

Project Title: ECMWF - New Headquarters - CBRs							Status: FINAL		Location ID SW106		 Card Geotechnics Limited, 12 Melcombe Place, London, NW1 6JJ www.cgl-uk.com		
Client: Mace Construct Limited							Location Type: Trial pit/trench Coords: 474119.260E/171760.477N Level: 66.712m Final Depth: 0.91 m Orientation: 0° Inclination: 90° Date Start: 21/02/2024 Date End: 21/02/2024						
Method and Plant Used				Groundwater									
From (m)	To (m)	Type	Plant Used	Strike (m)	Time (min)	Rose To							
0.00	0.91	TP	Mini Digger										
Samples & Tests				Water Level (m)	Legend	Strata Depth (m)	Level (m)	Strata Description			Inst/ Backfill (m)	Depth (m)	
Sample Depth (m)	Type/ Ref	Tests/Results											
0.50 - 0.91	B 1					0.35	66.36	Grass over dark grey slightly gravelly slightly sandy clay/silt. Gravel is subangular to subrounded fine to coarse of flint. Rare subangular to subrounded fine to medium gravel of charcoal and red brick fragments. [MADE GROUND]					
								Dark grey silty gravel. Gravel of subangular to subrounded fine to coarse of flint and red brick fragments. One cobble of brick 30cm in length seen. [MADE GROUND]					
						0.50	66.21	Light grey silty GRAVEL. Gravel is subangular to subrounded fine to coarse of flint.					
						0.91	65.80	EOH at 0.91m - Terminated as target depth reached					
												1	
												2	
Notes:							Soakaway Tests				Scale: 1:10		
1. Topsoil scraped back and placed aside in order to undertake trial pit excavation. 2. Infiltration test carried out in accordance to BRE 365. 3. Trial pit was stable during testing. 4. Trial pit was backfilled with arisings and topsoil was reinstated to original state. 5. Weather: Overcast / Light rain. 6. Infiltration test was incomplete as only two 'runs' were completed.							Test No.	Date	Duration (hh:mm)	Infiltration Rate	Logged By: SJP		
							2	21/02/2024	02:17	0.00000762 m/s	Checked By: JSB		
											Approved By: MPC		
							Pit Details				Section ID:		
Stability				Shoring	Length (m)	Width (m)	CGL Reference						
Stable					1.00	0.50	CGL_10078A						

APPENDIX C

Infiltration testing results



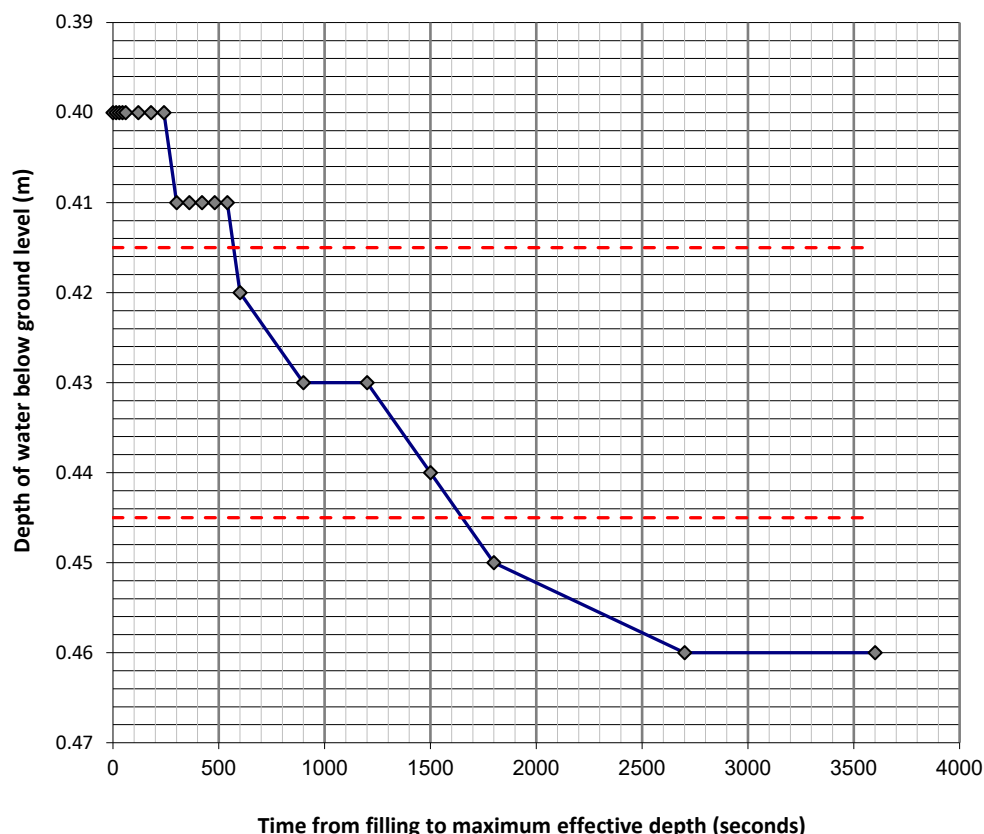
Time Elapsed (s)	Time Elapsed (mins)	Distance to water surface from ground level (m)	Pit Construction Remarks		PIT LENGTH (L):		1.00 m
					PIT WIDTH (W):		0.50 m
					PIT DEPTH (D):		0.62 m
0	0.00	0.400	INPUT PARAMETERS:				
15	0.25	0.400	Total volume of pit/Maximum potential volume of water (V)		(m ³)	0.11	
30	0.50	0.400	Pit volume between 75% & 25% depths (PV _{25/75}) = L x W x ½D		(m ³)	0.06	
45	0.75	0.410	Maximum depth of water (MDW) = D - Water depth @ time 0		(m)	0.22	
60	1.00	0.410	Surface area of pit up to 50% effective depth (AP ₅₀)		(m ²)	0.83	
90	1.50	0.410	Level of water in pit at 75% effective depth (P ₇₅)		(m)	0.06	
120	2.00	0.410	Level of water in pit at 25% effective depth (P ₂₅)		(m)	0.17	
180	3.00	0.410	Time at 75% effective depth (T ₇₅)		(s)	1052	
240	4.00	0.410	Time at 25% effective depth (T ₂₅)		(s)	4652	
300	5.00	0.420	Time for outflow for 75% and 25% effective depth (T ₇₅ -T ₂₅)		(s)	3600	
360	6.00	0.420	SOIL INFILTRATION RATE (f) = PV ₇₅₋₂₅ /(AP ₅₀ x T ₇₅₋₂₅)		(m/s)	1.84E-05	
420	7.00	0.420	WATER INPUT:		110L	in	
480	8.00	0.420				2 minutes	
540	9.00	0.430	Geology of test section/Test remarks				
600	10.00	0.440	MADE GROUND from 0.00m to 0.40m, silty GRAVEL from 0.40m to 0.62m.				
900	15.00	0.450	Compiled by: SJP		Checked by: JSB		
1200	20.00	0.460	After BRE Digest 365, Soakaway Design, 2016				
1500	25.00	0.470	Page 1 of 1				
1800	30.00	0.480					
2700	45.00	0.510					
3600	60.00	0.530					
5400	90.00	0.590					
7200	120.00	0.620					

[illegible]

DATE:	20/02/2024	Card Geotechnics Limited, 4 Godalming Business Centre, Woolsack Way, Godalming, Surrey, GU7 1XW Tel: 01483 310600	
PROJECT No:	CGL/10078A		
PROJECT NAME:	Reading - ECMWF Headquarters		
CLIENT:	Mace Construct Ltd		
TRIAL PIT ID:	SW101		
TEST NUMBER:	3		

SOAKAWAY TEST - SOIL INFILTRATION RATE/PERMEABILITY

Time Elapsed (s)	Time Elapsed (mins)	Distance to water surface from ground level (m)	Pit Construction Remarks	PIT LENGTH (L):	1.00 m
				PIT WIDTH (W):	0.50 m
				PIT DEPTH (D):	0.62 m
			INPUT PARAMETERS:	EFFECTIVE DEPTH (ED) * :	0.06 m
0	0.00	0.400	Maximum potential volume of water (V)	(m ³)	0.03
15	0.25	0.400	Pit volume between 75% & 25% depths (PV _{25/75}) = L x W x ½ ED	(m ³)	0.02
30	0.50	0.400	Maximum head of water lost during test = D - Water depth @ time 0	(m)	0.06
45	0.75	0.400	Surface area of pit up to 50% effective depth (AP ₅₀)	(m ²)	1.07
60	1.00	0.400	Level of water in pit at 75% effective depth (P ₇₅)	(m)	0.42
120	2.00	0.400	Level of water in pit at 25% effective depth (P ₂₅)	(m)	0.45
180	3.00	0.400	Time at 75% effective depth (T ₇₅)	(s)	570
240	4.00	0.400	Time at 25% effective depth (T ₂₅)	(s)	1650
300	5.00	0.410	Time for outflow for 75% and 25% effective depth (T ₇₅ -T ₂₅)	(s)	1080
360	6.00	0.410	SOIL INFILTRATION RATE (f) = $PV_{75-25}/(AP_{50} \times T_{75-25})$	(m/s)	1.30E-05
420	7.00	0.410	WATER INPUT:	110L	in
480	8.00	0.410			2 minutes
540	9.00	0.410	Geology of test section/Test remarks		
600	10.00	0.420	Infiltration rate is indicative and is calculated only from readings recorded during testing. Not all of the water fully drained from the initial head of water to the full pit depth during the period readings were recorded.		
900	15.00	0.430			
1200	20.00	0.430			
1500	25.00	0.440			
1800	30.00	0.450			
2700	45.00	0.460	Compiled by: SJP	Checked by: JSB	
3600	60.00	0.460	After BRE Digest 365, Soakaway Design, 2016		Page 1 of 1
			* Effective Depth (ED) = Total drop in water level over test period		



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