# 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 | | Address | 20 Southwood Road, Trowbridge, BA14 7BZ | | |
| Client | Subsidence Management Services | Contact | Ben John | Claim No. | IFS-LBG-SUB-21-0096976 |
| ES Ref | SA-249109 | Consultant | Andrew Gardner | Contact No. | 0330 380 1036 |
| Report Date | 23/11/2021 | | | | |

**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 have been advised that the current damage is indicative of downward movement and rotational movement to the right hand side of the house, relative to the remainder of the building.

## 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 | ☑ | | |

## 4. Action Plan

| Mitigation | |
|---|---|
| Insured involved? | Yes |
| Local Authority involved? | Yes |
| Other third party Mitigation involved? | Yes |
| **Recovery** | |
| Is there a potential recovery action? | Yes |

| Treeworks | |
|---|---|
| Local Authority | West Wiltshire District Council |
| TPO / Conservation Area / Planning Protection Searches | Awaiting Searches from LA |
| **Additional Comments** | |
| Awaiting Further Instructions.<br><br>A potential recovery action has been identified.<br><br>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 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.

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.

Foundations are noted to extend to a depth of 500mm 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 MEDIUM plasticity, i.e. capable of moderate 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.

We note that drain investigations found damage in the immediate vicinity of the area of damage.

However, moisture depletion has also been demonstrated by way of Atterberg testing; moisture depletion at the depths identified is beyond the maximum depth of ambient soil drying and commensurate with root activity.

Atterberg / Suction 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.

Roots have been recovered below the property (TP/BH1); 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 Quercus spp.

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

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 Oak (T2), given its position relative to the damage it is our opinion that the roots identified in TP/BH1 will emanate from this tree 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.

Sample trial pits are generally small in size and the recovery of roots from such a small excavation leads us to conclude that these will not be isolated examples; there is significant potential for further root proliferation below the insured structure.

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/or close for pruning to be viable.

Consequently, complete removal of T2 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 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 |
|---|---|---|---|---|---|---|---|
| T2 | Oak | 3 | 18.5 | 8.2 | A - Third Party | Remove | Remove close to ground level; do not treat stump due to translocation risk. Where such a risk exists, we advise that any emergent regrowth is removed annually. |
| **Age Cat:** 1 = Younger than property; 2 = Similar age to the property; 3 = Significantly older than property | | | | | | | |

* Estimated

## 6.2 Future Risk Recommendations

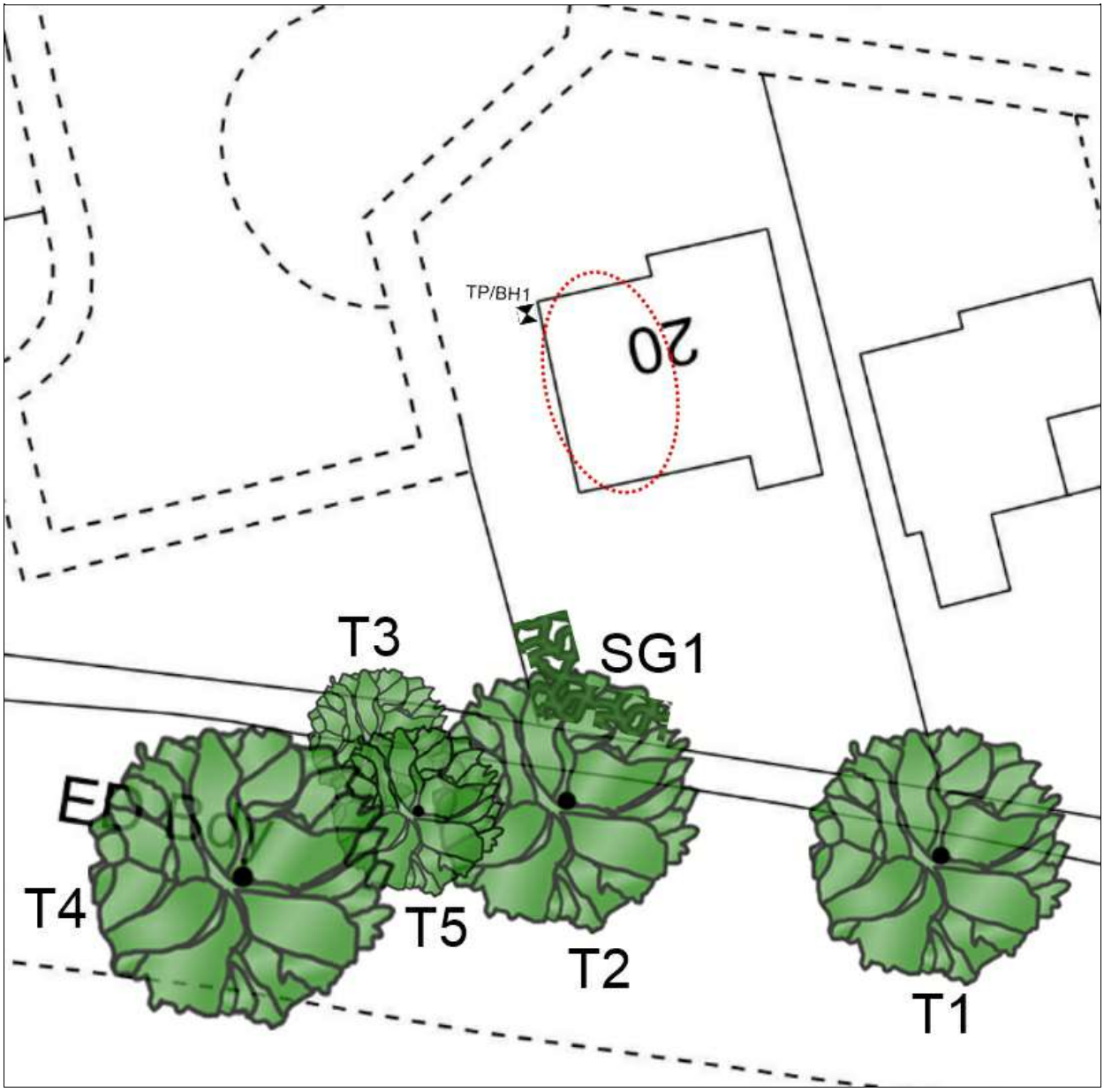
These recommendations may be subject to review following additional site investigations.

| Tree No. | Species | Age Cat | Approx. Height (m) | Distance to Building (m) * | Ownership | Action | Requirement |
|---|---|---|---|---|---|---|---|
| SG1 | Mixed species shrubs: including weigela, laurel, rose and eleagnus. | 1 | 2 | 3.2 | C - Insured | Action to avoid future risk | Maintain at broadly current dimensions by way of regular pruning. |
| T1 | Oak | 3 | 18 | 13 | A - Third Party | Action to avoid future risk | Crown reduce overall canopy by 30% (minimum) to achieve a crown volume reduction in line with BRE IP7/06. Maintain at reduced dimensions by re-pruning back to points of previous reduction on a 3 year cycle. |
| T3 | Ash | 1 | 9 | 11 | B - Local Authority | Action to avoid future risk | Maintain at broadly current dimensions by way of regular pruning. |
| T4 | Oak | 3 | 23 | 21 | A - Third Party | Action to avoid future risk | Crown reduce overall canopy by 30% (minimum) to achieve a crown volume reduction in line with BRE IP7/06. Maintain at reduced dimensions by re-pruning back to points of previous reduction on a 3 year cycle. |
| T5 | Oak | 3 | 10 | 13 | A - Third Party | Action to avoid future risk | Maintain at broadly current dimensions by way of regular pruning. |
| **Age Cat:** 1 = Younger than property; 2 = Similar age to the property; 3 = Significantly older than property | | | | | | | |

* Estimated

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

## 7. Site Plan




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

## 8. Photographs



SG1 - Mixed species shrubs



T1 - Oak



T2 - Oak



T3 - Ash



T5 - Oak



T4 - Oak

Date: 23/11/2021 Property: 20 Southwood Road, Trowbridge, BA14 7BZ

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

| | |
|---|---|
| Insured Property Tree Works | £0.00 |
| Third Party Tree Works | [redacted] |
| 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.

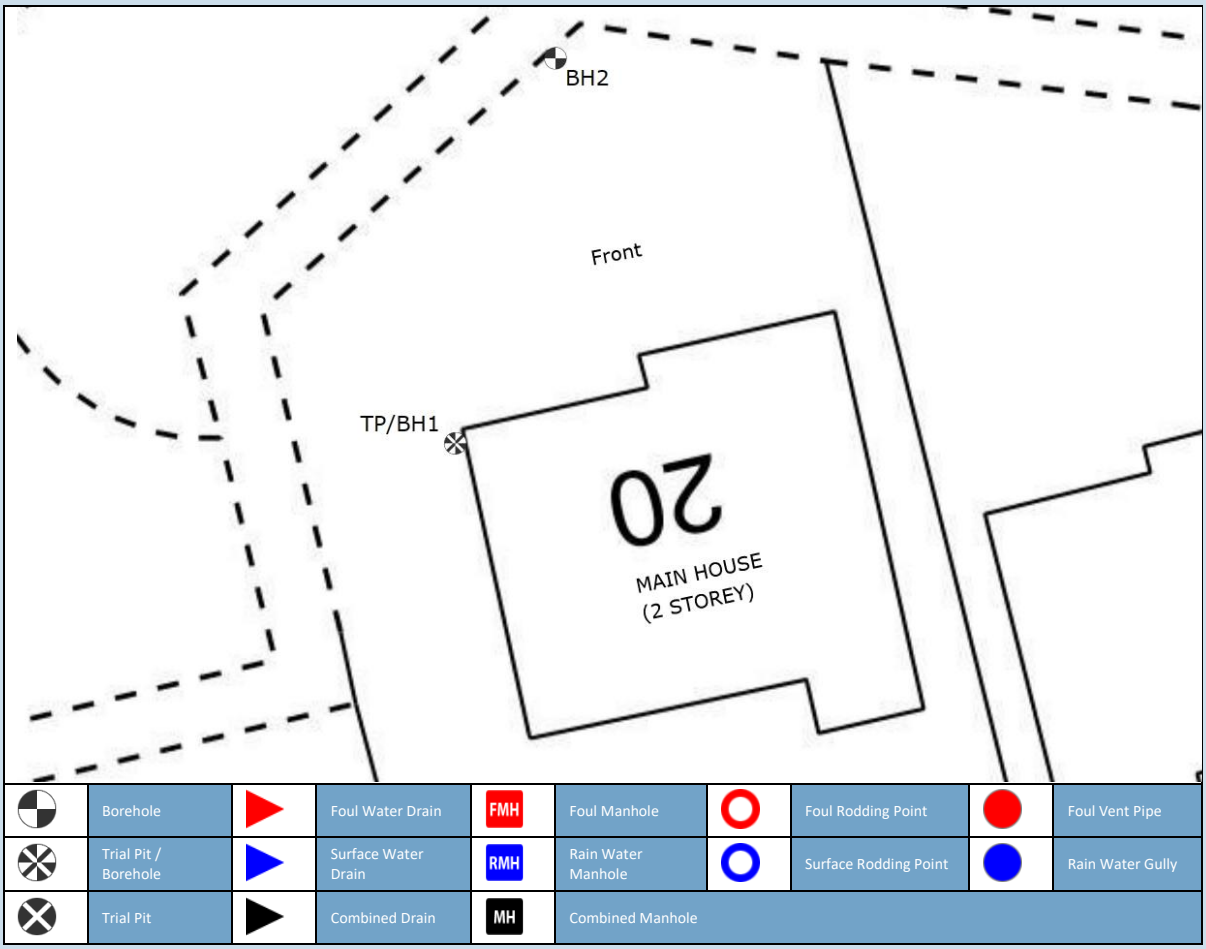
**A legal Duty of Care requires that all works specified in this report should be performed by qualified, arboricultural contractors who have been competency tested to determine their suitability for such works in line with Health & Safety Executive Guidelines. Additionally all works should be carried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

# GEOTECHNICAL
## for Subsidence Management Services

**20 Southwood Road, , Trowbridge, BA14 7BZ**

| | |
|---|---|
| Client: | Subsidence Management Services |
| Client Contact: | Ben John |
| Client Ref: | IFS-LBG-SUB-21-0096976 |
| Policy Holder: | Mr and Mrs Richard and Therese Hughes |
| Report Date: | 21 October 2021 |
| Our Ref: | C62809G28262 |

## Site Plan

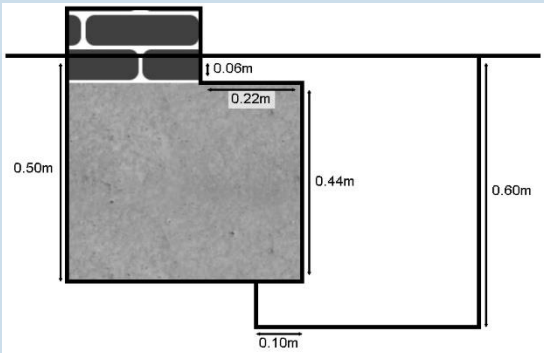



SubsNetUK
Classification: General

# TP/BH1 Foundation Detail and Borehole Log

## Foundation Detail

House foundation comprised of brick wall to 60mm bgl, bearing on concrete to 500mm bgl, with a total projection of 220mm from the elevation. Underside of foundation (USF) was exposed to 100mm back from the face of the foundation and probed 400mm 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. |
| | R | 0.10 - 0.50 | | | | | ...at 2.5m bgl borehole terminated due to Hand Auger refusal. |
| | | | | | | | ...at 0.1m to 1.4m bgl occasional roots of live appearance encountered and sampled. |
| | | | | | | | SHARP SAND/ GRIT SAND. |
| | R | 0.50 - 1.40 | | | | 0.5 | MADE GROUND: Very compact dark greyish brown silty CLAY with occasional fine to medium brick and stone. |
| | D | 0.60 - 1.10 | MP | 0.60 | 37,39,37,39,40,40 | | MADE GROUND: Very compact greyish brown silty CLAY with occasional fine brick and occasional fine to medium stone. |
| | D | 1.10 - 1.60 | MP | 1.10 | 44,46,44,46,35,37 | 1.0 | |
| | D | 1.60 - 2.10 | MP | 1.60 | 35,35,35,35,35,37 | 1.5 | |
| | D | 2.10 - 2.50 | PEN | 2.10 | HP=4.0 (3.8,4.0,4.0,4.0,4.0) | 2.0 | Stiff becoming very stiff grey silty CLAY with occasional fine crystals and shell. |
| | | | | | | 2.5 | -- End of borehole at 2.50m -- Trial pit excavated to 0.60m bgl. Borehole completed by hand auger. |

SubsNetUK
Classification: General

# 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<br>...at 2.8m bgl borehole terminated due to Hand Auger refusal. |
| | D | 0.50 - 1.00 | PEN | 0.50 | HP=3.0 (3.0,3.0,3.0,3.0,3.0) | 0.5 | Stiff becoming very stiffgreyish brown silty CLAY with occasional fine to medium stone. 0.5 |
| | D | 1.00 - 1.50 | PEN | 1.00 | HP=3.5 (3.5,3.5,3.5,3.3,3.5) | 1.0 | 1.0 |
| | D | 1.50 - 2.00 | PEN | 1.50 | HP=4.1 (4.0,4.0,4.3,4.0,4.0) | 1.5 | 1.5 |
| | D | 2.00 - 2.50 | PEN | 2.00 | HP=4.2 (4.3,4.3,4.3,4.0,4.0) | 2.0 | Very stiff greyish brown silty CLAY. 2.0 |
| | D | 2.50 - 2.80 | PEN | 2.50 | HP=4.0 (4.0,4.0,4.0,4.0,4.0) | 2.5 | Very stiff greyish brown silty CLAY with occasional fine shell. 2.5 |

-- End of borehole at 2.80m --
Borehole completed by hand auger.

SubsNetUK

Classification: General

## Site Observations

GENERAL:
VC pipework running through top of foundation

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

SOILS:
At 2.5m bgl borehole terminated due to Hand Auger refusal in TP/BH1.

ROOTS:
At 0.1m to 1.4m bgl occasional roots of live appearance encountered and sampled in TP/BH1.

SubsNetUK
Classification: General

Environmental Services

# SOIL ANALYSIS

## for Subsidence Management Services

**20 Southwood Road, Trowbridge, BA14 7BZ**

| | |
|---|---|
| Client: | Subsidence Management Services |
| Claim Number: | 102382876 |
| Policy Holder: | Mr and Mrs Richard and Therese Hughes |
| Report Date: | 12/11/2021 |
| Our Ref: | L22158 |

Compiled By:

| Name | Position | Signature |
|---|---|---|
| Saira Dougan | Laboratory Technician | [redacted] |

Checked By:

| Name | Position | Signature |
|---|---|---|
| Bob Walker | Laboratory Manager | [redacted] |

| | |
|---|---|
| Date samples received: | 25-Oct-21 |
| Water Content Test Date: | 08-Nov-21 |
| Atterberg Limits Test Date: | 09-Nov-21 |
| Suction Test Date: | 12-Nov-21 |

UKAS TESTING

9265

Environmental Services

## Notes relating to soils testing

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

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

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

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

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

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.
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 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’

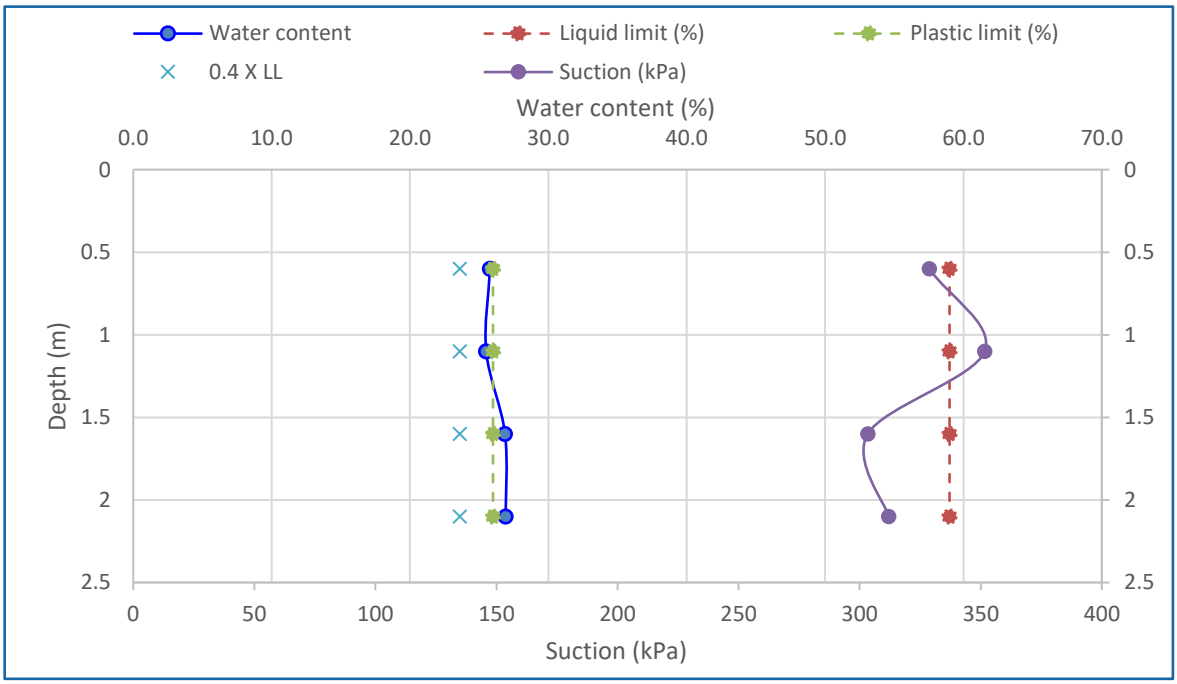
Unless otherwise stated the moisture content of the filter paper was determined after 7 days contact with the sample and the test was prepared from a remoulded disturbed sample.

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

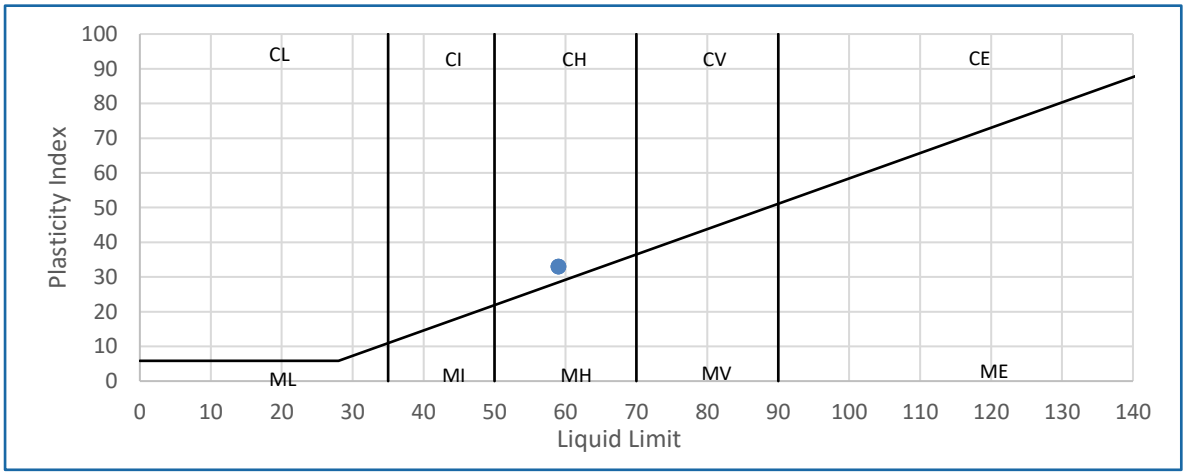
Environmental Services

## Samples from BH1

| Lab Ref | Depth (m) | WC (%) | LL (%) | PL (%) | PI (%) | .425 mm(%) | mod. PI (%) | Av. Suc. (kPa) | Description |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.6 | 25.8 | 59 | 26 | 33 | 98 | 32 | 329 | Firm grey-brown silty CLAY with rare gravel and sand. Gravel is fine |
| 2 | 1.1 | 25.5 | 59 | 26 | 33 | 98 | 32 | 352 | Firm grey-brown silty CLAY with rare gravel and sand. Gravel is fine |
| 3 | 1.6 | 26.9 | 59 | 26 | 33 | 98 | 32 | 303 | Firm grey-brown silty CLAY with rare gravel. Gravel is fine |
| 4 | 2.1 | 26.9 | 59 | 26 | 33 | 98 | 32 | 312 | Firm grey-brown silty CLAY with rare gravel. Gravel is fine |



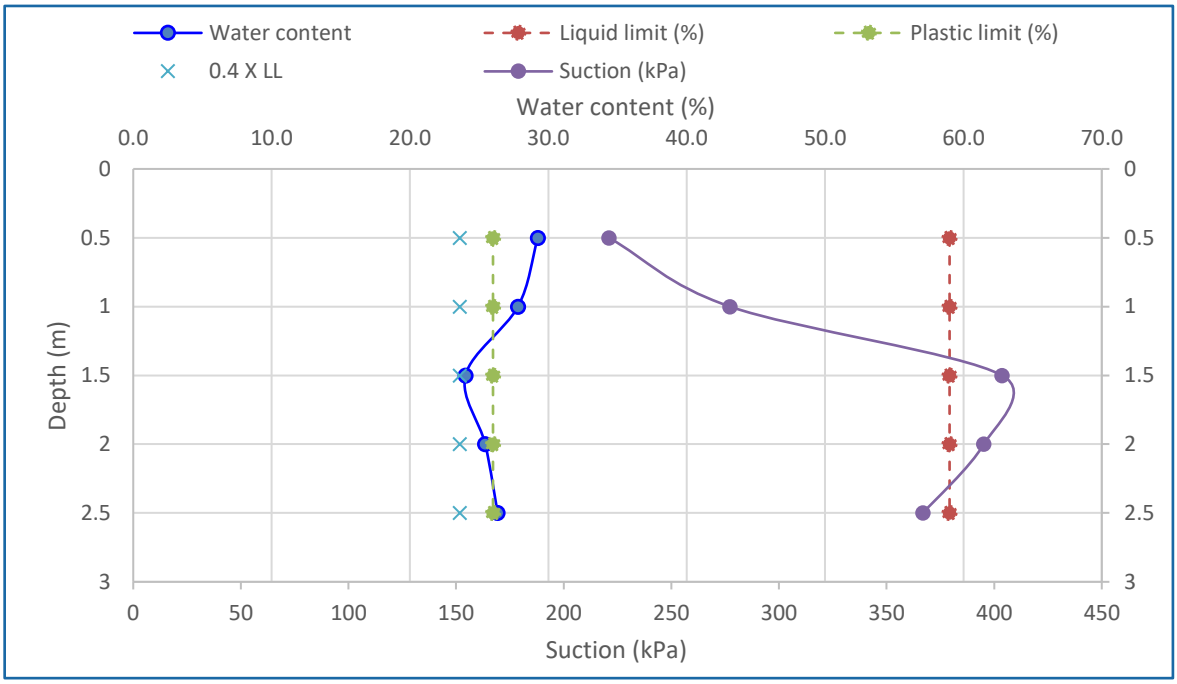

## Plasticity Chart for Casagrande Classification



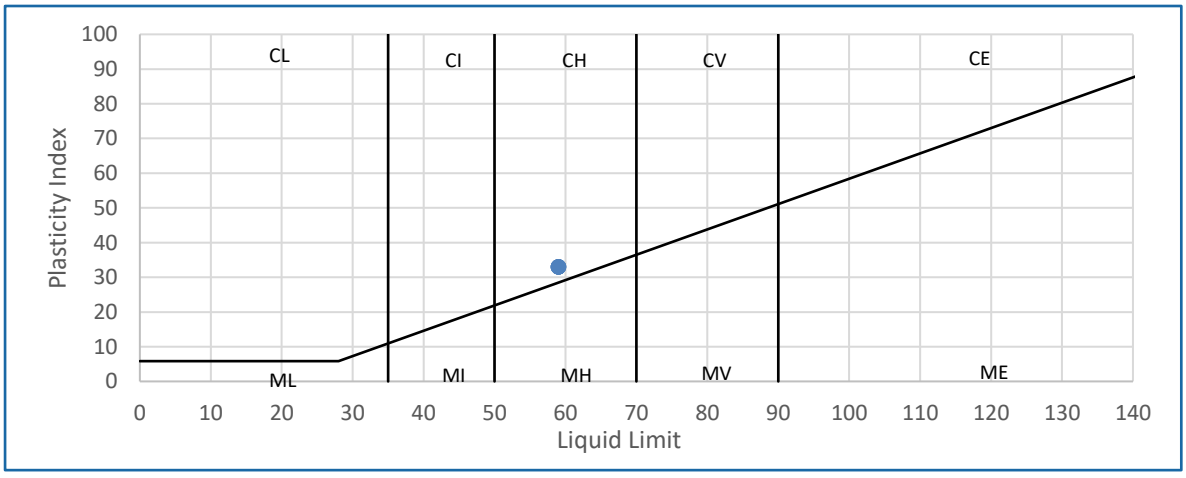

## Samples from BH2

Environmental Services

| Lab Ref | Depth (m) | WC (%) | LL (%) | PL (%) | PI (%) | .425 mm(%) | mod. PI (%) | Av. Suc. (kPa) | Description |
|---|---|---|---|---|---|---|---|---|---|
| 5 | 0.5 | 29.2 | 59 | 26 | 33 | 100 | 33 | 221 | Firm grey-brown silty CLAY with rare gravel and sand. Gravel is fine |
| 6 | 1 | 27.8 | 59 | 26 | 33 | 100 | 33 | 277 | Firm grey-brown silty CLAY with rare gravel and sand. Gravel is fine |
| 7 | 1.5 | 24.0 | 59 | 26 | 33 | 100 | 33 | 404 | Firm grey-brown silty CLAY with rare gravel and sand. Gravel is fine |
| 8 | 2 | 25.4 | 59 | 26 | 33 | 100 | 33 | 395 | Firm grey-brown silty CLAY with rare gravel and sand. Gravel is fine |
| 9 | 2.5 | 26.3 | 59 | 26 | 33 | 100 | 33 | 367 | Firm grey-brown silty CLAY with rare gravel and sand. Gravel is fine |




## 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 | | | | | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| 5 | | | | | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | | | | | |
| 9 | | | | | |

Key

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

## References

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

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

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

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

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

# ROOT IDENTIFICATION

## for Subsidence Management Services

**20 Southwood Road, Trowbridge, BA14 7BZ**

| | |
|---|---|
| Client: | Subsidence Management Services |
| Client Contact: | Ben John |
| Claim Number: | 102382876 |
| Client Reference: | IFS-LBG-SUB-21-0096976 |
| Policy Holder: | Mr and Mrs Richard and Therese Hughes |
| Report Date: | 22 October 2021 |
| Our Ref: | R43498 |

Intec
Parc Menai, Bangor,
Gwynedd, North Wales
[redacted]

| Sub Sample | Species Identified | | Root Diameter | Starch |
|---|---|---|---|---|
| **TP/BH1:** | | | | |
| 0.5-1.4m | *Quercus* spp. | 1 | 5 mm | Abundant |

**Comments:**

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

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

**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** Lloyds Banking Group

**Risk Address:** 20 Southwood Road, Hilperton, Trowbridge, BA14 7BZ

**Visit Date:** 01/11/2021

**Client Reference:** IFS-LBG-SUB-21-0096976

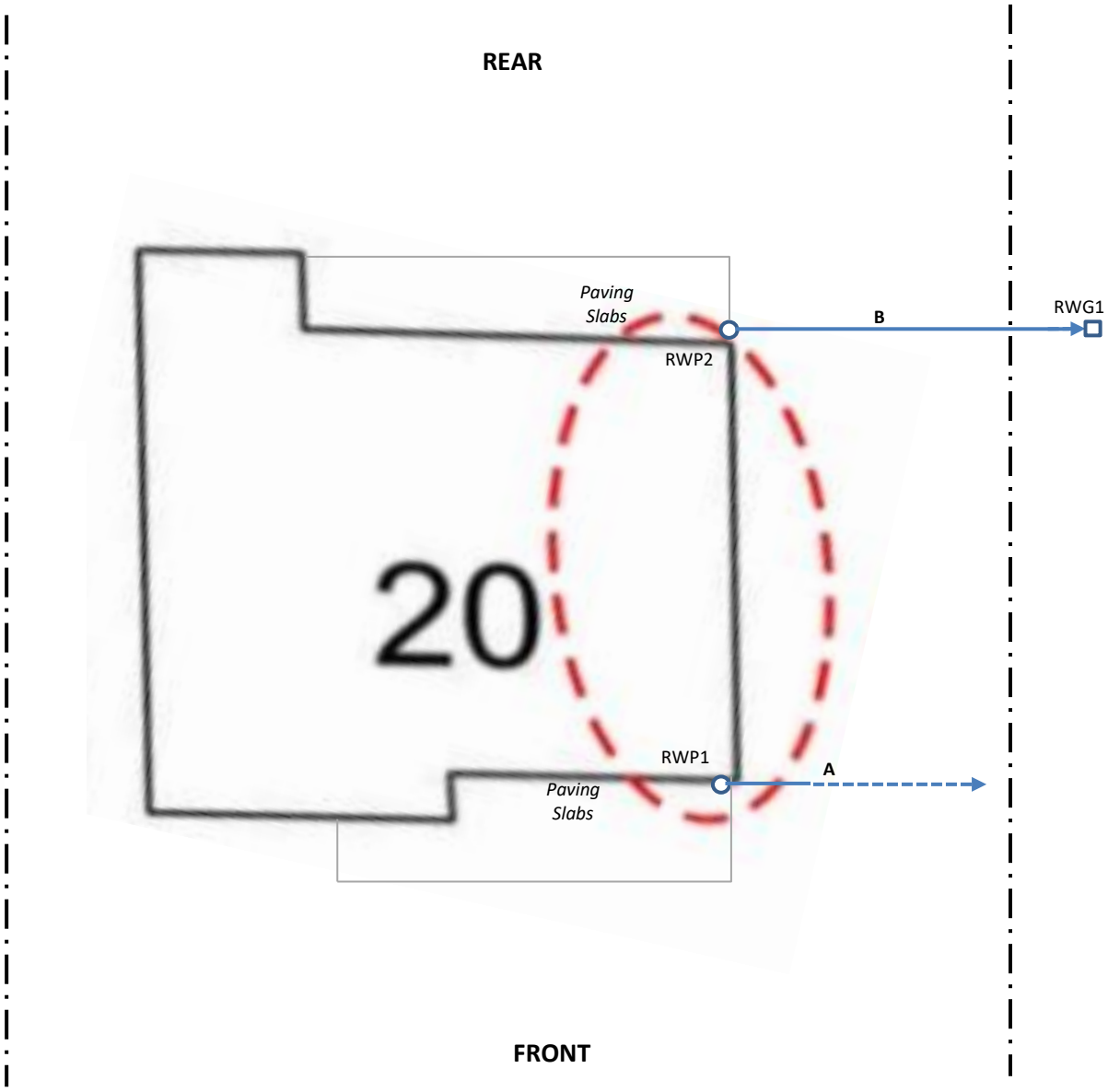
**Our Reference:** C62809 D21664

**Report Date:** 04/11/2021

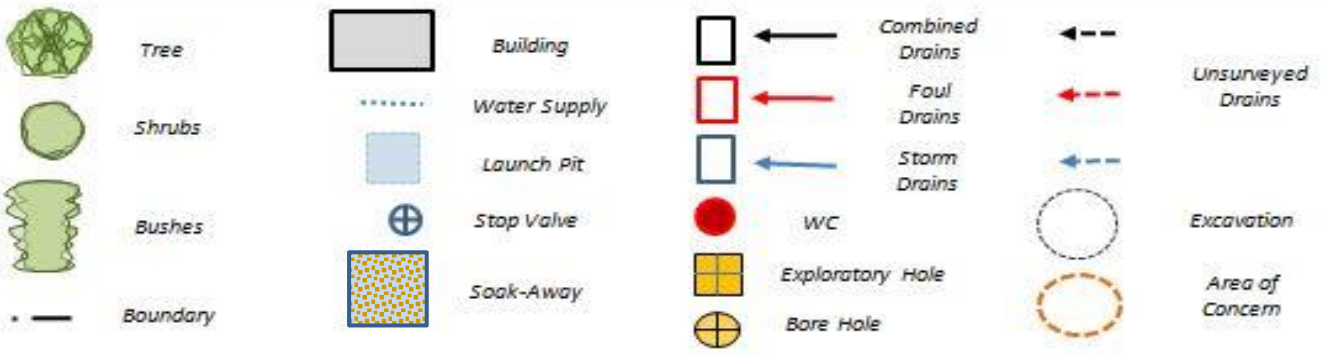
**Report Content:**
Front Page
Site Plan
CCTV Coding
Drain Overview
Quote

Classification: General

# Site Plan




## Key




| | |
|---|---|
| **Notes:** | |
| **Address:** | 20 Southwood Road, Hilperton, Trowbridge, BA14 7BZ |

Classification: General

# 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: | C | Direction: | Downstream | Responsibility: | Home Owner |

| *Distance* | *Code* | *Hydraulic Test - Not Tested* |
|---|---|---|
| 0.00 | SN | Start Node from RWP1 |
| 0.20 | JDL | Joint Displaced (Large) |
| 0.20 | SA | Survey Abandoned - Unable to push past defect |
| | | |

| RUN | Start From : | RWP1 | Finish at : | RWG1 | Pipe Ø: | 100mm |
|---|---|---|---|---|---|---|
| B | Invert Level (m): | n/a | Invert Level (m): | n/a | Material: | Clay |
| STORM | Condition grade: | A | Direction: | Downstream | Responsibility: | Home Owner |

| *Distance* | *Code* | *Hydraulic Test - Not Tested* |
|---|---|---|
| 0.00 | SN | Start Node from RWP2 |
| 1.30 | MC | Material of drain changes at this point to Plastic |
| 4.50 | FN | Finish Node at RWG1 |
| | | |
| | | |
| | | |

**Address:** 20 Southwood Road, Hilperton, Trowbridge, BA14 7BZ

Classification: General

# 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 Downstream**
**Pipe Diameter**: 100mm
**Responsibility**: Home Owner
**Hydraulic Pressure Test:** Not Tested
**CCTV Survey Result**: Structural damage
**Recommended Repair**:

1) To excavate and replace existing Rest bend at base of RWP including 1m of adjacent pipework.
2) To carry out a further look-see CCTV survey and report findings.

**Drain Run B: RWP2 Downstream to RWG1**
**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.

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

**Address:** 20 Southwood Road, Hilperton, Trowbridge, BA14 7BZ

Classification: General

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 | | | |
| UK1120155 | 32/40mm waste pipes. Remove existing and replace with new PVCu. Fixed to masonry. | m | | | |
| UK1120165 | 32/40mm waste pipes. Shoes / bends. | nr | | | |
| UK0605 | Excavate & remove isolated length. Replace in new 110mm PVCu. Bed, surround & backfill. n.e. 1000mm deep. | nr | | | |
| UK0880 | Short Radius Bend. Remove existing item and replace with new 110mm PVCu. | nr | | | |
| UK1060 | Extra over pipework for surrounding drain run in 100mm thick concrete. | m | | | |
| UK0025 | Protection Temporary works to floors, 1000 gauge polythene. | m2 | | | |
| UK8120300 | Hardcore Filling to excavations over 250 mm average thick. | m | | | |
| UK2050005 | Disposal by hand excavated contaminated/saturated material off site. | m3 | | | |
| UK1045 | Removal, set aside and reinstatement of concrete slab paving n.e 100mm thick. | m2 | | | |
| | CCTV survey of underground drainage & report (where undertaken as part of other drainage works on site) | nr | | | |
| | | | | Total (Excl VAT) | |

## REPAIR ESTIMATE TOTALS:

| Run / Location | | Amount (£) |
|---|---|---|
| RUN A | | |
| | Total (Excl VAT) | |

**Address:** 20 Southwood Road, Hilperton, Trowbridge, BA14 7BZ

Classification: General