

Arboricultural Appraisal Report

Subsidence Damage Investigation at:

Flats 2, 3 and 5
30 Eton Avenue
London
NW3 3HL



CLIENT:	Crawford & Company
CLIENT REF:	SU1603271
MWA REF:	SUB170323-1251
MWA CONSULTANT:	Mark Bisley (BSc Hons)
REPORT DATE:	05-04-2017

SUMMARY

Statutory Controls		Mitigation (current claim)	
TPO	No	Insured	Yes
Cons. Area	Yes	3 rd Party	No
Trusts schemes	N/a	Local Authority	No
Planning	N/a	Other	No
Local Authority: -	London Borough of Camden		

Introduction

Acting on instructions received from Crawford & Company, the insured property was visited on 06/04/2017 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 detached, 3 storey house built c.1900.

External areas comprise gardens to the front and rear.

The site is generally level with no adverse topographical features.

Damage Description & History

The current damage affects the right hand ground floor flat and was first noticed in July 2016.

At the time of the engineers' inspection (22/09/2016) the structural significance of the damage was found to fall within Category 1 (very slight) of Table 1 of BRE Digest 251.

Site investigations

Drains: No information available at the time of writing.

Monitoring: Level monitoring is in progress.

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.

Reference to the British Geological Survey 1:50,000 scale map shows the property to be located on a bedrock of London Clay. This is known to be a plastic clay subsoil susceptible to undergoing volumetric change in relation to changes in soil moisture. In the absence of a site investigation the results of the levels monitoring would be required to confirm if movement is the result of vegetation.

Only the right hand flat is affected. Vegetation is present adjacent to the rear elevation across the rear of the property in the form of low level hedges and shrubs, but these are unlikely to be significant contributors to desiccation as the damage only affects one end of the building. However, there is greater tree and shrub cover in the garden areas to the right of the building than to the left.

There are three components of principle interest to the current claim. The first is a climber (C2) growing up the rear elevation and rooted immediately adjacent to the wall. This extends to the top floor and has been trained across the rear elevation of the upper right flat. The second element is a collection of trees on the rear right boundary of the property. These are of mixed age and species but are close to the rear elevation and could be affecting soils beneath the foundations. The third is an area of shrubs adjacent to the right flank wall.

Having considered the available information, it is our opinion that should clay shrinkage subsidence be confirmed as the cause of subsidence, the combined influence of C2, T2, TG1 and SG2 is the principal cause of the damage. If an arboricultural solution is to be implemented to mitigate the current damage and allow the soils beneath the property to recover to a position such that an effective repair solution can be implemented we recommend that C2, T2, TG1 and SG2 are removed.

The larger trees to the rear may be contributing to the damage although this is equivocal at present. Site investigations will be necessary to establish if they are involved.

Nevertheless, recommendations are provided for vegetation which could pose a future risk. Recommendations may be subject to review upon receipt of additional information and monitoring data.

Conclusions

- Conditions necessary for clay shrinkage subsidence to occur related to moisture abstraction by vegetation have been identified.
- 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
C2	Jasmine, Ivy	8	60	10	0.0	Younger than property	Policy Holder
Management history		Trained up and across rear elevation of upper right flat balcony.					
Recommendation		Remove and treat stump to inhibit regrowth.					
T2	Ash	10	140	5	3.3	Younger than property	Policy Holder
Management history		Lifted. Suppressed by adjacent trees.					
Recommendation		Fell and treat stump to inhibit regrowth.					
TG1	Laburnum, Holm Oak	6	220	5	3.3	Younger than property	Policy Holder
Management history		Collection 3 trees in close proximity – 1 established Laburnum, 1 young Laburnum and one young Holm Oak. Mutually suppressed. Lifted to clear planting below.					
Recommendation		Fell and treat stumps to inhibit regrowth.					
SG2	Multi species	2	90	3	0.0	Younger than property	Policy Holder
Management history		Collection of shrubs and self-seeded trees to side of property. Includes Holm Oak and Sycamore growing from base of wall. Hydrangea, Japanese Maple, Cypress, Holly, Rosemary, Rose, Fatsia, Euonymus and Juniper are also present. Area shows some recent clearance and reduction but still contains a number of potentially large species.					
Recommendation		Remove.					

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	Cypress	3	Ms 75	0.5	0.3	Younger than property	Policy Holder
Management history		Small tree.					
Recommendation		Remove.					
T3	Hawthorn	7	400	8	8.7	Younger than property	Policy Holder
Management history		Lifted and reduced in the past.					
Recommendation		Do not allow to exceed current dimensions.					
T4	Sycamore	16	Ms 500	11	11.4	Younger than property	Policy Holder
Management history		Likely coppiced at some point. Lifted and reduced in past.					
Recommendation		Fell and treat stump to inhibit regrowth.					
T5	False Acacia	16	250*	7	16.5	Younger than property	3 rd Party:- 22 Lancaster Grove
Management history		Lifted and cut back to boundary in past.					
Recommendation		Do not allow to exceed current dimensions.					
T6	Honey Locust	12	MS 300*	10	17.2	Younger than property	3 rd Party:- 22 Lancaster Grove
Management history		Recently cut back in line with shrub bed over site. Climber extends through much of scaffold.					
Recommendation		Do not allow to exceed current dimensions.					

Tree No.	Species	Ht. (m)	Dia. (mm)	Crown Spread (m)	Dist. to building (m)	Age Classification	Ownership
T7	Pine	16	350	7	16.9	Younger than property	3 rd Party:- 22 Lancaster Grove
Management history		Drawn up form due to adjacent trees.					
Recommendation		Do not allow to exceed current dimensions.					
T8	Cherry	16	325	7	16.8	Younger than property	3 rd Party:- 22 Lancaster Grove
Management history		Drawn up and suppressed by adjacent Pine.					
Recommendation		Do not allow to exceed current dimensions.					
T9	Magnolia	3	90	3	0.2	Younger than property	Policy Holder
Management history		Recently reduced.					
Recommendation		Fell and treat stump to inhibit regrowth.					
H1	Privet	1.5	50	1 x 2	0.4	Younger than property	Policy Holder
Management history		Regularly trimmed.					
Recommendation		Do not allow to exceed current dimensions.					
H2	Privet	1.5	50	1 x 2	0.4	Younger than property	Policy Holder
Management history		Regularly trimmed.					
Recommendation		Do not allow to exceed current dimensions.					

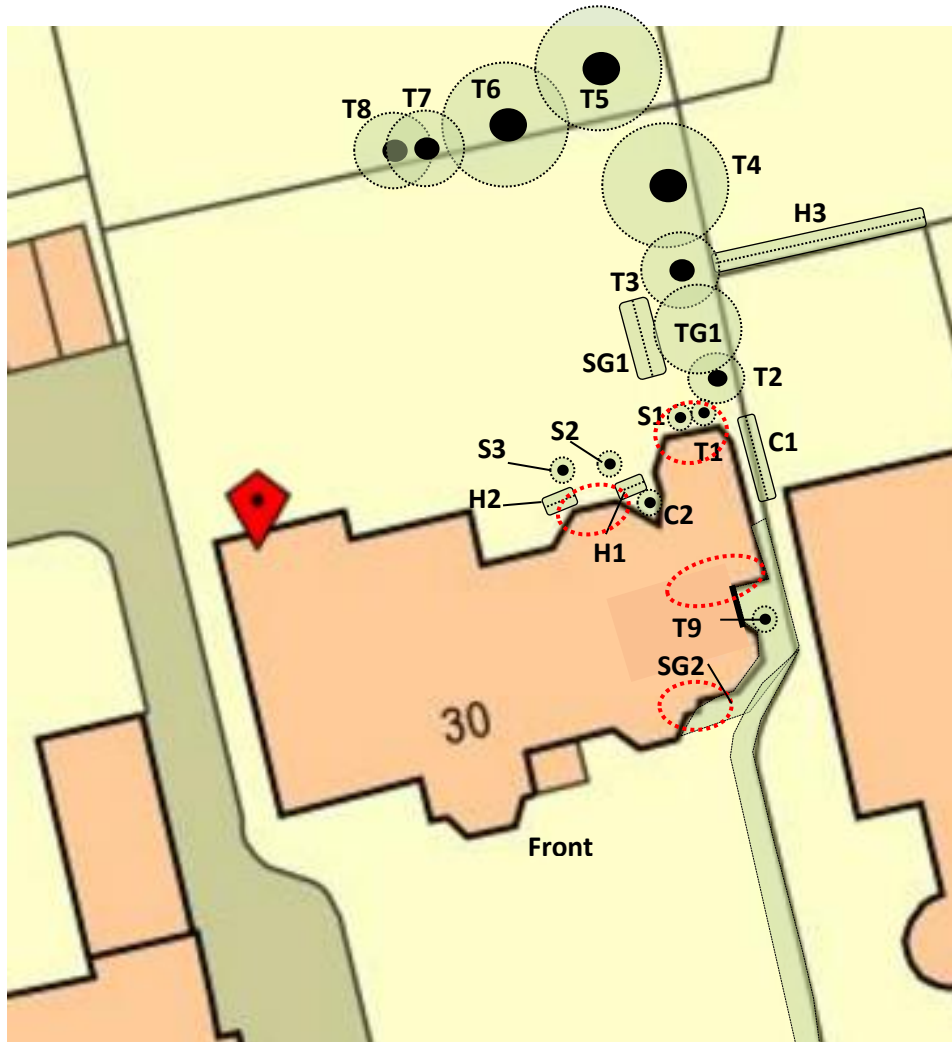
Tree No.	Species	Ht. (m)	Dia. (mm)	Crown Spread (m)	Dist. to building (m)	Age Classification	Ownership
H3	Lime	4	90	0.25 x 8	9	Younger than property	3 rd Party:- 26 Lancaster Grove
Management history		Pleached trees along rear boundary apparently intended as a 'hedge'.					
Recommendation		Do not allow to exceed 7m in height.					
H4	Privet	2.5	90	1	1.3	Younger than property	Policy Holder
Management history		Regularly trimmed hedge on front right boundary.					
Recommendation		Remove to provide 2m offset from front of property.					
S1	Cotoneaster	2	60	0.5	0.3	Younger than property	Policy Holder
Management history		Recently reduced.					
Recommendation		Fell and treat stump to inhibit regrowth.					
S2	Camelia	2	Ms 70	1	2.2	Younger than property	Policy Holder
Management history		Established shrub trimmed to fit bed.					
Recommendation		Do not allow to exceed current dimensions.					
S3	Camelia	3.5	90	2	2.2	Younger than property	Policy Holder
Management history		Established shrub trimmed to fit bed.					
Recommendation		Reduce and do not allow to exceed 2m.					

Tree No.	Species	Ht. (m)	Dia. (mm)	Crown Spread (m)	Dist. to building (m)	Age Classification	Ownership
SG1	Multi species	1.5	55	1 x 4	3	Younger than property	Policy Holder
Management history		Japanese Pagoda Tree, Hebe, Rose and Berberis growing in bed beside lawn. Regularly trimmed.					
Recommendation		Do not allow to exceed 2.5m in height.					
C1	Ivy	2	40	4 x 0.5	1	Younger than property	3 rd Party- 28 Eton Avenue
Management history		Trained along fence and recently reduced.					
Recommendation		Do not allow to exceed current dimensions.					


Ms: multi-stemmed

* Estimated value

SITE PLAN



Plan not to scale – indicative only

 Approximate areas of damage

Images



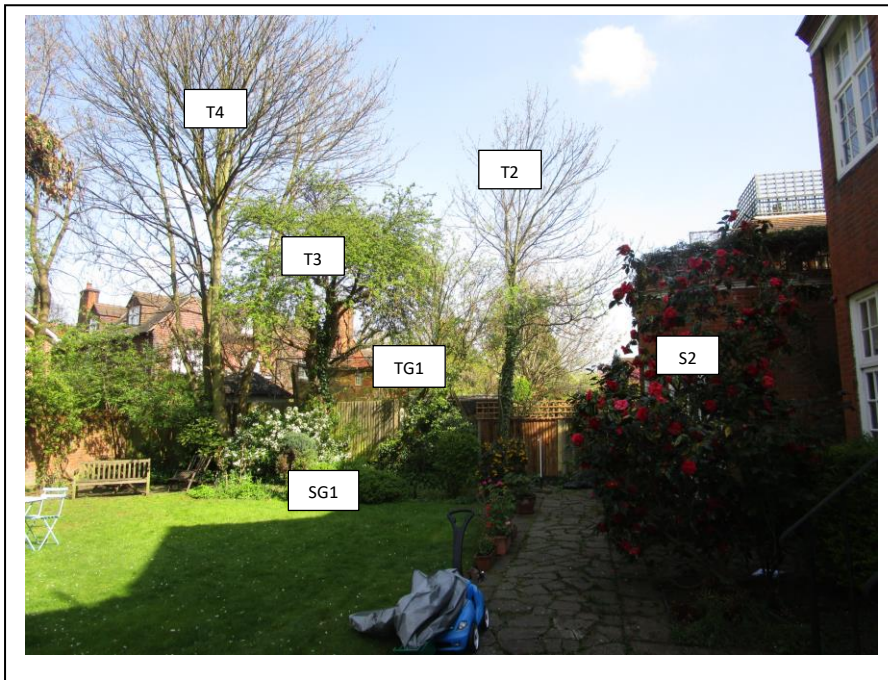
View of rear right corner



View of view of 2nd bay from right



View of right hand corner bay



View of rear right boundary



View of rear boundary



View of right front flank



View of self-seeded tree within SG2



View of front right bay