2 The Boulevard, City West One Office Park, Gelderd Road, Leeds, LS12 6NY

Policyholder: [redacted]

Subject Property Address:

34 Southwood Road
TROWBRIDGE
Wiltshire
BA14 7BZ

INSURANCE CLAIM

CONCERNING SUBSIDENCE DAMAGE

ENGINEERING APPRAISAL REPORT

This report is prepared on behalf of [redacted] or 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: 03/10/2023

Our Ref: 9473216

INTRODUCTION

The technical aspects of this claim are being overseen by our Building Consultant, Susan Bromell, in accordance with our project managed service.

The claim is primarily concerned with damage to the rear single storey extension. All references to the property are as observed facing the front of the building.

DESCRIPTION OF BUILDING AND SITE

The subject property is a detached two storey house constructed circa 1978 in a residential estate location on a plot that is level. A single storey extension was added to the rear of the property circa 1985 and a more recent two storey extension has been added to the left side of the property.

This claim relates to damage to the single storey extension.

There are trees within influencing distance of the property. An arboricultural report was obtained and more details are provided below.

DISCOVERY AND NOTIFICATION

Circumstances of Discovery	The Policyholder noticed a small crack in Summer 2021. Cracking worsened significantly during Summer 2021
Subsequent action	After obtaining a report from an Engineer, Insurers were notified early in 2022.
Claim notification	Insurers were notified on 02/02/2022.

NATURE AND EXTENT OF DAMAGE

Description and Mechanism	The main area of damage is to the rear left corner of the single storey extension and takes the form of tapered diagonal and horizontal cracking, up to 5mm, towards the left end of rear wall. The indicated mechanism of movement is downwards to the left side of the extension.
Significance	The level of damage is slight and is classified as category 2 in accordance with BRE Digest 251 - Assessment of damage in low-rise buildings.
Onset and Progression	We consider that the damage first occurred during Summer 2021. It is likely that movement will be of a cyclical nature with cracks opening in the summer and closing in the winter.

SITE INVESTIGATIONS

A site investigation was carried out by CET Structures Ltd on 23rd February 2022, and subsequent root identifications were provided on 11th March 2022. Laboratory testing was then carried out on samples obtained from a borehole installed for monitoring purposes on 15th June 2022. For full details please refer to the factual reports.

A trial pit excavated at the rear left corner of the extension confirmed the structure to build be built off a concrete raft 150mm thick over a 250 millimetre thick hardcore base bearing at a depth of 0.35m below ground level. The founding soil is silty clay with stone nodules, which is known to be of high plasticity in this area. The borehole extended through the base of the trial pit had to be terminated at a depth of 2.7m where stone obstruction was encountered. Roots recovered from the underside of the foundations and to a depth of 1.8m were tested and shown to emanate from Ash.

Laboratory testing confirmed the clay soil to be of high shrinkage potential to a depth of 5m where the borehole was terminated.

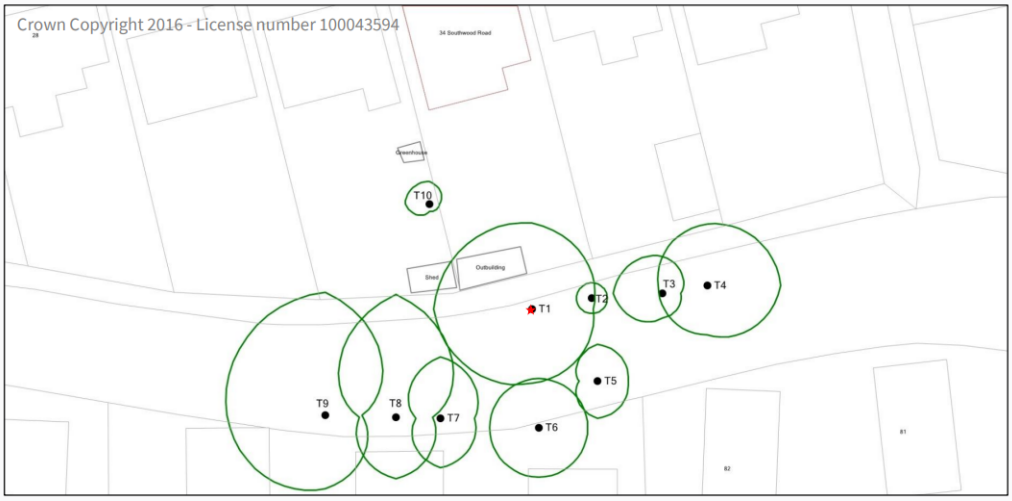
A CCTV survey of nearby drains has confirmed there are no defects to underground pipes that will be allowing an escape of water.

ARBORICULTURAL ASSESSMENT REPORT

An arboricultural assessment report was obtained from PRI in April 2022. For full details please refer to their report.

PRI have recommended removal of Ash tree (T1 on the below plan) to mitigate damage.

7.0 APPENDIX 2: SITE PLAN



Location: 34 Southwood Road, Trowbridge, BA14 7BZ
Job Ref: 226299
Survey Date: 19/04/2022 – NTS

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 Ash tree (T1) located on commercial third party land to the rear of the property.

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. Ash tree roots are present in the clay subsoil beneath the foundations and to a depth of 1.8m. In this case, I am satisfied that the damage has therefore been caused by clay shrinkage subsidence following moisture extraction by the Ash tree

I have also considered whether there could be any other influencing factors and drains have been tested and confirmed to have no defects.

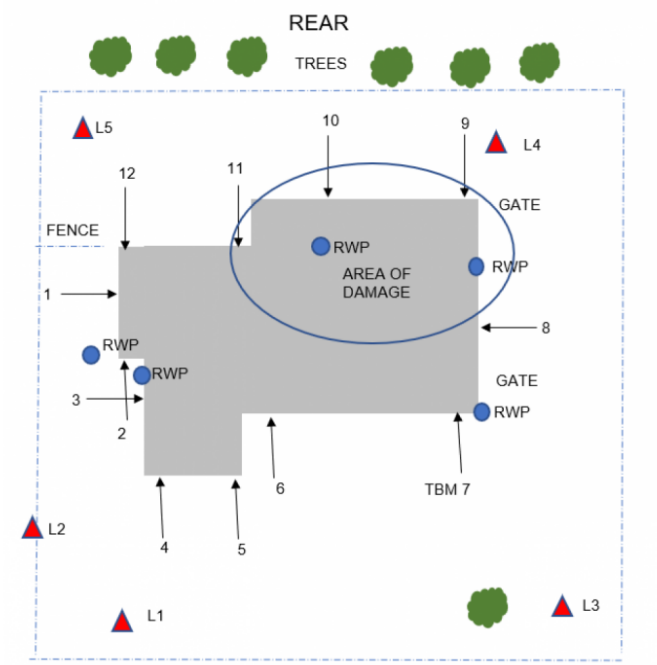
I am satisfied that there is no factor, other than the Ash tree, that is causing the damage.

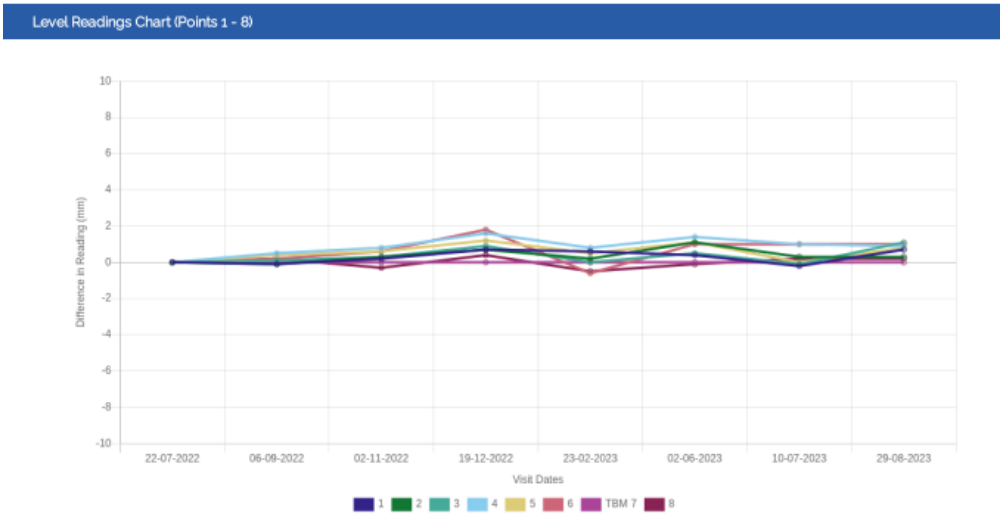
RECOMMENDATIONS

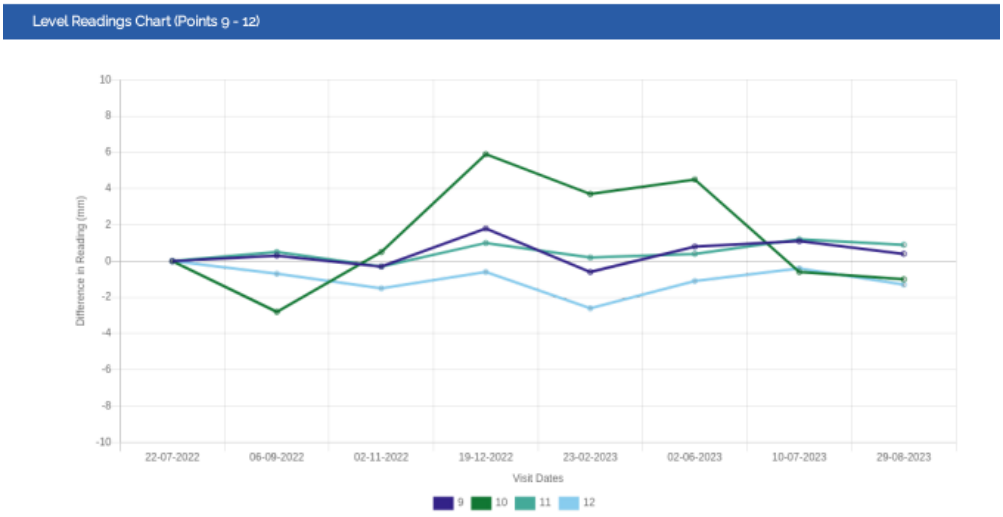
Given the above information is it recommended that the Ash tree T1 located on commercial third party land to the rear of the property be removed.

MONITORING

Level monitoring commenced in July 2022 and results have confirmed cyclical movement occurring towards the rear left corner of the extension, point 10. The level monitoring plan and results to date are shown below.







HEAVE ASSESSMENT

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

The site investigation has been undertaken during the summer months with desiccation suggested by the soil suction profile. The amount of desiccation is minor and, in my opinion, represents purely seasonal desiccation rather than a persistent soil moisture deficit.

There is no evidence of significant tilt towards the Ash tree having occurred to the extension, or distortion within the property, as would be expected if a significant persistent soil moisture deficit had been set up.

I am not of the opinion that heave of the clay subsoil is a threat to adjacent property.

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.

REPAIR RECOMMENDATIONS AND APPROXIMATE COST IMPLICATIONS

If the Ash tree is removed, then I consider that works including structural crack repair and redecoration at an approximate cost of £4000.00 will be appropriate in order to repair the damage in this case.

If the Ash 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 £40,000.

PROJECT TEAM DETAILS

Susan Bromell BEng(Hons) DipSurv CertCII - Senior Building Consultant
Cameron Wilson - *Claims Technician Specialist Subsidence Team*
Direct dial: 01924 428633
E-mail: Cameron.Wilson@uk.sedgwick.com