

Arboricultural Appraisal Report

Subsidence Damage Investigation at:

Flat 3
21 Mount Park Road
London
W5 2RS



CLIENT:	QuestGates
CLIENT REF:	QG1T1228431
MWA REF:	SUB230811-14037
MWA CONSULTANT:	Andy Clark
REPORT DATE:	28/09/2023

SUMMARY

Statutory Controls		Mitigation (Current claim tree works)	
TPO current claim	No	Policy Holder	Yes
TPO future risk	Yes – T1, TG3 (cherry, yew)	Domestic 3 rd Party	Yes
Cons. Area	Yes	Local Authority	No
Trusts schemes	No	Other	No
Local Authority: -	London Borough of Ealing		

Introduction

Acting on instructions from QuestGates, the insured property was visited on 07/09/2023 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 of traditional construction, built C.1900 and since extended with a two-storey addition to the right-flank and converted into 7 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 right-hand corner of the building, with internal and external cracking indicative of downward movement.

At the time of the engineer's inspection the structural significance of the damage was found to fall within Category 3 (Moderate) 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.

Site Investigations

Site investigations were carried out by Auger on 27/06/2023, 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 in this report are made on the understanding that QuestGates have identified clay shrinkage subsidence as a cause of building movement and damage.

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 2.9m bgl in TP/BH1, and recovered samples have been positively identified (using anatomical analysis) as Cupressaceae spp. and a shrub species similar to either Euonymus spp., Cistaceae spp. or Lavandula spp. [very thin samples]; the origins of which will be the Cypresses of TG1 group and S1 Euonymus, confirming their influence on the soils below the foundations.

Irrespective of the identification of recovered root samples, the roots of the much larger but more distant Horse Chestnut T1 may also be present below foundation level in proximity to the area of movement/damage and influencing soil moisture and volumes. The larger elements of TG3 at the property frontage may also be involved. However this cannot be determined while the more proximal vegetation remains an active influence on the soils below the building.

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.

If an arboricultural solution is to be implemented to mitigate the influence of the implicated trees/vegetation we recommend that TG1 Cypress group and the S1 Euonymus are removed. Other vegetation recorded presents a potential future risk to building stability and management is therefore recommended. Recommended tree works may however be subject to change upon receipt of additional information.

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.

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
TG1	Group of Cypress with Elder and Ash	12.0	280 Ms *	6.0	2.3	Younger than Property	Third Party 29 Mount Park Crescent W5 2RN
Management history		No significant recent management noted.					
Recommendation		Remove (fell) to near ground level and treat Ash and Elder stumps to inhibit regrowth.					
S1	Euonymus	5.0	60 Ms *	5.0	1.6	Younger than Property	Policy Holder
Management history		No significant past management noted.					
Recommendation		Remove (fell) to near ground level and treat stump to inhibit regrowth.					

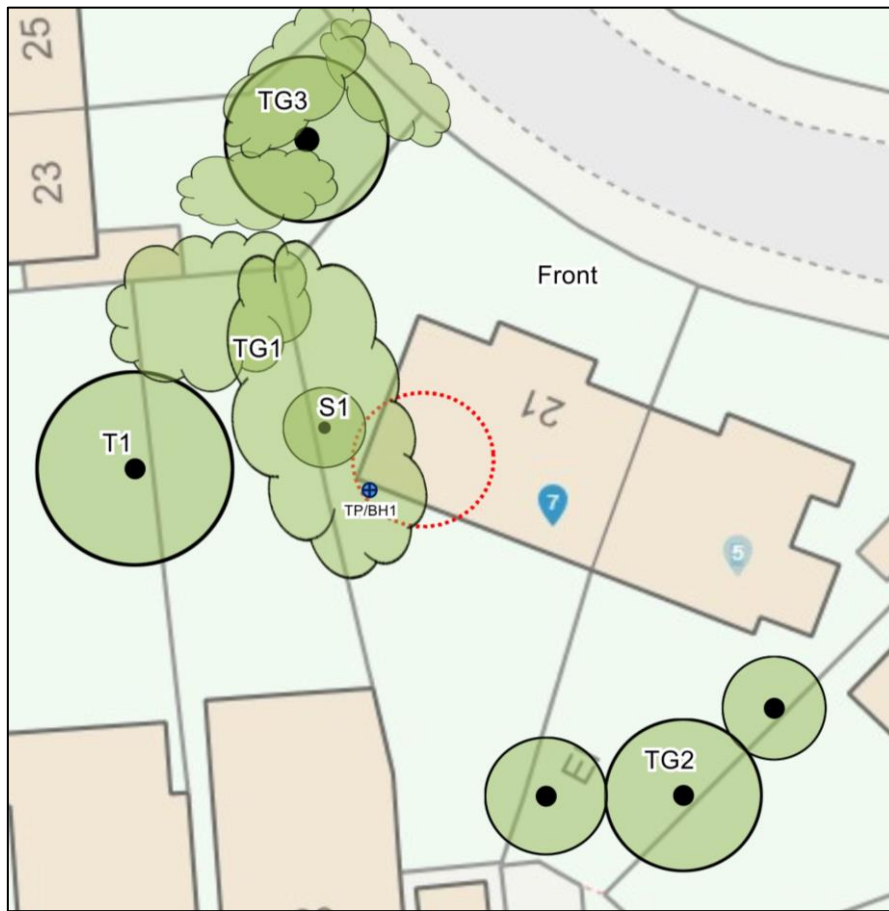
Ms: multi-stemmed * Estimated value

Table 2 Future Risk - Tree Details & Recommendations


Tree No.	Species	Ht (m)	Dia (mm)	Crown Spread (m)	Dist. to building (m)	Age Classification	Ownership
T1	Horse Chestnut	16.0 *	900 *	16.0	12.8	Younger than Property	Third Party 28 Mount Park Crescent W5 2RN
Management history		Subject to past management/pruning - previously crown reduced.					
Recommendation		No works required at present (subject to review if movement persists).					
TG2	Group of Holly and Plum	6.5	300	7.0	6.5	Younger than Property	Third Party 20 Mount Park Road W5 2RS
Management history		No significant past management noted.					
Recommendation		Maintain broadly at no more than current dimensions by periodic pruning.					
TG3	Group of mostly Cypress, Rowan, Tree of Heaven, Rose, and Purple Leaved Plum	16.0	450 *	14.5	12.5	Younger than Property	Third Party 23 Mount Park Road W5 2RS
Management history		No significant past management noted.					
Recommendation		No works required at present (subject to review if movement persists).					

Ms: multi-stemmed * Estimated value

Site Plan



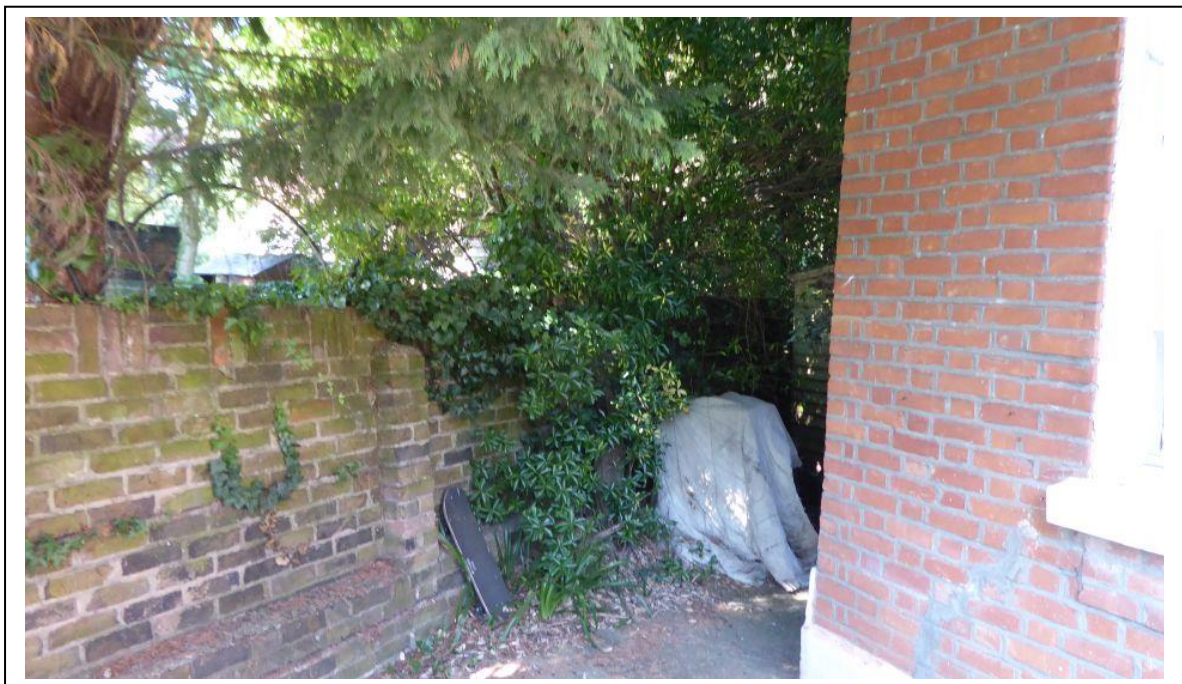
Plan not to scale – indicative only

 Approximate areas of damage

Images



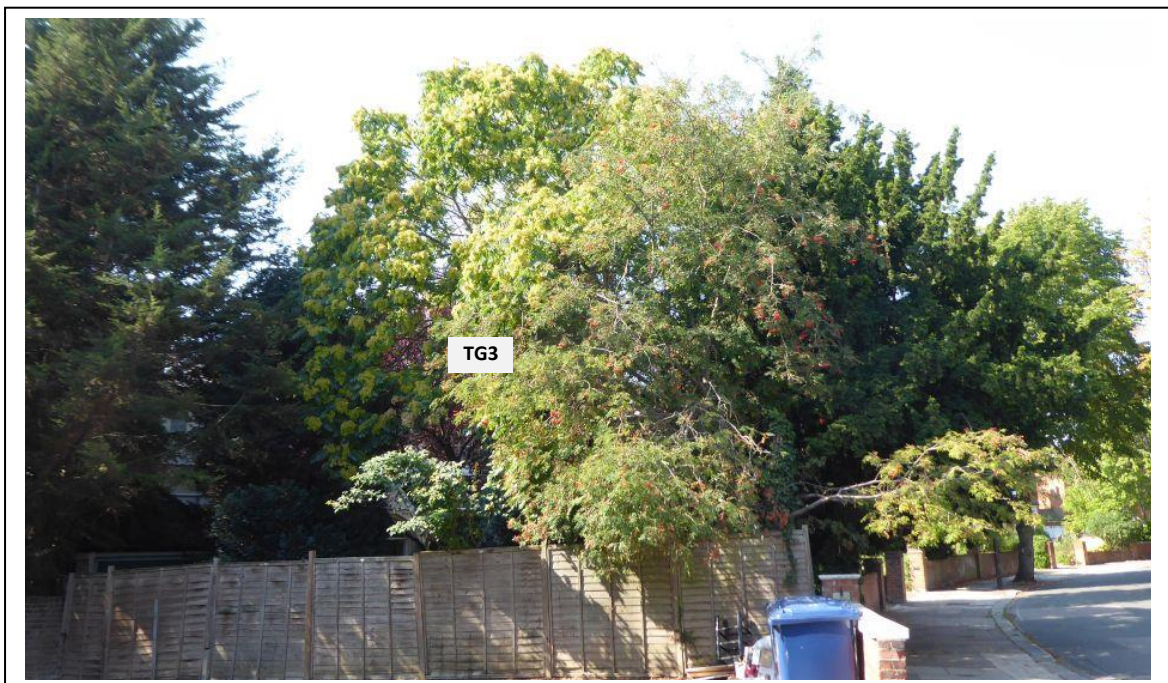
View of TG1 group



View of S1 Euonymus



View of T1 Horse Chestnut with TG1 group visible to right of frame



View of TG3 group beyond front right-hand corner