Cunningham Lindsey

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23 Laurier Road
London
NW5 1SH

INSURANCE CLAIM

CONCERNING SUBSIDENCE DAMAGE

ENGINEERING APPRAISAL REPORT

This report is prepared on behalf of Legal & General 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: 30/10/2018

[redacted]

[redacted]

INTRODUCTION

This report has been prepared by our Building Consultant, Yiu-Shan Wong BSc C.Build E MCABE MCIOB IMaPS Cert CII, and is being investigated in accordance with our Project Managed Service.

Unless stated otherwise all directions are referred to as looking towards the front door from the outside the property.

DESCRIPTION OF BUILDING

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

CIRCUMSTANCES OF DISCOVERY OF DAMAGE

The policyholder and homeowner, Mr Patrick Kiernan, first discovered the damage in August 2018 and contacted insurers.

NATURE AND EXTENT OF DAMAGE

Description and Mechanism

The principal damage takes the form of tapering diagonal cracking within the property, affecting both the front and rear of the property.

The indicated mechanism of movement is downwards movement towards both the front and rear of the site.

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

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.

SITE INVESTIGATIONS

Reference to the solid and drift geological survey map shows the anticipated subsoil as clay/gravel/head deposits/alluvium/etc

The site investigation has been undertaken by Auger Ltd on 27th September 2018 which comprised of exploratory excavations to both the front and rear of the property along with a CCTV survey of the nearby drains.

TP1 – Front

This revealed that the property is built off 35mm brick stepped footings, extending down to an overall depth of 1.05m below ground level and onto a clay subsoil.

Roots were encountered down to 1.1m depth and samples taken were analysed and the results revealed that they originate from the Aesculus family of trees, which includes the Chestnut.

TP2 - Rear
They were unable to find the bottom of the footings at 1.3m depth and there fore abandoned and a remote borehole was taken nearby which revealed claysoil and roots down to 2.5m depth.

Roots samples revealed Aesculus (Chestnut) again and also Rosaceae/Pomoidese family of shrubs/trees.

The results of the CCTV drainage survey also revealed defects with cracking to the pipes and root ingress and these will need to be repaired.

CAUSE OF DAMAGE

Taking an overview of all the site investigation results referred to above, it is my opinion that the cause of damage results from clay shrinkage subsidence brought about by the action of roots from the tree located in the public footpath to the right of the property.

I base this view on the fact that the foundations of the property in the area of damage have been built at a relatively shallow depth, bearing onto shrinkable clay subsoil. The soil is susceptible to movement as a result of changes in volume of the clay with variations in moisture content and analysis of the site investigation results indicates that the soil has been affected by shrinkage. Aesculus tree roots are present in the clay subsoil beneath the foundations. In this case, I am satisfied that the damage has therefore been caused by clay shrinkage subsidence following moisture extraction by this tree.

RECOMMENDATIONS

It is recommended that the street tree located in the side path and close to the property is removed to mitigate against further movement. The Mitigation Centre of Oriel Services Ltd will liaise with the Local Authority in this regard.

In the meantime I shall arrange for the drains located close by the property to be repaired.

Crack width/level monitoring will continue after removal of the tree in order to check for stability. A detailed scope of repairs will be finalised upon conclusion of the monitoring.

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 strengthening, 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.

REPAIRS

If the street tree is removed, then I consider that works including structural crack repair and redecoration will be appropriate in order to repair the damage in this case.

However, if the tree is not removed and significant movement gets recorded, 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.

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Building Consultant – Specialist Subsidence Team

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Claims Technician
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