BS5837:2012 Tree Survey

By

Jason Harker

Arboricultural Consultant

For

Mariam Radi

43 The Avenue

Ickenham

Uxbridge

UB10 8NR

Prepared by
ProHort Limited
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1.0 Introduction

ProHort Limited have been commissioned by Mariam Radi to conduct an arboricultural survey of the land at 43 The Avenue, Ickenham, Uxbridge (grid reference: TQ 07479 85994). This report details the trees that are located within or on the boundaries of the site, their condition, and any recommended works to be conducted.

The survey was carried out on the 22nd of October 2024 by means of inspection from ground level by a qualified Arboricultural Consultant. Trees were assessed in accordance with *BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations.*

Under the British Standard, the assessment of trees is made objectively and without influence by the client. The categorisation method identifies the quality and value of the trees that may be potentially influenced by any proposed works to a site as well as the impact of the tree upon the site.

Fencing and a concreted road are within the influence of the trees surveyed.

A total of 4 individual trees (T1 – T4) and 1 group of trees (G1) were surveyed and mapped (refer to Drawing 1). All arboricultural information recorded within the survey is presented within Appendix 1.

The composition of the soils on site was not assessed during the survey. The possibility of soil movement due to tree root activity can't be discounted.

This report provides the results of the survey and includes the following:

- A schedule of all trees located within and externally to the site that may influence the existing fence lines, roadway and proposed building (Appendix 1)
- An assessment based on *BS 5837:2012*, of the trees in terms of their potential value within any future development.
- On the basis of this assessment, the trees have been categorised into one of four categories: A, B, C or U.
- Advice on removal, retention and management of the trees (Sections 5 & 7).
    - A Tree Constraints Plan detailing tree quality categories, for all trees surveyed (Appendix 1).

2.0 Site and Surroundings

2.1 The area surveyed is located off The Avenue. The plot is part of an existing residential property. It comprises of an area of vegetated garden (lawn) with tree cover. Site access is via The Avenue.

2.2 Weather conditions during the survey were cloudy but fair.

2.3 Images

Figure 1 – Tree 1 (T1) was a yew tree (*Taxus baccata*)

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Figure 2 – Tree 2 (T2) was a common ash (*Fraxinus excelsior)*

Figure 3 – Tree 3 (T3) was a magnolia (*Magnolia grandiflora)*

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Figure 4 – Tree 4 (T4) was a hawthorn (*Crataegus monogyna*)

Figure 4 – Group 1 (G1) was 3 yew (*Taxus baccata*) and 1 apple (*Malus domestica)*

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3.0 Development Proposals

3.1 There is proposed development on the site, consisting of a wraparound extension to the north and east aspects of the existing residential dwelling.

4.0 Statutory Protection and Guidance

National Planning Policy Framework (NPPF)

4.1.1 The NPPF assumes protection of all ancient woodland and veteran trees unless it can be clearly demonstrated that the need for or benefits of development outweighs the loss. In this respect, ancient woodland is defined as an area which has been wooded continuously since at least 1600 AD. A veteran tree is one of exceptional value for wildlife, in the landscape, or culturally because of its great age, size or condition.

4.1.2 On this site, there is no ancient woodland or veteran trees.

5.0 Tree Protection Requirements

5.1. Tree Preservation Orders and Designations

5.1.1. Local authorities reserve the right to create Tree Preservation Orders (TPO) to protect the amenity value conferred to a location by a single tree or group of trees. Where a TPO is in force, lopping, topping, felling, uprooting or wilful damage caused to a tree such actions are prohibited and such actions may be prosecuted and incur a fine of up to £20,000 per tree affected. Works to TPO protected trees must only be undertaken with the written consent of the local authority.

5.1.2. No trees were found to have a TPO on within the area surveyed however the site is within a conservation area.

5.1.3. There are certain circumstances where written permission from the local planning authority may not be necessary before undertaking works. These include;

- Making a tree safe if it is an imminent threat to people or property.
- Removing dead wood, or a dead tree.

Owners, managers or any persons wishing to undertake work as an exemption to the written permission process **are required** to provide the local planning authority with 5 days' notice prior to attending to a tree which they deem as being dead or dangerous, unless such works are required in an emergency. It is the tree owner's responsibility to provide proof that the tree was indeed dead or dangerous should this exception be challenged; hence, it is advisable always to request an inspection by the local authority Tree Officer prior to carrying out such operations. Furthermore, and even in the event of an emergency situation, there is still a duty to notify the local planning authority that work has been completed including supplying an explanation of the necessity.

5.2. Protected Species – Bats

5.2.1. Mature trees often contain cavities, crevices and hollows which are a potential habitat for roosting bats. Bats are afforded protection under Schedule 5 of the wildlife and Countryside Act 1981 (as amended), as well as under Schedule 2 of the Conservation of Species and Habitats Regulations 2010 and as such causing damage to a bat roost constitutes an offence.

5.2.2. A preliminary ground level appraisal of the wildlife habitat value of each tree was undertaken as part of the arboricultural survey. No trees were noted as having features suitable to support roosting bats.

5.2.3. Should the presence of a bat roost be suspected whilst undertaking works on any trees on site, operations must be halted until a licensed bat handler or ecologist can provide advice.

5.3. Protected Species – Birds

5.3.1. Trees are a potential habitat for nesting birds, which as well as their nests and eggs are protected under the *Wildlife and Countryside Act 1981* (as amended). This makes it an offence to intentionally or recklessly, damage or destroy an active bird's nest or any part thereof.

5.3.2. Due to the suitability of the trees within the vicinity of the survey boundary for nesting birds, all tree work should ideally be undertaken outside the bird nesting

season (British bird nesting season: March to August inclusively). If this is not possible then a detailed inspection of each tree should be undertaken by a qualified ecologist prior to arboricultural works. Should an active nest be found (being built, containing eggs, or chicks) work must be halted until the nest becomes inactive.

6.0. Tree Population

6.1. 4 individual trees (T1 – T4) and 1 group of trees (G1) were recorded that are growing within the boundaries of the surveyed Site. A schedule of all trees in terms of species, condition, age, management recommendations and *BS 5837:2012* quality categories is provided in Appendix 1.

6.2. The tree population recorded is entirely confined within the Site boundary with elements typical with its existing use as a residential garden.

6.3. Tree Quality Categorisation

6.3.1. Under *BS 5837:2012 Trees in relation to design, demolition and construction – Recommendations* trees and groups objectively assigned a quality category designed to quantify their value within any future development. Table 1, below, presents a summary of the categories presented in the British Standard.

Table 1: Summary of BS 5837:2012 tree quality categorisation criteria.

Category A	Trees of high value including those that are particularly good examples of their species and/or those that have visual importance or significant conservation or other value.
Category B	Trees of moderate value including those that do not qualify as Category A due to impaired condition and/or those that collectively have a higher value than they would as individuals; also trees with material conservation or other value.
Category C	Trees of low value including those with very limited merit or impaired condition; trees offering transient or temporary landscape benefits.

Category U	Trees with irremediable defects and anticipated early loss due to collapse; dead trees or those in immediate decline and those with infectious pathogens.

The rationale of this designation is to take account of individual trees or landscape features that may contain attractive or unusual qualities or characteristics, but are of poor form, poorly sited, or have a predicted lifespan of less than 20 years due to inherent weaknesses or faults as detailed in the *Schedule of Trees*.

7.0. Management Recommendations

7.1 Tree Work

7.1.1. All tree surgery including felling work should be carried out by a qualified contractor in accordance with *BS 3998:2010 Tree work- Recommendations.*
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7.1.2. All tree surgery works, once approved by the Local Planning Authority, should be carried out prior to any other site works.

7.1.3. **Cultural Implications for Retained Trees -** It is not necessary to undertake access facilitation pruning (AFP). None of the trees on Site should impact the proposed development.

7.1.4. Other works to retained trees (not relating to development) are included in this report.

7.2. Mitigation for the removal of trees

7.2.1. 2 individual trees must be removed to facilitate further development of the site (T1 & T2). Mitigation for their loss and associated habitats may be required in the form of replacement tree planting.

7.2.2. If trees are to be removed, then suitable species choice is likely to include small ornamental type and/or native trees (Prunus or malus spp.).

7.2.3. The National Planning Policy Framework (NPPF) is a material consideration in the planning process and promotes a presumption in favour of sustainable development. In terms of the natural environment, development should minimise impacts on biodiversity and provide a net gain in biodiversity where possible.

7.3. Post Work Tree Care

7.3.1. Hazard recommendations are based on observations at the time of the survey. Trees are dynamic living organisms whose structure is constantly changing. Even those in good condition can suffer from damage or stress. Following site development, regular (annual or biennial) inspections of all retained trees should be undertaken by a qualified Arboricultural Consultant.

7.3.2. Aftercare is vital to the survival of any newly planted trees. Provision should be made for a minimum of two years maintenance of newly planted trees and include watering, formative pruning and the checking of tree ties and stakes.

7.4. Foundation Depth Calculations

7.4.1. This report has been written in accordance with, and to satisfy the requirement of *BS 5837:2012*.

7.4.2. The nature of the soils on site was not assessed during the survey. The possibility of soil movement due to tree root activity cannot be discounted.

8.0. Summary

8.1 A total of 4 individual trees and 1 group of trees were recorded during the survey within the development area site boundary.

8.2. Based on an objective assessment made in accordance with *BS 5837:2012 Trees in relation to design, demolition and construction - Recommendations* the trees were all valued as either category B or C features.

8.3. 2 individual trees must be removed to facilitate development.

8.4. At the time of the survey no trees within the Site were identified as being subject to Tree Preservation Orders. A Tree Preservation Order was identified for trees adjacent east to the Site at 64 Ivyhouse Road, Ickenham, however these trees are not due to be affected by the proposed works. The Site was within a Conservation Area.

8.5. No trees were found to have features suitable for roosting bats.

8.6. The successful implementation of the proposed scheme presents a realistic opportunity for development.

9.0 Survey Method

The survey of the trees was conducted from ground level only. The nature of the soils on Site was not assessed. Trees are dynamic living organisms with a constantly changing structure; even trees in good condition can suffer from damage or stress. The information recorded is presented as being correct at the time of the survey.

9.1 The following features of each tree, group of trees or wood have been recorded in the Arboricultural Survey Date Sheets at Appendix 1.

9.1.1. Species

The common name is given. The Latin name may also be given if further clarification is required.

9.1.2. Height

Top height of tree recorded in metres.

9.1.3. Stem Diameter

For single-stemmed trees, the measurement is taken at 1.5 metres above ground level and recorded in millimetres.

For multi-stemmed trees, an average of all stems measured at 1.5m above ground level is used.

For tree groups, a range from minimum to maximum diameters is provided based on measurements taken using one of the aforementioned methods.

9.1.4. No. of Stems

A count of stems arising below a height of 1.5 metres.

9.1.5. Crown Spread

The N, S, E and W branch spreads are recorded in metres to provide a representative crown shape.

9.1.6. Height of Lowest Branch

Crown clearance above ground level recorded in metres.

9.1.7. Direction of Lowest Branch

The direction of growth of the first significant branch from the point of attachment.

9.1.8. Maturity

Young: Trees that can reasonably be relocated or replaced like for like, without undue cost.

Middle Age: Trees in the established growth stage of their life with the potential to continue increasing in size.

Mature: Trees that have reached their ultimate size, given their location and surroundings.

9.1.9. Condition

Good, Fair, Poor: An overall assessment of a tree's physiological and structural state in which factors that may increase its susceptibility to the effects of development are taken into account.

9.1.10. Veteran

Trees that are in such a condition as in significantly increase their biological, cultural or aesthetic value. This is characteristic of, but not exclusive to, individuals surviving beyond that typical age range of species concerned.

9.1.11. Comments

A brief evaluation and description of the tress with comments on form, vitality, health and any significant defects or symptoms of ill-health.

9.2. BS 5837 Tree Quality Assessment

The tree quality assessment is based on Table 1 of BS 5837:2012 (See below). Four categories (A, B, C and U) are used to denote tree quality (A=High, B=Moderate, C=Low, U=Unsuitable for retention). Sub categories (1-3) denote the specific function value of the trees and the reasoning behind the allocation of a specific category (the subcategories may be used in combination but do not accumulate collective weight).

9.3. Root Protection Area (RPA)

The RPA is allocated to ensure that a sufficient area is left undisturbed during development. It is provided as an area (m^2) and as the radius of a circle (m) typically plotted from the centre of the stem.

The RPA is calculated using a mathematical equation included in BS 5837:2012 (Table D.1) and is based on a trees stem diameter. In some cases the RPA may need to be adapted to best reflect the likely area of the position of roots required to ensure survival; this may be based on criteria such as the tree's condition, species, crown spread and any barriers to growth. Any alteration must be justifiable but is made at the Arboricultural Consultants discretion.

9.4 Recommendations

Recommendations for arboricultural works, etc. are based on the current land use and take into account the tree or group attributes without bias to the proposed development.

Any tree surgery works proposed as part of this Survey are recommended to mitigate any identified problems that may be caused by trees in close proximity to the proposed building. To this end, should these recommendations be overruled, this Survey stands as the opinion of ProHort Limited, and therefore any damage or injury caused by trees recommended by this practice for felling or tree surgery works, to which the proposed schedule of works has been altered or the tree has been requested to be retained by the Local Planning Authority, cannot be the responsibility of this practice.

Whilst this is an arboricultural report, comments relating to non-arboricultural matters are given, such as built structures and soil data. Any opinion thus expressed should be viewed as provisional and confirmation from an appropriately qualified professional sought. Such points are clearly identified within the body of the report.

9.5 Estimated Remaining Contribution

An estimation of the life expectancy as a healthy functioning tree. This will be influenced by species and the condition of the tree at the time of the survey.

- Long: Greater than 40 years
- Medium: 20 – 40 years

- Short: Less than 20 years

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Category	Description	Subcategory			Colour on Map
		Mainly arboricultural qualities	Mainly landscape qualities	Mainly cultural values, including conservation	
Trees unsuitable for retention					
Category U	Those in such a condition that they cannot realistically be retained as living trees in the context of the current land use for longer than 10 years.	Trees that have a serious, irremediable, structural defect, such that their early loss is expected due to collapse, including those that will become unviable after removal of other category U trees (e.g. where, for whatever reason, the loss of companion shelter cannot be mitigated by pruning. Trees that are dead or are showing signs of significant, immediate, and irreversible overall decline. Trees infected with pathogens of significance to the health and/or safety of other trees nearby, or very low-quality trees suppressing adjacent trees of better quality. *NOTE: Category U trees can have existing or potential conservation value which it might be desirable to preserve.*			Dark Red RGB Code: 127-000-000
Trees to be considered for retention					
Category A	Trees of high quality with an estimated remaining life expectancy of at least 40 years.	Trees that are particularly good examples of their species, especially if rare or unusual; or those that are essential components of groups or formal or semi-formal arboricultural features (e.g. the dominant	Trees, groups or woodlands of particular visual importance as arboricultural and/or landscape features.	Trees, groups or woodlands of significant conservation, historical, commemorative or other value (e.g. veteran trees or wood pasture)	Light Green RGB Code: 000-255-000

		and/or principal trees within an avenue)			
Category B	Trees of moderate quality with an estimated remaining life expectancy of at least 20 years.	Trees that might be included in Category A but are downgraded because of impaired condition (e.g. the presence of significant though remediable defects, including unsympathetic past management and storm damage), such that they are unlikely to be suitable for retention beyond 40 years; or trees lacking the special quality necessary to merit the Category A designation.	Trees present in numbers, usually growing as groups or woodlands, such that they attract a higher collective rating than they might as individuals; or trees occurring as collectives but situated so as to make little visual contribution to the wider locality.	Trees with material conservation or other cultural value.	Mid Blue RGB Code: 000-000-255
Category C	Trees of low quality with an estimated remaining life expectancy of at least 10 years, or young trees with a stem diameter below 150mm	Unremarkable trees of very limited merit or such impaired condition that they do not qualify in the high categories.	Trees present in groups or woodlands, but without this conferring on them significantly greater collective landscape value; and/or trees offering low or only temporary/transient landscape benefits.	Trees with no material conservation or other cultural value	Grey RGB Code: 091-091-091

Notes: All young trees are assessed as quality category 'C' but this does not preclude their retention within a development.

9.6 Limitations & Qualifications

Tree inspection reports are subject to the following limitations and qualifications.

General exclusions

Unless specifically mentioned, the report will only be concerned with above ground inspections. No below ground inspections will be carried out without the prior confirmation from the client that such works should be undertaken.

The validity, accuracy and findings of this report will be directly related to the accuracy of the information made available prior to and during the inspection process. No checking of independent third-party data will be undertaken. ProHort Ltd will not be responsible for the recommendations within this report where essential data is not made available or is inaccurate.

This report will remain valid for one year from the date of inspection but will become invalid if any building works are carried out upon the property, if soil levels altered in any way close to the property, or if tree work is undertaken. It must also be appreciated that recommendations proposed within this report may be superseded by extreme weather or any other unreasonably foreseeable events.

If alterations to the property or soil levels are carried out, or tree work is undertaken, it is strongly recommended that a new tree inspection is carried out.

It will be appreciated, and deemed to be accepted by the client and their insurers, that the formulation of the recommendations for the management of trees will be guided by the following: -

1. The need to avoid reasonable foreseeable damage.
2. The arboricultural considerations - Tree safety, Good Arboricultural practice (tree work) and aesthetics.

The client and their insurers are deemed to have accepted the limitation placed on the recommendations by the sources quoted in the attached report. Where sources are limited by time constraints or the client, this may lead to an incomplete quantification of the risk.

Jason Harker
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ProHort Limited

10.0. Site Plan – Tree Constraints Plan

Produced on Nov 19, 2024
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10 m
Scale 1:500 (at A4)

N

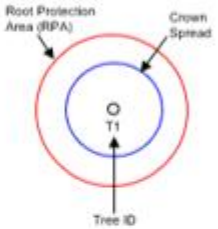
Key

Category A: [000-255-000]

Category B: [000-000-255]

Category C: [091-091-091]

Category U: [127-000-000]



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Location	43 The Avenue UB10 8NR
Date:	19/11/2024
Scale:	1:500 @ A4

The original of this report was produced in colour – a monochrome copy should not be relied upon.

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Appendix 1: Arboricultural Survey Data Sheet

Tree & Tag No Species	Height (m)	Stems		Crown		Age	RP A (m^2) R (m)	Physical Condition	Structural Condition	Preliminary Recommendations Survey Comment	Cat ERC
		No	Dia (mm)	Spread (m)	Clear (m)						
T1 - yew	13	2	195 300	**N** 4 **E** 4 **S** 5 **W** 4	1.7 2.1 2.1 2	M	**A** 55.33 **R** 4.2	Fair	**C** Fair **S** Fair **B** Fair	To be removed due to development	C1
T2 - ash	9	1	85	**N** 0.5 **E** 2.8 **S** 3 **W** 1.2	3 2 2 2	SM	**A** 3.26 **R** 1.02	Fair	**C** Fair **S** Fair **B** Fair	To be removed due to development – growing 0 m from boundary wall – flags lifted by roots	C1
T3 – magnolia	6	1	190	**N** 5 **E** 4.5 **S** 4 **W** 3.8	1.2 1 1.7 1.2	M	**A** 16.31 **R** 2.28	Good	**C** Good **S** Good **B** Good	Remove ivy from trunk – no impact to development	C2
T4 – hawthorn	5	1	330	**N** 4 **E** 3.2 **S** 3.5 **W** 3	1.8 2 2 2	M	**A** 49.19 **R** 3.96	Fair	**C** Fair **S** Fair **B** Fair	Remove ivy from trunk	B2
G1 – 3 yews and 1 apple	7	1	210	**N** 3 **E** 3 **S** 3 **W** 3	0 0 0 0	M	**A** 73.11 **R** 2.52	Fair	**C** Fair **S** Fair **B** Fair	Yew is good, apple is poor	B2

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Appendix 2: BS 5837:2012 Terms and Definitions

Access Facilitation Pruning

One-off tree pruning operation, the nature and effects of which are without significant adverse impact on tree physiology or amenity value, which is directly necessary to provide access for operations on site.

Arboricultural Method Statement

Methodology for the implementation of any aspect of development that is within the root protection area, or has the potential to result in loss of or damage to a tree to be retained.

Arboriculturist

A person who has, through relevant education, training and/or experience, gained expertise in the field of trees in relation to construction.

Competent Person

A person who has training and experience relevant to the matter being addressed and an understanding of the requirements of the particular task being approached.
NOTE - a competent person is expected to be able to advise on the best means by which the recommendations of this British Standard may be implemented.

Construction

Site-based operations with the potential to affect existing trees.

Construction Exclusion Zone

Area based on the root protection area from which access is prohibited for the duration of a project.

Root Protection Area (RPA)

Layout design tool indicating the minimum area around a tree deemed to contain sufficient roots and rooting volume to maintain the tree's viability, and where the protection of the roots and soil structure is treated as a priority.

Service

Any above or below ground structure or apparatus required for utility provision.

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NOTE - examples include drainage, gas supplies, ground source heat pumps, CCTV and satellite communications.

Stem
Principal above ground structural component(s) of a tree that supports its branches.

Structure
Manufactured object, such as a building, carriageway, path, wall, service run, and built or excavated earthwork.

Tree Protection Plan
Scale drawing, informed by descriptive text where necessary, based upon the finalized proposals, showing trees for retention and illustrating the tree and landscape protection measures.

Veteran Tree
Tree that, by recognized criteria, shows features of biological, cultural or aesthetic value that are characteristic of, but not exclusive to, individuals surviving beyond the typical age range for the species concerned.

10. *NOTE - these characteristics might typically include a large girth, signs of crown retrenchment and hollowing of the stem.*

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