

Dear Mr Brooks,

Please find below the results of your Infiltration testing. The information contained below is a summary of the site works carried out on 14th January 2021.

Geology

An examination of the available British Geological Survey data of the area for the site has been examined and indicates that the site has superficial drift deposits composed of Head (gravel, sand, silt and clay), and bedrock deposits recorded as the Lewes Nodular Chalk Formation, Seaford Chalk Formation, Newhaven Chalk Formation, Culver Chalk Formation and Portsdown Chalk Formation (chalk).

Fieldworks

The programme of this investigation included the excavation of one trial pit. The location of the soakaway test was selected by the client. During this work, the soils encountered were logged in general accordance with BS5930: 1990, as amended in 2007.

Percolation Testing

During the soakaway tests the water achieved a fall from 75% to 25% of the effective depth of the storage volume. The results obtained from the soakaway tests are summarised below:

WS	Dimensions (m)	Depth (m)	Soil Description	Infiltration Rate (m/sec)	Drainage Characteristics
TP01 test1	1.20 x 0.40	1.50	Orange clayey, sandy GRAVEL.	2.2E-4	Good
TP01 test2	1.20 x 0.40	1.50	Orange clayey, sandy GRAVEL.	1.4E-4	Good
TP01 test3	1.20 x 0.40	1.50	Orange clayey, sandy GRAVEL.	9.6E-5	Good

Conclusion

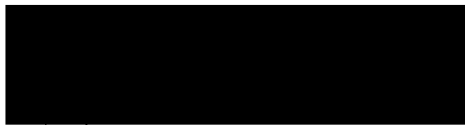
The soils encountered beneath the site were found to be predominantly GRAVEL. The soakage rates obtained during the investigation were found to be good and permeable. Given the data from the test, it is considered that the use of soakaways is suitable for this site.

References

- Building Research Establishment (BRE) Digest 365, *Soakaway Design*, September 1991.
- British Standards Institution (1999) BS5930: *Code of practice for site investigations*, B.S.I., London.
- British Standards Institution (2007), Amendment No 1, BS5930: *Code of practice for site investigations*, B.S.I., London.

Please do contact me on 01243 787150 or 07758 162624 should you have any questions.

Regards



Nick Hammond
Geo-Environmental Engineer

Appendix A



Site Investigation Plan



Adjacent to Sundown.
YEX3290
14/12/2021

Appendix B

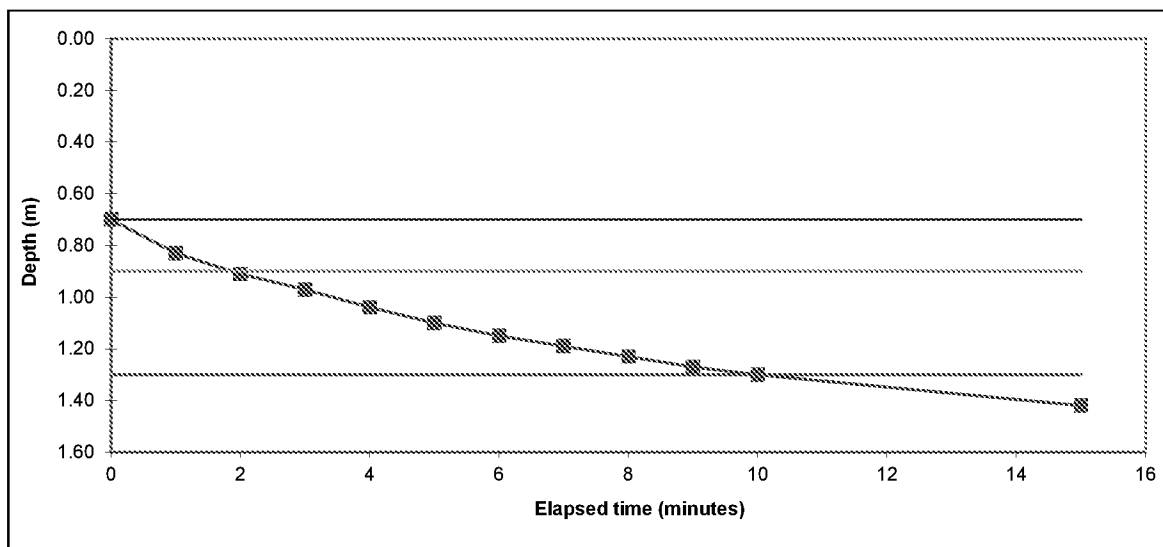
Appendix C

Your Environment

Soakaway Test

Trial Pit No:	TP1	Test No:	1	Date:	14/01/2022
Length (m):	1.200	Datum Height:		0.00 m agl	
Width (m):	0.40	Granular infill:	None		
Depth (m):	1.50	Porosity of infill:	1	(assumed)	

Elapsed time (minutes)	Water Depth (m below datum)	Elapsed time (minutes)	Water Depth (m below datum)
0	0.700		
1	0.830		
2	0.910		
3	0.970		
4	1.040		
5	1.100		
6	1.150		
7	1.190		
8	1.230		
9	1.270		
10	1.300		
15	1.420		



Start water depth for analysis (mbgl):	0.70		
75% effective depth (mbgl):	0.90	Elapsed time (mins):	1.9
50% effective depth (mbgl):	1.10		
25% effective depth (mbgl):	1.30	Elapsed time (mins):	10.0
Base of soakage zone (mbgl):	1.50		
Volume outflow between 75% and 25% effective depth (m³):			0.192
Mean surface area of outflow (m²):			1.76
(side area at 50% effective depth + base area)			
Time for outflow between 75% and 25% effective depth (mins):			8.1

Soil infiltration rate (m/s):	2.2E-4
Remarks	Results processed following BRE 365 (2007).

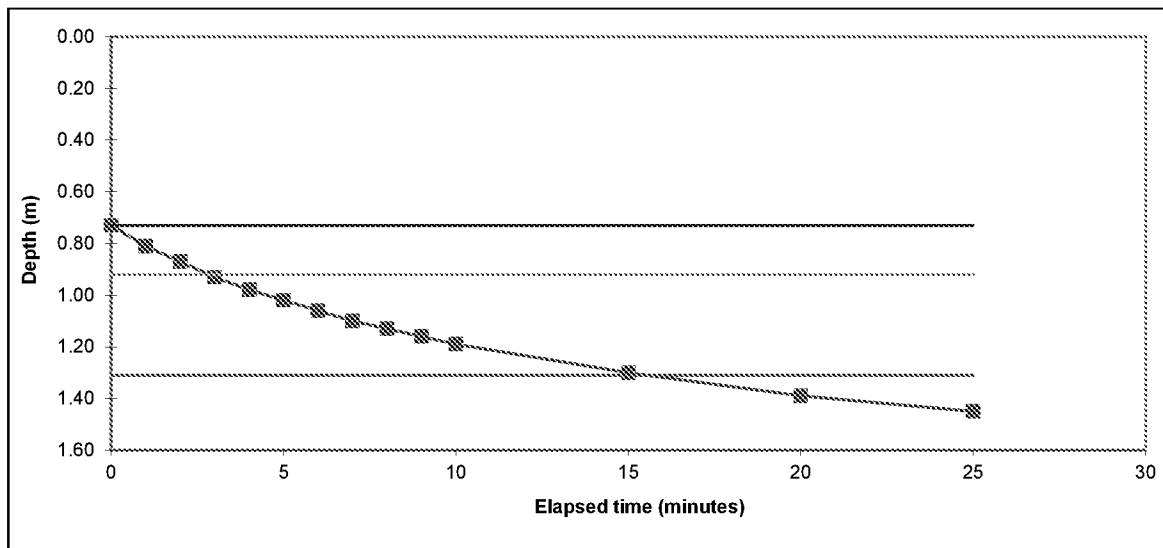
Client:	Richard Brooks	TP1
Site:	Adj. to Sundown	

Your Environment

Soakaway Test

Trial Pit No:	TP1	Test No:	2	Date:	14/01/2022
Length (m):	1.200	Datum Height:		0.00 m agl	
Width (m):	0.40	Granular infill:	None		
Depth (m):	1.50	Porosity of infill:	1	(assumed)	

Elapsed time (minutes)	Water Depth (m below datum)	Elapsed time (minutes)	Water Depth (m below datum)
0	0.730		
1	0.810		
2	0.870		
3	0.930		
4	0.980		
5	1.020		
6	1.060		
7	1.100		
8	1.130		
9	1.160		
10	1.190		
15	1.300		
20	1.390		
25	1.450		



Start water depth for analysis (mbgl):	0.73		
75% effective depth (mbgl):	0.92	Elapsed time (mins):	2.8
50% effective depth (mbgl):	1.12		
25% effective depth (mbgl):	1.31	Elapsed time (mins):	15.6
Base of soakage zone (mbgl):	1.50		
Volume outflow between 75% and 25% effective depth (m³):			0.187
Mean surface area of outflow (m²):			1.70
(side area at 50% effective depth + base area)			
Time for outflow between 75% and 25% effective depth (mins):			12.8

Soil infiltration rate (m/s):	1.4E-4
Remarks	Results processed following BRE 365 (2007).

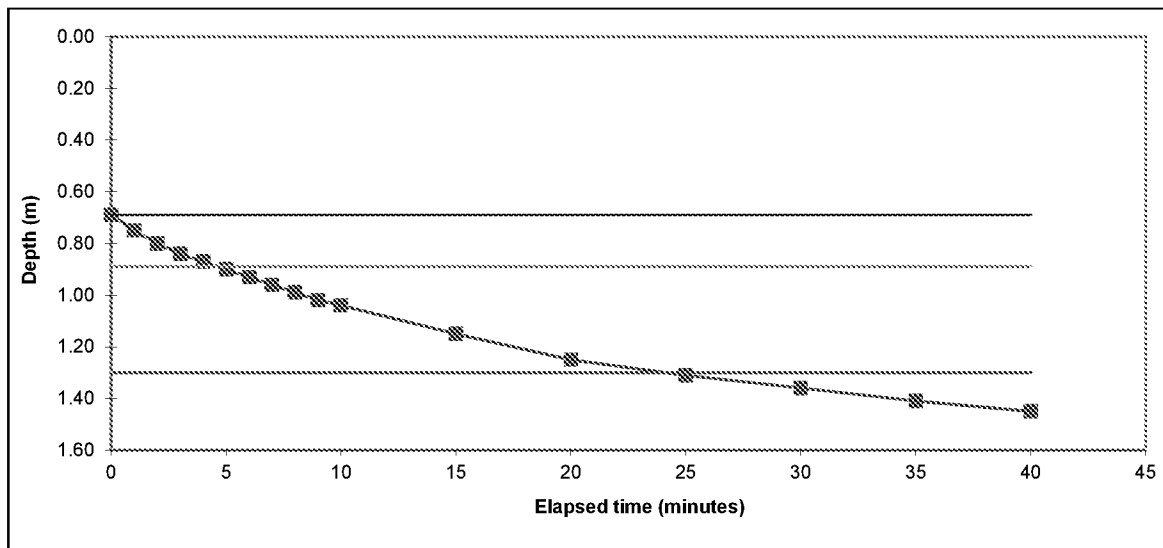
Client:	Richard Brooks	TP1
Site:	Adj. to Sundown	

Your Environment

Soakaway Test

Trial Pit No:	TP1	Test No:	3	Date:	14/01/2022
Length (m):	1.200	Datum Height:		0.00 m agl	
Width (m):	0.40	Granular infill:	None		
Depth (m):	1.50	Porosity of infill:	1	(assumed)	

Elapsed time (minutes)	Water Depth (m below datum)	Elapsed time (minutes)	Water Depth (m below datum)
0	0.690	30	1.360
1	0.750	35	1.410
2	0.800	40	1.450
3	0.840		
4	0.870		
5	0.900		
6	0.930		
7	0.960		
8	0.990		
9	1.020		
10	1.040		
15	1.150		
20	1.250		
25	1.310		



Start water depth for analysis (mbgl)	0.69		
75% effective depth (mbgl):	0.89	Elapsed time (mins):	4.7
50% effective depth (mbgl):	1.10		
25% effective depth (mbgl):	1.30	Elapsed time (mins):	24.2
Base of soakage zone (mbgl):	1.50		
Volume outflow between 75% and 25% effective depth (m³):			0.197
Mean surface area of outflow (m²):			1.76
(side area at 50% effective depth + base area)			
Time for outflow between 75% and 25% effective depth (mins):			19.5

Soil infiltration rate (m/s):	9.6E-5
Remarks	Results processed following BRE 365 (2007).

Client:	Richard Brooks	TP1
Site:	Adj. to Sundown	