



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

Policyholder: Mr & Mrs William Banthorpe

Subject Property Address:

21 Freeman Avenue
Henley
IPSWICH
IP6 0RZ

INSURANCE CLAIM

CONCERNING SUBSIDENCE DAMAGE

ENGINEERING APPRAISAL REPORT

This report is prepared on behalf of Fairmead Insurance 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: 18/01/2022

Our Ref: 9255790

CIRCUMSTANCES OF DISCOVERY OF DAMAGE

The policyholder and homeowner, Mr & Mrs William Banthorpe, first discovered the damage in Approximately 1 year ago.

The Policyholder noticed cracking and the plaster finish to be in a poor condition in the rear, left-hand bedroom. He instructed a plasterer and the walls were skimmed. Damage later returned and he noticed external cracking. He subsequently contacted his insurers.

NATURE AND EXTENT OF DAMAGE

The principal damage takes the form of internal plaster cracking in the rear left-hand bedroom with corresponding cracking to brickwork externally. This indicates a mechanism of downwards movement towards the rear of the site where the Lime tree is located.

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

Mr & Mrs William Banthorpe has advised that damage first commenced historically.

We consider that damage first occurred historically, but that movement is on-going and damage progressive.

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

SITE INVESTIGATIONS

The site investigation was carried out by Auger on 22/11/2021 and comprised the excavation of a trial pit/borehole to the rear left-hand corner of the building to the rear elevation.

Trial Pit 1/Borehole 1

This revealed the building to be built off a 250mm thick concrete strip foundation, the underside of which is located 600mm below external ground floor level. In turn, this is supported by a sub-soil of brown, slightly sandy, gravelly, silty clay with roots observed directly beneath the foundations.

A borehole was extended at the same location and from c1800mm a moist, stiff, brown, sandy clay was encountered which extends to c2700mm. From 2700mm to 3000mm a brown, fine to medium, gravelly, silty clay was encountered. Roots were again observed and recovered for sampling at 1100mm in depth and the borehole was abandoned at 3000mm as target depth was reached.

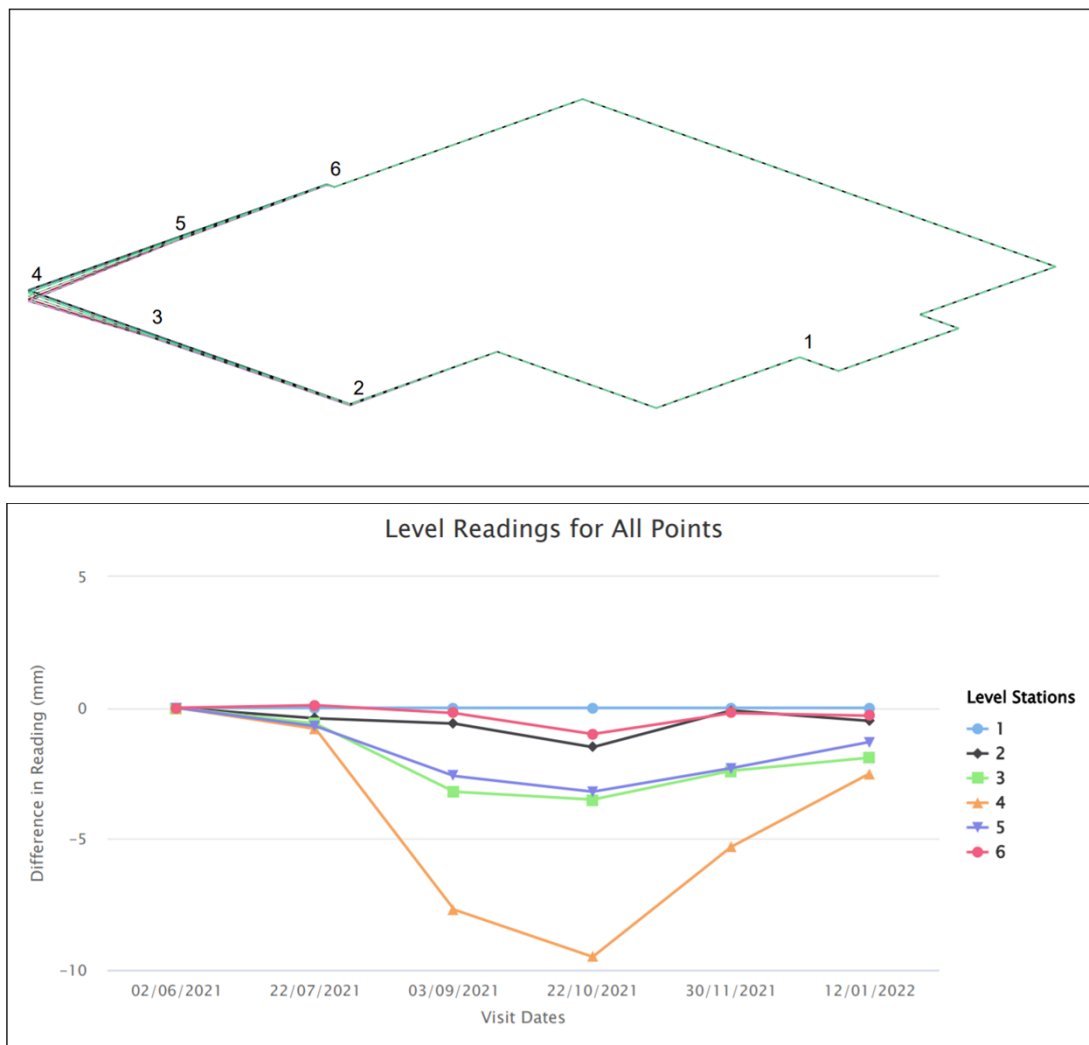
Laboratory testing of the clay soils sampled within the trial pit and borehole has confirmed it to have an initially intermediate (underside of foundation), becoming low and finally high potential for volumetric change. It has also confirmed the soil to be in a state of desiccation to the underside of foundations.

Laboratory analysis of roots sampled from within the trial pit/borehole has identified them as follows:

TH1, 0.6m		
2 no.	Examined root: TILIA (Lime).	Alive, recently*.
TH1, 1.1m		
2 no.	Examined root: very THIN. We cannot rule out TILIA (Lime). Less than 0.15mm in diameter.	Dead* (note this 'dead' result can be unreliable with such thin samples).
3 no.	All sections or pieces of BARK only - alas insufficient material for identification.	

MONITORING

Level monitoring has been underway since June 2021. In summary, the results to date show downwards movement to the rear left-hand corner of the building over the dryer summer months, and recovery (upwards movement), over the wetter winter months. This pattern of movement is consistent with the operation of a clay shrinkage mechanism and confirms the dewatering effects of the Lime tree roots on the shrinkable clay sub-soil:



CAUSE OF DAMAGE

Taking an overview of all the site investigation, and monitoring, 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 Lime tree located in the rear garden.

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 Lime tree.

I have also considered whether there could be any other influencing factors and there are none.

RECOMMENDATIONS

It is recommended that the Lime tree located in the rear garden, and within influencing distance of the building, is removed to mitigate against further movement. The Sedgwick Mitigation Centre will instruct an arboricultural report and submit any application in respect of the Tree Preservation Order.

REPAIRS

Once mitigation is achieved, and we are satisfied that the property is stable, we will proceed to a repair phase. Taking account the severity of damage, and on the assumption that mitigation is achieved, we are confident that superstructure crack repairs and associated decorations will return the property to a pre-loss condition.

Alistair Sutton BSc (Hons)
Building Consultant
For and on behalf of Sedgwick

Ellie Herd
Claims Technician
Direct dial: 01924 428721
E-mail: Eleanor.Herd@uk.sedgwick.com