

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	Mr Gordon Lindley	Date of discovery	15/08/2022
Risk Address	36 Yeomead Nailsea Bristol BS48 1JA	Our Ref	IFS-AVI-SUB-22-0101951
Location of damage	rear left hand corner of the main house, rear left and rear right extensions	Date of relevant construction	1961 / 1969
Nature of Damage	Stepped internal and external cracking	Property Type	Two storey detached house
Crack Widths	3 and would be classified as moderate.	Indicated mechanism of movement	Downward / outwards rotational damage
Occupiers' Observations	See below	BRE Classification	Category 3
Comments	The ground floor extension door was difficult to open close and the frame has moved. in the other extension cracking has appeared since decorated 2 years ago. The is also cracking around a door, a window has cracking to the wallpaper underneath.		

Investigation Evidence

Examination by Building Professional	<input type="checkbox"/> Yes	Brad Jenkins	BA PgDip Cert CII ICIOB
Trial Hole/Bore Hole Excavations	<input type="checkbox"/> Yes	C67595G30919	Date of related SI <input type="checkbox"/> 23/12/2022
CCTV Drainage survey	<input type="checkbox"/> Yes	The drains are not implicated in the damage	Date of Drain survey <input type="checkbox"/> 23/11/2022
Soil Laboratory Testing	<input type="checkbox"/> Yes	Shrinkable soils <input type="checkbox"/> Yes	Desiccated soils <input type="checkbox"/> Yes
Root Analysis	<input type="checkbox"/> Yes	Quercus spp. with abundant starch	Date of related SI <input type="checkbox"/> 09/01/2023
Arboriculture Assessment	<input type="checkbox"/> Yes	Oak (T6) and Oak (T9) implicated	Date of related SI <input type="checkbox"/> 11/01/2023
Heave Risk after tree removal	<input type="checkbox"/> No	Assesed By	Brad Jenkins brad.jenkins@innovation.group
Building Monitoring	<input type="checkbox"/> Yes	Crack Width <input type="checkbox"/> No	Level/Distortion <input type="checkbox"/> Yes
Monitoring to date confirms	Recovery movement to stations 7 and 9 by up to 10mm between November 2022 and January 2023		
Supporting Comments	Monitoring is ongoing		

Repair Scope

If prompt vegetation removal	Only Superstructure repairs required	Initial likely cost of repairs	£14,788.80
If NO vegetation is removed	Localised piling or root barrier	Potential additional costs	£60,120.00
Supporting Comments	If the 2 protected Oak trees are to remain in place, an engineered solution will need to be considered. Likely either localised piling works or a root barrier.		

Conclusions & Recommendations

The damaged property is a detached 5 bedroom house, constructed in around 1961. Purchased by the policyholders in 1965. The property benefits from 2 rear extensions which were added by the policyholders in around 1969. The property was subject to a previous claim for subsidence in 1998/99, where the vegetation was reduced in size by 30%.

The current damage was first noticed on 15.08.2022. The policyholders reported various cracks as well as sticking doors. A site visit was completed to site confirming subsidence damage affecting the rear left and rear of the property. The site investigation has confirmed that the cause of the subsidence is clay shrinkage. The foundations at the rear left corner of the property are 500mm deep and bear on a soft clay soil which becomes firm at approximately 1.6m. The clay soil is approaching desiccation at a depth of 1600mm with roots to a depth of 1500mm. The foundations at the rear left corner of the rear right extension are 400mm deep and bear on a soft clay soil which becomes firm between 1.0 - 1.5m. The clay soil is desiccated at a depth of 2500mm with roots to a depth of 1500mm. The foundations within our control trail pit / borehole located remote from the area of damage at the front of the property are 700mm deep and bear on a wet clayey sand with roots to a depth of 1800mm. All the roots were identified as emanating from an Oak tree, which we are aware to be the protected trees to the left of the risk address. The drains at the rear of the property have been surveyed and several defects / issues were noted. Repairs have been completed to run C to ensure that this can be ruled out as a factor in any ongoing movement. The drain survey also highlighted that the soakaway located to the rear of the property located below the shed is within influencing distance of the damage and that the water butts to the left of the property are likely resulting in water escaping into the ground during peak rainfall events. The rainwater drainage from the water butts and soak aways will need to be redirected into the existing underground storm drainage system or into new soak aways located at least 5.0m from any building and 2.5m from any boundary. Unfortunately, the cost of these improvements cannot be accepted under the subsidence claim however, you should contact your insurers to see whether there is cover under a different peril. Given the above factual evidence we conclude that the 2 protected Oak trees are the primary cause of the damage and we require their removal to arrest the current episode of subsidence. The Arborist will liaise with the local authority to request lifting of the Tree Protection orders (TPO's) then with the commercial 3rd party tree owner requesting removal of the trees. Monitoring to date has revealed upwards movement to stations at the rear left corner and to the rear elevation of the property. To provide the level of evidence that will be required to secure lifting of the TPO, we will arrange for the property to be monitored. This may take in excess of a year to obtain the necessary supporting information.