Arboricultural Consultancy for Aviva - Commercial

Note: This report is intended for use between the client, Environmental Services and any parties detailed within the report. It is based on the understanding at the time of visiting the property that Engineers are satisfied that damage is attributable to clay shrinkage subsidence exacerbated by vegetation.

1. Case Details

Insured	Gilling Court	Address	Flat 26 & Common Areas, Gilling Court, Belsize Court, Hampstead, NW3 4UY		
Client	Subsidence Management Services	Contact	Stephan Barnes	Claim No.	[redacted]
ES Ref	[redacted]	Consultant	Andrew Cayley	Contact No.	
Report Date	06/03/2023				

Scope of Report: To survey the property and determine significant vegetation contributing to subsidence damage, make recommendation for remedial action and assess initial mitigation and recovery prospects. The survey does not make an assessment for decay or hazard evaluation.

2. Property and Damage Description

The insured structure is a 4 storey block of flats. The property occupies a level site with no adverse topographical features.

We understand that the current damage relates to the rear left-hand corner of the insured dwelling, where cracking indicates downwards movement.

3. Technical Reports

No technical investigations are available at the time of reporting, therefore assumptions outlined in Note above apply: recommendations may be subject to change following evaluation of any investigations that may be forthcoming.

4. Action Plan

Mitigation	
Insured involved?	Yes
Local Authority involved?	No
Other third party Mitigation involved?	Yes
Recovery	
Is there a potential recovery action?	No

Treeworks	
Local Authority	
TPO / Conservation Area / Planning Protection Searches	Awaiting Searches from LA
Additional Comments	
Awaiting Further Instructions.	

[redacted]

5. Technical Synopsis

This report is based upon our understanding at the time of visiting the property that Subsidence Management Services have concluded, on a preliminary basis, that the current damage is due to differential foundation movement exacerbated by moisture abstraction from vegetation growing proximate to the property's foundations.

We have therefore been instructed to assess the potential for vegetation to be influencing soil moisture levels beneath the foundations of the property and, if deemed appropriate provide management proposals which will return long-term stability and allow effective repairs to be undertaken.

The potential drying influence of the vegetation on site, has been considered based on an assessment of overall size, species profile and the proximity of vegetation relative to the advised area of damage.

Based on our observations on site, it is our opinion that the footings of the subject property are within the normally accepted influencing distance of vegetation on site, thereby indicating the potential for the advised damage to be the result of clay shrinkage subsidence exacerbated by the moisture abstracting influence of vegetation.

With due regards to species profile, size and proximity, T5 (Poplar (Lombardy)) is considered the dominant feature proximate to the focal area of movement and accordingly, where vegetation is confirmed as being causal, we have identified it as the primary cause of the current subsidence damage.

The Lime (T4) is also considered to retain a contributory influence, albeit in a secondary capacity when compared to the above.

The size and proximity of the above vegetation is consistent with the advised location(s) of damage and it is our opinion, on balance of probability, that roots from the above vegetation will be in proximity to the footings of the insured property.

Note: additional minor vegetation has been noted on site and, depending on trial-pit location may be identified within future site investigations; however, unless specifically identified within this report, these plants are not deemed material to the current claim nor pose a significant future risk.

Given the above and considering the suspected mechanism of movement, in order to mitigate the current damage thereby allowing soils beneath the property to recover to a position such that an effective engineering repair solution can be implemented, we recommend a program of vegetation management as detailed by this report.

Please refer to Section 6 for management prescriptions.

Preliminary recommendations contained within this report are prescribed on the basis that site investigations confirm vegetation to be causal; management advice is designed to offer the most reliable arboricultural solution likely to restore long-term stability and also facilitate liaison with third-party owners and/or Local Authorities where necessary.

Consequently, we have advocated the complete removal of T4 (Lime) and T5 (Poplar (Lombardy)) as it will offer the most certain arboricultural solution likely to restore long-term stability.

Replacement planting is considered appropriate with regards mitigating the impact of the works suggested; however, species selection should be appropriate for the chosen site and consideration must be given to the ultimate size of the replacement species and any future management requirements.

We recommend the role of vegetation and the efficacy of management recommendations be qualified by means of monitoring.

Please note that the footing of the insured property fall within the anticipated rooting distance of additional vegetation which we believe presents a foreseeable risk of future damage and accordingly we have made recommendations in respect of this.

We consider the impact on the wider public amenity from the proposed tree works is mitigated by the presence of further trees locally, their rear garden location and the scope for replacement planting.

Is vegetation likely to be a contributory factor in the current damage?	Yes
Is vegetation management likely to contribute to the future stability of the property?	Yes
Is replacement planting considered appropriate?	Yes
Would DNA profiling be of assistance in this case?	No

6.0 Recommendations

6.1 Current Claim Requirements

These recommendations may be subject to review following additional site investigations.

Tree No.	Species	Age Cat	Approx. Height (m)	Distance to Building (m) *	Ownership	Action	Requirement
T4	Lime	1	13.8	5	C - Insured	Remove	Remove close to ground level; do not treat stump due to translocation risk. Where such a risk exists, we advise that any emergent regrowth is removed annually.
T5	Poplar (Lombardy)	1	18	5.7	C - Insured	Remove	Remove close to ground level and treat stump to inhibit regrowth.
Age Cat: 1 = Younger than property; 2 = Similar age to the property; 3 = Significantly older than property							

* Estimated

[redacted]

6.2 Future Risk Recommendations

These recommendations may be subject to review following additional site investigations.

Tree No.	Species	Age Cat	Approx. Height (m)	Distance to Building (m) *	Ownership	Action	Requirement
S1	Holly	1	3.4	4.9	C - Insured	No action	No Works Required.
T1	Horse Chestnut	1	15	9.7	C - Insured	Action to avoid future risk	Do not allow to exceed current dimensions by way of regular pruning.
T2	Horse Chestnut	1	13.9	2.7	C - Insured	Action to avoid future risk	Re-pollard back to point of previous reduction and maintain thereafter on a 3 year cycle.
T3	Horse Chestnut	1	15.4	10.5	A - Third Party	Action to avoid future risk	Crown reduce overall canopy by 30% (minimum) to achieve a crown volume reduction in line with BRE IP7/06. Maintain at reduced dimensions by re-pruning back to points of previous reduction on a 3 year (max) cycle.
T6	Lime	1	9.7	5.8	C - Insured	Action to avoid future risk	Subject to regular management; maintain in line with BRE IP7/06 by re-pollarding on a 3-year cycle.
T7	Ash	1	16.8	6.8	C - Insured	Action to avoid future risk	Subject to previous management; maintain at broadly current dimensions by way of regular pruning.
TG1	Lime	1	12.9	5.4	C - Insured	Action to avoid future risk	Subject to regular management; maintain in line with BRE IP7/06 by re-pollarding on a 3-year cycle.
TG2	Mixed species group	1	16	10.7	C - Insured	Action to avoid future risk	Subject to previous management; maintain Horse Chestnut and x2 Limes at broadly current dimensions by way of regular pruning. No works required to Cherry..
Age Cat: 1 = Younger than property; 2 = Similar age to the property; 3 = Significantly older than property							

* Estimated

Third party property addresses should be treated as indicative only, should precise detail be required then Environmental Services can undertake Land Registry Searches

7. Site Plan

Please note that this plan is not to scale. OS Licence No. 100043218

[redacted]

8. Photographs

T6 - Lime

TG2 - Mixed species group

T7 - Ash

S1 - Holly

[redacted]

Arboricultural Consultancy for Aviva - Commercial

TG1 - Lime

T5 - Poplar (Lombardy)

T4 - Lime

T5 - Poplar (Lombardy)

[redacted]

Arboricultural Consultancy for Aviva - Commercial

T3 - Horse Chestnut

T2 - Horse Chestnut

T1 - Horse Chestnut

[redacted]

Arboricultural Consultancy for Aviva - Commercial

Date: 06/03/2023 Property: Flat 26 & Common Areas, Gilling Court, Belsize Court, Hampstead, NW3 4UY

9. Tree Works Reserve - Does not include recommendations for future risk.

Insured Property Tree Works	[redacted]
Third Party Tree Works	
Provisional Sum	

- The above prices are based on works being performed as separate operations.
- The above is a reserve estimate only.
- Ownerships are assumed to be correct and as per Section 6.
- A fixed charge is made for Tree Preservation Order/Conservation Area searches unless charged by the Local Authority in which case it is cost plus 25%.
- Should tree works be prevented due to statutory protection then we will automatically proceed to seek consent for the works and Appeal to the Secretary of State if appropriate.
- All prices will be subject to V.A.T., which will be charged at the rate applying when the invoice is raised.
- Trees are removed as near as possible to ground level, stump and associated roots are not removed or included in the price.
- Where chemical application is made to stumps it cannot always be guaranteed that this will prevent future regrowth. Should this occur we would be pleased to provide advice to the insured on the best course of action available to them at that time. Where there is a risk to other trees of the same species due to root fusion, chemical control may not be appropriate.

10. Limitations

This report is an appraisal of vegetation influence on the property and is made on the understanding that that engineers suspect or have confirmed that vegetation is contributing to clay shrinkage subsidence, which is impacting upon the building. Recommendations for remedial tree works and future management are made to meet the primary objective of assisting in the restoration of stability to the property. In achieving this, it should be appreciated that recommendations may in some cases be contrary to best Arboricultural practice for tree pruning/management and is a necessary compromise between competing objectives.

Following tree surgery we recommended that the building be monitored to establish the effectiveness of the works in restoring stability.

The influence of trees on soils and building is dynamic and vegetation in close proximity to vulnerable structure should be inspected annually.

The statutory tree protection status as notified by the Local Authority was correct at the time of reporting. It should be noted however that this may be subject to change and we therefore advise that further checks with the Local Authority MUST be carried out prior to implementation of any tree works. Failure to do so can result in fines in excess of £20,000.

Our flagging of a possible recovery action is based on a broad approach that assume all third parties with vegetation contributing to the current claim have the potential for a recovery action (including domestic third parties). This way opportunities do not "fall through the net"; it is understood that domestic third parties with no prior knowledge may be difficult to recover against but that decision will be fully determined by the client.

A legal Duty of Care requires that all works specified in this report should be performed by qualified, arboricultural contractors who have been competency tested to determine their suitability for such works in line with Health & Safety Executive Guidelines. Additionally all works should be carried out according to British Standard 3998:2010 *"Tree Work. Recommendations"*.

[redacted]

SubsNetUK

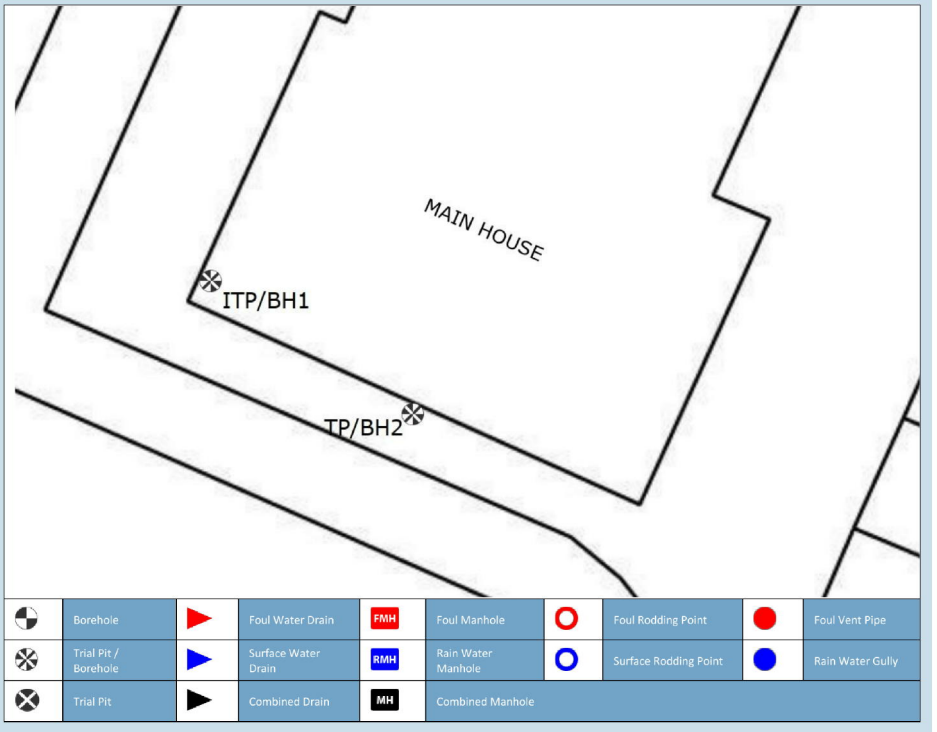
GEOTECHNICAL

for Subsidence Management Services

Gilling Court, Belsize Grove, London, NW3 4UY

Client:	Subsidence Management Services
Client Contact:	Stephan Barnes
Client Ref:	[redacted]
Policy Holder:	Gilling Court (Hampstead) Ltd
Report Date:	28 November 2022
Our Ref:	[redacted]

Site Plan

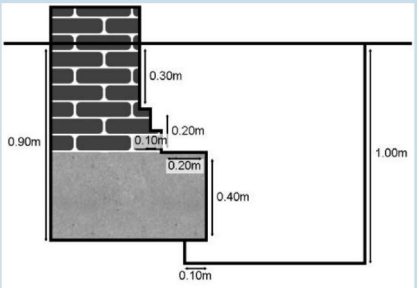


SubsNetUK

ITP/BH1 Foundation Detail and Borehole Log

Foundation Detail

House wall foundation comprised of brick wall to 300mm bgl, bearing on stepped brickwork to 500mm bgl with a total projection of 100mm from the elevation. In turn, bearing on concrete to 900mm bgl with a total projection of 300mm from the elevation. Underside of foundation (USF) was exposed to 100mm back from the face of the foundation and probed 350mm back from the face of the foundation.



WS	Samples Type	Samples Depth (m)	Tests Type	Tests Depth (m)	Tests Results	Legend	Strata Description and Observations
						0	CONCRETE.
						0.5	MADE GROUND: Firm dark greyish brown sandy silty CLAY with rare fine to medium brick and rare fine to medium ash & clinker. ..at 0.10m to 0.90m bgl rare roots of live appearance encountered.
	R	0.90 - 1.40	PEN	0.90	HP=3.5 (3.5,3.5,3.5,3.5,3.5,3.5)	1.0	Stiff brown CLAY.
	D	0.90 - 1.40					..at 0.90m to 1.40m bgl rare roots of live appearance encountered and sampled. ..at 0.90m bgl UNDERSIDE OF HOUSE FOUNDATION. ..at 1.00m bgl base of hand excavated trial pit.
	D	1.40 - 1.90	PEN	1.40	HP=4.0 (4.0,4.0,4.0,4.0,4.0,4.0)	1.5	..at 1.40m to 4.00m bgl no roots encountered. Extensive inspection of soil samples encountered no roots.
	D	1.90 - 2.40	PEN	1.90	HP=4.0 (4.0,4.0,4.0,4.0,4.0,4.0)	2.0	
	D	2.40 - 2.90	PEN	2.40	HP=4.0 (4.0,4.0,4.0,4.0,4.0,4.0)	2.5	
	D	2.90 - 3.40	PEN	2.90	HP=4.0 (4.0,4.0,4.0,4.0,4.0,4.0)	3.0	
	D	3.40 - 4.00	PEN	3.40	HP=4.0 (4.0,4.0,4.0,4.0,4.0,4.0)	3.5	
			PEN	4.00	HP=4.0 (4.0,4.0,4.0,4.0,4.0,4.0)	4.0	..at 4.00m bgl target depth achieved.

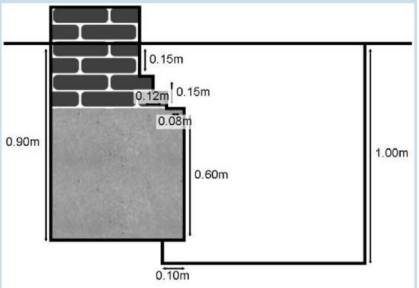
-- End of borehole at 4.00m --
Trial pit excavated to 1.00m bgl. Borehole completed by hand auger. Roots encountered to 1.40m bgl. Groundwater strikes not encountered.

SubsNetUK

TP/BH2 Foundation Detail and Borehole Log

Foundation Detail

House foundation comprised of brick wall to 150mm bgl, bearing on stepped brickwork to 300mm bgl with a total projection of 120mm from the elevation. In turn, bearing on concrete to 900mm bgl with a total projection of 200mm from the elevation. Underside of foundation (USF) was exposed to 100mm back from the face of the foundation and probed 300mm back from the face of the foundation.



WS	Samples Type	Samples Depth (m)	Tests Type	Tests Depth (m)	Tests Results	Legend	Strata Description and Observations
						0	TARMACADAM.
							MADE GROUND: Firm dark brown sandy gravelly CLAY with occasional fine to coarse brick.
							..at 0.10m to 0.50m bgl rare roots of live appearance encountered.
						0.5	MADE GROUND: Firm brown slightly sandy CLAY with rare fine to medium brick.
							..at 0.50m to 0.90m bgl rare roots of live appearance encountered.
	D R	0.90 - 1.40 0.90 - 1.40	PEN	0.90	HP=3.5 (3.5,3.5,3.5,3.5,3.5)	1.0	Firm brown CLAY.
							..at 0.90m to 2.40m bgl occasional roots of live appearance encountered and sampled.
							..at 0.90m bgl UNDERSIDE OF HOUSE FOUNDATION.
							..at 1.00m bgl base of hand excavated trial pit.
	D R	1.40 - 1.90 1.40 - 1.90	PEN	1.40	HP=3.5 (3.5,3.5,3.5,3.5,3.5)	1.5	
	R D	1.90 - 2.40 1.90 - 2.40	PEN	1.90	HP=4.0 (4.0,4.0,4.0,4.0,4.0)	2.0	
	D	2.40 - 2.90	PEN	2.40	HP=4.0 (4.0,4.0,4.0,4.0,4.0)		..at 2.40m to 4.00m bgl no roots encountered. Extensive inspection of soil samples encountered no roots.
						2.5	
	D	2.90 - 3.40	PEN	2.90	HP=4.0 (4.0,4.0,4.0,4.0,4.0)	3.0	
	D	3.40 - 4.00	PEN	3.40	HP=4.0 (4.0,4.0,4.0,4.0,4.0)	3.5	
			PEN	4.00	HP=4.0 (4.0,4.0,4.0,4.0,4.0)	4.0	..at 4.00m bgl target depth achieved.

-- End of borehole at 4.00m --
Trial pit excavated to 1.00m bgl. Borehole completed by hand auger. Roots encountered to 2.40m bgl. Groundwater strikes not encountered.

SubsNetUK

Site Observations

GENERAL:
Site Investigation works (ITP/BH 1 and TP/BH 2) undertaken on 25 November 2022 during dry weather (i.e. no rain).

HEALTH AND SAFETY:
Negative signal obtained in Power, Radio and Genny mode on the Cable Avoidance Tool (CAT) (ITP/BH1 and TP/BH 2).

FOUNDATIONS:
House foundation was exposed and the underside of foundation (USF) recorded to be 0.90m bgl (ITP/BH 1 and TP/BH 2).

ROOTS:
Roots encountered to 1.40m and 2.40m bgl (ITP/BH 1 and TP/BH 2).

IN SITU TESTING:
Hand Penetrometer (PEN) undertaken at 0.90m bgl (ITP/BH 1 and TP/BH 2) within the hand auger at maximum 0.50m intervals.

WATER STRIKES:
No water strikes (NWS) encountered (ITP/BH 1 and TP/BH 2).

The groundwater observations do not necessarily indicate equilibrium conditions. It should be appreciated that groundwater levels are subject to both seasonal and weather induced variations. Other effects such as construction activities may also change groundwater levels.

Environmental Services

SOIL ANALYSIS

for Subsidence Management Services

Gilling Court, London, NW3 4UY

Client: Subsidence Management Services

Claim Number: [redacted]

Policy Holder: Gilling Court (Hampstead) Ltd

Report Date: 20/12/2022

Our Ref: [redacted]

Compiled By:

Name	Position	Signature
Saira Dougan	Laboratory Technician	[redacted]

Checked By:

Name	Position
Bob Walker	Laboratory Manager

Date samples received: 30-Nov-22
Water Content Test Date: 12-Dec-22
Atterberg Limits Test Date: 14-Dec-22

Oedometer Test Date: 14-Dec-22

UKAS TESTING
9265

Environmental Services

Notes relating to soils testing

Unless otherwise stated, all soil testing was undertaken by Environmental Services at unit 10H Maybrook Business Park, B76 1AL for SubsNetUK of Unit 4 Linnet Court, Cawledge Business Park, Alnwick, NE66 2GD

Soil samples have been prepared in accordance with BS1377:Part 1: 2016 Section 7

Descriptions of soil samples within the laboratory have been undertaken generally in accordance with BS5930:2015. Descriptions of soil samples fall outside of the scope of UKAS accreditation and may have been shortened to remove tertiary components for ease of reference.

The graphical representation of 40% of the LL and the numerical representation of the modified plasticity index (mod. PI) fall outside of the scope of UKAS accreditation.

Following the issue of this soil analysis report, samples will be retained for at least 28 days should additional testing, or referencing, be required. It should be noted that any tests undertaken on soils retained subsequent to the issue of this report may not give an accurate indication of the in-situ conditions of the sample.

The results contained herein relate only to items tested and no others. Additionally as the laboratory is not responsible for the sampling process it takes no responsibility for the condition of the samples and all samples are tested "as received".

Where samples of the same test type are not tested on the same day, or the testing spans multiple days, the test date states the day of the final test or the test date of the final sample.

All information above the laboratory reference on the cover page of this report are as provided by the customer and the laboratory is not responsible for any errors or omissions therein.

Water Content Tests are undertaken in accordance with ISO 17892:Part 1:2014

The Liquid Limit test is undertaken in accordance with BS1377:Part 2:1990 Section 4.4 using an 80g cone with a 30° tip. Sieve percentages reported in blue denote that the sample has been sieved otherwise it has been prepared from its natural state. Sieve percentage reported in BOLD denote that the sample has been oven-dried prior to testing.
Unless otherwise specified herein, the one-point cone penetrometer method has been used with increasing water content. Atterberg results depicted in green have not been tested and are duplicates of the preceding sample, included for reference only.

The Plastic Limit test and the determination of the Plasticity Index is undertaken in accordance with BS1377:Part 2:1990. Where a plastic limit has been denoted with an asterisk (*) then it has been derived from the liquid limit and has not been tested.

The Oedometer swell/strain test method is based upon BS1377:Part 5:1990 Section 4.4 'Determination of swelling and collapse characteristics' and unless otherwise stated is undertaken on a remoulded, disturbed, sample.

The Oedometer Swell/Strain Test is undertaken in a controlled environment within a temperature range of 16°C and 24°C

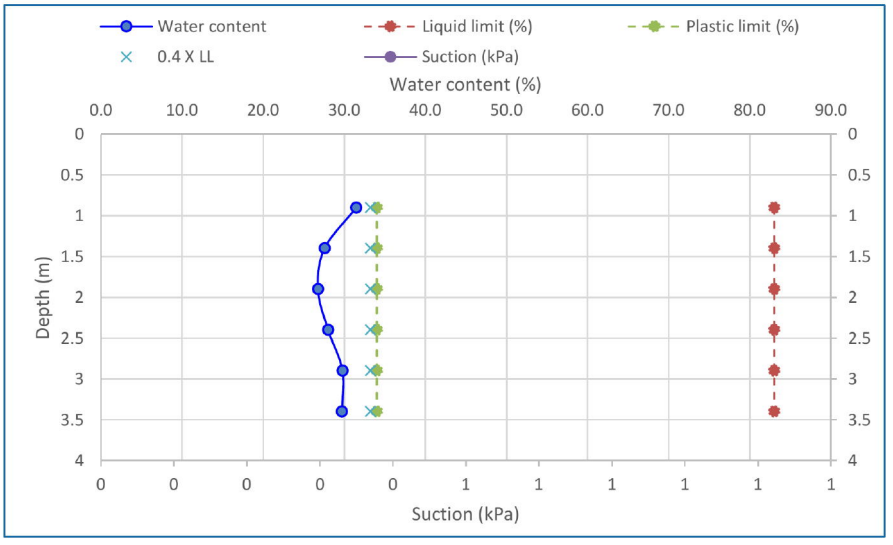
If you would like to provide feedback on this report or any laboratory services or performance, please complete the form below. All appropriate feedback will be used in the continual improvement of laboratory services.

Laboratory feedback form

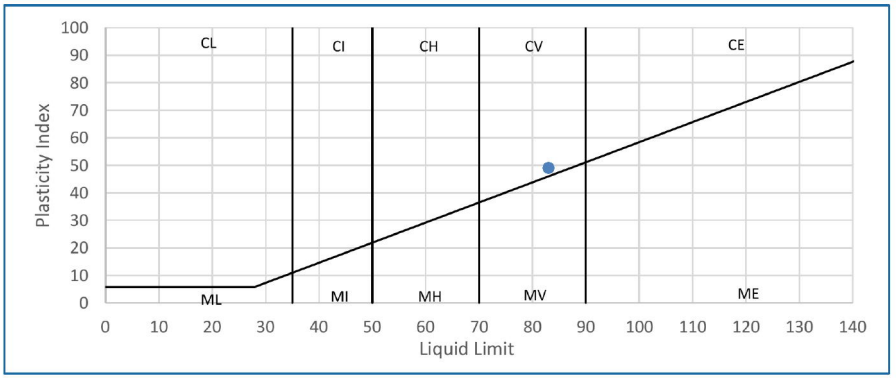
Environmental Services

Samples from BH1

Lab Ref	Depth (m)	WC (%)	LL (%)	PL (%)	PI (%)	.425 mm(%)	mod. PI (%)	Av. Suc. (kPa)	Description
1	0.9	31.5	83	34	49	99	49		Firm veined brown/grey silty CLAY with rare gravel. Gravel is fine
2	1.4	27.6	83	34	49	99	49		Stiff veined brown/grey silty CLAY with rare gravel. Gravel is fine
3	1.9	26.7	83	34	49	99	49		Stiff veined brown/grey silty CLAY with rare gravel. Gravel is fine
4	2.4	28.0	83	34	49	99	49		Stiff veined brown/grey silty CLAY with rare gravel. Gravel is fine
5	2.9	29.8	83	34	49	99	49		Stiff veined brown/grey silty CLAY with rare gravel. Gravel is fine
6	3.4	29.7	83	34	49	99	49		Stiff veined brown/grey silty CLAY with rare gravel. Gravel is fine



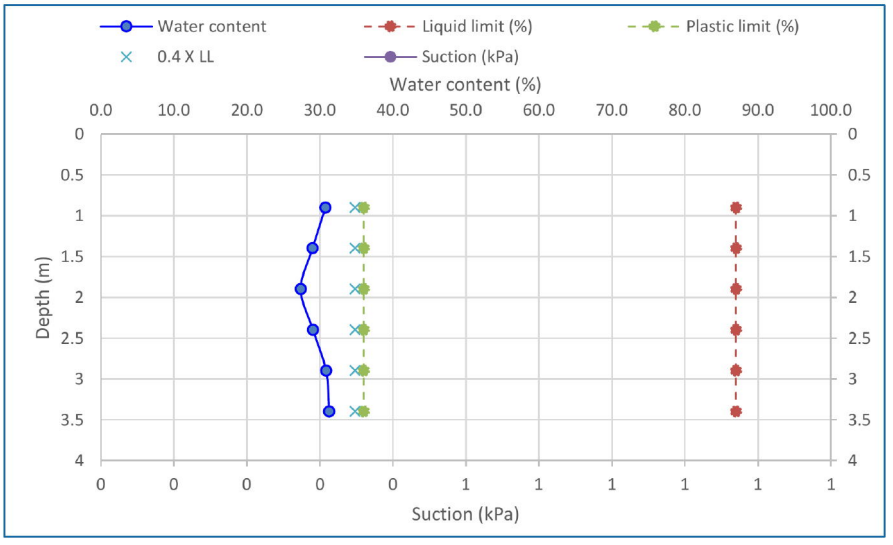
Plasticity Chart for Casagrande Classification



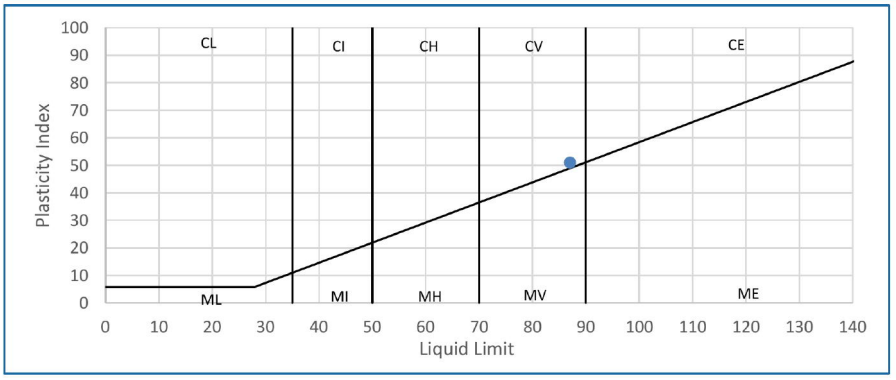
Environmental Services

Samples from BH2

Lab Ref	Depth (m)	WC (%)	LL (%)	PL (%)	PI (%)	.425 mm(%)	mod. PI (%)	Av. Suc. (kPa)	Description
7	0.9	30.7	87	36	51	100	51		Stiff brown silty CLAY with rare gravel. Gravel is fine
8	1.4	29.0	87	36	51	100	51		Stiff brown silty CLAY with rare gravel. Gravel is fine
9	1.9	27.4	87	36	51	100	51		Stiff brown silty CLAY with rare gravel. Gravel is fine
10	2.4	29.0	87	36	51	100	51		Stiff brown silty CLAY with rare gravel. Gravel is fine
11	2.9	30.8	87	36	51	100	51		Stiff brown silty CLAY with rare gravel. Gravel is fine
12	3.4	31.3	87	36	51	100	51		Stiff brown silty CLAY with rare gravel. Gravel is fine



Plasticity Chart for Casagrande Classification

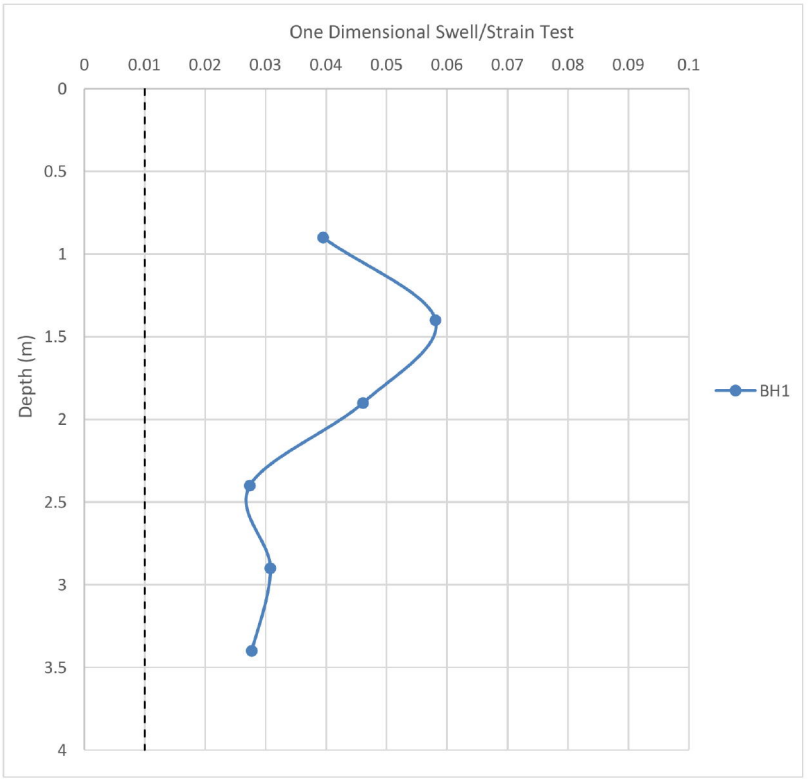


Environmental Services

Summary of Oedometer Testing for BH1

Lab Ref	Depth (m)	Strain	Heave (mm)	Remarks
1	0.9	0.0395	17.8	
2	1.4	0.0581	14.5	
3	1.9	0.0461	11.5	
4	2.4	0.0274	6.9	
5	2.9	0.0308	7.7	
6	3.4	0.0277	8.3	

BH 1 estimate of heave	67mm

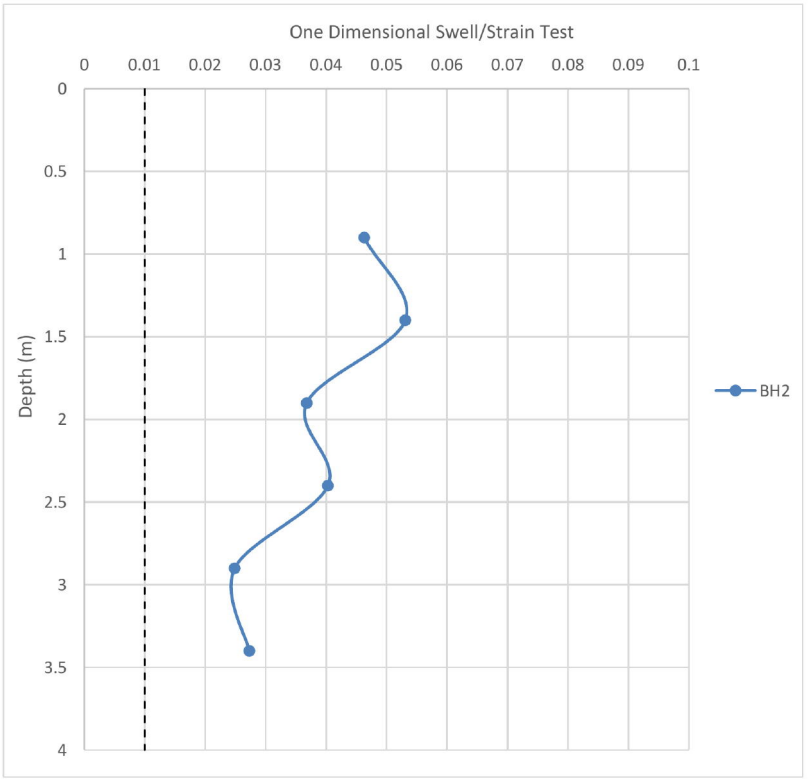


Environmental Services

Summary of Oedometer Testing for BH2

Lab Ref	Depth (m)	Strain	Heave (mm)	Remarks
7	0.9	0.0463	20.8	
8	1.4	0.0531	13.3	
9	1.9	0.0368	9.2	
10	2.4	0.0403	10.1	
11	2.9	0.0249	6.2	
12	3.4	0.0273	6.8	

BH 2 estimate of heave	66mm



Environmental Services

Deviating Samples

The table below details any samples deviating from laboratory procedure or deviating in condition to an extent whereby the validity of results may be affected. A test denoted "I" is likely to have had testing abandoned but where a test result has been provided a non-standard procedure may have been used, details of which will be provided upon request.

LAB REF	CONDITION	WC	ATT	SUC	OED
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					

Key	
D	Delay in sample receipt
C	Contaminated sample
B	Sample not bagged correctly
S	Sample too sandy (unsuitable for testing)
G	Sample too gravelly (unsuitable for testing)
V	Sample too soft (unsuitable for preparation)
L	Sample too silty
I	Insufficient sample
O	Too much organic content (unsuitable for testing)
N	Non-standard procedure used
H	Sample depth too shallow
X	Testing result too similar to above sample

References

The following provides a brief interpretation of the test results by comparison of the results to published classifications. The Atterberg Limit test may be used to classify the plasticity of soils; the plasticity classes defined in BS5930:2015 "Code of Practice for Site Investigations" are as follows.

CL (ML)	CLAY and CLAY/SILT of Low plasticity
CI (MI)	CLAY and CLAY/SILT of Intermediate plasticity
CH (MH)	CLAY and CLAY/SILT of High plasticity
CV (MV)	CLAY and CLAY/SILT of Very High plasticity
CE (ME)	CLAY and CLAY/SILT of Extremely High plasticity
O	The letter O is added to prefixes to symbolise a significant proportion of organic matter.
NP	Non-plastic

The Plasticity Index (PI) Result obtained from the Atterberg Limit tests may also be used to classify the potential for volume change of fine soils, in accordance with the National House Building Council's standards - Chapter 4.2 (2003) "Building Near Trees", as summarised below.

Modified PI < 10	Non Classified.
Modified PI = 10 to <20	Low volume change potential.
Modified PI = 20 to <40	Medium volume change potential.
Modified PI = 40 or greater	High volume change potential.

The 2003 edition of Chapter 4.2 also permits use of the Plasticity Index without modification. The classifications for this are grouped by soil type (soils with similar visual soils description and using unmodified Plasticity Indices.

ROOT IDENTIFICATION

for Subsidence Management Services

Gilling Court, Belsize Grove, London, NW3 4UY

Client: Subsidence Management Services
Client Contact: Stephan Barnes
Claim Number: [redacted]
Client Reference:
Policy Holder: Gilling Court (Hampstead) Ltd
Report Date: 30 November 2022
Our Ref: [redacted]

Intec [redacted]

Sub Sample	Species Identified		Root Diameter	Starch
TP/BH1:				
0.9-1.4m	*Populus* spp. *	1	1.5 mm	Abundant
TP/BH2:				
0.9-1.4m	*Populus* spp. *	2	1 mm	Low
1.4-1.9m	*Populus* spp. *	3	1 mm	Low
1.9-2.4m	*Populus* spp. *	4	1 mm	Abundant

Comments:

1 - Plus 2 others also identified as *Populus* spp.
2 - Plus 2 others also identified as *Populus* spp.
3 - Plus 2 others also identified as *Populus* spp.
4 - Plus 1 other also identified as *Populus* spp.

Populus spp. are poplars and aspens.

* EPSL research has developed a unique ability to differentiate Willows from Poplars. No other laboratory in the UK can currently provide this service. We now offer this benefit at no extra cost.

Signed: G S Turner

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

SubsNetUK