

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:	██████████ Date: 28/01/2020
Property Address:	9 Regent 's Park Terrace, London, NW1 7EE Our Ref: ██████████
Description Of Property:	The risk address is a 5 storey mid terrace house with a full basement. It has been extended with a two storey extension to the rear. The property occupies a site which steps down at the rear with no adverse topographical features.
Location Of Damage:	Damage relates to the rear extension where cracking indicates downward movement.
Date Of Relevant Construction:	The main house was built in Circa 1846.
Nature Of The Damage:	Diagonal and vertical crack damage.
Indicated Mechanism Of Movement:	Rearwards and downwards rotation of the foundations to the rear extension/projection. The monitoring also shows slight foundation movement at the front of the property.
Category Of Damage:	Crack damage falls into Category 3 (Moderate).
Date Of Discovery:	30 October 2017
Occupiers' Observations:	In approximately summer 2017 the policyholder noticed appearance of cracking at the junction to the main house and extension, being concerned that the damage may be due to subsidence, he sorted advice from a Structural Engineer (Ellis & Moore) and following their recommendations in May 2018, a claim was submitted to insurers.
Previous Relevant Movement:	We understand that the property, mainly the two storey rear extension, was previously affected by subsidence in approximately 1993. The policyholder advised that only standard superstructure repairs were undertaken at the time.
Comments:	Based on the results of ongoing level monitoring, the diagonal aspect of the cracks, together with the fact that they increase in width with height is indicative of subsidence as a result of shrinkage of the clay subsoil due to the moisture extracting influence of nearby vegetation.

Investigation Evidence:	
Examination By Building Professional:	Yes Martel Hawkins BSc Hon MCIQB MFPWS
Trial Hole/ Bore Hole Excavations:	Yes Report dates and references: 9 April 2019 / C44800G20947 (TP/BH1) Addition foundation comprised of brick wall to 450mm bgl, bearing on stepped brick to 600mm bgl with a total projection of 120mm from the elevation. In turn, bearing on brick/concrete to 900mm bgl with a total projection of 200mm from the elevation.
CCTV Drainage Survey:	Yes The CCTV survey was undertaken which revealed structural damage to some of the drains (runs B, C, D & E) to the rear. The defects found to the drains were consistent with accidental damage to underground services. The damage drains are underneath the section of the property affected by subsidence suggesting the defects may have been caused by the downwards foundation movement. The policyholder was advised to register a separate claim for drains so the relevant repairs could be implemented. Importantly, leakage from drains are not the material cause of the movement to the property. Furthermore, the Atterberg tests demonstrate that the load bearing capacity of the soil has not

		been compromised by excessive water content due to leaking drains and is therefore capable of bearing the imposed load.	
Soil Laboratory Testing:	Yes	Shrinkable soils reports. Dates and References: 28 May 2019 / C15243S44800	
			Yes
Root Analysis	Yes	12 April 2019 / R26786 – TP/BH1 - Platanus spp. between 0.9m-1.6m bgl. Starch present.	
Arboriculture Assessment:	Yes	Report dated 26/03/2019 / Ref: SA242982. Recommendations: Removal of the London Plane trees (T1 & T2) and treatment of the recently removed / reduced Wisteria (C1) stump.	
Heave Risk After Tree Removal:	No	31/07/2019 – total predicted Free surface heave was 45mm. No adverse heave anticipated.	
Building Monitoring:	Yes	Crack width: No	Level / distortion: Yes – latest report 6 January 2020 / Report Ref: M12752.
Monitoring To Date Confirms:	The influence of vegetation as we see clear seasonal fluctuations with downwards movement in summer (when the clay shrinks) and upwards movement in winter (when the clay swells).		
Comments:	No other causes produces similar pattern of movement.		
Repair Scope And Value			
If Prompt Vegetation Removal:	Superstructure repairs		
If No Vegetation Is Removed:	Foundation stabilisation – Possible traditional underpinning		
Comments:			
CONCLUSIONS AND RECOMMENDATIONS			
Following a review of the damage together with the geotechnical, arboriculture investigation reports and accurate level monitoring readings, I can confirm that the cause of the movement to this property is directly related to the seasonal water demands of the nearby T1 & T2 causing clay shrinkage subsidence to the rear. The removal of this tree will offer the most certain and reliable Arboricultural solution likely to restore longterm stability to the property.			
Report prepared by:	Martel Hawkins Bsc (Hon) MCIQB MFPWS		