

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 Andrew Hunnibal	Date of discovery	01/08/2020
Risk Address	Longacre Long Copse Lane EMSWORTH PO10 7UR	Our Ref	IFS-LBG-SUB-20-0089388
Location of damage	Front entrance porch structure and conservatory.	Date of relevant construction	Circa 1950
Nature of Damage	Various cracks/fractures.	Property Type	Two storey detached house
Crack Widths	3 and would be classified as moderate.	Indicated mechanism of movement	Downward/rotational movement.
Occupiers' Observations	Following the appearance of cracking the policyholder considered it prudent to contact insurers.	BRE Classification	Category 3
Comments	There is internal and external cracking/separation at junctions between the conservatory and main house. There is cracking/separation at junctions between the front porch/canopy structure and main house. The pattern and location of the damage is consistent of a downward/rotational movement of the conservatory and porch due to subsidence.		

Investigation Evidence

Examination by Building Professional	☐ Yes	John Morrison		BSc (Hons), MCIQB, AssocRICS, Cert CILA	
Trial Hole/Bore Hole Excavations	☐ Yes	Report Ref.: C58519G26267		Date of related SI	11/01/2021
CCTV Drainage survey	☐ No	The drains are not implicated in the damage		Date of Drain survey	N.A.
Soil Laboratory Testing	☐ Yes	Shrinkable soils	☐ Yes	Desiccated soils	☐ Yes
Root Analysis	☐ Yes	Report Ref.: R39608		Date of related SI	21/01/2021
Arboriculture Assessment	☐ Yes	Report Ref.: SA-247622		Date of related SI	09/02/2021
Heave Risk after tree removal	☐ No	Assesed By	John Morrison	john.morrison@innovation.group	
Building Monitoring	☐ Yes	Crack Width	☐ No	Level/Distortion	☐ Yes
Monitoring to date confirms	In the areas of concern, generally upward movement over the autumn/winter period and downward movement during the spring/summer.				
Supporting Comments	Founding subsoil is shrinkable. There is an oak tree that is within influencing distance of the property. Positive root identification for the species Quercus spp. (which are oaks) @ 1.2-3.1m below ground level.				

Repair Scope

If prompt vegetation removal	Only Superstructure repairs required	Initial likely cost of repairs	£ 10,000.00
If NO vegetation is removed	Piling or other appropriate stabilisation scheme.	Potential additional costs	£ 25,000.00
Supporting Comments	Failure to remove vegetation influencing stability resulting in consequential damage to the property will necessitate a form of stabilisation.		

Conclusions & Recommendations

Based on the geotechnical investigation and arborist's assessment, the most likely cause of the movement/damage to the porch structure and conservatory is root induced clay shrinkage subsidence. The porch foundation comprised of a brick wall to 200mm below ground level (bgl), bearing on concrete to an estimated depth of 1200mm bgl, with a total projection of 270mm from the elevation. The underside of the foundation (USF) was estimated by pushing a probe, approximately 160mm back from the face of the foundation, at an angle with no apparent contact with the face of the foundation beyond the estimated depth. The conservatory foundation comprised of a brick & blockwork wall to 500mm bgl, bearing on concrete to an estimated depth of 1400mm bgl, with a total projection of 390mm from the elevation. The underside of the foundation (USF) was estimated by pushing a probe, approximately 100mm back from the face of the foundation, at an angle with no apparent contact with the face of the foundation beyond the estimated depth. The foundations are supported on clay of high shrinkability with roots down to a depth of 3100mm bgl. Roots encountered from below the porch foundation have been identified (using anatomical analysis) as having emanated from the species Quercus (which are oaks) or Castanea (which include sweet chestnut). Roots encountered from below the conservatory foundation have been identified (using anatomical analysis) as having emanated from the species Populus (which are poplars and aspens). The prunus (T3) and poplar (T4) were removed on 02/06/21.

The monitoring results to date indicate that in the area(s) of concern, generally upward movement over the autumn/winter period and downward movement during the spring/summer period has been recorded. This is characteristic of the seasonal pattern of foundation movement where vegetation is involved.

Given the above factual evidence we conclude that the protected oak tree (T7) is the principal cause of the damage to the porch structure, and we require its removal to arrest the current episode of subsidence.