

Cunningham Lindsey

Scanning Centre, Ground Floor, Fountain Court, 12 Bruntcliffe Way, Morley
LS27 0JG
Telephone 01622 608810 Facsimile 0345 4252539



Policyholder: [REDACTED]

Subject Property Address:

Flat 1 & 2
108 Greencroft Gardens
LONDON
NW6 3PH

INSURANCE CLAIM

CONCERNING SUSPECTED SUBSIDENCE

ENGINEERING APPRAISAL REPORT

This report is prepared on behalf of [REDACTED] 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: 30/03/2017

Cunningham Lindsey Ref: 6332780

INTRODUCTION

This report has been prepared by our Chartered Building Surveyor, Michael Robinson BSc(Hons) MRICS Cert CII, and the damage to the property 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 traditionally constructed large three / four storey semi-detached house which has been converted into flats. It is likely that the property was constructed in around 1900 but the date of the conversion is unknown. There is a single storey rear addition to the rear left and a more modern single storey extension to the rear right which we understand was constructed in around 2008. The property is located within an established residential area which we understand has been designated as a Conservation Area on a plot which is essentially level.

The claim concerns damage to the single storey extension which forms part of Flat 2.

SIGNIFICANT VEGETATION

There are several trees within influencing distance of the property. Of particular note is an Oak tree which is sited within the rear garden of the risk address which is approximately 14m high and at a distance of 5m from the rear extension.

DISCOVERY OF DAMAGE

Cracking within the rear of the ground floor flat, Flat 2, was noted by the tenant in September 2016.

Matters were referred to the Letting Agents, Astral Property Services, and the landlord was subsequently notified. It was suspected that the damage had developed as a result of subsidence and a claim was therefore intimated to insurers. Insurers were notified on 10/10/2016.

NATURE AND EXTENT OF DAMAGE

Description and Mechanism

The main area of damage is to the rear right hand single storey extension and takes the form of cracking within Flat 2 in the rear left hand bedroom to the left hand flank wall and to the right hand internal wall. There is reflective cracking within the adjacent kitchen. Externally there is cracking to the left hand flank wall at the juncture with the rear elevation of the single storey addition to the main house.

The pattern of damage indicates downward and rotational movement to the extension relative to the main building.

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

Damage is considered to have developed in September 2016. 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 London Clay.

The ground investigation was carried out by CET Structures Ltd and for details of the trial pit and borehole location, together with test results, please refer to the attached CET Factual Report.

The trial pit was located adjacent to the left hand flank wall of the rear single storey extension and this revealed a concrete foundation to a depth of 1.7m bearing upon a stiff silty CLAY. A hand augered borehole was sunk to a depth of 5.0m and a stiff silty CLAY was noted throughout.

In-situ soil testing was undertaken and the shear vane readings were consistently very high. Laboratory testing has shown the clay to be of very high to high plasticity indicating the subsoil is highly susceptible to volumetric changes due to variations in moisture content. Based upon the results of the soil suction testing and analysis of the moisture contents and soil properties, the clay was considered to be desiccated at a depth of 1.7m.

Roots were noted at the underside of the foundations and within the borehole to a depth of 3.1m. Dead and decomposing roots were observed to 4.6m. Roots extracted from the underside of the foundation and within the borehole were analysed and found to originate from Quercus (Oak).

As previously outlined, there is an Oak tree located within the rear garden to the rear left of the property.

No drainage Investigations have been undertaken as the drains are somewhat remote from the area of damage and the site investigation has shown the soil to be dry which suggests the drains have not adversely affected the soils.

MONITORING

We consider that crack width monitoring is required. This is to confirm the operation of a clay shrinkage subsidence mechanism. Readings are to be taken at approximate eight week intervals and we will report again once results have been received from CET Structures Ltd.

CAUSE OF DAMAGE

Taking an overview of the site investigations we consider the damage has developed as a result of clay shrinkage subsidence brought about by the action of roots from adjacent vegetation and in particular the Oak tree positioned to the rear left.

This view is based on the fact that the foundations of the property in the area of damage bear onto shrinkable clay subsoil which 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 indicates that the soil has been affected by shrinkage and Oak roots are present in the clay subsoil beneath the foundations.

RECOMMENDATIONS

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 policyholder is responsible is contributing toward the cause of damage.

It is proposed that an independent Arboricultural report now be commissioned in respect of vegetation within rooting distance of the area of damage. Matters have therefore been referred to the Mitigation Centre of Oriel Services Ltd who will co-ordinate the appointment of OCA UK Ltd Arboricultural Consultants. We anticipate that they will recommend that the Oak tree located to the rear left of the property be felled to mitigate against further movement. However there are additional trees within potential rooting distance and a programme of vegetation management may be required.

We do not consider that the removal of the adjacent Oak tree will result in an unacceptable risk of heave to the subject property.

The property is considered to be located with a Conservation Area and OCA UK Ltd will arrange for the required notification to be submitted to the Local Authority prior to the commencement of any tree works. They will also confirm whether the tree is the subject of a specific Tree Preservation Order.

In the meantime the crack monitoring exercises will continue. A detailed scope of repairs will be finalised once mitigation measures have been secured and upon conclusion of the monitoring. The works will involve undertaking superstructure repairs and redecorations to the rear portion of Flat 2.

For Cunningham Lindsey:

Michael Robinson BSc(Hons) MRICS Cert CII
Building Consultant

Xanthe Eaglestone Cert CILA
Claims Technician
Direct dial: 01622608815
E-mail: Xanthe.Eaglestone@icare.cl-uk.com