

Arboricultural Appraisal Report

Subsidence Damage Investigation at:

20A Merton Rise
London
NW3 3EN



CLIENT:

CLIENT REF:

MWA REF:

MWA CONSULTANT:

REPORT DATE:



Giles Mercer (BSc Hons)

05/03/2021

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 QuestGates, the insured property was visited on the 2nd March 2021 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

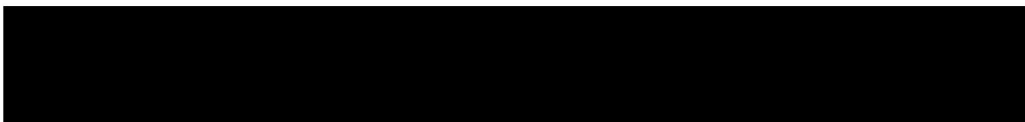
The Risk address comprises a four-storey link detached house with a two-storey flank addition that was constructed of traditional materials circa 1890 and converted into self-contained flats some years ago.

Damage Description & History

Damage affects the ground floor flat (20A Merton Rise) and also the Upper Ground Floor Flat (72 Fellows Road) and takes the form of cracking which is evident both internally and externally.

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 GEOCORE on 10/12/2020, 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. A drains survey was also undertaken.

Foundations:

Ref	Foundation type	Depth at Underside (mm)
TP/BH1	Concrete	1000
TP/BH2	TP/BH Abandoned	n/a

Soils:

Ref	Description	Plasticity Index (%)	Volume change potential (NHBC)
TP/BH1	A firm becoming stiff brown slightly sandy gravelly clay	53 - 54	High
TP/BH2	TP/BH Abandoned	-	-

Roots:

Ref	Roots Observed to depth of (mm)	Identification	Starch content
TP/BH1	No Roots Observed	-	-
TP/BH2	No Roots Observed	-	-

Drains: The drains have been surveyed and minor defects identified although leaking drains are concluded not to be a cause of the current damage.

Monitoring: No information available at the time of writing.



Discussion

Opinion and recommendations are made on the understanding that QuestGates 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.

No roots were observed in the trial pit or borehole excavations. Our survey however has identified vegetation within influencing distance of the building with a current potential to influence soil volumes below foundation level.

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 the Cypress (T1), laurel (S1) and the Bay Laurel (S2) are the principal cause of or 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 the Cypress (T1), S1 Laurel and Bay Laurel (S2) are removed. 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 site investigations and the testing of soil 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.



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	Cypress	3.6	90	1	1	Younger than Property	Policy Holder
Management history		No significant recent management noted.					
Recommendation		Remove (fell) to near ground level.					
S1	Laurel (Portuguese)	2.2	40 Ms *	2	2.5	Younger than Property	Policy Holder
Management history		Recently reduced/pruned.					
Recommendation		Remove (fell) to near ground level and treat stump to inhibit regrowth.					
S2	Laurel (Bay)	6.5	100 Ms *	5	4 *	Younger than Property	Third Party 70 Fellows Road NW3 3LJ
Management history		No significant recent 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
T2	Cypress	2.7	35 Ms *	2	3.35	Younger than Property	Policy Holder
Management history		No significant recent management noted.					
Recommendation		Maintain broadly at no more than current dimensions by periodic pruning.					
T3	Palm	6.4	270	5	4.5	Younger than Property	Policy Holder
Management history		No significant recent management noted.					
Recommendation		No works at present.					
T4	Ash	13.8	440	13	16 *	Younger than Property	Local Authority
Management history		Subject to past management/pruning - previously crown reduced (regrowth appears 4-5yrs age).					
Recommendation		None at present.					
H1	Privet	2.8	45 Ms *	2	7.3	Younger than Property	Policy Holder
Management history		Managed hedge.					
Recommendation		No works at present.					


Ms: multi-stemmed * Estimated value



Site Plan



Plan not to scale – indicative only

 Approximate areas of damage



Images



View of T1, T2 & S1

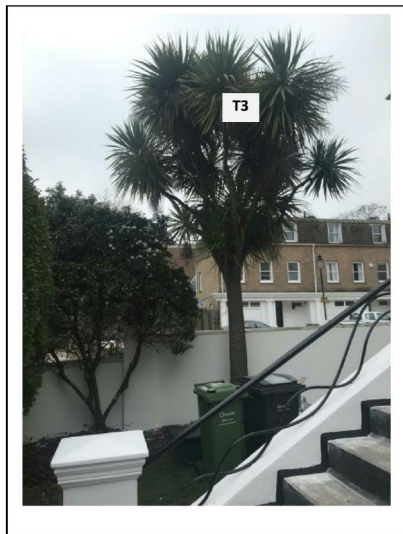


View of T1, T2, S1 & S2

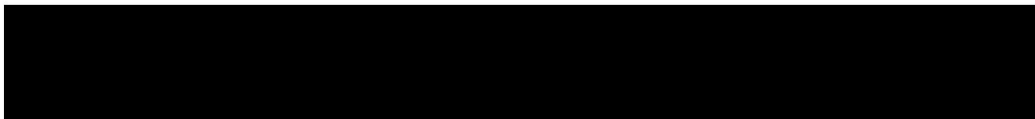




View of H1



View of T3





View of S2



View of T4

