Richard F. Gill & Associates

Consulting Structural Engineers

[redacted]

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STRUCTURAL ENGINEER'S REPORT

INSURED NAME: [redacted]

ADDRESS: **67 Aberdare Gardens**
London
NW6 3AN

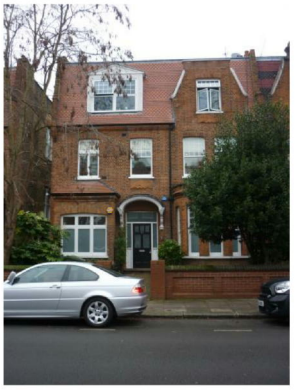
ENGINEERING PRACTICE: **Richard F Gill & Associates LLP**
[redacted]

INSPECTING ENGINEER: **R.E. Rock** BEng Hons. CEng MIStructE

DATE OF INSPECTION: **23rd January 2020**

INSURER: [redacted]

ENGINEERS REFERENCE: **20016**



20th February 2020

Also at
[redacted]

INTRODUCTION

This report follows the visual inspection of the property known as 67 Aberdare Gardens, London, NW6 3AN carried out on the 23rd January 2020, by [redacted] 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 front wall elevation and single storey front right-hand bay protrusion.

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. The cellar which is c. 1.2 m deep under the right-hand bay (max. 1.8m for a section under the entrance and left-hand bay creating a utility room and storage space) 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 left-hand side of the front boundary is a large deciduous tree, deemed to be an Acacia, located c.7m from the right-hand bay elevation. A small Laurel is present to the right-hand of the front boundary, located c.4m from the right-hand bay 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 is long-standing (2–3 years) but has progressed recently.

The ground floor brick arch lintel above the entrance has a vertical fracture to the left-hand, c.1mm. A vertical fracture extends from the top of the porch to first floor, <1mm.The right-hand end of the lintel shows evidence of previous repointing.

To the right-hand side of the front entrance, a vertical fracture extends externally from ground to above doorstep, <1mm.

To the left-central facet of the right-hand bay, a stepped fracture extends externally from air brick to cill, <1mm. To the central facet, a vertical fracture extends from low level to cill, <1mm.

Repointing has also been carried out locally to the front elevation and bays, generally.

Internally to the front right-hand bedroom, a diagonal fracture at the junction of the front elevation and left-hand facet extends from floor to cill, c.1mm.
A vertical fracture at the junction of front elevation and right-hand facet extends from floor to cill, <1mm turning horizontally at cill level.
At the junction of front elevation and right-hand party wall a fracture extends externally at high level, <1mm.

Elsewhere, the room has suffered very slight crack damage generally, Category 0-1 when assessed in accordance with BRE Digest 251. There is generally evidence of previous redecoration within the room.

To the front left-hand corner of the left-hand bay, a vertical fracture extends externally from low level to cill, <1mm.

Internally, the front left-hand bedroom has suffered very slight crack damage generally, Category 0-1 when assessed in accordance with BRE Digest 251. There is generally evidence of previous redecoration of the junctions within the room.

To the centre of the left-hand front boundary wall, a stepped fracture extends from ground, <1mm, to top of coping, 1-2mm. To the right, a stepped fracture extends from ground, <1mm, to top of coping, c.5mm.
To the right of the right-hand front boundary wall, a stepped fracture extends from ground level, c.1mm, to intersecting wall, c.3mm.

CONCLUSIONS

The property has suffered very slight crack damage to the front elevation and bays, Category 1 when assessed in accordance with BRE Digest 251. Whilst renovation works were being carried out to the 1st floor, these would be unlikely to produce the damage mechanism observed to the bays.

Damage to the front right-hand bay is consistent with subsidence of the bay causing rotation away from the front 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 and externally.

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 MIStructE
For Richard F. Gill and Associates LLP

20th February 2020