Arboricultural Consultancy for Lloyds Bank

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 Charles Southern	Address	3 Woodlands Avenue, Shrewsbury, SY5 8NG		
Client	Subsidence Management Services	Contact	Kyza Derby	Claim No.	IFS-LBG-SUB-20-0085780
ES Ref	SA-246106	Consultant	Giles Mercer	Contact No.	0330 380 1036
Report Date	05/08/2020				

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 bungalow. The property occupies a level site with no adverse topographical features.

Damage relates to the right-hand flank of the detached garage. Please refer to the engineers report for a full description of the claim history and damage.

3. Technical Reports

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

Soil Analysis	☑	Drain Report	☑	Foundation Detail	☑
Root Analysis	☑	Borehole Log	☑	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?	Yes

Treeworks	
Local Authority	Shropshire County Council
TPO / Conservation Area / Planning Protection Searches	Insured: TPO Adjacent & Adjoining properties: TPO
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 on our understanding, at the time of visiting the property, that engineers 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 manifest have been established by site investigations, whilst roots have been recovered below the property (BH2).

Samples of these roots were recovered from underside of foundations and throughout the borehole, these roots were identified (using anatomical analysis) as having emanated from the genus Tilia spp. (Lime).

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, 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 Limes (T1 & T2), given its position relative to the damage it is our opinion that the roots identified will emanate from this vegetation and accordingly we have identified it as the principal cause of the subsidence damage.

The size and proximity of the above vegetation is consistent with the location of damage and advised mechanism of movement; accordingly, we have identified their collective / cohesive influence as the primary cause of the subsidence damage.

Considering engineers conclusions and 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 management as listed by this report.

Please refer to Section 6 for management prescriptions.

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

Consequently, complete removal of T1 & T2 will offer the most certain arboricultural solution likely to restore long-term stability.

Note: Electricity board replaced wall approx 1 year ago and also dug alongside policyholders foundation; roots from T1 were identified all the way to rear.

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.

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.

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
T1	Lime	3	19	7.9	D - Unknown	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.
T2	Lime	3	16.1	4.45	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.
Age Cat: 1 = Younger than property; 2 = Similar age to the property; 3 = Significantly older than property							

* Estimated

6.2 Future Risk Recommendations

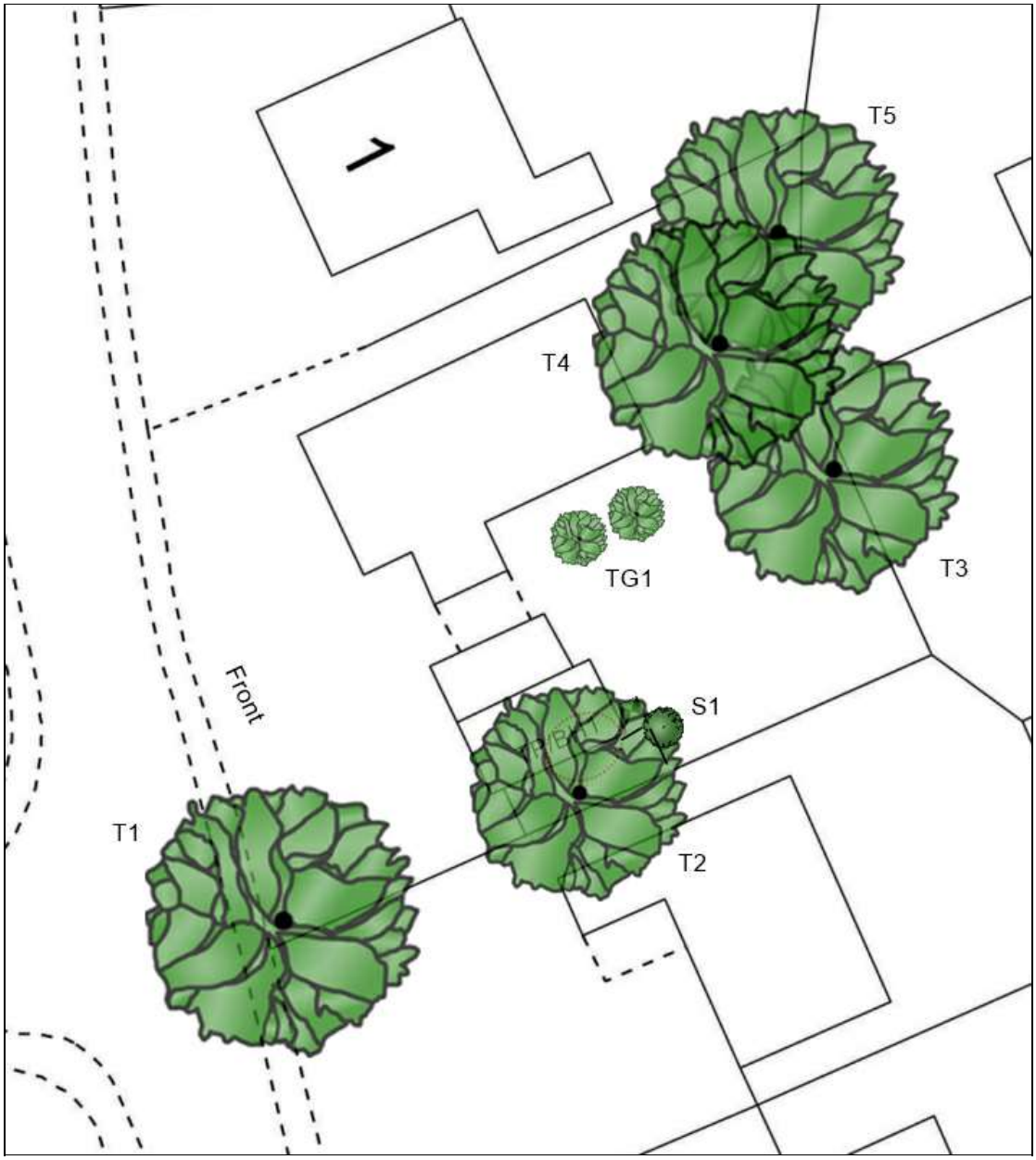
These recommendations may be subject to review following additional site investigations.

Tree No.	Species	Age Cat	Approx. Height (m)	Distance to Building (m) *	Ownership	Action	Requirement
S1	Shrub	1	1	1.4	C - Insured	Action to avoid future risk	Maintain at current dimensions by way of regular pruning.
T3	Lime	3	20	6.8	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.
T4	Lime	3	18	3.	C - Insured	Action to avoid future risk	Crown reduce overall canopy by 30% (minimum) to achieve a crown volume reduction in line with BRE IP 7/06. Maintain at reduced dimensions by re-pruning back to points of previous reduction on a strict 2-3 year cycle.
T5	Lime	3	18	8.3	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.
TG1	Cypress	1	1.7	3.9	C - Insured	Action to avoid future risk	Subject to regular management; maintain at 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

8. Photographs

S1 - Shrub

T1 - Lime

General Site

General Site

Arboricultural Consultancy for Lloyds Bank

General Site

T2 - Lime

General Site

TG1 - Cypress

Arboricultural Consultancy for Lloyds Bank

T3 - Lime

T4 - Lime

T5 - Lime

Rear

Arboricultural Consultancy for Lloyds Bank

Front

Date: 05/08/2020 Property: 3 Woodlands Avenue, Shrewsbury, SY5 8NG

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

Insured Property Tree Works	£3850.00
Third Party Tree Works	£3000.00
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.

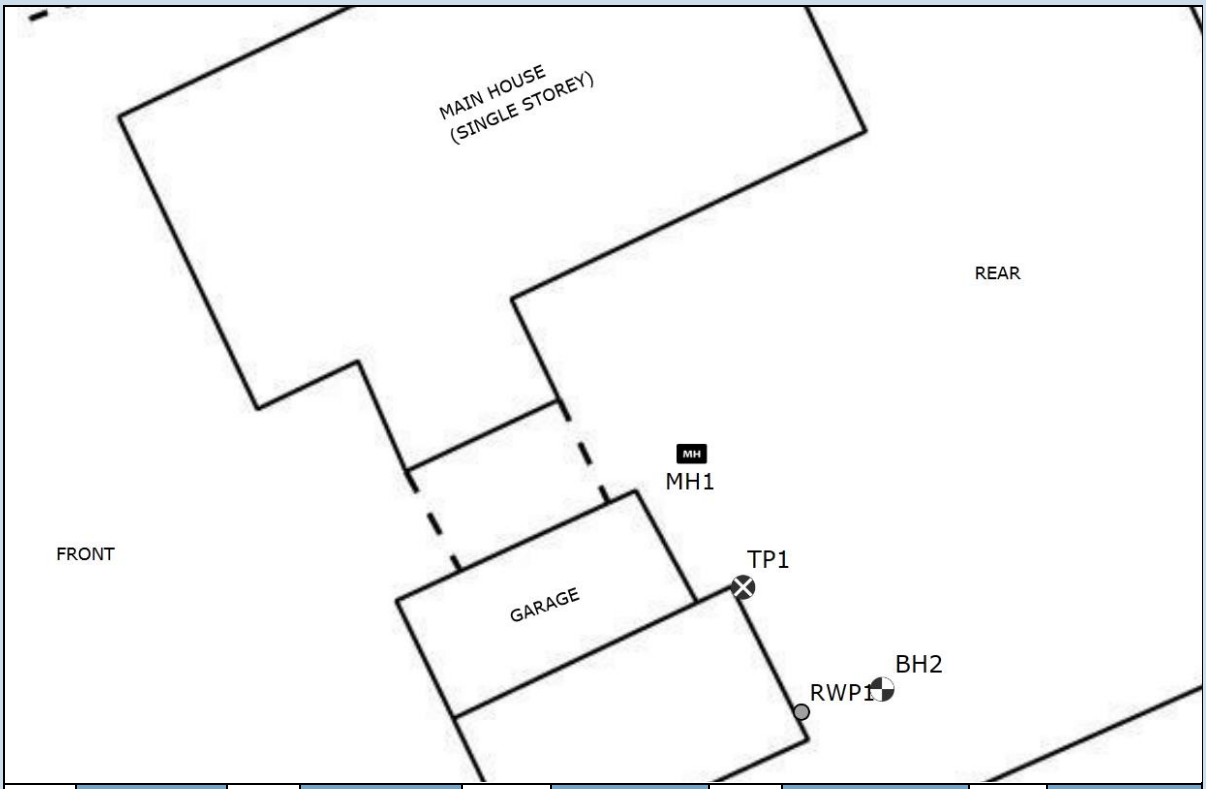
A legal Duty of Care requires that all works specified in this report should be performed by qualified, arboricultural contractors who have been competency tested to determine their suitability for such works in line with Health & Safety Executive Guidelines. Additionally all works should be carried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

GEOTECHNICAL
for Subsidence Management Services

3 Woodlands Avenue, Shrewsbury, SY5 8NG

Client:	Subsidence Management Services
Client Contact:	Ian Domigan
Client Ref:	IFS-LBG-SUB-20-0085780
Policy Holder:	Mrs Julie Griffiths
Report Date:	30 July 2020
Our Ref:	C54666G24308

Site Plan

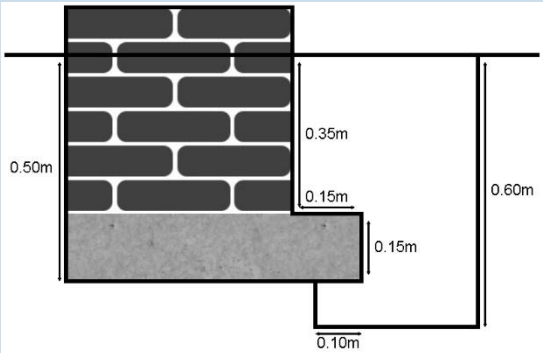


◓	Borehole	▶	Foul Water Drain	FMH	Foul Manhole	○	Foul Rodding Point	●	Foul Vent Pipe
⊗	Trial Pit / Borehole	▶	Surface Water Drain	RMH	Rain Water Manhole	○	Surface Rodding Point	●	Rain Water Gully
⊗	Trial Pit	▶	Combined Drain	MH	Combined Manhole				

TP1 Foundation Detail and Borehole Log

Foundation Detail

Garage foundation comprised of brick wall to 350mm bgl, bearing on stepped concrete to 500mm bgl with a total projection of 150mm from the elevation. Underside of foundation (USF) was exposed to 100mm back from the face of the foundation and probed 450mm 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	BLOCK PAVING. 0
							SHARP SAND/ GRIT SAND.
							SUB-BASE resembling MOT/DTp Type 1.
							..at 0.10m to 0.60m bgl occasional roots of live appearance encountered.
							MADE GROUND: brown mottled grey gravelly CLAY with occasional fine to medium brick. Gravel is fine to medium.
						0.5	Stiff brown mottled grey gravelly CLAY. Gravel is fine to medium.
							..at 0.50m bgl UNDERSIDE OF GARAGE FOUNDATION. 0.5
							..at 0.60m bgl base of hand excavated trial pit.

-- End of borehole at 0.60m --
Trial pit excavated to 0.60m bgl. Trial pit completed by hand excavation. Trial pit completed by hand excavation. Roots encountered to 0.60m bgl. Groundwater strikes not encountered.

BH2 Borehole Log

WS	Samples Type	Samples Depth (m)	Tests Type	Tests Depth (m)	Tests Results	Legend	Stratum Description and Observations
						0	GRASS over TOPSOIL. 0
							MADE GROUND: brown mottled grey gravelly CLAY with occasional fine to medium brick. Gravel is fine to medium.
							..at 0.10m to 0.50m bgl numerous roots of live appearance encountered.
							..at 0.10m to 1.00m bgl soils described as being dry.
							Hard brown mottled grey gravelly CLAY. Gravel is fine to medium.
							..at 0.40m bgl becoming friable.
D	0.50 - 1.00	PEN	0.50	HP=5.0 (5.0,5.0,5.0,5.0,5.0)	0.5	..at 0.50m bgl switched to Hand Held Percussive Window Sampler. 0.5
R	0.50 - 1.00					..at 0.50m to 1.00m bgl numerous roots of live appearance encountered and sampled.
							..at 0.60m bgl base of hand excavated trial pit.
						1.0	..at 1.00m bgl unable to retrieve further sample due to boulders preventing sample recovery.
							..at 1.00m bgl borehole terminated due to Hand Held Percussive Window Sampler refusal. 1.0

-- End of borehole at 1.00m --
Borehole completed by hand held percussive window sampler. Roots encountered to 1.00m bgl. Groundwater strikes not encountered. PEN = Hand Penetrometer (kg/sq cm).

Site Observations

GENERAL:
Site Investigation works (TP 1 & BH2) undertaken on 17 July 2020 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) (TP1).
Negative signal obtained in Power, Radio and Genny mode on the Cable Avoidance Tool (CAT) (BH2).

FOUNDATIONS:
At 0.50m bgl UNDERSIDE OF GARAGE FOUNDATION in TP1.

BOREHOLE:
At 1.00m bgl unable to retrieve further sample due to cobbles preventing sample recovery in BH2.

ROOTS:
At 0.10m to 0.60m bgl occasional roots of live appearance encountered in TP1.
At 0.10m to 0.50m bgl numerous roots of live appearance encountered in BH2.
At 0.50m to 1.00m bgl numerous roots of live appearance encountered and sampled in BH2.

IN SITU TESTING:
Hand Penetrometer (PEN) undertaken at 0.50m bgl (BH 2) within the window sampler at maximum 0.50m intervals.

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

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

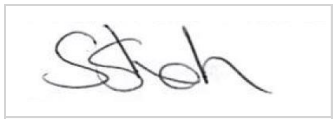
SOIL ANALYSIS

for Subsidence Management Services

3 Woodlands Avenue, Shrewsbury, SY5 8NG

Client:	Subsidence Management Services
Client Contact:	Ian Domigan
Claim Number:	102262422
Policy Holder:	Mrs Julie Griffiths
Report Date:	4 August 2020
Our Ref:	C18126S54666
Laboratory Ref:	L19006

Compiled By:

Name	Position	Signature
Saira Dougan	Laboratory Technician	

Checked By:

Name	Position	Signature
Bob Walker	Laboratory Manager	

Date samples received:	23-Jul-20
Water Content Test Date:	03-Aug-20
Atterberg Limits Test Date:	03-Aug-20

UKAS TESTING
9265

SubsNetUK

Notes relating to soils testing

Unless otherwise stated, all soils testing was undertaken at Environmental Services' soils laboratory at unit 10H Maybrook Business Park, B76 1AL for Subsidence Management Services of Gateway House, Penman Way, Leicester LE19 1SY

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.

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

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

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

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

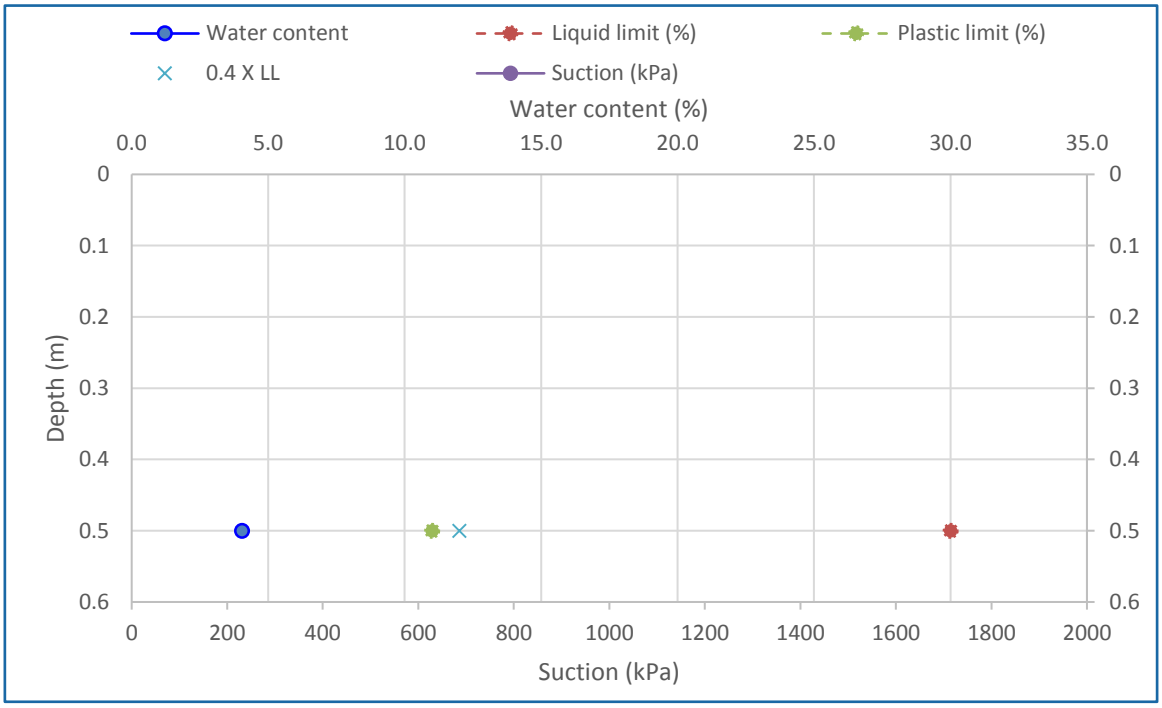
Water Content Tests are undertaken in accordance with ISO 17892:Part 1:2014

The Liquid Limit test is undertaken in accordance with BS1377:Part 2:1990 Section 4.4 using an 80g cone with a 30° tip. Sieve percentages reported in blue denote that the sample has been sieved otherwise it has been prepared from its natural state.
Unless otherwise specified herein, the four-point cone penetrometer method has been used with increasing water content

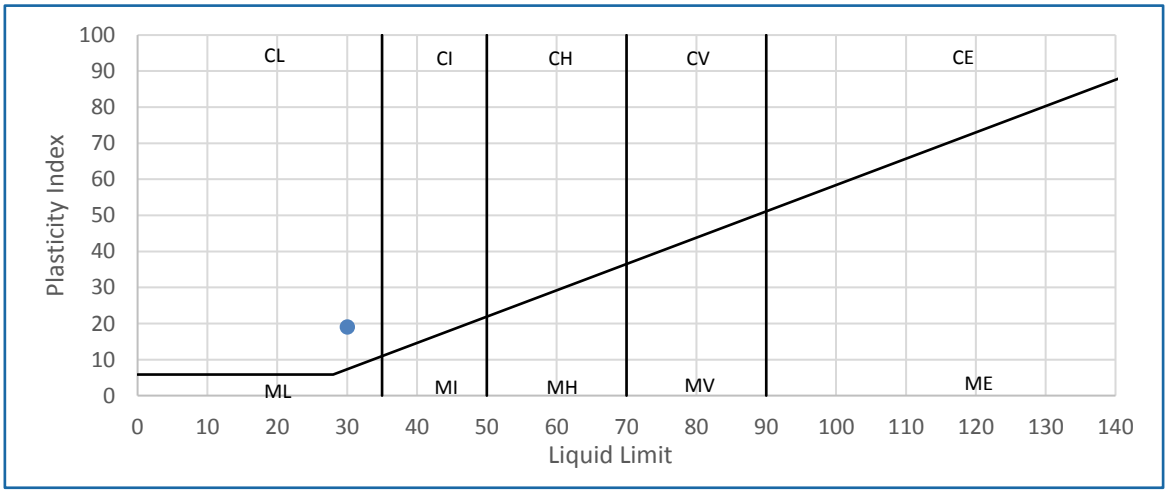
The Plastic Limit test and the determination of the Plasticity Index is undertaken in accordance with BS1377:Part 2:1990. Where a plastic limit has been denoted with an asterisk (*) then it has been derived from the liquid limit and has not been tested.

Samples from BH2

Lab Ref	Depth (m)	MC (%)	LL (%)	PL (%)	PI (%)	.425 mm(%)	mod. PI (%)	Av. Suc. (kPa)	Description
1	0.5	4.0	30	11	19	43	8		Dry brown very gravelly silty CLAY. Gravel is fine, medium and coarse.



Plasticity Chart for Casagrande Classification



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					

	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

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

3 Woodlands Avenue, Shrewsbury, SY5 8NG

Client:	Subsidence Management Services
Client Contact:	Ian Domigan
Claim Number:	102262422
Client Reference:	IFS-LBG-SUB-20-0085780
Policy Holder:	Mrs Julie Griffiths
Report Date:	3 August 2020
Our Ref:	R36043

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

Sub Sample	Species Identified		Root Diameter	Starch
BH2:				
0.5-1m	*Tilia* spp.	1	1 mm	Moderate

Comments:

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

Tilia spp. are limes.

Signed: R J 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

Drainage Investigation Report

For Subsidence Management Services

Client Mrs J Griffiths

Risk Address: 3 Woodlands Avenue, Shrewsbury, SY5 8NG

Visit Date: 17th July 2020

Client Reference: IFS-LBG-SUB-20-0085780

Our Reference: C54666 D17855 REV1

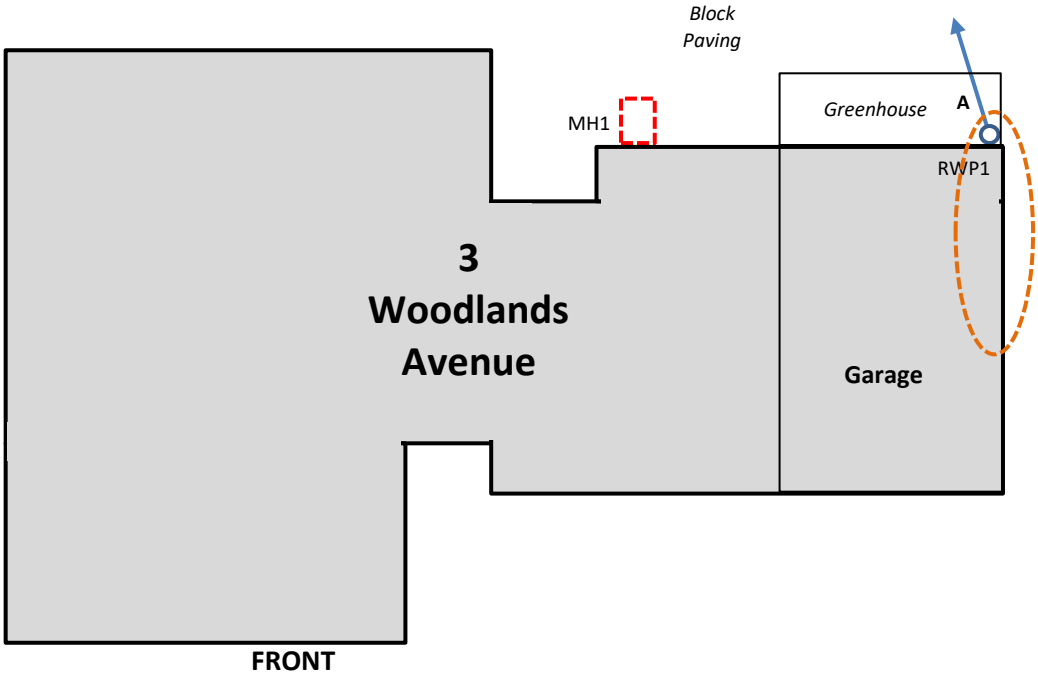
Report Date: 05/11/2020

Report Content:

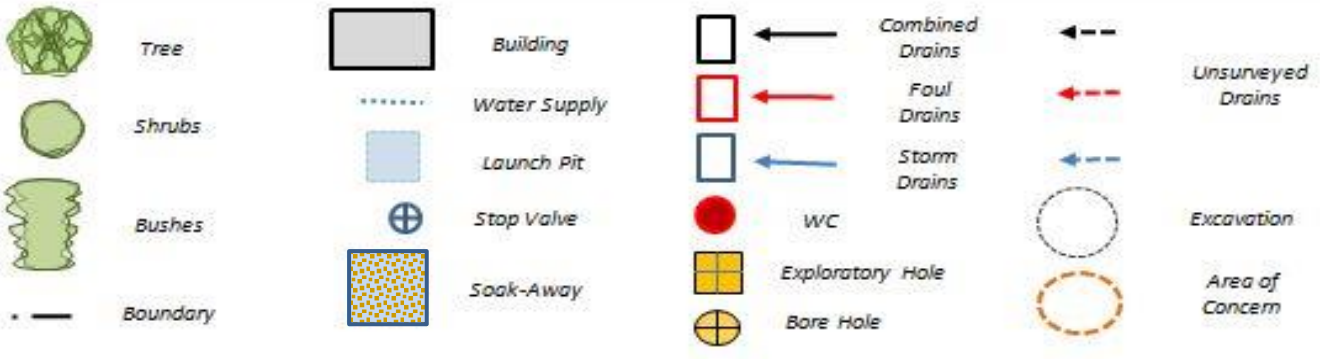
SubsNetUK

Site Plan

SubsNetUK



Key



Notes:	

Address: 3 Woodlands Avenue, Shrewsbury, SY5 8NG

CCTV Survey

RUN	Start From :	RWP1	Finish at :	Downstream node	Pipe Ø:	100mm
A	Invert Level (m):	N/a	Invert Level (m):	N/a	Material:	Clay
STORM	Condition grade:	B	Direction:	Downstream	Responsibility:	Home Owner

Distance	*Code*	*Hydraulic Test - Not Tested*
0.00	SN	Start Node from RWP1
0.00	WL	Water Level 0%
0.10	JDL	Joint Displaced (Large)
0.10	SA	Survey Abandoned - Unable to push past defects

Address: 3 Woodlands Avenue, Shrewsbury, SY5 8NG

Drainage Overview

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: RWP1 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 rest bend at the base of RWP1 together with a section of pipework.
Survey from excavation and report on findings.
Nb - Our excavation will be inside the greenhouse. We may need to remove the greenhouse to allow our works to be carried out. The policyholder has advised it is easily moved.

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**	

NOTES
We attempted to survey Run A with specialist gully camera but found there were issues with the camera and could not get accurate readings.

We were unable to remove the cover on MH1 to check if any drainage runs into the area of concern. It is thought the main drain from MH1 runs away from the property but it is unknown if there are any branch lines coming into it.

MH1 Recommendations
Break out the cover and frame on MH1 and replace
Survey any and all pipework, within the area of concern, and report on findings

Address: 3 Woodlands Avenue, Shrewsbury, SY5 8NG

SubsNetUK

Quote

SubsNetUK

RUN / LOCATION: Run A

Repair Item	Description	Unit	Rate (£)	Quantity	Amount (£)
UK0650	Rest-bend. Remove existing and replace with new PVCu item. Bed, surround and backfill.	nr	£96.02	1.00	£96.02
UK1120155	32/40mm waste pipes. Remove existing and replace with new PVCu. Fixed to masonry.	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 110mm PVCu. Bed, surround & backfill. n.e. 1000mm	nr	£131.47	1.00	£131.47
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	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)	£426.23

RUN / LOCATION: MH1

Repair Item	Description	Unit	Rate (£)	Quantity	Amount (£)
UK1090	Replace existing manhole cover and frame with new 600 x 600mm item	nr	£73.64	1.00	£73.64
UK1040	Removal, set aside and reinstatement of block paving n.e 100mm thick.	m2	£39.10	1.00	£39.10
				Total (Excl VAT)	£112.74

Address: 3 Woodlands Avenue, Shrewsbury, SY5 8NG

SubsNetUK **Further Report - 4th Nov 20** SubsNetUK

Following your instruction we attended site on 2nd October 2020 to carry out the authorised works.

Run A
Works completed to Spec
A survey from our excavation found no further issues with the pipework.

LEVEL MONITORING

for Subsidence Management Services

3 Woodlands Avenue, Shrewsbury, SY5 8NG

Client:	Subsidence Management Services
Client Contact:	Ian Domigan
Claim Number:	102262422
Client Reference:	IFS-LBG-SUB-20-0085780
Policy Holder:	Mrs Julie Griffiths
Report Date:	16 March 2022
Our Ref:	M16097

SubsNetUK

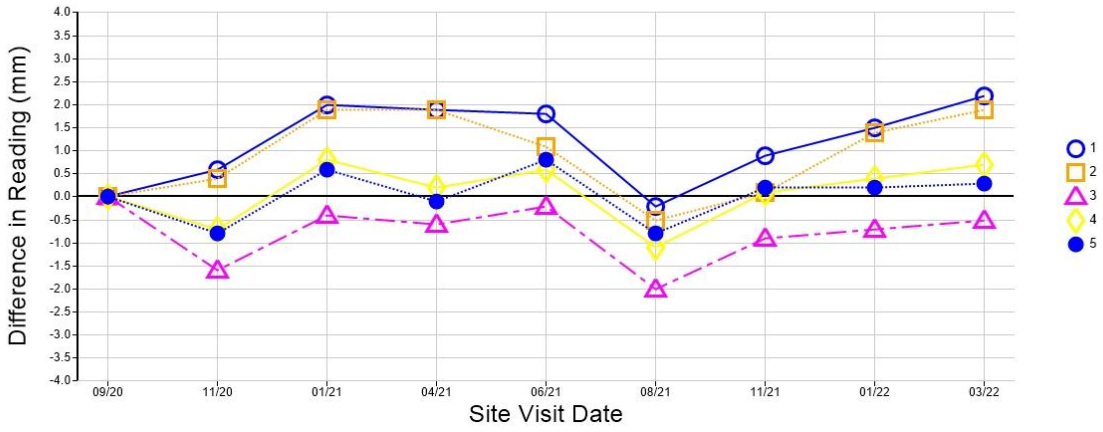
Level Monitoring Readings

The following table shows the reading levels of the various Level Monitoring Station points.

Date	1	2	3	4	5					
15/09/2020	10.1693	10.1889	10.2417	10.2464	10.2189					
20/11/2020	10.1699	10.1893	10.2401	10.2457	10.2181					
24/01/2021	10.1713	10.1908	10.2413	10.2472	10.2195					
16/04/2021	10.1712	10.1908	10.2411	10.2466	10.2188					
18/06/2021	10.1711	10.1900	10.2415	10.2470	10.2197					
28/08/2021	10.1691	10.1884	10.2397	10.2453	10.2181					
09/11/2021	10.1702	10.1890	10.2408	10.2465	10.2191					
17/01/2022	10.1708	10.1903	10.2410	10.2468	10.2191					
15/03/2022	10.1715	10.1908	10.2412	10.2471	10.2192					

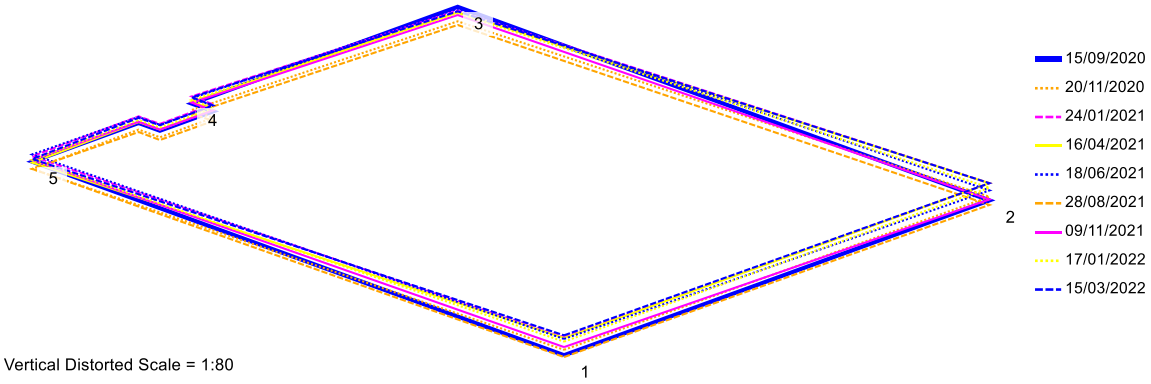
Level Monitoring Difference Graphs

The following graphs display the progressive movement that each Level Monitoring Station recorded at each separate site visit date to give an overall look at how much the property is moving.

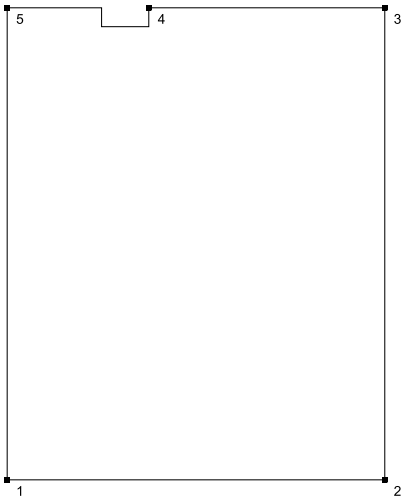


Level Monitoring Displacement Map

The following image shows an isometric representation of the movement of the property, based on the Level Monitoring Stations that were installed.



Vertical Distorted Scale = 1:80



FRONT

Site Visit Notes

Datum is relative to a manhole in the road. It has an assumed value of 10.0000m. If this is not suitable, a deep datum is recommended.

Site Visit: 15 September 2020

Point 5 added as an extra station.

Site Visit: 20 November 2020

Slight movement noted - tree to rear RHS.

Site Visit: 24 January 2021

Movement noted. Trees to front and rear RHS