



Subsidence Scanning Centre, 2 The Boulevard, City West Office Park, Gelderd Road, Leeds, LS12 6NY

Policyholder: [REDACTED]

Subject Property Address:

31 Firs Avenue
WATERLOOVILLE
Hampshire
PO8 8RS

INSURANCE CLAIM

CONCERNING SUBSIDENCE DAMAGE

ENGINEERING APPRAISAL REPORT

This report is prepared on behalf of [REDACTED] for the purpose of investigating a claim for subsidence. It is not intended to cover any other aspect of structural inadequacy or building defect that may otherwise have been in existence at the time of inspection.

Date: 24/11/2025

Our Ref: 9633067

INTRODUCTION

This report has been prepared by our Chartered Builder, Neville Ingley, and is being investigated in accordance with our Project Managed Service.

Unless stated otherwise all directions are referred to as looking towards the front door from the outside the property.

DESCRIPTION OF BUILDING

The subject property is a detached house in a residential estate on a plot that is steeply sloping down. The overall layout is recorded on our site plan.

The general layout of the site is shown on the attached sketch plan within the site investigation report.

There are trees within influencing distance of the property. A substantial Oak tree 19m in height is located in the rear garden of 2 Edwards Close 3.2m from the risk address, no other vegetation is implicated.

The drainage system is a separate system.

CIRCUMSTANCES OF DISCOVERY OF DAMAGE

The policyholder and homeowner, [REDACTED], first discovered the damage in August 2022. The policyholder and family noticed a single crack while in the garden and on further investigation discovered other cracks all of which have worsened since the damage was reported. The policyholder subsequently informed Insurers.

NATURE AND EXTENT OF DAMAGE

Site notes showing the layout of the site and the damage are attached.

Description and Mechanism

The principal damage takes the form of stepped, vertical and horizontal cracking of the external brickwork to the left-hand side of the house and attached garage predominantly on the front and rear elevations with corresponding internal damage to plaster finishes.

The indicated mechanism of movement is a downward rotation towards the Oak tree in the neighbouring garden.

Significance

The level of damage is moderate, and is classified as category 3 in accordance with BRE Digest 251 - Assessment of damage in low-rise buildings.

Onset and Progression

██████████ has advised that damage first commenced in August 2022.

We consider that the damage has occurred recently.

It is likely that movement will be of a cyclical nature with cracks opening in the summer and closing in the winter.

SITE INVESTIGATIONS

Reference to the solid and drift geological survey map shows the anticipated subsoil as clay.

The ground investigation was carried out by CET Safehouse Ltd on 23/08/2024. For details of the trial pit and borehole locations, together with test results, please refer to the attached CET factual report.

Trial Pit 1/Borehole 1

This was located at the front of the property at the interface between the main house and the garage.

The underside of the garage foundation is at 170mm below ground level and is believed to be a concrete raft construction the foundation of the main house is at a depth of 550mm with the foundation comprising a mass a concrete trench fill. The soil beneath the property foundations has been identified as very stiff light brown, grey veined silty clay thinly laminated with orange silt and fine sand. with roots encountered and identified as oak.

The moisture readings show desiccation towards the underside of the foundations reducing as depth increases and the moisture content rises.

Samples of root taken from beneath the foundations have been analysed and originate from an Oak tree. There is an Oak tree located 3.2m from the left-hand elevation of the property in the garden of 2 Edwards Close which is in the ownership of a private third party but which is protected by a tree preservation order.

Trial Pit 2 Borehole 2

This was located at the rear of the property at the interface between the main house and the garage.

The underside of the garage foundation is at 200mm below ground level and is believed to be a concrete raft construction the foundation of the main house is at a depth of 500mm with the foundation comprising a mass a concrete trench fill. The soil beneath the property foundations has been identified as very stiff light brown, grey veined silty clay thinly laminated with orange silt and fine sand. with roots encountered and identified as oak.

The moisture readings show desiccation towards the underside of the foundations reducing as depth increases and the moisture content rises.

Samples of root taken from beneath the foundations have been analysed and originate from an Oak tree. There is an Oak tree located 3.2m from the left-hand elevation of the property in the garden

of 2 Edwards Close which is in the ownership of a private third party but which is protected by a tree preservation order.

The site investigation results confirm the presence of a shrinkable clay soil and roots of nearby oak tree capable of exacerbating clay shrinkage which the moisture content profile supports.

Following drainage Investigations repairs were carried out in July of 2025 to drainage runs from rainwater pipes on the right-hand side of the property.

The site investigation report confirms the nature of the subsoil indicated by the available geological information and confirmed by the policy holder.

MONITORING

Level monitoring has been underway since August 2023 and demonstrates a pattern of seasonal movement indicative of root exacerbated clay shrinkage.

In summary, the results show a recovery of between 7 and 13.6mm over the period from August 2023 to February 2024 as hydration of the clay has occurred over the wetter winter period.

Results of the level monitoring carried out to date are attached in table/graphical format together with a plan showing the location of the monitoring studs within the insured property.

CAUSE OF DAMAGE

Taking an overview of all the site investigation results referred to above, it is my opinion that the cause of damage results from clay shrinkage subsidence brought about by the action of roots from the oak tree located in the

I base this view on the fact that the foundations of the property in the area of damage have been built at a relatively shallow depth, bearing onto shrinkable clay subsoil. The soil is susceptible to movement because of changes in volume of the clay with variations in moisture content and analysis of the site investigation results indicates that the soil has been affected by shrinkage. Oak roots are present in the clay subsoil beneath the foundations. In this case, I am satisfied that the damage has therefore been caused by clay shrinkage subsidence following moisture extraction by the oak tree.

I have also considered whether there could be any other influencing factors and I am satisfied that there is no factor, other than the oak tree, that is causing the damage.

RECOMMENDATIONS

It is recommended that the Oak tree located in the garden of 2 Edwards Close and close to the property is removed to mitigate against further movement. Sedgwick Mitigation Centre will liaise with the Local Authority in this regard {and a copy of OCA UK Limited's report is attached herewith}.

In summary, based on the site investigation results, the timing of the investigation and the nature and extent of damage within the property, I have concluded that significant heave and/or ground recovery will not occur should the vegetation management described above be undertaken.

REPAIRS

If the third-party tree is removed, then I consider that works including structural crack repair and redecoration at an approximate cost of £28,000.00 will be appropriate to repair the damage in this case.

If the third-party tree is not removed then it may be necessary to consider underpinning of the foundations of the property in the area of damage, in addition to structural crack repair and redecoration needed to repair the damage. The total cost of this option is estimated at £85,000.00.

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