

Report on a **GEOTECHNICAL GROUND INVESTIGATION**

Ref: 20/33046 | Date: January 2021

**62 Wolseley Road
Crouch End
London
N8 8RP**

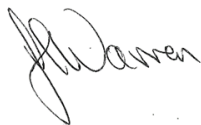
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ExposeM Site Investigations
Limited

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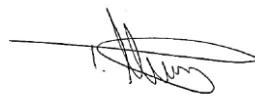
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Ref: 20/33121
Date: January 2021

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APPENDIX A

EXPOSEM SITE INVESTIGATIONS LIMITED FACUAL REPORT

APPENDIX B

CET LABORATORY TEST REPORT

1.0 Executive Summary

Site Location 62 Wolseley Road, Crouch End, London, N8 8RP

Client Exposem Site Investigations Limited

Environmental Setting The 1:50000 Geological Survey of Great Britain (England and Wales) covering the area indicates the site to be underlain by deposits of London Clay Formation at depth. A surface cover of Made Ground should also be expected.

The Bedrock geology underlying the site has been classified as a non-aquifer.

GEOTECHNICAL INVESTIGATION

Ground Conditions Encountered The boreholes revealed ground conditions that were generally consistent with the geological records and known history of the area and comprised Made Ground up to 1.00m in thickness resting on the London Clay Formation at depth.

Groundwater Groundwater was not encountered Borehole 1 after a period of approximately three weeks.

Engineering Observations & Recommendations Based on the ground and groundwater conditions encountered in the boreholes, it could, in theory, be possible to support the proposed new development on conventional strip foundations taken down below the Made Ground and any weak superficial soils and placed in the natural stiff silty sandy clay deposits which occur at a depth of 1.00m across the site.

Using theory from Terzaghi (1943), strip foundations placed within natural soils may be designed to allowable net bearing pressures of approximately 155kN/m² at 1.00m depth below ground level increasing to 270kN/m² at 3.00m depth below ground level in order to allow for a factor of safety of 2.5 against general shear failure. The actual allowable bearing pressure applicable will depend on the form of foundation, its geometry and depth in accordance with classical analytical methods, details of which can be obtained from "Foundation Design and Construction", Seventh Edition, 2001 by M J Tomlinson (see references) or similar texts.

2.0 Introduction

2.1 Outline and Limitations of Report

At the request of Exposem Site investigations Limited, a report was requested in relation to the ground investigation that was carried out by Exposem Site investigations Limited in connection with a proposed development at the above site.

The recommendations and comments given in this report are based on the ground conditions encountered in the exploratory holes made during the investigation and the results of the tests made in the field and the laboratory. It must be noted that there may be special conditions prevailing at the site remote from the exploratory hole locations which have not been disclosed by the investigation and which have not been taken into account in the report. No liability can be accepted for any such conditions.

3.0 Site Details

National Grid Reference: TQ – 296 885

3.1 Site Location

The site is located on the northern side of Wolseley Road, Crouch End at approximate postcode N8 8RP. The site consists of disused land with an existing outbuilding

The site is bound by residential properties within all directions.

3.2 Published Geology

The 1:50000 Geological Survey of Great Britain (England and Wales) covering the area indicates the site to be underlain by deposits of London Clay Formation at depth. A surface cover of Made Ground should also be expected.

4.0 Scope of Work

4.1 Site Works

The following works were undertaken by Exposem Site investigations Limited:-

- The drilling of two continuous flight auger boreholes to a depth of 9.00m below ground level (Boreholes 1 and 2).
- Sampling and in-situ testing as appropriate to the ground conditions encountered in the boreholes.
- Laboratory testing to determine the engineering properties of the soils encountered in the exploratory holes.
- The installation of a groundwater monitoring standpipe to a depth of 9.00m depth in Borehole 1, together with a single return monitoring visit.

Using information and samples from the site works carried out, Site analytical Services Limited carried out the following:-

- Interpretative reporting on foundation options for the proposed building and infrastructure.

4.2 Ground Conditions

The locations of the exploratory holes are shown on the site sketch plan supplied by Exposem Site investigations Limited.

The boreholes revealed ground conditions that were generally consistent with the geological records and known history of the area and comprised Made Ground up to 1.00m in thickness resting on the London Clay Formation at depth.

For detailed information on the ground conditions encountered in the boreholes, reference should be made to the exploratory hole records presented in Appendix A.

4.3 Groundwater

Groundwater was not encountered in the boreholes and the material remained essentially dry throughout.

It must be noted that the speed of excavation is such that there may well be insufficient time for further light seepages of groundwater to enter the boreholes and hence be detected, particularly within more cohesive soils.

Groundwater was not encountered in Borehole 1 after a period of approximately three weeks.

Isolated pockets of groundwater may also be present perched within any less permeable material found at shallower depth on other parts of the site especially within any Made Ground.

It should be noted that the comments on groundwater conditions are based on observations made at the time of the investigation (December 2020 and January 2021) and that changes in the groundwater level could occur due to seasonal effects and also changes in drainage conditions.

There will be no influence on the groundwater movement caused by the basement, as the groundwater was not encountered within the 9m of drilling and will be encountered within the Chalk, which is likely to be as deep at 50m below ground level.

5.0 In-Situ and Laboratory Tests

5.1 In-Situ Tests

In the essentially cohesive natural soils encountered at the site, in-situ shear vane tests were made at regular depth increments in order to assess the undrained shear strength of the materials. The results indicate that the natural soils are of a generally high strength in accordance with BS 5930 (2015).

5.2 Classification Tests

Atterberg Limit tests were conducted on six selected samples taken from the cohesive portion of the natural soils in Boreholes 1 and 2 and showed the samples tested to fall into Classes CH and CV according to the British Soil Classification System.

These are fine grained silty clay soils of high to very high plasticity and as such generally have a low permeability and a high susceptibility to shrinkage and swelling movements with changes in moisture content, as defined by the NHBC Standards, Chapter 4.2. The results indicated modified Plasticity Index values of between 44% and 53%, with all samples being above the 40% boundary between soils assessed as being of medium swelling and shrinkage potential and those assessed as being of high swelling and shrinkage potential.

The results of the tests are presented in Appendix B.

5.3 Sulphate and pH Analyses

The results of the sulphate and pH analyses made on two soil samples are presented in Appendix B. The results show the soil samples tested to have water soluble sulphate contents of up to 1.27g/litre associated with near neutral pH values.

6.0 Foundation Design

6.1 General

It is proposed to construct a single residential property with a single storey basement level. Details of the structures, layouts etc. have been provided, although details of the loadings were not available at the time of preparation of this report.

6.2 Site Preparation Works

The main contractor should be informed of the site conditions and risk assessments should be undertaken to comply with the Construction Design Management (CDM) regulations. Site personnel are to be made aware of the site conditions. It is recommended that extensive searches of existing man-made services are undertaken over the site prior to final design works.

6.3 Conventional Spread Foundations

A result of the inherent variability of uncontrolled fill, (Made Ground) is that it is usually unpredictable in terms of bearing capacity and settlement characteristics. Foundations should therefore, be taken through any Made Ground and either into, or onto a suitable underlying natural stratum of adequate bearing characteristics.

Based on the ground and groundwater conditions encountered in the boreholes, it could, in theory, be possible to support the proposed new development on conventional strip foundations taken down below the Made Ground and any weak superficial soils and placed in the natural stiff silty sandy clay deposits which occur at a depth of 1.00m across the site.

Using theory from Terzaghi (1943), strip foundations placed within natural soils may be designed to allowable net bearing pressures of approximately 155kN/m² at 1.00m depth below ground level increasing to 270kN/m² at 3.00m depth below ground level in order to allow for a factor of safety of 2.5 against general shear failure. The actual allowable bearing pressure applicable will depend on the form of foundation, its geometry and depth in accordance with classical analytical methods, details of which can be obtained from "Foundation Design and Construction", Seventh Edition, 2001 by M J Tomlinson (see references) or similar texts.

Any soft or loose pockets encountered within otherwise competent formations should be removed and replaced with well compacted granular fill.

In addition, foundations may need to be taken deeper should they be within the zones of influence of both existing or recently felled trees and any proposed tree planting. The depth of foundation required to avoid the zone likely to be affected by the root systems of trees is shown in the recommendations given in NHBC Standards, Chapter 4.2, April 2010, "Building near Trees" and it is considered that this document is relevant in this situation.

6.4 Piled Foundations

In the event that the use of conventional spread foundations proves either impracticable or uneconomical due to the size and depth of foundation required, then a piled foundation will be required. In these ground conditions, it is considered that some form of bored and in-situ cast concrete piled foundation with reinforced concrete ground beams should prove satisfactory.

The construction of a piled foundation is a specialist activity and the advice of a reputable contractor, familiar with the type of soil and groundwater conditions encountered at this site should be sought prior to finalising the foundation design. The actual pile working load will depend on the particular type of pile chosen and method of installation adopted.

To achieve the full bearing value a pile should penetrate the bearing stratum by at least five times the pile diameter.

Where piles are to be constructed in groups the bearing value of each individual pile should be reduced by a factor of about 0.8 and a calculation made to check the factor of safety against block failure.

Driven piles could also be used and would develop much higher working loads approximately 2.5 to 3 times higher than bored piles of a similar diameter at the same depth. However, the close proximity of adjacent buildings will in all probability preclude their use due to noise and vibration.

6.5 Retaining Walls

Several methods of retaining wall construction could be considered. These may include retaining structures cast in an underpinning sequence, or the use of temporary or sacrificial works to facilitate the retaining structure's construction. The excavation of the basement must not compromise the integrity of adjacent structures.

The full design of temporary and permanent retaining structures is beyond the scope of this report. However, the following design parameters for each element of soil recorded in the relevant exploratory holes are provided in the table below to assist the design of these structures.

Stratum	Depth to top	Bulk Density (Mg/m ³) (γ)	Effective Angle of Internal Friction (Φ)
London Clay Formation	0.40 to 1.00	2.00	23

Retaining Wall Design Parameters

The designer should use these parameters to derive the active and passive earth pressure coefficients k_a and k_p . The determination of appropriate earth pressure coefficients, together with factors such as the pattern of the earth pressure distribution, will depend upon the type/geometry of the wall and overall design factors.

6.6 Floor Slabs

Due to the presence of soils assessed to be of high swelling and shrinkage potential below, it is recommended that ground slabs should be fully suspended.

Within the zone of influence of trees, either retained or removed, floor slabs should incorporate either underfloor voids or suitable depths of compressible material in accordance with NHBC requirements, for soils with high volume change potential.

6.7 Excavations

Shallow excavations for foundations and services are likely to require nominal side support in the short term and groundwater is unlikely to be encountered in significant quantities once any accumulated surface water has been removed. Deeper and longer excavations below approximately 1.50m below existing ground level will require close side support and some seepages of groundwater could be encountered.

No particular difficulties are envisaged in removing such water by conventional internal pumping methods from open sumps.

Normal safety precautions should be taken if excavations are to be entered.

6.8 Chemical Attack on Buried Concrete

The results contained in Appendix B show the soil samples tested to have water soluble sulphate contents of up to 1.27g/litre associated with near neutral pH values.

In these conditions, it is considered that deterioration of buried concrete due to sulphate or acid attack is likely to occur. The final design of buried concrete according to Tables C1 and C2 of BRE Special Digest 1:2005 should be in accordance with Class DS-2 conditions.

In addition, segregations of gypsum were noted within the London Clay and scattered small gypsum crystals were also noted at depth. Consequently, it is considered that any buried concrete at depth may be attacked by such sulphates in solution and that it would be prudent to design any such deep buried concrete in accordance with full Class DS-2 conditions. With change in DS class, a modified ACEC class of AC-1s would be appropriate, assuming a static water condition.

7.0 List of Appendices

Appendix A – Exposem Site Investigations Limited Factual Report

Appendix B – CET Laboratory Test Report

8.0 References

1. British Standards Institution, 1986. Code of practice for foundations, BS 8004, BSI, London.
2. British Standards Institution, 1990. Methods for test for soils for civil engineering purposes, BS1377, BSI, London
3. British Standards Institution, 1994. Code of practice for earth retaining structures, BS8002, BSI, London
4. British Standards Institution, 2007. Code of Practice for Site Investigations, BS EN 1997-2, BSI, London
5. British Standards Institution, 2004. Geotechnical Design, BS EN 1997-1 BSI, London
6. Building Research Establishment Special Digest 1, 2005, "Concrete in Aggressive Ground – Third Edition."
7. Driscoll, R (1983) "The influence of vegetation on the shrinking and swelling of clay soils in Great Britain", Geo-technique 33, 93-107
8. Eurocode 1: Actions on structures – BS EN 1991-1-1:2002: General actions – Densities, self weight and imposed loads, BSI, London
9. Nathanail C.P., McCaffrey, C., Ashmore, M.H., Cheng, Y.Y., Gillet, A., Ogden, R. & Scott, D., 2009. The LQM/CIEH Generic Assessment Criteria for Human Health Risk Assessment (2nd edition). Land Quality Press, Nottingham.
10. NHBC Standards, Chapter 4.1, "Land Quality - managing ground conditions", September 1999.
11. NHBC Standards, Chapter 4.2, "Building near Trees", April 2010.
12. Stroud M.A. and Butler F.G. (1975) Symposium on the Engineering Behaviour of Glacial Materials; the Midland Soil Mechanics and Foundation Engineering Society; pgs 124 et seq.
13. Tomlinson, M J, 2001. "Foundation Design and Construction", Seventh Edition, Prentice Hall (ISBN 0-13-031180-4).

APPENDIX A

Exposeem Site Investigations Limited – Factual Report

EXPOSEM

SITE INVESTIGATIONS LTD

56 Falmouth Road

Essex, CM1 6HZ

Telephone: 07730 037 064

Email: matt@exposem.co.uk



Factual Report

Client : Richard Caelius

Site Name : 62 Wolseley Road, London, N8

Date of Works : 18.12.20

Date of Completion : 21.12.20



Content Summary

This report contains all data requested at the time of ordering

Site Name : Richard Caelius

Client Reference : 62 Wolseley Road, London, N8

This report comprises of the following :

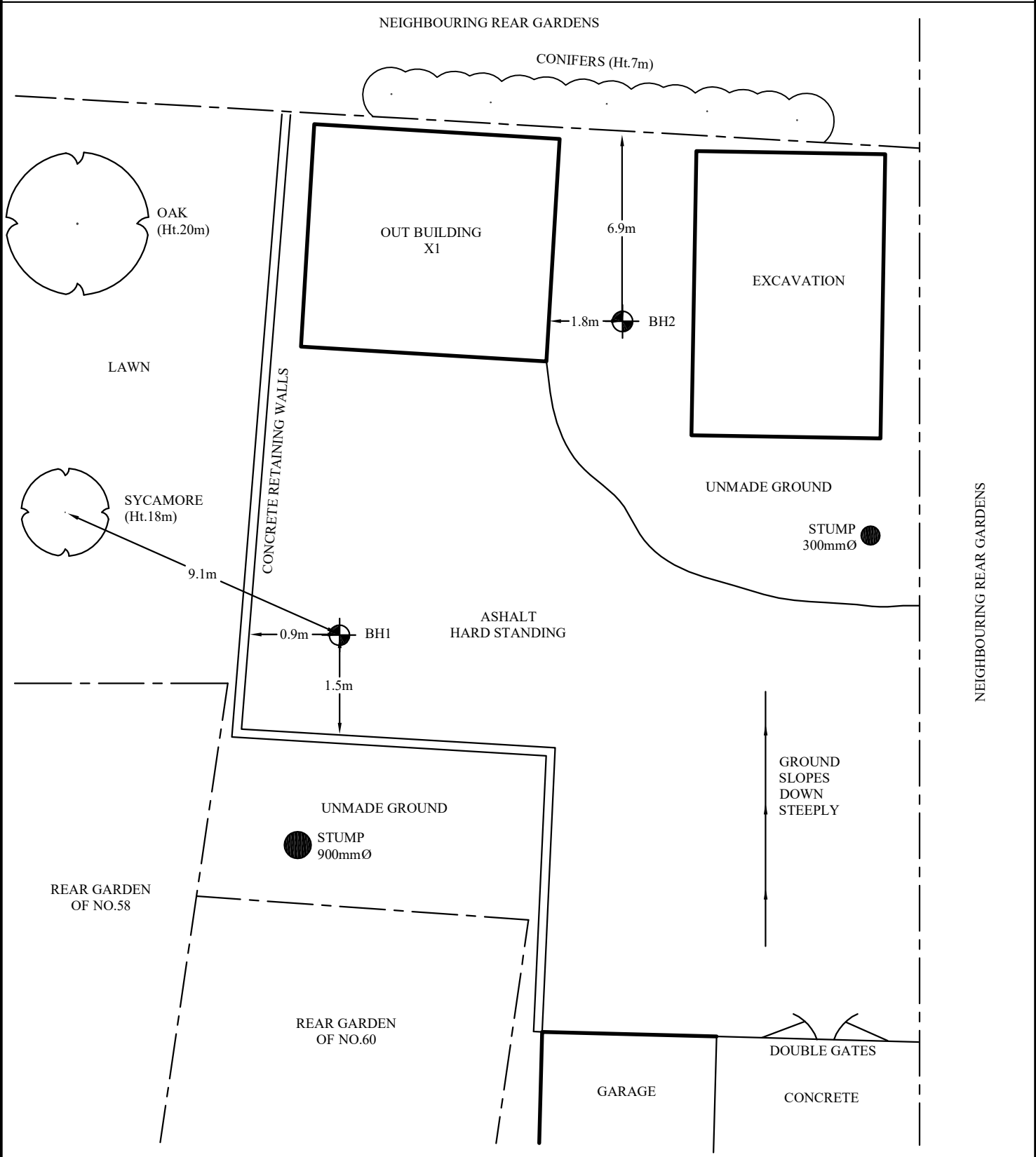
- 1 Site Plan**
- 2 Material Logs**
- 2 Misc. Photographs**
- 1 Limitations**

Notes :

General

Please refer to report summary notes for details pertaining to methods undertaken and their subsequent accreditations

Site Plan	Sheet: 1 of 1	Exposem Site Investigations 56 Falmouth Road, Chelmsford, Essex CM1 6HZ Mobile: 0773 0037064
	Ref No:	
Not to scale	Date: 18.12.20	Site: 62 Wolseley Road London N8
Client: Richard Caelius		

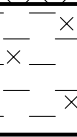
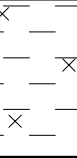
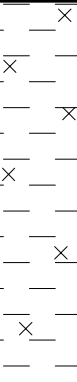
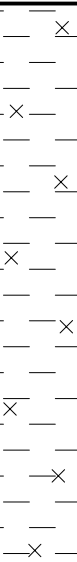


Remarks:	Key:	
	TP = Trial Pit BH = Borehole H = Approximate Height G = Gulley SVP = Soil vent pipe	IC = Inspection chamber IL = Invert level RWP = Rain water pipe

Tree identification not authenticated.

Borehole No: 1		Sheet: 1 of 1		Expossem Site Investigations 56 Falmouth Road, Chelmsford, Essex CM1 6HZ Mobile: 0773 0037064									
		Ref No:											
Not to scale		Date: 18.12.20		Site: 62 Wolsley Road London N8									
Client: Richard Caelius													
Depth Mtrs.	Description of Strata	Thick-ness	Legend	Sample	Type	Test Result	Root Information	Depth to Water	Depth mtrs				
G.L.	BLACK ASPHALT	0.1		D	WAC		Roots observed of live appearance to 2mmØ to 1.0m. ↓ No roots observed below 1.0m.		0.3				
0.1	BRICK RUBBLE	0.1											
0.2	MADE GROUND: medium compact mid brown silty clay with occasional gravel brick fragments & clinker/ash.	0.2		D	V	80 84				1.0			
0.4	Stiff mid brown grey veined silty CLAY with partings of brown silt & fine sand.	0.8											
1.2	Stiff dark brown silty CLAY thickly laminated with brown silt & fine sand.	0.7		D	V	90 90					2.0		
1.9	Stiff organic odour stained mid grey silty CLAY with partings of grey silt & fine sand.	1.0											
2.9				D	V	140+ 140+						3.0	
				D	V	140+ 140+							4.0
	Very stiff mid brown grey veined silty CLAY with partings of brown silt & fine sand.	3.1		D	V	140+ 140+	5.0						
6.0				D	V	140+ 140+		6.0					
				D	V	140+ 140+			7.0				
	Very stiff mid brown silty CLAY as above.	3.0		D	V	140+ 140+				8.0			
				D	V	140+ 140+					9.0		
9.0				D	V	140+ 140+							
	BOREHOLE ENDS AT 9.0m												
Remarks: 9.0m standpipe installed on completion. Borehole dry & open on completion.													

Key: D : Disturbed Sample M: Penetration Test by Mackintosh Probe W: Water Sample V: Vane Test

Borehole No: 2		Sheet: 1 of 1		Expossem Site Investigations 56 Falmouth Road, Chelmsford, Essex CM1 6HZ Mobile: 0773 0037064					
		Ref No:							
Not to scale		Date: 18.12.20		Site: 62 Wolsley Road London N8					
Client: Richard Caelius									
Depth Mtrs.	Description of Strata	Thick-ness	Legend	Sample	Type	Test Result	Root Information	Depth to Water	Depth mtrs
G.L.	MADE GROUND: medium compact dark brown gravelly clayey silt with numerous small pieces of concrete & brick.	1.2					Roots observed of live appearance to 8mmØ to 0.8m.		
1.0				D	V	88 90	↓ Roots observed as above to 1mmØ to 1.6m.		1.0
1.8	Stiff mid brown grey veined silty CLAY with partings of brown silt & fine sand.	0.8					↓ No roots observed below 1.6m.		
2.7	Stiff organic odour stained black silty CLAY with partings of black silt & fine sand.	0.9		D	V	90 92			2.0
				D	V	140+ 140+			3.0
	Very stiff mid brown/grey veined silty CLAY with partings of brown silt & fine sand.	2.3		D	V	140+ 140+			4.0
5.0				D	V	140+ 140+			5.0
				D	V	140+ 140+			6.0
	Very stiff mid brown silty CLAY as above.	4.0		D	V	140+ 140+			7.0
				D	V	140+ 140+			8.0
9.0				D	V	140+ 140+			9.0
	BOREHOLE ENDS AT 9.0m								
Remarks: Borehole dry & open on completion.									

EXPOSE M

Site Photos

BH1



EXPOSE M

Site Photos

BH2





This report is personal to the client, confidential and non assignable. It is issued with no admission of liability to any third party.

This report shall not be reproduced, except in full, without the written approval of the originator.

Where our involvement consists exclusively of testing samples, the results and comments (if provided) relate only to the samples tested.

Any samples taken that are deemed to be subject to deviation will be recorded as such within the test summary.

SITE INVESTIGATIONS LTD

56 Falmouth Road,
Chelmsford,
Essex, CM1 6HZ
Telephone: 07730 037 064
Email: matt@exposem.co.uk
www.exposem.co.uk
VAT No: 255 8778 50

Standpipe Monitoring Results

62 Wolseley Road
London
N8

Borehole 1 (10m Standpipe Installation)

Date

Water Level

7/1/21

0.00m (no water level to record)

APPENDIX B

CET Laboratory Test Report

SITE INVESTIGATION FACTUAL REPORT

Report No: 815212
Client: EXPOSE M
Site: 62 Wolseley Road, Chelmsford

Client Ref: 62 Wolseley Road
Date of Visit: 18/12/2020



Home Emergency Response - Subsidence Investigation - Drainage Services – Crack & Level Monitoring – Property Video Surveys

Unit E2 First Floor Suite, Boundary Court
Willow Farm Business Park, Castle Donington
Leicestershire, DE74 2NN

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✉ enquiries@cet-uk.com
💻 www.cet-uk.com

CET is the trading name of CET Structures Ltd
Registered in England No. 02527130

Laboratory Summary Results

Our Ref : 815212

Location : 62, Wolseley Road, N8

Client: EXPOSEM Site Investigation Ltd

Address: 56 Falmouth Road, Chelmsford, CM1 6HZ

Date Sampled: 18/12/2020

Date Received : 21/12/2020

Date Tested : 21/12/2020

Date of Report : 12/01/2021

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 [14]	SO ₄ [15]	
BH1	1.0	D	32	<5	79	26	53	0.12	53	CV							7.3	0.57	0.69	DS-2
	2.0	D	31	<5	65	20	45	0.24	45	CH										
	3.0	D	32	<5	75	27	48	0.10	48	CV										

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] In-house method S9a adapted from BRE IP 4/93

[9] In-house Test Procedure S17a: One Dimensional Swell/Strain Test

[10] Estimated Heave Potential (Dd)

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

[12] BS 1377 : Part 3 : 1990, Test No 4

[13] BS 1377 : Part 2 : 1990, Test No 9

[14] BS 1377 : Part 3 : 1990, Test No 5.6

[15] SO₄ = 1.2 x SO₃

[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.

* These tests are not UKAS accredited

Full reports can be provided upon request.

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



Test results reported relate only to the items tested.

This report shall not be reproduced except in full without approval of the laboratory.

* Sulphates/PH completed by K4 Soils

Construction Testing Solutions Ltd - Lawness Barns, Mountnessing Road, Billericay, Essex CM12 0TS

Version: 5BH V1 - 06.01.21

0927

Our Ref : 815212

Location : 62, Wolseley Road, N8

Client: EXPOSEM Site Investigation Ltd

Address: 56 Falmouth Road, Chelmsford, CM1 6HZ

Laboratory Testing Results

Date Sampled : 18/12/2020

Date Received : 21/12/2020

Date Tested : 21/12/2020

Date of Report : 12/01/2021

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 * (g / l)		* Class [16]
TP/BH No.	Depth (m)																			
																		SO3 [14]	SO4 [15]	
BH2	1.0	D	31	<5	73	25	48	0.13	48	CV										
	2.0	D	41	<5	79	29	50	0.24	50	CV							7.4	1.06	1.27	DS-2
	3.0	D	31	<5	72	28	44	0.06	44	CV										
																</				

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] In-house method S9a adapted from BRE IP 4/93

[9] In-house Test Procedure S17a: One Dimensional Swell/Strain Test

[10] Estimated Heave Potential (Dd)

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

[12] BS 1377 : Part 3 : 1990, Test No 4

[13] BS 1377 : Part 2 : 1990, Test No 9

[14] BS 1377 : Part 3 : 1990, Test No 5.6

[15] SO₄ = 1.2 x SO₃

[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.

* These tests are not UKAS accredited

Full reports can be provided upon request

* Sulphates/PH completed by K4 Soils

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



Test results reported relate only to the items tested.

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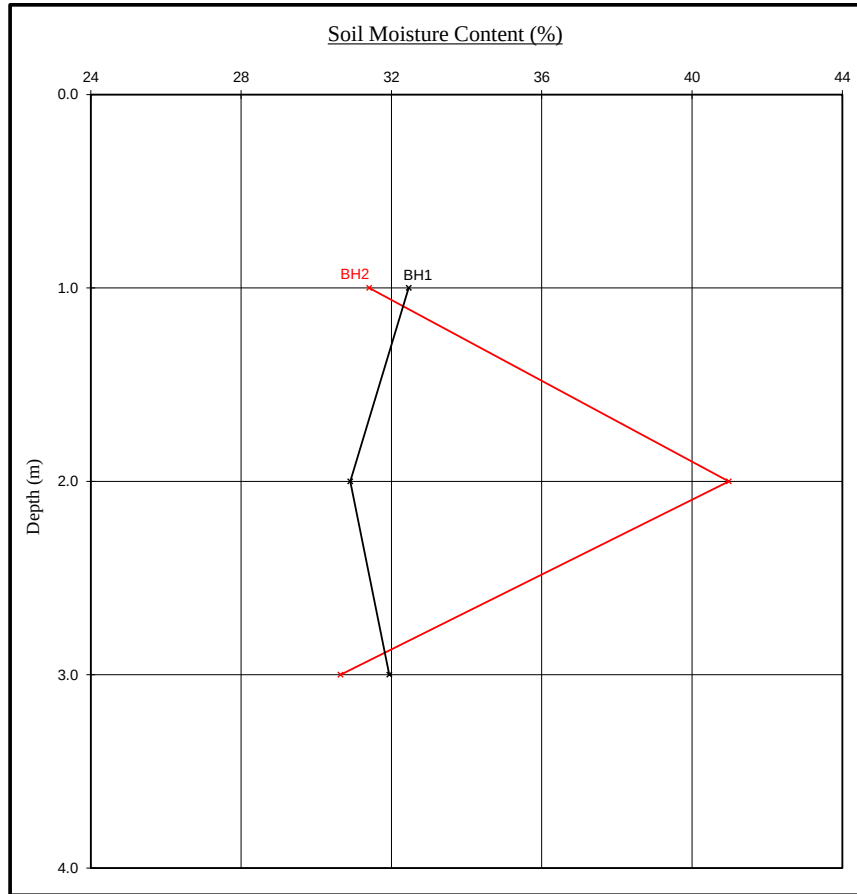
Construction Testing Solutions Ltd - Lawness Barns, Mountnessing Road, Billericay, Essex CM12 0TS

Version: 5BH V1 - 06.01.21

0927

Moisture Content Profiles

Our Ref : 815212
 Location : 62, Wolseley Road, N8
 Work carried out for: EXPOSEM Site Investigation Ltd

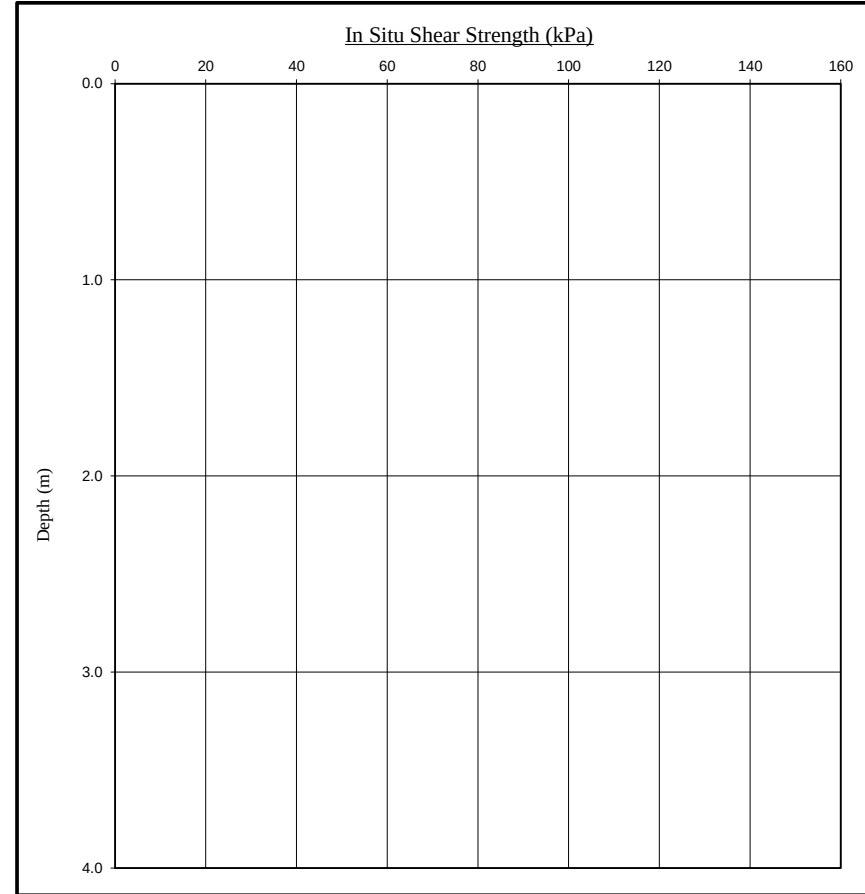


Notes

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 : 18/12/2020
 Date Received : 21/12/2020
 Date Tested : 21/12/2020
 Date of Report : 12/01/2021



Note

1. Unless otherwise stated, values of Shear Strength were determined in situ by CET 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.