

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 Robert Benyon	Date of discovery	01/08/2022
Risk Address	Greentrees, Prospect Lane, Birkenshaw, Bradford, BD11 2EL	Our Ref	IFS-AXA-SUB-22-0104686
Location of damage	Rear right-hand parts of the property	Date of relevant construction	01/01/1971
Nature of Damage	Cracking internally and externally to the rear RH parts of the property	Property Type	Two storey detached house
Crack Widths	Category 2 and would be classified as slight.	Indicated mechanism of movement	Downward rotational movement towards the implicated vegetation
Occupiers' Observations	The policyholder noted cracking to the rear right-hand parts of the property in August 2022 and a claim notified to insurers in October 2022.	BRE Classification	Category 2
Comments	The PPS noted cracking however this was believed to be due to thermal movement at that time.		
Comments			

Investigation Evidence

Examination by Building Professional	<input type="checkbox"/> Yes	Stephen Rutherford	BSc (Hons) MCIQB
Trial Hole/Bore Hole Excavations	<input type="checkbox"/> Yes	Firm clay soils below the damaged rear RH corner of the property	Date of related SI <input type="text" value="15/03/2023"/>
CCTV Drainage survey	<input type="checkbox"/> Yes	The drains are not implicated in the damage	Date of Drain survey <input type="text" value="12/01/2023"/>
Soil Laboratory Testing	<input type="checkbox"/> Yes	Shrinkable soils <input type="checkbox"/> Yes Desiccated soils <input type="checkbox"/> Yes	Date of related SI <input type="text" value="06/04/2023"/>
Root Analysis	<input type="checkbox"/> Yes	Live Fagus (Beech) and Quercus (Oak) roots to 2.1m depth	Date of related SI <input type="text" value="15/03/2023"/>
Arboriculture Assessment	<input type="checkbox"/> Yes	Recommends removal of T2, T3 Beech and T4 Oak	Date of related SI <input type="text" value="16/10/2023"/>
Heave Risk after tree removal	<input type="checkbox"/> No	Assesed By	Stephen Rutherford stephen.rutherford@innovation.group
Building Monitoring	<input type="checkbox"/> Yes	Crack Width <input type="text"/>	Level/Distortion <input type="checkbox"/> Yes Date of related SI <input type="text" value="21/08/2023"/>
Monitoring to date confirms	Downward movement to points 3-8, these being the damaged areas of the property		
Supporting Comments	Repairs to minor drainage defects were carried out in February 2023		

Repair Scope

If prompt vegetation removal	Only Superstructure repairs required	Initial likely cost of repairs	<input type="text" value="£10,500"/>
If NO vegetation is removed	Stabilisation required to the rear and RH parts of the property	Potential additional costs	<input type="text" value="£100,000"/>
Supporting Comments	If the trees remain in-situ, we will need to seek specialist advice regarding a design for piling or underpinning to stabilise the rear and RH parts of the property		

Conclusions & Recommendations

The subject property is a two storey detached property constructed in 1971 with 4 bedrooms. A uPVC conservatory adjoins the LH elevation. The property was purchased in 2019 and although cracking was noted on the pre-purchase survey, this was concluded to be due to thermal movement. Significant damage was noted by the PH in August 2022.8

The site investigation has confirmed that the cause of the subsidence is clay shrinkage. The foundations are 800mm deep and bear on a firm clay soil with adequate bearing capacity. The clay soil is desiccated to the base of the borehole at a depth of 1500mm with roots to 2.1m. The roots were identified as being from the Fagus (Beech) and Quercus (Oak) or Castanea species. The roots are believed to be from the implicated Beech trees (T2 and T3) and Oak tree (T4) T2 and T3 are within the neighbouring private garden to the right of the property and both trees have TPO's on them. T4 is located to the rear of the risk address on land believed to be owned by Bellway Homes.

The drains at the front of the property have been surveyed and several defects were noted, including root ingress. These are not considered to be the cause of the subsidence based on the tested soil characteristics, although the minor drainage defects were repaired in February 2023.

The level monitoring has shown downward movement to the rear and right-hand elevations and this is believed to be due to the influence of the implicated Beech trees (T2 and T3) located to the right of the property and the Oak tree (T4) located to the rear of the property.

Given the above factual evidence we conclude that the Beech and Oak trees are the cause of the damage and we require their removal to arrest the current episode of subsidence. The Beech trees (T2 and T3) are protected by TPO's and therefore an application will be submitted to the local authority seeking removal of the trees. Loss Adjusters acting on behalf of Bellway Homes have confirmed that they have recommended to Bellway that they remove T4. Once the implicated trees are removed and monitoring has confirmed stability superstructure repairs can be carried out. If the TPO application is not approved, we will need to carry out sub-structure stabilisation works. We would then instruct solicitors to seek recovery of the cost of this from the local authority.