Arboricultural Appraisal Report

Subsidence Damage Investigation at:

7 & 9 Pond Street
London
NW3 2PN

CLIENT:	Crawford & Company
CLIENT REF:	[redacted]
MWA REF:	
MWA CONSULTANT:	Andy Clark
REPORT DATE:	02/07/2024

SUMMARY

Statutory Controls			Mitigation (Current claim tree works)	
TPO current claim	No		Policy Holder	Yes
TPO future risk	No		Domestic 3rd Party	No
Cons. Area	Yes		Local Authority	No
Trusts schemes	No		Other	No
Local Authority: -	London Borough of Camden			

[redacted]

Introduction

Acting on instructions from Crawford & Company, the insured property was visited on 18/06/2024 to assess the potential role of vegetation in relation to subsidence damage.

We are instructed to provide opinion on whether vegetation is a causal factor in the damage to the property and give recommendations on what vegetation management, if any, may be carried out with a view to restoring stability to the property. The scope of our assessment includes opinion relating to mitigation of future risk. Vegetation not recorded is considered not to be significant to the current damage or pose a significant risk in the foreseeable future.

This is an initial appraisal report and observations/recommendations are made with reference to the technical reports and information currently available and may be subject to review upon receipt of additional site investigation data, monitoring, engineering opinion or other information.

This report does not include a detailed assessment of tree condition or safety. Where indications of poor condition or health in accessible trees are observed, this will be indicated within the report. Assessment of the condition and safety of third-party trees is excluded, and third-party owners are advised to seek their own advice on tree health and stability of trees under their control.

Property Description

The property comprises a four storey mid-terrace house of traditional construction, built C.1800s and since converted into a commercial building. The property, and the adjacent right-hand building No. 9 are owned by the same policy holder and share the garden / patio area to the rear. External areas comprise gardens to the front and rear. The site is generally level with no adverse topographical features.

Damage Description & History

Damage relates to the rear left-hand projection with internal and external cracking recorded. Damage is reported to have first been observed during July 2023.

At the time of the initial assessment (27/09/2023) the structural significance of the damage was found to fall within Category 3 (Moderate) of Table 1 of BRE Digest 251. Further details of the damage can be obtained from Crawford & Company.

The right-hand property No. 9 was the subject of a previous subsidence claim for similar damage affecting the rear and rear projection, which we understand resulted in underpinning.

Site Investigations

Site investigations were carried out by Auger on 07/03/2024, when a single trial pit was excavated to reveal the foundations, with a borehole sunk through the base of the trial pit to determine subsoil conditions. A drains survey was also undertaken. For further details please refer to the Site Investigation report.

[redacted]

Discussion

Opinion and recommendations in this report are made on the understanding that Crawford & Company has identified clay shrinkage subsidence as a cause of building movement and damage.

Site investigations and soil test results have confirmed a plastic clay subsoil susceptible to undergoing volumetric change in relation to changes in soil moisture.

Roots were observed below foundation depth in TP/BH1 and recovered samples have been positively identified (using anatomical analysis) as Fraxinus spp., the origin of which will be T1 Ash, confirming its influence on the soils below the foundations.

Based on the information currently available, engineering opinion and our own site assessment we conclude there is damage consistent with shrinkage of the clay fraction exacerbated by the soil drying effects of vegetation.

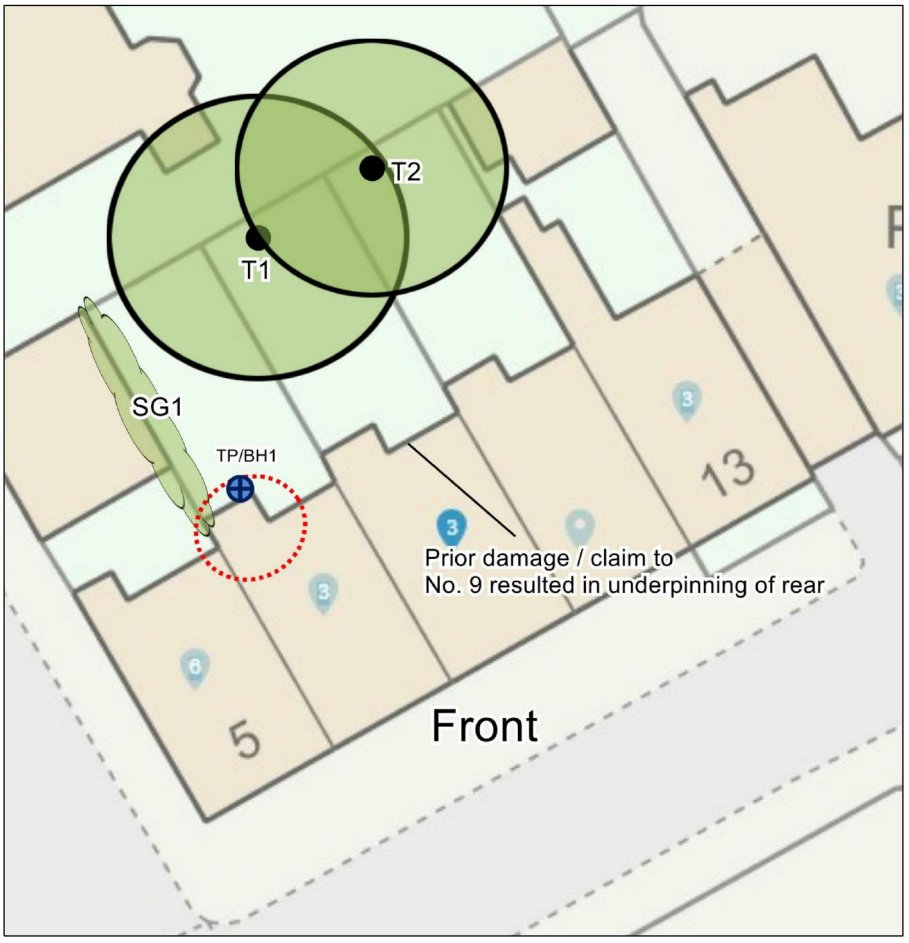
If an arboricultural solution is to be implemented to mitigate the influence of the trees/vegetation considered to be responsible for the movement/damage, works set out at Table 1 below are recommended.

Where other vegetation recorded presents a potential future risk to building stability, management is recommended (see Table 2). Recommended tree works may however be subject to change upon receipt of additional information.

Consideration has been given to pruning alone as a means of mitigating vegetation influence, however in this case, this is not considered to offer a viable long-term solution due to the species characteristics, size and proximity of the responsible vegetation to the area of damage.

[redacted]

Site Plan



Plan not to scale – indicative only

Approximate areas of damage

Tree/vegetation locations are based on what could be determined at the time of the survey.
It should be noted that this is not always clear due to lack of access or a restricted view of the trees/vegetation and may be disputed by property owners.
MWA can undertake land registry searches as required.

[redacted]

Table 1 **Current Claim** - Tree Details & Recommendations

Tree No.	Species	Ht (m)	Dia (mm)	Crown Spread (m)	Dist. to building (m)	Age Classification	Ownership
T1	Ash	16.5 *	560	12.5	11.6	Younger than Property	Policy Holder
Management history		Subject to past management/pruning - previously crown reduced.					
Recommendation		Remove (fell) to near ground level and treat stump to inhibit regrowth.					

Ms: multi-stemmed * Estimated value

Table 2 **Future Risk** - Tree Details & Recommendations

Tree No.	Species	Ht (m)	Dia (mm)	Crown Spread (m)	Dist. to building (m)	Age Classification	Ownership
T2	Sycamore	16.5 *	550 Ms *	11.0	16.3	Younger than Property	Third Party 11 Pond Street NW3 2PN
Management history		Subject to past management/pruning - previously crown reduced.					
Recommendation		Maintain broadly at no more than current dimensions by periodic pruning.					
SG1	Mixed spp. group of mostly Ivy, Hazel, Ash [self-sown] and Sycamore [self-sown]	4.5	20 Ms *	5.0	0.1	Younger than Property	Boundary Policy Holder and/or Third Party 5 Pond Street NW3 2PN
Management history		No significant recent management noted.					
Recommendation		Remove (fell) all to near ground level and treat stumps to inhibit regrowth.					

Ms: multi-stemmed * Estimated or approximate value

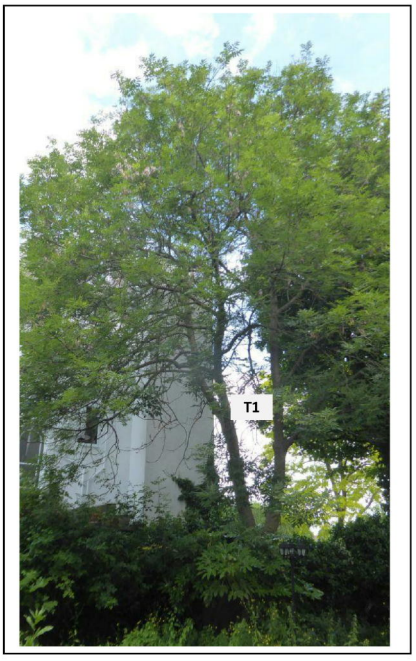
T - Tree; TG - Tree group; G – Group; H - Hedge; S - Shrub; SG - Shrub group; C - Climber; W – Woodland; ST - stump

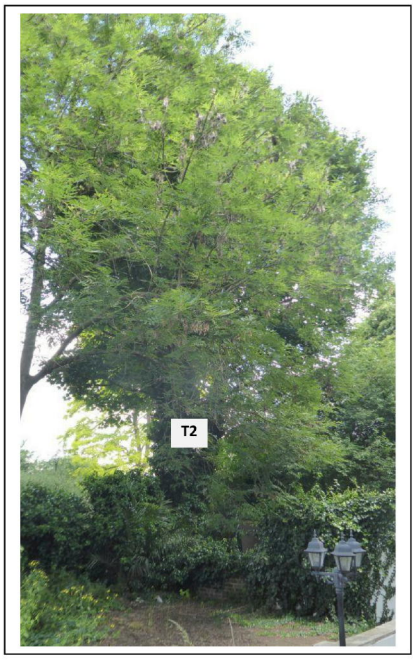
Distance to building measurements are to the nearest point of the building unless otherwise stated.
Tree dimensions may be estimated or approximate based on accessibility.
Crown spread values are normally an estimate of the maximum spread but note tree crowns may be asymmetrical.

[redacted]

Photographs

[redacted]


T1


T2

Management of vegetation to alleviate clay shrinkage subsidence.

All vegetation requires water to survive which is accessed from the soil. Clay soils shrink when water taken up by vegetation exceeds inputs from rainfall, which is at its maximum during the summer months. When deciduous vegetation enters dormancy and loses its leaves, and rainfall increases during the winter months, soil moisture increases and the clay swells. (Evergreen trees and shrubs use minimal/negligible amounts of soil water during the winter).

Buildings founded on clay soils are susceptible to movement as the clay shrinks and swells which when exacerbated by vegetation can result in cracking to walls.

Where damage does occur, pruning (reducing leaf area) can in some circumstances be effective in restoring stability however, removal of the influencing vegetation (trees, shrubs, climbers) causing the ground movement offers the most reliable and quickest solution in reducing seasonal volumetric changes in the clay and restoring building stability, and for this reason is frequently initially recommended as the most appropriate solution.

Often this is unavoidable due to the size or number of influencing trees, shrubs etc and their proximity to the building. Very heavy pruning of some species to a level required to effectively control its water use can result in the trees decline and ultimately death and is one factor considered when making recommendations for remedial and future management of a tree. Pruning alone, whilst reducing soil moisture uptake is often an unpredictable and unreliable management option in restoring building stability, either in the short or long term.

[redacted]