

Engineers Addendum Report

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

Policy Holder:	Harrow & Hillingdon Methodist Circuit	Date:	25/04/2024
Property Address:	19 Mount Pleasant, Ruislip, Middlesex, HA4 9HG	Our Ref:	IFS-MET-SUB-22-0104780
Description Of Property:	The risk address is a two storey detached property of traditional construction. It has 4 bedrooms and benefits from an attached garage		
Location Of Damage:	Damage has occurred to the rear left hand of the property with structural cracking internally and externally. Internal damage is evident within the ground floor WC, stairwell and landing area, and the rear bedroom. With structural cracking internally and externally to the load bearing masonry walls.		
Date Of Relevant Construction:	The main risk address was built in circa 1930, with no reported damage until the exceptionally hot summer of 2022.		
Nature Of The Damage:	Diagonal step cracking and fractures internally and externally, with horizontal and vertical cracking to the associated building fabric.		
Indicated Mechanism Of Movement:	Downward and rotational movement due to root ingress and trespass.		
Category Of Damage:	The damage was originally category 2 – Slight - BRE digest 251 (between >1 and <5mm)		
Date Of Discovery:	31 August 2022		
Occupiers' Observations:	Policy holder noted cracking to the areas described and being concerned that subsidence movement was occurring contacted their building insurers. Insured is concerned about the ongoing structural movement and damage.		
Previous Relevant Movement:	No previous ground movement evident or reported to the risk address.		
Comments:	Following geotechnical investigations, with a trial pit and borehole to the rear elevation. We found that the foundations to be a concrete strip footing at 600 mm deep with a 250 mm projection. The sub soils are a firm light brown slightly gravelly clay. The gravel is fine and medium, with evidence of root trespass. The arborist has recommended to the removal the neighbouring third party's T1 Oak which has a tree preservation order.		

Investigation Evidence:

Examination By Building Professional:	Yes - Alun Dwyer BSc (Hons) ACIAT ACOIB			
Trial Hole/ Bore Hole Excavations:	Yes	(26 September 2023/ C68049G33343) & (3 February 2023/C68049G31155)		
CCTV Drainage Survey:	Yes	Drainage defects were identified and subsequently repaired		
Soil Laboratory Testing:	Yes	Shrinkable soils (10/10/2023/L26830) CH and CV (MV) CLAY and CLAY/SILT of a high plasticity and a very high plasticity	Yes	
		Desiccated soils (10/10/2023/ L26830)		
Root Analysis	Yes	(25 September 2023/ R54837)		
Arboriculture Assessment:	Yes	27/01/2023/ SA-251876 - Recommendations: Removal T 1 Oak tree with a tree preservation order		
Heave Risk After Tree Removal:	No	Heave not considered a risk		
Building Monitoring:	Yes	Crack width: N/A	Level / distortion: Yes (16/12/2022- / to date18/03/2024) (M20050)	
Monitoring To Date Confirms:	The influence of the insureds offending vegetation with a TPO as we see cyclic and continued downward movement to the risk address.			
Comments:	Root ingress from 600 mm down to 2.10 metres, with roots up to 4.00 mm in size, with a moderate to abundant starch content. Within a high to very high plasticity clay.			
Repair Scope And Value				
If Prompt Vegetation Removal:	Superstructure repairs	Potential Cost	£ 14,000	

If No Vegetation Is Removed:	Foundation stabilisation (Traditional underpinning or a root barrier)	Potential Additional Cost	£ 45,400			
Comments:	An engineered design solution to the foundations is the only alternative solution for a long term and durable stabilisation method due to the root ingress from the offending vegetation if the vegetation remains in-situ.					
CONCLUSIONS AND RECOMMENDATIONS						
Following my initial review of the damage and subsequent geotechnical, arboriculture investigation reports and accurate level monitoring readings. I confirm that the cause of the movement to this property is directly related to the seasonal water demands of the neighbouring third party's offending Oak tree with a tree preservation order, which is causing clay shrinkage subsidence to the rear elevation of the risk address.						
Report prepared by:	Alun Dwyer BSc (Hons) ACIAT ACIOB					