sedgwick.
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01924 428691

Policyholder:

Subject Property Address:

139 Hornsey Lane
LONDON
N6 5NH

INSURANCE CLAIM

CONCERNING SUSPECTED SUBSIDENCE

ENGINEERING APPRAISAL REPORT

This report is prepared on behalf of 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: 09/01/2024

Our Ref: 9635191

51°34'27"N 0°7'40"W
2022-09-23 10:28 UTC

INTRODUCTION

The technical aspects of this claim are being overseen by our Building Consultant Roger Lowe BSc (Hons) CEng MICE, in accordance with our Project Managed Service.

DESCRIPTION OF BUILDING

The subject property is a semi-detached house built in 1851 in a residential estate location on a plot that is level. The overall layout is recorded on our site plan.

The property includes a single storey section to the rear left (kitchen and utility rooms), a bay window to the rear right, bay windows to the front elevation and a cellar to the front left.

DISCOVERY OF DAMAGE

The policyholder and homeowner, [redacted] first discovered the damage in August 2022.

The Insured was on holiday. Family noted damage to the property and that the front door would not close. A section of the rear bedroom ceiling fell. A builder suggested that Insurers should be contacted. The Insured contacted Insurers.

NATURE AND EXTENT OF DAMAGE

Description and Mechanism

The main area of damage is to the main house and takes the form of 5mm cracks in hall; rear right lounge; rear right first floor bedroom; rear right second floor bedroom; rear bathroom; kitchen and attached utility rooms.

There appears to be movement to the rear. However, there are other cracks in the property and level monitoring will be arranged to determine the locations of movement.

Significance

The level of damage is slight and is classified as category 2 in accordance with BRE Digest 251 - Assessment of damage in low-rise buildings.

Onset and Progression

[redacted] has advised that damage first commenced in August 2022.

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

SITE INVESTIGATIONS

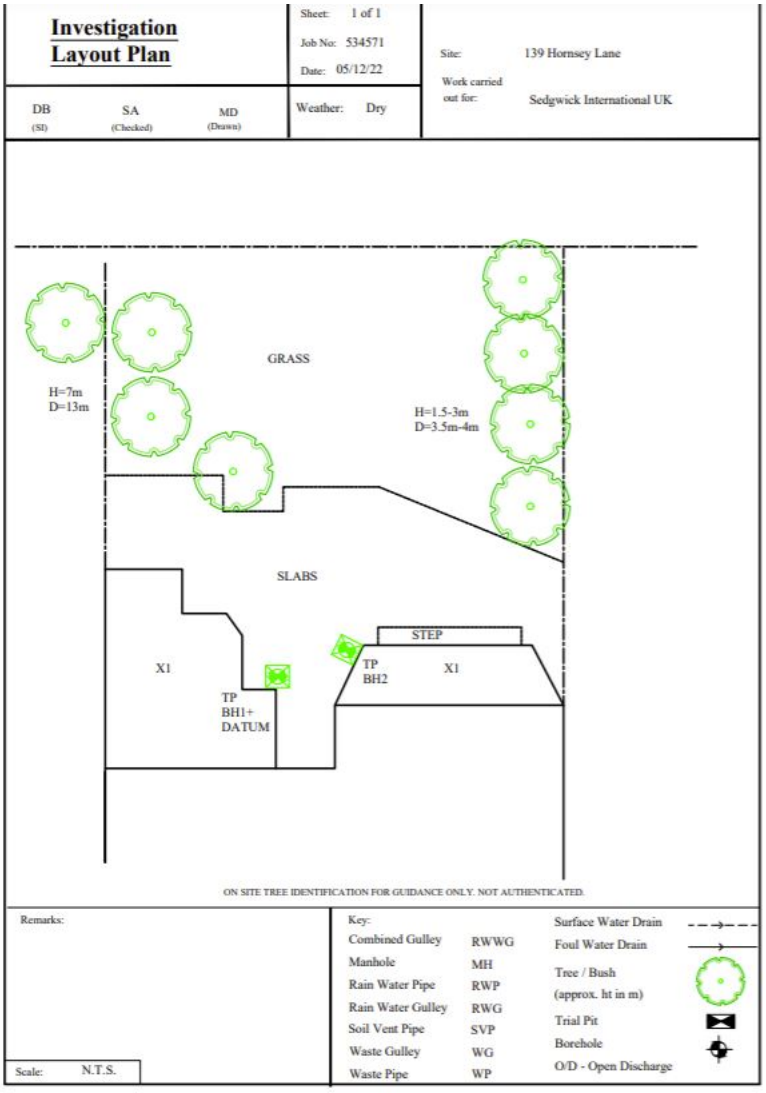
A site investigation has been arranged to confirm the cause of damage. The drift maps indicate that the subsoil is clay.

The results of the ground investigation indicate the following:

Site investigation December 2022:

Trial pit and borehole 1 were excavated to the rear left of the house. The foundations are 600mm thick brickwork at a depth of 900mm. The subsoil is firm orange, brown very silty clay. The clay is highly plastic. Roots were noted under the foundations but could not be identified.

Trial pit and borehole 2 were excavated to the rear right of the house. The foundations are 420mm thick brickwork at a depth of 900mm. The subsoil is firm orange, brown very silty clay. The clay is highly plastic. Roots were noted under the foundations but could not be identified.



ROOT IDENTIFICATION

139 Hornsey Lane,

Client Reference: 534571
Report Date: 14 December 2022
Our Ref: R49323

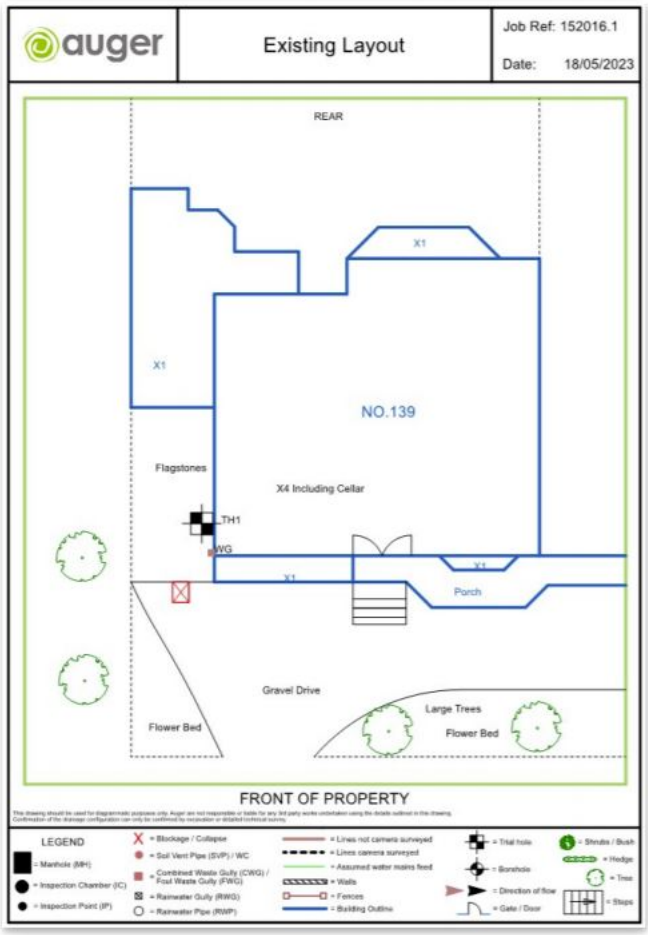
Sub Sample	Species Identified		Root Diameter	Starch
TP1:				
USF	broadleaved species, too decayed for positive identification	1	3 mm	Absent
BH1:				
to 3.2m	too small and decayed for identification	2	<1 mm	Absent
TP2:				
USF	broadleaved species, too decayed for positive identification	3	1 mm	Absent

Comments:

1 - Plus others too small and decayed.
2 - Plus 1 other the same.
3 - Plus 2 others the same.

Site investigation May 2023:

A trial pit and borehole were excavated to the front left of the house. The underside of the foundations was too deep to determine by hand excavation. However, the foundations at this point will be at the underside of the cellar at approximately 2,100mm depth. The subsoil is dry very brown fine to medium gravelly silty clay. The clay is highly plastic. A heave analysis indicates that heave will not be an issue if the trees are felled. Beech roots were noted under the foundations to a depth of at least 3,000mm.



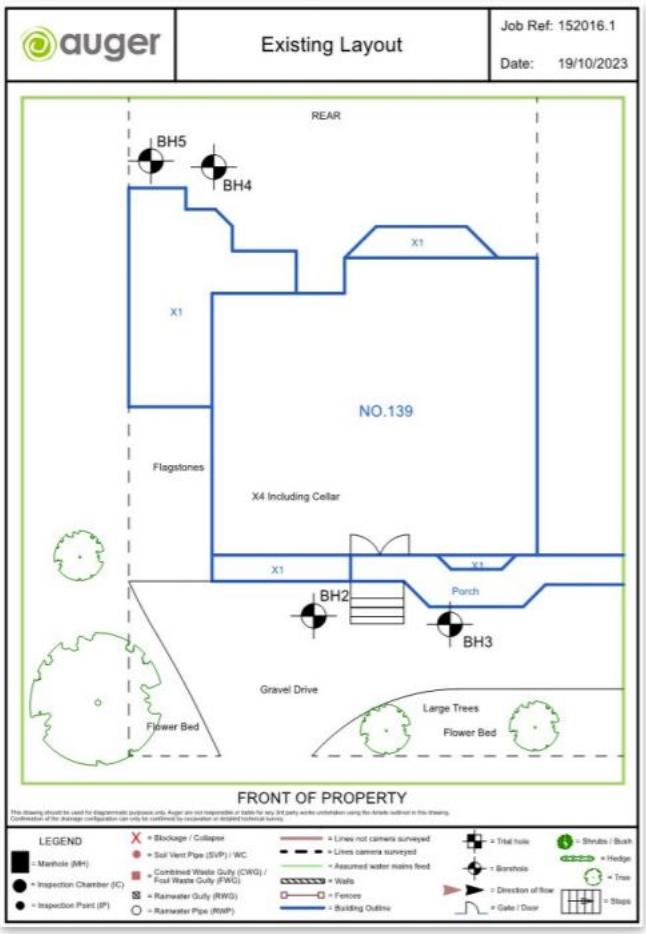
Root ID

The samples you sent in relation to the above on 18/05/2023 have been examined. Their structures were referable as follows:

TH1, 1.0m		
3 no.	Examined root: FAGUS (Beech).	Alive, recently*.
1 no.	Examined root: too DECAYED for identification.	
5 no.	Unfortunately all with insufficient cells for identification.	
TH1, 1.5m		
2 no.	Examined root: FAGUS (Beech).	Alive, recently*.
2 no.	Both pieces of BARK only - insufficient material for recognition.	
3 no.	Unfortunately all with insufficient cells for identification.	
TH1, 2.0m		
1 no.	Examined root: FAGUS (Beech). Very THIN - under 0.15mm in diameter.	Alive, recently*.
2 no.	Examined root: an herbaceous (non-woody) plant.	
2 no.	Both samples revealed too few cells for microscopic identification.	
TH1, 2.5m		
1 no.	Examined root: also very THIN - less than 0.1mm in diameter. We cannot rule out FAGUS (Beech).	Dead* (note this 'dead' result can be unreliable with such thin samples).
3 no.	Unfortunately all with insufficient cells for identification.	
TH1, 3.0m		
1 no.	Examined root: FAGUS (Beech).	Alive, recently*.
3 no.	Unfortunately all with insufficient cells for identification.	

Click here for more information: FAGUS

A further site investigation was completed by Auger on 5th October 2023. Boreholes were drilled in the locations shown on the plan below, next to the property. The subsoil was as previously identified. Roots were noted in the boreholes as shown below.



Root ID

The samples you sent in relation to the above on 05/10/2023 have been examined. Their structures were referable as follows:

TH2, 1.0m		
1 no.	Examined root: a SHRUB, similar in some ways to the family CAPRIFOLIACEAE (the most common members being Viburnum (Laurestinus and Guelder-rose), Weigela, Symphoricarpos (Snowberry), Lonicera (Honeysuckle)). Tentative - this was a very IMMATURE sample - under 0.1mm in diameter.	Alive, recently*.
2 no.	Examined root: essentially too immature for a confident identification. NOT coniferous. Could be FAGUS (Beech). Slightly tentative. As above, not more than 0.1mm in diameter.	Dead*.
3 no.	All pieces of BARK only - not enough material for identification.	
1 no.	Microscopic examination showed insufficient cells for recognition.	
TH3, 1.0m		
3 no.	Examined root: most referable to FAGUS (Beech). This sample was POOR - it had NO BARK.	Dead*.
1 no.	Examined root: referable in many ways to AESCULUS (Horse Chestnut and related Buckeyes). Again, NO BARK.	Dead*.
1 no.	A piece of BARK only, insufficient material for identification.	
1 no.	Microscopic examination showed insufficient cells for recognition.	

Click here for more information: AESCULUS FAGUS

MONITORING

We consider that level monitoring is required. This is to confirm the operation of a clay shrinkage subsidence mechanism and to determine which parts of the property have been affected. The level monitoring was set up on 11th January 2023. The monitoring indicates a cyclical pattern of movement (downward in the summer and upward in the winter) consistent with damage caused by root induced clay shrinkage subsidence.

CAUSE OF DAMAGE

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

RECOMMENDATIONS

Mitigation

We consider the damage will not progress if appropriate measures are taken to remove the cause. In this instance it is likely that vegetation for which private owners are responsible is contributing toward the cause of damage.

PRI arborist reported as follows:

Recommended vegetation management to address the current subsidence:

Tree No:	Species	Works Required	CA	TPO	Ownership
T1	Beech	Fell and treat stump with eco plugs (broadleaved)	Yes	Yes	P3P
T2	Beech	Fell and treat stump with eco plugs (broadleaved)	Yes	Yes	P3P
T3	Oak (Holm)	Fell and treat stump with eco plugs (broadleaved)	Yes	No	PH
T8	Poplar (Lombardy)	Fell and treat stump with eco plugs (broadleaved)	Yes	Yes	P3P

STATUTORY CONTROLS

London Borough Of Haringey has confirmed that the implicated Beech T1, T2 and Poplar T8 vegetation are subject to a Tree Preservation Order. There are also Conservation Area controls.

Location: 139 Hornsey Lane, London, N6 5NH

PRI will make applications to fell the TPO protected trees when they have sufficient monitoring data. If approved, they will gain Conservation Area Consent. We will then liaise with the owners to fell the vegetation that is the cause of damage.

In the meantime, PRI will gain Conservation Area approval for the Insured's T3 oak, then arrange to fell if approved.

Repair

After the tree has been felled repairs can proceed. We have not yet decided on the final type of repair required but have produced an outline of the most likely requirements. This involves undertaking superstructure repairs and redecoration. This decision has been taken based on our knowledge and experience of dealing with similar claims.

Roger Lowe BSc (Hons) CEng MICE
Building Consultant

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