adam Cadman
645	10.8	1.72	After BRE Digest 365, Soakaway Design, 2016			Page 1 of 1
685	11.4	1.75				
730	12.2	1.79				
775	12.9	1.82				
815	13.6	1.84				
860	14.3	1.87				
900	15.0	1.90				
945	15.8	1.93				
990	16.5	1.96				
1030	17.2	1.98				
1075	17.9	2.00				
1120	18.7	2.03				
1160	19.3	2.05				
1205	20.1	2.08				
1245	20.8	2.10				
1290	21.5	2.12				
1335	22.3	2.14				
1375	22.9	2.16				
1420	23.7	2.18				
1460	24.3	2.20				
1505	25.1	2.22				
1550	25.8	2.24				
1590	26.5	2.25				
1635	27.3	2.27				
1680	28.0	2.29				
1720	28.7	2.30				
1765	29.4	2.32				
1805	30.1	2.33				
1850	30.8	2.35				
1895	31.6	2.36				
1935	32.3	2.37				
1980	33.0	2.39				
2025	33.8	2.40				



Notes on plot: top red line is P₂₅; bottom red line is P₇₅.
 Green data point(s) extrapolated from test results

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PROJECT No:	CG/39877		
PROJECT NAME:	Friends School Playing Field		
CLIENT:	Chase New Homes		
TRIAL PIT ID:	SA01		
TEST NUMBER:	2		

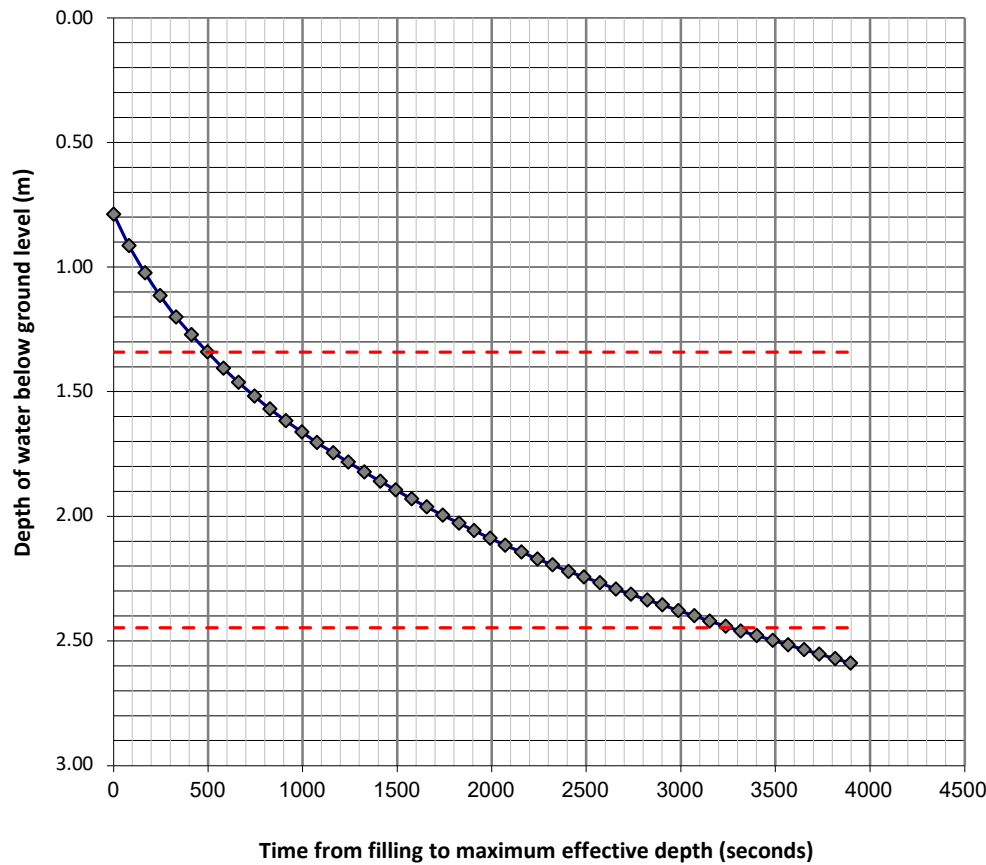
SOAKAWAY TEST - SOIL INFILTRATION RATE/PERMEABILITY

Time Elapsed (s)	Time Elapsed (mins)	Distance to water surface from ground level (m)	Geology of test section		PIT LENGTH (L):	2.40 m
			Structureless Chalk	PIT WIDTH (W):	0.64 m	
				PIT DEPTH (D):	3.00 m	
			INPUT PARAMETERS:		P ₂₅ achieved?	
0	0.0	0.79	Maximum potential volume of water (V)		(m ³)	3.40
80	1.3	0.91	Pit volume between 75% & 25% depths (PV _{25/75}) = L x W x ½ D		(m ³)	1.70
165	2.8	1.02	Maximum depth of water (MDW) = D - Water depth @ time 0		(m)	2.21
245	4.1	1.11	Surface area of pit up to 50% effective depth (AP ₅₀)		(m ²)	8.26
330	5.5	1.20	Level of water in pit at 75% effective depth (P ₂₅)		(m)	1.34
410	6.8	1.27	Level of water in pit at 25% effective depth (P ₇₅)		(m)	2.45
495	8.3	1.34	Time at 75% effective depth (T ₇₅)		(s)	495
580	9.7	1.41	Time at 25% effective depth (T ₂₅)		(s)	3261
660	11.0	1.46	Time for outflow for 75% and 25% effective depth (T ₇₅ -T ₂₅)		(s)	2766
745	12.4	1.52	SOIL INFILTRATION RATE (f) = $PV_{75-25}/(AP_{50} \times T_{75}-T_{25})$		(m/s)	7.4E-05
825	13.8	1.57	Test remarks			
910	15.2	1.62	Test measurements taken with data loggers. Data has been processed to reduce the number of individual data points (as provided to the left and plotted below).			
995	16.6	1.66				


Test measurements taken with data loggers. Data has been processed to reduce the number of individual data points (as provided to the left and plotted below).

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1075	17.9	1.70
1160	19.3	1.74
1240	20.7	1.78
1325	22.1	1.82
1410	23.5	1.86
1490	24.8	1.89
1575	26.3	1.93
1655	27.6	1.96
1740	29.0	2.00
1825	30.4	2.03
1905	31.8	2.06
1990	33.2	2.09
2070	34.5	2.12
2155	35.9	2.14
2240	37.3	2.17
2320	38.7	2.19
2405	40.1	2.22
2485	41.4	2.24
2570	42.8	2.27
2655	44.3	2.29
2735	45.6	2.31
2820	47.0	2.34
2900	48.3	2.36
2985	49.8	2.38
3070	51.2	2.40
3150	52.5	2.42
3235	53.9	2.44
3315	55.3	2.46
3400	56.7	2.48
3485	58.1	2.50
3565	59.4	2.52
3650	60.8	2.54
3730	62.2	2.55
3815	63.6	2.57
3895	64.9	2.59



Notes on plot: top red line is P₂₅; bottom red line is P₇₅.

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PROJECT No:	CG/39877		
PROJECT NAME:	Friends School Playing Field		
CLIENT:	Chase New Homes		
TRIAL PIT ID:	SA01		
TEST NUMBER:	3		

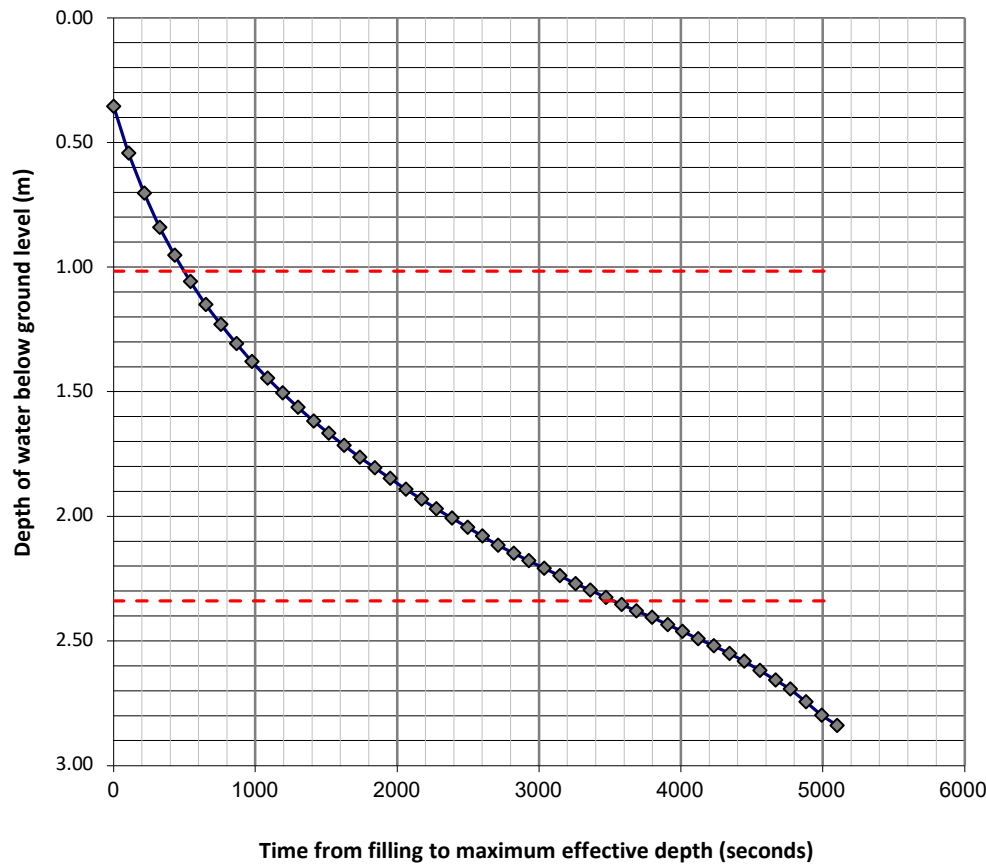
SOAKAWAY TEST - SOIL INFILTRATION RATE/PERMEABILITY

Time Elapsed (s)	Time Elapsed (mins)	Distance to water surface from ground level (m)	Geology of test section	PIT LENGTH (L):	2.40 m
0	0.0	0.35	Structureless Chalk	PIT WIDTH (W):	0.64 m
105	1.8	0.54		PIT DEPTH (D):	3.00 m
215	3.6	0.70		INPUT PARAMETERS:	P ₂₅ achieved?
325	5.4	0.84	Maximum potential volume of water (V)		(m ³) 4.06
430	7.2	0.95	Pit volume between 75% & 25% depths (PV _{25/75}) = L x W x ½ D		(m ³) 2.03
540	9.0	1.06	Maximum depth of water (MDW) = D - Water depth @ time 0		(m) 2.65
650	10.8	1.15	Surface area of pit up to 50% effective depth (AP ₅₀)		(m ²) 9.58
755	12.6	1.23	Level of water in pit at 75% effective depth (P ₂₅)		(m) 1.02
865	14.4	1.31	Level of water in pit at 25% effective depth (P ₇₅)		(m) 2.34
975	16.3	1.38	Time at 75% effective depth (T ₇₅)		(s) 497
1085	18.1	1.45	Time at 25% effective depth (T ₂₅)		(s) 3524
1190	19.8	1.50	Time for outflow for 75% and 25% effective depth (T ₇₅ -T ₂₅)		(s) 3027
1300	21.7	1.56	SOIL INFILTRATION RATE (f) = $PV_{75-25}/(AP_{50} \times T_{75}-T_{25})$		(m/s) 7.0E-05


Test remarks
 Test measurements taken with data loggers. Data has been processed to reduce the number of individual data points (as provided to the left and plotted below).

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1410	23.5	1.62
1515	25.3	1.67
1625	27.1	1.72
1735	28.9	1.76
1840	30.7	1.81
1950	32.5	1.85
2060	34.3	1.89
2170	36.2	1.93
2275	37.9	1.97
2385	39.8	2.01
2495	41.6	2.04
2600	43.3	2.08
2710	45.2	2.12
2820	47.0	2.15
2925	48.8	2.18
3035	50.6	2.21
3145	52.4	2.24
3255	54.3	2.27
3360	56.0	2.30
3470	57.8	2.32
3580	59.7	2.35
3685	61.4	2.38
3795	63.3	2.41
3905	65.1	2.43
4010	66.8	2.46
4120	68.7	2.49
4230	70.5	2.52
4340	72.3	2.55
4445	74.1	2.58
4555	75.9	2.62
4665	77.8	2.66
4770	79.5	2.69
4880	81.3	2.74
4990	83.2	2.80
5100	85.0	2.84



Notes on plot: top red line is P₂₅; bottom red line is P₇₅.

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PROJECT No:	CG/39877		
PROJECT NAME:	Friends School Playing Field		
CLIENT:	Chase New Homes		
TRIAL PIT ID:	SA02		
TEST NUMBER:	1		

SOAKAWAY TEST - SOIL INFILTRATION RATE/PERMEABILITY

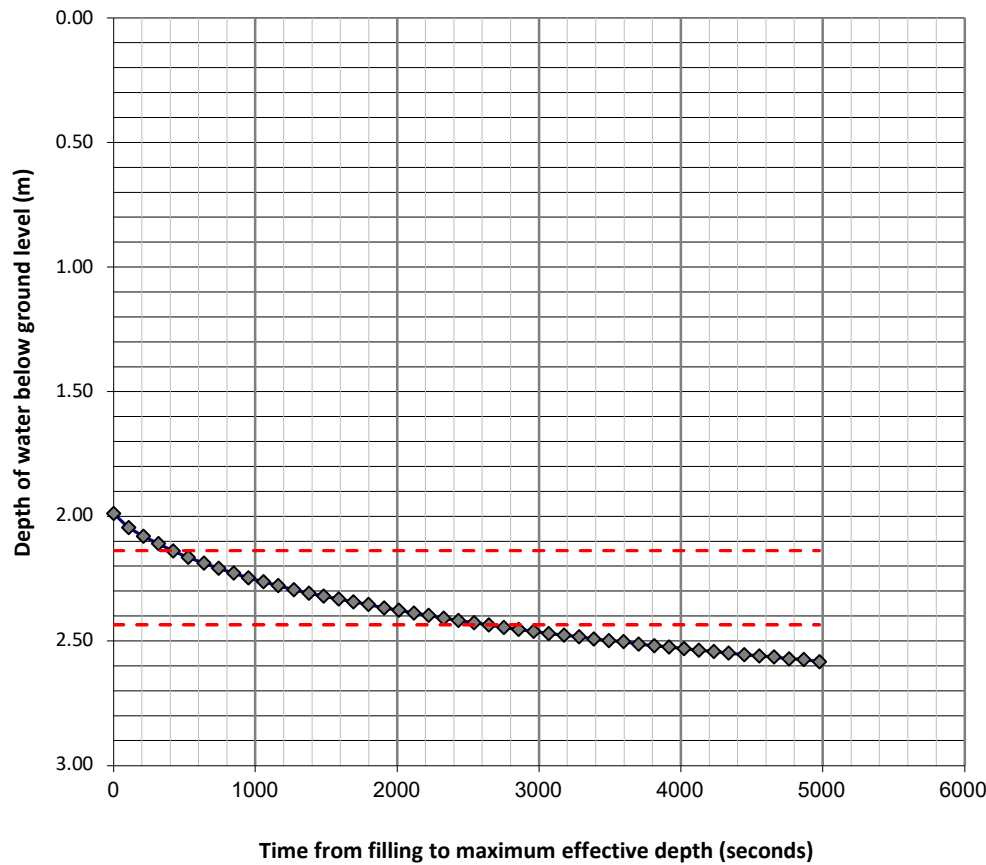
Time Elapsed (s)	Time Elapsed (mins)	Distance to water surface from ground level (m)	Geology of test section		PIT LENGTH (L):	2.00 m	
			Structureless Chalk		PIT WIDTH (W):	0.70 m	
					PIT DEPTH (D):	3.00 m	
			INPUT PARAMETERS:		P ₂₅ achieved?	No	
0	0.0	1.99	Maximum potential volume of water (V)			(m ³)	0.83
105	1.8	2.05	Pit volume between 75% & 25% depths (PV _{25/75}) = L x W x ½ ED			(m ³)	0.42
210	3.5	2.08	Maximum head of water lost during test (ED) = ED - Water depth @ time 0			(m)	0.60
315	5.3	2.11	Surface area of pit up to 50% effective depth (AP ₅₀)			(m ²)	5.26
420	7.0	2.14	Level of water in pit at 75% effective depth (P ₂₅)			(m)	2.14
525	8.8	2.16	Level of water in pit at 25% effective depth (P ₇₅)			(m)	2.43
635	10.6	2.19	Time at 75% effective depth (T ₇₅)			(s)	414
740	12.3	2.21	Time at 25% effective depth (T ₂₅)			(s)	2633
845	14.1	2.23	Time for outflow for 75% and 25% effective depth (T ₇₅ -T ₂₅)			(s)	2218
950	15.8	2.25	INDICATIVE SOIL INFILTRATION RATE (f) = $PV_{75-25}/(AP_{50} \times T_{75}-T_{25})$			(m/s)	3.6E-05
1055	17.6	2.26					
1160	19.3	2.28					
1270	21.2	2.29					

Test remarks

Test measurements taken with data loggers. Data has been processed to reduce the number of individual data points (as provided to the left and plotted below).
 Pit did not drain to 25% effective depth of initial head of water during the duration of the test. Calculations are based on an Effective Depth (ED) for the actual total drop in water level over test period, and are therefore 'indicative' only.

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Notes on plot: top red line is P₂₅; bottom red line is P₇₅.

1375	22.9	2.31
1480	24.7	2.32
1585	26.4	2.33
1690	28.2	2.34
1795	29.9	2.35
1905	31.8	2.37
2010	33.5	2.38
2115	35.3	2.39
2220	37.0	2.40
2325	38.8	2.41
2430	40.5	2.42
2540	42.3	2.43
2645	44.1	2.44
2750	45.8	2.45
2855	47.6	2.45
2960	49.3	2.46
3065	51.1	2.47
3175	52.9	2.48
3280	54.7	2.48
3385	56.4	2.49
3490	58.2	2.50
3595	59.9	2.50
3700	61.7	2.51
3810	63.5	2.52
3915	65.3	2.52
4020	67.0	2.53
4125	68.8	2.54
4230	70.5	2.54
4335	72.3	2.55
4445	74.1	2.56
4550	75.8	2.56
4655	77.6	2.56
4760	79.3	2.57
4865	81.1	2.57
4975	82.9	2.58

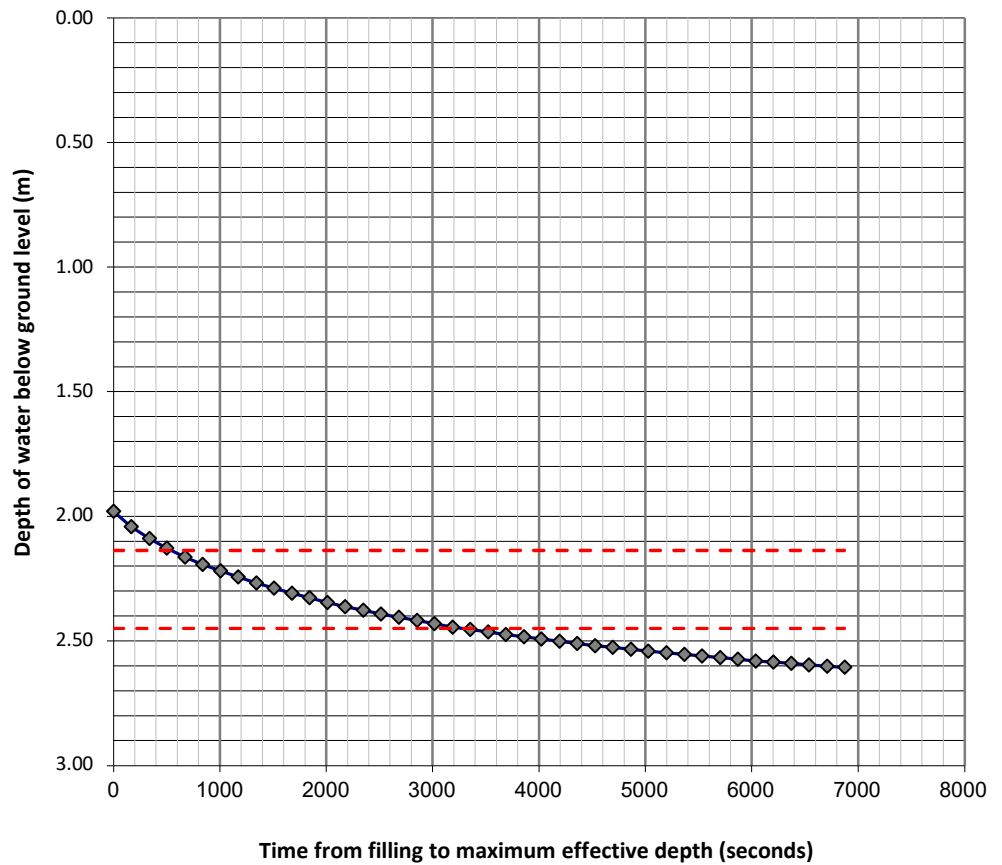
DATE:	April 2024	Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey, GU7 1XW Tel: 01483 310600	 CGL GEOTECHNICAL & GEOENVIRONMENTAL CONSULTANCY <small>A PHENNA GROUP COMPANY</small>
PROJECT No:	CG/39877		
PROJECT NAME:	Friends School Playing Field		
CLIENT:	Chase New Homes		
TRIAL PIT ID:	SA02		
TEST NUMBER:	2		

SOAKAWAY TEST - SOIL INFILTRATION RATE/PERMEABILITY

Time Elapsed (s)	Time Elapsed (mins)	Distance to water surface from ground level (m)	Geology of test section	PIT LENGTH (L):	2.00 m
			Structureless Chalk	PIT WIDTH (W):	0.70 m
0	0.0	1.98		PIT DEPTH (D):	3.00 m
165	2.8	2.04	INPUT PARAMETERS:	P ₂₅ achieved?	No
335	5.6	2.09	Maximum potential volume of water (V)	(m ³)	0.88
500	8.3	2.13	Pit volume between 75% & 25% depths (PV _{25/75}) = L x W x 1/2 ED	(m ³)	0.44
670	11.2	2.16	Maximum head of water lost during test (ED) = ED - Water depth @ time 0	(m)	0.63
835	13.9	2.19	Surface area of pit up to 50% effective depth (AP ₅₀)	(m ²)	5.22
1005	16.7	2.22	Level of water in pit at 75% effective depth (P ₂₅)	(m)	2.14
1170	19.5	2.24	Level of water in pit at 25% effective depth (P ₇₅)	(m)	2.45
1340	22.3	2.27	Time at 75% effective depth (T ₇₅)	(s)	540
1505	25.1	2.29	Time at 25% effective depth (T ₂₅)	(s)	3276
1675	27.9	2.31	Time for outflow for 75% and 25% effective depth (T ₇₅ -T ₂₅)	(s)	2736
1840	30.7	2.33	INDICATIVE SOIL INFILTRATION RATE (f) = $PV_{75-25}/(AP_{50} \times T_{75}-T_{25})$	(m/s)	3.1E-05
2010	33.5	2.35	Test remarks		

Test measurements taken with data loggers. Data has been processed to reduce the number of individual data points (as provided to the left and plotted below).
 Pit did not drain to 25% effective depth of initial head of water during the duration of the test. Calculations are based on an Effective Depth (ED) for the actual total drop in water level over test period, and are therefore 'indicative' only.

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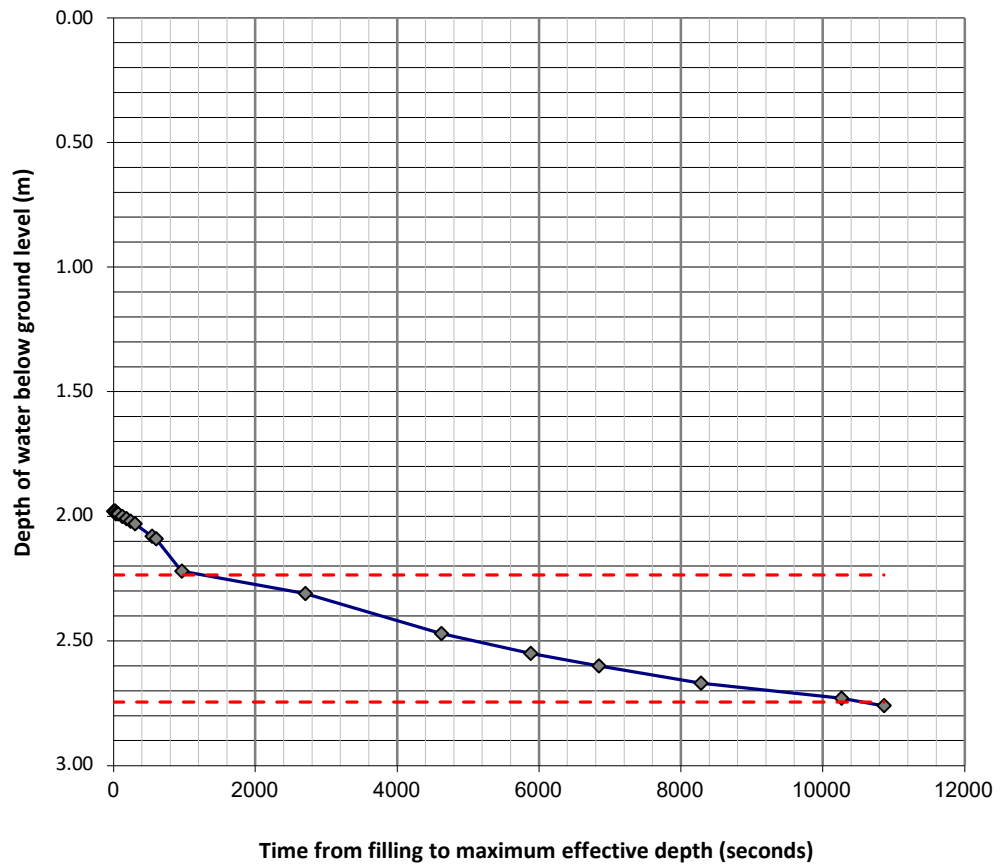


Notes on plot: top red line is P₂₅; bottom red line is P₇₅.


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PROJECT No:	CG/39877		
PROJECT NAME:	Friends School Playing Field		
CLIENT:	Chase New Homes		
TRIAL PIT ID:	SA02		
TEST NUMBER:	3		

SOAKAWAY TEST - SOIL INFILTRATION RATE/PERMEABILITY

Time Elapsed (s)	Time Elapsed (mins)	Distance to water surface from ground level (m)	Geology of test section		PIT LENGTH (L):		2.00 m	
			Structureless Chalk		PIT WIDTH (W):		0.70 m	
			INPUT PARAMETERS:		P ₂₅ achieved?		Yes	
0	0.0	1.98	Maximum potential volume of water (V)		(m ³)	1.43		
10	0.2	1.98	Pit volume between 75% & 25% depths (PV _{25/75}) = L x W x ½ D		(m ³)	0.71		
15	0.3	1.98	Maximum depth of water (MDW) = D - Water depth @ time 0		(m)	1.02		
20	0.3	1.98	Surface area of pit up to 50% effective depth (AP ₅₀)		(m ²)	4.15		
30	0.5	1.99	Level of water in pit at 75% effective depth (P ₂₅)		(m)	2.24		
60	1.0	1.99	Level of water in pit at 25% effective depth (P ₇₅)		(m)	2.75		
120	2.0	2.00	Time at 75% effective depth (T ₇₅)		(s)	1250		
180	3.0	2.01	Time at 25% effective depth (T ₂₅)		(s)	10560		
240	4.0	2.02	Time for outflow for 75% and 25% effective depth (T ₇₅ -T ₂₅)		(s)	9310		
300	5.0	2.03	SOIL INFILTRATION RATE (f) = $PV_{75-25}/(AP_{50} \times T_{75}-T_{25})$		(m/s)	1.8E-05		
540	9.0	2.08	Test remarks					
600	10.0	2.09	Test measurements taken with data loggers.					
960	16.0	2.22	Compiled by:		Adam Cadman	Checked by: Adam Cadman		
2700	45.0	2.31	After BRE Digest 365, Soakaway Design, 2016				Page 1 of 1	
4620	77.0	2.47						
5880	98.0	2.55						
6840	114.0	2.60						
8280	138.0	2.67						
10260	171.0	2.73						
10860	181.0	2.76						



Notes on plot: top red line is P₂₅; bottom red line is P₇₅.

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PROJECT No:	CG/39877		
PROJECT NAME:	Friends School Playing Field		
CLIENT:	Chase New Homes		
TRIAL PIT ID:	SA03		
TEST NUMBER:	1		

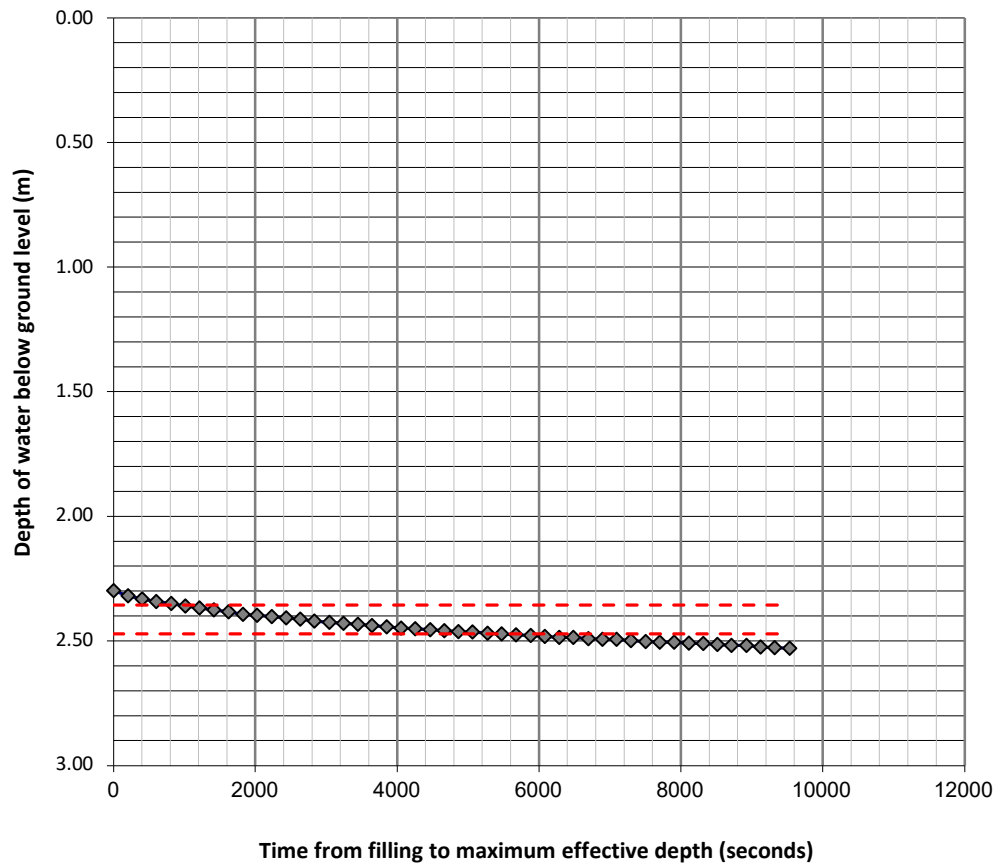
SOAKAWAY TEST - SOIL INFILTRATION RATE/PERMEABILITY

Time Elapsed (s)	Time Elapsed (mins)	Distance to water surface from ground level (m)	Geology of test section		PIT LENGTH (L):		2.00 m
			Structureless Chalk		PIT WIDTH (W):		0.65 m
		PIT DEPTH (D):			3.00 m		
INPUT PARAMETERS:			P ₂₅ achieved?		No		
0	0.0	2.30	Maximum potential volume of water (V)		(m ³)	0.30	
200	3.3	2.32	Pit volume between 75% & 25% depths (PV _{25/75}) = L x W x ½ ED		(m ³)	0.15	
400	6.7	2.33	Maximum head of water lost during test (ED) = ED - Water depth @ time 0		(m)	0.23	
600	10.0	2.34	Surface area of pit up to 50% effective depth (AP ₅₀)		(m ²)	4.41	
810	13.5	2.35	Level of water in pit at 75% effective depth (P ₂₅)		(m)	2.36	
1010	16.8	2.36	Level of water in pit at 25% effective depth (P ₇₅)		(m)	2.47	
1210	20.2	2.37	Time at 75% effective depth (T ₇₅)		(s)	919	
1410	23.5	2.38	Time at 25% effective depth (T ₂₅)		(s)	5407	
1620	27.0	2.38	Time for outflow for 75% and 25% effective depth (T ₇₅ -T ₂₅)		(s)	4489	
1820	30.3	2.39	INDICATIVE SOIL INFILTRATION RATE (f) = $PV_{75-25}/(AP_{50} \times T_{75}-T_{25})$		(m/s)	7.6E-06	
2020	33.7	2.40	Test remarks				
2230	37.2	2.40					
2430	40.5	2.41	Test measurements taken with data loggers. Data has been processed to reduce the number of individual data points (as provided to the left and plotted below). Pit did not drain to 25% effective depth of initial head of water during the duration of the test. Calculations are based on an Effective Depth (ED) for the actual total drop in water level over test period, and are therefore 'indicative' only.				
2630	43.8	2.41					
2830	47.2	2.42					
3040	50.7	2.43					
3240	54.0	2.43					
3440	57.3	2.43					
3640	60.7	2.44					
3850	64.2	2.44					
4050	67.5	2.45					
4250	70.8	2.45					
4460	74.3	2.46					
4660	77.7	2.46					
4860	81.0	2.46					
5060	84.3	2.46					
5270	87.8	2.47					
5470	91.2	2.47					
5670	94.5	2.48					
5880	98.0	2.48					
6080	101.3	2.48					
6280	104.7	2.49					
6480	108.0	2.49					
6690	111.5	2.49					
6890	114.8	2.49					
7090	118.2	2.49					
7290	121.5	2.50					
7500	125.0	2.50					
7700	128.3	2.50					
7900	131.7	2.51					
8110	135.2	2.51					
8310	138.5	2.51					
8510	141.8	2.51					
8710	145.2	2.52					
8920	148.7	2.52					
9120	152.0	2.52					
9320	155.3	2.53					
9530	158.8	2.53					

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Notes on plot: top red line is P₂₅; bottom red line is P₇₅.

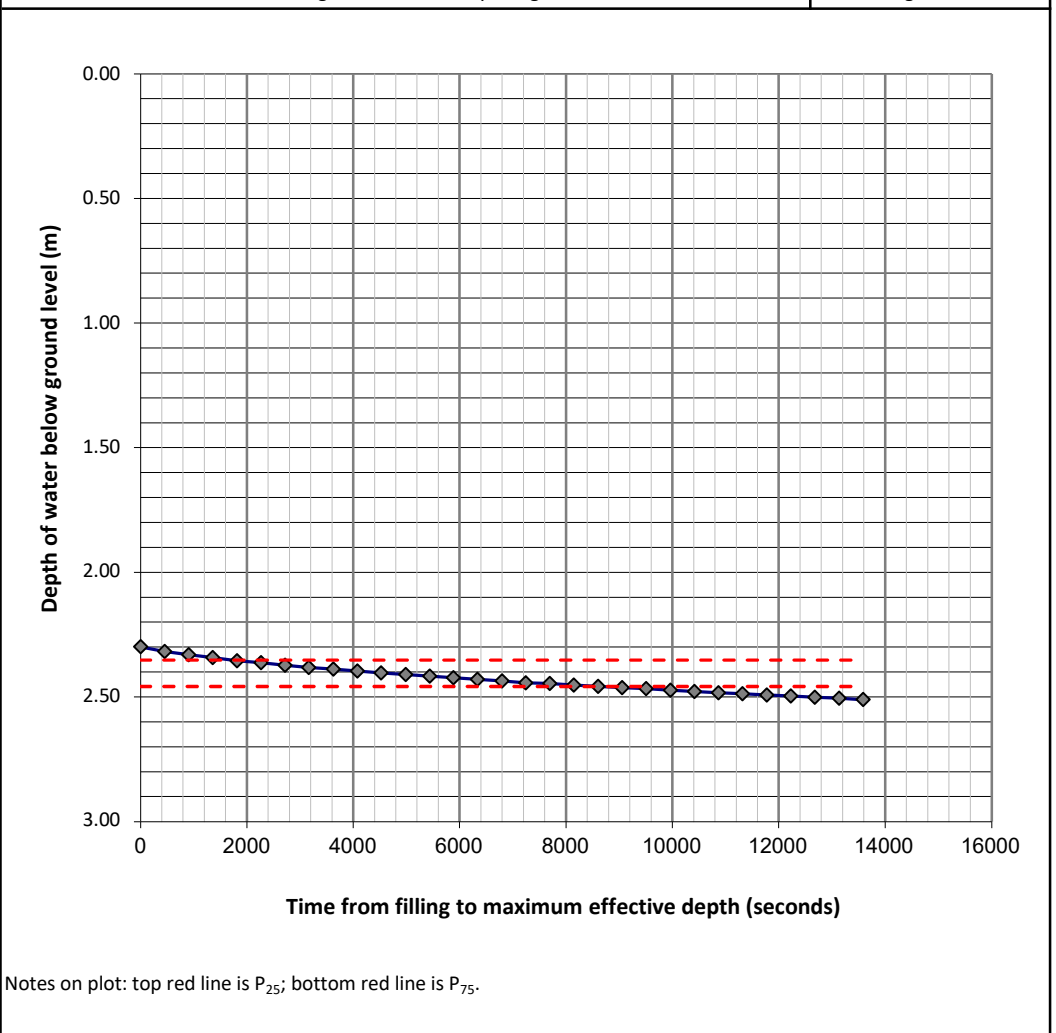
DATE:	April 2024	Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey, GU7 1XW Tel: 01483 310600	 GEOTECHNICAL & GEOENVIRONMENTAL CONSULTANCY <small>A PHENNA GROUP COMPANY</small>
PROJECT No:	CG/39877		
PROJECT NAME:	Friends School Playing Field		
CLIENT:	Chase New Homes		
TRIAL PIT ID:	SA03		
TEST NUMBER:	2		

SOAKAWAY TEST - SOIL INFILTRATION RATE/PERMEABILITY

Time Elapsed (s)	Time Elapsed (mins)	Distance to water surface from ground level (m)	Geology of test section	PIT LENGTH (L):	2.00 m
			Structureless Chalk	PIT WIDTH (W):	0.65 m
				PIT DEPTH (D):	3.00 m
			INPUT PARAMETERS:	P ₂₅ achieved?	No
0	0.0	2.30	Maximum potential volume of water (V)		(m ³) 0.28
450	7.5	2.32	Pit volume between 75% & 25% depths (PV _{25/75}) = L x W x ½ ED		(m ³) 0.14
900	15.0	2.33	Maximum head of water lost during test (ED) = ED - Water depth @ time 0		(m) 0.21
1350	22.5	2.34	Surface area of pit up to 50% effective depth (AP ₅₀)		(m ²) 4.46
1810	30.2	2.35	Level of water in pit at 75% effective depth (P ₂₅)		(m) 2.35
2260	37.7	2.36	Level of water in pit at 25% effective depth (P ₇₅)		(m) 2.46
2710	45.2	2.37	Time at 75% effective depth (T ₇₅)		(s) 1699
3160	52.7	2.38	Time at 25% effective depth (T ₂₅)		(s) 8573
3620	60.3	2.39	Time for outflow for 75% and 25% effective depth (T ₇₅ -T ₂₅)		(s) 6873
4070	67.8	2.40	INDICATIVE SOIL INFILTRATION RATE (f) = $PV_{75-25} / (AP_{50} \times T_{75} - T_{25})$		(m/s) 4.5E-06
4520	75.3	2.40	Test remarks		
4980	83.0	2.41			
5430	90.5	2.42	Test measurements taken with data loggers. Data has been processed to reduce the number of individual data points (as provided to the left and plotted below).		
5880	98.0	2.42	Pit did not drain to 25% effective depth of initial head of water during the duration of the test. Calculations are based on an Effective Depth (ED) for the actual total drop in water level over test period, and are therefore 'indicative' only.		
6330	105.5	2.43	Compiled by:	Adam Cadman	Checked by: Adam Cadman
6790	113.2	2.44	After BRE Digest 365, Soakaway Design, 2016		Page 1 of 1

Test measurements taken with data loggers. Data has been processed to reduce the number of individual data points (as provided to the left and plotted below). Pit did not drain to 25% effective depth of initial head of water during the duration of the test. Calculations are based on an Effective Depth (ED) for the actual total drop in water level over test period, and are therefore 'indicative' only.

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PROJECT No:	CG/39877		
PROJECT NAME:	Friends School Playing Field		
CLIENT:	Chase New Homes		
TRIAL PIT ID:	SA03		
TEST NUMBER:	3		

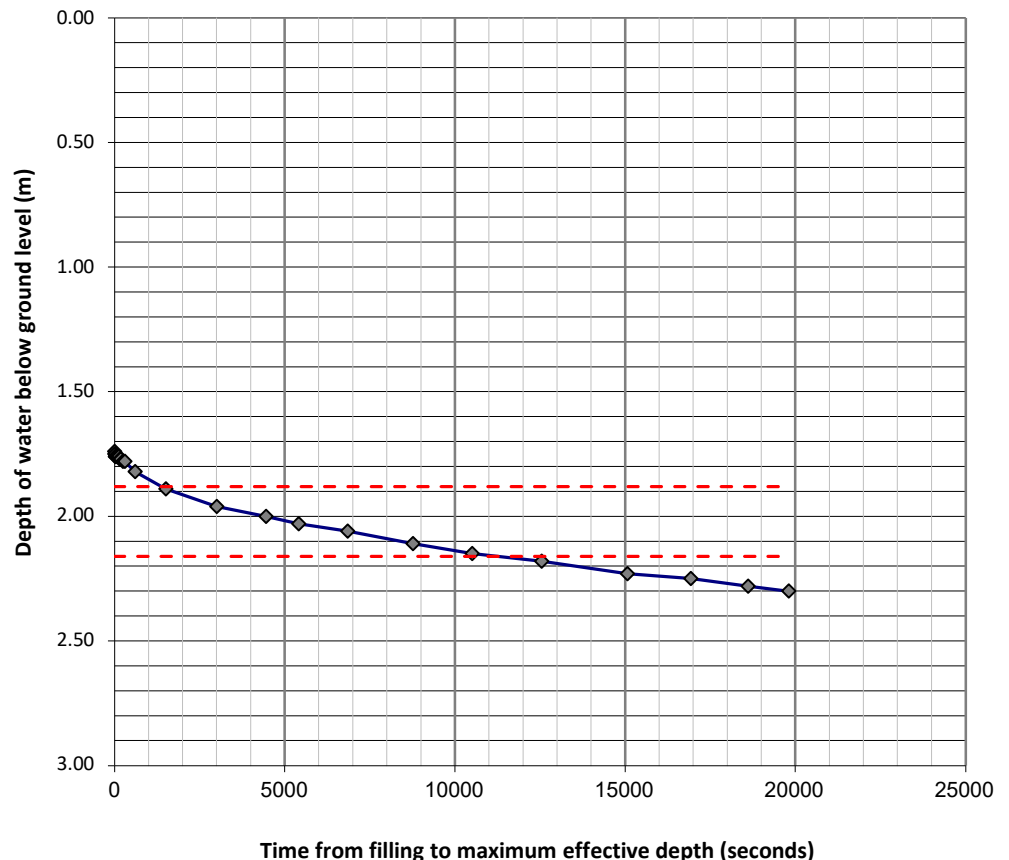
SOAKAWAY TEST - SOIL INFILTRATION RATE/PERMEABILITY

Time Elapsed (s)	Time Elapsed (mins)	Distance to water surface from ground level (m)	Geology of test section		PIT LENGTH (L):		2.00 m	
			Structureless Chalk		PIT WIDTH (W):		0.65 m	
			INPUT PARAMETERS:		P ₂₅ achieved?		No	
0	0.0	1.74	Maximum potential volume of water (V)				(m ³)	0.73
5	0.1	1.75	Pit volume between 75% & 25% depths (PV _{25/75}) = L x W x ½ ED				(m ³)	0.36
10	0.2	1.75	Maximum head of water lost during test (ED) = ED - Water depth @ time 0				(m)	0.56
15	0.3	1.76	Surface area of pit up to 50% effective depth (AP ₅₀)				(m ²)	6.49
30	0.5	1.76	Level of water in pit at 75% effective depth (P ₂₅)				(m)	1.88
60	1.0	1.76	Level of water in pit at 25% effective depth (P ₇₅)				(m)	2.16
120	2.0	1.76	Time at 75% effective depth (T ₇₅)				(s)	1372
150	2.5	1.77	Time at 25% effective depth (T ₂₅)				(s)	11180
180	3.0	1.77	Time for outflow for 75% and 25% effective depth (T ₇₅ -T ₂₅)				(s)	9809
240	4.0	1.78	INDICATIVE SOIL INFILTRATION RATE (f) =		$PV_{75-25} / (AP_{50} \times T_{75} - T_{25})$		(m/s)	5.7E-06
300	5.0	1.78	Test remarks					
600	10.0	1.82	Test measurements taken with dip meter and timer.					
1500	25.0	1.89	Pit did not drain to 25% effective depth of initial head of water during the duration of the test. Calculations are based on an Effective Depth (ED) for the actual total drop in water level over test period, and are therefore 'indicative' only.					


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Notes on plot: top red line is P₂₅; bottom red line is P₇₅.

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PROJECT No:	CG/39877		
PROJECT NAME:	Friends School Playing Field		
CLIENT:	Chase New Homes		
TRIAL PIT ID:	SA04		
TEST NUMBER:	1		

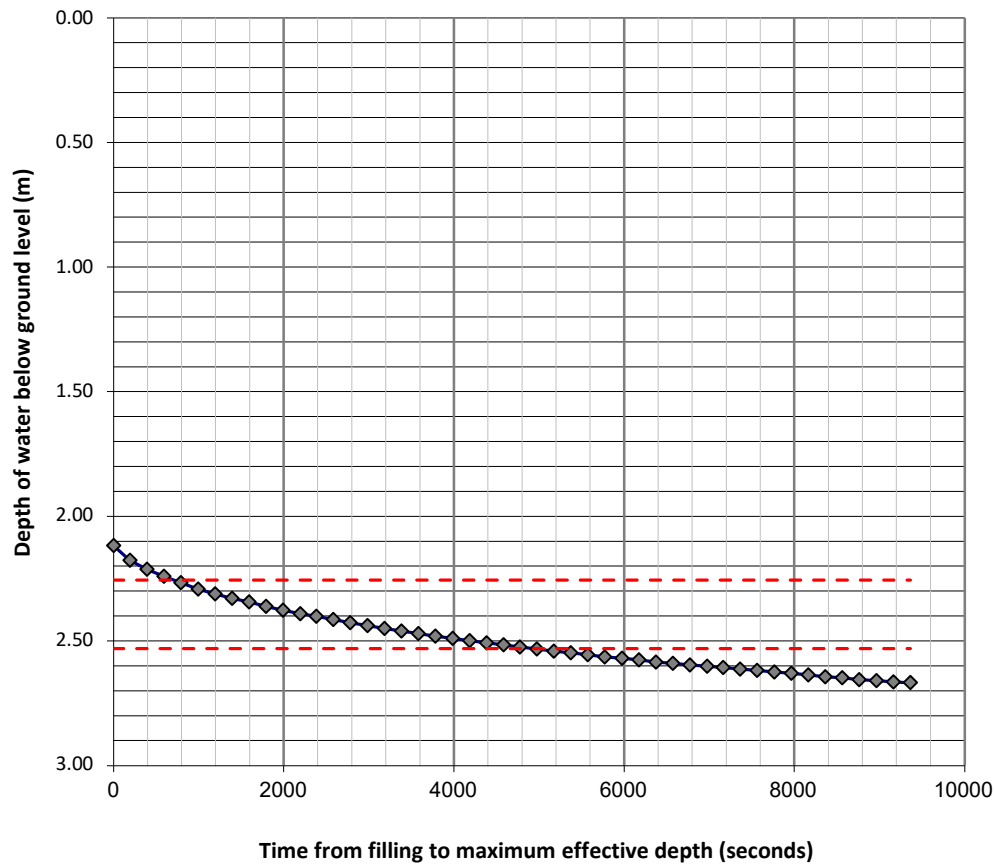
SOAKAWAY TEST - SOIL INFILTRATION RATE/PERMEABILITY

Time Elapsed (s)	Time Elapsed (mins)	Distance to water surface from ground level (m)	Geology of test section		PIT LENGTH (L):	2.00 m
			Structureless Chalk		PIT WIDTH (W):	0.70 m
		PIT DEPTH (D):			3.00 m	
INPUT PARAMETERS:			P ₂₅ achieved?		No	
0	0.0	2.12	Maximum potential volume of water (V)		(m ³)	0.77
190	3.2	2.18	Pit volume between 75% & 25% depths (PV _{25/75}) = L x W x ½ ED		(m ³)	0.38
390	6.5	2.21	Maximum head of water lost during test (ED) = ED - Water depth @ time 0		(m)	0.55
590	9.8	2.24	Surface area of pit up to 50% effective depth (AP ₅₀)		(m ²)	4.68
790	13.2	2.27	Level of water in pit at 75% effective depth (P ₂₅)		(m)	2.26
990	16.5	2.29	Level of water in pit at 25% effective depth (P ₇₅)		(m)	2.53
1190	19.8	2.31	Time at 75% effective depth (T ₇₅)		(s)	703
1390	23.2	2.33	Time at 25% effective depth (T ₂₅)		(s)	4924
1590	26.5	2.34	Time for outflow for 75% and 25% effective depth (T ₇₅ -T ₂₅)		(s)	4220
1790	29.8	2.36	INDICATIVE SOIL INFILTRATION RATE (f) = $PV_{75-25} / (AP_{50} \times T_{75} - T_{25})$		(m/s)	1.9E-05
1990	33.2	2.38	Test remarks			

Test measurements taken with data loggers. Data has been processed to reduce the number of individual data points (as provided to the left and plotted below).
 Pit did not drain to 25% effective depth of initial head of water during the duration of the test. Calculations are based on an Effective Depth (ED) for the actual total drop in water level over test period, and are therefore 'indicative' only.

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2190	36.5	2.39
2380	39.7	2.40
2580	43.0	2.41
2780	46.3	2.43
2980	49.7	2.44
3180	53.0	2.45
3380	56.3	2.46
3580	59.7	2.47
3780	63.0	2.48
3980	66.3	2.49
4180	69.7	2.50
4380	73.0	2.51
4580	76.3	2.52
4770	79.5	2.52
4970	82.8	2.53
5170	86.2	2.54
5370	89.5	2.55
5570	92.8	2.56
5770	96.2	2.56
5970	99.5	2.57
6170	102.8	2.58
6370	106.2	2.58
6570	109.5	2.59
6770	112.8	2.60
6970	116.2	2.60
7160	119.3	2.61
7360	122.7	2.61
7560	126.0	2.62
7760	129.3	2.62
7960	132.7	2.63
8160	136.0	2.64
8360	139.3	2.64
8560	142.7	2.65
8760	146.0	2.66
8960	149.3	2.66
9160	152.7	2.66
9360	156.0	2.67



Notes on plot: top red line is P₂₅; bottom red line is P₇₅.

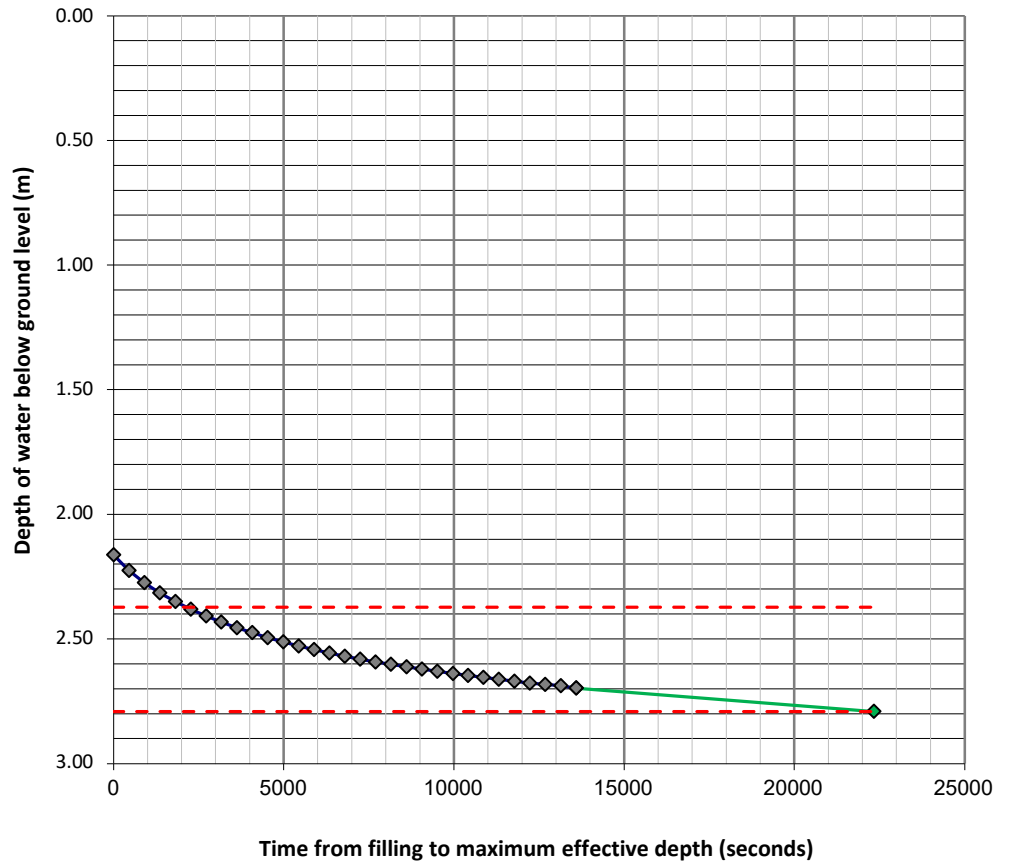
DATE:	April 2024	Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey, GU7 1XW Tel: 01483 310600	 GEOTECHNICAL & GEOENVIRONMENTAL CONSULTANCY <small>A PHENNA GROUP COMPANY</small>
PROJECT No:	CG/39877		
PROJECT NAME:	Friends School Playing Field		
CLIENT:	Chase New Homes		
TRIAL PIT ID:	SA04		
TEST NUMBER:	2		

SOAKAWAY TEST - SOIL INFILTRATION RATE/PERMEABILITY

Time Elapsed (s)	Time Elapsed (mins)	Distance to water surface from ground level (m)	Geology of test section		PIT LENGTH (L):		2.00 m	
			Structureless Chalk		PIT WIDTH (W):		0.70 m	
			INPUT PARAMETERS:		P ₂₅ achieved?		3.00 m	
0	0.0	2.16	Maximum potential volume of water (V)				(m ³)	1.17
450	7.5	2.23	Pit volume between 75% & 25% depths (PV _{25/75}) = L x W x ½ ED				(m ³)	0.59
900	15.0	2.27	Maximum head of water lost during test (ED) = ED - Water depth @ time 0				(m)	0.84
1350	22.5	2.31	Surface area of pit up to 50% effective depth (AP ₅₀)				(m ²)	4.48
1810	30.2	2.35	Level of water in pit at 75% effective depth (P ₂₅)				(m)	2.37
2260	37.7	2.38	Level of water in pit at 25% effective depth (P ₇₅)				(m)	2.79
2710	45.2	2.41	Time at 75% effective depth (T ₇₅)				(s)	2130
3160	52.7	2.43	Time at 25% effective depth (T ₂₅)				(s)	22329
3620	60.3	2.46	Time for outflow for 75% and 25% effective depth (T ₇₅ -T ₂₅)				(s)	20200
4070	67.8	2.47	INDICATIVE SOIL INFILTRATION RATE (f) =		$PV_{75-25} / (AP_{50} \times T_{75} - T_{25})$		(m/s)	6.5E-06
4520	75.3	2.49	Test remarks					
4980	83.0	2.51	Test measurements taken with data loggers. Data has been processed to reduce the number of individual data points (as provided to the left and plotted below).					
5430	90.5	2.53	Final data point(s) extrapolated from trend of results.					
5880	98.0	2.54	Compiled by:		Adam Cadman	Checked by:		Adam Cadman

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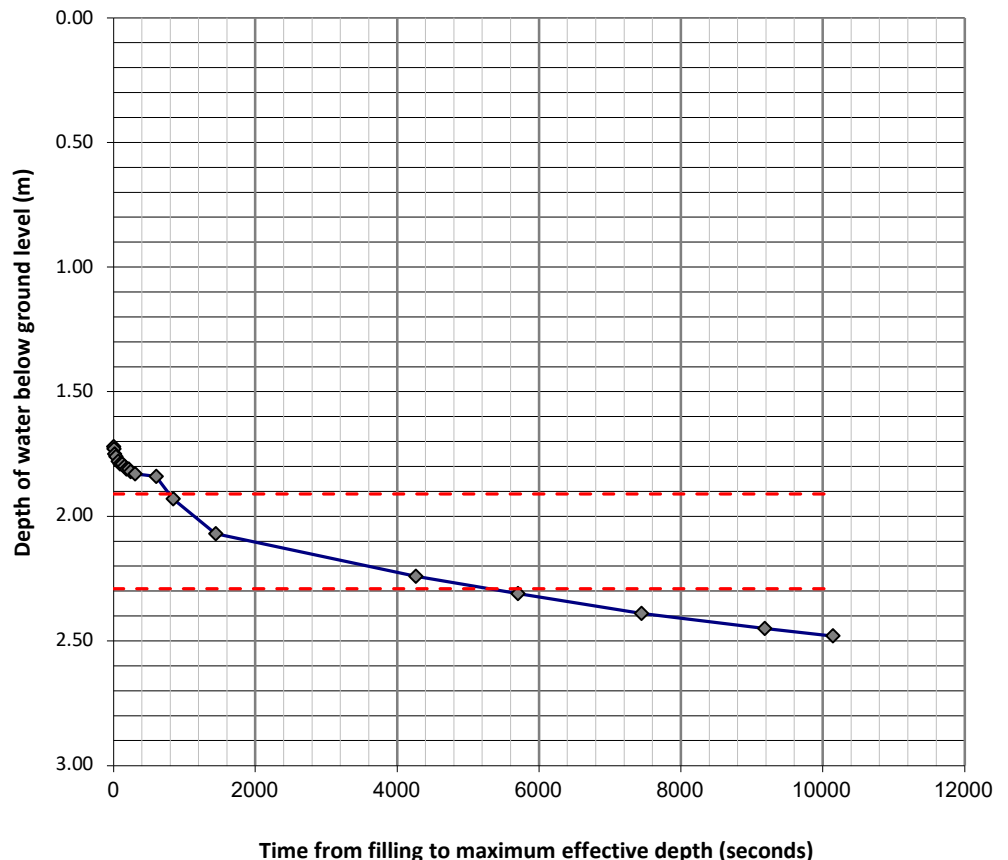
Notes on plot: top red line is P₂₅; bottom red line is P₇₅.

Green data point(s) extrapolated from test results

DATE:	April 2024	Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey, GU7 1XW Tel: 01483 310600	 GEOTECHNICAL & GEOENVIRONMENTAL CONSULTANCY <small>A PHENNA GROUP COMPANY</small>
PROJECT No:	CG/39877		
PROJECT NAME:	Friends School Playing Field		
CLIENT:	Chase New Homes		
TRIAL PIT ID:	SA04		
TEST NUMBER:	3		

SOAKAWAY TEST - SOIL INFILTRATION RATE/PERMEABILITY

Time Elapsed (s)	Time Elapsed (mins)	Distance to water surface from ground level (m)	Geology of test section		PIT LENGTH (L):		2.00 m	
			Structureless Chalk		PIT WIDTH (W):		0.70 m	
			INPUT PARAMETERS:		P ₂₅ achieved?		No	
0	0.0	1.72	Maximum potential volume of water (V)				(m ³)	1.06
5	0.1	1.73	Pit volume between 75% & 25% depths (PV _{25/75}) = L x W x ½ ED				(m ³)	0.53
10	0.2	1.75	Maximum head of water lost during test (ED) = ED - Water depth @ time 0				(m)	0.76
30	0.5	1.76	Surface area of pit up to 50% effective depth (AP ₅₀)				(m ²)	6.26
60	1.0	1.78	Level of water in pit at 75% effective depth (P ₂₅)				(m)	1.91
90	1.5	1.79	Level of water in pit at 25% effective depth (P ₇₅)				(m)	2.29
120	2.0	1.79	Time at 75% effective depth (T ₇₅)				(s)	787
150	2.5	1.80	Time at 25% effective depth (T ₂₅)				(s)	5289
180	3.0	1.81	Time for outflow for 75% and 25% effective depth (T ₇₅ -T ₂₅)				(s)	4502
210	3.5	1.81	INDICATIVE SOIL INFILTRATION RATE (f) =		$PV_{75-25} / (AP_{50} \times T_{75} - T_{25})$		(m/s)	1.9E-05
240	4.0	1.82	Test remarks					
300	5.0	1.83	Test measurements taken with dip meter and timer.					
600	10.0	1.84	Pit did not drain to 25% effective depth of initial head of water during the duration of the test. Calculations are based on an Effective Depth (ED) for the actual total drop in water level over test period, and are therefore 'indicative' only.					
840	14.0	1.93	Compiled by:		Adam Cadman	Checked by:		Adam Cadman
1440	24.0	2.07	After BRE Digest 365, Soakaway Design, 2016					Page 1 of 1
4260	71.0	2.24						
5700	95.0	2.31						
7440	124.0	2.39						
9180	153.0	2.45						
10140	169.0	2.48						

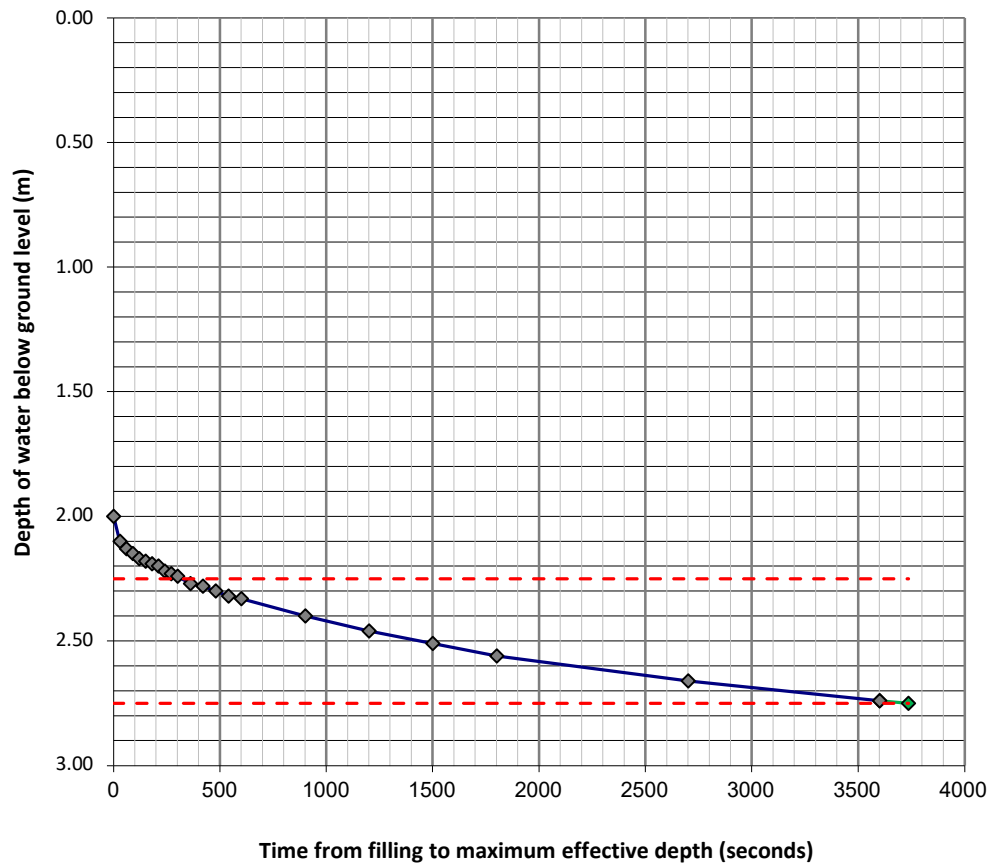


Notes on plot: top red line is P₂₅; bottom red line is P₇₅.

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PROJECT No:	CG/39877		
PROJECT NAME:	Friends School Playing Field		
CLIENT:	Chase New Homes		
TRIAL PIT ID:	SA05		
TEST NUMBER:	1		

SOAKAWAY TEST - SOIL INFILTRATION RATE/PERMEABILITY

Time Elapsed (s)	Time Elapsed (mins)	Distance to water surface from ground level (m)	Geology of test section		PIT LENGTH (L):		2.00 m	
			Structureless Chalk		PIT WIDTH (W):		0.70 m	
			INPUT PARAMETERS:		P ₂₅ achieved?		3.00 m	
0	0.0	2.00	Maximum potential volume of water (V)				(m ³)	1.40
30	0.5	2.10	Pit volume between 75% & 25% depths (PV _{25/75}) = L x W x ½ ED				(m ³)	0.70
60	1.0	2.13	Maximum head of water lost during test (ED) = ED - Water depth @ time 0				(m)	1.00
90	1.5	2.15	Surface area of pit up to 50% effective depth (AP ₅₀)				(m ²)	4.80
120	2.0	2.17	Level of water in pit at 75% effective depth (P ₂₅)				(m)	2.25
150	2.5	2.18	Level of water in pit at 25% effective depth (P ₇₅)				(m)	2.75
180	3.0	2.19	Time at 75% effective depth (T ₇₅)				(s)	320
210	3.5	2.20	Time at 25% effective depth (T ₂₅)				(s)	3735
240	4.0	2.22	Time for outflow for 75% and 25% effective depth (T ₇₅ -T ₂₅)				(s)	3415
270	4.5	2.23	INDICATIVE SOIL INFILTRATION RATE (f) =		$PV_{75-25} / (AP_{50} \times T_{75} - T_{25})$		(m/s)	4.3E-05
300	5.0	2.24	Test remarks					
360	6.0	2.27	Test measurements taken with dip meter and timer.					
420	7.0	2.28	Final data point(s) extrapolated from trend of results.					
480	8.0	2.30	Compiled by:		Adam Cadman	Checked by:		Adam Cadman
540	9.0	2.32	After BRE Digest 365, Soakaway Design, 2016					
600	10.0	2.33	Page 1 of 1					

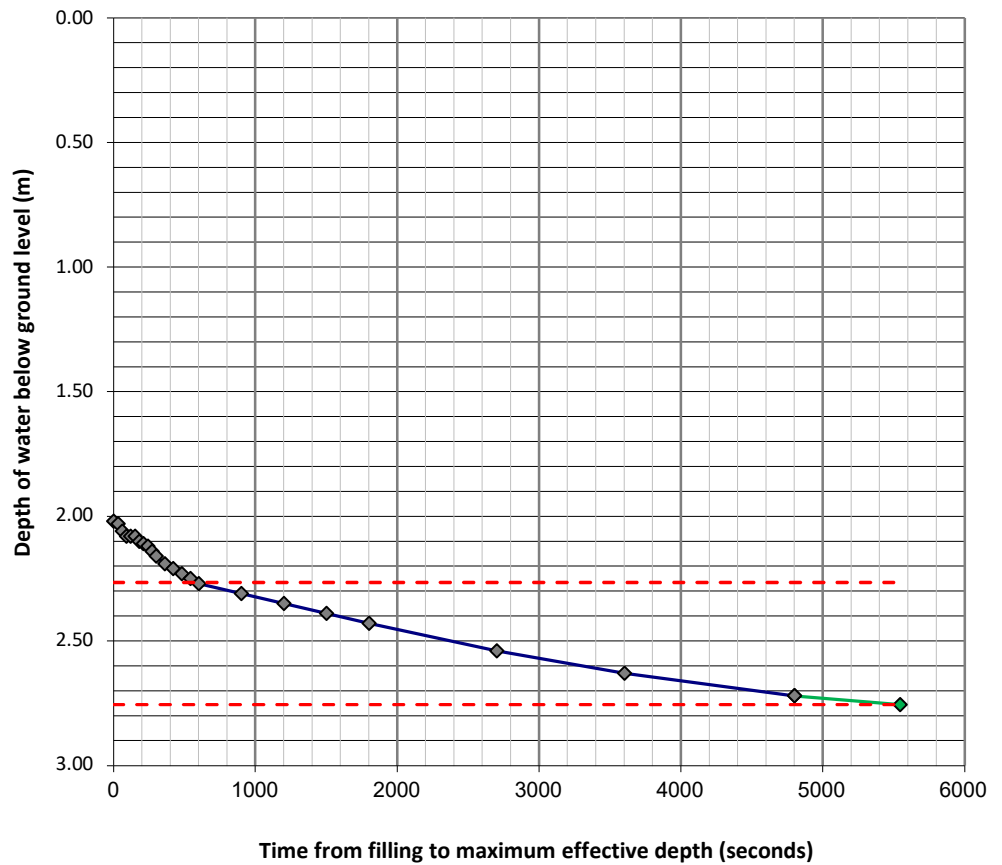


Notes on plot: top red line is P₂₅; bottom red line is P₇₅.
 Green data point(s) extrapolated from test results

DATE:	April 2024	Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey, GU7 1XW Tel: 01483 310600	 GEOTECHNICAL & GEOENVIRONMENTAL CONSULTANCY <small>A PHENNA GROUP COMPANY</small>
PROJECT No:	CG/39877		
PROJECT NAME:	Friends School Playing Field		
CLIENT:	Chase New Homes		
TRIAL PIT ID:	SA05		
TEST NUMBER:	2		

SOAKAWAY TEST - SOIL INFILTRATION RATE/PERMEABILITY

Time Elapsed (s)	Time Elapsed (mins)	Distance to water surface from ground level (m)	Geology of test section		PIT LENGTH (L):		2.00 m	
			Structureless Chalk		PIT WIDTH (W):		0.70 m	
			INPUT PARAMETERS:		P ₂₅ achieved?		3.00 m	
0	0.0	2.02	Maximum potential volume of water (V)				(m ³)	1.37
30	0.5	2.03	Pit volume between 75% & 25% depths (PV _{25/75}) = L x W x ½ ED				(m ³)	0.69
60	1.0	2.06	Maximum head of water lost during test (ED) = ED - Water depth @ time 0				(m)	0.98
90	1.5	2.08	Surface area of pit up to 50% effective depth (AP ₅₀)				(m ²)	4.80
120	2.0	2.08	Level of water in pit at 75% effective depth (P ₂₅)				(m)	2.27
150	2.5	2.08	Level of water in pit at 25% effective depth (P ₇₅)				(m)	2.76
180	3.0	2.10	Time at 75% effective depth (T ₇₅)				(s)	585
210	3.5	2.11	Time at 25% effective depth (T ₂₅)				(s)	5543
240	4.0	2.12	Time for outflow for 75% and 25% effective depth (T ₇₅ -T ₂₅)				(s)	4958
270	4.5	2.14	INDICATIVE SOIL INFILTRATION RATE (f) = $PV_{75-25} / (AP_{50} \times T_{75} - T_{25})$				(m/s)	2.9E-05
300	5.0	2.16	Test remarks					
360	6.0	2.19	Test measurements taken with dip meter and timer.					
420	7.0	2.21	Final data point(s) extrapolated from trend of results.					
480	8.0	2.23	Compiled by:		Adam Cadman	Checked by:		Adam Cadman
540	9.0	2.25	After BRE Digest 365, Soakaway Design, 2016					Page 1 of 1

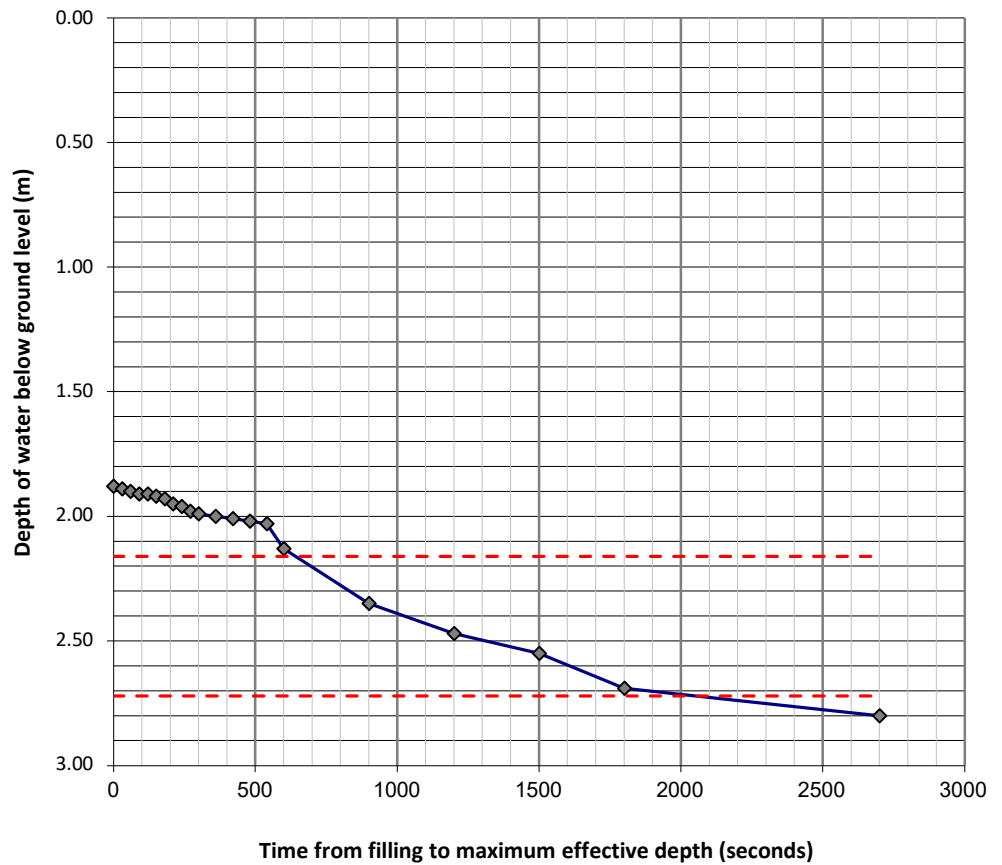


Notes on plot: top red line is P₂₅; bottom red line is P₇₅.
 Green data point(s) extrapolated from test results

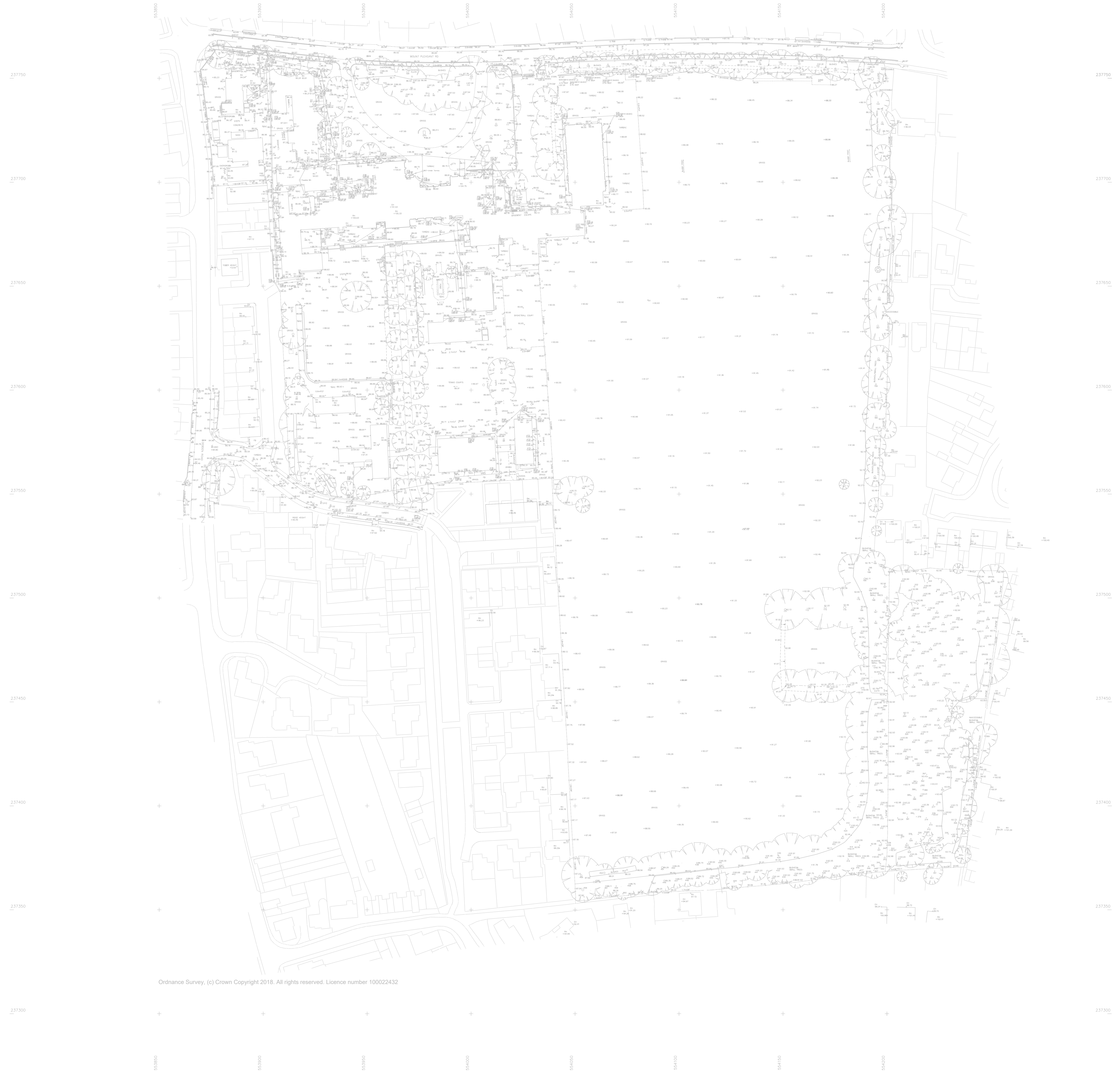
DATE:	April 2024	Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey, GU7 1XW Tel: 01483 310600	 GEOTECHNICAL & GEOENVIRONMENTAL CONSULTANCY <small>A PHENNA GROUP COMPANY</small>
PROJECT No:	CG/39877		
PROJECT NAME:	Friends School Playing Field		
CLIENT:	Chase New Homes		
TRIAL PIT ID:	SA05		
TEST NUMBER:	3		

SOAKAWAY TEST - SOIL INFILTRATION RATE/PERMEABILITY

Time Elapsed (s)	Time Elapsed (mins)	Distance to water surface from ground level (m)	Geology of test section		PIT LENGTH (L):		2.00 m
			Structureless Chalk		PIT WIDTH (W):		0.70 m
			INPUT PARAMETERS:		P ₂₅ achieved?		Yes
0	0.0	1.88	Maximum potential volume of water (V)		(m ³)	1.57	
30	0.5	1.89	Pit volume between 75% & 25% depths (PV _{25/75}) = L x W x ½ D		(m ³)	0.78	
60	1.0	1.90	Maximum depth of water (MDW) = D - Water depth @ time 0		(m)	1.12	
90	1.5	1.91	Surface area of pit up to 50% effective depth (AP ₅₀)		(m ²)	4.42	
120	2.0	1.91	Level of water in pit at 75% effective depth (P ₂₅)		(m)	2.16	
150	2.5	1.92	Level of water in pit at 25% effective depth (P ₇₅)		(m)	2.72	
180	3.0	1.93	Time at 75% effective depth (T ₇₅)		(s)	641	
210	3.5	1.95	Time at 25% effective depth (T ₂₅)		(s)	2045	
240	4.0	1.96	Time for outflow for 75% and 25% effective depth (T ₇₅ -T ₂₅)		(s)	1405	
270	4.5	1.98	SOIL INFILTRATION RATE (f) = $PV_{75-25}/(AP_{50} \times T_{75}-T_{25})$		(m/s)	1.3E-04	
300	5.0	1.99	Test remarks				
360	6.0	2.00	Test measurements taken with dip meter and timer.				
420	7.0	2.01	Compiled by:		Adam Cadman	Checked by:	
480	8.0	2.02				Adam Cadman	
540	9.0	2.03	After BRE Digest 365, Soakaway Design, 2016				
600	10.0	2.13	Page 1 of 1				



Notes on plot: top red line is P₂₅; bottom red line is P₇₅.



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