[redacted]

INSURANCE CLAIM: ENGINEERING APPRAISAL REPORT

This report is prepared on behalf of Protector Insurance for the purpose of investigating an insurance claim. 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.

[redacted]

Address of Insured: C & C, 266 Waterloo Road, LONDON, SE1 8RQ

Situation of Damage: 102 Albert Street, LONDON, NW1 7NE

Date: 22/12/2021 [redacted]

[redacted]

[redacted]

INTRODUCTION

Further to our earlier report site investigations have now been completed and we are in a position to make further recommendations.

The technical aspects of this claim are being overseen by our Building Consultant Matin Abdul BSC (Hons) MCIOB, in accordance with our project managed service.

The claim is primarily concerned with damage to the rear projection. A sketch plan and photographs are attached and all references to the property are as observed facing the front of the building.

DESCRIPTION OF BUILDING AND SITE

The subject property is a Mid terrace house constructed in 1900, in a residential estate on a plot that is level.

SIGNIFICANT VEGETATION

There are several trees nearby to rear of property, some roots that may extend beneath the rear projection foundations. The following trees are of particular interest as detailed on the site plan:

Tree no.	Tree type	Distance	Height	Ownership
T1	Mulberry	6.0m	8.0m	Neighbour 1
T2	Willow	20.0m	20.0m	Neighbour 2
T3	Ash	12.0m	20.0m	Policyholder
T4	Deciduous	12.0m	18.0m	Policyholder
T5	Deciduous	8.0m	18.0m	Neighbour 3

DISCOVERY AND NOTIFICATION

Circumstances of Discovery	Damage was noted around July 2021 and it appears to be getting worse.worse. Damage was noted around July 2021 and it appears to be getting worse.
Subsequent action	Matter reported to insurer.insurer. Matter reported to insurer.
Claim notification	Insurers were notified on 27/08/2021.

NATURE AND EXTENT OF DAMAGE

Description and Mechanism	The main area of damage is to the rear projection and takes the form of Structural cracks internal noted at this stage. Damage noted to walls and ceiling landing and WC on 3rd floor, 2nd floor, 1st floor and ground floor level within the rear projection.
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.

[redacted]

SITE INVESTIGATION

The site investigation has been undertaken by CET Ltd on 22nd of November 2021.

The investigation comprised of 1 no. exploratory trial pit and boreholes positioned in the zone of foundation movement, to the rear of rear projection.

Trial pit

The investigation has revealed that this part of the building is constructed of brick foundation. The depth not known as it was abandoned at 950mm due to collapsing ground.

Borehole

Borehole was dug to rear of trial pit down to 5.0m. it was found to be dry and open upon completion and roots were down to 2.7m. The clay subsoil consists of Stiff brown-grey veined CLAY at 1.0m depth and Very stiff brown-grey veined silty CLAY with claystone nodules at 2.5m depth. Deep datum installed for monitoring purposes.

The test results confirm the clay to be very highly shrinkable with a plastic index of circa 52%.

Testing of the soil within the borehole situated directly to the rear of the rear projection revealing the ground the clay is desiccated with reduced moisture contents down to 3.5m. This is in line with the roots found within the borehole down to 2.5m. Desiccation of clay soils is associated with moisture depletion linked to the influence of vegetation.

Depth of foundations	Liquid limit (LL)	LL x 0.4	Moisture Content	Differences
1.0	78	31.2	34	2.8
1.5	78	31.2	32	0.8
2.5	79	31.6	26	-5.6
3.5	80	32	31	-1

Roots were recovered during the soil sampling process and roots emanating detailed below:

- Fraxinus spp. include common ash and were positive for starch test.
- Acer spp. are maples, including sycamore, Norway maple, and Japanese maples and were positive for starch test.

The roots were present within the clay soil to a depth of 2.5m below ground level.

Drains

A CCTV survey of the drainage in the vicinity of the damage was carried out and at time of investigations. The findings are detailed below:

This is to the rear right corner of main building.

- Run 3 MH1 to U/S
  - Debris grease at 0.5m

This is to the rear of conservatory. The following drains are in good condition but full of silt.

- Run 6 – YG to RWP1
  - 100% blocked with silt at 0.2m
- Run 7 – YG to RWP2
  - 100% blocked with silt at 0.1m
- Run 8 – YG to D/S
  - 100% blocked with silt at 0.2m

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.

MITIGATION

Due to several unidentified vegetations and unclear ownership affecting rear of property, we shall now seek for specialist arboricultural advice regarding the influence of the various trees on the site within close proximity to the area of movement. This is to establish a strategy to limit ongoing seasonal movement of the supporting clay soil.

We would also like to highlight there are vegetation within the risk address and they may require removal, however this will be subject to the arboricultural assessment report and we shall report on this in due course.

Following the CCTV survey, some drains been found to be full of silt and needs to be addressed as part of property maintenance and this will not form part of the claim for subsidence.

CRACK WIDTH AND LEVEL MONITORING

We are waiting for the initial readings.

REPAIR RECOMMENDATIONS

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. In addition, the results of the Site Investigation, laboratory testing and monitoring have been taken into account.

PROJECT TEAM DETAILS

Matin Abdul BSC (Hons) MCIOB - *Building Consultant Specialist Subsidence Team*
Eloise Seale - *Claims Technician Specialist Subsidence Team*

[redacted]