Arboricultural Appraisal Report

Subsidence Damage Investigation at:

94 Greencroft Gardens
London
NW6 3PH

CLIENT: Crawford & Company

[redacted]

MWA CONSULTANT: Mark Johnson (FdSc; MArborA)

REPORT DATE: 31/10/2019

SUMMARY

Statutory Controls			Mitigation (Current claim tree works)	
TPO current claim	Yes – T1		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 23/10/2019 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 semi-detached house built circa 1890. External areas comprise gardens to the front and flagstones and gardens to the rear.

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

Damage Description & History

Damage relates to the rear elevation and the front bay window of the insured dwelling and was first noticed in August 2018. Vertical cracking is evident internally in the communal hall, stairs and landing. Externally there is cracking above the patio doors on the rear projection. There is additional external cracking above and below the front bay window.

For a more detailed synopsis of the damage please refer to the surveyor's technical report.

At the time of the engineer's inspection (07/12/2018) the structural significance of the damage was found to fall within Category 2 (slight) of Table 1 of BRE Digest 251.

We have not been made aware of any previous claims.

[redacted]

Site Investigations

Site investigations were carried out by CET on 22/05/2019, 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. 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 the underside of foundations in TP/BH1 and to a depth of 2000mm bgl in TP/BH2 and recovered samples have been positively identified (using anatomical analysis) as Privet and Poplar, the origin of which will be H1 and T1 confirming influence on the soils below the foundations.

Irrespective of the identification of recovered root samples, the roots of S1 (Griselinia) are also likely to be present below foundation level in proximity to the area of movement/damage and influencing soil moisture and volumes.

Level monitoring from 14/05/2019 to 28/08/2019 has recorded slight downward movement at the front and greater downward movement at the rear which is indicative of a reduction in clay volume related to the soil drying effects of vegetation.

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, S1 and H1 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 and S1 are removed and that H1 is managed in accordance with Table 1. Other vegetation recorded presents a potential future risk to building stability and management is therefore recommended.

[redacted]

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.

[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	Poplar	25 *	1000	16 *	17 *	Younger than Property	Third Party: 91 Canfield Gardens NW6 3EA
Management history		Managed as a high pollard.					
Recommendation		Remove (fell) to near ground level and treat stump to inhibit regrowth.					
S1	Griselinia	4	Ms	3	1	Younger than Property	Policy Holder
Management history		Subject to past management/pruning.					
Recommendation		Remove (fell) to near ground level. Owner to physically remove any regrowth (no chemical treatment due to translocation risk).					
H1	Privet	2.75	Ms	8.5 *	3	Younger than Property	Third Party: 92 Greencroft Gardens NW6 3PH
Management history		Subject to past management/pruning.					
Recommendation		Reduce height by 0.75m. Prune on an annual cycle to maintain at broadly reduced dimensions.					

Ms: multi-stemmed * Estimated value

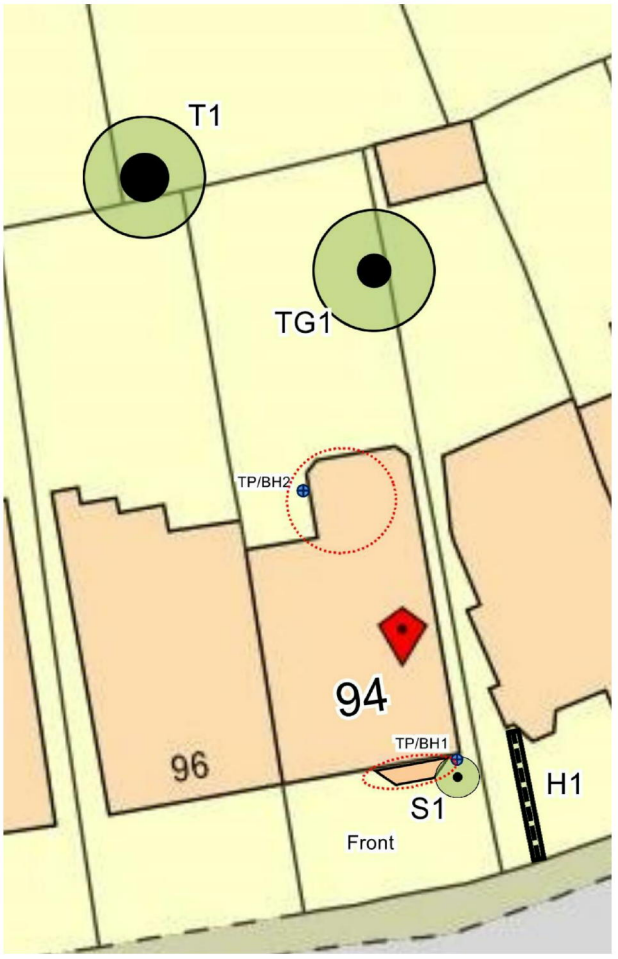
Table 2 **Future Risk** - Tree Details & Recommendations

Tree No.	Species	Ht (m)	Dia (mm)	Crown Spread (m)	Dist. to building (m)	Age Classification	Ownership
TG1	Lime	13	450	12*	11	Younger than Property	Policy Holder
Management history		No recent management noted.					
Recommendation		Reduce height by 4m and crown radius by 2m leaving balanced crown. Prune on a triennial cycle to maintain at broadly reduced dimensions.					

Ms: multi-stemmed * Estimated value

[redacted]

Site Plan

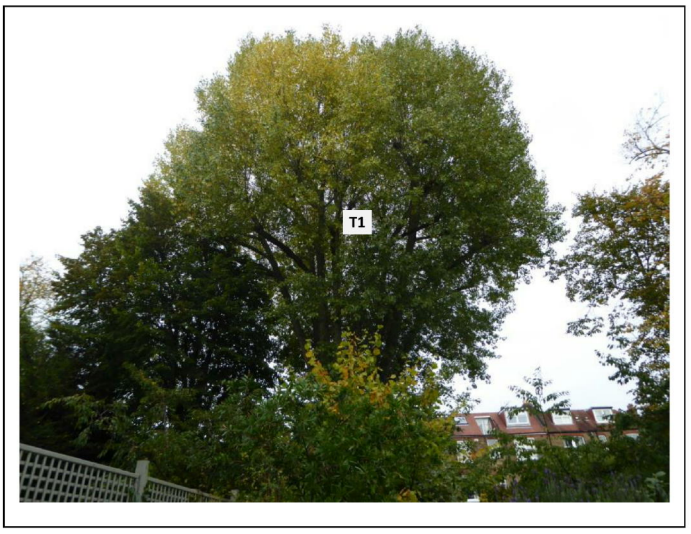


Plan not to scale – indicative only

Approximate areas of damage

[redacted]

Images



View of T1

View of T1

[redacted]

View of S1 and H1

View of S1

[redacted]