

**Cunningham Lindsey**

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Subject Property Address:

54 Compayne Gardens  
LONDON  
NW6 3RY

**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: 16/11/2015

Cunningham Lindsey Ref: 6095485

## INTRODUCTION

The technical aspects of this claim are being overseen by our Building Consultant, Yiu-Shan Wong BSc ACIAT C.Build E MCABE MCIQB RMaPS Cert CII, in accordance with our Project Managed Service.

## DESCRIPTION OF BUILDING

The subject property is a Semi detached house constructed circa 1900, in a residential estate on a plot that is level.

The claim concerns damage to the front and rear corner of the building.

## CIRCUMSTANCES OF DISCOVERY OF DAMAGE

██ first discovered the damage in August 2015, where what was previously hairline cracking suddenly deterioratecontacted insurers.

## NATURE AND EXTENT OF DAMAGE

### Description and Mechanism

tapering vertical cracking to front RH bay and rear addition.

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

### 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 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

Site investigations were undertaken by CET Structures Ltd on 20<sup>th</sup> October 2015 and comprised of two exploratory excavations together with a CCTV survey of the drains.

TP1/BH1 – to front RH corner

They revealed typical foundation depths of 225mm brick corbel on top of 500mm concrete with brick pieces foundations, extending down to an overall depth of 1.4m from ground level and bearing onto a clay subsoil. Roots were present down to 2.5m, with dead and decomposing roots found to 5.0m depth.

TP2/BH2 – to rear RH corner

They revealed typical foundation depths of 150mm brick corbel on top of 425mm concrete with brick pieces foundations, extending down to an overall depth of 725mm from ground level and bearing onto a clay subsoil. Roots were present down to 1.8m, with dead and decomposing roots found to 5.0m depth.

Samples of all these roots were sent away for analysis and the results identified that the roots extracted from the front originate from the Tilia family of trees which includes the Lime, whilst the remaining roots from the rear originate from the Fraxinus family of trees (Ash) and Clemantis (Garden climbers).

The results of the CCTV drainage survey has revealed that the drains are in working order and not contributing towards the damage.

#### MONITORING

A programme of level and crack width monitoring will be set up and regular readings will be undertaken. This is to confirm the operation of a clay shrinkage subsidence mechanism.

#### 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

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 will appoint Oriel Mitigation to arrange for an arboricultural report to be prepared and identify and ascertain whether the offending trees are protected.

## REPAIR

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

For Cunningham Lindsey:

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