



SITE INVESTIGATION FACTUAL REPORT

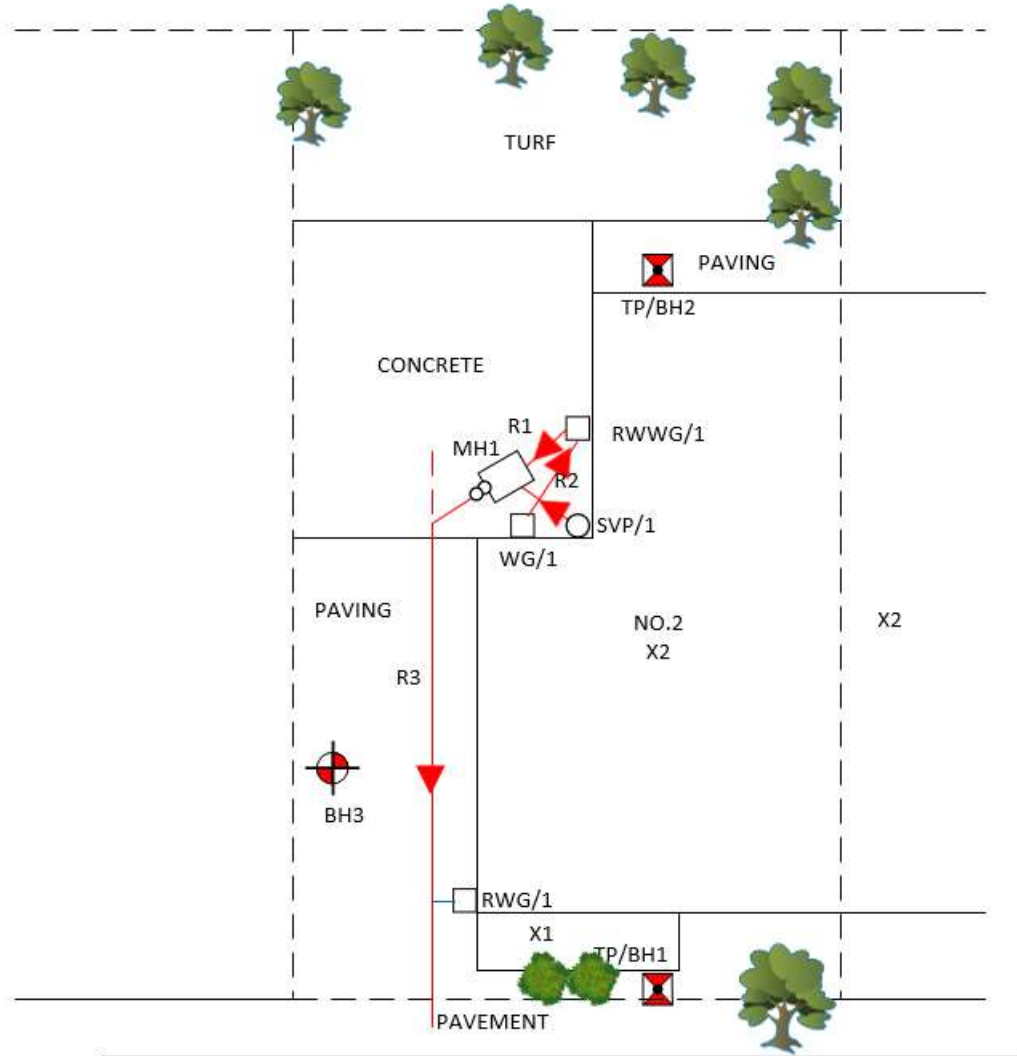


2 Northborough Road, Norbury, London, SW16
4AX

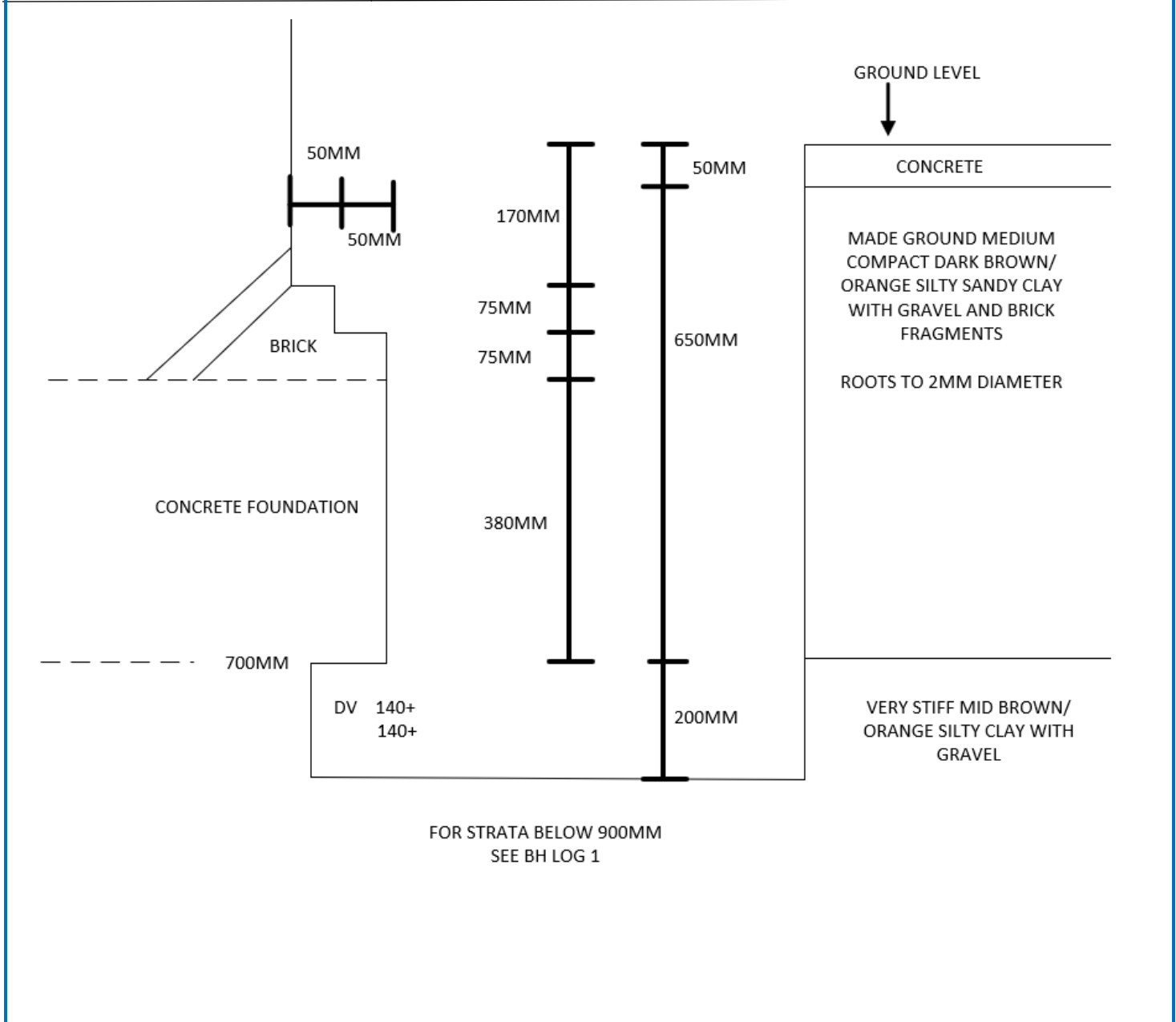
GHG
15/06/2023

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

SITE LAYOUT PLAN



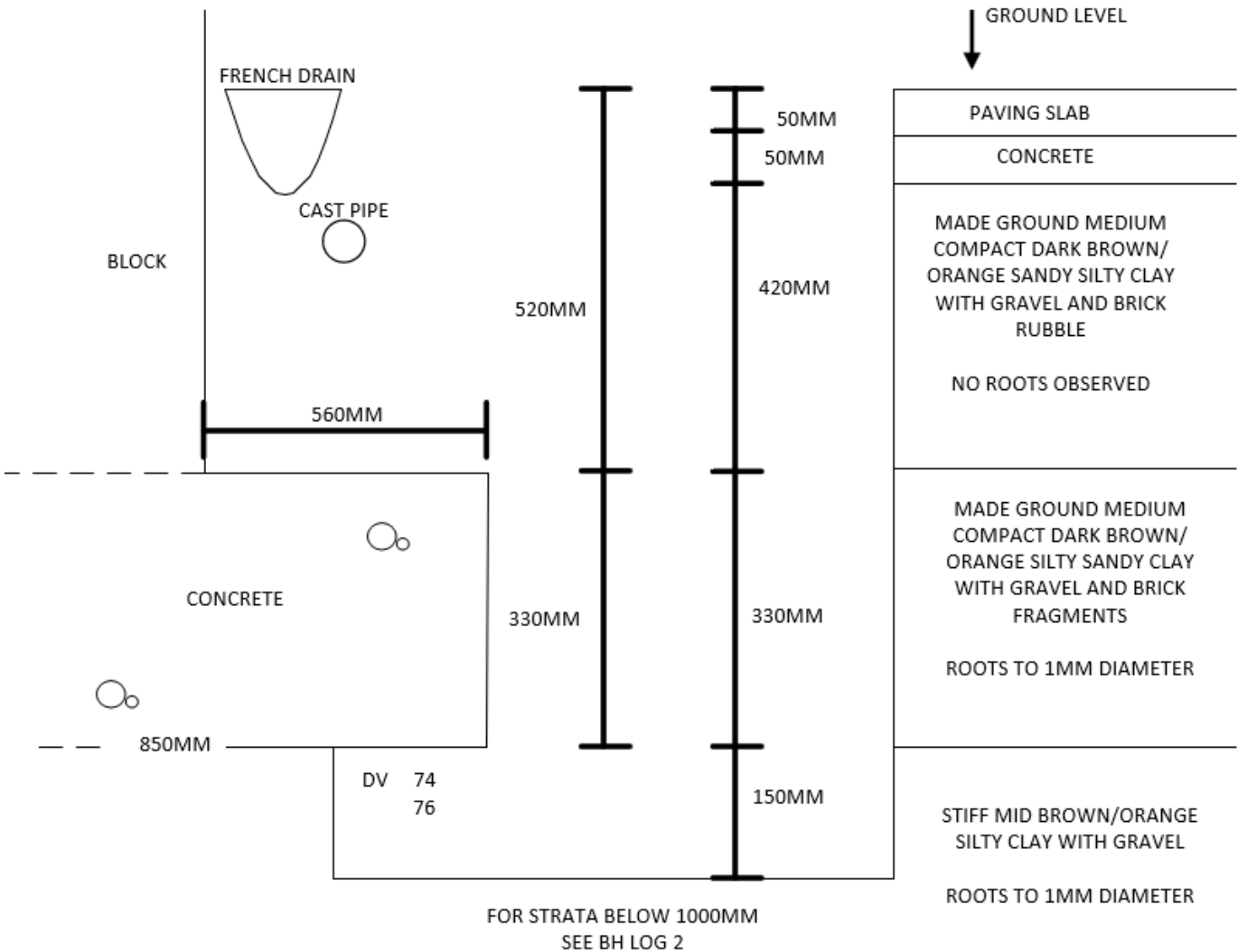
Trial Pit No: 1	Date: 15/06/2023	Site: Northborough
Excavation Method:	Ground Level	Client: GHG
Hand Tools		Weather During Survey: Dry
Co-ordinates: SP	MOD	



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
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Trial Pit No: 2	Date: 15/06/2023	Site: Northborough Client: GHG Weather During Survey: Dry
Excavation Method: Hand Tools	Ground Level	
Co-ordinates: SP	MOD	



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

CHECKED BY:	APPROVED BY:	NOT TO SCALE
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Borehole		2		Sheet:	1 of 1	Site: 2 Northborough Road					
				Job No:	DSW256738						
				Date:	15/06/2023						
Boring Method:	Hand Auger			Ground Level:		Client: DWS					
Diameter (mm):	75	Weather:	dry								
Depth (m)	Soil Description					Thickness	Legend	Samples and Tests			
0.00	See Trial Pit					1.00					
1.00	Stiff orange-brown silty CLAY					1.50		1.00	DV	84	
									DV	88	
								1.50	DV	100	
									DV	102	
								2.00	DV	112	
										116	
2.50	Very Stiff orange-brown silty CLAY					0.50		2.50	DV	140+	
									DV	140+	
3.00	End of BH							3.00	DV	140+	
									DV	140+	
Remarks: BH/2 ends at 3m. BH dry and open on completion. No roots observed below 2.3m						Key:				To	Max
						D - Disturbed Sample		Depth	Dia		
						B - Bulk Sample		(m)	(mm)		
						W - Water Sample	Roots	2.90	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		3	Sheet:	1 of 1	Site:	2 Northborough Road			
Boring Method:		Hand Auger	Job No.:	DSW256738	Client:			DWS	
Diameter (mm):		75	Weather:	dry	Ground Level:				
Depth (m)	Soil Description				Thickness	Legend	Samples and Tests		
							Depth	Type	Result
0.00	CONCRETE				0.10				
0.10	MADEGROUND medium compact brown silty sandy clay with gravel and brick fragments				0.40				
0.50	Firm orange-brown silty CLAY				1.00				
							1.00	DV	68
								DV	70
1.50	Stiff orange-brown silty CLAY				1.00				
							1.50	DV	78
								DV	82
							2.00	DV	110
								DV	112
2.50	Very Stiff orange-brown silty CLAY				0.50				
							2.50	DV	140+
								DV	140+
3.00	End of BH bh3 ends at 3.0m								
							3.00	DV	140+
								DV	140+
Remarks: BH/3 ends at 3m. BH dry and open on completion. No roots observed					Key:			To	Max
					D - Disturbed Sample			Depth	Dia
					B - Bulk Sample			(m)	(mm)
					W - Water Sample				
					J - Jar Sample				
					V - Pilcon Shear Vane (kPa)				
					M - Meckintosh Probe				
					TDTD - Too Dense To Drive				
					Roots				
					Depth to Water (m)				
Logged:	sp	Checked:	Approved:	Version	V1.0 28/01/16	N.T.S.			

Our Ref: DWS083
 Location: 2 Northborough Road
 Client: D.W Solutions
 Address: 39 Elmscroft Gardens, Potters Bar, Herts, EN6 2JP

Laboratory Summary Results

Date Sampled: 15/06/2023
 Date Received: 22/06/2023
 Date Tested: 01/07/2023
 Date of Report: 11/07/2023

Sample Ref		Type	# Moisture Content (%) [1]	# Soil Fraction > 0.425mm (%) [2]	# Liquid Limit (%) [3]	# Plastic Limit (%) [4]	~ Plasticity Index (%) [5]	~ Liquidity Index [3]	~ 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		* Class [16]
TP/BH No	Depth (m)																	SO3 (g/l) * [14]	SO4 (mg/l) [15]	
1	U/S 0.70	D	18	6	60	26	34	-0.24	32	CH	7	1530								
	1.0	D	25	<5	65	27	38	-0.07	38	CH	7	1400		> 140						
	1.5	D												> 140						
	2.0	D	24	<5	68	27	41	-0.07	41	CH	7	1440		> 140						
	2.5	D												> 140						
	3.0	D	29	<5	80	31	49	-0.03	49	CV	7	1470		> 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 fine soils

[8] Building Research Establishment Information Paper 493

- [9] In Accordance with BS 1377-5 : 1990 - Clause 1
- [10] Estimated Heave Potential (Dd)
- [11] Values of these strengths were determined in situ by CTS using a Picon hand vane or Geotest 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
- US Underside of Foundation

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.

These tests have been subcontracted and carried out by PSL (Part of the Phenna Group)

Full reports can be provided upon request.

Version: BH V1 SUBCON - 28.03.2023

Our Ref : DWS083
 Location : 2 Northborough Road
 Client : D.W Solutions
 Address : 39 Elmcroft Gardens, Potters Bar, Herts, EN6 2JP

Laboratory Summary Results

Date Sampled : 15/06/2023
 Date Received : 22/06/2023
 Date Tested : 01/07/2023
 Date of Report : 11/07/2023

Sample Ref.		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		* Class [16]
TP/BH No.	Depth (m)																	SO ₃ (g/l) * [14]	SO ₄ (mg/l) [15]	
2	U/S 0.85	D	26	<5	70	30	40	-0.10	40	CV	7	837								
	1.0	D	32	<5	80	33	47	-0.02	47	CV	7	1040		86						
	1.5	D												101						
	2.0	D	31	<5	83	32	51	-0.02	51	CV	7	1120		114						
	2.5	D												> 140						
	3.0	D	29	<5	80	31	49	-0.05	49	CV	7	1490		> 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.

- [8] Building Research Establishment Information Paper 490
- [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 Picon hand vane or Geotest 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 SO₄ 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 (Soil 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
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Our Ref: DWS083

Laboratory Summary Results

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Location: 2 Northborough Road

Date Received: 22/06/2023

Client: D.W Solutions

Date Tested: 01/07/2023

Address: 39 Elmscroft Gardens, Potters Bar, Herts, EN6 2JP

Date of Report: 11/07/2023

Sample Ref		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		* Class [16]
BH No.	Depth (m)																	SO ₃ (g/l) [14]	SO ₄ (mg/l) [15]	
3	1.0	D	27	<5	63	25	38	0.04	38	CH	7	213			68					
	1.5	D													80					
	2.0	D	31	<5	88	33	55	-0.04	55	CV	7	1290			111					
	2.5	D													> 140					
	3.0	D	30	<5	78	31	47	-0.03	47	CV	7	1360			> 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.

[8] Omining Resonance Estimation (Minimum Paper 500)

- [9] In accordance with BS 1377-5: 1990 - Clause 1
- [10] Estimated Heave Potential (Dd)
- [11] Values of shear strength were determined in situ by CTS using a Pilon hand vane or Geogear 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 Environments) 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.
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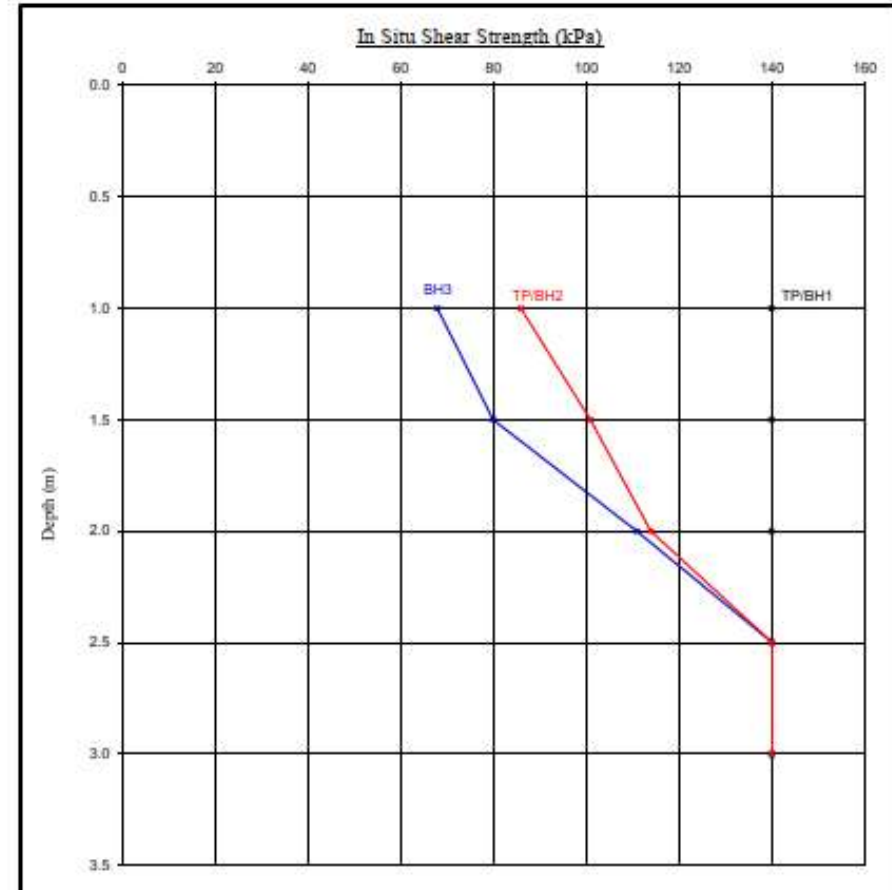
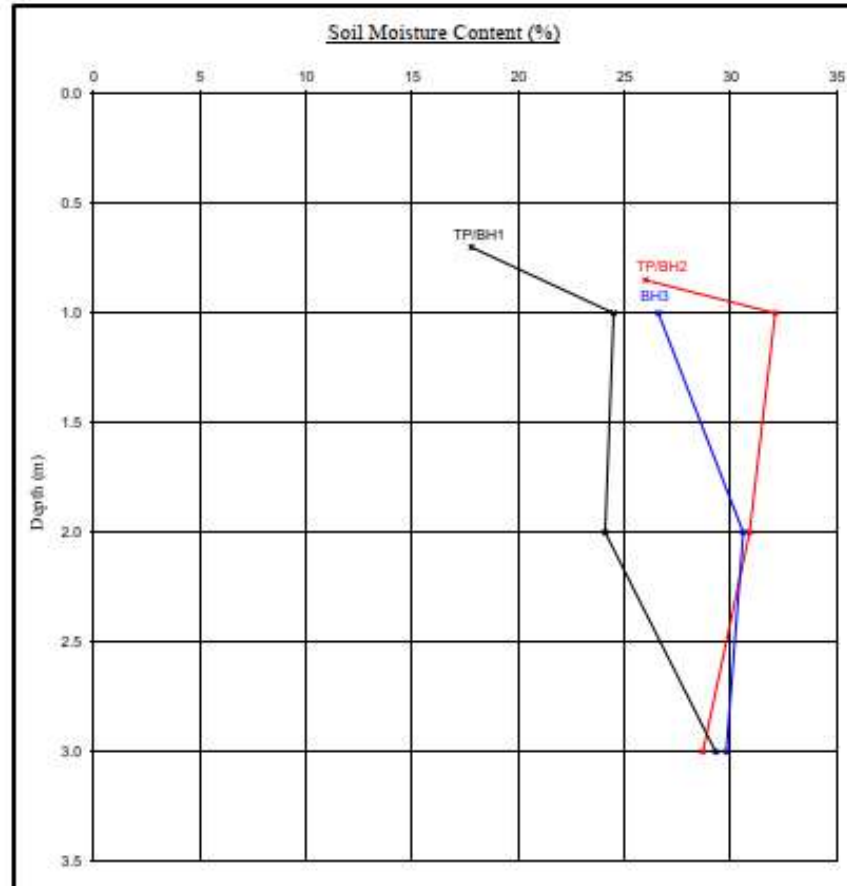
Full reports can be provided upon request.

Version: BH VI SUBCON - 28.03.2023

Moisture Content Profiles

Our Ref : DWS083
 Location : 2 Northborough Road
 Work carried out for: D.W Solutions

Date Sampled : 15/06/2023
 Date Received : 22/06/2023
 Date Tested : 01/07/2023
 Date of Report : 11/07/2023



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.

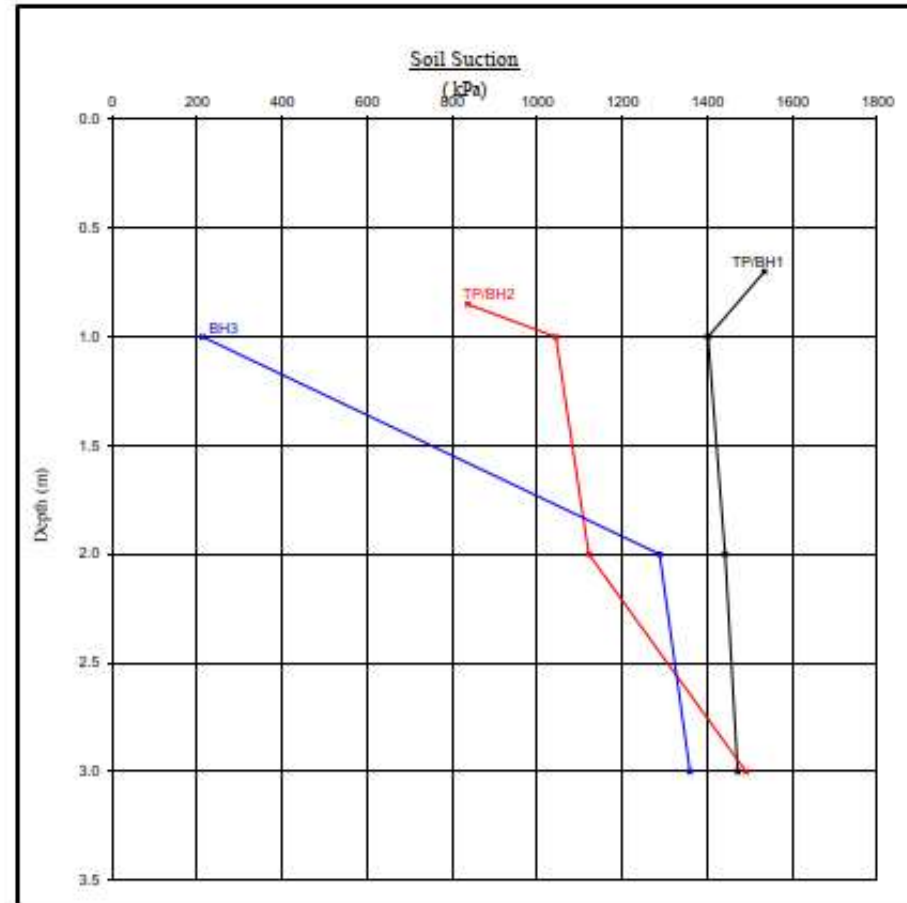
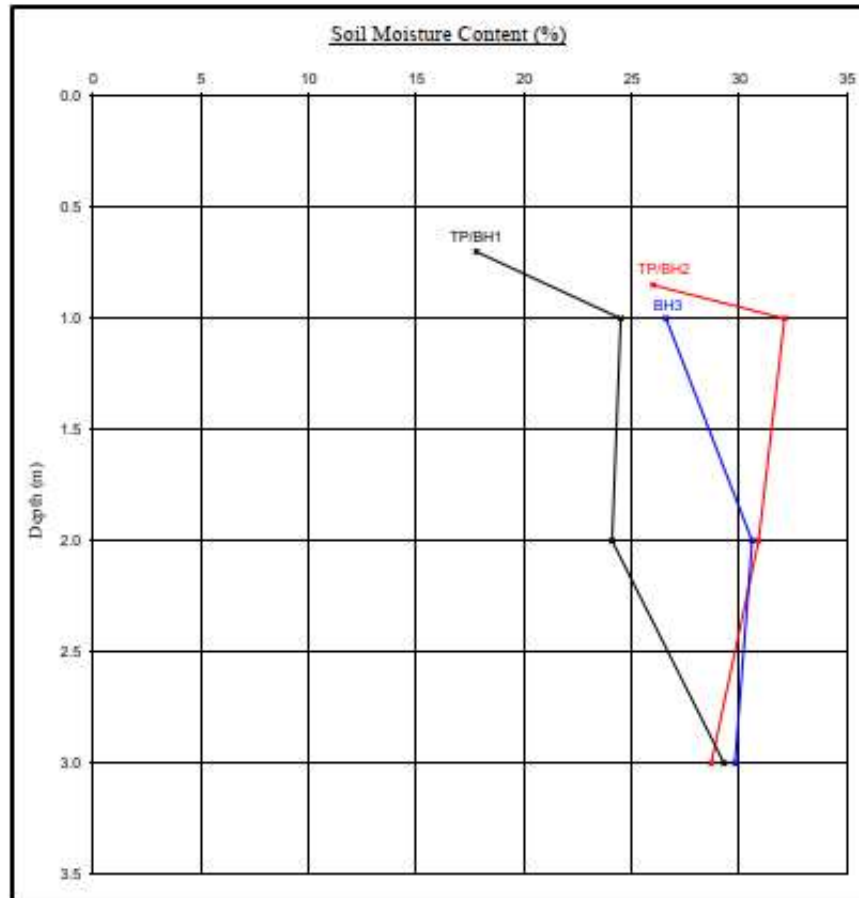
Note

1. Unless otherwise stated, values of Shear Strength were determined *in situ* by CTS using a Picon 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: DWS083
 Location: 2 Northborough Road
 Work carried out for: D.W Solutions

Date Sampled: 15/06/2023
 Date Received: 22/06/2023
 Date Tested: 01/07/2023
 Date of Report: 11/07/2023



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.

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 100kPa 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.

DW Solutions
1st and 2nd floor
2 West Street
Ware
Hertfordshire
SG12 9EE

Intec
Parc Menai, Bangor,
Gwynedd, North Wales
LL57 4FG
Tel: 01248 672652
Fax: 01248 672601

ROOT IDENTIFICATION

! Northborough Road,

Client Reference: N/A
Report Date: 26 June 2023
Our Ref: R53550

Sub Sample	Species Identified		Root Diameter	Starch
TP1:				
USF	broadleaved species, too juvenile for positive identification		<1 mm	Absent
BH1:				
	broadleaved species, too juvenile for positive identification	1	<1 mm	Absent
TP2:				
USF	<i>Aesculus</i> spp.	2	1.5 mm	Absent
BH2:				
to 2.3m	<i>Aesculus</i> spp.	2	1.5 mm	Absent

Comments:

- 1 - Also in a state of decay.
- 2 - Plus 2 others also identified as *Aesculus* spp. All in a state of decay.

Aesculus spp. are horse chestnuts.

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.



Registered in England No. 295427 Registered Office: Unit 4 Linnet Court, Cawledge Business Park, Alnwick, NE66 2GD

INVESTOR IN PEOPLE

