Arboricultural Appraisal Report

Subsidence Damage Investigation at:

31 Inglewood Road
London
NW6 1QT

CLIENT:	Crawford & Company
CLIENT REF:	[redacted]
MWA REF:	[redacted]
MWA CONSULTANT:	George Peters BSc. (Hons)
REPORT DATE:	29/03/2019

SUMMARY

Statutory Controls			Mitigation (Current claim tree works)	
TPO current claim	No		Policy Holder	Yes
TPO future risk	No		Domestic 3rd Party	Yes
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 17/03/19 to assess the potential role of vegetation in respect of subsidence damage.

We are instructed to provide opinion on whether moisture abstraction by 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 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 3 storey end-terrace house built in circa 1896. The property has been converted into three self-contained flats. External areas comprise hard standing to the front and garden to the rear.

The property occupies a site that slopes gently downhill from left to right.

Damage Description & History

Damage affects much of the building with internal cracking in several rooms at ground and first floor levels together with external cracking on the rear elevation. Damage was first noticed in July 2018. Please refer to the Crawford Technical report for a more detailed synopsis.

At the time of the engineer's inspection (01/11/2018) the structural significance of the damage was found to fall within Category 3 (moderate) of Table 1 of BRE Digest 251.

We have not been notified of any previous claims.

Site Investigations

Site investigations were carried out by FASTRACK on 22/12/2018, when 2 trial pits were hand excavated to reveal the foundations, with a borehole sunk through the base of the trial pit to determine subsoil conditions.

[redacted]

Discussion

Opinion and recommendations are made on the understanding that Crawford & Company are satisfied that the current building movement and the associated damage is the result of clay shrinkage subsidence and that other possible causal factors have been discounted.

Site investigations and soil test results have confirmed a plastic clay subsoil of medium to high volume change potential (NHBC Classification) susceptible to undergoing volumetric change in relation to changes in soil moisture. A comparison between moisture content and the plastic and liquid limits suggests moisture depletion at the time of sampling in TP/BH1 and TP/BH2 at depths beyond normal ambient soil drying processes such as evaporation indicative of the soil drying effects of vegetation.

Roots were observed to a depth of 800mm and 2200mm bgl in TP/BH1 and TP/BH2 respectively. Recovered samples have been positively identified (using anatomical analysis) as Pomoideae gp. and Cupressaceae spp., the origin of which will be T1 (Crataegus sp) and T3 (Cypress) confirming their influence on soils at and below the foundations.

Irrespective of the identification of recovered root samples, the roots of T2 (Willow) and T4 (Bay) are also likely to be present below foundation level in proximity to the area of movement/damage and influencing soil moisture and volumes. It is noted that H1 contains Pyracantha and roots from this genus were recovered from TP/BH1 although H1 is not considered to be significant.

Based on the technical reports currently available, engineering opinion and our own site assessment we conclude the damage is consistent with shrinkage of the clay subsoil related to moisture abstraction by vegetation. Having considered the information currently available, it is our opinion that T1, T2, T3, and T4 are the principal cause of or are materially contributing to the current subsidence damage.

If an arboricultural solution is to be implemented to mitigate the influence of the implicated trees/vegetation we recommend that T1, T2, T3, and T4 are removed.

Other vegetation recorded presents a potential future risk to building stability.

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

Recommended tree works may be subject to change upon receipt of additional information.

[redacted]

Conclusions

- Conditions necessary for clay shrinkage subsidence to occur related to moisture abstraction by vegetation have been confirmed by site investigations and the testing of soil and root samples.
- Engineering opinion is that the damage is related to clay shrinkage subsidence.
- There is significant vegetation present with the potential to influence soil moisture and volumes below foundation level.
- Roots have been observed underside of foundations and identified samples correspond to vegetation identified on site.
- Replacement planting may be considered subject to species choice and planting location.

[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	Crataegus sp.	5	280 *	4.5	3.5	Younger than Property	Policy Holder
Management history		No recent management noted.					
Recommendation		Remove (fell) to near ground level and treat stump to inhibit regrowth.					
T2	Willow	5	150 *	5 *	3.5 *	Younger than Property	Third Party: 9 Holmdale Road NW6 1BE
Management history		No recent management noted.					
Recommendation		Remove (fell) to near ground level and treat stump to inhibit regrowth					
T3	Cypress	9	190 *	4.5 *	1.5	Younger than Property	Third Party: 5 Holmdale Road NW6 1BE
Management history		No recent management noted.					
Recommendation		Remove (fell) to near ground level.					
T4	Bay	9	400 Ms	8	6.7	Similar Age to Property	Policy Holder
Management history		No recent management noted.					
Recommendation		Remove (fell) to near ground level and treat stump to inhibit regrowth.					

- Ms: multi-stemmed * Estimated value

[redacted]

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

Tree No.	Species	Ht (m)	Dia (mm)	Crown Spread (m)	Dist. to building (m)	Age Classification	Ownership
T5	Cherry	10	250	5 *	11.5	Younger than Property	Policy Holder
Management history		No recent management noted.					
Recommendation		Do not allow to exceed current dimensions.					
T6	Birch	9	120 Ms *	3 *	7.1	Younger than Property	Third Party: 5 Holmdale Road NW6 1BE
Management history		No recent management noted.					
Recommendation		Do not allow to exceed current dimensions.					
T7	Elder	4	100 Ms *	4	7 *	Younger than Property	Third Party: 3 Holmdale Road NW6 1BE
Management history		No recent management noted.					
Recommendation		Do not allow to exceed current dimensions.					
H1	Mixed species hedge	2.1	40 Ms *	0.5	0.3	Younger than Property	Policy Holder
Management history		Species include Bay and Pyracantha. Subject to past management.					
Recommendation		Do not allow to exceed current dimensions.					
H2	Privet	1.8	20 Ms	0.6	0	Younger than Property	Policy Holder
Management history		Subject to past management.					
Recommendation		Do not allow to exceed current dimensions.					
H3	Privet	1.8	20 Ms	0.5	4.5	Younger than Property	Policy Holder
Management history		Subject to past management.					
Recommendation		Do not allow to exceed current dimensions.					

- Ms: multi-stemmed * Estimated value

[redacted]

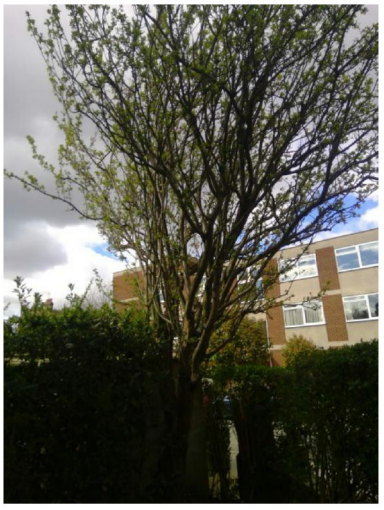
Site Plan

Plan not to scale – indicative only

Approximate areas of damage

[redacted]

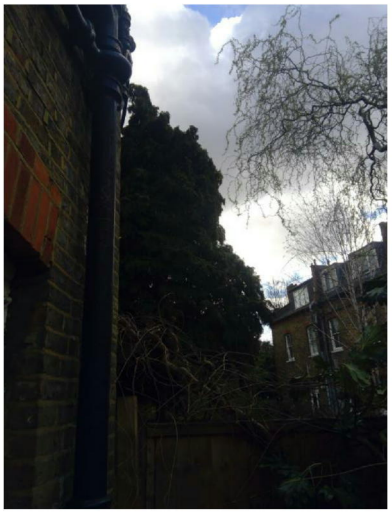
Images



View of T1 Crataegus sp., current claim.

View of T2 Willow, current claim.

[redacted]



View of T3 Cypress, current claim.

View of T4 Bay, current claim.

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