

Arboricultural Appraisal Report

CTC Reference: 14477

Report Date: 16/12/2022

Client: Chris Klausen

Client Ref: n/a

Property: 2 Heythrop Drive,
Uxbridge,
UB10 8DT

Local Authority: LB Hillingdon

Mortgage Lender:

Reference: N/A

Scope of Report:

To survey and assess two medium sized oak trees in the front garden of number 2 and determine whether they 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:

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

Quality Checked: Bruce Blackman BSc, Cert Arb, LANTRA PTI, City and Guilds,

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INTRODUCTION

Acting upon instructions received from the client, the site was surveyed on 16th December 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	<input checked="" type="checkbox"/> X	Semi detached	<input type="checkbox"/>	Mid Terrace	<input type="checkbox"/>
End Terrace	<input type="checkbox"/>	Bungalow	<input type="checkbox"/>	Flat	<input type="checkbox"/>
Garage	<input type="checkbox"/>	Other	<input type="checkbox"/>	No. of storeys	<input type="checkbox"/> 2
Year of Construction:		Main Building:	<input type="checkbox"/> 1990s	Extension(s):	<input type="checkbox"/> n/a

The site consists of a large detached 1990s house within its own grounds (Appendix 1 - Photo 1). There is a front garden consists of a lawn area in which the two oak trees are situated and parking area.

DAMAGE

As part of the survey the area around the trees and the client's property are inspected for damage. My findings were as follows:

There was no visible damage to the house. There was some minor damage to the neighbour's path (Appendix 1 – Photo 3), where the path had sunk and the gravel boards of the boundary fence were deflected.

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TECHNICAL INFORMATION

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

Engineers report	<input type="checkbox"/>	Soils analysis	<input type="checkbox"/>
Site plan	<input type="checkbox"/>	Root Identification	<input type="checkbox"/>
Foundations	<input type="checkbox"/>	Drains survey	<input type="checkbox"/>
Borehole log	<input type="checkbox"/>	Crack monitoring	<input type="checkbox"/>
Other:	<input type="checkbox"/>	(Home Buyer's report)	

None of the above were available.

TREE DETAILS

Tree No.	Species	Age Class	Approx. Height (m)	Dia. (DBH)	Condition	Growth Potential	Life Expectancy (category)
T1	English oak /Quercus robur (App 1 - Photo 1)	M	14	48	Poor	Medium	U (less than ten years)
Distance to built structures:		586 cm from the house (number 2)					
Targets:		House, road, fence, garden,					
Defects:		Roots: Bark damage to buttress roots, change in colour, Stem: leaning towards house, wounds, Crown: die back (60%), major dead wood, asymmetric crown,					

Tree No.	Species	Age Class	Approx. Height (m)	Dia. (DBH)	Condition	Growth Potential	Life Expectancy Category)
T2	English oak /Quercus robur (App 1 - Photo 2)	M	16	58	Poor	Medium	U (less than ten years)
Distance to built structures		810cm from the house (number 2)					
Targets:		House, road, fence, garden,					
Defects:		Roots: Bark damage to buttress roots, change in colour, Stem: leaning towards road, wounds, cavity at base of 32cm deep and 40cm high, white rot, Crown: major dead wood, asymmetric crown,					

TREE DAMAGE RISK ASSESSMENT

Direct Physical Damage:

Root damage: near T2 there is minor physical damage to the boundary fence (number 3) caused by the roots. There is no damage to the house. Both trees are a sufficient distance from the house not to represent a risk of physical damage to it from their roots.

Crown/Stem: there is a high risk of damage or injury from the aerial parts of both trees since they have significant defects and high value targets. There is major dead wood in the crowns including the leader of T2. This is likely to fail. There is a large basal cavity in T2 which exceeds two thirds of the radius and is surrounded by white rot. It includes the buttresses across one side of the tree. The client has advised this is progressive. There is a significant risk of whole tree failure. The client has also advised that there were yellow/brown fruiting bodies near to the base of T1 in the Autumn. There is a possibility this is *Armillaria mellea* since T1 is stressed and in poor physiological condition.

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 English oak is a High water demand species which can attain a mature height of 20m. Their zone of influence is calculated as 125% of their maximum height and so this would be 25m. Since both T1 and T2 are located 5.86 and 8.1 metres from the house the property is within the zone of influence of the trees. 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 trees are a potential risk to the property.

CONCLUSION AND TREE WORK RECOMMENDATIONS

I believe the risk of indirect physical damage is low. Although the house is within the zone of influence of the oak trees it was constructed in the 1990s when the risk of subsidence would have been known and it is assumed the foundation depths/design would have taken this risk into consideration. There is no sign of damage despite a very dry summer. Although both trees are not fully grown their poor physiological condition means that their rate of growth (if there is any) must be slow. It would also mean reduced rates of transpiration.

I believe the risk of direct physical damage is high. T2 has a very significant defect that is progressive. This represents an unacceptable risk of damage or injury and the landowner has a duty of care to remediate this. Both trees are in poor physiological condition (T1 has 60% die back) and so I do not think that crown reducing the trees is appropriate since it would further stress them and accelerate any decline.

I believe that the decline of the trees is due to the construction process. The soil is compacted, and it is possible (from the bark discolouration) that there was a change in soil levels with the topsoil being

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removed to 20cm below original levels. The bark damage on the buttress roots could have resulted from an excavator removing soil. This process would result in the loss of a large amount of the trees' absorptive roots.

My recommendation is that both trees are removed T2 should be removed because of the large cavity and T1 because it is in decline. Once T2 is removed it is likely to have a negative effect on T1 which will be exposed and lose part of the shared root system.

There should be replacement planting but with two with two small or medium sized trees (right tree right place) more appropriate to the size of the front garden and proximity to the house. Suitable species would include *Betula pendula* (*Fastigiata/Purpurea*), *Carpinus betulus* (*Frans Fontaine/Japonica*), *Ilex aquifolium* (any variety/cultivar), *Malus sylvestris* (*Trilobata/Evereste*) and *Sorbus aucuparia* (any variety/cultivar) which are natives which do well on clay soils. If more ornamental type trees are preferred then it is worth considering *Arbutus unedo*, *Amelanchier lamarckii* or *Cornus controversa*. The Cutler Richardson and NHBC data is shown below for guidance on safe planting distances, although I do not believe that these trees represent a risk even within the distances quoted because the foundations should have been designed to accommodate two oak trees.

Species	NHBC Zone of Influence	Cutler and Richardson 75%
<i>Betula</i>	7m	7m
<i>Carpinus</i>	8.5m	9m
<i>Ilex</i>	6m	n/a
<i>Malus</i>	6m	6m
<i>Sorbus</i>	8m	5.5m

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.

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.

Tree No.	Species	Ownership	Priority	Protection	Pruning Cycle	Recommendation	Indicative cost
T1	English oak	C	3	TBC	n/a	Fell and grind stump	[REDACTED]
T2	English oak	C	3	TBC	n/a	Fell and grind stump	[REDACTED]

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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 only.

APPENDIX 1

Photo 1 – T1 (Die back and lean evident).



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Photo 2 – T2 (major dead wood and dead leader visible)



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Photo 3 – Damage to boundary fence



Photo 4 – T2 Basal cavity

