

## **APPENDIX C**

### **EXTRACTS FROM SOILS REPORT**

(CGL, JUNE 2018)

**REVISION P2 – 18.09.2018**



Mrs Anu Nayar

**14 Queen's Grove,  
Westminster, London**  
*Ground Movement Assessment*

June, 2018



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## **APPENDIX C**

*CGL borehole records*

# BOREHOLE LOG



Project 14 Queens Grove, Westminster, London				BOREHOLE No <b>BH1</b>
Job No CG/28612	Date 09-05-18	Ground Level (m) 51.25	Co-Ordinates (m) E 526,740.0 N 183,596.0	
Client Mrs Anu Nayar				Sheet 1 of 2

SAMPLES & TESTS			Water	STRATA			Instrument / Backfill
Depth (m)	Type No	Test Result		Reduced Level	Legend	DESCRIPTION	
				50.90		Grass over very soft dark grey sandy gravelly silt with frequent rootlets. Sand is medium. Gravel is angular to subrounded fine to coarse of flint, concrete and brick. [TOPSOIL]	
				50.75		Soft dark brown silty gravelly clay with frequent fine to coarse, occasionally cobble sized, fragments of brick. Gravel is angular to subrounded fine to medium of flint and concrete. [MADE GROUND] 0.45 Brick content becoming occasional.	
0.95	D	N5				Soft light grey brown sandy gravelly CLAY with lenses of orange brown clayey medium sand and rare rootlets. Sand is medium to coarse. Gravel is subangular to rounded fine to coarse of flint. [POSSIBLE HEAD DEPOSITS] 0.85 Becoming orange brown mottled grey.	
1.00							
1.50	D						
1.85	HSV	62		49.45		Soft to firm orange brown fissured silty CLAY with fine sand sized selenite crystals, partly decayed rootlets and blue grey discoloration around rootlets and along fissures. Fissures are randomly orientated, closely spaced, planar, smooth. [WEATHERED LONDON CLAY FORMATION]	
2.00	D	N8					
2.00							
2.50	D					2.40 Fissures becoming sub horizontal, closely spaced, planar, smooth. 2.50 Lenses of orange brown silt noted. 2.60 - 3.00 Rare lenses of dark green brown fine sand noted.	
2.85	HSV	64					
3.00	D	N11					
3.00							
3.50	D						
3.85	HSV	87				3.85 Becoming firm to stiff. Selenite noted as fine to medium sand sized crystals. 3.95 - 4.80 Pockets of orange brown fine sand noted.	
4.00	D	N14					
4.00							
4.50	D						
4.85	HSV	108				4.85 Partly decayed rootlets noted.	
5.00	D						

Boring Progress and Water Observations						General Remarks
Date	Comment	Strike Depth	Casing Depth	Dia. mm	Standing Depth	
						1. Hand dug pit to 1.0m bgl. 2. No groundwater encountered. 3. D = Disturbed sample; HSV; Hand shear vane test; N = Standard penetration 'N60' value. 4. Installation details: 0.0mbgl to 1.0mbgl: plain pipe with bentonite backfill; 1.0mbgl to 5.0mbgl: slotted pipe with gravel backfill; 5.0mbgl to 6.0mbgl: bentonite backfill; 6.0mbgl to 10mbgl: arisings backfill. Installed with bung and flush with concrete cover.

Method/ Plant Used	Field Crew	Logged By	Checked By
LLAMR window sampler	Topdrill	GAT	JJM

# BOREHOLE LOG



Project 14 Queens Grove, Westminster, London				BOREHOLE No <b>BH1</b>
Job No CG/28612	Date 09-05-18	Ground Level (m) 51.25	Co-Ordinates (m) E 526,740.0 N 183,596.0	
Client Mrs Anu Nayar				Sheet 2 of 2

SAMPLES & TESTS			Water	STRATA			Instrument / Backfill
Depth (m)	Type No	Test Result		Reduced Level	Legend	Depth (m) (Thickness)	
5.00		N18		46.05		5.20	
5.50	D						
5.85	HSV	106					
6.00	D						
6.00		N22					
6.50	D						
6.85	HSV	121					
7.00	D						
7.00		N21					
7.50	D						
8.00	D						
8.00		N20					
8.50	D						
9.00	D						
9.00		N26					
9.50	D						
10.00	D			41.25		10.00	
10.00		N28					

Boring Progress and Water Observations						General Remarks	
Date	Comment	Strike Depth	Casing Depth	Dia. mm	Standing Depth		
						1. Hand dug pit to 1.0m bgl. 2. No groundwater encountered. 3. D = Disturbed sample; HSV; Hand shear vane test; N = Standard penetration 'N60' value. 4. Installation details: 0.0mbgl to 1.0mbgl: plain pipe with bentonite backfill; 1.0mbgl to 5.0mbgl: slotted pipe with gravel backfill; 5.0mbgl to 6.0mbgl: bentonite backfill; 6.0mbgl to 10mbgl: arisings backfill. Installed with bung and flush with concrete cover.	

Method/ Plant Used	LLAMR window sampler	Field Crew	Topdrill	Logged By	GAT	Checked By	JJM
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# BOREHOLE LOG



Project 14 Queens Grove, Westminster, London				BOREHOLE No <b>BH2</b>	
Job No CG/28612	Date 09-05-18	Ground Level (m) 52.00	Co-Ordinates (m) E 526,728.0 N 183,613.0		
Client Mrs Anu Nayar				Sheet 1 of 1	

SAMPLES & TESTS			Water	STRATA				Instrument / Backfill
Depth (m)	Type No	Test Result		Reduced Level	Legend	Depth (m) (Thickness)	DESCRIPTION	
				51.63		(0.37) 0.37	Soft dark grey sandy gravelly clay with rootlets. Sand is fine to medium. Gravel is subangular to rounded fine to medium of flint and brick. [TOPSOIL]	
				51.50		0.50	Soft light orange brown silty gravelly clay. Gravel is subangular to rounded fine to medium of flint and fine brick fragments. [MADE GROUND]	
				51.40		0.60		
							Soft light orange brown silty gravelly clay. Gravel is subangular to rounded fine to medium of flint. [POSSIBLE HEAD DEPOSITS] (Borehole terminated at 0.6m)	

Boring Progress and Water Observations						General Remarks	
Date	Comment	Strike Depth	Casing Depth	Dia. mm	Standing Depth	1. Hand auger to 0.6mbgl. 2. No groundwater encountered. 3. Backfilled with arisings.	

Method/ Plant Used	Hand auger	Field Crew	Topdrill	Logged By GAT	Checked By JJM
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# SPT Hammer Energy Test Report

in accordance with BSEN ISO 22476-3:2005

Topdrill Ltd  
7 Deeping Gate  
Stonebridge  
Milton Keynes  
MK13 0DE

SPT Hammer Ref: 038  
Test Date: 29/06/2017  
Report Date:  
File Name: 038.spt  
Test Operator: RM

## Instrumented Rod Data

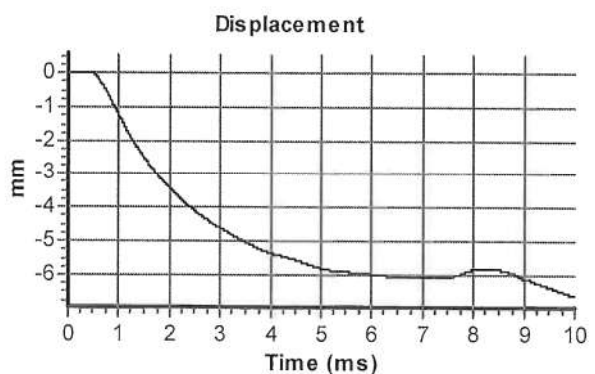
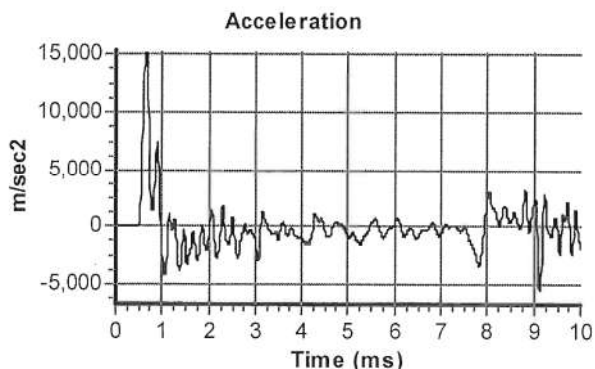
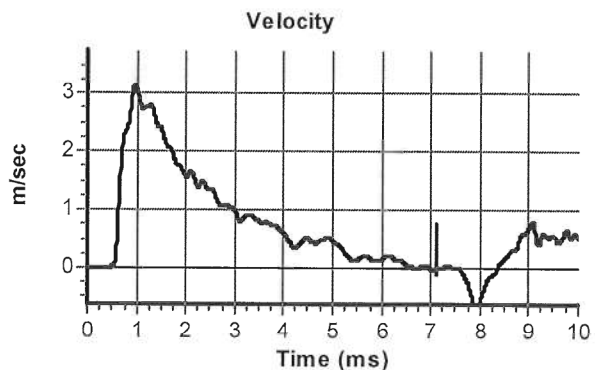
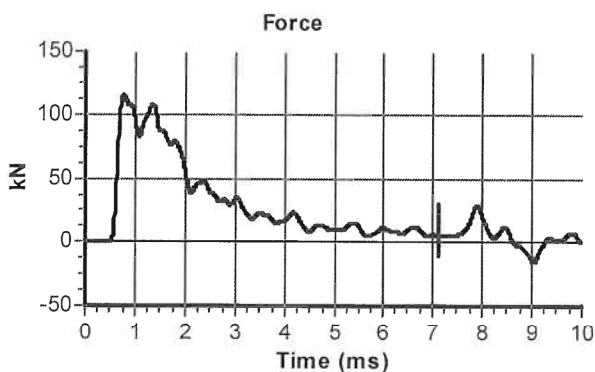
Diameter  $d_r$  (mm): 54  
Wall Thickness  $t_r$  (mm): 6.2  
Assumed Modulus  $E_a$  (GPa): 208  
Accelerometer No.1: 9783  
Accelerometer No.2: 9784

## SPT Hammer Information

Hammer Mass  $m$  (kg): 63.5  
Falling Height  $h$  (mm): 760  
SPT String Length  $L$  (m): 18.0

## Comments / Location

LLAMR 038  
Topdrill Ltd  
Milton Keynes



## Calculations

Area of Rod A ( $\text{mm}^2$ ): 931  
Theoretical Energy  $E_{\text{theor}}$  (J): 473  
Measured Energy  $E_{\text{meas}}$  (J): 376

Energy Ratio  $E_r$  (%): **79**

Signed: Andy Pearson  
Title: Drilling Manager

The recommended calibration interval is 12 months