

Cunningham Lindsey

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Policyholder:Freeways Personal Service Ltd

Subject Property Address:

Cliff Road Studios
5 Cliff Road
LONDON
NW1 9AN

INSURANCE CLAIM

CONCERNING SUBSIDENCE DAMAGE

ENGINEERING APPRAISAL REPORT

This report is prepared on behalf of Zurich Commercial Broker 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: June 2017

Cunningham Lindsey Ref: 6211101

INTRODUCTION

The technical aspects of this claim are being overseen by our Building Consultant, Michael Robinson BSc(Hons) MRICS Cert CII, 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 four storey block of studios / offices. We understand that the right hand portion of the block which contains Studios 1-6 was initially constructed in around 1968 but an adjoining building was added to the left in 1971 and this now contains Studios 7-10. The property is of concrete frame construction under a flat roof.

The property is located within an established residential area on a plot which is generally level. The area has been designated a Conservation Area within the London Borough of Camden.

There are trees within influencing distance of the property. An arboricultural report has been commissioned which shows the vegetation within potential rooting distance of the buildings and for precise details please refer to the report from OCA UK Ltd.

Of particular note are a Sycamore which is approximately 17m high and at a distance of 3.4m from the rear elevation, together with a False Acacia which is 17m high at a distance of 7.8m.

CIRCUMSTANCES OF DISCOVERY OF DAMAGE

We understand that the lessee of the top floor office initially discovered damage in 2015 and following a progression in the level of damage an Engineer's report was obtained. Conisbee Consulting Engineers were appointed and it was recommended that the damage be monitored. A claim was subsequently submitted to insurers.

NATURE AND EXTENT OF DAMAGE

Description and Mechanism

There is cracking within the left hand studio offices with movement essentially adjacent to the right hand wall which forms the party wall between the two blocks. The pattern of damage would suggest downward and rotational movement to the rear left hand portion of the left hand block with rotational displacement between the two structures. Externally there had been movement between the block with the disturbance to the flexible vertical joint with the greatest damage being at high level. There is evidence of disturbance to the roof covering to the right hand section of the left hand block and cracking to the blockwork staircase enclosure at roof level. The flashing detailing to the rear right hand parapet has also been disturbed.

At ground floor level there is diagonal cracking to the rear elevation at the juncture between the two buildings.

Internally there is cracking within the upper studios to the left hand block essentially adjacent to the right hand internal party wall between the two structures. There is more localised cracking to the rear of Units 1 and 2 within the right hand block.

Significance

The level of damage is severe, and is classified as category 4 in accordance with BRE Digest 251 - Assessment of damage in low-rise buildings.

Onset and Progression

Damage is considered to have first become a concern in 2015. However there has been a progression in the level of damage and the monitoring exercise has recorded cyclical movement 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.

In order to confirm the cause of movement localised site investigations were instructed with the works involving the excavation of a trial hole to the rear left hand portion of the building and an accompanying borehole. Works were undertaken by an approved contractor, CET Safehouse Ltd, and for precise details of the works undertaken please refer to the attached Factual Report.

The trial pit revealed the underside of a concrete slab which is considered to be the edge of a reinforced piled raft. The underside of the raft was at a depth of 400mm with the underlying subsoil comprising a Made Ground comprising a sandy very silty clay with gravel, brick, concrete clinker fragments and general builders rubble.

A hand augered borehole was sunk to a depth of 2.3m but it was not possible for the contractors to penetrate below this level as the subsoil was too dense.

The Made ground was found to extend to a depth of 1.4m and below this level the subsoil was a very stiff silty CLAY.

In-situ soil testing was undertaken and the shear vane readings were consistently very high. Laboratory testing has shown the clay to be of high to very high plasticity indicating the subsoil is highly susceptible to volumetric changes due to variations in moisture content. Based upon analysis of the moisture contents and soil properties, the clay was considered to be desiccated at a depth of 2.0m.

Roots were noted at the underside of the foundations and throughout the depth of the borehole and analysis confirmed the roots to be from Acer (sycamore, maples), Choisya (evergreen shrubs) and Leguminosae (laburnum, false acacia, broom, pagoda tree and wisteria)

As previously outlined there is a large Sycamore and a False Acacia positioned close to the rear elevation. There is also a bush / hedge adjacent to the rear which the arborists have confirmed to be a Choisya.

No drainage Investigations have been undertaken as the drains are considered to be 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

A programme of level and crack width monitoring has been in progress since June 2016 and a deep datum was installed to the rear of the building in May 2016. The level monitoring demonstrated a degree of downward movement during late summer 2016 and with slight recovery in Spring 2017. The greatest movement has been to the rear left hand corner of the building with a variation in the order of 22mm. The crack width monitoring has also demonstrated a pattern of cyclical movement.

CAUSE OF DAMAGE

Taking an overview of the site investigations and the monitoring readings we consider the damage has developed as a result of clay shrinkage subsidence brought about by the action of roots from the adjacent trees. An arboricultural report has been commissioned and the arborists have recommended the felling of the adjacent Sycamore, False Acacia and Choisya, all of which have been implicated by the site investigations.

This view is based on the fact that the underlying subsoil is a highly shrinkable clay which has been affected by shrinkage and roots from adjacent trees were present in the clay subsoil beneath the foundations.

RECOMMENDATIONS

It is considered that foundation stability can be achieved if the implicated trees were to be felled. An arboricultural report has been commissioned and it has been recommended that the adjacent Sycamore, False Acacia and Choisya be felled. The property is located within a Conservation Area and a notification is to be submitted to the Local Authority seeking consent to fell the trees. Oriel Mitigation Centre have been instructed to progress this aspect.

During their site inspection OCA UK Ltd also noted a degree of decay to the base of the Pear tree which is positioned to the rear of the site and it has been recommended that the tree be felled due to health and safety concerns.

In the meantime the monitoring exercise will continue. A detailed scope of repairs will be finalised once mitigation measures have been secured and upon conclusion of the monitoring.

For Cunningham Lindsey:

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