# Arboricultural Appraisal Report

## Subsidence Damage Investigation at:

180 Camden Road
London
NW1 9HG


| | |
|---|---|
| CLIENT: | Crawford & Company |
| CLIENT REF: | [redacted] |
| MWA REF: | |
| MWA CONSULTANT: | Steve Swinburne |
| REPORT DATE: | 12/03/2020 |

## SUMMARY

| Statutory Controls | | | Mitigation (Current claim tree works) | |
|---|---|---|---|---|
| TPO current claim | Yes – T7 | | Policy Holder | Yes |
| TPO future risk | No | | Domestic 3rd Party | Yes |
| Cons. Area | Yes | | Local Authority | No |
| Trusts schemes | No | | Other | No |
| Local Authority: - | London Borough of Camden | | | |

[redacted]

## Introduction

Acting on instructions from Crawford & Company, the insured property was visited on 10/03/2020 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 semi-detached, 3 storey house built in 1840.

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 front bay, front porch and rear elevation of the property and was first noticed in September 2019.

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 (19/11/2019) the structural significance of the damage was found to fall within Category 3 (moderate) of Table 1 of BRE Digest 251.

We have not been made aware of any previous claims.

[redacted]

## Site Investigations

Site investigations were carried out by Auger on 02/01/2020, when 3 trial pits were hand excavated to reveal the foundations, with a borehole sunk through the base of each trial pit to determine subsoil conditions.

**Foundations:**

| Ref | Foundation type | Depth at Underside (mm) |
|---|---|---|
| TH1 | Brick | 600 |
| TH2 | Brick | 600 |
| TH3 | Brick | 1000 |

**Soils:**

| Ref | Description | Plasticity Index (%) | Volume change potential (NHBC) |
|---|---|---|---|
| TH1 | Dry stiff brown sandy fine to medium gravelly silty CLAY | N/A | N/A |
| TH2 | Dry stiff brown sandy fine to medium gravelly silty CLAY | N/A | N/A |
| TH3 | Dry stiff brown sandy fine to medium gravelly silty CLAY | N/A | N/A |

**Roots:** Roots were observed at a depth of 1.6m in TH1 and 1.1m in TH2 however we currently have no information regarding the identification of the recovered roots.

**Drains:** The drains have been surveyed and defects identified within the drainage system to the rear.

**Monitoring:** No information available at the time of writing.

[redacted]

## 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.

Site investigations have confirmed a clay subsoil susceptible to undergoing volumetric change in relation to changes in soil moisture.

Our survey has identified vegetation within influencing distance of the building.

Based on the technical reports currently available and engineering opinion we conclude the damage has the potential to be linked to 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 the remedial works detailed in Table 1 are implemented.

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.
- 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 foundation.

[redacted]

## 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 | Prunus | 9.5 | 300 * | 9 | 3.5 | Younger than Property | Policy Holder |
| Management history | | No recent management noted. Tree located approximately 2m above ground level of basement flat. | | | | | |
| Recommendation | | Remove (fell) to near ground level and treat stump to inhibit regrowth. | | | | | |
| T2 | Tree of Heaven | 12 | 240 | 8 | 7 | Younger than Property | Policy Holder |
| Management history | | No recent management noted. Tree located approximately 2m above ground level of basement flat. | | | | | |
| Recommendation | | Remove (fell) to near ground level. Owner to physically remove any regrowth (no chemical treatment due to translocation risk). | | | | | |
| T3 | Holly | 9.5 | Ms | 7 | 6 | Younger than Property | Third Party 178 Camden Road NW1 9HG |
| Management history | | No recent management noted. Tree located approximately 2m above ground level of basement flat. | | | | | |
| Recommendation | | Remove (fell) to near ground level and treat stump to inhibit regrowth. | | | | | |
| T4 | Tree of Heaven | 14 * | 550 * | 14 * | 12 * | Younger than Property | Third Party 178 Camden Road NW1 9HG |
| Management history | | No recent management noted. Tree located approximately 2m above ground level of basement flat. Unable to access the location to confirm species of tree. | | | | | |
| Recommendation | | Reduce height by 2m and crown radius by 1m leaving balanced crown. Prune on a triennial cycle to maintain at broadly reduced dimensions. | | | | | |
| T6 | Holly | 6 | Ms | 5 * | 5 | Younger than Property | Third Party 182 Camden Road NW1 9HG |
| Management history | | No recent management noted. | | | | | |
| Recommendation | | Reduce height by 2m and crown radius by 1m leaving balanced crown. Prune on a biennial cycle to maintain at broadly reduced dimensions. | | | | | |
| T7 | Tree of Heaven | 17 * | 650 * | 13 * | 12 * | Younger than Property | Third Party 178 Camden Road NW1 9HG |
| Management history | | Subject to past management/pruning. | | | | | |
| Recommendation | | Remove (fell) to near ground level and grind out stump to inhibit regrowth. | | | | | |

Ms: multi-stemmed * Estimated value

[redacted]

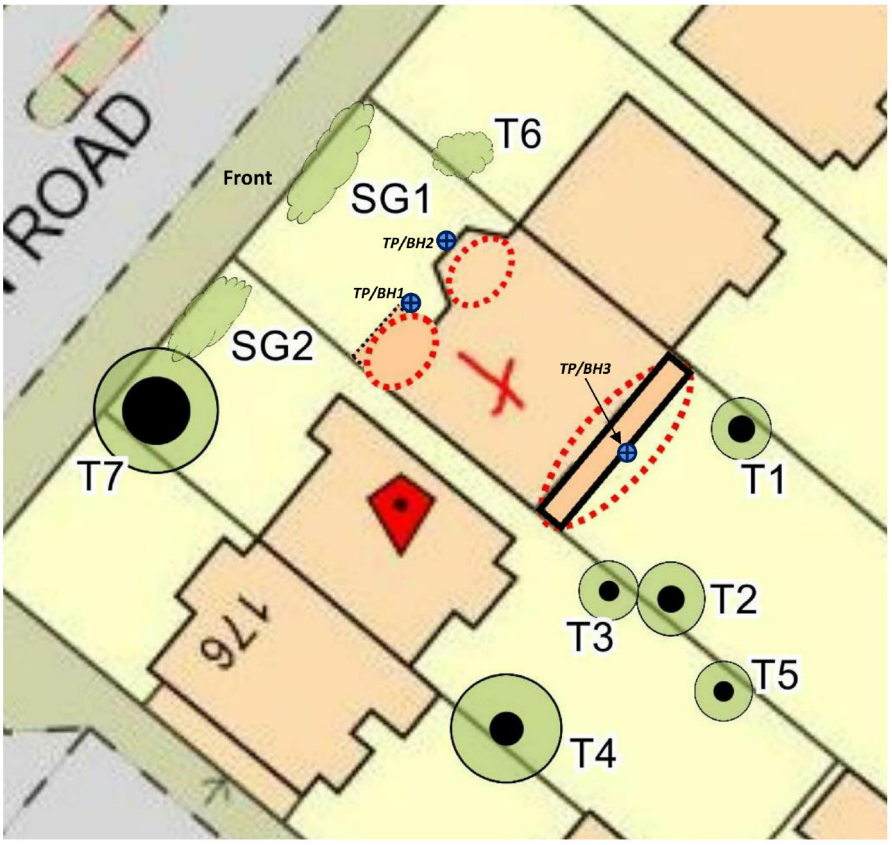
**Table 2** **Future Risk** - Tree Details & Recommendations

| Tree No. | Species | Ht (m) | Dia (mm) | Crown Spread (m) | Dist. to building (m) | Age Classification | Ownership |
|---|---|---|---|---|---|---|---|
| T5 | Tree of Heaven | 9 * | 250 * | 7 * | 11 * | Younger than Property | Third Party 178 Camden Road NW1 9HG |
| Management history | | No recent management noted. | | | | | |
| Recommendation | | Maintain broadly at no more than current dimensions by periodic pruning. | | | | | |
| SG1 | Mixed species shrubs including Pyracantha & Laurel | 4 * | Ms | 3 | 6 | Younger than Property | Policy Holder |
| Management history | | No recent management noted. | | | | | |
| Recommendation | | Maintain broadly at no more than current dimensions by periodic pruning. | | | | | |
| SG2 | Laurel | 3 * | Ms | 3 * | 9 * | Younger than Property | Third Party 178 Camden Road NW1 9HG |
| Management history | | Subject to past management/pruning. | | | | | |
| Recommendation | | Maintain broadly at no more than current dimensions by periodic pruning. | | | | | |

Ms: multi-stemmed * Estimated value

[redacted]

**Site Plan**




Plan not to scale – indicative only

Approximate areas of damage

**Images**

View of T1

View of T2 & T3

[redacted]

View of T5 and T4

View of SG1 and T6

[redacted]

View of T7 and SG2

[redacted]