

Engineer's Report

Our Reference	IFS-DLG-SUB-13-0044404
Claim Reference	013091913
Prepared for	Direct Line

Claim Details:

Report Date	04 October 2013
Policyholder	Mrs Potter
Address	25 Galaxie Road, Waterlooville, Hampshire, PO8 9AT

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 Marishal Thompson Group. © Crown Copyright 2009. All rights reserved. Lincence number 100043218

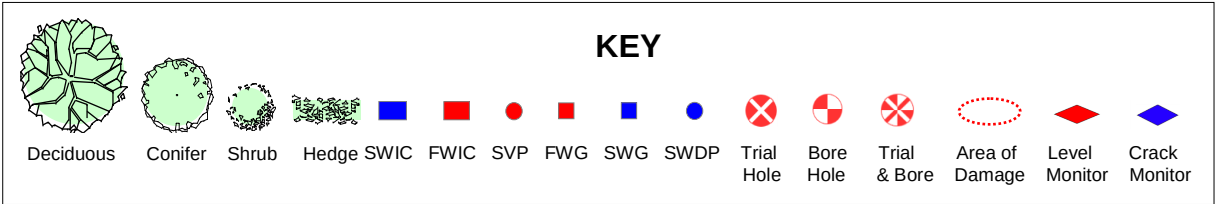


FIGURE 1 Site Plan

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

The insured has become aware of cracks developing within the property over the last year and fearing the damage may be related to subsidence, insurers were informed of a potential claim.

PROPERTY

The property is a two storey semi-detached house of traditional construction with part timber clad brickwork walls surmounted by a gabled and ridged tile covered roof.

The property has 3 bedrooms. The property has an extension to the rear which was constructed prior to the insured's purchase.



FIGURE 2 Front Elevation

HISTORY

Date of Construction	1970
Purchased	2008
Policy Inception Date	14 February 2012
Damage First Noticed	01 March 2013
Claim Notified To Insurer	24 September 2013
Date of our Inspection	03 October 2013

ADEQUACY OF BUILDING SUM INSURED

The current building sum insured is considered adequate

TOPOGRAPHY

The property is located within a quiet residential cul de sac and the site is generally flat although there is a drop of approximately 600mm down beyond the left hand boundary.

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 Oldhaven, Blackheath, Woolwich, and Reading and Thanet beds.

VEGETATION

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

Type	Height	Distance	Owner
Ash	12m	8m	Policyholder
Laburnum	4m	1m	Policyholder
Beech	3m	7m	Policyholder
Oak	25m	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

Within the conservatory, there is a vertical crack along the right hand wall which increases in width with height. The roof is noted to be leaking within the conservatory and the right hand wall is suffering from water ingress.

Within the living room, there are cracks along wall ceiling junctions and the coving was noted to have been pulled and is coming adrift on the rear elevation.

Within the kitchen, there are cracks along the front and right hand elevation, indicative of the outward movement of the left hand flank wall.

Within the front left hand bedroom, there is a vertical crack below the radiator on the front elevation and further cracking along the junction of the front and left hand elevations.

Within the rear left hand bedroom, there are cracks along wall ceiling joints and cracking around the junction of the front and left hand elevation.

No other damage of any structural significance was noted from our inspection.

EXTERNALLY

On the front elevation, there is a diagonal tapering crack which increases in width with height and tends towards the left hand elevation. The brickwork below the kitchen window has become loose and the window has elongated.

No other damage of any structural significance was noted from our inspection.



FIGURE 03 Verical crack on RHS of conservatory.

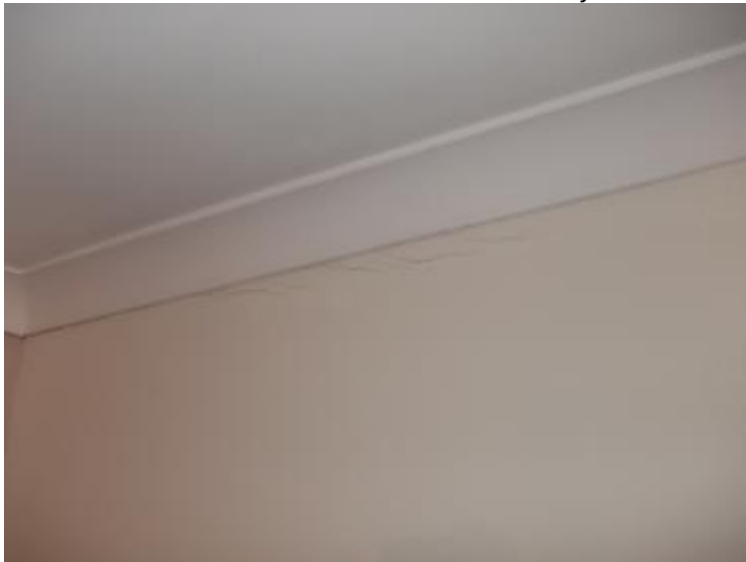


FIGURE 04 Stress crack along wall ceiling joint in lounge



FIGURE 05 cracks on front elevation below kitchen window



FIGURE 06 Diagonal crack above kitchen window

DAMAGE CATEGORY

It is common practice to categorise the structural significance of the damage in accordance with the classification given in Table 1 of Digest 251 produced by the Building Research Establishment. In this instance, the damage falls into Category 3 (Moderate).

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

Extract from Table 1. B.R.E Digest 251
Classification of damage based on crack widths

SITE EXCAVATIONS

Site investigations will shortly be undertaken by a specialist contractor.

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 Ash tree and local Laurel shrubs and a Leylandii to the rear of the conservatory. To the left hand boundary of the property in the neighbour's garden, a number of established Oak trees and other semi mature trees may also be within potential influencing distance of the property.

The nature and pattern of damage is consistent with subsidence about the left hand corner of the house and the damage within the conservatory is equally consistent, with differential downward movement about the rear. The cause appears to be large trees detailed above, which are extracting moisture from clay soil below the foundations and in turn, causing them to shrink. As the soil shrinks, it reduces support to the underside of the foundation and hence stress fractures occur. Removing the trees, allows the soil to rehydrate, swell and upward recovery is often experienced, such that many of the cracks close as a consequence.

REQUIREMENTS

In view that the damage to the property is considered to be as a result of an insured event, a valid claim arises under the terms of policy cover, subject to the applicable excess.

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. As some of the trees implicated are known to have tree preservation orders it may be necessary to complete a program of monitoring to provide a link between the vegetation and the ongoing foundation movement and this can cause delays in the progression of the claim when the local authority are reluctant to sanction the trees removal without extensive evidence.

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.

Spencer Caizley

Engineer

InFront Innovation Subsidence Management Services