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INSURANCE CLAIM: ENGINEERING APPRAISAL REPORT

Address of Insured: 91 Wiltshire Lane, PINNER, Middlesex, HA5 2LY

Situation of Damage: 91 Wiltshire Lane, PINNER, Middlesex, HA5 2LY



This report is prepared on behalf of [REDACTED] 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.

Date: 04/10/2021

Out Ref: 8982080

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 Stephen Robertson , in accordance with our project managed service.

The claim is primarily concerned with damage to front porch and front garage. 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 1980, in a residential estate on a plot that is level.

SIGNIFICANT VEGETATION

There is a single tree nearby, some roots that may extend beneath the garage and front porch foundations. The following tree is of particular interest as detailed on the site plan:

Tree no.	Tree type	Distance	Height	Ownership
T1	Pine tree	4.0m	25.0m	right side neighbours no. 93

DISCOVERY AND NOTIFICATION

Circumstances of Discovery

The damage inside front porch was noticeable around November 2019 and gradually getting worse. External damage was visible around that time and also getting worse.

Subsequent action

Matter reported to Insurer.

Claim notification

Insurers were notified on 06/07/2020.

NATURE AND EXTENT OF DAMAGE

Description and Mechanism

The main area of damage is to the front porch and garage and takes the form of Structural cracks internal and external.

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. Continuation / 3 Our Ref: 8982080

SITE INVESTIGATION

The site investigation has been undertaken by CET Ltd on 20th of November 2020. The investigation comprised of a single exploratory trial pit and borehole positioned in the zone of foundation movement, between the garage and the front porch.

Garage trial pit A

The investigation has revealed that this part of the building is constructed upon concrete foundation of 100mm depth, to an overall depth of 400mm below ground level. The foundation bears upon made ground, soft, becoming medium compact, mid brown, silty, clay with brick and concrete fragments with pea shingle.

The soil is continuous to a depth of 1.2m where the investigation was terminated as made ground obstructs and too compact to hand auger.

Front porch trial pit B

The investigation has revealed that this part of the building is constructed upon concrete foundation of 100mm depth, to an overall depth of 400mm below ground level. The foundation bears upon made ground, soft, becoming medium compact, mid brown, silty, clay with brick and concrete fragments with pea shingle.

The soil is continuous to a depth of 1.2m where the investigation was terminated as made ground obstructs and too compact to hand auger.

Roots were recovered during the soil sampling within trial pit A and B and the borehole process and roots emanating from the following:

- *Pinus spp.* are pines were found to be positive
- *Monocotyledon spp.* include palms, grasses, bamboos and lilies were found to be negative

They were found to be present within the clay soil to a depth of 1.2m below ground level.

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

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 the adjoining private Third Party is responsible is contributing toward the cause of damage.

As the nearby vegetation is protected under Tree Preservation Order (TPO) to the front of the 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 also note from the site investigation soil data, the ground is really soft and suspect leaking drains in the area. The drains surrounding the front porch and garage were inspected and were found to be watertight.

MITIGATION RECOMMENDATIONS

We have received the Arboricultural Assessment Report reference 182744 from Property Risk Inspection LTD following their visit on the 1st of January 2019. They have recommended the removal of the following vegetations located to front of the risk address:

T1 Pine Neighbouring property - 93 Wiltshire Lane Pinner HA5 2LY

In this instance the Pine tree in the front garden will need to be removed. We will contact the 3rd party owners as works will also be required to their tree.

CRACK WIDTH AND LEVEL MONITORING

Readings been recorded for the following month:

- October 2020
- December 2020
- February 2021
- April 2021
- May 2021
- July 2021
- September 2021

The readings to date confirm seasonal movement with downward movement recently recorded over the summer period with winter ground recovery recorded from December 2020 up until May 2021.

HEAVE ASSESSMENT

There is no evidence of significant tilt towards the tree having occurred to the house, or distortion within the front porch and garage, as would be expected if a significant persistent soil moisture deficit had been set up, and where the tree was planted after the house was built.

I am not of the opinion that heave of the clay subsoil is a threat to adjacent property.

In summary, 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 described above be undertaken.

REPAIRS ROUTE

If the tree is removed/severely pruned, then I consider that works including structural crack repair and redecoration at an approximate cost of £15,000.00 will be appropriate in order to repair the damage in this case.

If the offending tree is not removed/severely pruned then it may be necessary to consider underpinning of the foundations of the property in the area of damage, in addition to structural crack repair and redecoration needed to repair the damage.

The total cost of this option is estimated at £120,000.00.

PROJECT TEAM DETAILS

Stephen Robertson BSC (Hons) MCIOB - *Building Consultant Specialist Subsidence Team*

David McCormack - *Claims Technician Specialist Subsidence Team*

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