

INSURANCE CLAIM: ENGINEERING APPRAISAL REPORT

Name of Insured:

Address of Insured:

Flat A, 28 Leighton Road, LONDON, NW5 2QE

Situation of Damage:

Flat A, 28 Leighton Road, LONDON, NW5 2QE



This report is prepared on behalf of for the purpose of investigating an insurance claim. 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: 10/03/2022

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INTRODUCTION

The technical aspects of this claim are being overseen by our Building Consultant Gavin Catheline MCIQB, 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

The subject property is a 3-storey mid terrace house constructed c.1890 which has been converted into 2 self contained flats. The property is located on a main road in a mature residential area and on a plot that is generally level.

The claim concerns damage to the rear single storey extension affecting flat A.

CIRCUMSTANCES OF DISCOVERY OF DAMAGE

The residents first discovered the damage in summer 2020 when cracking suddenly appeared to the rear single storey extension.

London Borough of Camden were notified of the damage who obtained a report from a Structural Engineer. A claim was then notified to the Insurers.

NATURE AND EXTENT OF DAMAGE

Description and Mechanism

The main area of damage is to the rear single storey extension and takes the form of vertical and diagonal tapered cracking, sloping windows and sloping doors.

The indicated mechanism of movement is downward towards the rear.

Significance

The level of damage is very severe, and is classified as category 5 in accordance with BRE Digest 251 - Assessment of damage in low-rise buildings.

Onset and Progression

London Borough of Camden and the residents have advised that damage first commenced in Summer 2020.

We consider that the crack damage has occurred recently, but that distortions are historic.

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 investigations were carried out by CET Property Assurance Ltd on 14th January 2022 and for details of the trial pit and borehole locations, together with test results, please refer to the attached CET factual report.

Trial Pit 01/Borehole 01

This was located adjacent to the rear left corner of the rear single storey extension, within the area of damage and this revealed a concrete strip foundation with an overall founding depth of 1.1m below ground level. The founding subsoil is described as firm, wet, brown, grey veined, silty CLAY containing numerous hair & fibrous roots. The clay became stiff at 1.4m and then very stiff and fragmented from 1.7m below ground level, which extended throughout the remainder of the borehole to 3.6m when the material became too hard to hand auger. Further roots were observed within the subsoil samples to a depth of 2.7m below ground level.

The subsoil samples retrieved from borehole 01 were sent to a laboratory for analysis. This has revealed that the clay subsoil is of high and very high plasticity index, meaning that the material is very susceptible to movement due to shrinkage and swelling with variations in moisture content. This is to say that if moisture is withdrawn from the subsoil, for example due the action of roots, then shrinkage i.e. a volumetric reduction will occur. Analysis of the subsoil moisture content profiles and soil suction values indicates that the subsoil in borehole 01, within the area of damage has a moisture deficit at a depth of 2.0m below ground level. This indicates that the subsoil in borehole 01 is desiccated at 2.0m and has been affected by shrinkage due to the action of the roots found beneath the foundations and to a depth of up to 2.7m below ground level.

The roots have been analysed in the laboratory but were too small / juvenile for positive identification. We consider that the roots undoubtedly emanate for the trees and overgrown vegetation to the rear of the property as described below.

A CCTV survey of the drains to the rear of the property was also carried out as part of the site investigations. This has revealed that the property is served by a combined foul and surface water drainage system which discharges to a main sewer to the left and out to the front of the building. The survey has identified multiple defects to the clay pipework including medium displaced joints, circumferential cracking and mass root intrusion. We consider the damage to the drains has been caused by associated clay shrinkage ground movement and the action of roots from nearby vegetation. Such defects can often be found in this type and age of drainage system and may be of little consequence under normal use of the drains. However, the drains should be repaired to prevent the damage from getting worse as recommended in the drainage survey report from CET. The condition of the subsoil in trial pit 01/borehole 01 does not indicate that the subsoil has been adversely affected by leakage from the drains.

MONITORING

We do not consider that monitoring is required. on this occasion.

CAUSE OF DAMAGE

Based on the information detailed above, we are of the opinion that damage has occurred due to clay shrinkage subsidence. This has been caused by moisture extraction by roots altering the moisture content of the clay subsoil, resulting in volume changes, which in turn have affected the foundations.



RECOMMENDATIONS

Our recommendation is that mitigation measures are undertaken to address the cause of damage and restore stability to the subsoil and building foundations. Consideration can then be given to the required building repairs.

MITIGATION

We consider the damage will not progress if appropriate measures are taken to remove the cause. In this instance it is likely that vegetation for which the policyholder is responsible is contributing toward the cause of damage.

We have identified the following vegetation within influencing distance to the property and which is highly likely to be implicated in the current damage:

T1 – Acacia / Mimosa tree – 8m high, 1m distance from rear right corner in garden at No.26A.

T2 – Sycamore tree – 6m high, 4m distance from rear left corner in garden at No.28A and No.28B.

G1 – Group of mixed overgrown vegetation including Buddleia and Sycamore – up to 6m high, 0.5m distance from rear in garden at No.28A and No.28B.

We understand that all of the above vegetation is the responsibility of London Borough of Camden.

Pleased confirm when all vegetation listed above has been removed and we can progress the claim to the building repairs stage.

With regard to the damage to the drains, we recommend that the drains are repaired as outlined in the attached cctv survey report and estimate from CET Property Assurance Ltd for the sum £1,275.00 +vat.

REPAIR

We have not decided on the final type of repair required as our investigations have not yet been concluded. This involves undertaking partial demolition, rebuilding and redecoration. This decision has been taken based on our knowledge and experience of dealing with similar claims. In addition the results of the Site Investigation and laboratory testing have been taken into account.

PROJECT TEAM DETAILS

Gavin Catheline MCIQB - *Building Consultant Specialist Subsidence Team*

Luke Exall - *Claims Technician Specialist Subsidence Team*

