INNOVATION GROUP

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 & Mrs T. Redhead	**Date of discovery**	01/05/2019
Risk Address	89 West End March Cambridgeshire PE15 8DJ	**Our Ref**	IFS-LBG-SUB-19-0084888
		Date of relevant construction	03/04/1905
Location of damage	Front left area	**Property Type**	Two storey semi-detached house
Nature of Damage	Diagonal cracking on front elevation and internal cross wall.	**Indicated mechanism of movement**	Rotational movement towards front left corner of building.
Crack Widths	2 and would be classified as slight.	**BRE Classification**	Category 2
Occupiers' Observations	Please see below	**Previous Relevant movement**	Please see below

Comments

Diagonal cracking on the front elevation and internal cross wall indicating rotational movement towards front right corner of the building and in the direction of trees. There has been previous history of movement to the prpoerty. I understand that the party wall and rear walls of the two storey extension were piled in 1991. The reasons for this work are unknown but the remaining walls to the main body of the house were not piled. There was also a previous subsidence claim in 2018 in respect of damage to a side conservatory.

Investigation Evidence

Examination by Building Professional	Yes	Ian Hanson	BEng (Hons) CEng MICE DipCII (Claims) BDMA Ins Tech				
Trial Hole/Bore Hole Excavations	Yes	Report Reference C53129G23738				Date of related SI	31/01/2020
CCTV Drainage survey	No	The drains are not implicated in the damage				Date of Drain survey	27/12/2019
Soil Laboratory Testing	Yes	Shrinkable soils	Yes	Desiccated soils	No	Date of related SI	05/02/2020
Root Analysis	Yes	Report Reference R34571				Date of related SI	13/01/2020
Arboriculture Assessment	Yes	Report Reference SA-245549				Date of related SI	12/02/2020
Heave Risk after tree removal	Yes	Assesed By	Ian Hanson	ian.hanson@innovation.group			
Building Monitoring	Yes	Crack Width	Yes	Level/Distortion	Yes	Date of related SI	13/08/2020
Monitoring to date confirms	Both crack and level monitoring is showing movement related to clay shrinkage/tree root action.						
Supporting Comments	There are no drains near the front right area of the property and crack/level moniriting can be attributed to clay shrinkage/tree root action.						

Repair Scope

If prompt vegetation removal	Only Superstructure repairs required	Initial likely cost of repairs	[redacted]
If NO vegetation is removed	A piled raft foundation will be required to front left area of the property.	Potential additional costs	[redacted]
Supporting Comments	Please see below		

Conclusions & Recommendations

The damaged property is a traditionally built 1920's 2 storey semi detached building with a rear two storey extension.

The site investigation has confirmed that the cause of the subsidence to the main building clay shrinkage and tree root action. The house foundations are 1200mm deep and bear on a highly shrinkable peaty clay soil (Plasticity Index of 46%). The soil contains roots to a depth of 1500mm The roots were identified as emanating from an ash tree, which I believe are the protected third party trees near the front right area of the building (T1 and T2 ash trees - Please see aboricultural report).

There are no drains near the area of damage. Crack and level monitoring to date has also shown evidence of movement associated with clay shrinkage and tree root influence.

Given the above factual evidence I conclude that protected trees T1 and T2 are the cause of the damage and I require their removal to arrest the current episode of subsidence. Following my initial review of the damage and subsequent geotechnical, arboriculture investigation reports and accurate crack/level monitoring readings I confirm that the cause of the movement to this property is directly related to the seasonal water demands of the nearby Third party vegetation causing clay shrinkage subsidence to the front right area of the building.

Report Prepared By	Ian Hanson	BEng (Hons) CEng MICE DipCII (Claims) BDMA Ins Tech