

# Engineer's Report

|                 |                               |
|-----------------|-------------------------------|
| Our Reference   | <b>IFS-RBS-SUB-11-0031530</b> |
| Claim Reference | <b>20610816/12</b>            |
| Prepared for    | <b>Direct Line</b>            |

## Claim Details:

|              |                                                                 |
|--------------|-----------------------------------------------------------------|
| Report Date  | <b>22 November 2011</b>                                         |
| Policyholder | <b>Dr Harban</b>                                                |
| Address      | <b>The Gables, Carlton Road, Carlton, Barnsley,<br/>S71 3JD</b> |

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

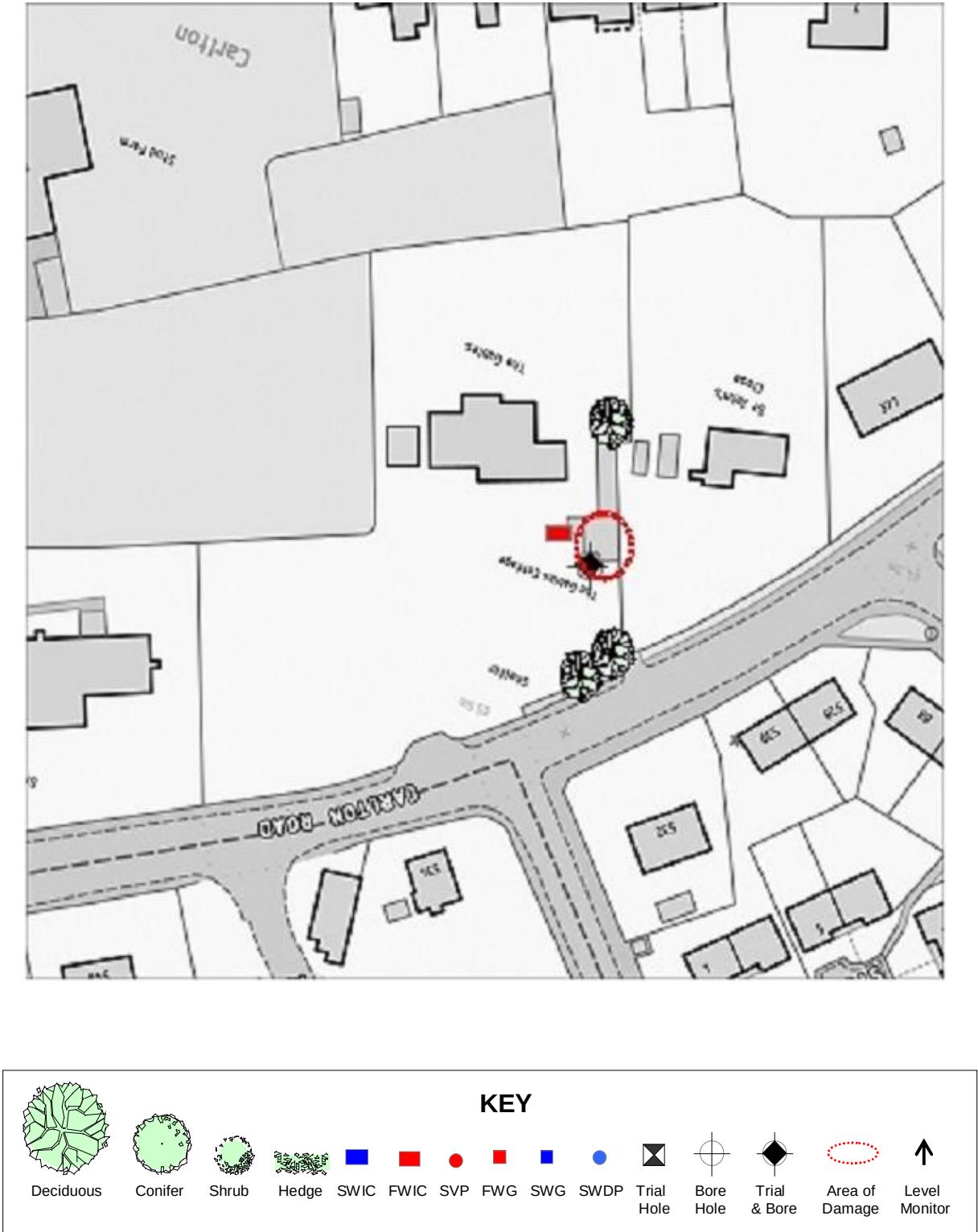


FIGURE 1 Site Plan

## 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 claim relates to damage to the detached cottage at the right hand side of the main building. Internal and external cracking was noted to the cottage, approximately 6 weeks ago, prompting the policyholder to notify a possible subsidence claim to insurers.

## PROPERTY

The property is a two storey detached house of traditional construction with stone walls surmounted by a ridged slate covered roof.

The property has 9 bedrooms. The insured property is a grade II listed building. There is a detached cottage at the right hand side of the main building, forming part of the insured premises. No recent structural alterations appear to have been undertaken to the cottage.



FIGURE 2 Front Elevation

## HISTORY

|                           |                  |
|---------------------------|------------------|
| Date of Construction      | 1825             |
| Purchased                 | 1993             |
| Policy Inception Date     | 08 February 1995 |
| Damage First Noticed      | 10 October 2011  |
| Claim Notified To Insurer | 18 October 2011  |
| Date of our Inspection    | 16 November 2011 |

## ADEQUACY OF BUILDING SUM INSURED

The current building sum insured is considered to be inadequate and should be reassessed, being recommended that it is increased to a minimum value of £823000

## TOPOGRAPHY

The property is located in the village of Carlton, in Barnsley, South Yorkshire, next to the church grounds. The ground profile slopes down very gently from left to right.

## 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 Lower Westphalian (mainly Productive Coal Measures).

## VEGETATION

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

| Type      | Height | Distance | Owner        |
|-----------|--------|----------|--------------|
| Broadleaf | 16m    | 19m      | Policyholder |
| Broadleaf | 11m    | 14m      | Policyholder |
| Broadleaf | 18m    | 11m      | Policyholder |
| Shrubs    | 4m     | 2m       | Policyholder |

## 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

#### Lounge

Up to approximately 10mm wide cracking was noted above and below the window openings on the front and side walls, with some minor vertical cracking also evident at the rear left corner of the room.

The damage was generally orientated towards the right hand side of the cottage.

#### Dining room

Up to approximately 1/2mm wide cracking was noted below the front window and also to the front right corner junction, with some cracking up to 3mm wide also evident beneath the staircase, on the right hand side wall.

#### Kitchen

Minor cracking, up to approximately 1mm wide was noted above the front kitchen window.

#### Bedroom

Up to approximately 1mm wide cracking was noted below the front window, with 1/2mm wide cracking also evident along the junction between the walls and ceiling.

**EXTERNALLY**

Stepped diagonal cracking, up to approximately 10mm wide, was noted above and below the front and side lounge window openings, and also to the rear elevation of the cottage, reflecting the internal damage within the various rooms.



FIGURE 3 External damage to cottage



FIGURE 4 Internal damage to lounge



FIGURE 5 Internal damage to dining room

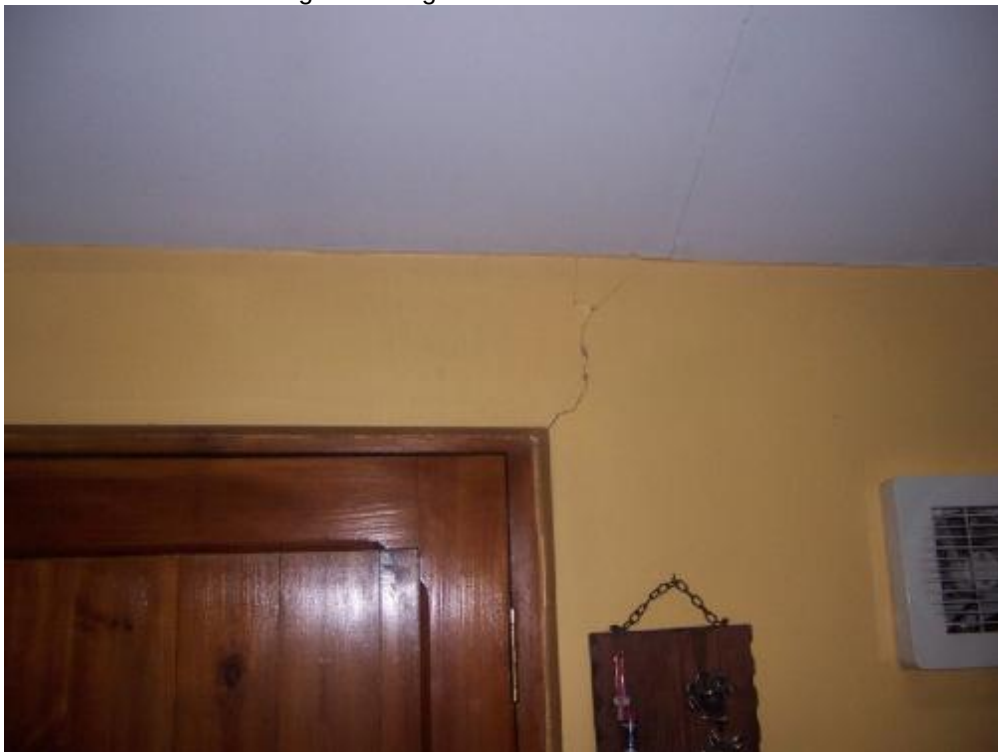


FIGURE 6 Internal damage to kitchen

### 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

Site investigations will shortly be undertaken by a specialist contractor.

### DRAINS

Drainage investigations in the vicinity of damage will shortly be undertaken by a specialist contractor.

### MONITORING

3 crack width visits will be undertaken at 8-week intervals.

## DISCUSSION

The pattern and location of the cracks to the cottage, together with the fact that they increase in width with height is indicative of minor localised subsidence. This appears to have occurred as a result of shrinkage of the clay subsoil due to the moisture extracting influence of nearby vegetation.

In particular, the large trees close to the front garden boundary appear to have been the main contributory factors. The drains at the front right corner of the cottage may also be leaking and hence affecting ground conditions.

## 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. An arboricultural report will also be arranged to consider the extent of any vegetation management works required.

Following completion of any necessary tree works and/or drain repairs, the property will then be monitored to reaffirm stability.

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

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/stonework 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 may be introduced, where practicable.

ENGINEERS REPORT

The Gables, Carlton Road, Carlton, Barnsley

**Afzal Ahmed**  
**Engineer**  
**Subsidence Management Services**