Engineer's Report

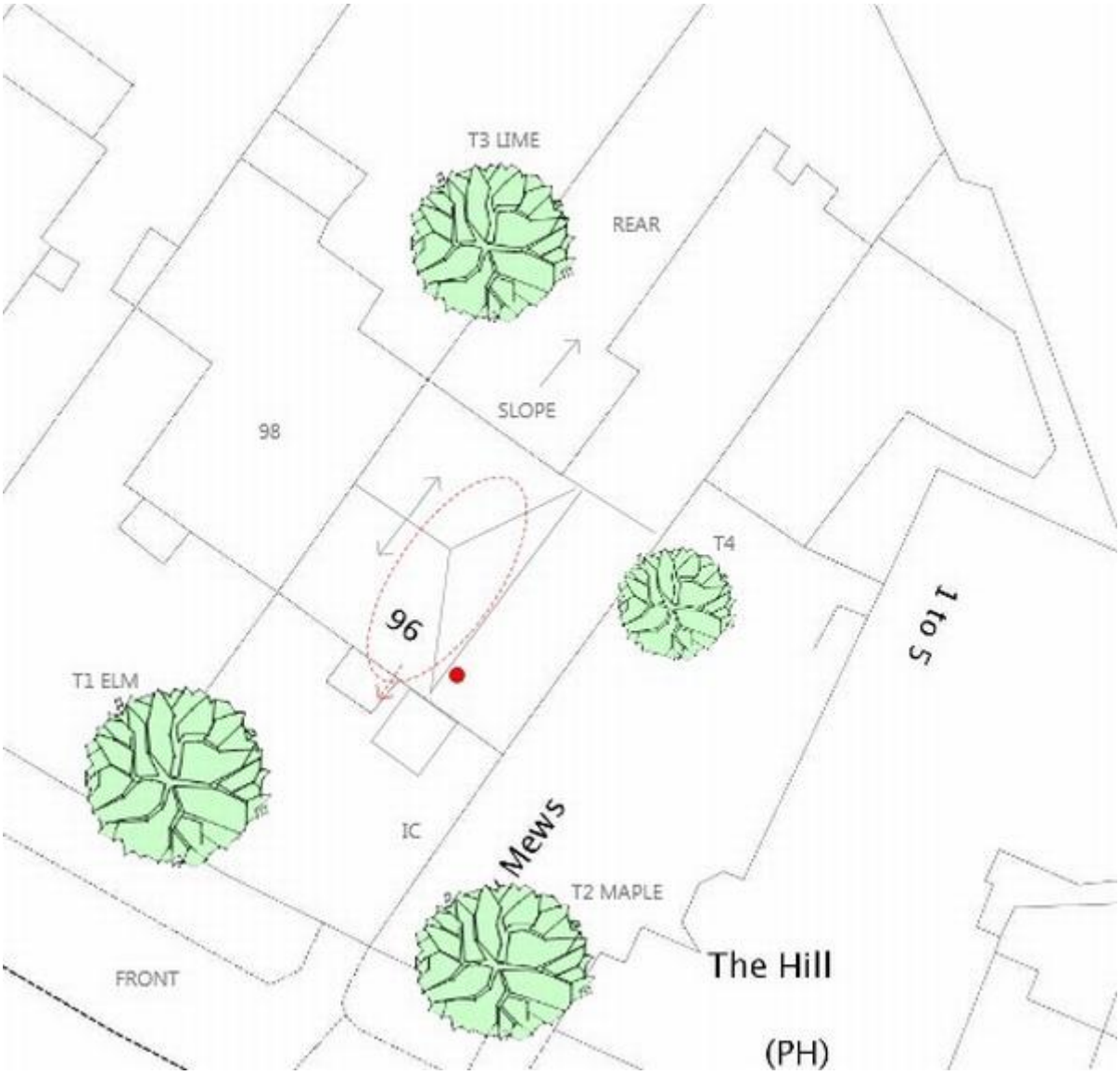
Our Reference	**IFS-AVI-SUB-14-0052426**
Claim Reference	**14C600459**
Prepared for	**Aviva**

Claim Details:

Report Date	**15 August 2014**
Policyholder	**Hill Limited**
Address	**96 Haverstock Hill, London, NW3 2BD**

SITE PLAN NOT TO SCALE

This plan is diagrammatic only and has been prepared to illustrate the general position of the property and its relationship to nearby drains and trees etc. The boundaries are not accurate, and do not infer or confer any rights of ownership or right-of-way. OS images provided by Environmental Services.



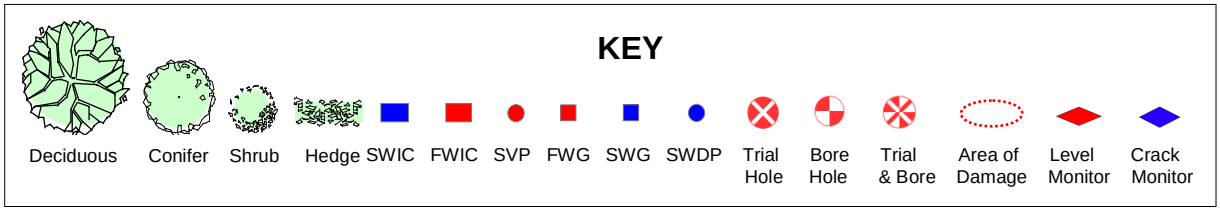


FIGURE 1 Site Plan

INTRODUCTION

We have been asked by your building Insurers to comment on suspected subsidence damage to the above property. Our report briefly describes the damage, identifies the cause and gives recommendations on the required remedial measures.

Our report should not be used in the same way as a pre-purchase survey. It has been prepared specifically in connection with the present insurance claim and should not be relied on as a statement of structural adequacy. It does not deal with the general condition of the building, decorations, services, timber rot or infestation etc.

Investigations have been carried out in accordance with the guidance issued by The Institution of Structural Engineers. All directions are given relative to an observer facing the front of the property. We have not commented on any part of the building that is covered or inaccessible.

CIRCUMSTANCES

Following the recent appearance of cracking, being concerned that the damage may be due to subsidence a claim for subsidence damage was submitted to insurers. The policyholder advised that the building damage to the Garden Flat commenced suddenly over July 2014. The policyholder also advised that the Garden Flat of the property had been extensively renovated at the time of purchase in 2011. Finally, the policyholder also advised that the property had been the subject of a past subsidence claim for the front right entrance steps and portico in 2003.

PROPERTY

The property is a four storey large converted semi-detached house of unknown construction with solid brickwork walls surmounted by a hipped tile covered roof.

The property has 2 bedrooms.

FIGURE 2 Front Elevation

HISTORY

Date of Construction	1850
Purchased	2011
Policy Inception Date	31 August 2001
Damage First Noticed	01 July 2014
Claim Notified To Insurer	18 July 2014
Date of our Inspection	11 August 2014

ADEQUACY OF BUILDING SUM INSURED
The current building sum insured is considered adequate

TOPOGRAPHY
The site slopes gently downwards from front to rear.

GEOLOGY
Reference to the 1:50,000 scale British Geological Survey Map (Drift Edition) suggests the drift geology of the site is No drift geology recorded overlying a solid geology of London Clay.

VEGETATION
The following vegetation was recorded as being within potential influencing distance of the property:-

Type	Height	Distance	Owner
Elm	20m	5m	Policyholder
Maple	20m	12m	Neighbour
Lime	20m	6m	Neighbour

DAMAGE RELATING TO THE CLAIM
The following is a summary of the damage relating to the Insurance claim, including any unrelated damage in the same vicinity, with supporting photographs where appropriate.

INTERNALLY
GARDEN FLAT:
FRONT LEFT SIDE BEDROOM:
Diagonal tapering cracks in the region of 10 - 15 mm in width were recorded to the right side and rear walls of the bedroom around the ensuite and hallway doors. A further vertical tapering crack in the region of 1 - 2 mm in width was recorded to the front right of the room underside of the window.

FRONT RIGHT SIDE BEDROOM:
Diagonal tapering cracks in the region of 2 - 3 mm in width were recorded to the right side wall of the bedroom to underside of the window and to the front wall above the hallway door.

FRONT RIGHT STUDY:
The study timber flooring was recorded with downwards movement resulting in a gap with the skirting.

HALLWAY:
The hallway timber flooring was recorded with downwards movement of approximately 25 - 30 mm resulting in a gap with the skirting. Diagonal tapering cracks in the region of 2 - 3 mm in width were recorded to the left side wall of the hallway to above both the bedroom and bathroom doors.

BATHROOM:
A horizontal and vertical tapering crack in the region of 1 - 2 mm in width was recorded to above the hallway door. A vertical crack in the region of 1 mm in width was recorded to the rear tiled surface to the rear of the bathroom.

REAR LEFT LOUNGE:
A number of both horizontal and diagonal cracks in the region of 1 - 3 mm in width were recorded to the front right of the lounge to above the hallway and kitchen doors.

REAR RIGHT KITCHEN:
A number of both horizontal and diagonal cracks in the region of 1 - 3 mm in width were recorded to the front right of the lounge to above the hallway and kitchen doors.

GROUND FLOOR FLAT - RIGHT SIDE KITCHEN:
A number of both horizontal and diagonal cracks in the region of 1 - 3 mm in width were recorded to the front left of the kitchen to above the hallway and lounge doors.

EXTERNALLY

FRONT ELEVATION, ENTRANCE STEPS AND PORTICO:
Crack damage was recorded in the form of render deterioration to both the front entrance steps, portico and boundary walls to the property.

RIGHT SIDE ELEVATION:
No crack damage was recorded.

REAR ELEVATION:
No crack damage was recorded.

FIGURE 03 Rear Elevation.

FIGURE 04 Crack damage to the garden flat front left bedroom.

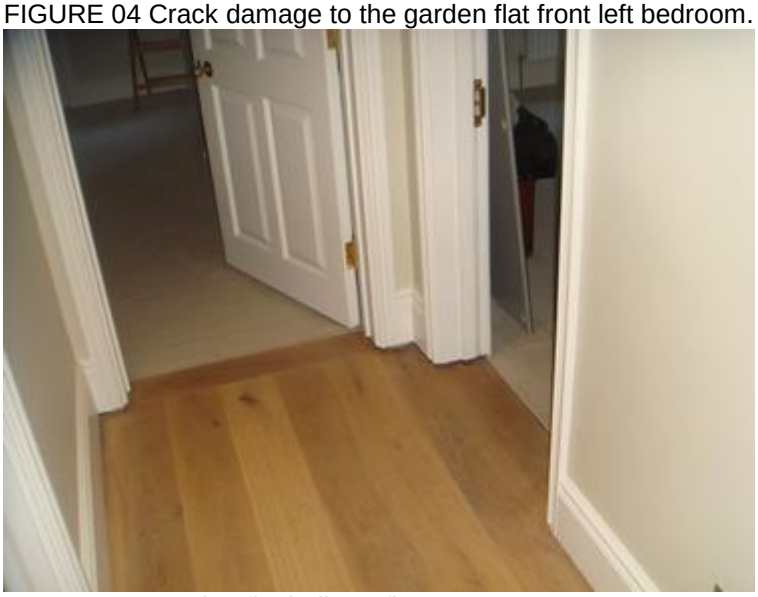


FIGURE 05 Garden flat hallway floor movement.

FIGURE 06 Ground floor flat crack damage recorded to the front right kitchen.

DAMAGE CATEGORY

It is common practice to categorise the structural significance of the damage in this instance, the damage falls into Category 3 (Moderate).

Category 0	Negligible	<0.1 mm
Category 1	Very Slight	0.1 - 1mm
Category 2	Slight	>1 but < 5mm
Category 3	Moderate	>5 but < 15mm
Category 4	Severe	>15 but < 25mm
Category 5	Very Severe	>25mm

Classification of damage based on crack widths

DISCUSSION

The diagonal aspect of the cracks, together with the fact that they increase in width with height is indicative of subsidence as a result of shrinkage of the clay subsoil due to the moisture extracting influence of an Elm tree located to the front of the subject property and a Maple tree situated within the adjoining property at Hay Mews Haverstock Hill.

The indicated mechanism of movement is downwards to the right side of the property.

REQUIREMENTS

In order to stabilise the property and prevent further damage occurring in the future, the cause of the movement needs to be addressed, with site investigations being required.

Following completion of tree management works, the property will then be monitored to confirm stability.

Provided the property stabilises as expected, no foundation stabilisation works are considered necessary, with structural repairs of the superstructure being required only, together with internal redecoration of the damaged rooms.

Generally cracks 1mm wide or less will be filled (internal) or re-pointed (external). Internally, where the cracks are wider than 1mm, but less than 5mm the underlying brickwork or block work will be exposed and prior to making good the plaster finishes the cracking will be covered with expanded metal lathe. Where cracks are 5mm across or wider, some form of bed joint reinforcement will be introduced.

Raymond Borrow
Engineer
Subsidence Management Services