

Arboricultural Appraisal Report

Subsidence Damage Investigation at:

29 Elsworthy Road
London
NW3 3BT



CLIENT:	Crawford & Company
CLIENT REF:	[REDACTED]
MWA REF:	[REDACTED]
MWA CONSULTANT:	George Peters BSc. (Hons), M.Arbor.A
REPORT DATE:	09/09/2019

SUMMARY

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



Introduction

Acting on instructions from Crawford & Company, the insured property was visited on 05/09/2019 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 2 storey detached house built in 1910. No 29, the risk address, includes the ground floor only. 4 further flats (no's 29A-29D) comprise the upper floor plus rooms in the roof structure. No 29 has a large bay extension, added at an unknown date, towards the right hand side.

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 front right hand bay and entrance portico of the insured dwelling. Internally, cracking has been noted to the front bedroom. Damage was first noticed in June 2018.

At the time of the engineer's inspection (13/12/2018) the structural significance of the damage was found to fall within Category 3 (moderate) of Table 1 of BRE Digest 251.

The property was the subject of a previous claim in 2016 which affected the front bay. The bay was repaired in summer 2017.



Site Investigations

Site investigations were carried out by CET on 15/05/2019, 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. A drains survey was also undertaken. 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.

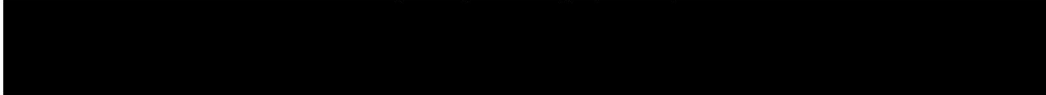
Roots were observed to a depth of 2400mm and 2200mm bgl in TP/BH1 and TP/BH2. Recovered samples have been positively identified (using anatomical analysis) as *Platanus* spp., and *Cupressaceae* spp., the origin of which will be T1 (London Plane) and H1 (Cypress) confirming their influence on the soils below the foundations.

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 and H1 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 is re-pollarded, and committed to strict re-pollard interval of every 2 years, and H1 is removed to achieve 4 metres clearance from the insured property. 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.



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.



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	Plane (London)	16	900	13	15.5	Younger than Property	Local Authority
Management history		Past pollard management					
Recommendation		Re pollard. Repeat every 2 years.					
H1	Cypress	3	100 Ms	11	1	Younger than Property	Policy Holder
Management history		No recent management noted.					
Recommendation		Remove section to provide 4m clearance from insured property.					

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
S1	Choisya	2	30 Ms	1.5	1	Younger than Property	Policy Holder
Management history		No recent management noted.					
Recommendation		Maintain broadly at no more than current dimensions by periodic pruning.					
SG1	Includes Hydrangea Laurustinus Jasmine	3	30 Ms *	7.1	4	Younger than Property	Policy Holder
Management history		No recent management noted.					
Recommendation		Maintain broadly at no more than current dimensions by periodic pruning.					

Ms: multi-stemmed * Estimated value



Images



View of T1 London Plane, current claim.

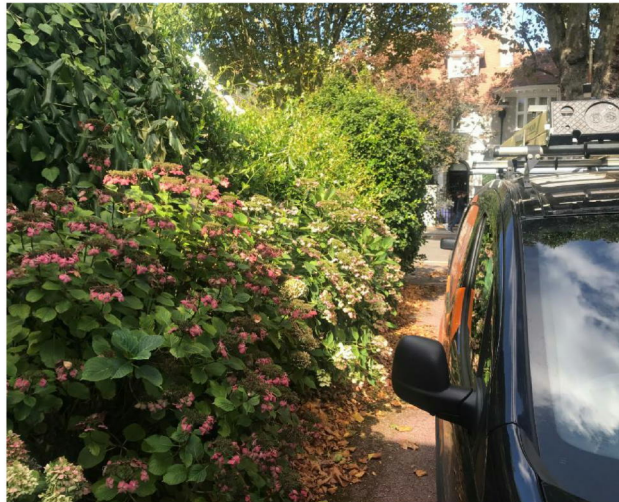


View of H1 Cypress, current claim.





View of S1 Choisya, future risk.



View of SG1 mixed species, future risk.

