

Arboricultural Appraisal Report

Subsidence Damage Investigation at:

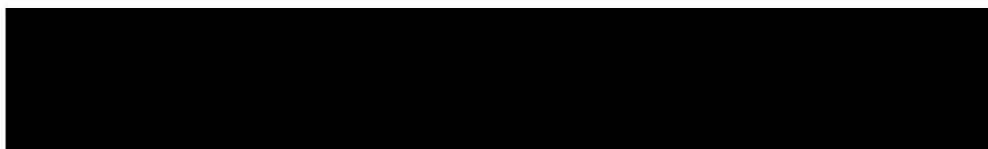
85 St Augustines Road
London
NW1 9RR



CLIENT:	B Maule & Co Ltd
CLIENT REF:	[REDACTED]
MWA REF:	[REDACTED]
MWA CONSULTANT:	Andy Clark
REPORT DATE:	17/09/2019

SUMMARY

Statutory Controls		Mitigation (Current claim tree works)	
TPO current claim	No	Policy Holder	Yes
TPO future risk	Yes T3	Domestic 3 rd Party	No
Cons. Area	Yes	Local Authority	No
Trusts schemes	No	Other	No
Local Authority: -	London Borough of Camden		



Introduction

Acting on instructions from B Maule & Co Ltd, the insured property was visited on 08/08/2019 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 of traditional construction, extended with a conservatory to the rear.

External areas comprise gardens to the front and rear.

The property occupies a site that slopes uphill from front to rear, which is accounted for by a series of stepped terraces.

Damage Description & History

Damage is noted throughout the rear of the property. For a more detailed synopsis of the damage please refer to the building surveyor's technical report.

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.

We have not been made aware of any previous claims.



Site Investigations

Site investigations were carried out by GEO INVESTIGATE on 23/05/2019, 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.

Foundations:

Ref	Foundation type	Depth at Underside (mm)
TP/BH1	Concrete	500

Soils:

Ref	Description	Plasticity Index (%)	Volume change potential (NHBC)
TP/BH1	Firm brown to stiff mottled grey slightly sandy, slightly gravelly CLAY	43 - 53	High

Roots:

Ref	Roots Observed to depth of (mm)	Identification	Starch content
TP/BH1	1600	Platanus spp.	Present

Platanus spp. includes London Plane and Oriental Plane

Drains: No information available at the time of writing.

Monitoring: Level monitoring is in progress, commencing on 28/02/19 and with one subsequent reading available at the time of writing, taken on 27/06/19.



Discussion

Opinion and recommendations are made on the understanding that B Maule & Co 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 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 1.6m bgl in TP/BH1, and recovered samples have been positively identified (using anatomical analysis) as *Platanus* spp.; the origin of which will be T1 London Plane, confirming its 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 London Plane is the principal cause of 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 London Plane is removed.

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	London Plane	16.5 *	650	14.5	7.3	Younger than Property	Policy Holder
Management history		Subject to past management/pruning – previously crown reduced.					
Recommendation		Remove (fell) to near ground level and treat stump to inhibit regrowth.					

Ms: multi-stemmed

* Estimated value



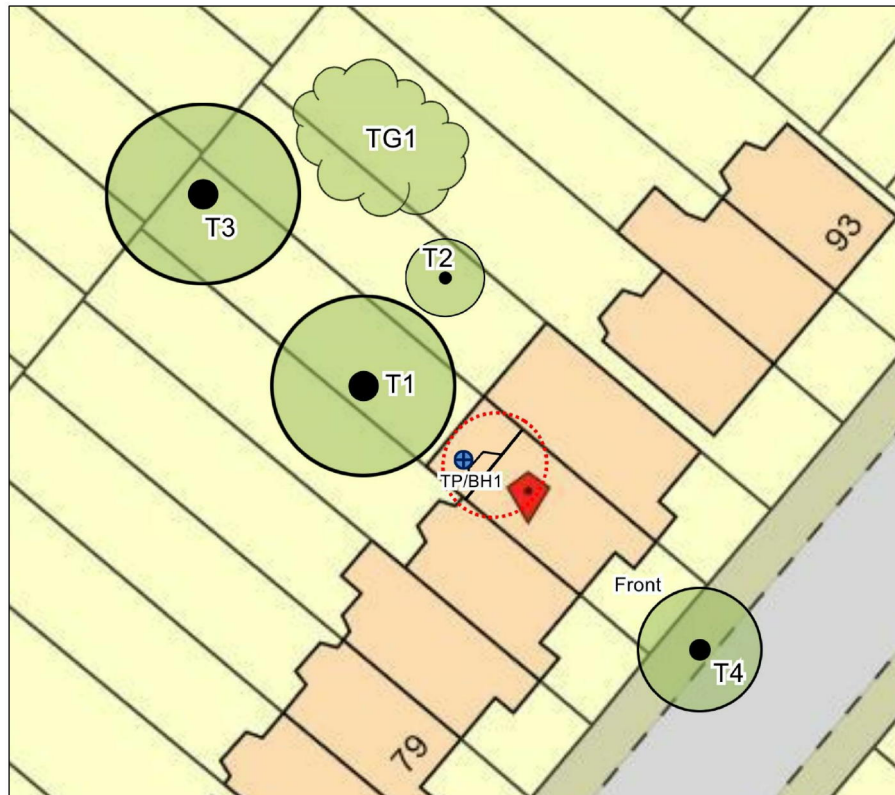
Table 2 **Future Risk - Tree Details & Recommendations**

Tree No.	Species	Ht (m)	Dia (mm)	Crown Spread (m)	Dist. to building (m)	Age Classification	Ownership
T2	Pine	10.0	220 *	4.5 *	11.6	Younger than Property	Third Party: 87 St. Augustine's Road, NW1 9RR
Management history		No past management noted.					
Recommendation		Maintain broadly at no more than current dimensions by periodic pruning.					
T3	Ash	18.5 *	650	14.5	20.9	Younger than Property	Policy Holder
Management history		No past management noted. Significant decay to base of main stem with stem lean towards 3p gardens – tree appears to be resting on PH shed structure.					
Recommendation		Remove (fell) to near ground level and treat stump to inhibit regrowth. H&S Risk					
T4	False Acacia	11.0	420	7.5	3.6	Younger than Property	Local Authority
Management history		Subject to past management/pruning – previously crown reduced.					
Recommendation		None at present					
TG1	Lime	12.0	300 Ms *	7.5	13.5 *	Younger than Property	Third Party: 89 St. Augustine's Road, NW1 9RR
Management history		No past 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

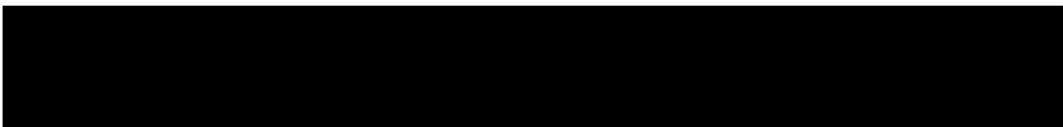
Images

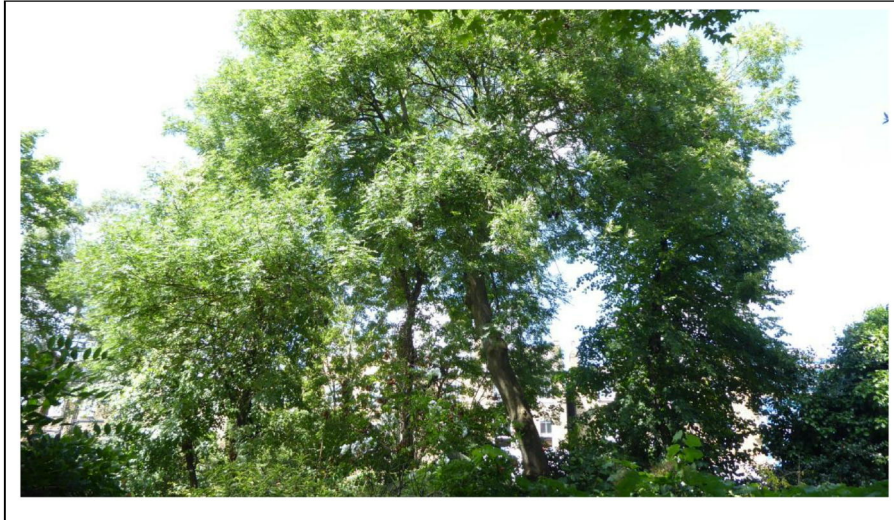


View of T1 London Plane



View of T2 Pine with TG1 Lime group visible beyond





View of T3 Ash



View of T4 False Acacia

