

Engineers Addendum Report

This Report sets out in concise terms the nature of the evidence collected and the consultant's conclusions and recommendations

Policyholder, Property & Event Details

Policyholder Name	Mrs Diana Clarke	Date of discovery	15/08/2022
Risk Address	22 Princess Road, Horsham, RH12 3HR	Our Ref	IFS-LBG-SUB-22-0101892
Location of damage	Front right corner and front elevation	Date of relevant construction	c.1963
Nature of Damage	Cracking to walls and ceilings	Property Type	Two storey detached house
Crack Widths	3 and would be classified as moderate.	Indicated mechanism of movement	Downward and outward rotation of front right and front left of property
Occupiers' Observations	Policyholder heard noise in August 2022 and following day found cracking along with front door and windows sticking	BRE Classification	Category 3
Comments	Damage occurred suddenly in August 2022 during a hot dry summer. Our subsequent investigations show it to be derived from vegetation related clay shrinkage subsidence. We are also aware of similar subsidence damage to the two properties immediately to the right, within the adjacent road, again derived from vegetation related clay shrinkage subsidence. The same group of trees are implicated in all 3 claims in part or in whole.		

Investigation Evidence

Examination by Building Professional	Yes	Simon Davy		BSc CEng MStructE Cert CII	
Trial Hole/Bore Hole Excavations	Yes	Confirms foundations in clay ground with adequate load capacity		Date of related SI	13/10/2022
CCTV Drainage survey	Yes	The drains are not implicated in the damage		Date of Drain survey	
Soil Laboratory Testing	Yes	Shrinkable soils		Desiccated soils	
Root Analysis	Yes			Date of related SI	
Arboriculture Assessment	Yes			Date of related SI	
Heave Risk after tree removal	No	Assesed By	Simon Davy	simon.davy@innovation.group	
Building Monitoring	Yes	Crack Width		Level/Distortion	Yes
Monitoring to date confirms	Monitoring confirms ongoing seasonal movement in line with ongoing vegetation influence despite removal of T3 Oak in April 2024.				
Supporting Comments	Drain defects in area of damage were rectified in June 2023 to remove them from consideration. Ongoing cyclical movement confirms that they are not influential.				

Repair Scope

If prompt vegetation removal	Only Superstructure repairs required	Initial likely cost of repairs	£5,200.00
If NO vegetation is removed	Potential for mass concrete underpinning to front and part of left flank.	Potential additional costs	£ 105,600.00
Supporting Comments	In the event trees T2 and T4 are not removed, it will be necessary to isolate the building from their influence, which is to depths up to 3.2 m across the front and down part of the left flank of the property.		

Conclusions & Recommendations

The property is a c.1963, 3-bedroomed detached property of traditional load-bearing cavity masonry construction, with ground bearing ground floor, suspended timber first floor and pitched concrete tiled roof. There is an attached double garage off the rear section of the right gable.

Damage appeared suddenly in August 2022 and is predominantly to the front right corner and front elevation, although monitoring indicates significant movement to the front left also.

The site investigation has confirmed that the cause of the subsidence is clay shrinkage. The foundations are 900mm deep to front right and 1600 mm to front left, bearing on a stiff clay soil with adequate bearing capacity. The clay soil is desiccated to a depth of at least 1400mm to the front right and to 3.7 m to the front left. There are roots to a depth of 1600 mm to the front right and 2600mm to front left. Soil suctions are also elevated in the zones of desiccation. The roots were identified as emanating from Oak, Fuchsia and Hedera/Fatsia. There are low level shrubs adjacent the front right but not of sufficient size as to cause the extent of damage and ongoing movement. We are arranging for this minor vegetation to be removed notwithstanding our conclusions.

The main vegetation implicated is a row of Oak beyond the left boundary line.

It is confirmed that following an earlier application T3 Oak immediately off the front left corner was removed in April 2024.

The drains at the front of the property have been surveyed and several defects were noted. These are not considered to be the cause of the subsidence based on the tested soil characteristics, but have been repaired in June 2023 to remove them from consideration.

Given the above factual evidence we conclude that the protected Oak trees are the cause of the continuing damage, despite removal of T3 Oak in April 2024. We require their removal to arrest the current episode of subsidence.

The level monitoring since removal of T3 oak shows an much reduced but continuing amount of movement to the front left and therefore we require the removal of T4 Oak to reduce this to the point where stability is returned to the property on that side. There is no requirement to remove T5 or T6 Oaks on that basis.

We also require the removal of T2 Oak to remove the ongoing and significant movement to the front right, which at 14.5 mm during summer 2025 is too significant to allow to continue unresolved.