



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

Policyholder:



Subject Property Address:

23 Shepherds Hill
LONDON
N6 5QJ

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: 29/07/2026

Our Ref: 8714923

INTRODUCTION

This report has been prepared by our Building Consultant Michael Whittington , and is being investigated in accordance with our Project Managed Service.

The claim is primarily concerned with damage to the rear bay window and single storey section of the property. We note the property is located within a conservation area and both implicated Sycamore trees have Tree Preservation Orders (TPOs).

Following previous repairs during circa September 2022 (as part of the initial claim which was notified to insurers during 2019), with the implicated vegetation remaining in-situ the damage re-occurred within the same zone of damage during the summer of 2024.

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 constructed in 1880, which has been converted into self-contained flats, in a suburban area on a plot that is steeply sloping down from front to rear and from left to right. The neighbouring garden to the right-hand side is 1.8 metres lower than the subject garden.

There are trees within influencing distance of the property. The Sycamore trees have been previously reduced, however the damage to the risk address re-occurred circa summer 2024.

Within the garden of the property and neighbouring property No.25 there are two substantial Sycamore trees to the rear right of the house which are approximately 18 metres high and within approximately 10m from the rear elevation.

CIRCUMSTANCES OF DISCOVERY OF DAMAGE

The policyholder and homeowner, [REDACTED], first discovered the damage in Summer 2019.

Cracks noted in lounge walls Insurers were notified of the damage. Following previous repairs during circa September 2022, with the implicated vegetation remaining in-situ the damage re-occurred within the same zone of damage during the summer of 2024.

NATURE AND EXTENT OF DAMAGE

The main area of damage is to the basement flat and takes the form of vertical and diagonal cracks to walls and ceilings of the rear rooms. Cracking has also been noted to the rear elevation brickwork at ground floor level.

The level of damage is slight to moderate and is classified as category 2 and 3 in accordance with BRE Digest 251 - Assessment of damage in low-rise buildings.

Onset and Progression

[REDACTED] has advised that damage first commenced during 2019 and has got progressively worse overtime.

We consider that the damage has occurred recently within the confirmed timescales.

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

SITE INVESTIGATIONS

Site Investigation No.1

The site investigation was undertaken by CET Structures Ltd on 1st November 2019.

The trial / borehole was excavated to the right-hand side of the bay window to the rear of the property and conformed a concrete foundation below spread brickwork to the base of the wall, the underside of the concrete being founded 1350mm below the surface of the ground and bearing onto a stiff, brown, grey veined, silty, sandy CLAY.

The presence of 950mm deep concrete under the spread brick footing suggests that the bay window, or part of it, has been underpinned in the past.

Further excavation by means of a hand augured borehole revealed that the band of stiff, brown grey veined, silty, sandy CLAY was 1550mm thick and is underlain by a 2.3m band of stiff, brown-grey veined, silty CLAY sitting over stiff, moist, brown very sandy CLAY extending down to the borehole termination depth of 5.0m below ground level.

Roots of live appearance up to 10mm diameter were reported to the underside of the foundation and 4mm diameter roots were recovered down to 3.0m below ground level. Samples of those roots have been independently positively identified (using anatomical analysis) as having emanated from Acer (SYCAMORE).

The recorded Plasticity Index of 38-44% to the underside of the foundation confirms the medium to high shrinkable nature of the supporting soil i.e., capable of significant volumetric change due to a variation in moisture content.

Supplementary Site Investigation No.2

In addition to our previous site investigation dated 1st November 2019, a supplementary site investigation has been arranged to confirm the cause of damage and to provide possible evidence of tree root nuisance. This supplementary investigation has been undertaken by CET Ltd on 20th October 2023.

For precise details of the trial pit and borehole location, together with test results, please refer to the attached CET 'Site Investigation Factual Report'.

The trial pit excavated to the left-hand corner of the rear elevation revealed a concrete foundation to the depth of 1.00m bearing on stiff clay.

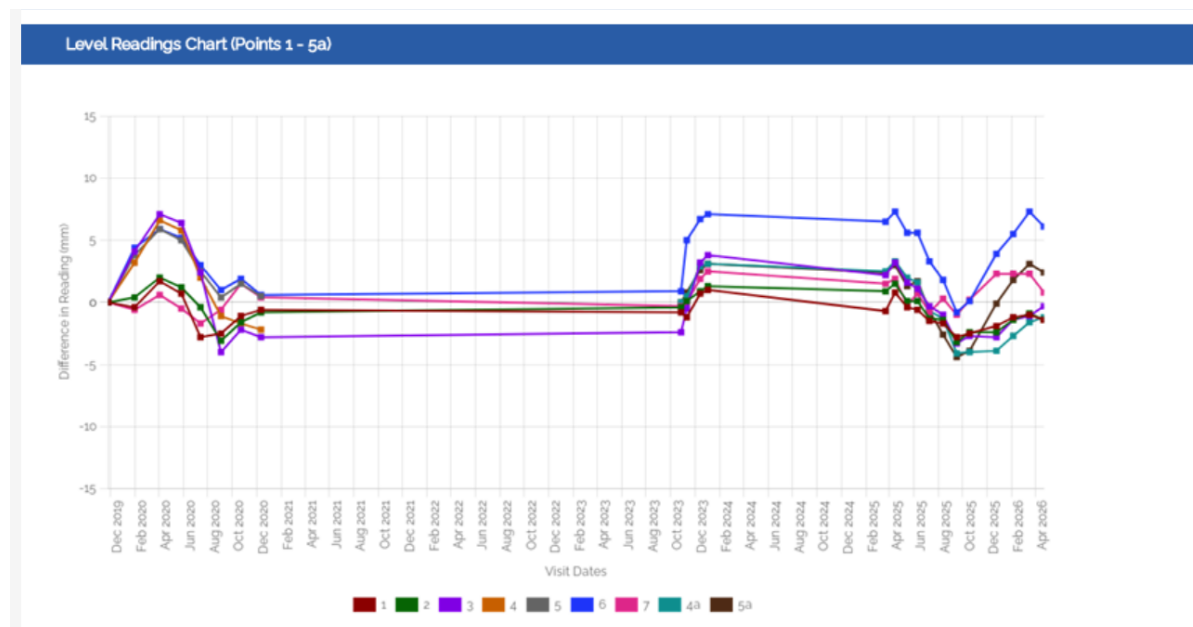
Within the trial pit a borehole was excavated down to a depth of 3.20m, which also confirmed stiff clay throughout.

Laboratory testing taken from a soil sample from the underside of the foundation have recorded a relatively low moisture content and high plasticity levels and the soil sample suction test also showed a reading of 1040, which is considered as being very high. These laboratory results would classify the soil as being very dry clay and highly shrinkable.

Roots were observed to the underside of the foundation and within the borehole down to the depth of 2.00m. These roots originate from Acer spp including sycamore.

MONITORING

With the implicated vegetation remaining in-situ, the extended level monitoring exercise has shown a pattern of cyclical movement, with significant downwards movement noted during the summer months and recovery of the winter period.



MITIGATION

We consider the damage will not progress if appropriate measures are taken to remove the cause. In this instance it is likely that the two implicated Sycamore trees that are subject to Tree Preservation Orders (TPOs) are contributing towards the cause of damage.

Previous vegetation management works in the form of tree reduction works to the Sycamore trees have failed to provide long-term stability to the rear elevation of the risk address. As shown by the latest level monitoring exercise, we have confirmation the rear elevation of the risk address has been subject to continuous cyclical movement as a result of the implicated vegetation remaining in-situ.

Following previous repairs during circa September 2022 (as part of the initial claim which was notified to insurers during 2019), with the implicated vegetation remaining in-situ the damage re-occurred within the same zone of damage during the summer of 2024. Therefore, we now recommend the two implicated Sycamore trees are now considered for removal.

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 nearby Sycamore trees located in the rear garden of the risk address and neighbouring property No.25.

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 as a result 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. tree 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 Sycamore trees.

I am satisfied that there is no factor, other than the Sycamore trees , that is causing the damage.

RECOMMENDATIONS

It is recommended that the sycamore trees located in the rear garden of the risk address and neighbouring property No.25 and within proximity to the rear elevation are removed to mitigate against further movement.

The monitoring exercise will continue following the removal of the implicated vegetation to confirm stability prior to proceeding to final repairs. Sedgwick Mitigation Centre will liaise with the Local Authority in this regard.

HEAVE ASSESSMENT

I have assessed whether significant heave/ground recovery will occur should the vegetation as referred to above be removed.

The fact that the site investigations have shown the depth of shrinkable clay beneath the underside of foundations to be quite shallow there is little chance of a significant heave problem.

There is also no evidence of significant tilt towards the tree having occurred to the house, or distortion within the property, as would be expected if a significant persistent soil moisture deficit had been set up, and where the tree was planted after the house was built.

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 Sycamore trees are removed, then I consider that works including structural crack repair and redecoration at an approximate cost of £20,000 will be appropriate in order to repair the damage in this case.

If the Sycamore trees are 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 £150,000.

Michael Whittington BSc (Hons) MCIOB AssocRICS
Building Consultant

Linda Mabhena
Claims Technician
Direct dial: +443456900179
E-mail: .