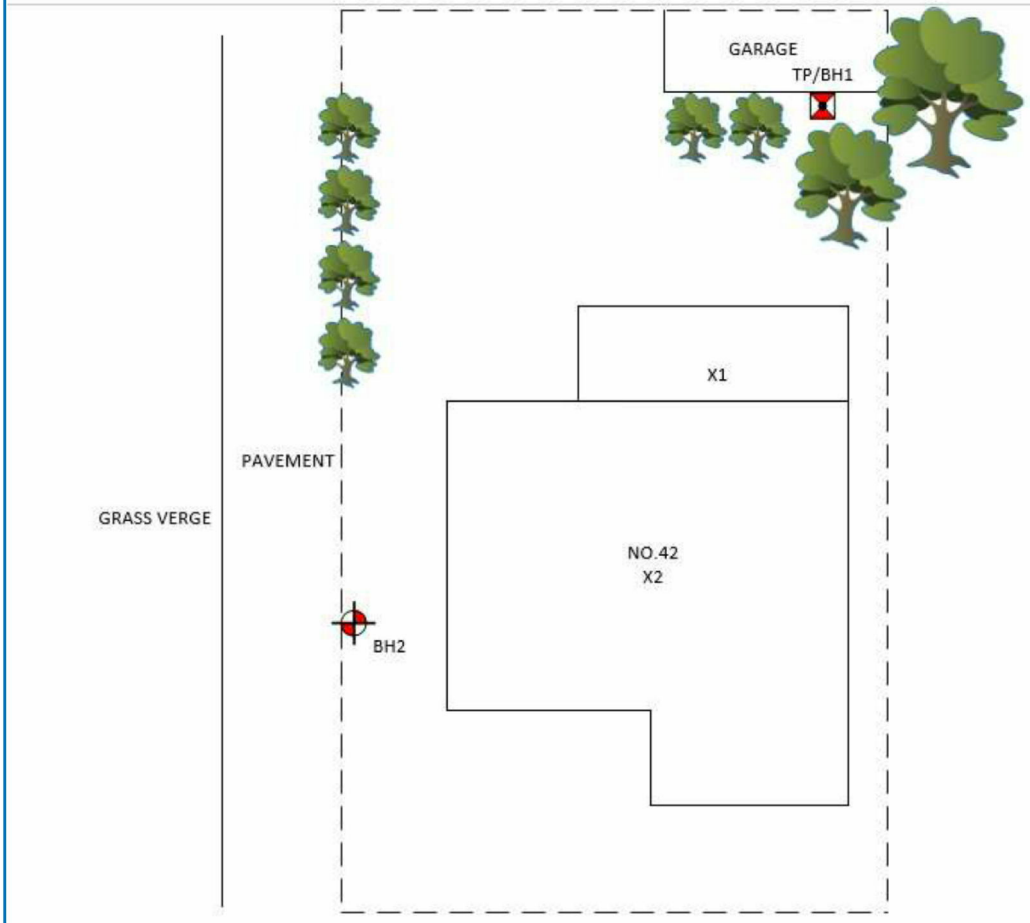
SITE INVESTIGATION
FACTUAL REPORT

42 Hillway London N6 6HH

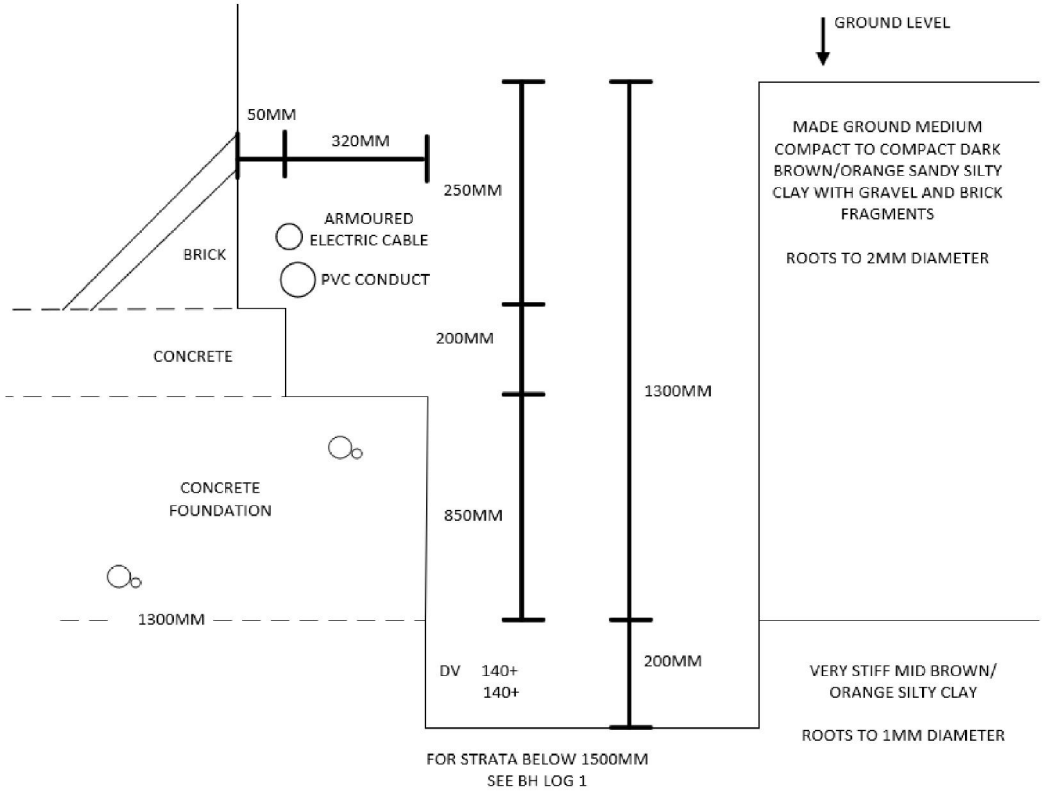
GHG
07/06/2023

PLEASE NOTE THAT OUR SOIL TESTING IS UNDERTAKE VIA A SEPARATE UKAS ACCREDITED LAB

SITE LAYOUT PLAN



Trial Pit No: 1	Date: 07/06/2023	Site: 42 Hillway Client: GHG Weather During Survey: Dry
Excavation Method: Hand Tools	Ground Level MOD	
Co-ordinates: SP		



REMARKS:	KEY: D: SMALL DISTURBED SAMPLE J: JAR SAMPLE B: BULK DISTURBED SAMPLE V: PILCON VANE (kPa) U: UNDISTURBED SAMPLE (U100) M: MACKINTOSH PROBE W: WATER SAMPLE N: STANDARD PENETRATION TEST BLOW COUNT

LOGGED BY: SP	CHECKED BY:	APPROVED BY:	NOT TO SCALE

Borehole	1		Sheet:	1 of 1	Site:	42 Hillway
			Job No:	[redacted]		
			Date:	07/06/2023		
Boring Method:	Drive-in-Sampler		Ground Level:		Client:	Dws
Diameter (mm):	100	Weather:	dry			

Depth	Soil Description			Samples and Tests		
(m)		Thickness	Legend	Depth	Type	Result
0.00	See Trial Pit	1.50				
1.50	Very stiff orange-brown CLAY	3.50		1.50	U	
				2.00	UV	140+
						140+
				2.50	U	
				3.00	UV	140+
						140+
				3.50	U	
				4.00	UV	140+
						140+
				4.50	U	
				5.00	UV	140+
5.00	End of BH					140+

Remarks:
BH ends at 5.0m. BH dry and open on completion. No roots observed below 3.5m.

Key:

		To Depth (m)	Max Dia (mm)
D - Disturbed Sample			
B - Bulk Sample			
W - Water Sample	Roots	3.50	1
J - Jar Sample	Roots		
V - Pilcon Shear Vane (kPa	Roots		
M - Mackintosh Probe	Depth to Water (m)		

TDTD - Too Dense To Drive

Logged:	SP		Checked:	Approved:	Version	V1.0 28/01/16	N.T.S.

Borehole	2		Sheet:	1 of 1	Site:	42 Hillway
			Job No:	[redacted]		
			Date:	07/06/2023		
Boring Method:	Drive-in-Sampler		Ground Level:		Client:	DWS
Diameter (mm):	100	Weather:	dry			

Depth	Soil Description	Thickness	Legend	Samples and Tests		
(m)				Depth	Type	Result
0.00	MADEGROUND medium compact brown silty sandy clay with gravel and brick fragments	0.50				
0.50	Firm orange-brown slightly gravelly CLAY	0.50		0.50	U	
1.00	Firm orange-brown CLAY	0.50		1.00	UV	64
						68
1.50	Stiff orange-brown CLAY	1.50		1.50	U	
				2.00	UV	110
						110
				2.50	U	
3.00	Very Stiff orange-brown CLAY	2.00		3.00	UV	140+
						140+
				3.50	U	
				4.00	UV	140+
						140+
				4.50	U	
				5.00	UV	140+
5.00	End of BH					140+

Remarks:
BH ends at 5.0m. BH dry and open on completion, no roots observed below 1.3m.

Key:

		To Depth (m)	Max Dia (mm)
D - Disturbed Sample			
B - Bulk Sample			
W - Water Sample	Roots	1.30	1
J - Jar Sample	Roots		
V - Pilcon Shear Vane (kPa)	Roots		
M - Mackintosh Probe	Depth to Water (m)		

TDTD - Too Dense To Drive

Logged:	SP	AM	Checked:	Approved:	Version	V1.0 28/01/16	N.T.S.

Our Ref : [redacted]

Laboratory Summary Results

Location : 42 Hillway
Client: D.W Solutions
Address: [redacted]

Date Sampled: 07/06/2023
Date Received : 12/06/2023
Date Tested : 26/06/2023
Date of Report : 07/07/2023

Sample Ref. TP/BH No	Depth (m)	Type	# Moisture Content (%) [1]	# Soil Fraction > 0.425mm (%) [2]	# Liquid Limit (%) [3]	# Plastic Limit (%) [4]	~ Plasticity Index (%) [5]	Liquidity * Index [5]	Modified * Plasticity Index (%) [6]	~ Soil * Class [7]	# Filter Paper Contact Time (d)	# Soil Sample Suction (kPa) [8]	# Oedometer Strain [9]	~ Estimated * Heave Potential (Dd) (mm) [10]	In situ * Shear Vane Strength (kPa) [11]	Organic * Content (%) [12]	pH Value [13]	Sulphate Content SO_3 (g/l) * [14]	Sulphate Content SO_4 (mg/l) [15]	* Class [16]
1	U/S 1.30	D	23	<5	58	25	33	-0.05	33	CH	7	937			> 140					
	1.5	D	24	<5																
	2.0	D	23	<5	61	26	35	-0.07	35	CH	7	1370			> 140					
	2.5	D	23	<5																
	3.0	D	23	<5	68	28	40	-0.13	40	CH	7	1460			> 140					
	3.5	D	21	<5																
	4.0	D	22	<5	62	26	36	-0.12	36	CH	7	1470			> 140					
	4.5	D	25	<5																
	5.0	D	24	<5	68	27	41	-0.07	41	CH	7	1410			> 140					

Test Methods / Notes

[1] BS 1377 : Part 2 : 1990, Test No 3.2
[2] Estimated if <5%, otherwise measured
[3] BS 1377 : Part 2 : 1990, Test No 4.4
[4] BS 1377 : Part 2 : 1990, Test No 5.3
[5] BS 1377 : Part 2 : 1990, Test No 5.4
[6] BRE Digest 240 : 1993
[7] BS 5930 : 2018 : Figure 8 - Plasticity Chart for the classification of fines soils
[8] Building Research Establishment Information Paper 4/93
[9] In Accordance with BS 1377-5 : 1990 : Clause 3
[10] Estimated Heave Potential (Dd)
[11] Values of shear strength were determined in situ by CTS using a Pilcon hand vane or Geonor vane (GV).
[12] BS 1377 : Part 3 : 2018 + A1 2021 Clause 4 - *Tested By CTS Leicester*
[13] BS 1377 : Part 3 : 2018 + A1 2021 Clause 12 - *Tested By CTS Leicester*
[14] Sulphate content as SO3 as required by BS 1377: Part 3: 1990 has been provided for information purposes - *Tested By CTS Leicester*
[15] BS 1377 : Part 3 : 2018 + A1 2021 Clause 7.6 - Tested By CTS Leicester
[16] BRE Special Digest One (Concrete in Aggressive Ground) August 2005 Note that if the SO4 content falls into the DS-4 or DS-5 class, it would be prudent to consider the sample as falling into the DS-4M or DS-5M class respectively unless water soluble magnesium testing is undertaken to prove otherwise.
PSD Chart - BS 1377: Part 2 : 1990, Test No 9.2
~ Calculations performed using subcontracted data.
* These tests are not UKAS accredited

Key

D	Disturbed sample (small)
B	Disturbed sample (bulk)
U	Undisturbed sample
W	Groundwater sample
ENP	Essentially Non-Plastic by inspection
U/S	Underside of Foundation

 # These tests have been subcontracted and carried out by PSL (Part of the Phenna Group)
Full reports can be provided upon request.

Test results reported relate only to the items tested.
This report shall not be reproduced except in full without approval of the laboratory.
The laboratory does not apply a conformity statement to test reports as standard, unless specifically requested by the customer.
Opinions and interpretations expressed herein are outside of the scope of UKAS accreditation.

Version: BH V1 SUBCON - 28.03.2023

[redacted]

Our Ref : [redacted]

Laboratory Summary Results

Date Sampled : 07/06/2023

Location : 42 Hillway

Date Received : 12/06/2023

Client: D.W. Solutions

Date Tested : 26/06/2023

Address: [redacted]

Date of Report : 07/07/2023

Sample Ref. BH No.	Sample Ref. Depth (m)	Type	# Moisture Content (%) [1]	# Soil Fraction > 0.425mm (%) [2]	# Liquid Limit (%) [3]	# Plastic Limit (%) [4]	– Plasticity Index (%) [5]	– Liquidity Index [5]	– Modified * Plasticity Index (%) [6]	– Soil * Class [7]	# Filter Paper Contact Time (d)	# Soil Sample Suction (kPa) [8]	# Oedometer Strain [9]	– Estimated * Heave Potential (Dd) (mm)[10]	In situ * Shear Vane Strength (kPa) [11]	Organic * Content (%)[12]	pH Value [13]	Sulphate Content SO_3 (g/l) * [14]	Sulphate Content SO_4 (mg/l) [15]	* Class [16]
2	U/S 0.50	D	23	<5	39	19	20	0.21	20	CI	7	5.62								
	1.0	D	21	<5											66					
	1.5	D	26	<5	67	26	41	0.00	41	CH	7	121								
	2.0	D	26	<5											110					
	2.5	D	26	<5	68	27	41	-0.04	41	CH	7	164								
	3.0	D	24	<5											> 140					
	3.5	D	26	<5	65	27	38	-0.03	38	CH	7	260								
	4.0	D	28	<5											> 140					
	4.5	D	28	<5	69	30	39	-0.05	39	CH	7	429								
	5.0	D	33	<5							7	244			> 140					

Test Methods / Notes

[1] BS 1377 : Part 2 : 1990, Test No 3.2

[2] Estimated if <5%, otherwise measured

[3] BS 1377 : Part 2 : 1990, Test No 4.4

[4] BS 1377 : Part 2 : 1990, Test No 5.3

[5] BS 1377 : Part 2 : 1990, Test No 5.4

[6] BRE Digest 240 : 1993

[7] BS 5930 : 1981 : Figure 31 - Plasticity Chart for the classification of fine soils.

[9] *In Accordance with BS 1377-5 : 1990 : Clause 3*

[10] Estimated Heave Potential (Dd)

[11] Values of shear strength were determined in situ by CTS using a Pilcon hand vane or Geonor vane (GV).

[12] BS 1377 : Part 3 : 2018 + A1 2021 Clause 4 - *Tested By CTS Leicester*

[13] BS 1377 : Part 3 : 2018 + A1 2021 Clause 12 - *Tested By CTS Leicester*

[14] Sulphate content as SO3 as required by BS 1377: Part 3: 1990 has been provided for information purposes - *Tested By CTS Leicester*

[15] BS 1377 : Part 3 : 2018 + A1 2021 Clause 7.6 - Tested By CTS Leicester

[16] BRE Special Digest One (Concrete in Aggressive Ground) August 2005

Note that if the SO4 content falls into the DS-4 or DS-5 class, it would be prudent to consider the sample as falling into the DS-4M or DS-5M class respectively unless water soluable magnesium testing is undertaken to prove otherwise.

PSD Chart - BS 1377: Part 2 : 1990, Test No 9.2.

– Calculations performed using subcontracted data.

* These tests are not UKAS accredited

Key

D	Disturbed sample (small)
B	Disturbed sample (bulk)
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 # These tests have been subcontracted and carried out by PSL (Part of the Phenna Group)

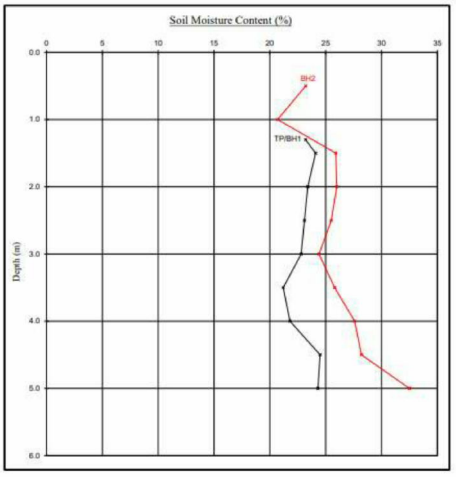
Full reports can be provided upon request.

[redacted]

Version: BH V1 SUBCON - 28.03.2023

Moisture Content Profiles

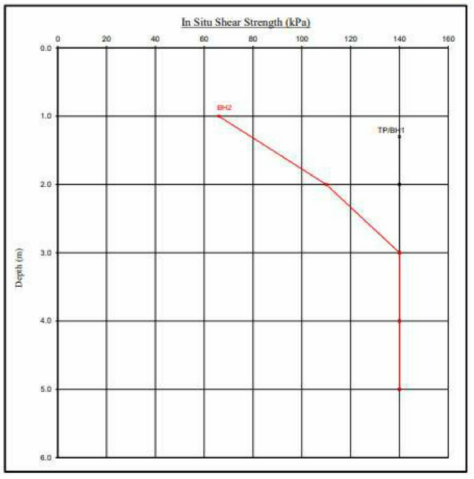
Our Ref : [redacted]
Location : 42 Hillway
Work carried out for: D.W Solutions



Notes
1. If plotted, 0.4 LL and PL+2 (after Driscoll, 1983) should only be applied to London Clay (and similarly overconsolidated clay) at shallow depths.
2. Unless specifically noted the profiles have not been related to a site datum.

Shear Strength Profiles

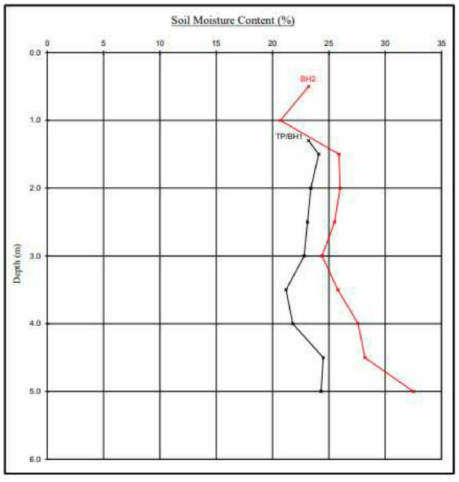
Date Sampled : 07/06/2023
Date Received : 12/06/2023
Date Tested : 26/06/2023
Date of Report : 06/07/2023



Note
1. Unless otherwise stated, values of Shear Strength were determined in situ by CTS using a Pilcon Hand Vane the calibration of which is limited to a maximum reading of 130 kPa.
2. Unless specifically noted the profiles have not been related to a site datum.

Moisture Content Profiles

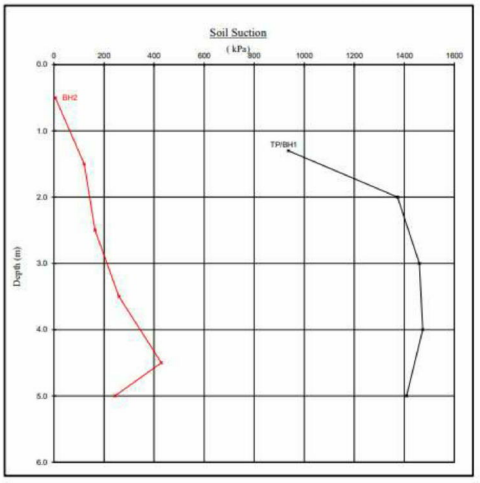
Our Ref : [redacted]
Location : 42 Hillway
Work carried out for: D.W Solutions



Notes
1. If plotted, 0.4 LL and PL+2 (after Driscoll, 1983) should only be applied to London Clay (and similarly overconsolidated clay) at shallow depths.
2. Unless specifically noted the profiles have not been related to a site datum.

Soil Suction Profiles

Date Sampled : 07/06/2023
Date Received : 12/06/2023
Date Tested : 26/06/2023
Date of Report : 06/07/2023



Note
When shown, the theoretical equilibrium suction profiles are based on conventional assumptions associated with London Clay (and similarly overconsolidated clays) at shallow depths. Note that the sample disturbance component is dependant on the method of sampling and any subsequent recompaction. The above plots show this to be 10/0kPa which is the value suggested by the BRE on the basis of their limited number of tests on recompacted samples. This may or may not be appropriate in this instance and judgement should be exercised.

EPSL
Independent Scientific Analysis

European Plant Science Laboratory

DW Solutions
[redacted]

Intec
[redacted]

ROOT IDENTIFICATION

42 Hillway,

Client Reference: N/A
Report Date: 19 June 2023
[redacted]

Sub Sample	Species Identified		Root Diameter	Starch
TP1:				
USF	Cupressaceae spp.	1	2 mm	Abundant
USF	Pomoideae gp.		1.5 mm	Abundant
BH1:				
to 3.5m	Cupressaceae spp.	2	1.5 mm	Abundant
BH2:				
to 1.3m	broadleaved species, too juvenile for positive identification		<1 mm	Low

Comments:

1 - Plus 1 other also identified as Cupressaceae spp.
2 - Plus 2 others also identified as Cupressaceae spp.

Cupressaceae spp. include Lawson cypress, western red cedar, Monterey cypress, Leyland cypress and junipers.
Pomoideae gp include apple, cotoneaster, hawthorn, pear, pyracantha, quince, rowan, snowy mespil and whitebeam.

Signed: M D Mitchell

Unless we are otherwise instructed in writing, the above sample material will normally be disposed of 6 years after the date of this report.

[redacted]

QM S ISO 9001 REGISTERED FIRM