

## ***Richard F. Gill & Associates***

***Consulting Structural Engineers***

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### **STRUCTURAL ENGINEER'S REPORT**

**INSURED NAME:**

**ADDRESS:**

**67 Aberdare Gardens  
London  
NW6 3AN**

**ENGINEERING PRACTICE:**

**Richard F Gill & Associates LLP**

**INSPECTING ENGINEER:**

**R.E. Rock BEng Hons. CEng MStructE**

**DATE OF INSPECTION:**

**23<sup>rd</sup> January 2020**

**INSURER:**

**ENGINEERS REFERENCE:**



27<sup>th</sup> January 2020



Richard F Gill & Associates is a trading name of  
Richard F Gill & Associates LLP (partnership No. OC385641)

## **INTRODUCTION**

This report follows the visual inspection of the property known as 67 Aberdare Gardens, London, NW6 3AN carried out on the 23<sup>rd</sup> January 2020, by Mr R.E. Rock, on the instructions of [REDACTED] of Woodgate & Clark Loss Adjusters, on behalf of [REDACTED] insurance company.

The purpose of the visit was to inspect and report on the probable cause of the crack damage observed to the junction with the rear wall elevation and single storey extension.

## **DESCRIPTION OF PROPERTY AND SITE**

### **Description**

The property comprises a four storey (including cellar and roof), semi-detached house with single storey rear extension converted to flats some time ago.

The inspection concerned the ground floor flat comprising solid brick external walls with a suspended timber, ground floor. Above, a tiled mansard roof is supported on solid brick external walls. A steel frame at ground floor level under the original rear elevation provides access to the ground floor extension. This frame sits on the rear wall of the cellar which is c. 1.2 m deep (max. 1.8m towards the front of the property) and occupies the full footprint of the original property.

### **Topography**

The site is relatively flat.

### **Vegetation**

Significant vegetation will be identified on a site plan following site investigations. However, to the rear boundary is a large Eucalyptus tree, located c.15m from the rear extension rear elevation.

### **Sub-soil Conditions**

The British Geological Survey indicates that the property is underlain by London Clay.

London Clay is a highly shrinkable deposit that is susceptible to drying shrinkage and subsidence, particularly adjacent to trees.

## **DAMAGE**

All descriptions relate to a view standing on the street to the front of the property.

Anecdotally, the cracking was noticed during the summer of 2019. Concurrently refurbishment works were taking place on the first floor of the property.

To the rear ground floor reception room, within the single storey extension, a vertical fracture extends internally on the right hand flank wall adjacent to the existing column from floor, <1mm, to bottom flange of beam, c.2-3mm. The fracture follows the profile of the beam extending horizontally along the top flange to the left dividing wall.

Where the original building meets the extension, a vertical fracture extends vertically up the dividing wall, adjacent to the existing column from floor to ceiling, <1mm. At the same location, within the single storey extension, a vertical fracture extends from part way up the dividing wall to ceiling, <1mm.

There is generally evidence of previous redecoration of the junctions within the extension such as between the beam and the ceiling and wall-wall / wall-ceiling.

Elsewhere, the extension has suffered very slight crack damage generally, Category 0-1 when assessed in accordance with BRE Digest 251.

Externally to the rear extension a vertical fracture extends from ground to roof, <1mm. This is not reflected internally and appears to align with an internal cross wall.

## **CONCLUSIONS**

The property has suffered slight crack damage to the rear extension, Category 2 when assessed in accordance with BRE Digest 251. Whilst renovation works were being carried out to the 1<sup>st</sup> floor, these would have been restricted to the original rear elevation and so be unlikely to produce the damage mechanism observed.

Damage is consistent with subsidence of the rear extension causing rotation of the extension away from the original rear elevation of the property. The probable cause being clay shrinkage due to the action of tree roots on the suspected shrinkable clay subsoil.

## **RECOMMENDATION**

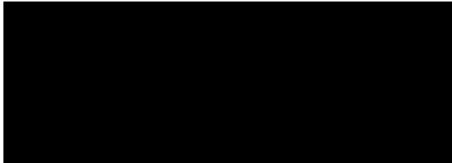
Undertake site investigations.

Fix crack width monitoring internally.

## **LIMITATIONS**

We have not inspected wood work, damp proof courses, services, foundations except where exposed, or any other part of the structure which was covered, unexposed or inaccessible, and we are therefore unable to report any such part free from defect.

This report has been prepared for the sole use and benefit of insurers, and the liability of R. F. Gill and Associates LLP shall not be extended to any third party.



R.E. Rock BEng Hons. CEng MStructE  
For Richard F. Gill and Associates LLP

27<sup>th</sup> January 2020