

Building Survey and Report

30 Christopher Way

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Prepared by:
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Prepared for:
Mr and Mrs Haskell

Background

Mr and Mrs Haskell have suffered significant structural damage to their property caused by root disturbance of a tree in close proximity to their property.

The tree is, I believe, an Oak tree of around 20 metres in height and lies approximately 10 -12 metres from the rear elevation of their property.

During 2018 Mr and Mrs Haskell noticed that cracks had appeared around their property both internally and externally and contacted their buildings insurance provider.

A claims consultant from B. Maule and Co. Ltd of Albion Chambers, Matthew Street, Dunstable, LU6 1SD, visited the property and prepared a report on behalf of the insurers. Ref 11/20184889

Within the report it states that they consider that some ground movement has occurred and consequently affected the foundations of the property.

They also state that the likely cause of the ground movement is the localised tree roots having dehydrated the soil in a prolonged dry weather period.

They also stated that the damage was “insignificant” and repairs could be conducted using helical steel reinforcement bars which would strengthen the masonry to make it resistant to further movement, but firstly to allow the ground to become naturally rehydrated before any remediation works were conducted and proposed a period when this would likely occur as being late Winter of 2018 or early Spring of 2019.

A further recommendation was for the localised shrubs to be removed and the Oak tree to be reduced in height to restrict further water demand.

Oak trees have a high-water demand, particularly those of such maturity as the one that lies within the close proximity of Mr and Mrs Haskell’s property.

Remedial works were conducted during September 2019 and completed on the 18th of September 2019.

The works were conducted on behalf of Mr and Mrs Haskell's insurers L V General Insurance Company Limited by Burgis Building Services.

The damage was detailed as:

Superstructure cracking internally and externally to the main building.

Such cracks were categorised as Category 2 [slight] using the Building Research Establishment [BRE] Digest 251.

Monitoring of the cracks was not formally undertaken.

Mitigation works were prescribed, and this entailed the removal of shrubs and to reduce the crown [canopy] of the Oak tree.

In the report by Maule and Co. Ltd they concluded that the cause of the damage was:

“ consistent with subsidence due to the presence of the arboreal growth adjacent to the external walls of the house exacerbated by the hot dry summer of 2018”

The remedial works comprised of superstructure crack repairs, incorporating masonry reinforcement, associated plaster repairs and making good and internal decorations.

No specification or method statement was provided to Mr and Mrs Haskell, prior or post the remedial works.

B. Maule and Co Ltd certified the works as being in compliance to the agreed specification and contract including any authorised variations and were satisfied that the Contractor's obligations had been discharged under the Contract.

They further certified that the works did not require Building Regulations certification.

Survey

I undertook a survey/inspection of Mr and Mrs Haskell's property on Friday the 29th of September 2023. The weather was dry and warm.

Cracks referenced are in assessment accordant with BRE Digest 251 [1995 Revision]

Internal

Kitchen Area wall between the kitchen and garage

Cracking to the plasterwork, Category 2-3 at the abutment to the wall and ceiling then translateral vertically down the wall.



There is also a crack to the ceiling plasterwork.

The door in this area has also been affected and has subsequently been re-aligned to allow it to open.

The cracks are predominantly situated within right hand side [when viewed from the road] and rear of the property but there are isolated though significant cracks throughout the property.

Below are a series of photographs giving an indication of the internal plasterworks.





External

Significant evidence of the subsidence is visible externally.

The porch entrance area has a quarry tiled surface and deflection of the floor is evident. There is a crack in the grouting of the tiles and distortion can be felt underfoot.



This is a Category 2 crack.

The wall adjacent to the tiled floor area within the porch is an external wall constructed of pre-cast re-constituted stone. There is a crack to the mortar joint which typifies the cracking which occurs during subsidence or heave.



This is a category 1-2 crack.

The photograph below shows a windowsill to the right-hand side elevation.



This is a category 2-3 crack and is a typical presentation of subsidence within a building that has caused the concrete still to shear in the vertical plane. Cracks of this nature are not caused by impact.

The photographs below shows distortion of the rear patio paving slabs, this is synonymous with ground movement.



The photograph below shows significant distortion of the paving slabs.



The distortions indicated in the above photographs are undoubtedly occasioned by the activity of the Oak tree root system as they seek water in the surrounding sub strata.

By this level of dehydration of the soil, the substrata become what is known as “friable” where the ground turns to a dry almost powder like consistency which drastically reduces the bearing capacity of the ground.

Subsequently, foundations will sink into the poor load bearing soil and deflect the masonry which they support causing cracking. This is commonly referred to as “subsidence”.

Upon ground rehydration, the ground has a tendency to swell causing further deflection of the foundations. This is common referred to as "heave"

As a general rule, the larger and more maturity a tree achieves the larger the canopy crown and root spread. Trees such as Oak have a large water demand to satiate their foliage and to provide growth.

I am unsure of the age of the Oak tree to the rear of Mr and Mrs Haskell's property but assessing the diameter of the trunk I would estimate it to between 150 and 200 years old.

Mr Haskell advised me during my site visit that the Oak tree has a tree preservation order [TPO] placed upon it.

There is substantial evidence and mitigation within both my report and the one conducted by B. Maule and Company in 2018 to effect the removal of the tree preservation order [TPO] and to significantly reduce the tree in height and spread or to remove the tree from the premises entirely.

If this is not conducted, then damage occasioned to Mr and Mrs Haskell's property by the Oak tree will continue and significant repair costs will be incurred.

Statement of truth

I, Michael Patrick Flanagan declare that,

I have no conflict of interest, and my preparation of this report, though limited in its content, reflects accurately those facts that are within my knowledge and experience, and I confirm them to be true.

Signed. *Michael P. Flanagan*

Michael Patrick Flanagan

Dated 25th October 2023

