

Arboricultural Appraisal Report

Subsidence Damage Investigation at:

1 Torriano Cottages
 Torriano Avenue
 London
 NW5 2TA



CLIENT: Davies Group Ltd
 CLIENT REF: [REDACTED]
 MWA REF: [REDACTED]
 MWA CONSULTANT: George Peters BSc. (Hons), M.Arbor.A
 REPORT DATE: 18/07/2019

SUMMARY

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



Introduction

Acting on instructions from Davies Group Ltd, the insured property was visited on 13/07/19 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 2 storey semi-detached house built in circa 1890. 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 bay window where cracking indicates downward movement. Cracking has been noted to the exterior brickwork and internally at the bay window. Damage was first noticed on 15th September 2018.

At the time of the engineer's inspection (22 October 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 made aware of any previous claims.

Site Investigations

Site investigations were carried out by Optera in February 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. 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 Davies Group Ltd 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. A comparison between moisture content and the plastic and liquid limits suggests moisture depletion at the time of sampling in TP/BH1 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 1000mm bgl in TP/BH1 and recovered samples have been positively identified (using anatomical analysis) as Prunus spp., the origin of which will be T1 Cherry confirming its influence on the soils below the foundations.

Irrespective of the identification of recovered root samples, the roots T2, H1 (Wisteria) and H2 are also likely to be present 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 T1 the principal cause of the current subsidence damage, with a possible contribution from T2, H1 and H2.

We recommend that T1 and T2 are removed in the first instance and H1 is cut back to the main scaffold branches along its entire length and H2 reduced.

Should movement persist following the completion of recommended works, further works may be required.

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	Cherry	4	100 Ms *	3	2.9	Younger than Property	Third Party 2 Torriano Cottages NW5 2TA
Management history		No recent management noted.					
Recommendation		Remove (fell) to near ground level and treat stump to inhibit regrowth.					
T2	Apple	3.5	180	3	3.4	Younger than Property	Policy Holder
Management history		Subject to past management/pruning.					
Recommendation		Remove (fell) to near ground level and treat stump to inhibit regrowth.					
H1	Wisteria	3.5	50 *	3	1.5	Younger than Property	Third Party 2 Torriano Cottages NW5 2TA
Management history		No recent management noted.					
Recommendation		Prune back to main scaffold branches along entire length. Prune on a biennial basis.					
H2	Privet	1.7	20 Ms	0.5	3	Younger than Property	Policy Holder
Management history		Subject to past management/pruning.					
Recommendation		Reduce height to 1.4m and prune annually maintaining at reduced dimensions.					

• Ms: multi-stemmed * Estimated value

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Table 2 Future Risk - Tree Details & Recommendations

Tree No.	Species	Ht (m)	Dia (mm)	Crown Spread (m)	Dist. to building (m)	Age Classification	Ownership
T3	Sycamore	10	300 *	8	10 *	Younger than Property	Local Authority
Management history		No past management noted.					
Recommendation		Maintain broadly at no more than current dimensions by periodic pruning.					
SG1	Camelia and Pyracantha	3	40 Ms *	4	0	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



Site Plan



Plan not to scale – indicative only

 Approximate areas of damage

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Images



View of H1 Wisteria, current claim.



View of H1 Wisteria stem, current claim.

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View of T1 Cherry, current claim.



View of T2 Apple, current claim.

