



2 The Boulevard, City West One Office Park, Gelderd Road, Leeds, LS12 6NY
01924 428691

Policyholder: Mr & Mrs Michael Sharples

Subject Property Address:

219 Winchester Road
Chandler's Ford
EASTLEIGH
Hampshire
SO53 2DX

INSURANCE CLAIM

CONCERNING SUBSIDENCE DAMAGE

ENGINEERING APPRAISAL REPORT

This report is prepared on behalf of Prestige Underwriting Services Ltd 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: 11/05/2022

Our Ref: 9083781

INTRODUCTION

This report has been prepared by our Chartered Engineer, Michael McGinn BSc CEng MStructE CertCII, 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 property is a detached house in a residential location on a plot that is level.

The general layout of the site is shown on the plan within the Arboricultural Assessment report.

CIRCUMSTANCES OF DISCOVERY OF DAMAGE

The policyholder became aware of cracking that developed over the Summer 2020, prompting a notification to Insurers.

NATURE AND EXTENT OF DAMAGE

Description and Mechanism

The main area of damage is to the front right-hand side of the house taking the form of tapered crack in externally and internally. The pattern of cracking indicates a mechanism of downwards movement of the foundation towards the front right-hand side of the house.

Significance

The 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 has occurred and progressed during summer 2020. Unless appropriate mitigation is undertaken movement will continue which will be cyclical nature resulting in cracks opening in the summer and closing in the winter. This has been confirmed by the monitoring.

SITE INVESTIGATIONS

The site investigation was undertaken by Auger Ltd on 19/11/2020.

The trial pit excavated to the right-hand side of the front elevation confirmed the foundation to be concrete which has previously been underpinned to a depth of 1300mm below ground level onto dry, very stiff, fine gravelly, sandy, silty Clay. The soil testing confirmed the Clay to have plasticity index in the range 35% - 40% i.e. to have medium shrinkage potential. The moisture content and soil suction results didn't confirm the Clay to be desiccated, which would indicate that it had become rehydrated by the time the investigation was undertaken.

Roots were recovered from beneath the foundation identified as originating from tree species Oak.

No drainage Investigations have been undertaken as the drains are a significant distance from the area of damage and the site investigation has shown the soil to be dry which suggests the drains have not adversely affected the soils.

MONITORING

Level monitoring has been underway since 05/02/2021.

In summary, the results to date have confirmed seasonal movement with downwards movement in the summer months and upwards movement over the winter months. Greatest movement has been recorded at the front right hand corner which is closest to the trees that are considered to be exerting a drying influence.

CAUSE OF DAMAGE

Taking an overview of all the site investigation and monitoring results, it is my opinion that damage has been caused by clay shrinkage subsidence due to moisture extraction by the protected Oak trees located near to the front right hand corner of the house.

I base this view on the fact that the foundations of the property in the area of damage are 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. Oak tree roots are present in the clay subsoil beneath the foundations.

RECOMMENDATIONS

Arboricultural advice has been obtained from Property Risk Inspections. It has been recommended that the Protected Oak trees T1 & T2 growing close to the front right hand corner of the house are removed to mitigate against further movement.

It is fully anticipated that stability will return after removal of the protected Oak trees and as such we shall proceed to repair immediately after the mitigation is completed.

HEAVE ASSESSMENT

The soil testing undertaken includes an assessment of heave which has confirmed that there to be no risk of heave.

REPAIRS

If the protected Oak trees are removed works including structural crack repair and redecoration at an approximate cost of £18,000 including investigation costs and fees will be appropriate in order to repair the damage in this case.

If the protected Oak 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 £50,000 including investigation costs and fees.

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