

## Arboricultural Appraisal Report

### Subsidence Damage Investigation at:

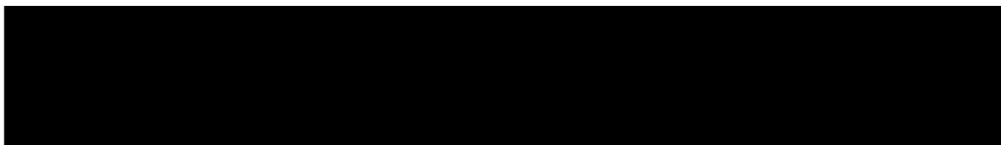
33 Priory Terrace  
London  
NW6 4DG



CLIENT: Crawford & Company  
CLIENT REF: [REDACTED]  
MWA REF: [REDACTED]  
MWA CONSULTANT: Andy Clark  
REPORT DATE: 12/05/2020

### SUMMARY

Statutory Controls		Mitigation (Current claim tree works)	
TPO current claim	No	Policy Holder	Yes
TPO future risk	Yes – T4, T5	Domestic 3 <sup>rd</sup> Party	Yes
Cons. Area	Yes	Local Authority	No
Trusts schemes	No	Other	No
Local Authority: -	London Borough of Camden		



## **Introduction**

Acting on instructions from Crawford & Company, the insured property was visited on 09/05/2020 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 semi-detached house of traditional construction, built c.1880 and since extended with a single-storey addition to the rear and converted into 4 self-contained flats. 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 extension where internal and external cracking indicates downward movement. Damage is reported to have first been observed during October 2019.

At the time of the engineer's inspection the structural significance of the damage was found to fall within Category 2 (Slight) of Table 1 of BRE Digest 251. For a more detailed synopsis of the damage please refer to the surveyor's technical report.

We have not been made aware of any previous claims.

## **Geology / Soils**

The online 1:50 000 scale British Geological Survey map records the bedrock geology as London Clay Formation - Clay, silt and sand. No superficial deposits for the area are recorded.



## 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.

Published soil maps indicate the underlying soils include or are likely to include a clay component susceptible to undergoing volumetric change with changes in soil moisture. Moisture abstraction by vegetation has the potential to cause soil shrinkage and consequent subsidence of the building.

Our survey has identified vegetation within influencing distance of the building with a current potential to influence soil volumes below foundation level; the most significant of which in relation to the current damage are the large Horse Chestnut and Lime trees beyond the rear boundary [T1 – T5]. There is also a likely localised contribution from the CG1 Wisteria and Ivy group adjacent to the left hand flank of the rear addition.

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

If an arboricultural solution is to be implemented to mitigate the influence of the trees/shrubs considered to be responsible for the damage we recommend that T1 and T2 Horse Chestnuts and T3 Lime are pollarded combined with removal of nearby elements of CG1 climber group. 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 reference to published soil maps.
- 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.

**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	Horse Chestnut	19.0 *	800 *	12.5	9.5 *	Older than Property	Third Party 38 Priory Road NW6 4SJ
Management history		No significant past management noted – Heavily Ivy clad.					
Recommendation		Remove Ivy from throughout tree crown. Pollard at approx. 6m to 7m high in keeping with T2, T3 and T4 and thereafter do not allow re-growth to exceed 3yrs age.					
T2	Horse Chestnut	19.0 *	750 *	14.0	8.7	Older than Property	Third Party 38 Priory Road NW6 4SJ
Management history		Subject to past management/pruning - previously pollarded at approx. 7.0m (regrowth appears >10yrs age).					
Recommendation		Re-pollard to previous points at approx. 7.0m and thereafter do not allow re-growth to exceed 3yrs age.					
T3	Lime	20.5 *	550 *	12.0	9.8	Older than Property	Third Party 38 Priory Road NW6 4SJ
Management history		Subject to past management/pruning - previously pollarded at approx. 6.0m (regrowth appears >10yrs age).					
Recommendation		Re-pollard to previous points at approx. 6.0m and thereafter do not allow re-growth to exceed 3yrs age.					
CG1	Wisteria and Ivy	4.5	50 Ms *	9.0	1.2	Younger than Property	Policy Holder
Management history		No significant past management noted.					
Recommendation		Remove (fell) all within 4.0m of the extension to near ground level and treat stumps to inhibit regrowth.					

Ms: multi-stemmed

\* Estimated value

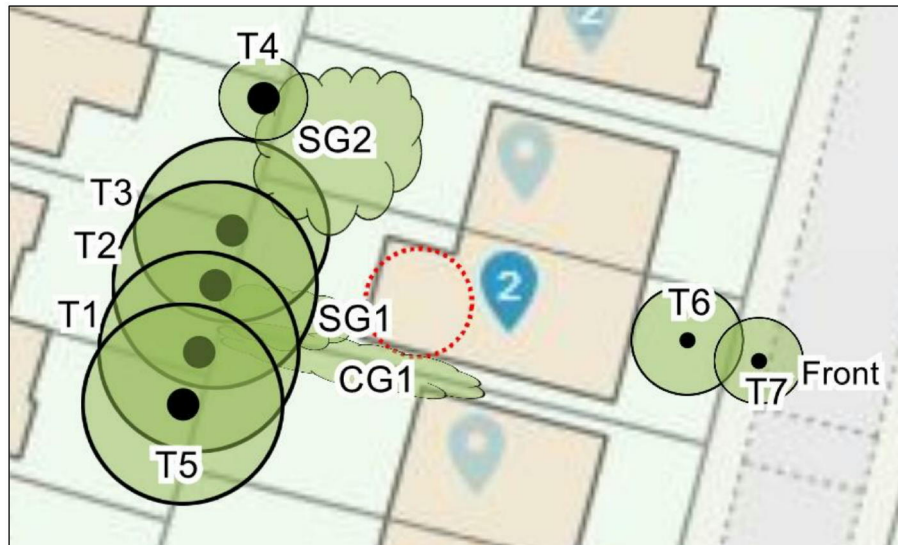


**Table 2** **Future Risk - Tree Details & Recommendations**


Tree No.	Species	Ht (m)	Dia (mm)	Crown Spread (m)	Dist. to building (m)	Age Classification	Ownership
T4	Lime	10.0 *	600 *	4.5	13.0	Older than Property	Third Party 40 Priory Road NW6 4SJ
Management history		Subject to past management/pruning - previously pollarded at approx. 8.0m (regrowth appears <5yrs age).					
Recommendation		Maintain broadly at no more than current dimensions by periodic [triennial] re-pollarding.					
T5	Horse Chestnut	18.5	800 *	13.5	12.0 *	Older than Property	Third Party 36 Priory Road NW6 4SJ
Management history		No significant past management noted.					
Recommendation		No works required at present (subject to review if movement persists).					
T6	Cherry	5.0	230	8.5	3.2	Younger than Property	Policy Holder
Management history		No significant past management noted.					
Recommendation		Maintain broadly at no more than current dimensions by periodic pruning.					
T7	Birch	15.0	210	4.5	8.2	Younger than Property	Local Authority
Management history		No significant past management noted.					
Recommendation		Maintain broadly at no more than current dimensions by periodic pruning.					
SG1	Mixed spp. group of mostly Fig, Portuguese laurel and Philadelphus	4.0	30 Ms *	3.0	1.7	Younger than Property	Policy Holder
Management history		Recently reduced/pruned. Growing in raised bed.					
Recommendation		Maintain broadly at no more than current dimensions by periodic pruning.					
SG2	Mixed spp. group of mostly Hazel, Ceanothus and Sycamore	4.5	10 Ms *	6.0	5.0	Younger than Property	Third Party 35 Priory Terrace NW6 4DG
Management history		Subject to past management/pruning - appears regularly pruned.					
Recommendation		Maintain broadly at no more than current dimensions by periodic pruning.					

Ms: multi-stemmed \* Estimated value

Site Plan



Plan not to scale – indicative only

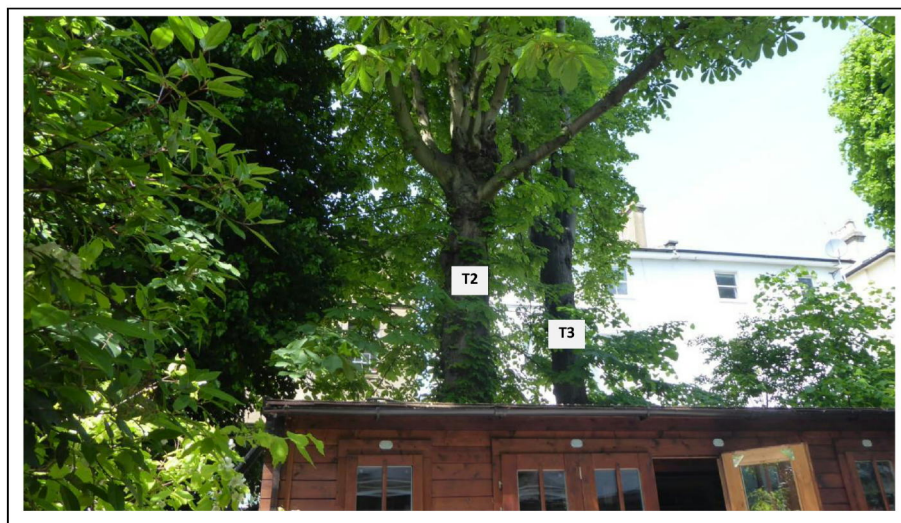

 Approximate areas of damage



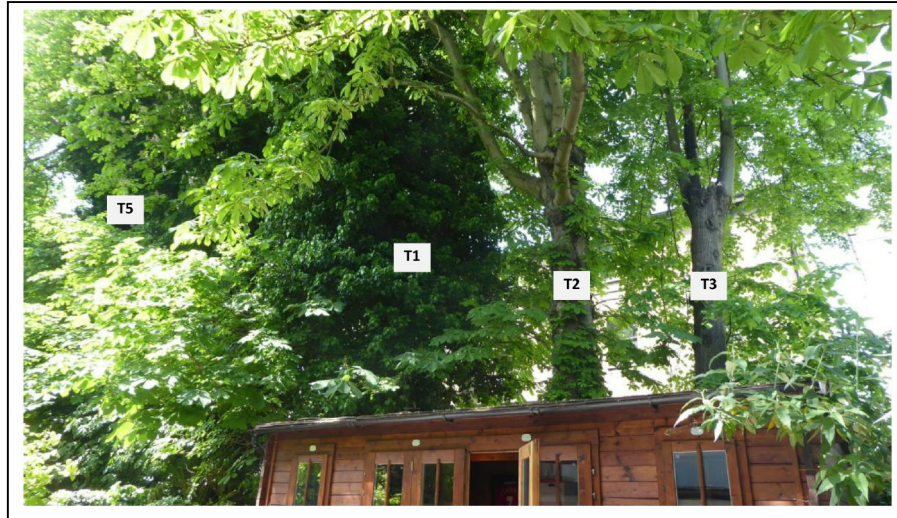
## Images



View of CG1 Wisteria and Ivy group



View of T2 Horse Chestnut and T3 Lime beyond rear boundary



View of T1 to T3 and T5 stems beyond rear boundary



View of T4 Lime with additional pollarded Limes [not recorded] continuing at greater distance and SG2 group to foreground

