



Subsidence Claim

Engineer's Report

Our Reference	IFS-RSA-SUB-10-0020083
Claim Reference	201006050197
Prepared for	RSA

Claim Details:

Report Date	19 July 2010
Policyholder	Mr Grattan
Claim address	4 Hermitage Gardens, Waterlooville, Hampshire, PO7 7PR

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 Dotted Eyes. © Crown Copyright 2009. All rights reserved. Licence number 100019918

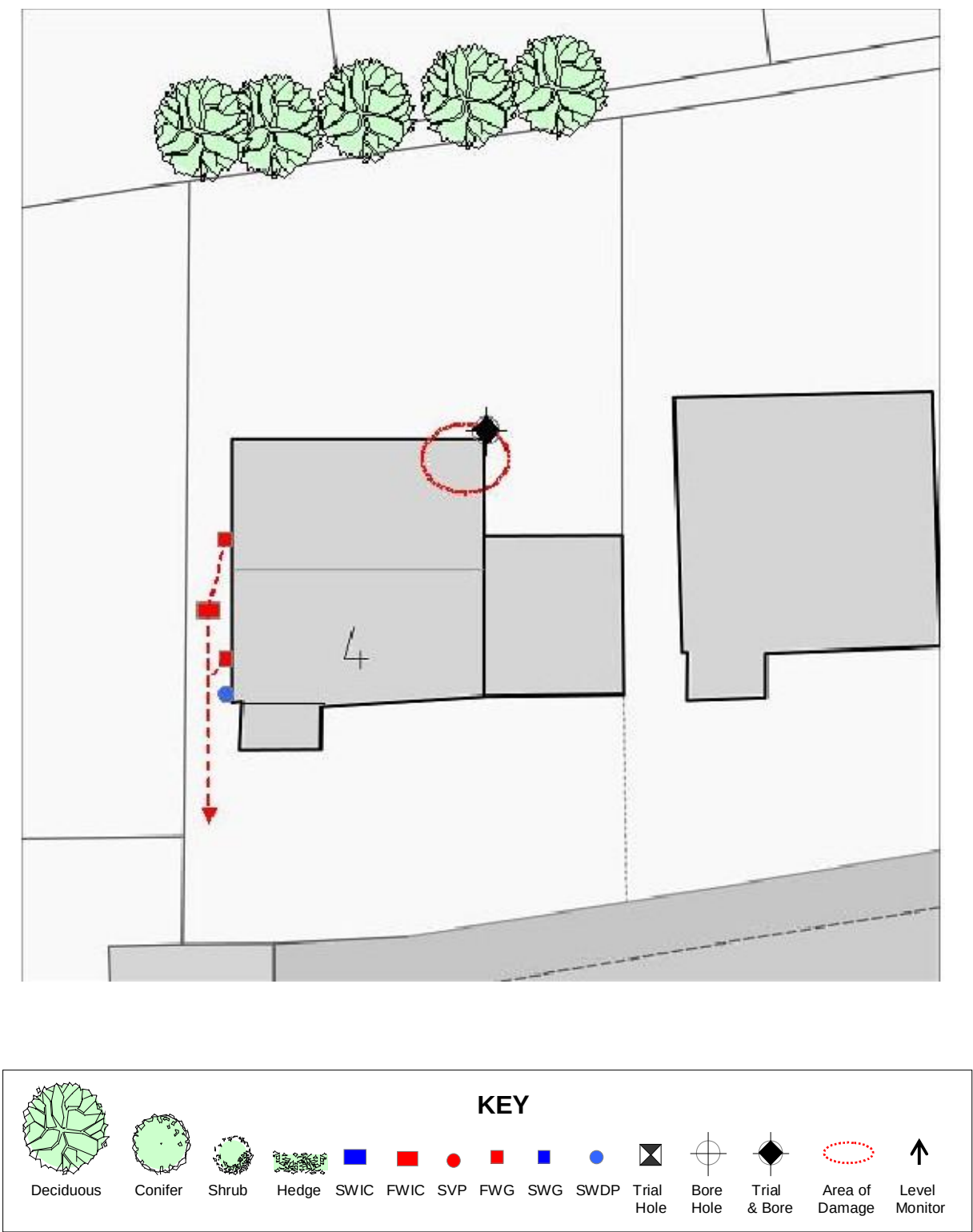


FIGURE 1 - Site Plan

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 policyholder has lived in the property since 1978. Sitting in the garden in early June he noticed the gap beneath the damp proof course at the rear corner. Since notifying a claim to insurers on 21st June, the gap has widened considerably initialing just accommodating a piece of board about 15mm thick now being 22mm wide.

PROPERTY

The property is a two storey detached house of traditional construction with part tile hung brickwork walls surmounted by a gabled tile covered roof.

The property has 4 bedrooms. A double flat roofed garage is attached to the right flank elevation.



FIGURE 2 – Front Elevation

HISTORY

Date of Construction	1973
Purchased	01 June 1978
Policy Inception Date	12 April 2010
Damage First Noticed	07 June 2010
Claim Notified To Insurer	21 June 2010
Date of our Inspection	14 July 2010

ADEQUACY OF EXISTING BUILDING SUM INSURED

The current building sum insured is considered adequate

TOPOGRAPHY

The property is situated on a level within an established residential suburb of Waterloooville surrounded by properties of similar age and style. Mature oak trees mark an original field beyond the rear boundary fence. Drainage is along the left flank to the main sewer and remote from the damage.

GEOLOGY

Reference to the 1:50,000 scale British Geological Survey Map (Drift Edition) suggests the drift geology of the site is Clay 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
Oak	12m	12m	Neighbour

DAMAGE RELATING TO THE CLAIM

The following is a summary of the damage relating to the Insurance claim, including any damage noted in the same vicinity, with supporting photographs where appropriate. Our report and damage description should not be used in the same way as a pre-purchase survey and should not be relied on as a statement of structural adequacy or general condition of the property.

INTERNALLY**DINING ROOM**

- Diagonal tapered crack 1mm wide from window to underside of ceiling
- Diagonal tapered crack 1mm wide from LR door to underside of ceiling

LIVING ROOM

- Diagonal tapered crack 1mm wide from DR door to underside of ceiling

REAR BEDROOM (above DR)

- Diagonal tapered crack 1mm wide from window to underside of ceiling

EXTERNALLY

REAR ELEVATION

- Horizontal gap 22mm wide at damp proof course level from patio door to corner continuing around corner to right flank elevation
- Vertical stepped tapered crack 5.5mm wide beneath patio door

ADDITIONAL DAMAGE NOT RELATED TO THE CLAIM

No other significant damage was noticed during the inspection.



FIGURE 3 Rear Wall_01



FIGURE 4 Rear Corner



FIGURE 5 Dining Room



FIGURE 6 Rear Bedroom

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

INVESTIGATIONS

SITE EXCAVATIONS

No investigations were undertaken on this occasion, site investigations will however shortly be arranged.

DRAINS

No investigation of the drainage was undertaken as there is no drainage in the vicinity of the damage.

MONITORING

In view of the nature of the damage, crack width monitoring will be undertaken. 6 monitoring visits will be undertaken at eight-week intervals.

DISCUSSION

The nature of the cracking at the rear corner is indicative of a minor episode of subsidence. The foundation at the rear corner has subsided and we believe that the cause is shrinkage of the clay subsoil caused by root activity from the mature oak trees beyond the rear boundary. Shrinkage of clay is reversible by removal or reduction of nearby vegetation. Clay soils will, in time, recover to their normal moisture content and the cracks will close. Consideration therefore needs to be given to the removal or reduction of the dominant vegetation.

Damage resulting from clay shrinkage subsidence is covered under the subsidence cover offered by the buildings insurance policy subject to a £1000 excess.

REQUIREMENTS

Subsidence damage resulting from clay shrinkage is covered under the subsidence cover offered by the buildings insurance policy subject to a £1000 excess.

We recommend a site investigation to confirm the cause. A trial hole will be excavated at the rear corner to determine the depth of the foundation, the nature of the subsoil and the presence and type of tree roots. If the site investigation results confirm our diagnosis it will be necessary to undertake removal or reduction of offending vegetation. Our further advice on the extent of vegetation removal and the parties responsible for the cost of this work will be advised following the site investigation. This may involve consultation with an Arborist in relation to the extent of the vegetation removal.

We have fixed studs over the main cracks externally. Periodic readings will be taken over a six month period although it may be necessary to extend this depending on the outcome of our approach to the neighbour. Monitoring is a useful diagnostic tool. Generally, cracks that open and close are caused by clay shrinkage and swelling whereas cracks that continue to open without closing are caused by leaking drains or other water related problems. Monitoring will enable us to determine when movement has ceased and when repairs may be carried out. It is carried out in accordance with the recommendations of the Building Research Establishment.

When we are satisfied that the building is stable, repairs will be undertaken to the building as follows

Dining Room repair cracking on rear wall repair cracking on LR wall redecorate room

Living Room repair cracking on DR wall redecorate room

Rear Bedroom repair cracking on rear wall redecorate room

Rear and Flank Elevations fill horizontal cracking repair vertical crack beneath patio door

If, despite the foregoing, there is further movement, then a limited scheme of underpinning may be required but this is unlikely given that the cause of the problem can be eliminated.

Richard Baker-Jones
Engineer
Subsidence Management Services