

Cunningham Lindsey



Policyholder: Rosbury Properties Limited

Subject Property Address:

Flat 1/2 & 5  
33 Broadhurst Gardens  
London  
NW6 3QT

**INSURANCE CLAIM**

**CONCERNING SUSPECTED SUBSIDENCE**

**ENGINEERING APPRAISAL REPORT**

This report is prepared on behalf of Allianz Insurance Plc 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: 26/03/2018

Cunningham Lindsey





## **INTRODUCTION**

Technical aspects of this claim are being overseen by our Building Consultant, Gavin Catheline, in accordance with our project managed service.

## **DESCRIPTION OF BUILDING**

The subject property is a large detached house converted in to 5 self contained flats constructed in approximately 1880, in a mature residential area on a plot that is generally level.

The claim concerns damage to the rear of the main building.

## **CIRCUMSTANCES OF DISCOVERY OF DAMAGE**

The policyholder and homeowner, Rosbury Properties Limited, first discovered the damage in July 2017.

The damage was first reported by the tenant of flat 1.

## **NATURE AND EXTENT OF DAMAGE**

### Description and Mechanism

The principal damage takes the form of vertical and diagonal tapered cracking.

The indicated mechanism of movement is downward towards the rear.

### 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

Rosbury Properties Limited has advised that damage first commenced in Summer 2017.

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**

A site investigation was carried out by CET Property Assurance Ltd on 7/2/2018.

Trial pit / borehole 01 was excavated adjacent to the rear elevation of the building, centrally. This revealed that the foundations consist of a concrete strip footing with an overall founding depth of 360mm below ground level. The founding subsoil is a made ground consisting of a medium compact, brown silty clay with brick fragments. The subsoil at foundation level was seen to contain numerous live roots of up to 14mm in diameter. The clay mixture made ground subsoil extended throughout the borehole to a depth of 3.3m below ground level with further roots being found to a depth of 1.5m.

The subsoil and root samples were sent to the laboratory for testing. The subsoil has been found to be of very high plasticity index meaning that it is very susceptible to movement due to shrinkage and swelling with variations in moisture content. The roots were analysed and have been found to emanate from Cypress and Birch trees to the rear of the property.

#### **MONITORING**

We consider that level monitoring is required. This is to confirm the operation of a clay shrinkage subsidence mechanism and support the Conservation Area application for tree removal.

#### **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.



## **RECOMMENDATIONS**

### **Mitigation Measures**

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.

We have identified the following trees within influencing distance to the property and likely to be implicated in the current damage:

- T1 Fir tree – 15m high, 3m distant from rear left corner – Remove and treat stump.
- T2 Conifer – 17m high, 4m distant from rear right corner – Remove and treat stump.
- T3 Silver Birch – 17m high, 7m distant from rear – Remove and treat stump.

We recommend that the 3 trees above are felled and the stumps treated to prevent re-growth.

We understand that the property is within a conservation area and therefore permission will need to be obtained to carry out the recommended vegetation removal works.

### **Building Repairs**

We have not decided on the final type of repair required as our investigations have not yet been concluded. However 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.

For Cunningham Lindsey:

Gavin Catheline MCIQB  
*Building Consultant*

Martin Putman  
*Claims Technician*

