

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

Insured	Mr Stephen John Edwards	Address	20 Wellington Court, Bradford, BD11 2HY		
Client	Subsidence Management Services	Contact	Ian Domigan	Claim No.	IFS-AXA-SUB-22-0099767
ES Ref	SA-249643	Consultant	Keith Burgess	Contact No.	0330 380 1036
Report Date	05/04/2022				

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. It has been extended with a two-storey extension to the rear. The property occupies a level site with no adverse topographical features.

We are advised that the current damage relates to the rear elevation of the insured dwelling where cracking indicates downwards movement.

3. Technical Reports

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

Soil Analysis Drain Report Foundation Detail
Borehole Log

4. Action Plan

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

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

5. Technical Synopsis

This report is based on our understanding, at the time of visiting the property, that Subsidence Management Services are satisfied that damage is the result of clay shrinkage subsidence exacerbated by the indirect influence of vegetation.

The conditions necessary for clay shrinkage subsidence to occur have been established by site investigations.

Foundations are noted to extend to a depth of 860mm in TP/BH1 and bear onto subsoil described within the borehole log as containing clay, thereby indicating the potential for the observed damage to be the result of clay shrinkage subsidence exacerbated by the influence of vegetation.

The supporting subsoil has been analysed by a UKAS accredited Laboratory (to relevant BS, EN and ISO standards).

NHBC chapter 4.2 (2021) categorises the supporting subsoil as being of LOW plasticity, i.e. capable of volumetric change potential in response to moisture content.

A CCTV (Closed Circuit Television) survey of the drainage system on the property was undertaken, the drainage layout mapped and a report prepared on the system structure, condition and functionality together with any recommendations for remedial works.

Arboricultural Consultancy for AXA Insurance

We note that drain investigations found minor damage in the vicinity of the area of damage; however, moisture depletion has been demonstrated by way of Atterberg testing at depths commensurate with root activity.

Atterberg tests demonstrate that the load bearing capacity of the soil has not been compromised by excessive water content due to leaking drains and is therefore capable of bearing the imposed load.

The footings of the subject property are also within the normally accepted influencing distance of vegetation on site

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

We have therefore been instructed to advise on the causal vegetation and to deliver management proposals which will provide on-going and long-term stability allowing repairs to be undertaken.

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

Our survey of the site identified the Lime (T4), Beech trees (T5 & T8) and Oaks (T6 & T7), given their proximity relative to the advised area of damage, we have identified their collective / cohesive influence as the primary cause of the subsidence damage.

The size and proximity of the above vegetation is consistent with the location of damage; 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.

Given the above and considering the advised 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.

The recommendations contained within this report are prescribed to give the most reliable arboricultural solution likely to restore long-term stability.

Whilst we have given consideration to pruning as a means of mitigating the vegetative influence of the above, this has been discounted; pruning is generally ineffective and in the context of the current claim we consider the above vegetation too large and close for pruning to be viable.

Consequently, complete removal of the Lime (T4), Beech trees (T5 & T8) and Oaks (T6 & T7) will offer the most certain arboricultural solution likely to restore long-term stability.

We recommend the efficacy of the management recommendations be qualified by means of further monitoring to confirm stability.

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 would advise the owner(s) review and adopt appropriate action to mitigate future subsidence risk to the subject property.

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 ultimate tree height should not exceed 75% of the available distance to built structures.

Arboricultural Consultancy for AXA Insurance

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	3	18	5.5	F - Commercial 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.
T5	Beech	3	18	6.8	F - Commercial 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	18	9.0	F - Commercial 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.
T7	Oak	3	18	9.3	F - Commercial 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.
T8	Beech	3	13	7.5	F - Commercial 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.

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

* Estimated

Arboricultural Consultancy for AXA Insurance

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
T1	Beech	3	18	14.8	C - Insured	Action to avoid future risk	Do not allow to exceed current dimensions by way of regular pruning.
T2	Lime	3	18	12.0	C - Insured	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.
T3	Lime	3	18	9.0	C - Insured	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 strict 2-3 year cycle.
T9	Monkey Puzzle	1	3	5.8	C - Insured	Action to avoid future risk	Do not allow to exceed 5m height / spread by way of regular pruning.
TG1	Mixed Species Group: including Maple, Ash, Beech, Lime & Holly.	3	12	3.5	F - Commercial Third Party	Action to avoid future risk	Maintain those trees within recognised influencing distance of the property (based on species, size and proximity) at, or below current dimensions by way of regular pruning. Any pruning undertaken should be in accordance with BRE IP7/06 and repeated on a 3-year (max) basis to be deemed as effective.

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

Arboricultural Consultancy for AXA Insurance

8. Photographs



T1 - Beech



T9 - Monkey Puzzle



T2 - Lime



T3 - Lime

Arboricultural Consultancy for AXA Insurance



T4 - Lime



T5 - Beech



T6 - Oak



T7 - Oak

Arboricultural Consultancy for AXA Insurance



T8 - Beech



TG1 - Mixed species group

Arboricultural Consultancy for AXA Insurance

Date: 05/04/2022

Property: 20 Wellington Court, Bradford, BD11 2HY

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

Insured Property Tree Works	£0.00
Third Party Tree Works	£6750.00
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".

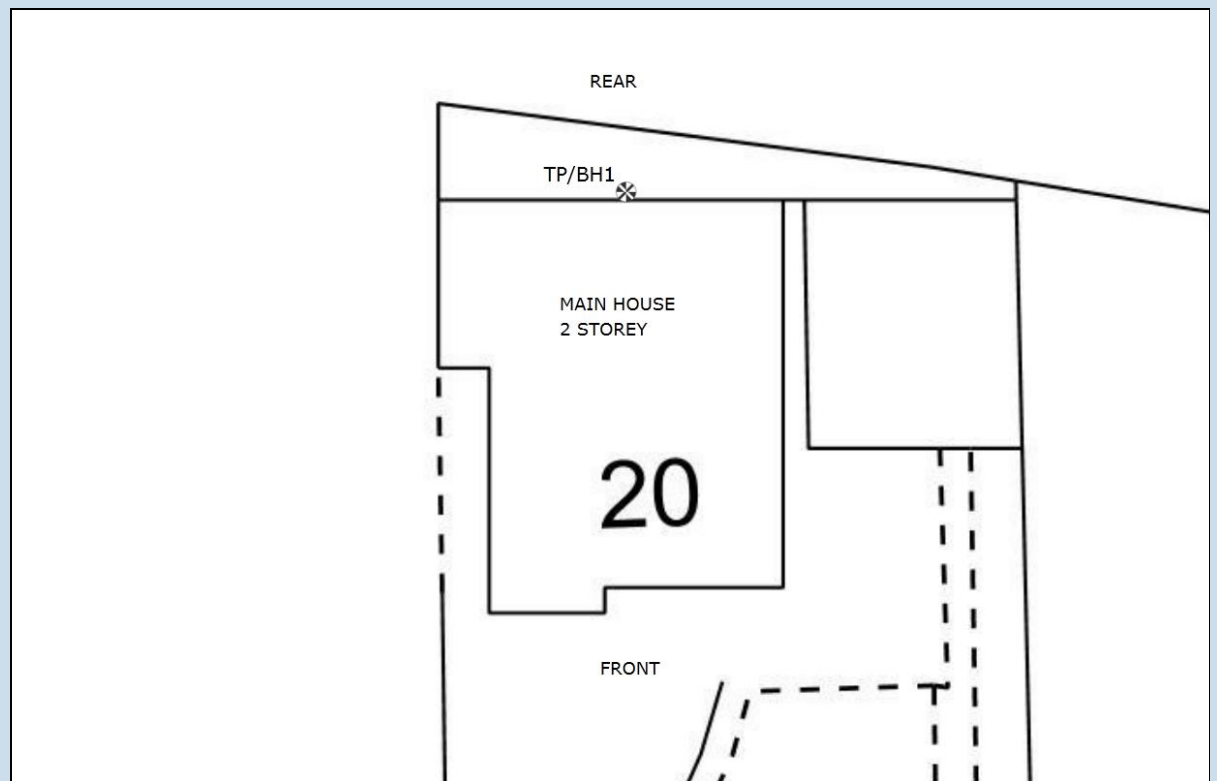
GEOTECHNICAL

for Subsidence Management Services

20 Wellingotn Court, Bradford, BD11 2HY

Client: Subsidence Management Services
Client Contact: Ian Domigan
Client Ref: IFS-AXA-SUB-22-0099767
Policy Holder: Mr Stephen John Edwards
Report Date: 16 March 2022
Our Ref: C63932G28776

Site Plan

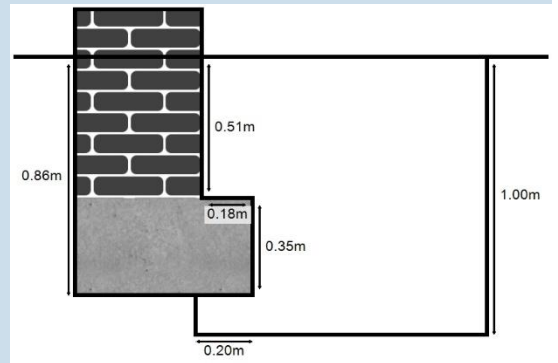


	Borehole		Foul Water Drain		Foul Manhole		Foul Rodding Point		Foul Vent Pipe
	Trial Pit / Borehole		Surface Water Drain		Rain Water Manhole		Surface Rodding Point		Rain Water Gully
	Trial Pit		Combined Drain		Combined Manhole				

TP/BH1 Foundation Detail and Borehole Log

Foundation Detail

House foundation comprised of brick wall to 510mm bgl, bearing on concrete to 860mm bgl, with a total projection of 180mm from the elevation. Underside of foundation (USF) was exposed to 200mm back from the face of the foundation and probed 200mm back from the face of the foundation.



WS	Samples		Tests		Legend	Stratum Description and Observations
	Type	Depth (m)	Type	Depth (m)		
					0	PAVING SLAB. ...at 0.00m to 0.86m bgl numerous roots of live appearance encountered.
					0.5	Firm dark brown silty CLAY with numerous fine to medium sandstone. Firm light orangish brown silty CLAY with numerous fine to medium sandstone.
R	0.86 - 1.90	PEN	0.86	HP=5.0 (5 0,5 0,5 0,5 0,5 0)	1.0	Very stiff light orangish brown mottled grey silty CLAY with numerous fine to medium sandstone. ...at 0.86m to 1.90m bgl numerous roots of live appearance encountered and sampled. ...at 0.86m bgl UNDERSIDE OF HOUSE FOUNDATION. ...at 1.00m bgl switched to Hand Held Percussive Window Sampler. ...at 1.00m bgl base of hand excavated trial pit.
D	1.40 - 1.90	PEN	1.50	HP=5.0 (5 0,5 0,5 0,5 0,5 0)	1.5	
D	1.90 - 2.20	PEN	2.00	HP=5.0 (5 0,5 0,5 0,5 0,5 0)	2.0	...at 1.90m to 2.20m bgl no roots encountered. Extensive inspection of soil samples encountered no roots.
D	2.20 - 2.40				2.0	Hard black COAL. ...at 2.40m bgl borehole terminated due to Hand Held Percussive Window Sampler refusal.
		MP	2.40	Refusal 50 for 10mm		

– End of borehole at 2.40m –
 Trial pit excavated to 1.00m bgl. Borehole completed by mech window sampler. Roots encountered to 1.90m bgl. Groundwater strikes not encountered. PEN = Hand Penetrometer (kg/sq cm).

Site Observations

GENERAL:

Site Investigation works (TP/BH 1) undertaken on 14 March 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) (TP/BH1).

FOUNDATIONS:

At 0.86m bgl UNDERSIDE OF HOUSE FOUNDATION in TP/BH1.

BOREHOLE:

At 1.00m bgl switched to Hand Held Percussive Window Sampler in TP/BH1.

At 1.00m bgl base of hand excavated trial pit in TP/BH1.

At 2.40m bgl borehole terminated due to Hand Held Percussive Window Sampler refusal in TP/BH1. Hand Held Percussive Window Sampler and Mackintosh Probe refusal at 2.40m bgl due to density within the rock (TP/BH 1).

Borehole terminated. No further works undertaken.

ROOTS:

At 0.00m to 0.86m bgl numerous roots of live appearance encountered in TP/BH1.

At 0.86m to 1.90m bgl numerous roots of live appearance encountered and sampled in TP/BH1.

At 1.90m to 2.20m bgl no roots encountered. Extensive inspection of soil samples encountered no roots in TP/BH1.

IN SITU TESTING:

Hand Penetrometer (PEN) undertaken at 0.86m bgl (TP/BH 1) within the hand excavated trial pit and thereafter in the window sampler at maximum 0.50m intervals.

Mackintosh Probe (MP) test undertaken at 2.40m bgl (TP/BH 1) within the window sample borehole only with no further Mackintosh Probe (MP) testing undertaken.

WATER STRIKES:

No water strikes (NWS) encountered (TP/BH 1).

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.

SOIL ANALYSIS

for Subsidence Management Services

20 Wellington Court, Bradford, BD11 2HY

Client: Subsidence Management Services
Claim Number: 12519444D
Policy Holder: Mr Stephen John Edwards
Report Date: 28/03/2022
Our Ref: L22711

Compiled By:

Name	Position	Signature
Saira Dougan	Laboratory Technician	

Checked By:

Name	Position	Signature
Bob Walker	Laboratory Manager	

Date samples received: 18-Mar-22
Water Content Test Date: 22-Mar-22
Atterberg Limits Test Date: 25-Mar-22

Oedometer Test Date: 22-Mar-22



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 2:1990 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.

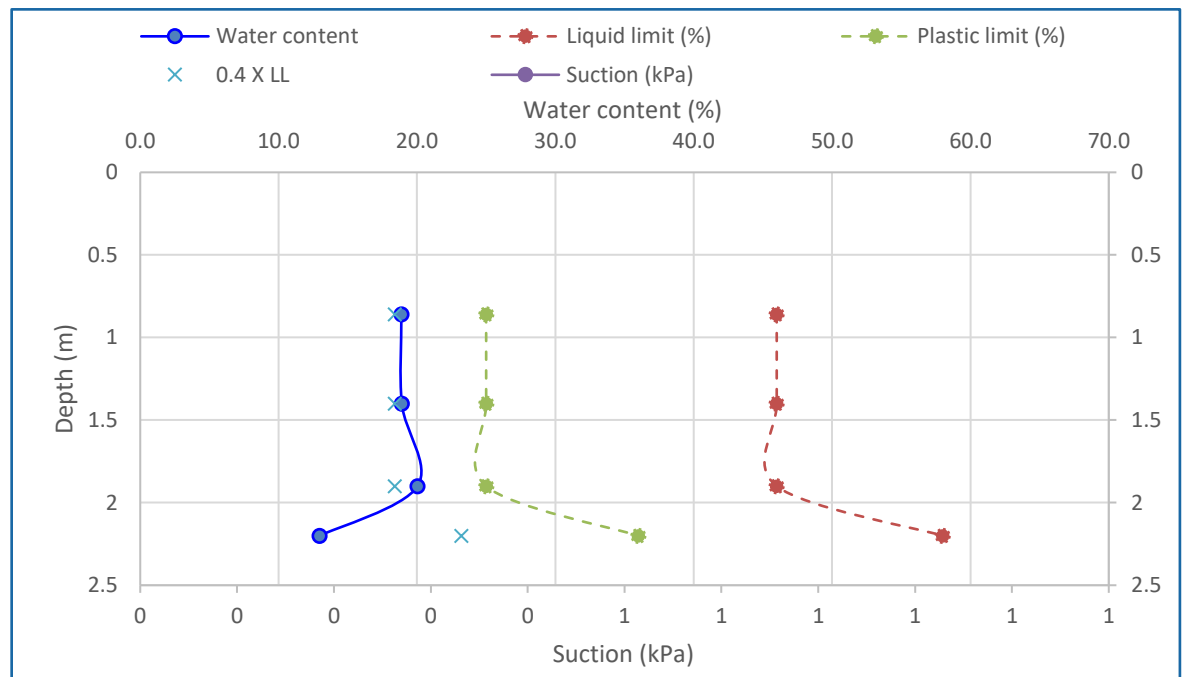
The Plastic Limit test and the determination of the Plasticity Index is undertaken in accordance with BS1377:Part 2:1990. Where a plastic limit has been denoted with an asterisk (*) then it has been derived from the liquid limit and has not been tested.

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.

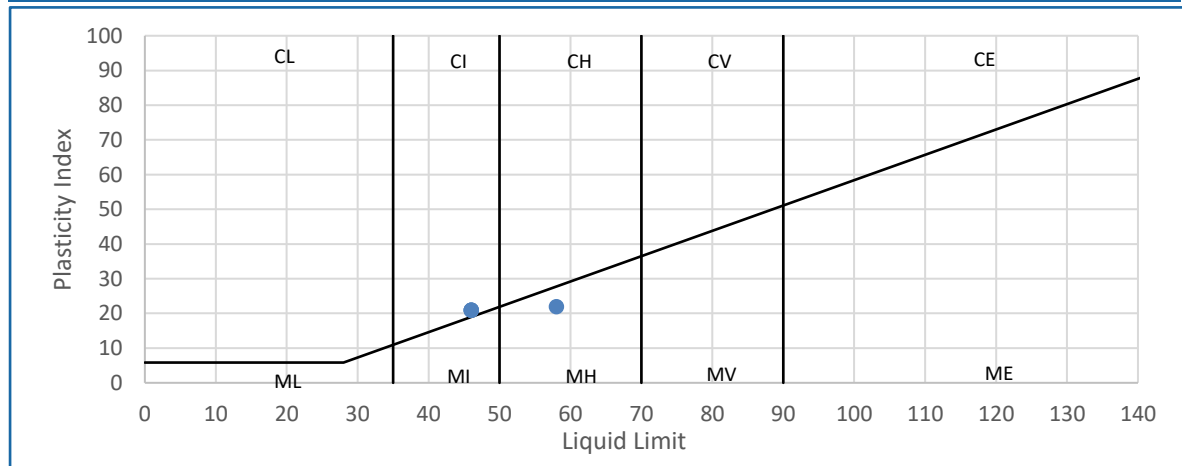
The Oedometer Swell/Strain Test is undertaken in a controlled environment within a temperature range of 16°C and 24°C

Samples from BH1

Lab Ref	Depth (m)	WC (%)	LL (%)	PL (%)	PI (%)	.425 mm(%)	mod. PI (%)	Av. Suc. (kPa)	Description
1	0.86	18.9	46	25	21	83	17		Firm brown/orange-brown/light grey silty CLAY with rare gravel and sand. Gravel is fine and medium.
2	1.4	18.9	46	25	21	83	17		Firm brown/orange-brown/light grey silty CLAY with rare gravel and sand. Gravel is fine and medium.
3	1.9	20.0	46	25	21	83	17		Firm brown/orange-brown/light grey silty CLAY with rare gravel and sand. Gravel is fine and medium.
4	2.2	13.0	58	36	22	43	9		Moist black gravelly COAL DUST. Gravel is fine to medium shale.



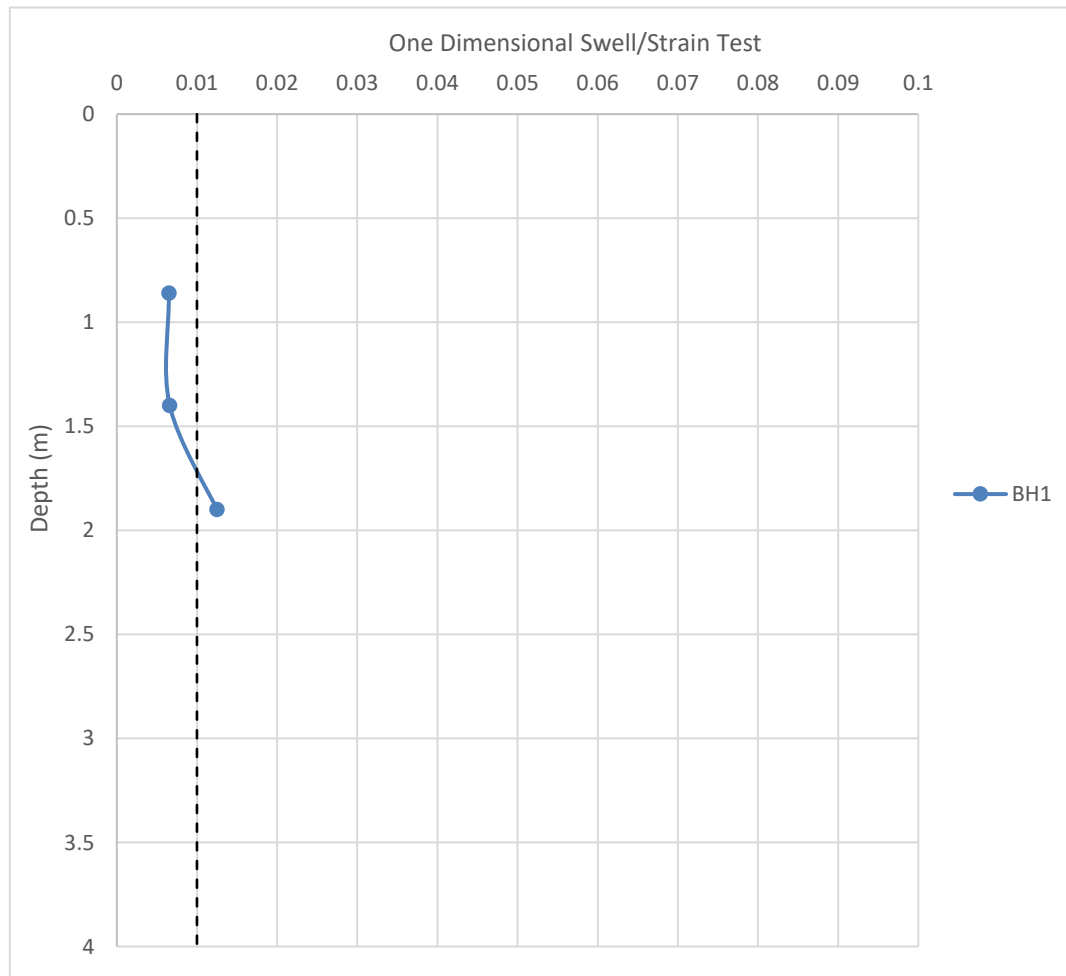
Plasticity Chart for Casagrande Classification



Summary of Oedometer Testing for BH1

Lab Ref	Depth (m)	Strain	Heave (mm)	Remarks
1	0.86	0.0065	0	
2	1.4	0.0066	0	
3	1.9	0.0125	3.1	
4	2.2			

BH 1 estimate of heave	3mm
------------------------	-----



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					

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

20 Wellington Court, Bradford, BD11 2HY

Client: Subsidence Management Services
Client Contact: Ian Domigan
Claim Number: 12519444D
Client Reference: IFS-AXA-SUB-22-0099767
Policy Holder: Mr Stephen John Edwards
Report Date: 31 March 2022
Our Ref: R44556



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

Sub Sample	Species Identified	Root Diameter	Starch
TP/BH1:			
0.86-1.9m	<i>Quercus</i> spp.	1	2 mm Low

Comments:

1 - Plus 4 others also identified as *Quercus* spp.

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

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.

Drainage Investigation Report

For Subsidence Management Services

Client Mr S Edwards

Risk Address: 20 Wellington Court, Bradford, BD11 2HY

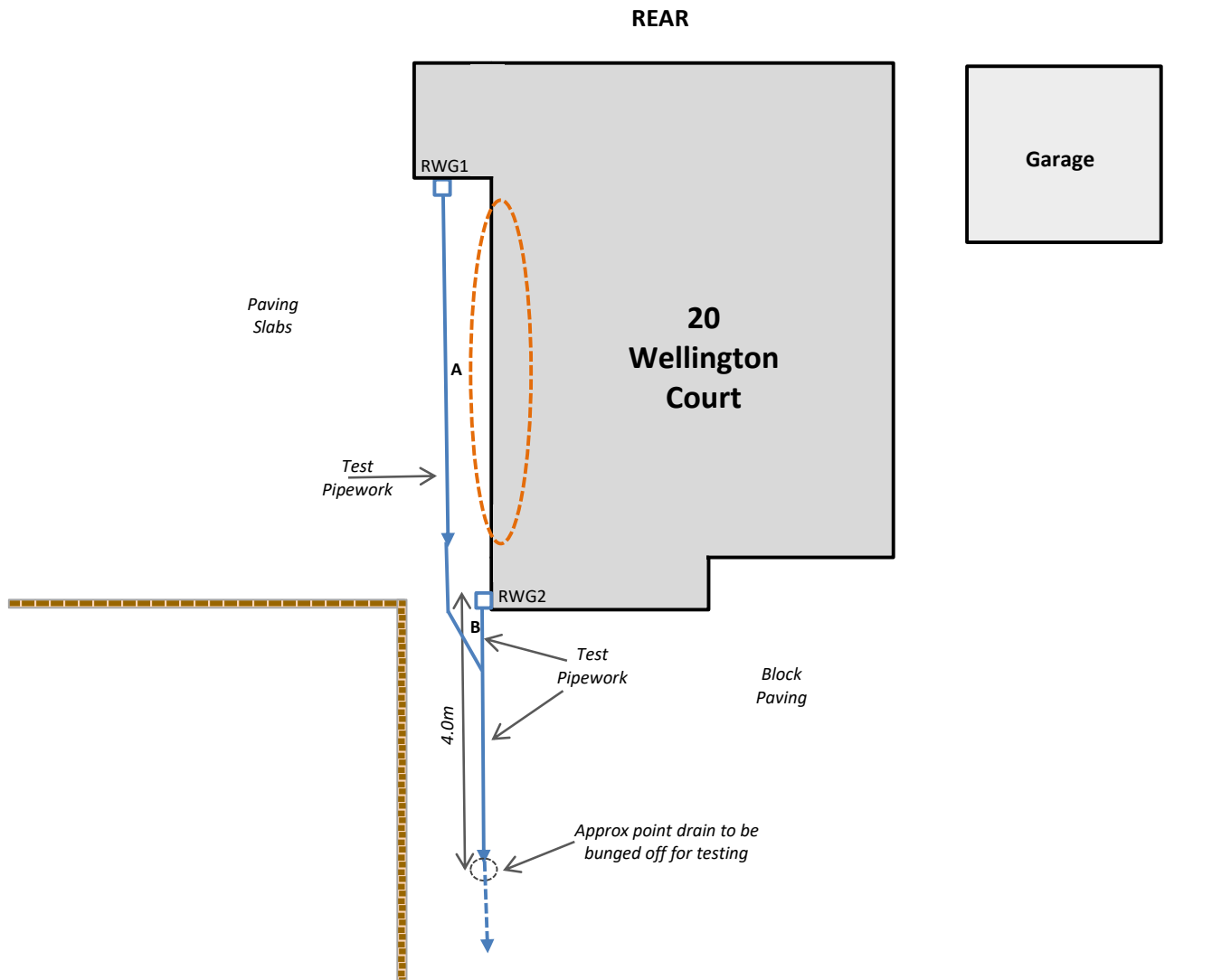
Visit Date: 1st March 2022

Client Reference: IFS-AXA-SUB-22-0099767

Our Reference: C63932 D22212

Report Date: 4th March 2022

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: 20 Wellington Court, Bradford, BD11 2HY

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: RWG1 to Downstream Node Point

Pipe Diameter: 100mm

Responsibility: Home Owner

Hydraulic Pressure Test: Not Tested

CCTV Survey Result: Structural damage

Recommended Repair:

Excavate and replace the junction noted at 6.4m together with a section of pipework downstream

Carry out tests of the pipework from excavation. Upstream to RWG1 and Upstream to RWG2

Bung off the pipework at suitable point downstream and test the pipework within the area of concern

Report on any works required to carry out repairs if the pipework fails testing

Drain Run B: RWG2 Downstream to Run A

Pipe Diameter: 100mm

Responsibility: Home Owner

Hydraulic Pressure Test: Not Tested

CCTV Survey Result: No structural damage noted

Recommended Repair:

See Run A

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.

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

Address:

20 Wellington Court, Bradford, BD11 2HY

RUN / LOCATION: Run A

Repair Item	Description	Unit	Rate (£)	Quantity	Amount (£)
UK0660	Excavate & remove junction. Replace with new 110mm PVCu. Bed, surround & backfill. n.e. 1000mm deep	nr	£142.50	1.00	£142.50
UK0825	Excavate & remove pipework. Replace with new 110mm PVCu. Bed, surround & backfill. n.e. 1000mm deep	m	£81.39	1.00	£81.39
UK1060	Extra over pipework for surrounding drain run in 100mm thick concrete.	m	£14.40	1.00	£14.40
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	1.00	£35.35
UK2050005	Disposal by hand excavated contaminated/saturated material off site.	m3	£45.30	1.00	£45.30
UK1040	Removal, set aside and reinstatement of block paving n.e 100mm thick.	m2	£39.10	1.00	£39.10
Total (Excl VAT)					£361.64

REPAIR ESTIMATE TOTALS:

Run / Location	Amount (£)
Run A	£361.64
Total (Excl VAT)	£361.64

Address:

20 Wellington Court, Bradford, BD11 2HY