

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	Q UW FAITH COMBINED BORDEREAUX	Address	Bridle Road, Pinner, Greater London, HA5 2SH		
Client	Subsidence Management Services	Contact	Simon Friel	Claim No.	IFS-AVI-SUB-24-0112106
ES Ref	SA-254771	Consultant	Andrew Cayley	Contact No.	0330 380 1036
Report Date	12/06/2024				

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 commercial property (Temple). It has been extended with a single-storey extension to the left-flank. The property occupies a broadly level site with no adverse topographical features.

We understand that the current damage relates to both the rear left-hand corner and the rear right-hand corner of the insured property, 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?	Yes

Treeworks	
Local Authority	Hillingdon London Borough
TPO / Conservation Area / Planning Protection Searches	Awaiting Searches from LA
Additional Comments	
Awaiting Further Instructions.	
A potential recovery action has been identified.	
Engineers should consider focusing investigations to strengthen factual evidence for disclosure to third party tree owners.	

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.

The conditions necessary for clay shrinkage subsidence to manifest have been established by site investigations and roots have also been recovered below foundation depths (TP/BH1 & TP/BH2).

Samples of the roots recovered from underside of foundations have been identified (using anatomical analysis) as having emanated from the genus *Quercus* spp. and either *Quercus* spp. or *Castanea* spp.

Given the above, vegetation is judged to retain the capacity to be causal to the current movement / damage.

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

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allow effective repairs to be undertaken.

In assessing the potential drying influence of the vegetation on site, we have considered, in addition to the above, species profile, normally accepted influencing distance and the position of vegetation relative to the observed damage.

Our survey of the site identified the Oaks (T2, T3, T6 and TG1) which, in our opinion, will be the source of the roots recovered below the property and as such, we have identified their collective / cohesive influence as the primary cause of the current subsidence damage.

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 the Oaks (T2, T3, T6 and TG1) as it will offer the most certain arboricultural solution likely to restore long-term stability.

Consideration has been given to pruning only, as a means of mitigating the influence of the above, however this has been discounted in this instance.

Whilst it is accepted that pruning in accordance with BRE IP7/06 (and if repeated on a 3-year (max) basis) can be an alternative to removal, it is one with a high residual risk of future movement; in the context of the current claim we consider the above vegetation is too large and/or close for pruning to be viable in this instance.

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.

The extent / impact of vegetation management required to restore and maintain long-term stability at this property is acknowledged. However, we consider the impact on the wider public amenity from the proposed tree works is mitigated by the presence of further trees and the scope for replacement planting.

Whilst replacement planting is considered appropriate, due consideration must be given to the ultimate size of the replacement and future management requirements. 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.

At the time of our survey it was not possible to ascertain the exact ownership of all the vegetation noted. Further consultation with those involved and/or Land Registry searches may therefore be required to identify exact ownership.

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?	See Above
Would DNA profiling be of assistance in this case?	No

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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
T2	Oak (English)	1	16.2	8.2	A - Third Party	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.
T3	Oak (English)	2	20.5	12.6	A - Third Party	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.
T6	Oak	3	16	6.7	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.
TG1	Oak	3	21.5	5.8	C - Insured	Remove	Remove x3 trees close to ground level; do not treat stumps due to translocation risk. Where such a risk exists, we advise that any emergent regrowth is removed annually.

Age Cat: 1 = Younger than property; 2 = Similar age to the property; 3 = Significantly older than property

* Estimated

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6.2 Future Risk Recommendations

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

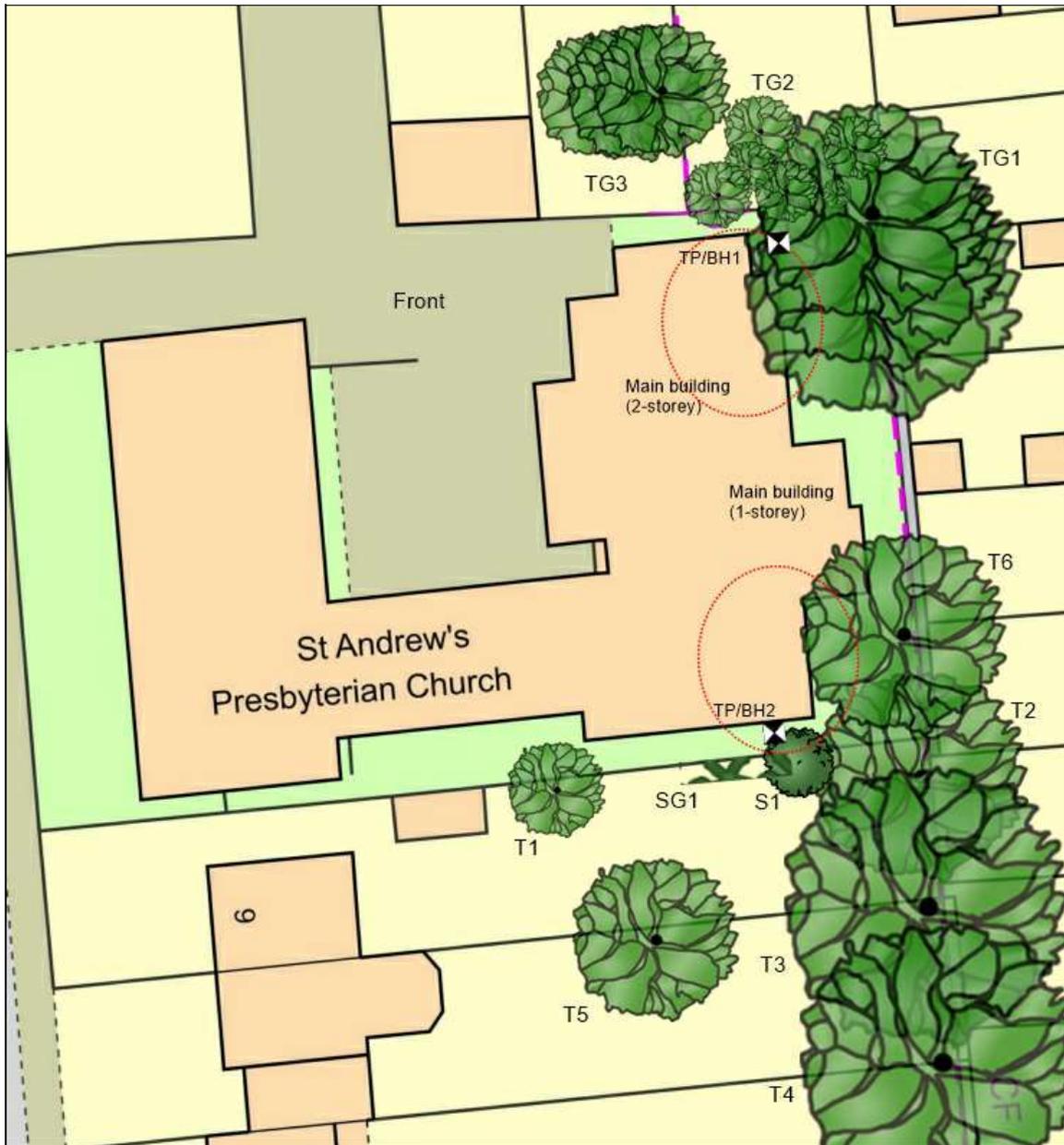
Tree No.	Species	Age Cat	Approx. Height (m)	Distance to Building (m) *	Ownership	Action	Requirement
S1	Laurel (Cherry)	1	6	2.3	A - Third Party	Action to avoid future risk	Do not allow to exceed current dimensions by way of regular pruning.
SG1	Mixed Species Group: includes Hawthorn, Holly, Ash, and Cherry-laurel.	1	3.6	2	A - Third Party	Action to avoid future risk	Maintain group at broadly current dimensions by way of regular pruning.
T1	Birch (Silver)	1	11.5	1.8	A - Third Party	Action to avoid future risk	Maintain at, or below current dimensions by way of regular pruning.
T4	Oak (English)	2	20.5	21.5	E - Boundary Veg (ownership to be confirmed)	Action to avoid future risk	Crown reduce overall canopy by 3m - 4m 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.
T5	Birch (Silver)	1	16	11.5	A - Third Party	Action to avoid future risk	Do not allow to exceed current dimensions by way of regular pruning.
TG2	Mixed Species Group: includes Hazel, Elder, Prunus, Holly and Cypress.	1	9.5	2.1	A - Third Party	Action to avoid future risk	Maintain group at broadly current dimensions by way of regular pruning.
TG3	Cypress (Leyland)	1	10.3	6.2	A - Third Party	Action to avoid future risk	Maintain group at broadly current dimensions by way of regular pruning.

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

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8. Photographs



T1 - Birch (Silver)



TG1 - Oak



T6 - Oak



TG2 - Mixed species group

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TG1 - Oak



TG1 - Oak



TG3 - Cypress (Leyland)

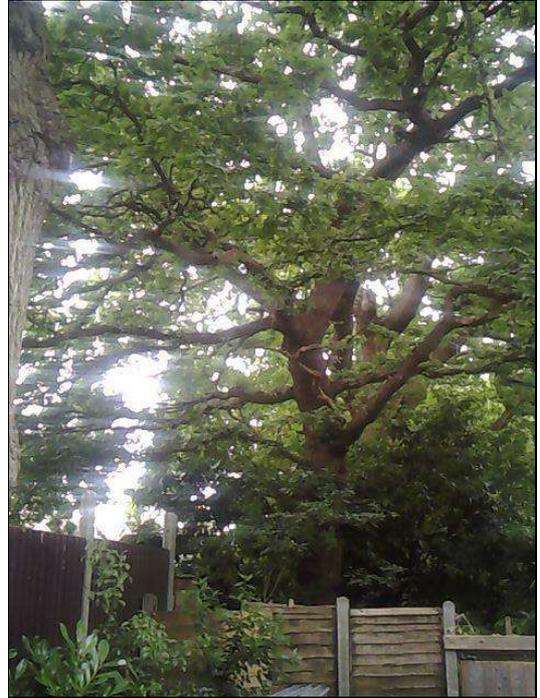


SG1 - Mixed species group

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S1 - Laurel (Cherry)



T2 - Oak (English)



T3 - Oak (English)



T3 - Oak (English)

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T4 - Oak (English)



T5 - Birch (Silver)



T6 - Oak

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Date: 12/06/2024

Property: Bridle Road, Pinner, Greater London, HA5 2SH

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

Insured Property Tree Works	£5850.00
Third Party Tree Works	£3950.00
Provisional Sum	£0.00

- 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".

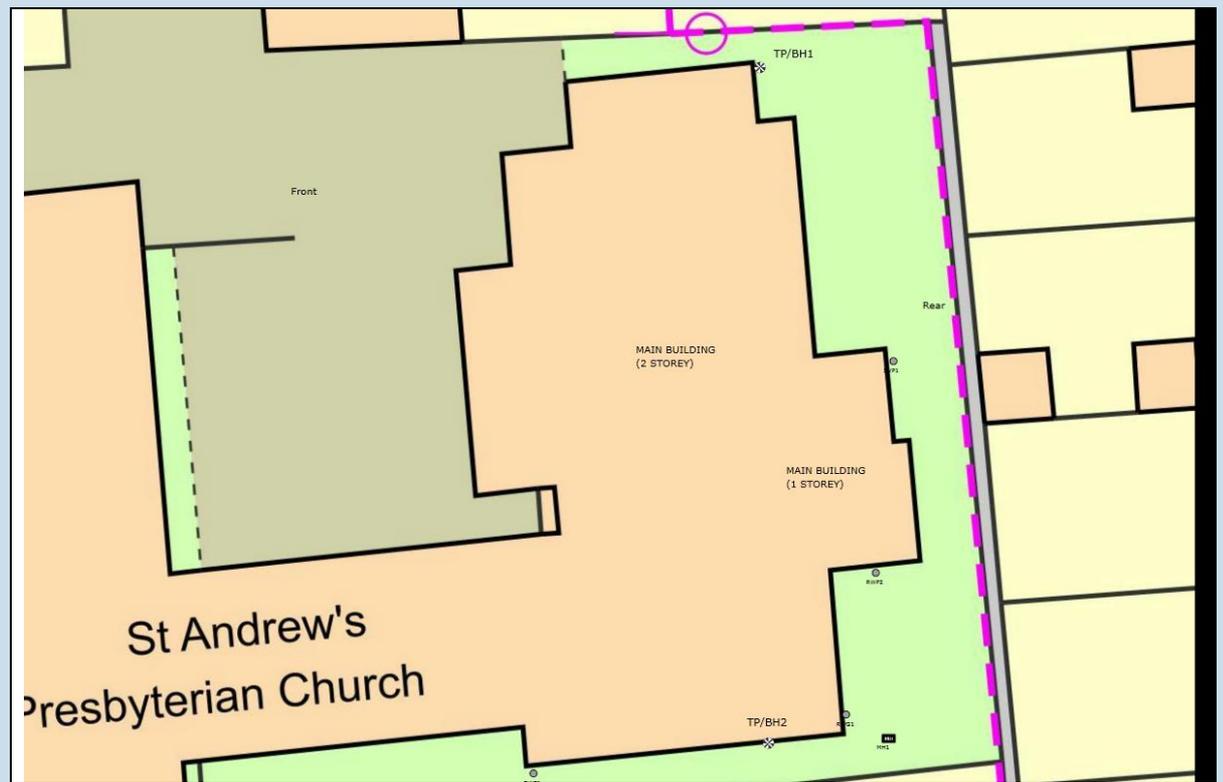
GEOTECHNICAL

for SMS (AVI, PRE)

Shree Swaminarayan Agyna Upasana Satsang Mandal UK, Bridle Road, Pinner, Greater London, HA5 2SH

Client: SMS (AVI, PRE)
Client Contact: Simon Friel
Client Ref: IFS-AVI-SUB-24-0112106
Policy Holder: Q UW FAITH COMBINED BORDEREAUX
Report Date: 8 May 2024
Our Ref: C77956G34394

Site Plan

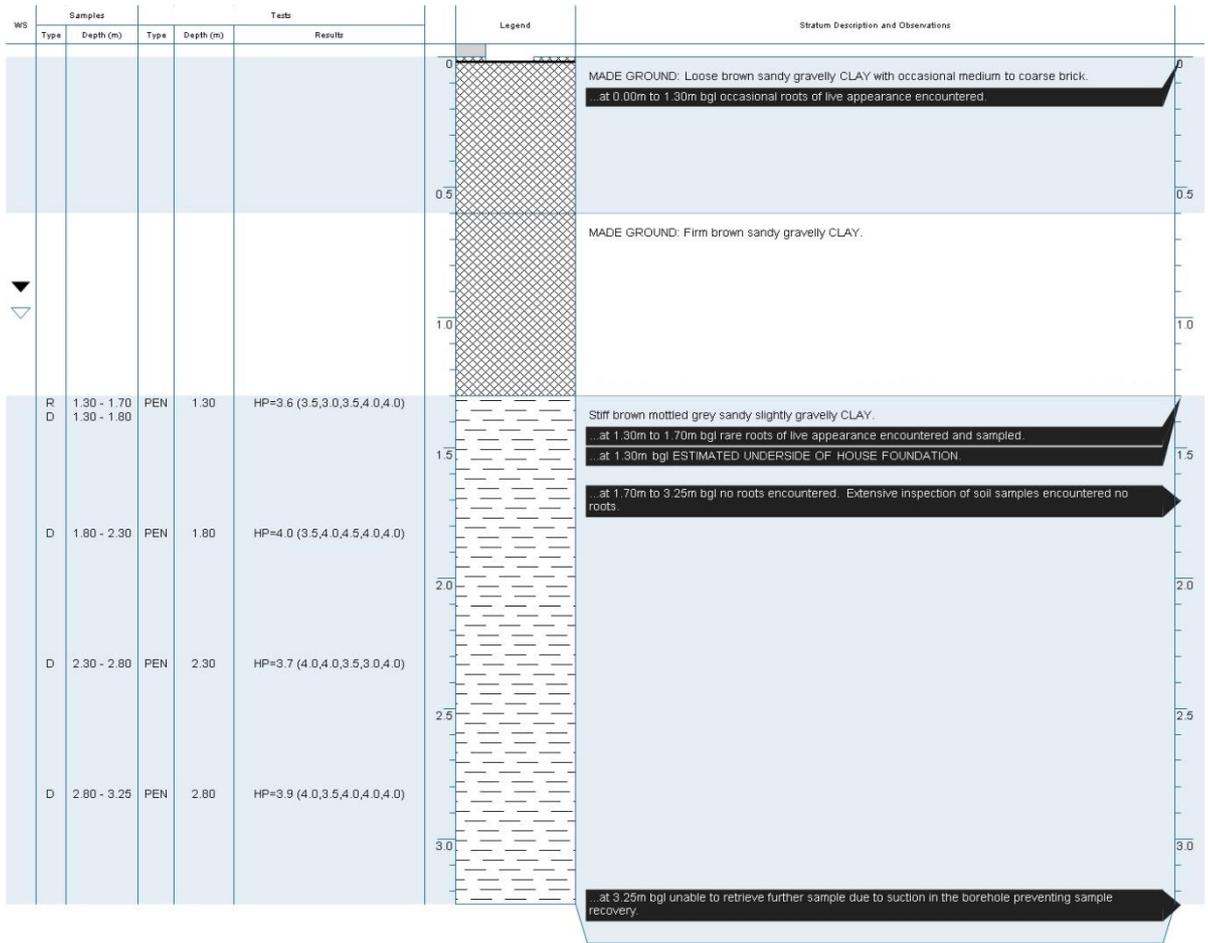
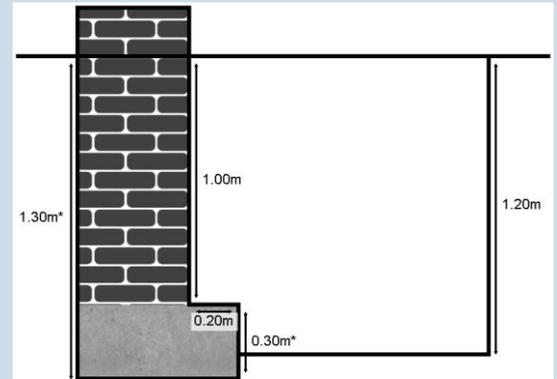


	Borehole		Foul Water Drain		Foul Manhole		Foul Rodding Point		Foul Vent Pipe
	Trial Pit / Borehole		Surface Water Drain		Rain Water Manhole		Surface Rodding Point		Rain Water Gully
	Trial Pit		Combined Drain		Combined Manhole				

TP/BH1 Foundation Detail and Borehole Log

Foundation Detail

House foundation comprised of brick wall to 1000mm bgl, bearing on concrete to an estimated depth of 1300mm bgl, with a total projection of 200mm from the elevation. Underside of foundation (USF) was estimated by pushing a probe, approximately 50mm back from the face of the foundation, at an angle with no apparent contact with the face of the foundation beyond the estimated depth.

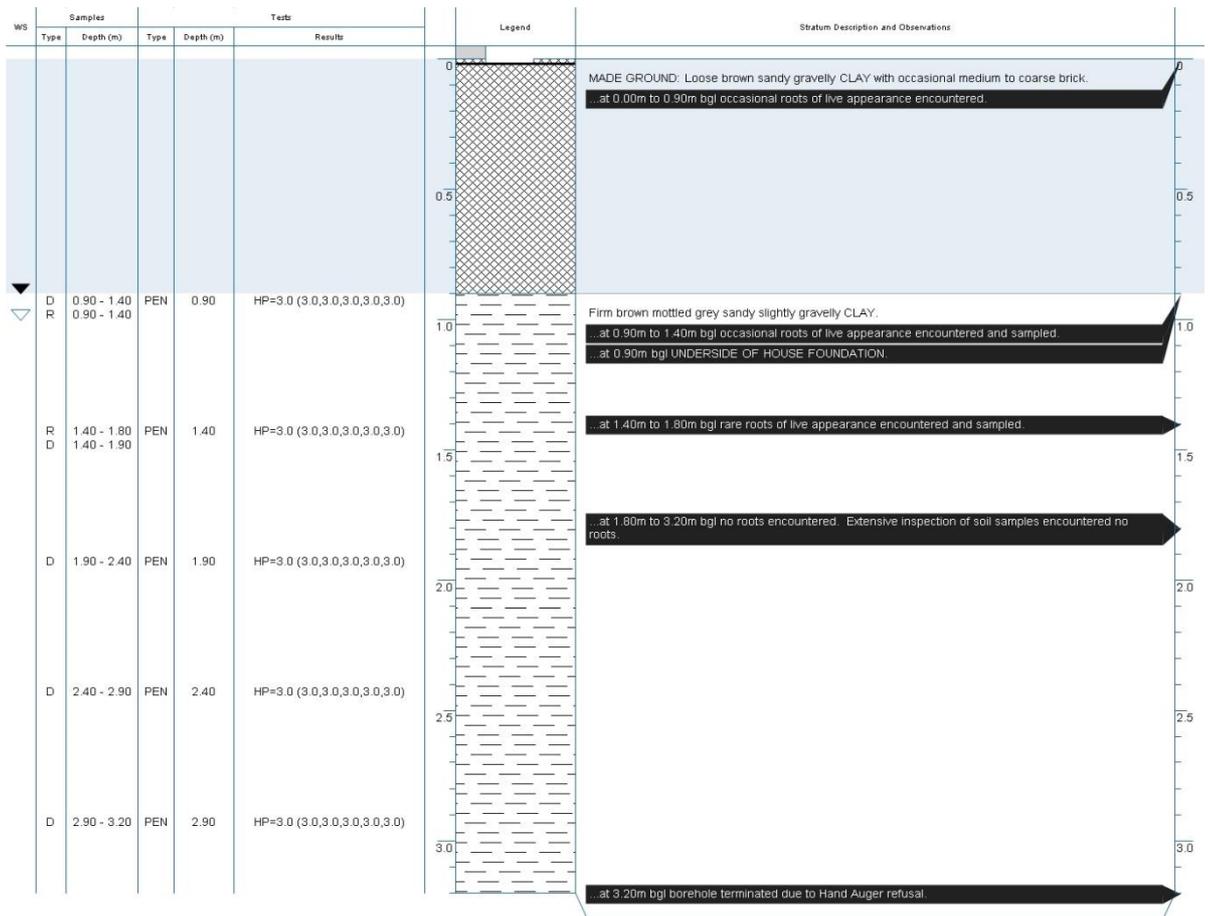
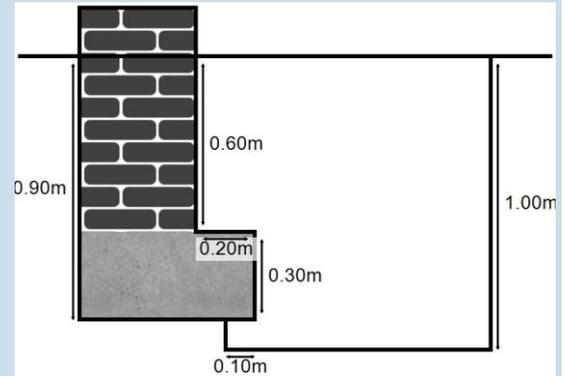


-- End of borehole at 3.25m --
Groundwater encountered at 1.00m bgl. Standing water level within the exploratory hole at 0.90m bgl on completion. Borehole completed by hand auger. Roots encountered to 1.70m bgl. PEN = Hand Penetrometer (kg/sq cm). Trial pit excavated to 1.20m bgl. Borehole completed by hand auger.

TP/BH2 Foundation Detail and Borehole Log

Foundation Detail

House foundation comprised of brick wall to 600mm bgl, 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 350mm back from the face of the foundation.



-- End of borehole at 3.20m --
Borehole completed by hand auger. Roots encountered to 1.80m bgl. PEN = Hand Penetrometer (kg/sq cm). Trial pit excavated to 1.00m bgl. Borehole completed by hand auger. Groundwater encountered at 0.90m bgl. Standing water level within the exploratory hole at 0.90m bgl on completion.

Site Observations

GENERAL:

Site Investigation works (TP/BH 1) undertaken on 7 May 2024 during dry weather (i.e. no rain).
Site Investigation works (TP/BH 2) undertaken on 7 May 2024 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) (TP/BH1).
Negative signal obtained in Power, Radio and Genny mode on the Cable Avoidance Tool (CAT) (TP/BH2).

FOUNDATIONS:

At 1.30m bgl ESTIMATED UNDERSIDE OF HOUSE FOUNDATION in TP/BH1.
At 0.90m bgl UNDERSIDE OF HOUSE FOUNDATION in TP/BH2.

BOREHOLE:

At 3.25m bgl unable to retrieve further sample due to suction in the borehole preventing sample recovery in TP/BH1.
At 3.20m bgl borehole terminated due to Hand Auger refusal in TP/BH2.

ROOTS:

At 0.00m to 1.30m bgl occasional roots of live appearance encountered in TP/BH1.
At 1.30m to 1.70m bgl rare roots of live appearance encountered and sampled in TP/BH1.
At 1.70m to 3.25m bgl no roots encountered. Extensive inspection of soil samples encountered no roots in TP/BH1.
At 0.00m to 0.90m bgl occasional roots of live appearance encountered in TP/BH2.
At 0.90m to 1.40m bgl occasional roots of live appearance encountered and sampled in TP/BH2.
At 1.40m to 1.80m bgl rare roots of live appearance encountered and sampled in TP/BH2.
At 1.80m to 3.20m bgl no roots encountered. Extensive inspection of soil samples encountered no roots in TP/BH2.

IN SITU TESTING:

Hand Penetrometer (PEN) undertaken at 1.30m bgl (TP/BH 1) within the hand excavated trial pit and thereafter in the hand auger borehole at maximum 0.50m intervals.
Hand Penetrometer (PEN) undertaken at 0.90m bgl (TP/BH 2) within the hand excavated trial pit and thereafter in the hand auger borehole at maximum 0.50m intervals.

WATER STRIKES:

A water strike (WS) was encountered in the made ground at 1.00m bgl (TP/BH 1), with a standing water level (SWL) recorded at 0.90m bgl after 10 minutes (TP/BH 1). Standing water level within the exploratory hole at 0.90m bgl (TP/BH 1) on completion.
A water strike (WS) was encountered in the clay at 1.00m bgl (TP/BH 2), with a standing water level (SWL) recorded at 0.90m bgl after 10 minutes (TP/BH 2). Standing water level within the exploratory hole at 0.90m bgl (TP/BH 2) on completion.

SOIL ANALYSIS

for Subsidence Management Services

**Shree Swaminarayan Agyna Upasana Satsang Mandal UK, Greater London,
HA5 2SH**

Client: Subsidence Management Services
Claim Number: 4503085087
Policy Holder: Q UW FAITH COMBINED BORDEREAUX
Report Date: 16/05/2024
Our Ref: L27879

Compiled By:

Name	Position	Signature
Saira Dougan	Laboratory Supervisor	

Checked By:

Name	Position	Signature
Bob Walker	Laboratory Manager	

Date samples received: 09-May-24
Water Content Test Date: 09-May-24
Atterberg Limits Test Date: 14-May-24

Oedometer Test Date: 12-May-24



9265

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.

This Soil Analysis Report may not be reproduced, in part or in full, without written approval of the laboratory.

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 2:2022 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. 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 2:2022. 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.

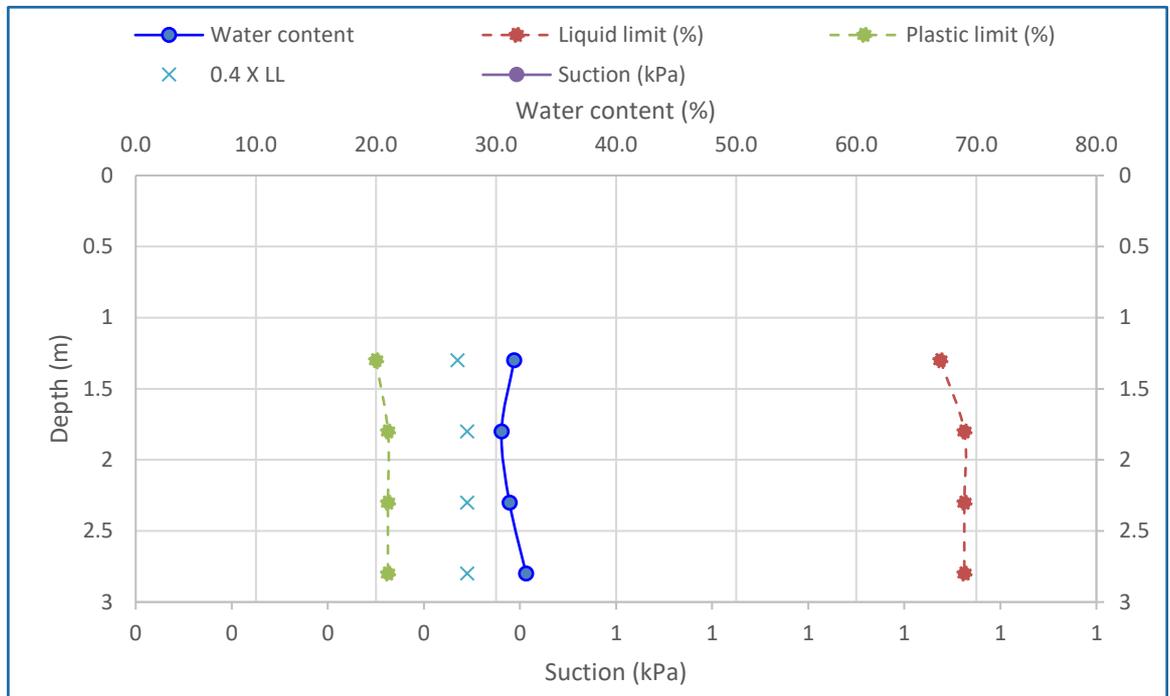
The Oedometer Swell/Strain Test is undertaken in a controlled environment within a temperature range of 16°C and 24°C

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.

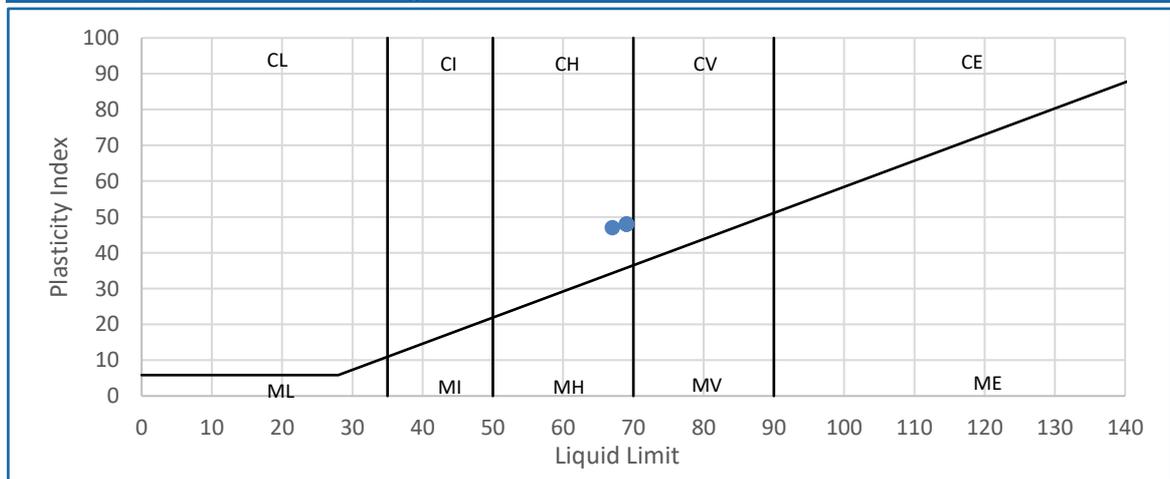
[Laboratory feedback form](#)

Samples from BH1

Lab Ref	Depth (m)	WC (%)	LL (%)	PL (%)	PI (%)	.425 mm(%)	mod. PI (%)	Av. Suc. (kPa)	Description
1	1.3	31.5	67	20	47	96	45		Firm brown slightly gravelly CLAY . Gravel is fine and medium.
2	1.8	30.5	69	21	48	98	47		Firm brown CLAY with rare gravel. Gravel is fine and medium.
3	2.3	31.1	69	21	48	98	47		Firm brown CLAY with rare gravel. Gravel is fine and medium.
4	2.8	32.5	69	21	48	98	47		Firm brown CLAY with rare gravel. Gravel is fine and medium.

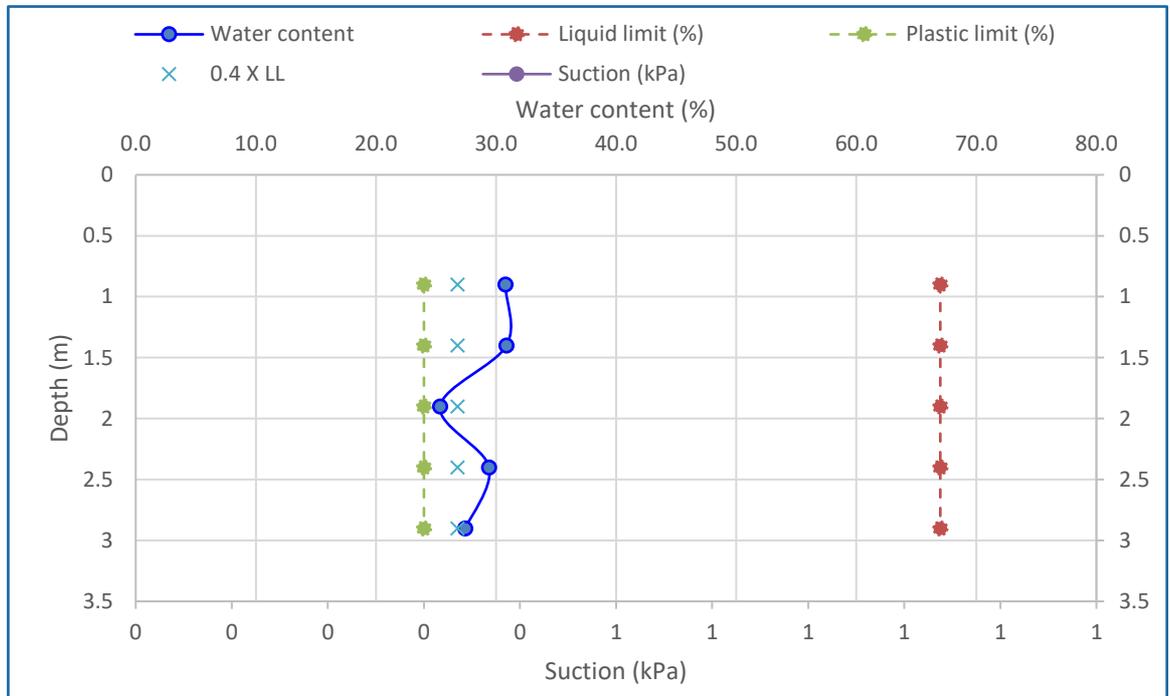


Plasticity Chart for Casagrande Classification

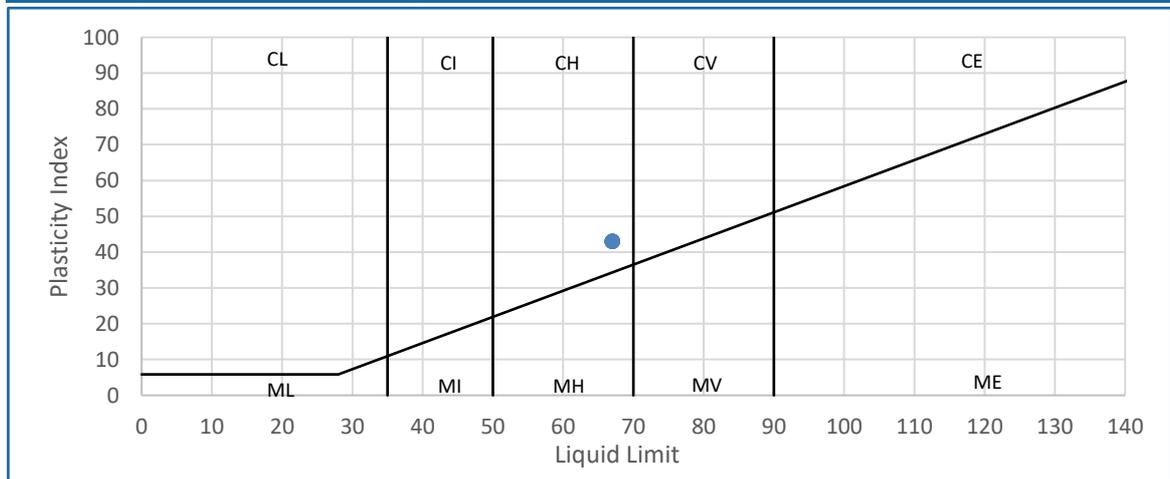


Samples from BH2

Lab Ref	Depth (m)	WC (%)	LL (%)	PL (%)	PI (%)	.425 mm(%)	mod. PI (%)	Av. Suc. (kPa)	Description
5	0.9	30.8	67	24	43	100	43		Firm brown CLAY with rare gravel. Gravel is fine
6	1.4	30.9	67	24	43	100	43		Firm brown CLAY with rare gravel. Gravel is fine
7	1.9	25.3	67	24	43	100	43		Firm brown CLAY with rare gravel. Gravel is fine
8	2.4	29.4	67	24	43	100	43		Firm brown CLAY with rare gravel. Gravel is fine
9	2.9	27.4	67	24	43	100	43		Soft to firm brown CLAY with rare gravel. Gravel is fine and medium.



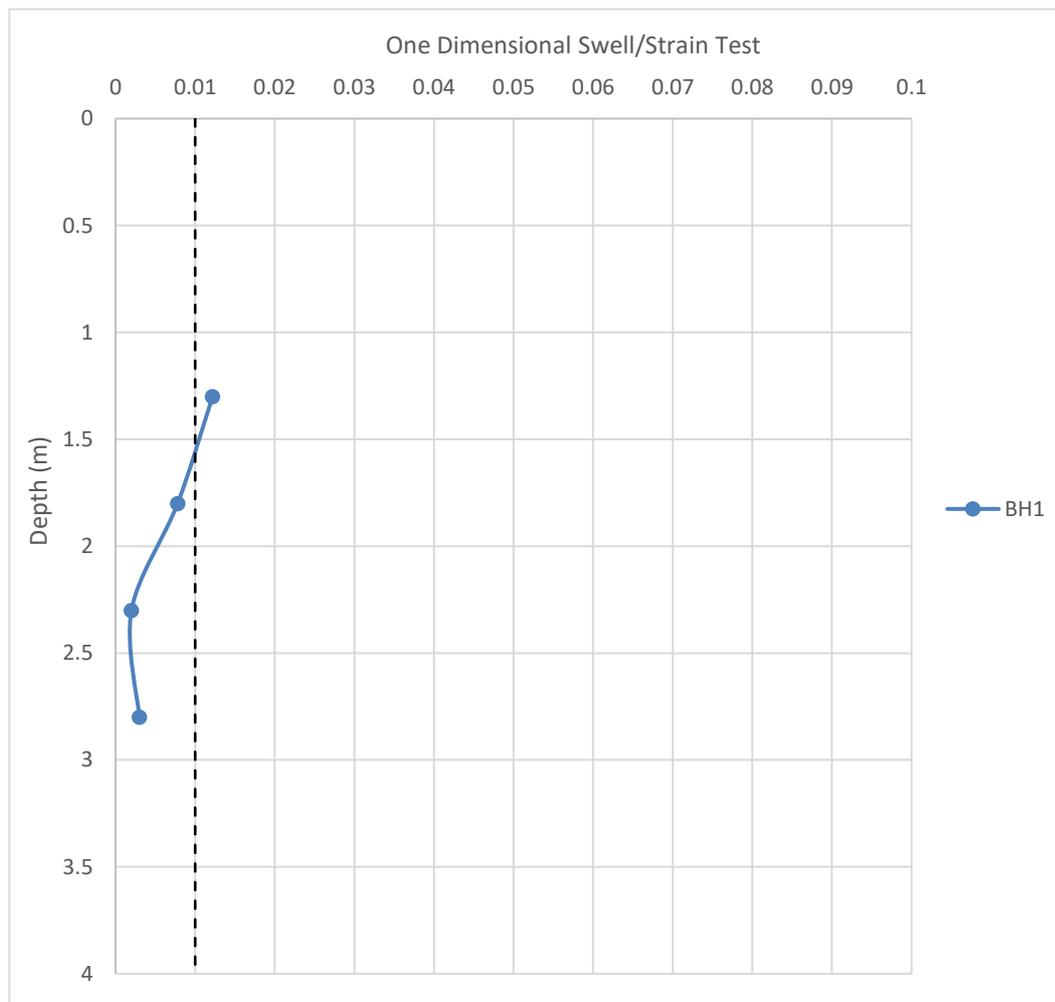
Plasticity Chart for Casagrande Classification



Summary of Oedometer Testing for BH1

Lab Ref	Depth (m)	Strain	Heave (mm)	Remarks
1	1.3	0.0122	7.9	
2	1.8	0.0078	0	
3	2.3	0.002	0	
4	2.8	0.003	0	

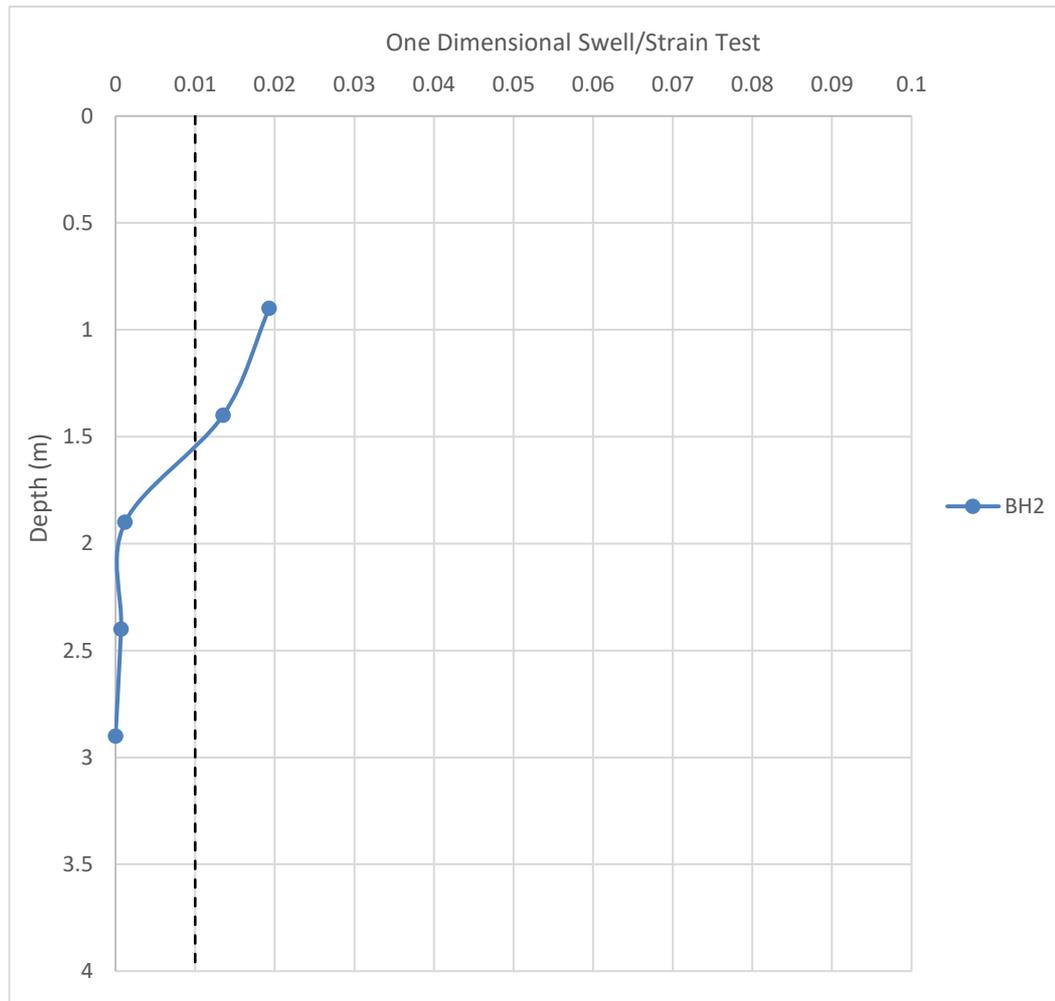
BH 1 estimate of heave	8mm
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Summary of Oedometer Testing for BH2

Lab Ref	Depth (m)	Strain	Heave (mm)	Remarks
5	0.9	0.0193	8.7	
6	1.4	0.0135	3.4	
7	1.9	0.0012	0	
8	2.4	0.0007	0	
9	2.9	0	0	

BH 2 estimate of heave	12mm
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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					

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 SMS (AVI, PRE)

Shree Swaminarayan Agyna Upasana Satsang Mandal UK, Bridle Road,
London, HA5 2SH

Client: SMS (AVI, PRE)
Client Contact: Simon Friel
Claim Number: 4503085087
Client Reference: IFS-AVI-SUB-24-0112106
Policy Holder: Q UW FAITH COMBINED BORDEREAUX
Report Date: 8 May 2024
Our Ref: R57662



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

Sub Sample	Species Identified	Root Diameter	Starch
TP/BH1:			
1.3-1.7m	either <i>Quercus</i> spp. or <i>Castanea</i> spp.	1	<1 mm Low
TP/BH2:			
0.9-1.8m	<i>Quercus</i> spp.	2	1.5 mm Moderate

Comments:

- 1 - Plus 3 others the same. All very juvenile.
- 2 - Plus 3 others also identified as *Quercus* spp.

Quercus spp. are oaks. *Castanea* spp. include sweet chestnut.

Signed: R. Shaw

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

Drainage Investigation Report

For Subsidence Management Services

Client Aviva

Risk Address: Shree Swaminarayan Agyna Upasana Satsang Mandal UK, Bridle Road, HA5 2SH

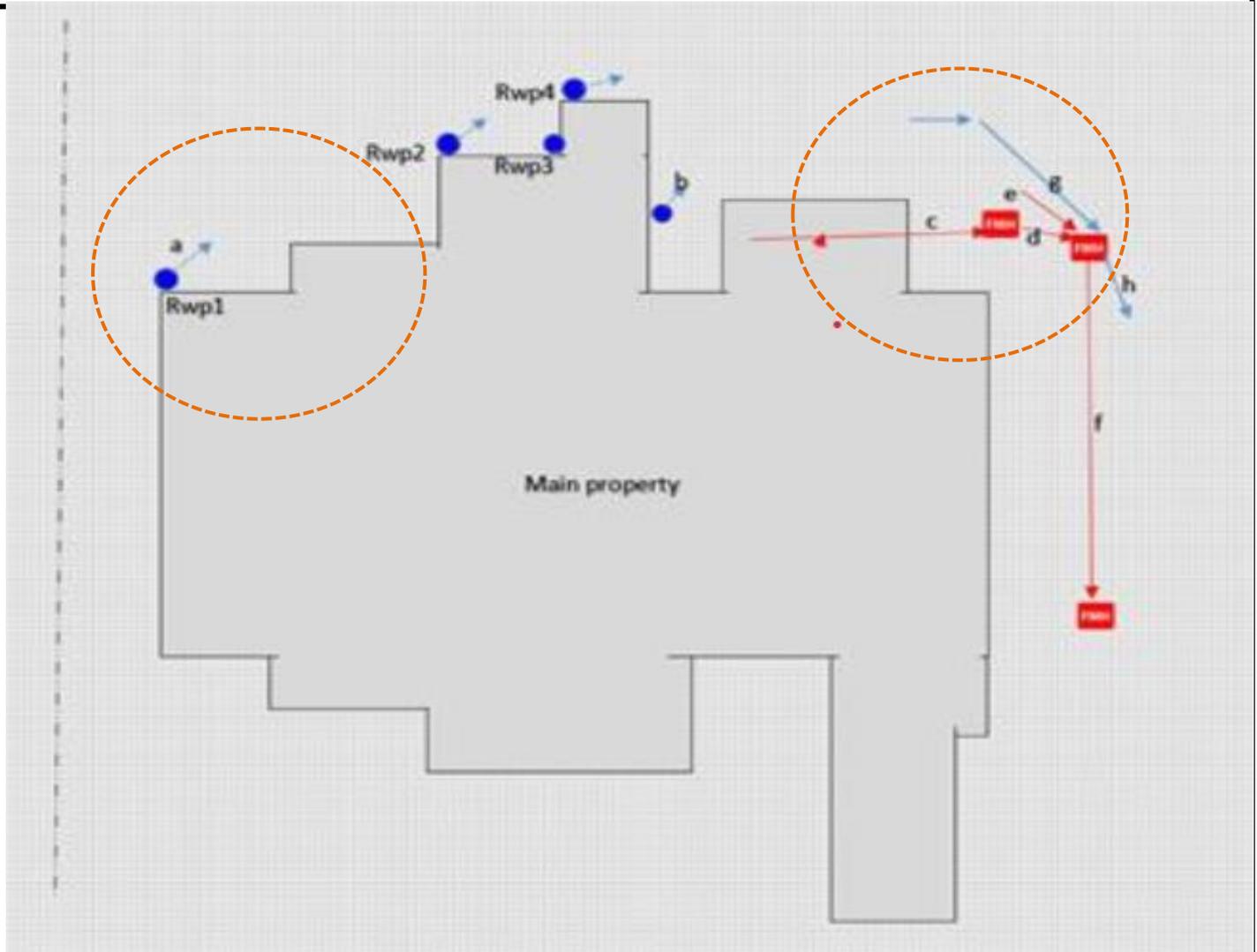
Visit Date: 7th June 2024

Client Reference: IFS-AVI-SUB-24-0112106

Our Reference: C77956 D27190

Report Date: 19th June 2024

Report Content: Front Page
Site Plan
CCTV Coding
Drain Overview
Quote



Key

	Tree		Building		Combined Drains		Unsurveyed Drains
	Shrubs		Water Supply		Foul Drains		Excavation
	Bushes		Launch Pit		Storm Drains		Area of Concern
	Boundary		Stop Valve		WC		
			Soak-Away		Exploratory Hole		
					Bore Hole		

Notes:

Address: Shree Swaminarayan Agyna Upasana Satsang Mandal UK, Bridle Road, HA5 2SH

RUN	Start From :	Pipe 1	Finish at :	BAOC	Pipe Ø:	100mm
A	Invert Level (m):	0	Invert Level (m):	0	Material:	Clay
STORM	Condition grade:	C	Direction:	Downstream	Responsibility:	Home Owner
<i>Distance</i>	<i>Code</i>	<i>Hydraulic Test - Not Tested</i>				
0.00	SN	Start Node from pipe 1				
0.00	WL	Water Level 0%				
0.50	RM	Root Mass				
0.70	DES	Settled Deposits (fine)				
2.30	CC	Crack Circumferential				
2.30	JDM	Joint Displaced (Medium)				
2.69	CC	Crack Circumferential				
2.69	JDM	Joint Displaced (Medium)				
3.49	CC	Crack Circumferential				
4.39	CC	Crack Circumferential				
8.06	FN	Finish Node - Beyond Area of Concern				
RUN	Start From :	SWG2	Finish at :	BAOC	Pipe Ø:	100mm
B	Invert Level (m):	0	Invert Level (m):	0	Material:	Plastic
STORM	Condition grade:	C	Direction:	Upstream	Responsibility:	Home Owner
<i>Distance</i>	<i>Code</i>	<i>Hydraulic Test - Not Tested</i>				
0.00	SN	Start Node from SWG2				
0.00	WL	Water Level 0%				
1.30	LL	Line of drain deviates left °				
1.30	MC	Material of drain changes at this point to clay				
1.90	DES	Settled Deposits (fine)				
2.76	RM	Root Mass				
2.76	REM	Remark - Pipe joins another drain line via junction				
2.76	FN	Finish Node - Beyond Area of Concern				
RUN	Start From :	FMH1	Finish at :	Waste pipe 1	Pipe Ø:	100mm
C	Invert Level (m):	200	Invert Level (m):	0	Material:	Plastic
FOUL	Condition grade:	A	Direction:	Upstream	Responsibility:	Home Owner
<i>Distance</i>	<i>Code</i>	<i>Hydraulic Test - Not Tested</i>				
0.00	SN	Start Node from FMH1				
0.00	WL	Water Level 0%				
0.65	LU	Line of drain deviates up °				
2.15	LR	Line of drain deviates right °				
2.69	JN	Junction				
3.12	JN	Junction				
3.14	DC	Dimension of drain changes at this point to 40mmØ				
RUN	Start From :	FMH1	Finish at :	FMH2	Pipe Ø:	100mm
D	Invert Level (m):	200	Invert Level (m):	0	Material:	Plastic
FOUL	Condition grade:	A	Direction:	Upstream	Responsibility:	Home Owner
<i>Distance</i>	<i>Code</i>	<i>Hydraulic Test - Not Tested</i>				
0.00	SN	Start Node from FMH1				
0.00	WL	Water Level 0%				
0.60	LR	Line of drain deviates right °				
0.89	FN	Finish Node at FMH2				

Address:

Shree Swaminarayan Agyna Upasana Satsang Mandal UK, Bridle Road, HA5 2SH

Following the receipt of your instruction, we attended site to carry out a CCTV survey.

The CCTV survey was undertaken in general accordance with the Manual of Sewer Classification and the WRc Drain Repair Book.

The following presents a summary of the findings with recommendations to repair and/ or return the drains to a serviceable state, where necessary.

Drain Run A: Pipe1 to BAOC

Pipe Diameter: 100mm

Responsibility: Home Owner

Hydraulic Pressure Test: Not Tested

CCTV Survey Result: Structural damage

Recommended Repair: To excavate and replace existing Rest bend at base of RWP including 8m of adjacent pipework.

Further survey upstream

Drain Run B: SWG2 to BAOC

Pipe Diameter: 100mm

Responsibility: Home Owner

Hydraulic Pressure Test: Not Tested

CCTV Survey Result: Structural damage

Recommended Repair: To excavate and replace existing Rest bend including 3m of adjacent pipework.

Drain Run C: FMH1 to Waste pipe 1

Pipe Diameter: 100mm

Responsibility: Home Owner

Hydraulic Pressure Test: Not Tested

CCTV Survey Result: No structural damage

Recommended Repair: No repairs have been recommended as the drain line was found to be free from defects.

Drain Run D: FMH1 to FMH2

Pipe Diameter: 100mm

Responsibility: Home Owner

Hydraulic Pressure Test: Not Tested

CCTV Survey Result: No structural damage

Recommended Repair: No repairs have been recommended as the drain line was found to be free from defects.

NOTE: The re-instatement will be carried out on a like-for-like basis but where concrete or tarmac has been re-instated these surfaces will not match to the existing surface and will be seen as its new material.

Drain Run E: FMH2 to BAOC**Pipe Diameter:** 100mm**Responsibility:** Home Owner**Hydraulic Pressure Test:** Not Tested**CCTV Survey Result:** Structural damage**Recommended Repair:** To excavate and replace up to 2m of pipe from FMH2.**Drain Run F: FMH2 to BAOC****Pipe Diameter:** 100mm**Responsibility:** Home Owner**Hydraulic Pressure Test:** Not Tested**CCTV Survey Result:** Structural damage**Recommended Repair:** To prepare the drain line using mechanical root cutting and insert 12m of structural liner to cover defects.**Drain Run G: FMH2 to BAOC****Pipe Diameter:** 100mm**Responsibility:** Home Owner**Hydraulic Pressure Test:** Not Tested**CCTV Survey Result:** Structural damage**Recommended Repair:** To excavate and replace up to 2m of pipe.**Drain Run H: FMH2 to BAOC****Pipe Diameter:** 100mm**Responsibility:** Home Owner**Hydraulic Pressure Test:** Not Tested**CCTV Survey Result:** Structural damage**Recommended Repair:** To excavate and replace up to 2m of pipe.

NOTE: The re-instatement will be carried out on a like-for-like basis but where concrete or tarmac has been re-instated these surfaces will not match to the existing surface and will be seen as its new material

		Result	Notes
Water Main Test		PASS	

Address:

Shree Swaminarayan Agyna Upasana Satsang Mandal UK, Bridle Road, HA5 2SH

RUN / LOCATION: Set-up Fee

Repair Item	Description	Unit	Rate (£)	Quantity	Amount (£)
UK1133	Van pack HPWJ & CCTV in preparation of lining	nr	£148.44	1.00	£148.44
Total (Excl VAT)					£148.44

RUN / LOCATION: Further Surveys

Repair Item	Description	Unit	Rate (£)	Quantity	Amount (£)
	CCTV survey of underground drainage & report <i>(where undertaken as part of other drainage works)</i>	nr	£165.00	1.00	£165.00
Total (Excl VAT)					£165.00

RUN / LOCATION: Run A

Repair Item	Description	Unit	Rate (£)	Quantity	Amount (£)
UK0650	Rest-bend. Remove existing and replace with new <i>DVCu item. Bed, surround and backfill</i>	nr	£96.02	1.00	£96.02
UK1120155	32/40mm waste pipes. Remove existing and replace <i>with new DVCu. Fixed to manhole</i>	m	£9.60	1.00	£9.60
UK1120165	32/40mm waste pipes. Shoes / bends.	nr	£10.81	2.00	£21.61
UK0605	Excavate & remove isolated length. Replace in new <i>110mm DVCu. Bed, surround & backfill to 100mm</i>	nr	£131.47	8.00	£1,051.75
UK0880	Short Radius Bend. Remove existing item and replace <i>with new 110mm DVCu</i>	nr	£14.89	2.00	£29.78
UK1060	Extra over pipework for surrounding drain run in <i>100mm thick concrete</i>	m	£14.40	8.00	£115.24
UK0025	Protection Temporary works to floors, 1000 gauge <i>polythene</i>	m2	£1.79	16.00	£28.69
UK8120300	Hardcore Filling to excavations over 250 mm average <i>thick</i>	m	£35.35	8.00	£282.82
UK2050005	Disposal by hand excavated contaminated/saturated <i>material off site</i>	m3	£45.30	8.00	£362.43
UK1050	Removal, disposal and reinstatement of concrete path <i>(hardstanding to 100mm thick)</i>	m2	£54.19	8.00	£433.49
Total (Excl VAT)					£2,431.41

RUN / LOCATION: Run B

Repair Item	Description	Unit	Rate (£)	Quantity	Amount (£)
UK0650	Rest-bend. Remove existing and replace with new <i>DVCu item. Bed, surround and backfill</i>	nr	£96.02	1.00	£96.02
UK1120155	32/40mm waste pipes. Remove existing and replace <i>with new DVCu. Fixed to manhole</i>	m	£9.60	1.00	£9.60
UK1120165	32/40mm waste pipes. Shoes / bends.	nr	£10.81	2.00	£21.61
UK0605	Excavate & remove isolated length. Replace in new <i>110mm DVCu. Bed, surround & backfill to 100mm</i>	nr	£131.47	3.00	£394.40
UK0880	Short Radius Bend. Remove existing item and replace <i>with new 110mm DVCu</i>	nr	£14.89	2.00	£29.78
UK1060	Extra over pipework for surrounding drain run in <i>100mm thick concrete</i>	m	£14.40	3.00	£43.21
UK0025	Protection Temporary works to floors, 1000 gauge <i>polythene</i>	m2	£1.79	9.00	£16.14
UK8120300	Hardcore Filling to excavations over 250 mm average <i>thick</i>	m	£35.35	3.00	£106.06
UK2050005	Disposal by hand excavated contaminated/saturated <i>material off site</i>	m3	£45.30	3.00	£135.91
UK1050	Removal, disposal and reinstatement of concrete path <i>(hardstanding to 100mm thick)</i>	m2	£54.19	3.00	£162.56
Total (Excl VAT)					£1,015.29

Address:

Shree Swaminarayan Agyna Upasana Satsang Mandal UK, Bridle Road, HA5 2SH

RUN / LOCATION: Run E

Repair Item	Description	Unit	Rate (£)	Quantity	Amount (£)
UK0825	Excavate & remove pipework. Replace with new 110mm PVCu. Bed surround & backfill to 100mm	m	£81.39	2.00	£162.78
UK0880	Short Radius Bend. Remove existing item and replace with new 110mm PVCu	nr	£14.89	2.00	£29.78
UK1060	Extra over pipework for surrounding drain run in 100mm thick concrete	m	£14.40	2.00	£28.81
UK0025	Protection Temporary works to floors, 1000 gauge polythene	m2	£1.79	2.00	£3.59
UK8120300	Hardcore Filling to excavations over 250 mm average thick	m	£35.35	2.00	£70.70
UK2050005	Disposal by hand excavated contaminated/saturated material off site	m3	£45.30	2.00	£90.61
UK1050	Removal, disposal and reinstatement of concrete path / hardstanding to 100mm thick	m2	£54.19	2.00	£108.37
Total (Excl VAT)					£494.64

RUN / LOCATION: Run F

Repair Item	Description	Unit	Rate (£)	Quantity	Amount (£)
UK1135	Drain Lining - Initial Set-Up Fee (0-3.0m)	nr	£332.64	1.00	£332.64
UK1140	Drain Lining - 100mm. Install Structural liner into existing 100mm underground drain - 3mm Wall	m	£55.52	9.00	£499.64
Total (Excl VAT)					£832.28

RUN / LOCATION: Run G

Repair Item	Description	Unit	Rate (£)	Quantity	Amount (£)
UK0825	Excavate & remove pipework. Replace with new 110mm PVCu. Bed surround & backfill to 100mm	m	£81.39	2.00	£162.78
UK0880	Short Radius Bend. Remove existing item and replace with new 110mm PVCu	nr	£14.89	2.00	£29.78
UK1060	Extra over pipework for surrounding drain run in 100mm thick concrete	m	£14.40	2.00	£28.81
UK0025	Protection Temporary works to floors, 1000 gauge polythene	m2	£1.79	2.00	£3.59
UK8120300	Hardcore Filling to excavations over 250 mm average thick	m	£35.35	2.00	£70.70
UK2050005	Disposal by hand excavated contaminated/saturated material off site	m3	£45.30	2.00	£90.61
UK1050	Removal, disposal and reinstatement of concrete path / hardstanding to 100mm thick	m2	£54.19	2.00	£108.37
Total (Excl VAT)					£494.64

RUN / LOCATION: Run H

Repair Item	Description	Unit	Rate (£)	Quantity	Amount (£)
UK0825	Excavate & remove pipework. Replace with new 110mm PVCu. Bed surround & backfill to 100mm	m	£81.39	2.00	£162.78
UK0880	Short Radius Bend. Remove existing item and replace with new 110mm PVCu	nr	£14.89	2.00	£29.78
UK1060	Extra over pipework for surrounding drain run in 100mm thick concrete	m	£14.40	2.00	£28.81
UK0025	Protection Temporary works to floors, 1000 gauge polythene	m2	£1.79	2.00	£3.59
UK8120300	Hardcore Filling to excavations over 250 mm average thick	m	£35.35	2.00	£70.70
UK2050005	Disposal by hand excavated contaminated/saturated material off site	m3	£45.30	2.00	£90.61
UK1050	Removal, disposal and reinstatement of concrete path / hardstanding to 100mm thick	m2	£54.19	2.00	£108.37
Total (Excl VAT)					£494.64

Address:

Shree Swaminarayan Agyna Upasana Satsang Mandal UK, Bridle Road, HA5 2SH

REPAIR ESTIMATE TOTALS:

Run / Location		Amount (£)
Set Up Fee		£148.44
Further Survey		£165.00
Run A		£2,431.41
Run B		£1,015.29
Run E		£494.64
Run F		£832.28
Run G		£494.64
Run H		£494.64
Total (Excl VAT)		£6,076.34

Address:

Shree Swaminarayan Agyna Upasana Satsang Mandal UK, Bridle Road, HA5 2SH