



Policyholder: Mr & Mrs Gabriel Hughes

Subject Property Address:

46 Vallance Road  
London  
N22 7UB

**INSURANCE CLAIM  
CONCERNING SUSPECTED SUBSIDENCE  
ENGINEERING APPRAISAL REPORT**

This report is prepared on behalf of Fairmead Insurance for the purpose of investigating a claim for subsidence. It is not intended to cover any other aspect of structural inadequacy or building defect that may otherwise have been in existence at the time of inspection.

Date: 03/04/2023

## INTRODUCTION

The technical aspects of this claim are being overseen by our Building Consultant Tracey Keefe, in accordance with our Project Managed Service.

### 1.1. Description of building

The subject property was purchased by the Policyholders during May 2012 and comprised a traditional five / six bedroom, principally two storey, mid terraced dwelling located on a residential street of similar buildings. There is a cellar below the left side and a loft conversion with two bedrooms in the attic space. The property is on a reasonably level site and slightly elevated above the public footpath by about one metre.

Construction is typical for the early 1900's of traditional masonry walls with a pitched roof covering of tiles. There are no extensions or structural alterations to the original building.

### 1.2. Discover of damage

Minor cracking was first inspected and then repaired early 2017; it being considered this type of damage was likely to be expected in a property of this age and construction.

However, during the summer of 2018, the Policyholders noticed cracks appearing to several rooms in their property. Upon becoming concerned, the Policyholders contacted their Insurers on or about 10<sup>th</sup> October 2018.

Following mitigation, which included removal of vegetation belonging to the policyholder, private third parties and local authority vegetation, superstructure repairs were undertaken in early 2022.

However, through the summer of 2022, the policyholder noticed further cracking started to appear. This cracking focused within the rear rooms and rear elevation of the property.

### 1.3. Nature and extent of damage

#### Description and Mechanism

The principle damage takes the form of diagonal cracking within rooms occupying the rear of the property indicating a mechanism of downward rotation of the foundation towards the rear.

#### Significance

The level of damage is moderate and is classified as category 3 in accordance with BRE Digest 251 - Assessment of damage in low-rise buildings.

#### Onset and Progression

We consider that the damage has occurred recently.

It is likely that movement will be of a cyclical nature with cracks opening in the summer and closing in the winter.

## 2. SITE INVESTIGATIONS

Initial site Investigations in 2018 were carried out by CET Group Limited at the front right (TP/BH1) and rear right corners (TP/BH2) of the property.

TP/BH1 – Front right corner;

The foundation took bearing at 1750mm below ground level into very stiff orange brown silty Clay with plasticity indices of between 45% and 53%, the Clay therefore being classified as having high volume change potential. The moisture content at foundation underside 1750mm depth e.g. within the zone of root activity, was only 19% compared with values of 30% for samples taken at 2000mm and 3000mm depth.

TP/BH2 – Rear right corner;

The foundation took bearing at 600mm below ground level into stiff /very stiff orange brown silty Clay with plasticity indices of between 41% and 55%, the Clay therefore being classified as having high volume change potential. The moisture content at foundation underside 600mm depth e.g. within the zone of root activity, was only 22% compared with values of 30% for samples taken at 2000mm and 3000mm depth.

There were roots at the underside of the foundation down to 1700mm depth.

The samples sent to the laboratory were identified as follows;

|               |        |                                                                         |          |
|---------------|--------|-------------------------------------------------------------------------|----------|
| TP2 (USF)     | 6 mm   | Buddleia spp.<br>2 roots                                                | Positive |
| TP2 (USF)     | 2 mm   | Rubus spp.                                                              | Positive |
| TP2 (USF)     | 1.5 mm | Prunus spp.<br>2 roots                                                  | Positive |
| BH2 (to 1.7m) | 1 mm   | broadleaved species, too decayed for positive identification<br>2 roots | Negative |

Buddleia spp. are common flowering shrubs, including the butterfly bush.

Rubus spp. include blackberry and raspberry.

Prunus spp. include blackthorn, cherry, cherry-laurel, Portuguese laurel, peach, plum, and related species.

Drainage Survey;

The CCTV survey confirmed that the yard gully at the rear of the building joined with the outlet from the rainwater downpipe and then ran below the building to the front of the site. There were leaks present in the underground pipe work along with cracking and displaced joints.

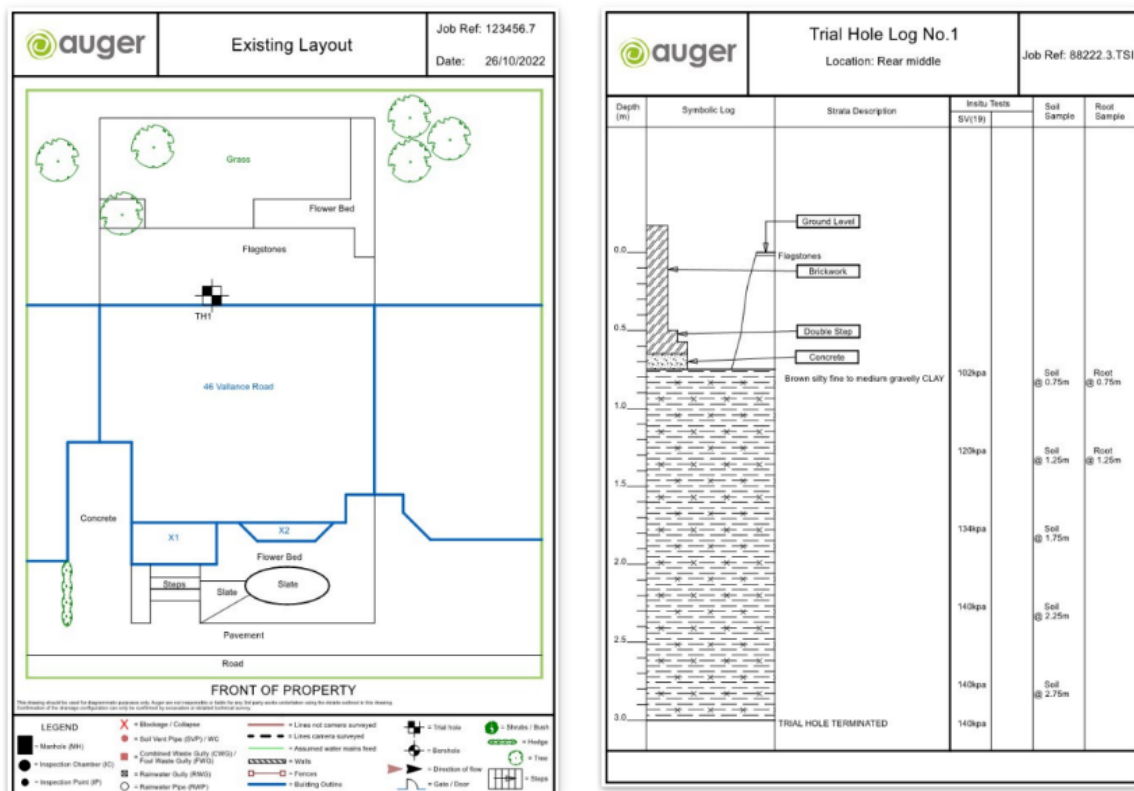
The drain repairs were undertaken in May 2019.

In response to the return of damage, further investigation by Auger Limited was undertaken in October 2022.

TP/BH1 – rear elevation;

The foundation took bearing at 750mm below ground level into stiff brown fine to medium gravelly Clay with plasticity indices of between 38% and 53%, the Clay therefore being classified as having high volume change potential. The moisture content at foundation underside 600mm depth e.g. within the zone of root activity, was 28% compared with values of 33% for samples taken at 2000mm depth.

There were roots retrieved at the underside of the foundation down to 1250mm depth.



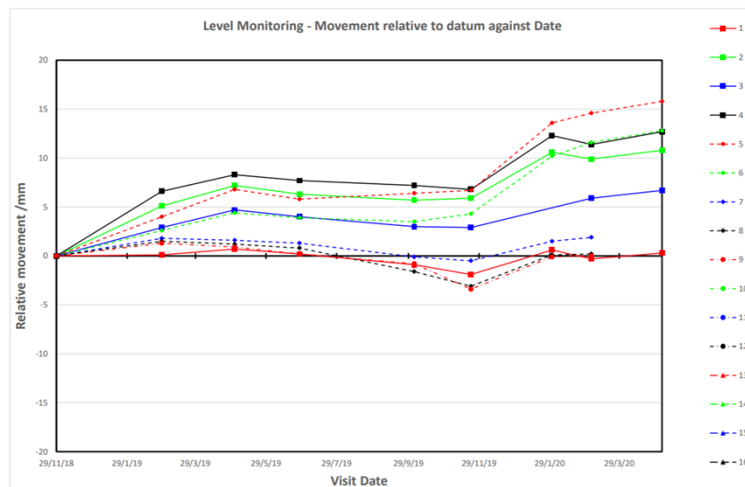
### Root ID

The samples you sent in relation to the above on 25/10/2022 have been examined. Their structures were referable as follows:

| TH1, 0.75m |                                                                                                                             |                   |
|------------|-----------------------------------------------------------------------------------------------------------------------------|-------------------|
| 3 no.      | Examined root: similar in many ways to QUERCUS (Oak) or the related CASTANEA (Sweet Chestnut). Less than 0.8mm in diameter. | Alive, recently*. |
| TH1, 1.25m |                                                                                                                             |                   |
| 1 no.      | Examined root: QUERCUS (Oak) or the related CASTANEA (Sweet Chestnut). Also under 0.8mm in diameter.                        | Dead*.            |
| 3 no.      | Unfortunately all with insufficient cells for identification.                                                               |                   |

Click here for more information: [CASTANEA](#) [QUERCUS](#)

### 3. MONITORING



Previous level monitoring was undertaken during the period 29/11/2018 – 29/1/2020 as noted in the above data.

Due to the reoccurring damage, I have instructed the level monitoring to recommence and await the results.

### 4. CONCLUSIONS

#### 4.1. Cause of Subsidence

Based on the information detailed above, I am of the opinion that damage has occurred due to clay shrinkage subsidence. This has been caused by variations in the moisture content of the clay subsoil, resulting in volume changes, which in turn have affected the foundations.

Oak tree roots are present in the clay subsoil beneath the foundations. In this case, I am satisfied that the damage has been caused by clay shrinkage subsidence following moisture extraction by the neighbour's Oak tree.

I have assessed whether significant heave/ground recovery will occur should the vegetation, as referred to above, be removed. Based on the site investigation results, the timing of the investigation and the nature and extent of damage within the property, I have concluded that significant heave and/or ground recovery will not occur should the vegetation management be undertaken.

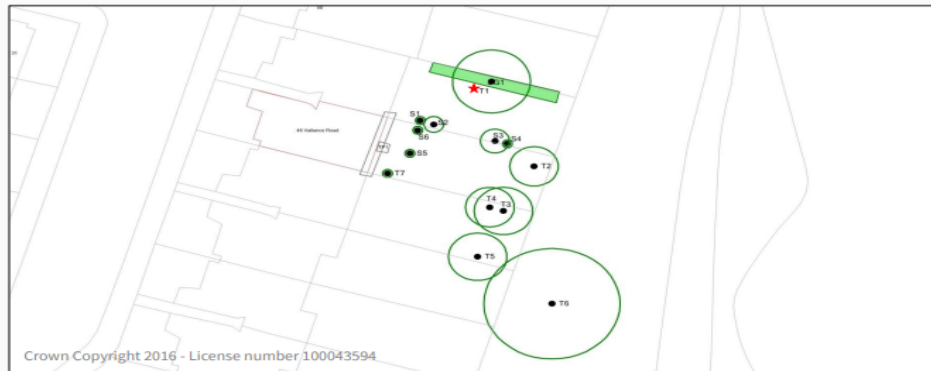
#### 4.2. Recommendations

In order to prevent the ongoing subsidence, and to regain ground stability, further Arboricultural advice was sought to establish appropriate measures.

Vegetation noted below, for which the adjoining private Third Party is responsible, is contributing toward the cause of the further damage. We believe the vegetation is also subject to conservation restrictions which is under review.

**4.2 Recommended vegetation management to address the current subsidence:**

| Tree No: | Species       | Works Required                                     |
|----------|---------------|----------------------------------------------------|
| T1       | Oak (English) | Fell and treat stump with eco plugs (broadleaved). |

**7.0 APPENDIX 2: SITE PLAN****4.2.1 Repair:**

Further repairs can be carried out as soon as the necessary mitigation has been completed and the ground has had time to restabilise. At the present time, we consider that these works will involve undertaking superstructure repairs and redecoration and this decision has been taken based on our knowledge and experience of dealing with similar claims.

On behalf of Sedgwick International UK

Tracey Keefe  
Building Consultant

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