Arboricultural Appraisal Report

Subsidence Damage Investigation at:

12 Heath Hurst Road
London
NW3 2RX

CLIENT: Crawford & Company

[redacted]

MWA CONSULTANT: Mark Johnson (FdSc; MArborA)

REPORT DATE: 11/01/2020

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 18th December 2019 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 4 storey mid-terrace house with basement built c.1890.

External areas comprise flagstones and steps to the front. There was no access to the rear of the property at the time of our inspection.

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

Damage Description & History

Damage relates to the front elevation and the front bay window of the insured dwelling where cracking indicates downward movement. Damage was first noticed in September 2018.

Cracking is evident internally either side of the bay window in the lounge. There is further cracking in several rooms on the first, second and 3rd floors. Externally there is cracking to centre cill of the front bay window. There is vertical separation cracking to the left and right hand side of the bay at its junction with the main property.

At the time of the engineer's inspection (05/12/2018) the structural significance of the damage was found to fall within Category 3 (moderate) of Table 1 of BRE Digest 251. For a more detailed synopsis of the damage please refer to the surveyor's technical report.

There were previous claims in 2012 and 2016. The most recent claim dealt with movement to the rear of the property.

[redacted]

Site Investigations

Site investigations were carried out by OPTERA on 01/05/2019, 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. Please refer to the Site Investigation report for further details.

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 susceptible to undergoing volumetric change in relation to changes in soil moisture.

Roots were observed to a depth of 2400mm bgl in TP/BH1 and recovered samples have been positively identified (using anatomical analysis) as Fraxinus spp., the origin of which will be TG1 (ash) confirming its influence on the soils below the foundations.

Irrespective of the identification of recovered root samples, the roots of C1 (wisteria) are also likely to be present below foundation level in proximity to the area of movement/damage and influencing soil moisture and volumes.

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 TG1 and C1 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 TG1 and C1 are removed. Other vegetation recorded presents a potential future risk to building stability and management is therefore recommended.

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
TG1	Ash	8	Ms	5	1.25	Younger than Property	Policy Holder
Management history		No recent management noted.					
Recommendation		Remove (fell) to near ground level and treat stump to inhibit regrowth.					
C1	Wisteria	5	Ms	4	0.1	Younger than 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

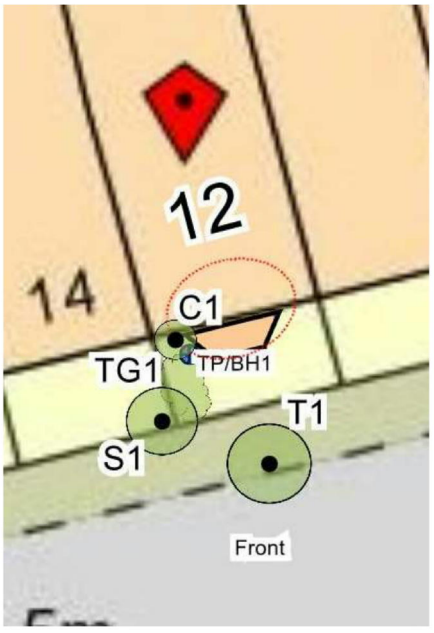
Table 2 **Future Risk** - Tree Details & Recommendations

Tree No.	Species	Ht (m)	Dia (mm)	Crown Spread (m)	Dist. to building (m)	Age Classification	Ownership
T1	Hawthorn	3.5	100	3	4.3	Younger than Property	Local Authority
Management history		No recent management noted.					
Recommendation		Do not allow to exceed current dimensions.					
S1	Pittosporum	3.5	Ms	1.5	2.75	Younger than Property	Third Party 14 Heath Hurst Road NW3 2RX
Management history		No recent management noted.					
Recommendation		Reduce height to 2m and crown radius leaving balanced crown. Prune on an cycle to maintain at broadly reduced dimensions.					

Ms: multi-stemmed * Estimated value

[redacted]

Site Plan



Plan not to scale – indicative only

Approximate areas of damage

[redacted]

Images

View of TG1 and C1

View of S1, TG1 and C1

[redacted]

View of S1, TG1 and T1

View of TG1, S1 and T1

[redacted]