Arboricultural Consultancy for AXA Insurance

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

[redacted]	[redacted]	[redacted]	[redacted]		
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]
Report Date	22/12/2025				

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 2 storey detached house. The property occupies a level site with no adverse topographical features.

We understand that the current damage relates to the front elevation of the insured, property where cracking indicates downwards movement.

3. Technical Reports

In preparing our report we have had the benefit of the following technical investigations:

Engineers Report ☑

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	Horsham District Council
TPO / Conservation Area / Planning Protection Searches	Awaiting Searches from LA
Additional Comments	
Awaiting Further Instructions.	

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, T1 (Oak) and T2 (Oak) are considered the dominant features proximate to the focal area(s) of movement and accordingly, where vegetation is confirmed as being causal, we have identified them as the primary cause of the current subsidence damage.

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 T1 and T2 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 footings 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.

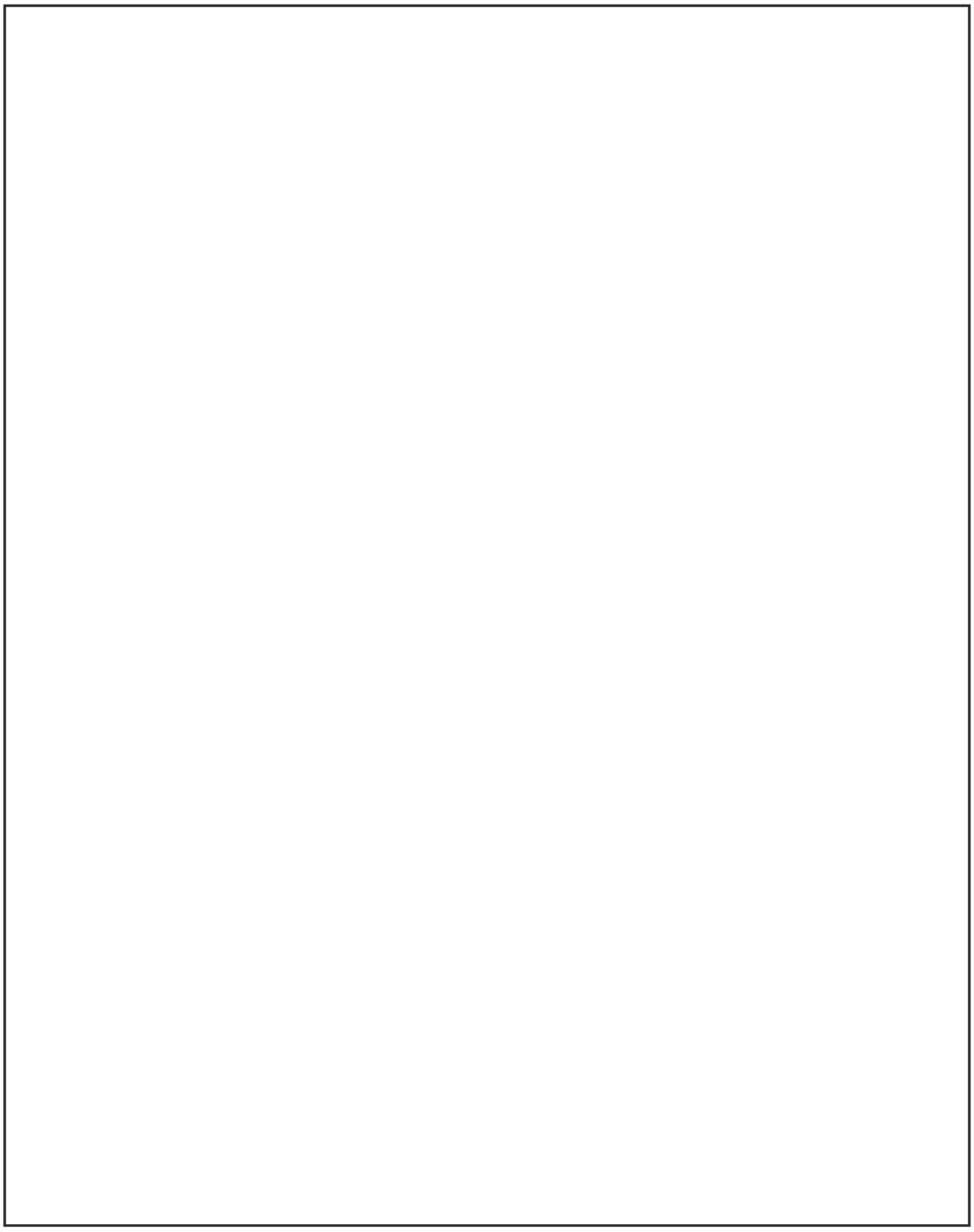
The extent / impact of vegetation management required to restore and maintain long-term stability at this property is acknowledged. However, we consider the impact on the wider public amenity from the proposed tree works is mitigated by the presence of further trees and the scope for replacement planting.

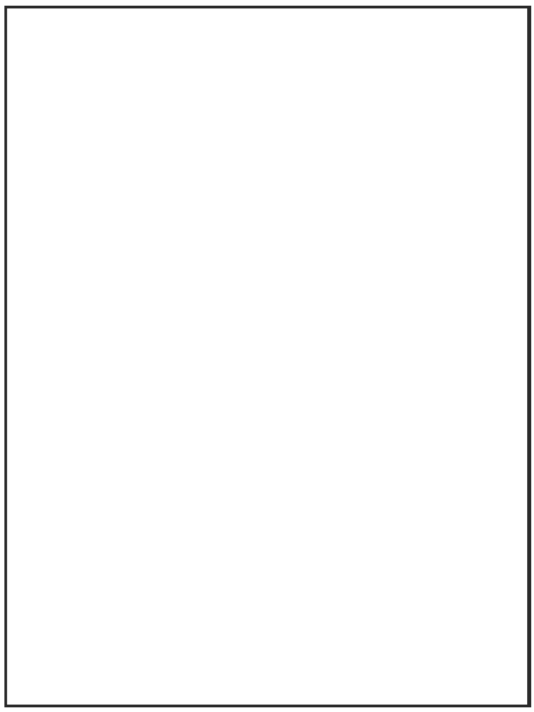
Whilst replacement planting is considered appropriate, due consideration must be given to the ultimate size of the replacement and future management requirements. Species selection should be appropriate for the chosen site and consideration must be given to the ultimate size of the replacement species and any future management requirements.

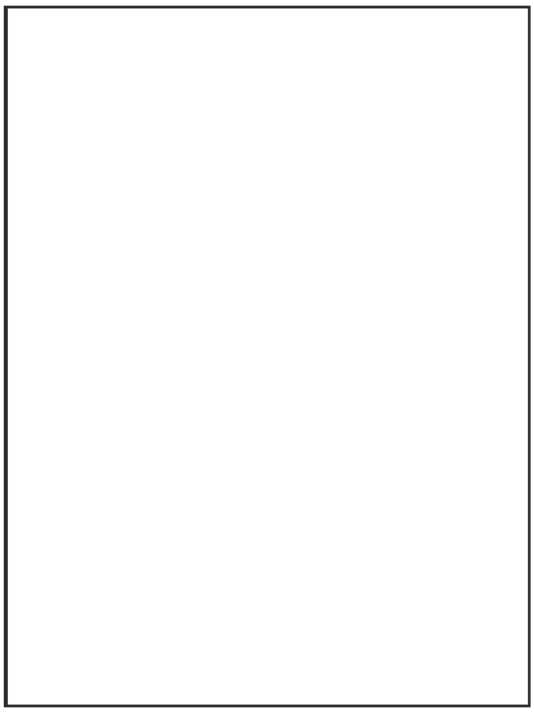
Is vegetation likely to be a contributory factor in the current damage?	Yes
Is vegetation management likely to contribute to the future stability of the property?	Yes
Is replacement planting considered appropriate?	Yes
Would DNA profiling be of assistance in this case?	No

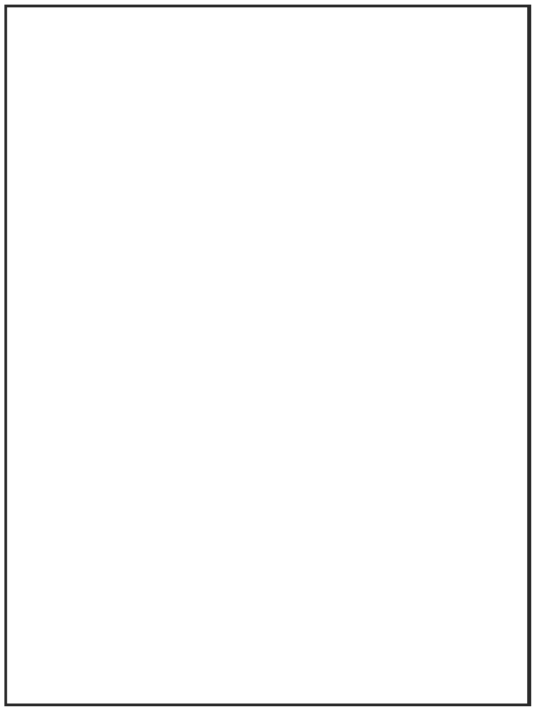
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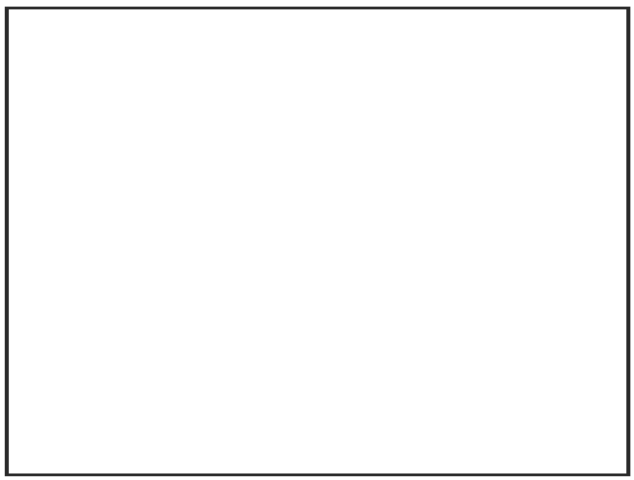
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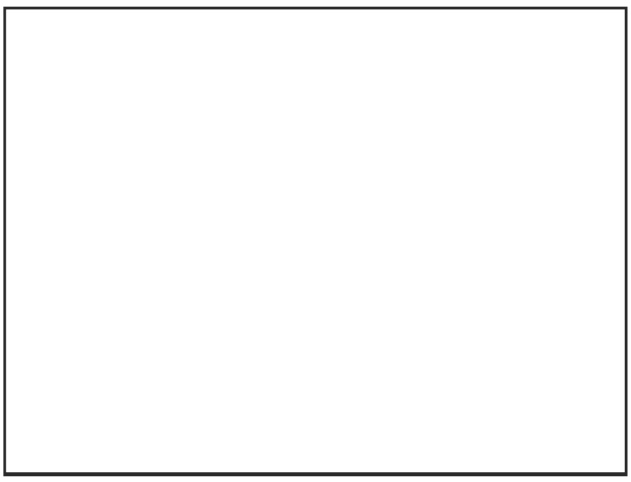


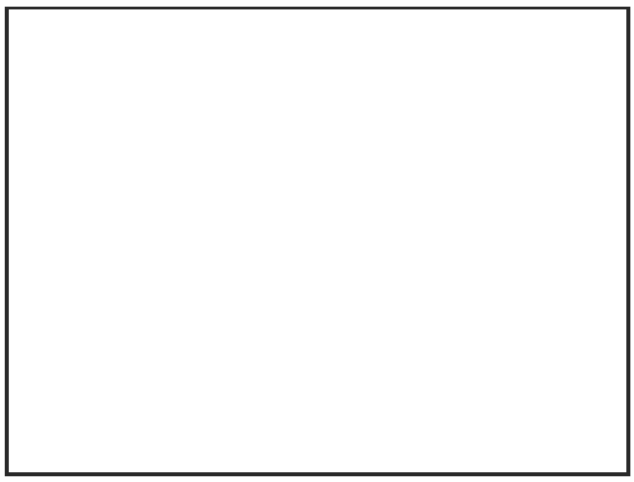


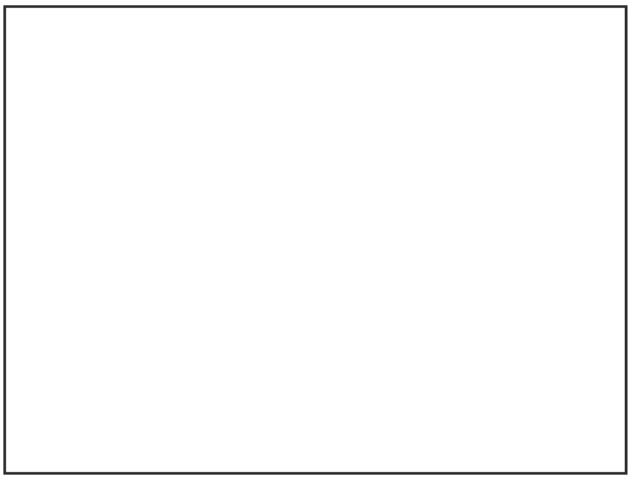


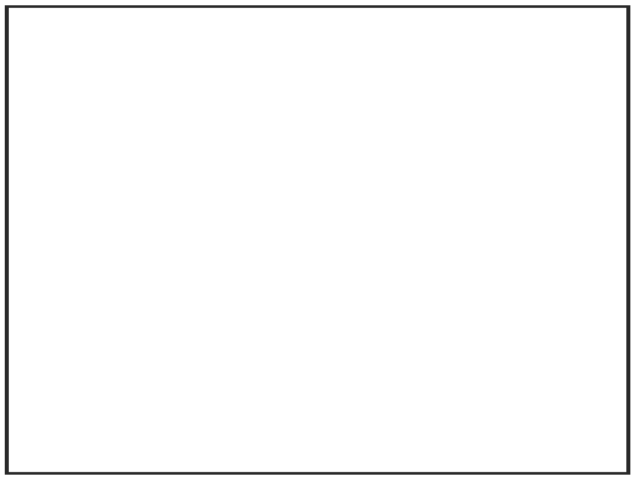












Arboricultural Consultancy for AXA Insurance

Date: 22/12/2025 Property: Birchwood, The Street, Slinforld, RH13 0RP

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

[redacted]	[redacted]
[redacted]	[redacted]
[redacted]	[redacted]

- [redacted]
- 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.

[redacted].

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.

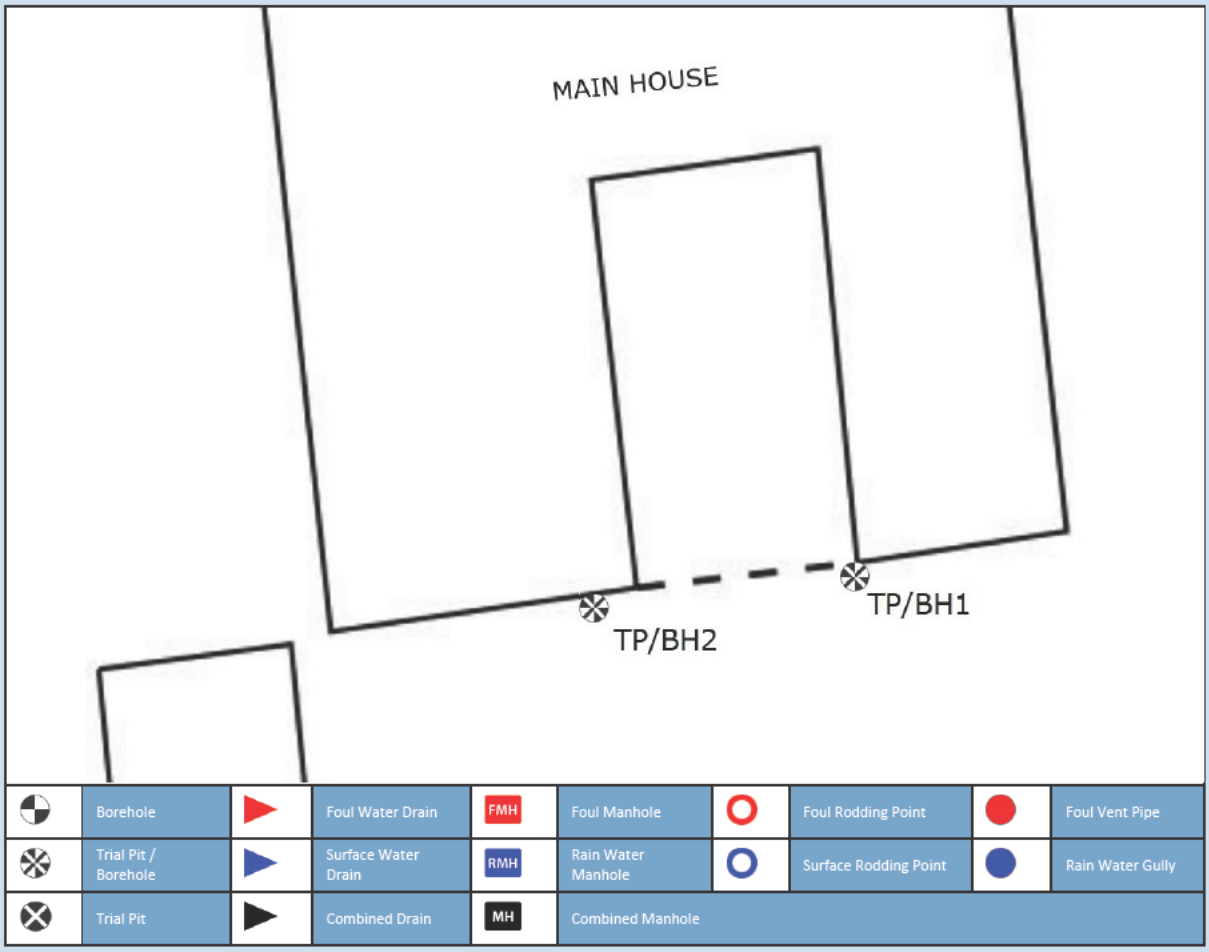
A legal Duty of Care requires that all works specified in this report should be performed by qualified, arboricultural contractors who have been competency tested to determine their suitability for such works in line with Health & Safety Executive Guidelines. Additionally all works should be carried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

GEOTECHNICAL
for SMS (AXA)

Birchwood, The Street, Slinforld, Horsham, RH13 0RP

Client:	SMS (AXA)
Client Contact:	Refer to iSubs
Client Ref:	IFS-AXA-SUB-25-0125280
Policy Holder:	Mr Senthil Rajan-Edge
Report Date:	27 January 2026
Our Ref:	C85371G37460

Site Plan

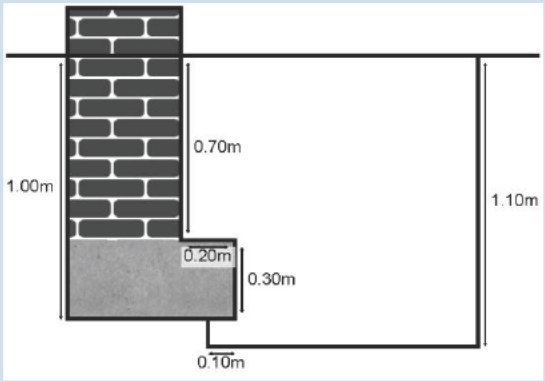


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TP/BH1 Foundation Detail and Borehole Log

Foundation Detail

House foundation comprised of brick wall to 700mm bgl, bearing on concrete to 1000mm 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 500mm back from the face of the foundation.



WS	Samples Type	Samples Depth (m)	Tests Type	Tests Depth (m)	Tests Results	Legend	Stratum Description and Observations
						0	TOPSOIL.
						0.5	Firm dark brown sandy silty CLAY.
	D R	1.10 - 1.60 1.10 - 2.10	PEN	1.10	HP=1.3 (1.5,1.0,1.5,1.0,1.5)	1.0	Firm orangish brown mottled grey sandy silty CLAY.
	D	1.60 - 2.10	PEN	1.60	HP=1.4 (1.5,1.5,1.5,1.0,1.5)	1.5	
	D	2.10 - 2.60	PEN	2.10	HP=1.7 (1.5,1.5,2.0,1.5,2.0)	2.0	
	D	2.60 - 3.10	PEN	2.60	HP=2.0 (2.0,2.0,2.0,2.0,2.0)	2.5	Firm greyish brown mottled blue sandy silty CLAY.
	D	3.10 - 3.60	PEN	3.10	HP=2.1 (2.0,2.0,2.0,2.5,2.0)	3.0	
	D	3.60 - 4.00	PEN	3.60	HP=2.2 (2.0,2.0,2.5,2.5,2.0)	3.5	
						4.0	Firm dark brownish grey mottled orange sandy silty CLAY.

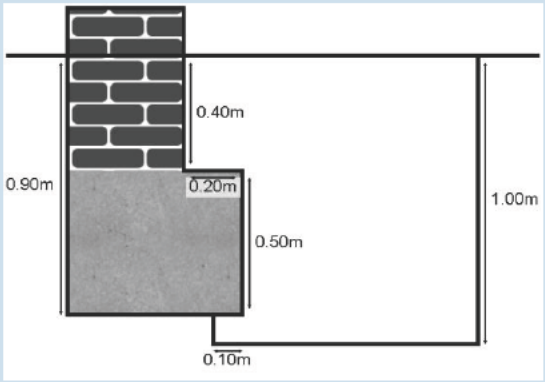
-- End of borehole at 4.00m --
Trial pit excavated to 1.10m bgl. PEN = Hand Penetrometer (kg/sq cm). Roots encountered to 2.1m bgl.
Groundwater strikes not encountered. Borehole completed by mech window sampler.

SubsNetUK

TP/BH2 Foundation Detail and Borehole Log

Foundation Detail

House foundation comprised of brick wall to 400mm 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 500mm back from the face of the foundation.



WS	Samples Type	Samples Depth (m)	Tests Type	Tests Depth (m)	Tests Results	Legend	Stratum Description and Observations
						0	TOPSOIL.
						0.5	Firm dark brown sandy silty CLAY with rare fine to medium gravel.
▼	R D	1.00 - 2.00 1.00 - 1.50	PEN	1.00	HP=1.4 (1.5,1.5,1.5,1.5)	1.0	Firm orangish brown mottled grey sandy silty CLAY.
	D	1.50 - 2.00	PEN	1.50	HP=1.3 (1.0,1.5,1.5,1.5)	1.5	
	R D	2.00 - 3.00 2.00 - 2.50	PEN	2.00	HP=1.2 (1.0,1.0,1.5,1.0,1.5)	2.0	Firm orangish brown mottled blue sandy silty CLAY.
	D	2.50 - 3.00	PEN	2.50	HP=1.7 (1.5,1.5,2.0,2.0,1.5)	2.5	Firm greyish brown mottled blue sandy silty CLAY with rare fine to medium gravel.
	D	3.00 - 3.50	PEN	3.00	HP=2.2 (2.0,2.0,2.5,2.0,2.5)	3.0	Firm greyish brown mottled blue sandy silty CLAY.
	D	3.50 - 4.00	PEN	3.50	HP=2.5 (2.5,2.5,2.5,2.5,2.5)	3.5	
						4.0	-- End of borehole at 4.00m --

Trial pit excavated to 1.00m bgl. PEN = Hand Penetrometer (kg/sq cm). Roots encountered to 3m bgl.
Borehole completed by mech window sampler.

SubsNetUK

Site Observations

GENERAL:
Site Investigation works (TP/BH 1) undertaken on 2 January 2026 during dry weather (i.e. no rain).
Site Investigation works (TP/BH 2) undertaken on 2 January 2026 during dry weather (i.e. no rain).

HEALTH AND SAFETY:
Negative signal obtained in Power and Radio and Genny mode on the Cable Avoidance Tool (CAT) (TP/BH 1).
Negative signal obtained in Power and Radio and Genny mode on the Cable Avoidance Tool (CAT) (TP/BH 2).

FOUNDATIONS:
House foundation was exposed and the underside of foundation (USF) recorded to be 1m bgl (TP/BH 1).
House foundation was exposed and the underside of foundation (USF) recorded to be 0.9m bgl (TP/BH 2).

ROOTS:
Roots encountered to 2.1m bgl (TP/BH 1).
Roots encountered to 3m bgl (TP/BH 2).

IN SITU TESTING:
Hand Penetrometer (PEN) undertaken at 1.1m bgl (TP/BH 1) within the window sampler and thereafter in the window sampler at maximum 4m intervals.
Hand Penetrometer (PEN) undertaken at 1m bgl (TP/BH 2) within the window sampler and thereafter in the window sampler at maximum 4m intervals.

WATER STRIKES:
No water strikes (NWS) encountered (TP/BH 1).
A water strike (WS) was encountered in the clay at 1m bgl (TP/BH 2) with no standing water level (SWL) recorded after 10 minutes (TP/BH 2).

Environmental Services

SOIL ANALYSIS

for Subsidence Management Services

Birchwood, Horsham, RH13 0RP

Client:	Subsidence Management Services
Claim Number:	12687256K
Policy Holder:	Mr Senthil Rajan-Edge
Report Date:	03/02/2026
Our Ref:	L30322

Compiled By:

Name	Position	Signature
Saira Dougan	Laboratory Supervisor	[redacted]

Checked By:

Name	Position
Bob Walker	Laboratory Manager

Date samples received:	05-Jan-26
Water Content Test Date:	21-Jan-26
Atterberg Limits Test Date:	31-Jan-26
Suction Test Date:	03-Feb-26

UKAS TESTING

9265

Environmental Services

Notes relating to soils testing

Unless otherwise stated, all soil testing was undertaken by Environmental Services at 21 Coventry Road, Coleshill, B46 3BB for Subsidence Management Services, Bembridge House, 1300 Parkway, Solent Business Park, Whiteley, Fareham, Hampshire, England, PO15 7AE and all testing at these premises currently falls outside of UKAS accreditation.

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.

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 Filter Paper Suction Test is undertaken in accordance with the BRE paper IP4/93 (corrected) ‘A Method of Determining the State of Desiccation in Clay Soils’

Unless otherwise stated the moisture content of the filter paper was determined after 7 days contact with the sample and the test was prepared from a remoulded disturbed sample.

The Filter Paper Suction Tests are conducted in a controlled environment within a temperature range of 18°C and 22°C

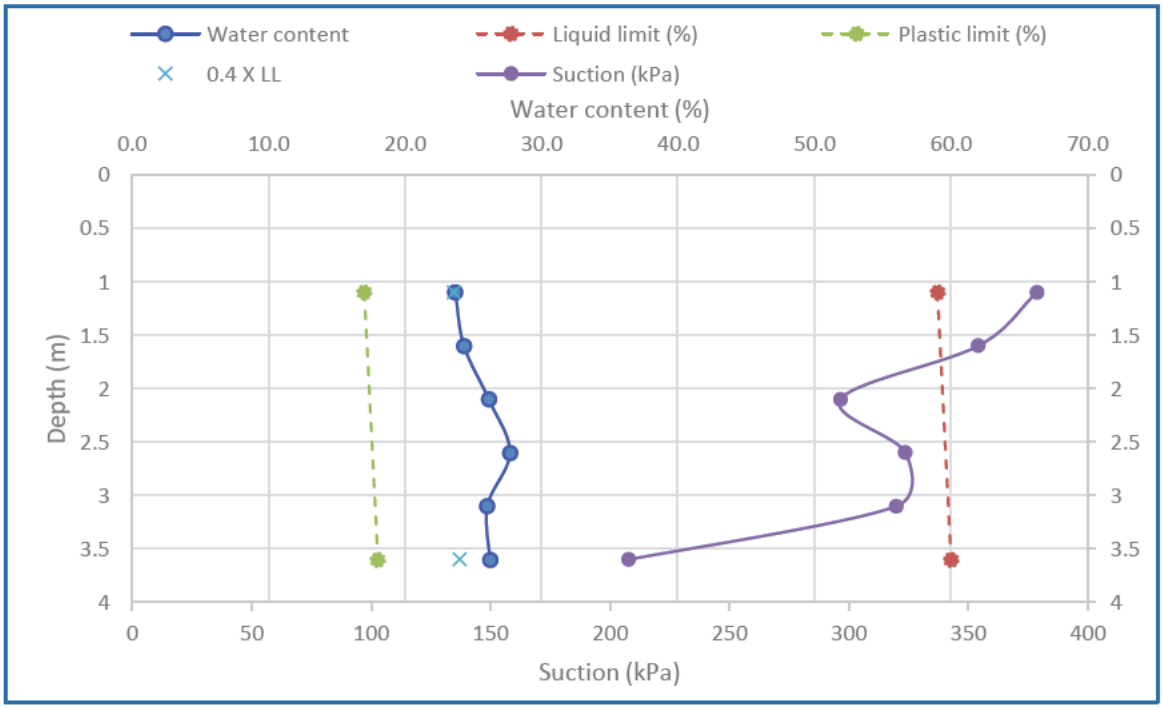
If you would like to provide feedback on this report or any laboratory services or performance, please complete the form below. All appropriate feedback will be used in the continual improvement of laboratory services.

Laboratory feedback form

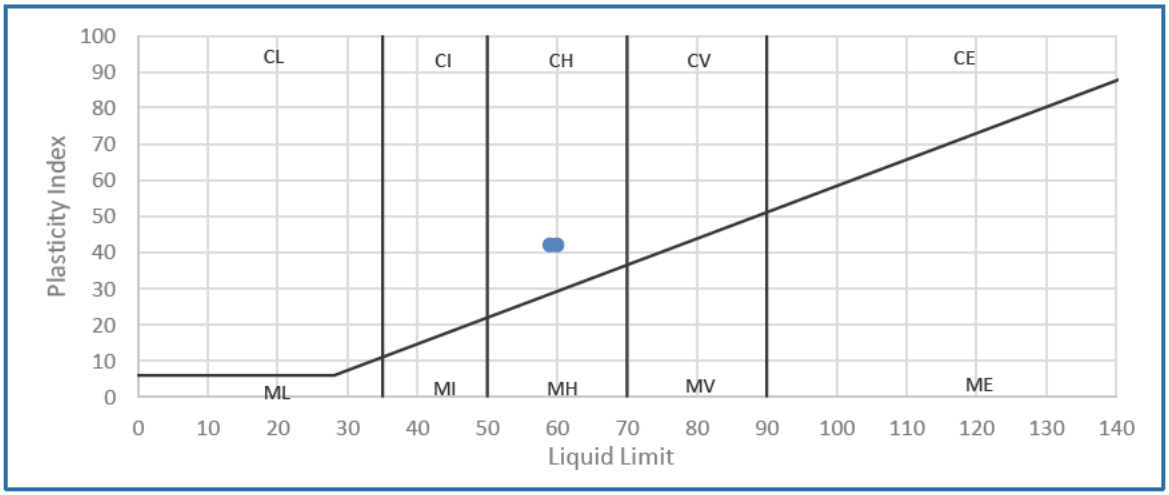
Environmental Services

Samples from BH1

Lab Ref	Depth (m)	WC (%)	LL (%)	PL (%)	PI (%)	.425 mm(%)	mod. PI (%)	Av. Suc. (kPa)	Description
1	1.1	23.7	59	17	42	100	42	379	Firm grey slightly silty CLAY with rare gravel
2	1.6	24.3						354	Firm grey slightly silty CLAY with rare gravel
3	2.1	26.1						297	Firm grey slightly silty CLAY with rare gravel
4	2.6	27.7						324	Firm grey slightly silty CLAY with rare gravel
5	3.1	26.0						320	Firm grey slightly silty CLAY with rare gravel
6	3.6	26.2	60	18	42	100	42	208	Firm grey slightly silty CLAY with rare gravel



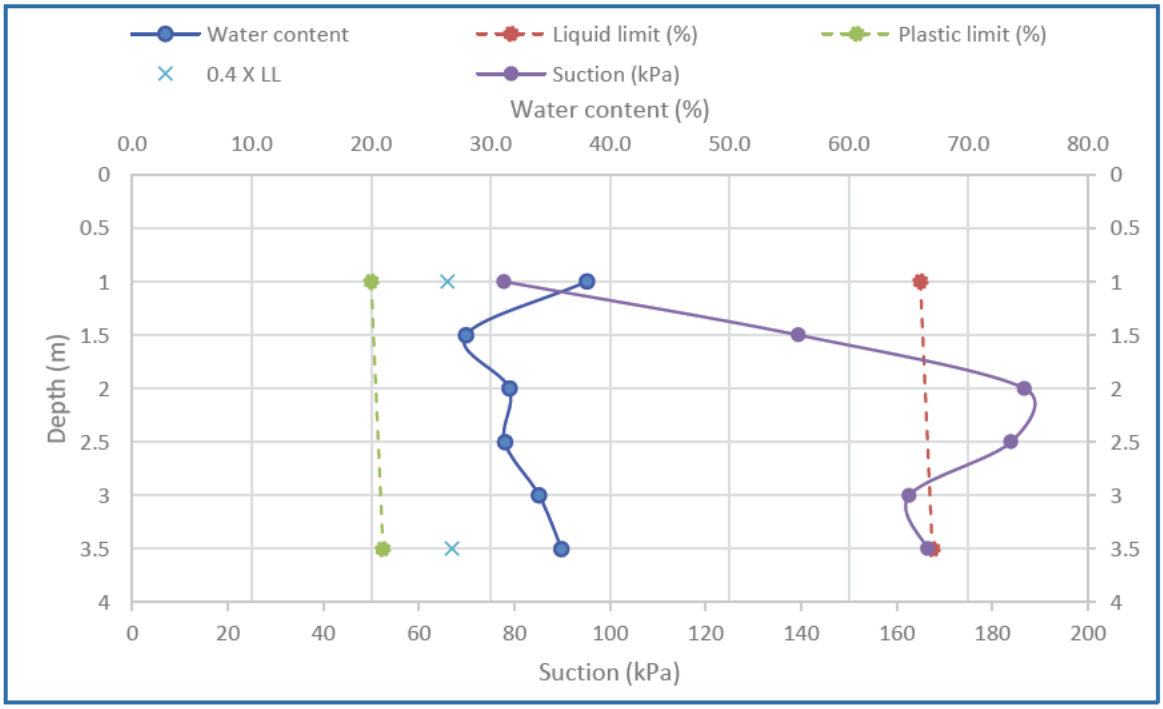
Plasticity Chart for Casagrande Classification



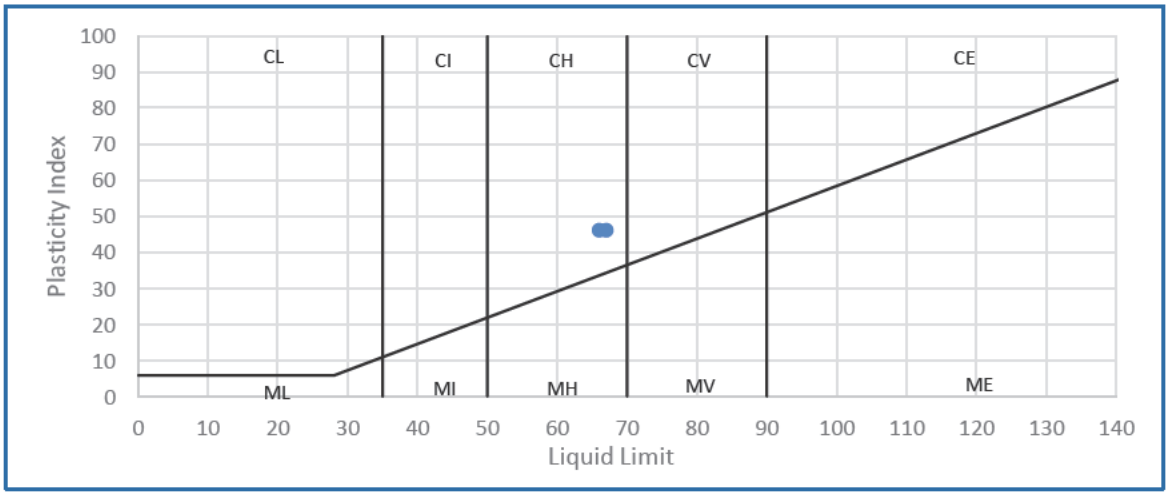
Environmental Services

Samples from BH2

Lab Ref	Depth (m)	WC (%)	LL (%)	PL (%)	PI (%)	.425 mm(%)	mod. PI (%)	Av. Suc. (kPa)	Description
7	1	38.1	66	20	46	96	44	78	Firm grey slightly silty CLAY with rare gravel
8	1.5	27.9						139	Firm grey slightly silty CLAY with rare gravel
9	2	31.6						187	Firm grey slightly silty CLAY with rare gravel
10	2.5	31.2						184	Firm grey slightly silty CLAY with rare gravel
11	3	34.1						163	Firm grey slightly silty CLAY with rare gravel
12	3.5	36.0	67	21	46	98	45	167	Firm grey slightly silty CLAY with rare gravel



Plasticity Chart for Casagrande Classification



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 SMS (AXA)

Birchwood, The Street, Slinforld, Horsham, RH13 0RP

Client:	SMS (AXA)
Client Contact:	Refer to iSubs
Claim Number:	12687256K
Client Reference:	IFS-AXA-SUB-25-0125280
Policy Holder:	Mr Senthil Rajan-Edge
Report Date:	29 January 2026
Our Ref:	R64102

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

Sub Sample	Species Identified		Root Diameter	Starch
TP/BH1:				
1.1-2.1m	*Quercus* spp.	1	2 mm	Abundant
TP/BH2:				
1-2m	*Quercus* spp.	2	4 mm	Absent
2-3m	*Quercus* spp.	3	1 mm	Abundant

Comments:

1 - Plus 2 others also identified as *Quercus* spp.
2 - Plus 2 others also identified as *Quercus* spp. All in a state of decay.
3 - Plus 2 decayed roots the same.

Quercus spp. are oaks (both deciduous and evergreen).

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.

SubsNetUK
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ISO 9001 REGISTERED FIRM

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Drainage Investigation Report

For Subsidence Management Services

Client Mr Senthil Rajan-Edge

Risk Address: Birchwood, Horsham, RH13 0RP

Visit Date: 17.12.2025

Client Reference: IFS-AXA-SUB-25-0125280

Our Reference: C85371 D29628

Report Date: 16.01.2026

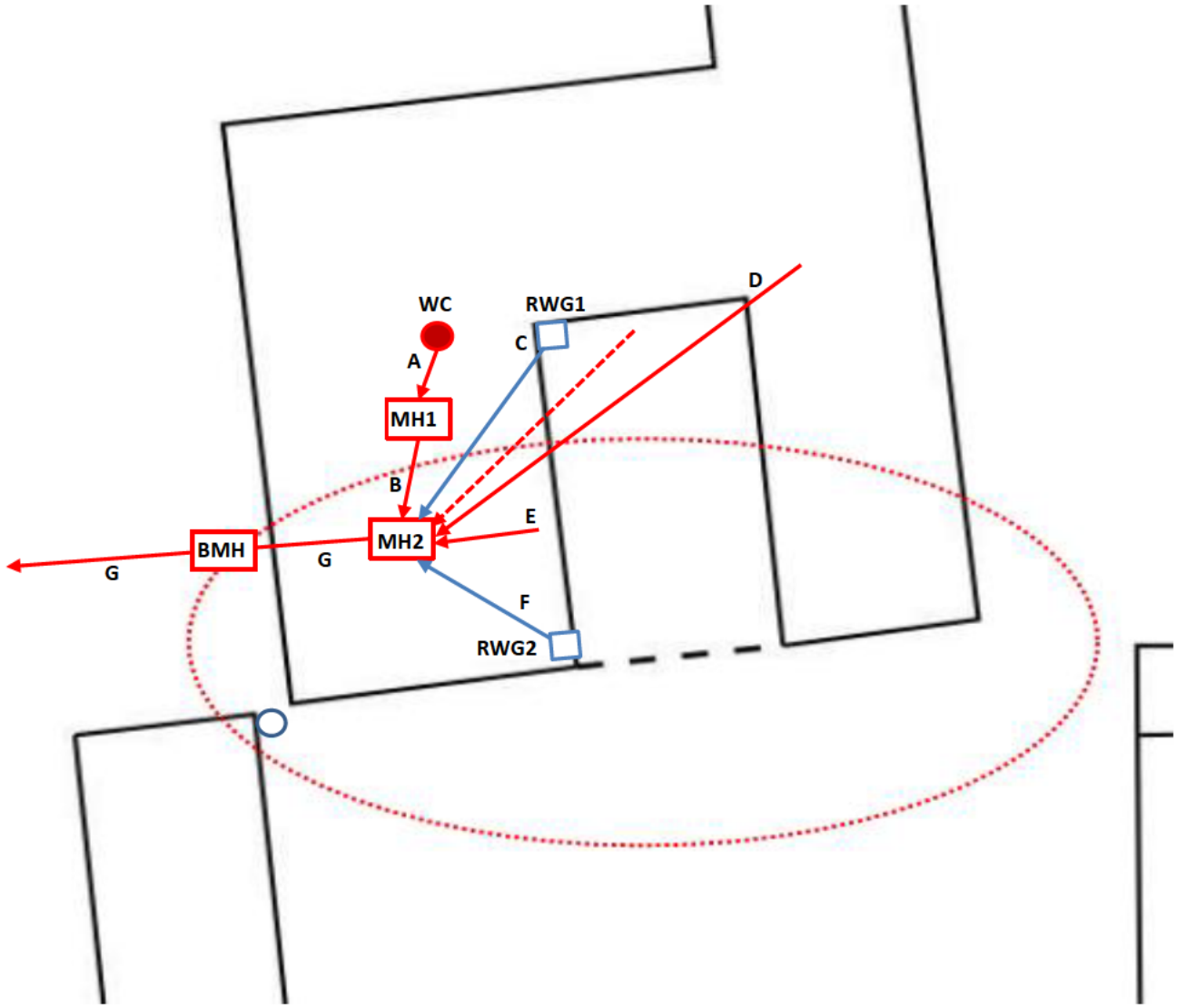
Report Content:

Front Page
Site Plan
CCTV Coding
Drain Overview
Photographs
Quote

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Site Plan

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Key

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

Notes:	

Address: Birchwood, Horsham, RH13 0RP

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CCTV Survey

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RUN	Start From :	MH1	Finish at :	WC	Pipe Ø:	100mm
A	Invert Level (m):	500	Invert Level (m):	N/a	Material:	Plastic
FOUL	Condition grade:	A	Direction:	Upstream	Responsibility:	Home Owner
Distance	*Code*	*Hydraulic Test - Not Tested*				
0.00	SN	Start Node from MH1				
0.00	WL	Water Level 0%				
0.00	LU	Line of drain deviates up slight				
0.30	REM	Remark - At Rest Bend				
0.60	FN	Finish Node at WC				

RUN	Start From :	MH1	Finish at :	MH2	Pipe Ø:	100mm
B	Invert Level (m):	500	Invert Level (m):	N/a	Material:	Plastic
FOUL	Condition grade:	B	Direction:	Downstream	Responsibility:	Home Owner
Distance	*Code*	*Hydraulic Test - Fail*				
0.00	SN	Start Node from MH1				
0.00	WL	Water Level 0%				
0.00	LR	Line of drain deviates right slight				
0.50	MC	Material of drain changes at this point to clay				
0.50	JDL	Joint Displaced (Large)				
1.00	CC	Crack Circumferential				
1.50	FN	Finish Node at MH2				

RUN	Start From :	MH2	Finish at :	RWG1	Pipe Ø:	100mm
C	Invert Level (m):	700	Invert Level (m):	N/a	Material:	Clay
STORM	Condition grade:	B	Direction:	Upstream	Responsibility:	Home Owner
Distance	*Code*	*Hydraulic Test - Fail*				
0.00	SN	Start Node from MH2				
0.00	WL	Water Level 0%				
0.20	CM	Cracks Multiple Start				
1.00	CM	Cracks Multiple End				
1.50	JDM	Joint Displaced (Medium)				
1.55	LR	Line of drain deviates right 30 °				
1.70	JDM	Joint Displaced (Medium)				
1.80	FN	Finish Node at RWG1				

RUN	Start From :	MH2	Finish at :	Upstream node	Pipe Ø:	100mm
D	Invert Level (m):	700	Invert Level (m):	N/a	Material:	Clay
FOUL	Condition grade:	C	Direction:	Upstream	Responsibility:	Home Owner
Distance	*Code*	*Hydraulic Test - Not Tested*				
0.00	SN	Start Node from MH2				
0.00	WL	Water Level 0%				
2.70	MC	Material of drain changes at this point to cast iron				
7.70	DEE	Attached Deposits (encrustation)				
7.70	SA	Survey Abandoned - Unable to push past attached deposit				

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CCTV Survey

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RUN	Start From :	MH2	Finish at :	Upstream node	Pipe Ø:	100mm
E	Invert Level (m):	700	Invert Level (m):	N/a	Material:	Clay
FOUL	Condition grade:	B	Direction:	Upstream	Responsibility:	Home Owner
Distance	*Code*	*Hydraulic Test - Not Tested*				
0.00	SN	Start Node from MH2				
0.00	WL	Water Level 0%				
0.20	DER	Settled Deposits Start (coarse)				
2.00	DER	Settled Deposits 100% (coarse)				
2.00	SA	Survey Abandoned - Unable to push past blockages				

RUN	Start From :	MH2	Finish at :	RWG2	Pipe Ø:	100mm
F	Invert Level (m):	700	Invert Level (m):	N/a	Material:	Clay
STORM	Condition grade:	B	Direction:	Upstream	Responsibility:	Home Owner
Distance	*Code*	*Hydraulic Test - Not Tested*				
0.00	SN	Start Node from MH2				
0.00	WL	Water Level 0%				
1.10	JDM	Joint Displaced (Medium)				
1.15	LL	Line of drain deviates left 30°				
1.15	CC	Crack Circumferential				
1.50	JDM	Joint Displaced (Medium)				
1.80	FN	Finish Node at RWG2				

RUN	Start From :	MH2	Finish at :	BAOC	Pipe Ø:	100mm
G	Invert Level (m):	700	Invert Level (m):	N/a	Material:	Clay
COMBINED	Condition grade:	B	Direction:	Downstream	Responsibility:	Home Owner
Distance	*Code*	*Hydraulic Test - Not Tested*				
0.00	SN	Start Node from MH2				
0.00	WL	Water Level 0%				
0.30	JDM	Joint Displaced (Medium)				
1.40	CC	Crack Circumferential				
2.90	CC	Crack Circumferential				
3.90	REM	Remark - Line enters buried manhole				
4.10	REM	Remark - Line exits buried manhole				
4.10	MC	Material of drain changes at this point to liner				
4.20	DER	Settled Deposits Start (coarse)				
4.30	DER	Settled Deposits 50% (coarse)				
5.50	DER	Settled Deposits End (coarse)				
7.20	FN	Finish Node - Beyond Area of Concern				

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Drainage Overview

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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.

An excavation will be required to expose MH2 so that repair works can be completed

Drain Run A: MH1 to WC
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 B: MH1 to MH2
Pipe Diameter: 100mm
Responsibility: Home Owner
Hydraulic Pressure Test: Fail
CCTV Survey Result: Structural damage
Recommended Repair:
To prepare the drain line and insert 2x resin patch liner to cover defects at 0.5m and 1m

Drain Run C: MH2 or RWG1
Pipe Diameter: 100mm
Responsibility: Home Owner
Hydraulic Pressure Test: Fail
CCTV Survey Result: Structural damage
Recommended Repair:
To excavate and replace existing gully including 1m of adjacent pipework.
To prepare the drain line and insert 1x resin patch liner to cover defects at 0.2m
To back-fill and reinstate and ensure all is left clean and tidy on completion.

Drain Run D: MH2 to Upstream node
Pipe Diameter: 100mm
Responsibility: Home Owner
Hydraulic Pressure Test: Not Tested
CCTV Survey Result: No structural damage but we were unable to pass a point within the area of concern
Recommended Repair:
Conduct HPWJ to remove attached deposits and cleanse the line, CCTV survey and report on findings

Drain Run E: MH2 to Upstream node
Pipe Diameter: 100mm
Responsibility: Home Owner
Hydraulic Pressure Test: Not Tested
CCTV Survey Result: No structural damage but we were unable to pass a point within the area of concern
Recommended Repair:
Conduct HPWJ to remove the blockage and cleanse the line, CCTV survey and report on findings

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Drainage Overview 2

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Drain Run F: MH2 to RWG2
Pipe Diameter: 100mm
Responsibility: Home Owner
Hydraulic Pressure Test: Not Tested
CCTV Survey Result: Structural damage
Recommended Repair:
To excavate and replace existing gully including 1m of adjacent pipework.
To back-fill and reinstate and ensure all is left clean and tidy on completion.

Drain Run G: MH2 to RWG2
Pipe Diameter: 100mm
Responsibility: Home Owner
Hydraulic Pressure Test: Not Tested
CCTV Survey Result: Structural damage
Recommended Repair:
Trace, locate and excavate to expose the buried manhole
HPWJ and CCTV survey all drainage within the area of concern
To prepare the drain line and insert 3m of structural liner from MH2 downstream
Bench liner into MH2
To back-fill and reinstate and ensure all is left clean and tidy on completion.

CCTV SURVEY ALL REMAINING DRAINAGE WITHIN THE AREA OF CONCERN THAT MAY HAVE BEEN MISSED ON THE FIRST VISIT INCLUDING ADDITIONAL LINES ENTERING MH2 , BMH AND SURFACEWATER DRAINAGE

	Result	Acoustic Test
Water Main Test	**PASS**	No noise could be heard which indicates that there is no leak

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RUN / LOCATION: Excavation Works

Repair Item	Description	Unit	Rate (£)	Quantity	Amount (£)
UK1300	Signing & Guarding	nr	£327.31	1.00	£327.31
UK9017	C.A.T and Genny - Underground Service Detection	nr	£178.68	1.00	£178.68
				Total (Excl VAT)	£505.99

RUN / LOCATION: Further Surveys

Repair Item	Description	Unit	Rate (£)	Quantity	Amount (£)
	CCTV survey of underground drainage & report	nr	£181.91	1.00	£181.91
UK0530	High Pressure Water Jetting - Additional 1/2 hours on	1/2hr	£30.11	4.00	£120.44
				Total (Excl VAT)	£302.35

RUN / LOCATION: Excavate to expose MH2 to complete works

Repair Item	Description	Unit	Rate (£)	Quantity	Amount (£)
UK0025	Protection Temporary works to floors, 1000 gauge	m2	£1.97	2.00	£3.94
UK8120300	Hardcore Filling to excavations over 250 mm average	m	£38.98	1.00	£38.98
UK2050005	Disposal by hand excavated contaminated/saturated	m3	£49.95	1.00	£49.95
UK1045	Removal, set aside and reinstatement of concrete	m2	£27.13	2.00	£54.26
UK007	Excavate for access to survey. Reinstate on	nr	£66.15	1.00	£66.15
				Total (Excl VAT)	£213.28

RUN / LOCATION: Run B

Repair Item	Description	Unit	Rate (£)	Quantity	Amount (£)
UK1180	Patch Lining. Up to 2 m x 100mm diameter	nr	£320.76	1.00	£320.76
UK0025	Protection Temporary works to floors, 1000 gauge	m2	£1.97	2.00	£3.94
				Total (Excl VAT)	£324.70

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RUN / LOCATION: Run C

Repair Item	Description	Unit	Rate (£)	Quantity	Amount (£)
UK0010	Remove existing UPVC pipework in isolated lengths,	nr	£15.71	1.00	£15.71
UK0015	Extra over for bends.	nr	£9.17	1.00	£9.17
UK0595	Gully, 225mm x 225mm. Remove existing and replace	nr	£161.44	1.00	£161.44
UK0605	Excavate & remove isolated length. Replace in new	nr	£144.94	1.00	£144.94
UK0880	Short Radius Bend. Remove existing item and replace	nr	£16.41	2.00	£32.82
UK1060	Extra over pipework for surrounding drain run in	m	£15.88	1.00	£15.88
UK0025	Protection Temporary works to floors, 1000 gauge	m2	£1.97	2.00	£3.94
UK8120300	Hardcore Filling to excavations over 250 mm average	m	£38.98	1.00	£38.98
UK2050005	Disposal by hand excavated contaminated/saturated	m3	£49.95	1.00	£49.95
UK1045	Removal, set aside and reinstatement of concrete	m2	£27.13	1.00	£27.13
UK1180	Patch Lining. Up to 2 m x 100mm diameter	nr	£320.76	1.00	£320.76
				Total (Excl VAT)	£820.72

RUN / LOCATION: Run F

Repair Item	Description	Unit	Rate (£)	Quantity	Amount (£)
UK0010	Remove existing UPVC pipework in isolated lengths,	nr	£15.71	1.00	£15.71
UK0015	Extra over for bends.	nr	£9.17	1.00	£9.17
UK0595	Gully, 225mm x 225mm. Remove existing and replace	nr	£161.44	1.00	£161.44
UK0605	Excavate & remove isolated length. Replace in new	nr	£144.94	1.00	£144.94
UK0880	Short Radius Bend. Remove existing item and replace	nr	£16.41	2.00	£32.82
UK1060	Extra over pipework for surrounding drain run in	m	£15.88	1.00	£15.88
UK0025	Protection Temporary works to floors, 1000 gauge	m2	£1.97	2.00	£3.94
UK8120300	Hardcore Filling to excavations over 250 mm average	m	£38.98	1.00	£38.98
UK2050005	Disposal by hand excavated contaminated/saturated	m3	£49.95	1.00	£49.95
UK1045	Removal, set aside and reinstatement of concrete	m2	£27.13	1.00	£27.13
				Total (Excl VAT)	£499.96

RUN / LOCATION: Run G

Repair Item	Description	Unit	Rate (£)	Quantity	Amount (£)
UK0025	Protection Temporary works to floors, 1000 gauge	m2	£1.97	2.00	£3.94
UK8120300	Hardcore Filling to excavations over 250 mm average	m	£38.98	1.00	£38.98
UK2050005	Disposal by hand excavated contaminated/saturated	m3	£49.95	1.00	£49.95
UK1045	Removal, set aside and reinstatement of concrete	m2	£27.13	2.00	£54.26
UK007	Excavate for access to survey. Reinstate on	nr	£66.15	1.00	£66.15
UK10051	Drain Tracing - Electronic, with report plotting	nr	£99.25	1.00	£99.25
UK1135	Drain Lining - Initial Set-Up Fee (0-3.0m)	nr	£366.73	1.00	£366.73
UK1080	Cut out & replace drainage channel including	nr	£120.17	1.00	£120.17
				Total (Excl VAT)	£799.43

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REPAIR ESTIMATE TOTALS:

Run / Location		Amount (£)
Excavation Works		£505.99
Further Survey		£302.35
Excavate to expose MH2 to complete works		£213.28
Run B		£324.70
Run C		£820.72
Run F		£499.96
Run G		£799.43
	Total (Excl VAT)	£3,466.43

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