

## Arboricultural Appraisal Report

### Subsidence Damage Investigation at:

3 Crediton Hill  
London  
NW6 1HT



CLIENT:	Crawford & Company
CLIENT REF:	██████████
MWA REF:	SUB190218-3651
MWA CONSULTANT:	George Peters BSc. (Hons)
REPORT DATE:	24/02/2019

### SUMMARY

Statutory Controls		Mitigation (current claim works)	
TPO current claim	No	Policy Holder	No
TPO future risk	No	3 <sup>rd</sup> Party	Yes
Cons. Area	Yes – West End Green	Local Authority	No
Trusts schemes	No	Other	No
Local Authority: -	London Borough of Camden		



## Introduction

Acting on instructions received from Crawford & Company, the insured property was visited on 23/02/19 for the purpose of assessing 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 3 storey semi-detached house built in 1901. The property has been extended with a conservatory to the rear built pre 1980. External areas comprise gardens to the front and rear.

The property occupies a site that slopes gently uphill from front to rear.

## Damage Description & History

Damage relates to the left-hand flank, rear elevation and the conservatory where cracking indicates downward movement. Damage was first noticed in September 2018.

At the time of the engineer's inspection (26/11/2018) the structural significance of the damage was found to fall within Category 4 (severe) of Table 1 of BRE Digest 251.

We have not been made aware of any previous claims.

## Geology / Soils

Reference has been made to the British Geological Survey maps for an indicative guide to underlying soil characteristics. The online 1:50 000 scale map records the bedrock geology as London Clay Formation, comprising blue-grey or grey-brown, slightly calcareous, silty to very silty clay, clayey silt. No superficial deposits are recorded. BGS records for this post code area include borehole scans which record soils with a clay component.

## 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.

Published soil maps indicate the underlying soils include a clay component susceptible to undergoing volumetric change with changes in soil moisture. Moisture abstraction by vegetation therefore has the potential to cause soil shrinkage and consequent subsidence of the building.

Our survey has identified vegetation within influencing distance of the building with a current potential to influence soil volumes below foundation level.

The most significant vegetative influence in relation to the current damage is T1 (Goat Willow) with a potential contribution from TG1 (Cherry Laurel). Other vegetation recorded represents a future risk.

Based on the information currently available, engineering opinion and our own site assessment we conclude the damage is potentially due to shrinkage of the clay fraction due to the soil drying effects of vegetation.

Having considered the available information, it is our opinion that T1 and TG1 are the principal cause of any damage related to clay shrinkage subsidence.

If an arboricultural solution is to be implemented to mitigate the influence of the trees/shrubs considered to be responsible for the damage we recommend that T1 is removed, and TG1 is reduced to 2.5m height and 1m width, and is to be maintain at broadly reduced dimensions on a biannual pruning cycle.

Recommendations are provisional at this stage and are based on an assumed presence of a shrinkable clay soil below foundation level. Recommended tree works may be subject to change upon receipt of additional information.

Replacement planting may be considered subject to species choice and planting location.

### Conclusions

- Conditions necessary for clay shrinkage subsidence to occur related to moisture abstraction by vegetation have been confirmed by reference to British Geological Survey maps.
- 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	Goat Willow	7.3	130 Ms *	7	2	Younger than Property	Third Party: 19 Lymington Road NW6 1HX
Management history		No recent management noted.					
Recommendation		Remove (fell) to near ground level and treat stump to inhibit regrowth.					
TG1	Cherry Laurel	5.3	300 Ms *	7	1.8	Younger than Property	Third Party: 1 Crediton Hill NW6 1HT
Management history		No recent management noted.					
Recommendation		Reduced to 2.5m height and 1m width. Maintain at broadly reduced dimensions on a bianual pruning cycle.					

Ms: multi-stemmed \* Estimated value

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

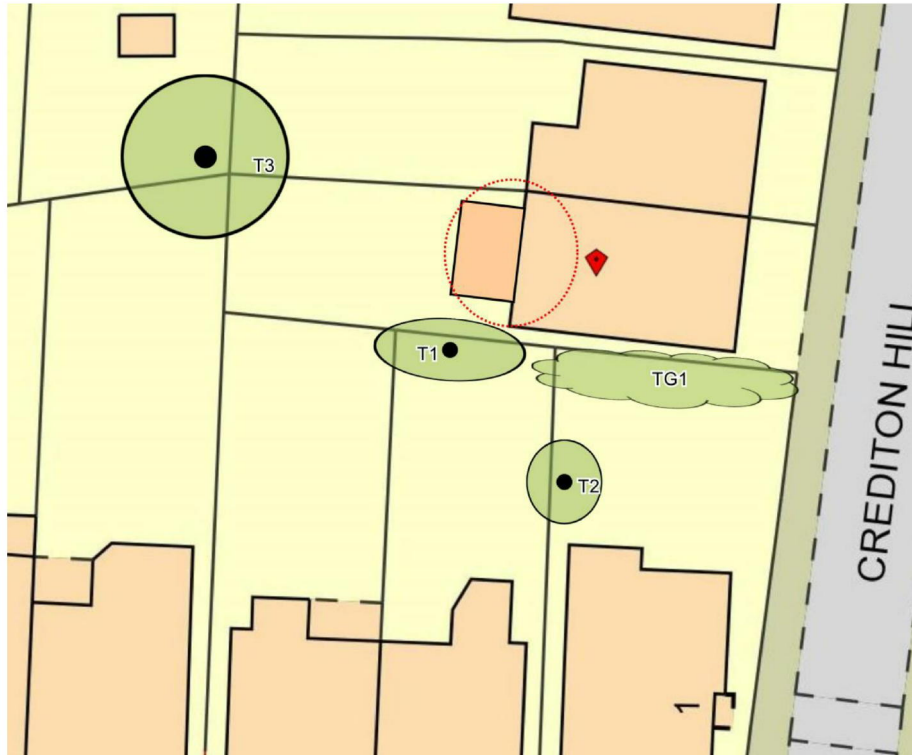
Tree No.	Species	Ht (m)	Dia (mm)	Crown Spread (m)	Dist. to building (m)	Age Classification	Ownership
T2	Lime	8.6 *	300 *	4	13 *	Younger than Property	Third Party: 1 Crediton Hill NW6 1HT
Management history		Subject to past management.					
Recommendation		Do not allow to exceed current dimensions.					
T3	London Plane	12	800 *	10 *	18	Older than Property	Third Party: 16 Fawley Road NW6 1SH
Management history		Subject to recent pollard management.					
Recommendation		Re pollard every 3 years.					

Ms: multi-stemmed \* Estimated value

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SITE PLAN



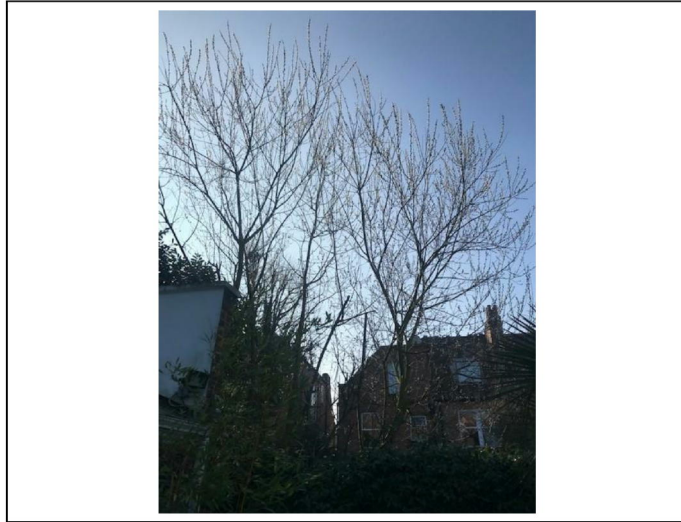
Plan not to scale – indicative only

 Approximate areas of damage

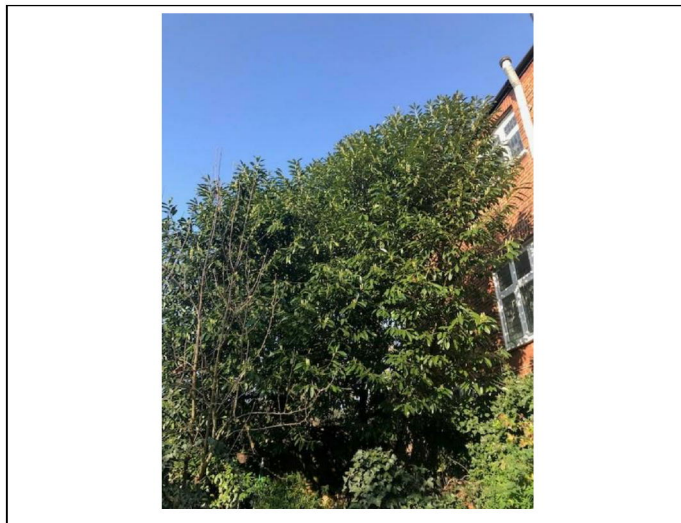
Property: 3 Crediton Hill  
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**Images**



View of T1 Goat Willow, current claim.



View of TG1 Cherry Laurel, current claim.





View of T2 Lime, future risk.



View of T3 London Plane, future risk.

