sedgwick

[redacted]

Policyholder: 54 Camden Square Management Company Ltd & Mr Steve Bentley

Subject Property Address:

54 Camden Square
LONDON
NW1 9XE

INSURANCE CLAIM

CONCERNING SUSPECTED SUBSIDENCE

ENGINEERING APPRAISAL REPORT

This report is prepared on behalf of NIG 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: 31/03/2019

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INTRODUCTION

Technical aspects of this claim are being overseen by our Project Manager, Gavin Catheline MCIOB, in accordance with our Project Managed Service.

DESCRIPTION OF BUILDING

The subject property is a semi detached house constructed c.1900 which has been converted in to 2 self contained flats. The property is in a mature residential area on a plot that is generally level.

The claim concerns damage to the front elevation of the building.

CIRCUMSTANCES OF DISCOVERY OF DAMAGE

We are advised that cracking was suddenly discovered to the front of the building on return from a holiday.

Insurers were notified of the damage on 14th August 2018.

NATURE AND EXTENT OF DAMAGE

Description and Mechanism

The principal damage takes the form of diagonal tapered cracking to the front of the building.

The indicated mechanism of movement is downward towards the front right corner.

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 crack damage has occurred recently, but that distortions are historic.

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

SITE INVESTIGATIONS

Site investigations were undertaken by CET Property Assurance Ltd on 28th November 2018 and comprised the excavation of a single trial pit extended by hand augured borehole.

Trial pit / borehole 01 was excavated at the base of the light well, adjacent to the front right corner of the main building, within the area of damage and this revealed a stepped corbel brick foundation with an overall founding depth of 700mm below ground level. The founding subsoil is described as stiff, mid brown, silty CLAY with partings of orange and brown silt and fine sand with clay stone nodules. Numerous roots to 2mm in diameter were observed within the subsoil beneath the foundations. The stiff clay subsoil extended throughout the borehole to a depth of 1.7m when the borehole ended due to the material becoming too dense to penetrate by hand auger. Further roots were observed to a depth of 1.5m below ground level, this being from below the ground level within the light well.

The clay subsoil and root samples were sent to a laboratory for testing. The subsoil has been found to be of high and very high plasticity index, meaning that the subsoil is very susceptible to movement due to shrinkage and swelling with variations in moisture content. This is to say that if moisture is withdrawn from the material, for example by the action of roots, the shrinkage, i.e. a volumetric reduction will follow.

The roots have been analysed and they have all been identified as *Pomoideae* and were alive. *Pomoideae* include a number of closely related species including apple, cotoneaster, hawthorn, pear, pyracantha, quince, rowan, snowy mespil and whitebeam. We consider that the roots emanate from the nearby Hawthorn tree growing close to the front right corner of the building in the risk address front garden.

MONITORING

We believe that it is likely that there will be a short term change in crack widths following the mitigation measures described below, before the damage is seen to stabilise. We do however believe that the damage will be seen to stabilise. We therefore propose to continue to monitor the building to confirm when stability has occurred. We would then propose to agree the detailed scope of repair works at the end of the monitoring period.

CAUSE OF DAMAGE

Based on the results of the site investigations, the pattern and nature of the cracking, the timing of discovery of the damage and the presence of a large Hawthorn tree within influencing distance to the area of damage, we are of the opinion that the damage has been caused by root exacerbated clay shrinkage subsidence.

The foundations of the property in the area of damage have been built 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. Analysis of the site investigation results has indicated that the soil has been affected by shrinkage. A number of tree roots identified as originating from a Hawthorn tree were also found in the clay subsoil beneath the foundations. In this case, the damage has therefore been caused by clay shrinkage subsidence following moisture extraction by the nearby Hawthorn tree.

RECOMMENDATIONS

Mitigation Measures

We believe that the damage is likely to stabilise if appropriate measures are taken to remove the cause. In this case the primary cause of damage is the nearby Hawthorn tree growing close to the front right corner of the building. We recommend that this tree is removed to mitigate against further damage.

T1 - Hawthorn tree – 10m high, 3m distance from front right corner with risk address front garden. Recommendation is to fell and treat remaining stump to prevent re-growth.

Building Repair

We have not yet decided on the final type of repair required, but have produced an outline of the most likely requirements. This is likely to involve undertaking superstructure repairs and redecoration. This decision will be taken based on our knowledge and experience of dealing with similar claims. In addition the results of the site investigation, laboratory testing and monitoring will be taken into account.

Gavin Catheline MCIOB
Building Consultant

David Thompson
Claims Technician
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