

## Arboricultural Appraisal Report

### Subsidence Damage Investigation at:

24 Langbourne Avenue  
London  
N6 6AL



CLIENT:	Crawford & Company
CLIENT REF:	[REDACTED]
MWA REF:	[REDACTED]
MWA CONSULTANT:	Steve Swinburne
REPORT DATE:	01-04-2019

### SUMMARY

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



## **Introduction**

Acting on instructions from Crawford & Company, the insured property was visited on 18/03/2019 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 three-storey semi-detached house built circa 1920. External areas comprise gardens to the front and rear.

The property occupies a site sloping from front down to the rear.

## **Damage Description & History**

The current damage affects the raised patio area attached to the rear single-storey extension, which is pulling away from the main house causing damage to the rear extension, as well as to the concrete pad on which the rear patio is laid. The damage was first noticed in August 2018. For a more detailed synopsis of the damage please refer to the building surveyor's technical report.

At the time of the building surveyor's inspection (14/11/2018) 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**

The Crawford Technical report refers to the 1:625,000 scale British Geological Survey Map (solid edition) OS Tile number TQNW which suggests the underlying geology to be London Clay.



## 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 or are likely to include a clay component susceptible to undergoing volumetric change with changes in soil moisture. Moisture abstraction by vegetation 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 vegetation likely to be most significant in relation to the current damage is T1 with a likely contribution from T2 and SG1. Other vegetation recorded represents a future risk.

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

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, T2 and SG1 are 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.

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.



### **Conclusions**

- Conditions necessary for clay shrinkage subsidence to occur related to moisture abstraction by vegetation have been confirmed by reference to published soil 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.
- Replacement planting may be considered subject to species choice and planting location.



**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	Willow	13	410	40	6 to patio	Younger than property	Policy Holder
Management history		Subject to past reduction/pruning.					
Recommendation		Remove (fell) to near ground level and treat stump to inhibit regrowth.					
T2	Prunus	9.5	180	5	2 to patio	Younger than property	3 <sup>rd</sup> Party: 22 Langbourne Ave N6 6AL
Management history		No recent management noted.					
Recommendation		Remove (fell) to near ground level and treat stump to inhibit regrowth.					
SG1	Mixed species group including Ceanothus and Rhododendron	2.25	MS	2	0.2 to patio	Younger than property	Policy Holder
Management history		Subject to past reduction/pruning.					
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
C1	Trachelospermum	2.5	Ms	4	.1	Younger than property	Policy Holder
Management history		Subject to past pruning.					
Recommendation		Do not allow to exceed current dimensions.					
T3	Magnolia	8	250*	12*	3.5	Younger than property	3 <sup>rd</sup> Party: 22 Langbourne Ave N6 6AL
Management history		No recent management noted.					
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

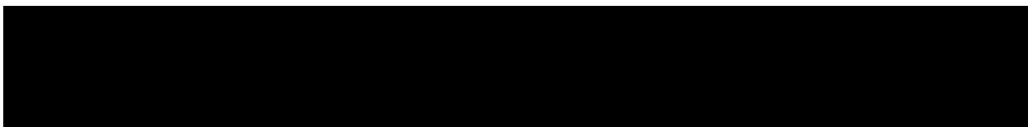
Images



View of cracking to rear elevation



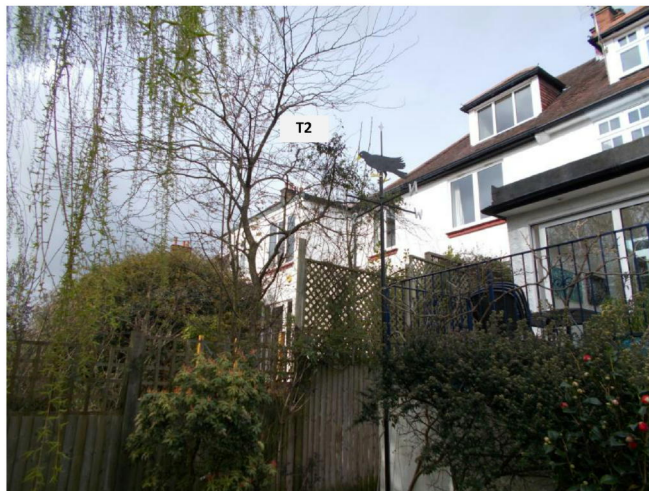
View of T1







View of SG1



View of T2

