

Arboricultural Appraisal Report

CTC Reference: 15081

Report Date: 08/09/2022

Client: Rafael Monroy

Client Ref: n/a

Property: 104 Haverstock Hill,
London,
NW3 2BD

Local Authority: LB Camden

Mortgage Lender:

Reference: N/A

Scope of Report:

To survey and assess a large holm oak and other vegetation in the front garden of 104 Haverstock Hill and determine whether it could potentially affect the property; specifically to assess the risk of damage or injury to persons or property. This includes indirect damage due to clay shrinkage subsidence by the abstraction of soil moisture or direct damage by mechanical failure of the physical action of aerial parts or the roots.

Consultant: Bruce Blackman

Qualifications: BSc Landscape Management,
ISA Certified Arborist,
City and Guilds Arboriculture
LANTRA PTI

Quality Checked: Bruce Blackman BSc, Cert Arb, LANTRA PTI,

Complete Tree Care Ltd

Wyke Green Golf Club, Syon Lane, Isleworth, TW7 5PT

T: 020 8616 9051 F: 020 8569 7655

Email: treework@completetreecare.co.uk

Arboricultural Appraisal Report

INTRODUCTION

Acting upon instructions received from the client, the site was surveyed on 26th January 2022. The following is a preliminary appraisal report based on the conditions found on that day, but without reference to supporting technical information. Recommendations may be subject to review following the submission of additional information.

Potential Sources of Damage from Trees

The potential for trees to damage buildings and light structures (patios, walls etc.) comes from direct and indirect means. Direct action includes falling branches or whole trees, the physical displacement of structures by tree roots or aerial parts, the blocking of drains by roots, and direct contact by branches in close proximity to a building.

Indirect damage is commonly associated with the abstraction of moisture by tree roots from the soil below the foundations. This process may result in shrinkage of the soil and structural instability in built structures. The presence of shrinkable clays is required for this type of damage to occur.

PROPERTY AND SITE DETAILS

Detached	☐	Semi detached	☐	Mid Terrace	☐
End Terrace	☒	Bungalow	☐	Flat	☐
Garage	☐	Other	☐	No. of storeys	4
Year of Construction:	Main Building:		1900-1929	Extension(s):	n/a

104 is part of a terrace of four storey town houses located on Haverstock Hill. There is a front garden which is raised from street level with a retaining wall and steps. The garden is planted with trees and shrubs including a large mature Holm oak at the front near the road.

There is a parking space and other vegetation to one side, near to the adjoining property 102.

Please refer to the Site Plan which shows the location of the trees and vegetation referred to in this report.

Arboricultural Appraisal Report

DAMAGE

As part of the survey the area around the trees and the client's property are inspected for damage. However, this inspection is superficial and for a detailed account of the damage please refer to the Structural Engineers Report.

My findings were as follows:

- Cracking to front garden walls, but not the new front boundary wall (Photo 5),
- Cracking to right side gate pier to boundary wall (Photo 6),
- Surface damage/cracks (Photo 7),
- Damage to front portico and steps (Photo 8 and 9),

The new front boundary wall was checked for levels and found to be vertical and showed no visible signs of movement.

TECHNICAL INFORMATION

The following technical information has been provided, copies of which are held on file.

Engineers report	☒	Soils analysis	☐
Site plan	☐	Root Identification	☐
Foundations	☐	Drains survey	☐
Borehole log	☐	Crack monitoring	☐
Other:	☐	(Home Buyer's report)	

TREE DETAILS

Tree No.	Species	Age Class	Approx. Height (m)	Dia. (DBH)	Condition	Growth Potential	Dist. to Building (m)
73	Holm oak (Quercus ilex) (Photo 1)	M	19M	62	Fair	Low	1230cm (house) 7cm (new wall) 360cm (gate pier)
Targets:		Road, wall, garden,					
Defects:		Crown: too large for site, growing into light, Stem: leaning towards road, Roots: no defects visible,					

Arboricultural Appraisal Report

Tree No.	Species	Age Class	Approx. Height (m)	Dia. (DBH)	Condition	Growth Potential	Dist. to Building (m)
SG1	Mixed species (Hebe/ Euonymous/ Cotoneaster) (Photo 2)	M	1M	5	Fair	Medium	230cm (house)
Targets:		Road, wall, garden,					
Defects:		No defects visible					

Tree No.	Species	Age Class	Approx. Height (m)	Dia. (DBH)	Condition	Growth Potential	Dist. to Building (m)
SG2	Mixed species (Lavender/ Euonymous) (Photo 3)	M	1.5M	5	Fair	Medium	520cm (house)
Targets:		Road, wall, garden,					
Defects:		No defects visible					

Tree No.	Species	Age Class	Approx. Height (m)	Dia. (DBH)	Condition	Growth Potential	Dist. to Building (m)
SG3	Mixed species (Corkscrew hazel, Forsythia/ Mahonia, Ivy) (Photo 4)	M	3.5M	5-10	Fair	Medium	260cm (house)
Targets:		Road, wall, garden,					
Defects:		Crown: too large, obstructing path					

Arboricultural Appraisal Report

TREE DAMAGE RISK ASSESSMENT

Direct Physical Damage:

Although there is some minor risk of damage from the arial parts of T1 (near street light) and SG1 (obstructing path) the visible damage to the walls and house are not in my opinion caused by the direct action of roots for the following reasons:

- The house is too far from the Holm oak and the shrub groups to be effected by direct action of the roots since they are all more than 2m away. At this distance the roots are unlikely to be large enough to cause damage.
- The front boundary wall is vertical and not cracked. Where there are cracks to the wall these are not consistent with lifting by roots (typically a vertical crack which is narrow at the bottom and wider at the top),
- There is no direct physical damage visible. The tree is sufficient distance from the house not to represent a risk of physical damage to it.

The risk of major injury or damage from the failure of significant parts of the tree is considered low.

Indirect Physical Damage:

With respect to indirect damage, subsidence is a complex process and its risk of occurring relies on the evaluation of a number of factors. Foundation depth, soil characteristics, climate, tree species and tree to building distance are all factors which require consideration if an accurate assessment of risk is to be determined.

The British Geological Survey (BGS) data for this area shows the property to be located on a bedrock of London Clay Formation (Clay, Silt and Sand) with no Superficial deposits. This is a high plasticity soil type which can be subject to shrinkage and therefore has the potential to cause subsidence damage to the property.

According to the NHBC Standard 2010 Holm oak is a High water demand species which can attain a mature height of 16m. Their zone of influence is calculated as 125% of their maximum height and so this would be 20m. Since T1 is located 12.3m from the house and much closer to the walls and paving then they are all within the zone of influence of the tree. The Kew data shows that 75% of subsidence cases caused by oak occurred when the tree was within 13m of the property. Again this means the tree is a potential risk to both the house and the walls and surfaces.

Nither the Kew root data or the NHBC standard provide information on shrubs. However, the shrub groups are in much closer proximity to the house than the Holm oak and although smaller will still be actively translocating water and removing it from the surrounding soil – thereby contributing to the volumetric change. The shrubs in SG3 are larger in height and area.

Although there has been no crack monitoring for the damage I have been informed verbally by the Origin Housing surveyor and the residents that the cracks have become much larger through the summer months indicating that they are seasonal.

This summer has been very dry and we have been informed that the risk of indirect damage from trees is considered to be high due to this factor.

Arboricultural Appraisal Report

Although I have not been provided with a drainage report I have been informed that there has been a survey of the drains and there was no damage visible.

The pattern of damage is consistent with volumetric changes in the soil. The cracks to the walls and surfaces could be resulting from differential downwards movement. The movement of the portico and stairs away from the building is typical of subsidence damage where there are differing depths of foundations again resulting in differential movement.

Based on the information above I would conclude that the damage to the walls and front of the house (steps and portico) is likely to have been caused by the indirect action of roots (subsidence). Due to the proximity, size and water demand of the Holm oak this is likely to be the primary cause. SG3 is also likely to be contributing due to its close proximity and the large size of shrubs.

Due to the scale of the property damage Origin Housing may wish to report the matter to their insurers who might make further investigations in the form of trial pits for soil and root analysis and conduct crack monitoring. However, I believe there is sufficient evidence to warrant tree works in the short term to reduce the water uptake of the implicated vegetation. With the likely hydration of the soil over winter this may be sufficient to prevent further damage next year and potential removal of the holm oak (subject to planning consent).

TREE WORK RECOMMENDATIONS

The table below summarises the tree work specification, priority and indicative costs. However, before undertaking tree works it is necessary to check for statutory tree protection. Trees may be protected by Tree Preservation Order or by being in a Conservation Area. To determine if this is the case the Local Planning Authority should be consulted on this. In this case the Holm oak is protected by a TPO and the smaller vegetation (where greater than 7.5cm diameter) by being in a Conservation Area. However, some works are exempt from planning consent which would include dead wooding and crown lifting to statutory clearances.

With conservation area protection there is only a requirement to give six weeks' notice of tree work (in accordance with a section 211 notice). Where trees are covered by TPO / Conservation Area protection, and the Local Planning Authority refuse permission to undertake works, Complete Tree Care are able to undertake Appeal action in accordance with the Department of Transport, Local Government and the Regions regulations. Further discussions with the LPA and / or Appeals can often result in original refusals to undertake work being changed.

The recommendations below are primarily to reduce the risk of indirect physical damage, but would also have the advantage of reducing the risk of direct damage or injury from failure of parts of the tree. A crown reduction will lessen the wind sail effect of the canopy and loading on the stem and limbs which have poor taper.

Arboricultural Appraisal Report

Tree No.	Species	Ownership	Priority	Protection	Pruning Cycle (yrs)	Recommendation	Indicative cost
73	Holm oak	C	2	TPO	2	Crown reduce by 3m	£950
SG1	Mixed species	C	2	CA	1	Remove all shrubs within 2m of house. Trim remainder	£150
SG2	Mixed species	C	2	CA	1	Remove all shrubs within 2m of house. Trim remainder	£150
SG3	Mixed species	C	2	CA	1	Remove all shrubs.	£500

Ownership	Category
Third Party	A
L.A. Tree	B
Owner	C
Unknown	D

Timescale/Priority	Category
Action within 48 hours	1
Action within 12 weeks	2
Action within 1 years	3
Action within 2 years	4

TECHNICAL QUALIFICATION

Complete Tree Care Ltd was founded in 2001 and has developed to provide a full Arboricultural consultancy service in West London. The Company does not subcontract any consultancy work with all staff being directly employed to ensure consistency and quality. Reports are subject to quality control procedures by company directors.

LIMITATIONS

This report is intended as a preliminary appraisal of vegetation influence on the property and assumes that engineers suspect, have confirmed or believe there is a future risk of damage related to clay shrinkage subsidence.

Where recommendations for remedial tree works and future management are made, this is to meet the primary objective of assisting in the restoration of stability to the property. In achieving this, it should be appreciated that recommendations may in some cases be contrary to best Arboricultural practice for tree pruning/management and is a necessary compromise between competing objectives. Any connection between the structural damage to the property and trees will require the clear identification of shrinkable clay soils below foundation depths.

The presence of Tree Preservation Orders (TPO) or Conservation Area status must be determined prior to any tree works being implemented.

APPENDIX 1

Photo 1 – T73 Holm oak



Photo 2 – SG1



Photo 3 – SG2



Photo 4 – SG3



Photo 5 – Wall damage 1



Arboricultural Appraisal Report

Photo 6– Wall damage/gate pier (2)



Photo 7 - Surface damage



Photo 8 – Portico Damage



Photo 9 – Step damage

