WHARTON
Natural
Infrastructure
Consultants

Arboricultural Impact Assessment

SITE LOCATION
20 Hamilton Rd,
Uxbridge
UB8 3AJ

PREPARED FOR
Paula Gaillard

PRINCIPAL AUTHOR
Dean Hickton

ISSUE DATE
30th December 2022

OUR REFERENCE
221128 1613 AIA V1

Quality Assurance

Issue/revision	Issue 1	Revision 1	Revision 2
Remarks	**DRAFT ISSUE**	**FINAL**	
Date	30th November 2022	1st December 2022	
Prepared by	Dean Hickton	Dean Hickton	
Signature			
Non-Technical Review by	Callum Throw	Callum Throw	
Signature			
Authorised by	Callum Throw	Callum Throw	
Position	Business Operations Manager	Business Operations Manager	
Signature			
Client number	**1613**	**1613**	

Table of Contents

1. Introduction

1.1 Terms of Instruction

We were instructed by Paula Gaillard to carry out a BS5837:2012 survey

1.1.1 Paula Gaillard (hereafter the 'Client'), commissioned Wharton Natural Infrastructure Consultants Ltd ('Wharton') to undertake a detailed walkover survey and arboricultural assessment in accordance with *BS5837:2012 - Trees in Relation to Design, Demolition and Construction: Recommendations* (hereafter referred to as 'BS5837:2012') at 20 Hamilton Rd, Uxbridge, UB8 3AJ ('the Site).

The Site location Plan is shown at Appendix 1.

We considered all arboricultural features within or adjoining the Site

1.1.2 The walkover survey and arboricultural assessment considered trees directly within the site or influencing distance (15m buffer beyond the boundary) whose root protection areas or crowns extents extend into the proposed developable area, are recorded, and considered. This has been based on the surveyor's discretion.

Trees may form a constraint to the Proposed Development and assessment of the impacts is required

1.1.3 An Arboricultural Impact Assessment (AIA) has been prepared to accompany a planning application in relation to the construction of an extension to the existing dwelling at the Site (the 'Proposed Development').

The arboricultural features will be considered by Hillingdon London Borough Council

1.1.4 This AIA is required to fulfil the requirements of the Local Planning Authority (LPA), Hillingdon London Borough Council, to make an informed decision on our client's planning application.

This report will be referenced if any disputes over compliance arise

1.1.5 This document may be used as a point of reference if there were to be a dispute over compliance with related planning decisions.

An Arboricultural Method Statement (AMS) will be required

1.1.6 Should the LPA be minded granting planning permission, an Arboricultural Method Statement (AMS) should be conditioned to ensure sufficient protection of retained trees.

1.2 Scope of the Report

The scope and detail of this AIA provides appropriate consideration of arboricultural features as part of a planning application

1.2.1 The information provided complies with the requirements of BS5837:2012, Table B.1 and broadly comprises four stages.

The first stage is to undertake a walkover survey of trees on, and within influencing distance, of the Site, in accordance with BS5837:2012.

The second stage is to provide a Tree Constraints Plan for the Site demonstrating the above and below-ground constraints including Root Protection Areas (RPA), canopy spreads. and shading arcs, if necessary (orientation dependant).

Thirdly, provide an AIA to evaluate the effects which are likely to arise from a final design layout implementation and identifies mitigation for the direct and indirect impacts on retained trees.

Lastly, provide a draft Tree Protection Plan (TPP) and general Tree Protection Guidance (Arboricultural Method Statement (AMS) 'heads of terms').

The BS5837:2012 provides guidance on assessing the quality of an arboricultural feature and an evaluation of impacts

1.2.2 The BS5837:2012 provides guidance on assessing the quality of features and recommends an evaluation of impacts, both direct and indirect. The BS5837:2012 does not provide explicit limits for measuring the perceived sensitivity of an arboricultural feature nor does it provide a methodology for how effects should be classified.

1.3 Caveats and Limitations

This report in no way constitutes a tree risk-benefit survey

1.3.1 This report has been prepared to accompany a planning application and provides no detail specifically in relation to the risk-benefit of the features. Where concerns for tree health and safety exist the necessary and appropriate tree inspections should be carried out. All tree inspections were undertaken from ground level and no climbing inspections were undertaken.

Trees are growing dynamic structures; no guarantee can be given as to the absolute safety or otherwise of any feature recorded

1.3.2 Whilst reasonable effort has been made to identify risk features within the features inspected, no guarantee can be given as to the absolute safety or otherwise of any of the trees. No tree is ever safe due to the unpredictable laws and forces of nature. As a result of this, natural failure of intact trees will occur; extreme climatic conditions can cause damage to even apparently healthy trees. Therefore, the contents of this report are valid for a period of one year (12 months) from the date of this survey.

Dimensions are approximate only and, where necessary, were estimated

1.3.3 Where arboricultural features have been captured beyond the Site boundary, all dimensions of trees and their structure are based on estimations unless otherwise stated. If trees are located within the Site boundary, measurements will not be estimated unless otherwise stated within the comments of the BS5837:2012 Survey Schedule at Appendix 2.

No reliance should be given on comments relating to buildings, engineering, or soils

1.3.4 This is an arboricultural report which may make a series of assumptions over construction related matters or recommendations for engineering solutions which will require further technical input from a suitably qualified professional in their relevant discipline. Further, this report does not rely on ecological or archaeological data. If either is commented upon within the report, further professional advice should be sought.

Publicly accessible third-party information has been relied upon for an assessment of statutory and non-statutory constraints

1.3.5 While the third-party data and aerial imagery relating to statutory and non-statutory constraints are deemed to be broadly accurate, in some instances no specific date is given for the information and images used and Wharton cannot and will not accept liability for any deficiencies in third party information.

The survey has only been undertaken from land where permission has been sought

1.3.6 The survey has only been undertaken from land within the Client's ownership, publicly accessible land or from areas where formal access has been prior-arranged and consent obtained.

1.4 Confidentiality

This report is for the sole use of the Client, and it will not be relied upon or transferred to any other parties

1.4.1 This report is for the sole use of the Client as named on this report and its reproduction or use by anyone else is forbidden unless written consent is given by Wharton and the author. This report shall not be relied upon or transferred to any other parties without the prior express written authorisation of Wharton.

2. Site Overview

2.1 Site Description

The Site is located to the south of Uxbridge in the London Borough of Hillingdon

2.1.1 The Site is located at Ordnance Survey (OS) National Grid Reference TQ 05773 82008. Access to the Site is provided along Hamilton Road. Immediately surrounding the Site are residential dwellings off Hamilton Road and Bosanquet Close. The Site is situated within cul-de-sac which is accessed off the A408.

The Site comprised c.0.034ha of residential land

2.1.2 The Site comprised a residential dwelling with parking at the front of the property, with side access leading to a rear garden.

The surrounding land use was a mixture of residential estates and recreational open space

2.1.3 The immediate landscape was mainly made up of urban, residential estates. In the wider landscape are a combination of public open spaces, agricultural land parcels and commercial and retail parks.

3. Arboricultural Baseline and Desk Study

3.1 Baseline Data Collection

Baseline data collection consists of an arboricultural desk study and walkover survey of the study area

3.1.1 Baseline data collection has been undertaken with reference to BS5837:2012 and extends to an arboricultural desk study; and a walkover survey of all arboricultural features within the arboricultural study area.

A desk study has been undertaken as a means of identifying any statutory and non-statutory constraints

3.1.2 The desk study has considered the following statutory and non-statutory environmental constraints.

Tree Preservation Orders (TPO)

Conservation Areas

Ancient Woodland

Ancient, veteran, or notable trees

3.2 Tree Preservation Orders (TPO) and Conservation Areas

Hillingdon London Borough Council online map confirmed that there are TPOs across the Site, however, the Site is not within a Conservation Area

3.2.1 The presence of any TPO[1] or Conservation Areas was checked using the Hillingdon London Borough Council online, interactive map on 28th November 2022. T1, T3 and T4 appear to fall within TPO Ref: TPO357. This TPO covers the eastern boundary of the site and many other rear gardens to the north of the Site. The area order spans the entire open space to the rear of the property and several other residential properties. As T5 and T6 are set back from this boundary and T2 is not within the hatched area, it would appear these trees fall outside of TPO357.

3.3 Ancient woodland, Ancient, Veteran and Notable trees

The Site was absent of any Ancient Woodland, Ancient, Veteran or Notable trees

3.3.1 The presence of ancient woodland designation[2] and ancient, veteran, or notable trees[3] on or adjoining the Site was checked using publicly accessible information, freely available online on 28th November 2022.

[1] Hillingdon London Borough Council (Online)). Available at < https://lbhillingdon.maps.arcgis.com/apps/View/index.html?appid=7b18f60872a94d38a0c9bf1aea032760 > (Last Accessed 28 November 2022)
[2] Magic (DEFRA), 2018. Multi Agency Geographic Information for the Countryside (Online). Available at: < https://magic.defra.gov.uk/MagicMap.aspx > (Last 28 November 2022).
[3] Ancient Tree Inventory, 2018. Ancient Tree Inventory [Online]. Available at: < https://ati.woodlandtrust.org.uk > Last Accessed 28 November 2022).

4. Arboricultural Survey Results

4.1 Method of Data Collection

The Site was surveyed using an OS master map

4.1.1 The arboricultural survey was undertaken in accordance with BS5837:2012, with OS master maps forming the base mapping.

The Site was originally surveyed without reference to the Proposed Development

4.1.2 The trees on the Site were initially surveyed without reference to the Site layout as detailed in Clause 4.4.1.1 of BS5837:2012. However, for the purposes of this arboricultural assessment, the design proposal for the Site has been considered.

The survey recorded trees either as individual specimens, groups, or woodlands

4.1.3 Trees were recorded as Groups where they were more aerodynamically, culturally, or visually important in the collective. For this survey, a woodland is defined as a dense stand of trees which mature to form a closed woodland canopy, and which comprise an understory layer consisting of tree species not having potential to attain a size at which they can contribute to the closed canopy.

Small trees are not a material consideration

4.1.4 In accordance with BS5837:2012, small trees with a stem diameter less the 75mm were generally not surveyed as they are not a material consideration and would either be easily replaced or relocated.

The BS5837:2012 Tree Schedule and Constraints Plans are provided at Appendix 2 and 3

4.1.5 The tree numbers associated with each arboricultural feature are cross-referenced within the Schedule and plans at Appendix 2 and 3 respectively. The complete, detailed method of data collection for the tree survey is provided at Appendix 6.

The Tree Constraints Plan (TCP) demonstrates the Root Protection Area (RPA), an area equivalent to a circle with a radius 12 times the diameter of the trees measured at 1.5 metres for single stemmed trees. For trees with more than one stem, one of two calculation methods should be used, dependent on the number of stems. Stem diameter(s) should be measured in accordance with Annex C, and the RPA should be guided from Annex D of BS5837:2012.

The RPAs for the arboricultural features are shown as pink dashed circles on the Tree Constraints Plan at Appendix 3.

4.2 Summary of Arboricultural features recorded

The walkover survey and assessment were undertaken on 25th November 2022

4.2.1 The walkover survey and assessment were undertaken by the Principal Author and the trees inspected from ground level. Weather at the time of survey was clear and bright, there were no limitations to the assessment.

A total of 6no. arboricultural features were surveyed and assessed

4.2.2 Of the 6no. arboricultural features surveyed across the wider Site (red line boundary), 6no. individual trees were recorded.

A detailed breakdown of features surveyed along with comments for each feature are given in detail in the BS5837:2012 Survey Schedule at Appendix 2.

The survey included 2no. category B, 3no. category C and 1no. category U features.

4.2.3 In line with BS5837:2012, Category B trees should be considered as providing a substantial contribution to a Site. These should be retained and incorporated into the Proposed Development where possible and feasible.

Generally, category C and U trees are of low quality or are young specimens, which can be readily replaced, therefore, should not be considered a constraint to Proposed Development. It should be noted that Table 1 of BS5837:2012 only gives recommendations in relation to remaining years. A tree may be considered to have a longer remaining life, however, still be of a lower category given its maturity, condition, or overall impact to the application Site.

Wherever possible, trees will be retained

4.2.4 Wherever possible, arboricultural features will be retained for the benefits that they currently provide as well as helping to ensure a continuity of tree cover and providing a mature landscape to the Proposed Development.

5. Arboricultural Impact Assessment

The direct and indirect effects associated with construction of the Proposed Development have been assessed

5.1.1 The purpose of this AIA is to assess the direct and indirect effects associated with construction of the Proposed Development on existing trees and, where necessary, the AIA further identifies necessary compensation and mitigation measures where these are deemed appropriate.

5.2 Proposed Development

It is being proposed to extend the existing residential dwelling

5.2.1 The Proposed Development is to construct an extension on the eastern side of the property.

5.3 Reference Documents

An OS Map, Proposed Development layout were referenced

5.3.1 As background information, the following documentation has been referenced to prepare this AIA.

Proposed Development (drwg.no. Ground-floor-extract-Hamilton-Rd-UB8-3AJ) prepared by DAA Designs and dated Unknown

5.4 Assumptions and Limitations of the Impact Assessment

All proposed works will be restricted to immediate application area

5.4.1 All proposed site clearance, earthworks, and construction activities will be restricted to the immediate application area (as denoted by the red line) and not into areas of third-party land beyond the development land. Any impacts arising to any trees beyond the development land have not been considered.

Detailed information concerning the extent of earthworks, enabling works or diversion of services has not been fully disclosed

5.4.2 Detailed information concerning the extent of earthworks across the Proposed Development has not been fully disclosed. Details on enabling works such as the installation or diversion of services by statutory undertakers beyond the application boundary, have not been considered during an assessment of the impacts.

Existing areas of hard surfacing will be utilised wherever possible

5.4.3 Existing areas of hard surfacing will be utilised wherever possible for movement of vehicles, site compounds and material storage during site clearance, demolition, and construction. It is assumed that no access or tree removal on third party land will be required to facilitate the Proposed Development

All arboricultural features have been plotted using aerial imagery and on-site GPS locations

5.4.4 Aerial imagery and on-site GPS location cannot always be relied upon. Therefore, the Tree Constraints Plans and Tree Retention and Removal Plan, and Tree Protection Plans have features plotted with approximate locations only. In these instances, tree locations will have an assumed accuracy of two to five metres.

5.5 Impact of the Proposed Development

The Proposed Development layout has been overlaid to demonstrate the relationship with the existing arboricultural features

5.5.1 The Proposed Development is shown on the Tree Retention and Removals Plan provided at Appendix 3 (drwg.no. 221128 1613 TRRPV1).

The size and orientation of the Proposed Development, means that all existing trees are retained

5.5.2 All the trees were situated along, or close to, the eastern boundary of the Site. The tree cover provided good screening value from wider vantage points beyond the Site and provided an established level of privacy. All the features are set to be retained as part of the Proposed Development.

Existing trees are only one factor requiring consideration for the Site's development

5.5.3 Section 5.1.1 of BS5837:2012 recognises that the competing needs of development mean that trees are only one factor requiring consideration. It also states that misplaced tree retention can be detrimental on a Site where it will cause excessive pressure on those trees being retained and could necessitate their removal in the future.

5.6 Below-ground Constraints

The below ground constraints are generally summarised as the root protection areas (RPA)

5.6.1 The RPA is an area in which no ground works should be undertaken without due care in relation to the retained tree(s) and this is to avoid soil compaction, changes in levels or soil contamination which could alter the trees condition and/or stability. The shape of the RPA and its exact location will depend upon existing arboricultural considerations and ground conditions.

The Tree Retention and Removals Plan (drwg.no. 221128 1613 TRRPV1) illustrates the relationship between the RPAs associated with the trees and the Proposed Development.

All arboricultural features have existing incursions within the RPA

5.6.2 Arboricultural features T1, T2 and T3 have existing incursions into their RPAs from hard standing (off-site footpath). Furthermore, T5 and T6 (off-site tree) have incursions into their RPAs from the lightweight structure in the rear, adjoining garden to the north.

New RPA Incursions

The default position should be that structures are located outside the RPAs of retained trees

5.6.3 In this instance, there will not be a requirement for new RPA incursions because of the Proposed Development.

5.7 Spatial Requirements for Contractors during Construction

Contractors will require sufficient working room which may fall within the RPA of retained trees

5.7.1 It is considered likely during construction that contractors will require sufficient working room which may fall within the RPA of retained trees. This is particularly evident for T1 (sycamore), the largest specimen at the Site and therefore has the greatest RPA that occupies a large portion of the rear garden.

Working room within the RPAs will be installed with ground protection

5.7.2 To ensure that the adjacent tree specimens are not negatively impacted, there will be a requirement for ground protection. This will be set out as per the notes within the BS5837:2012 Clause 6.2.3.3 Note a. It will comprise of either a suspended wooden walkway beneath the scaffolding or 100mm of woodchip laid onto a geotextile base overlaid with wooden boards. This will significantly reduce the likelihood of ground compaction.

Installation of underground services

It is assumed that services will be extended from the existing utilities already present at the Site

5.7.3 Due to the details provided for this application there is insufficient information relating to below ground services and utilities available at present.

However, it is assumed that services required as part of the Proposed Development will be joined to the existing utilities at the property. This will mean that the trees at the Site will not be impacted on.

5.9 Tree Management

Tree Pruning Requirements

Tree pruning is required to T6, which is located off-site and possibly T5

5.9.1 It is envisaged that pruning works are likely to be confined to facilitation pruning during the construction phases, typically crown lifting to provide greater ground clearances and avoid any injurious contact from plant machinery.

The future growth of retained trees is not considered to be a major constraint to the Proposed Development

5.9.2 The future growth of T6 (off-site tree) will conflict with the eastern corner of the proposed site layout. This can be addressed with minor pruning, in the form of raising lower branches and the reduction in length of lateral branches, this will create sufficient offset between its canopy and the Proposed Development.

Specific tree pruning will generally only become apparent once contractor spatial requirements are known

5.9.3 The requirement for a detailed schedule of pruning work will become apparent during on site supervision by the ACoW and should be identified prior to commencing any demolition or construction works and discussed at a pre-commencement meeting.

All tree works must comply with British Standard 3998:2010 – Tree Work Recommendations

5.9.4 Tree management and pruning should be carried out by skilled tree surgery contractors. It is recommended that quotations for such work be obtained from Arboricultural Association Approved Contractors as this is the recognised authority for certification of tree work contractors

All tree management, pruning and vegetation clearance must be removed outside of the bird-nesting season

5.9.5 Birds are protected under the Wildlife and Countryside Act, 1981 (as amended) whilst on an active nest. Where it is not possible to restrict tree management, vegetation to be removed or pruned should be checked for the presence of nesting birds by an ecologist.

6. Tree Protection Guidance (AMS 'Heads of Terms')

Arboricultural protection measures will be required

6.1.1 Guidance and recommendations for arboricultural protection measures have been identified as part of the Proposed Development. The following guidance presents, in principle, the arboricultural protection measures which will be applied. These will need to be expanded upon as part of a formal Arboricultural Method Statement (AMS) which should be conditioned as part of any planning approval.

Retained trees will need to be adequately protected during both demolition and construction

6.1.2 Tree protection will extend to the erection of mandatory tree protection barriers placed at the extent of the calculated RPAs to create construction exclusion zones (CEZs). The measures to protect trees should follow the guidance in BS5837:2012. The purpose of these measures should be understood from the outset and well-considered in that they protect trees to be retained within the and adjacent to the Site whilst allowing sufficient access for the implementation of the Proposed Development.

It will be the responsibility of the Principal Contractor to ensure compliance

6.1.3 The Principal Contractor will be responsible for ensuring that all site personnel and contractors are made aware of the requirements of any tree protection measures and any future amendments. They will act as the main point of contact with the LPA Tree Officer and ACoW for any tree-related matters.

General procedures and pre-commencement actions

The Site construction activities will be managed to avoid unnecessary damage to retained features

6.1.4 Wide or tall loads should not encounter retained trees. Oil, bitumen, cement, or other material that is potentially injurious to trees should not be stacked or discharged within 10m of a tree stem. No concrete should be mixed within 10m of a tree. Allowance should be made for the slope of ground to prevent materials running towards the tree.

No fires will be lit where flames are anticipated to extend to within 5m of tree foliage, branches, or trunk, taking into consideration wind direction and size of fire. Notice boards, telephone cables or other services should not be attached to any part of a retained tree.

Remove arboricultural features in accordance with the AIA following full planning approval

6.1.5 Trees, groups of trees, woodlands and hedgerows that are to be removed in accordance with this report and the approved Development (full planning obtained), are to be felled prior to the erection and implementation of protective barriers and measures.

Erect all protective barriers prior to commencement of construction activities

6.1.6 Retained arboricultural features on site will be protected by suitable barriers or ground protection measures around their calculated RPA, defined crown spread or other constraints as detailed by section 6 and 7 of BS5837:2012 and the draft Tree Protection Plan (drwg.no. 221128 1613 TPP V1). Tree protection fencing / barriers should be specified by an appointed ACoW and following a specification as detailed within an AMS.

Tree Protective Fencing Specification

Tree Protection Fencing / barriers will be fit for their intended purpose

6.1.7 Fencing should be robust enough to restrict being breached from the type of construction activity taking place on Site and suitable for the degree and proximity of works to retained trees. Fencing to be installed must be periodically inspected by an appointed ACoW to ensure that they remain fit for purpose and, where required, maintained, or improved throughout the duration of demolition and construction activities on Site.

Where the risk to retained trees is considered minimal, it may be deemed appropriate to use an alternative Protective Fencing specification.

Tree Protection Fencing should encompass a rigid wire mesh, metal fencing panel (Heras™)

6.1.8 In most situations, these panels should be affixed to scaffold poles driven vertically into the ground. To offer additional resistance against impacts where construction activity is anticipated to be more intense, supporting struts; acting as a brace, should also be provided.

A Construction Exclusion Zone (CEZ) will be established

6.1.9 No works are to be carried out within the CEZ and none of the fencing or barriers will be removed or their position altered without prior consultation between the Principal Contractor, the appointed ACoW and in agreement with the acting local authority. Weatherproof signs should be affixed to the panels are regular intervals to indicate that all construction activities are excluded from the CEZ.

Trees may be situated along or close to the Site boundaries, within third-party land, and the root protection area and crown spread of these trees will need to be protected throughout the duration of all work on Site.

The appointed ACoW will confirm that all protection measures are correct

6.1.10 The appointed ACoW will provide written confirmation that all specified tree protection measures have been set out correctly in accordance with a formal AMS (to be prepared) and Tree Protection Plan. This needs to be obtained prior to commencing with all demolition and construction activities.

ACoW routine inspections and monitoring

Arboricultural features to be retained will be routinely monitored

6.1.11 Any features which are to be retained a should be routinely monitored both during and after demolitions and construction. The purpose of this monitoring regime will be to identify any symptomatic changes within trees or identify unexpected injurious contact and better inform any remedial works deemed appropriate as a result.

Construction access may be considered within the root protection area if suitable ground protection measures are in place

6.1.12 Ground protection measures may comprise single scaffold boards over a compressible layer laid onto a geo-textile membrane for pedestrian movements.

Vehicular movements over the root protection area will require the calculation of expected loading and the use of proprietary protection systems.

7. Conclusions

The walkover survey and assessment were undertaken on 25th November 2022

7.1.1 The arboricultural survey was undertaken in accordance with BS5837:2012 with OS master maps forming the base mapping. The walkover survey and assessment were undertaken by the Principal Author and the trees inspected from ground level. Weather at the time of survey was clear and bright, there were no limitations to the assessment.

The desk study revealed the presence of statutory designations at the Site

7.1.2 A Desk Study was conducted ahead of the arboricultural walkover survey. The desk study identified that 3no. trees appear to be subject to statutory constraints, by way of an area TPO (ref: TPO357)

A total of 6no. arboricultural features were surveyed and assessed

7.1.3 Of the 6no. arboricultural features surveyed across the wider Site (red line boundary), 6no. individual trees were recorded.

All the arboricultural features at the Site are set to be retained

7.1.4 An Arboricultural Impact Assessment (AIA) has been undertaken. To implement the Proposed Development, there will not be a requirement for tree removal.

8. Future Considerations

An AMS should be provided detailing how the necessary tree protection will be implemented

8.1.1 The successful retention of the trees to be retained on Site as part of an approved Development will be reliant upon the adoption of suitable tree protection measures and the ongoing compliance and maintenance of these measures. Should the LPA be minded granting planning permission, an Arboricultural Method Statement (AMS) should be conditioned.

A detailed Tree Protection Plan will be required

8.1.2 A draft Tree Protection Plan has been provided for the purpose of this assessment. This is preliminary and subject to alteration following a final decision notice and should be reissued in detail as part of a robust planning condition.

An ACoW should be appointed to oversee tree-related matters during demolition and construction

8.1.3 Whilst the Principal Contractor will be responsible for ensuring that all site personnel and contractors are made aware of the requirements of any tree protection measures, the ACoW will act as the main point of contact for any tree-related matters. The ACoW will also be responsible for any pre-commencement activities concerning tree protection and provide regular supervision, inspections, monitoring and on-site guidance, particularly where works are close to, or within, the RPA of retained features. The ACoW will also liaise with the LPAs Tree Officer, where necessary.

Appendix 1: Site Location Plan

20 Hamilton Road, Uxbridge


Hamilton Rd
Bosanquet Cl
Bosanquet Cl
Bosanquet Cl

Appendix 2: Tree Schedule

BS5837:2012 Tree Schedule

Client Name: Paula Gaillard
Site: 20 Hamilton Road, Uxbridge
Ref No: 221128 1613 TS V1

Consultant: Dean Hickton
Survey Date: November 2022

Measurements	
Height	All tree heights have been assessed using a clinometer. Tree heights are given in metres.
Stem Dia.	Diameter in millimetres (mm) in accordance with BS5837:2012 paragraph 4.6.1, Annex C.
Crown spread	Given as an average diameter or measured using a distometer. North (N), east (E), south (S) and west (W) provided.
Crown Height	Height of ground clearance is given in metres. Estimate of the height of the first branch above ground level.
Species name	The tree species have been recorded with both common and scientific names.
Tag no.	Where present, any metal tags attached to trees have been recorded.

Age Class	
Young	Establishing, good vigour, fast growth rates and strong apical dominance; < 1/3rd estimated life expectancy.
Semi-Mature	Established specimen approaching 1/3 life expectancy.
Early-Mature	1/3 – 2/3 life expectancy, vigorous growth rate and increasing in height.
Mature	Over 2/3 life expectancy. Generally good vigour and achieving full height potential with crown still spreading.
Over-Mature	Declining or moribund trees of low vigour.
Veteran	Exhibiting features of biological, cultural, or aesthetic value characteristic of species surviving beyond the typical age range.

Physiological Condition	
Good	Generally in good health typical of the species.
Fair	Reasonable health with few risk features.
Poor	Trees that exhibit significant risk features which are irremediable or moribund tree.
Dead	Tree has died.

Structural Condition	
Good	Few minor risk features of little overall significance.
Fair	A significant risk feature or several small risk features.
Poor	Major risk feature present or many small risk features.
Collapsing	Feature has uprooted or the whole tree, or part of the tree has collapsed.

Abbreviations and Notes
est - Estimated stem diameter
av - Average stem diameter for multiple stems
upto - Maximum stem diameter of a group
erc - Estimated remaining contribution

Root Protection Areas (RPA)

The below ground constraints are generally summarised as the root protection areas (RPA). The RPA is an area equivalent to a circle with a radius 12 times the diameter of the trees measured at 1.5 metres for single stemmed trees. For trees with more than one stem, one of two calculation methods should be used. In all cases, the stem diameter(s) should be measured in accordance with Annex C, and the RPA should be guided from Annex D of BS5837:2012. Both RPA radius in metres from the main stem and total area for the RPA as square metres.

An average stem diameter is provided for tree groups, wooded areas and hedges. Where veteran trees have been identified the RPA has been calculated in accordance with Natural England guidance i.e. 15x the stem diameter or 5m beyond the crown whichever is greater.

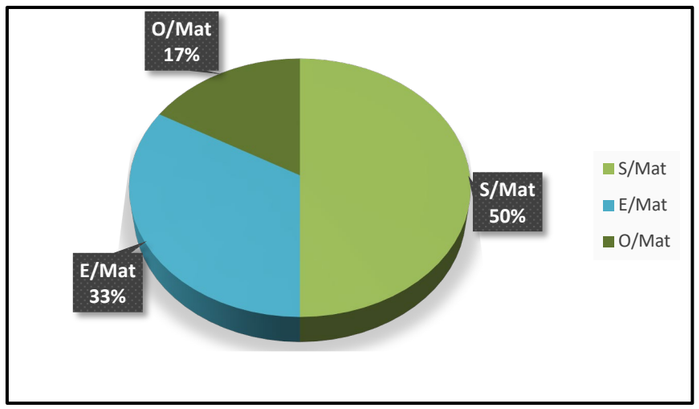
General Notes

Each tree was individually assessed and comments, where appropriate, were recorded for the condition of each tree's roots, main stem, and crown. The physiological condition has been recorded to provide an indication of the tree's general health and vitality. General comments have also been made where appropriate, with recommendations for tree work given, where applicable.

Each individual tree has been given an identification number. Metal tags have not been used for this survey as identification on-site does not require this. The tree numbers associated with each tree are cross referenced within the schedule and Tree Constraints Plan/s. Small trees with a stem diameter less the 75mm were not surveyed as they would either be easily replaced or relocated.

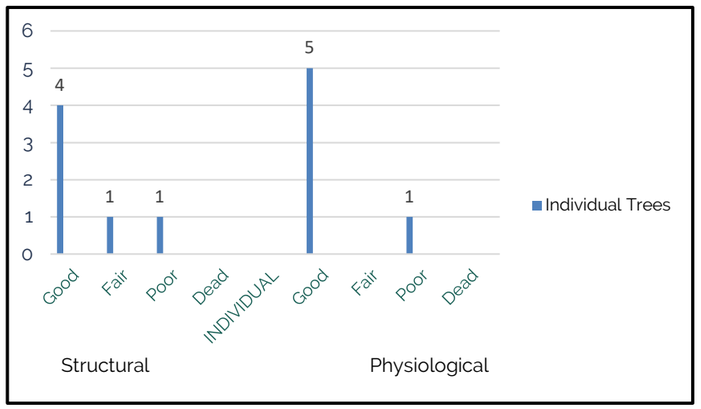
BS5837:2012 Tree Schedule

Age Distribution of the Tree Population



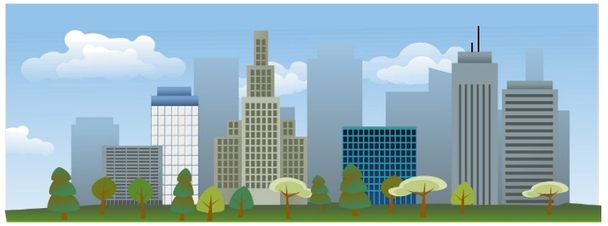
The distribution of age category across the tree population is useful for understanding expected longevity and can be used for determining mitigation, management and replacement.

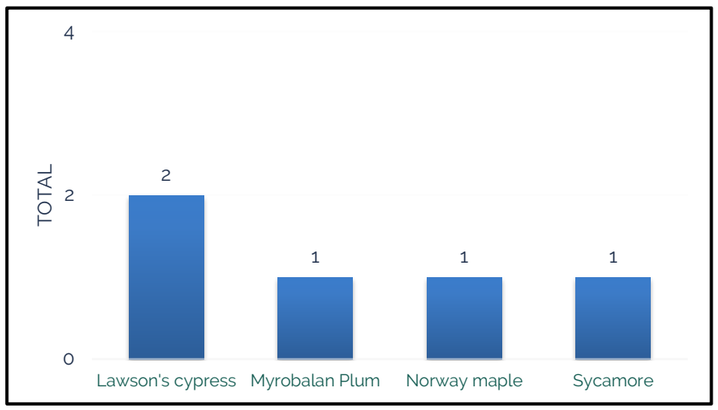
Distribution of Physiological and Structural Conditions across the Tree Population



Physiological condition provides an indication of the vitality of the tree. Structural condition is related to the presence of defects that can lead to failures.

Species Composition of the Individual Tree Population





The proportions of any given family, genus, species, and cultivar which make up the total individually recorded tree population across the Site.

Ancient Woodland and Ancient, Veteran and Notable Trees

Ancient Tree - A tree that has passed beyond maturity and is old, or aged, in comparison with trees of the same species. Characterised by biological, cultural, or aesthetic features of interest.
Ancient Woodland - Any wooded area that has been continuously wooded since 1600 AD
Veteran Tree - Exhibiting features of biological, cultural, or aesthetic value characteristic of species surviving beyond the typical age range.
Notable Tree - mature trees which may stand out in the local environment because they are large in comparison with other trees around them.

Forestry Commission and Natural England Guidance for the protection of ancient woodland, ancient trees and veteran trees from development and the use of semi-natural buffer zones:
- Fifteen metres between any development and ancient woodland.
- Fifteen times the diameter of its stem or 5m from the edge of its canopy, if that's greater, around any ancient or veteran tree.

Ancient Woodlands	Ancient Trees	Veteran Trees	Notable Trees
0	0	0	0

BS5837:2012 Tree Schedule

CATEGORY A	CATEGORY B	CATEGORY C	CATEGORY U
Trees with an estimated remaining contribution 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.	Trees 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 or trees lacking the special quality necessary to merit the category A designation.	Trees 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 higher categories.	Trees 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.
Sub-categories	Mainly arboricultural value **1**	Mainly landscape value **2**	Mainly cultural or conservation value **3**

Summary of Individual trees, Groups, Woodlands and Hedges			
	T1, T4	T3, T5, T6	T2
0	**2**	**3**	**1**

Estimated Remaining Contribution (ERC)			
> 40 years	**> 20 years**	**< 20 years**	**< 10 years**

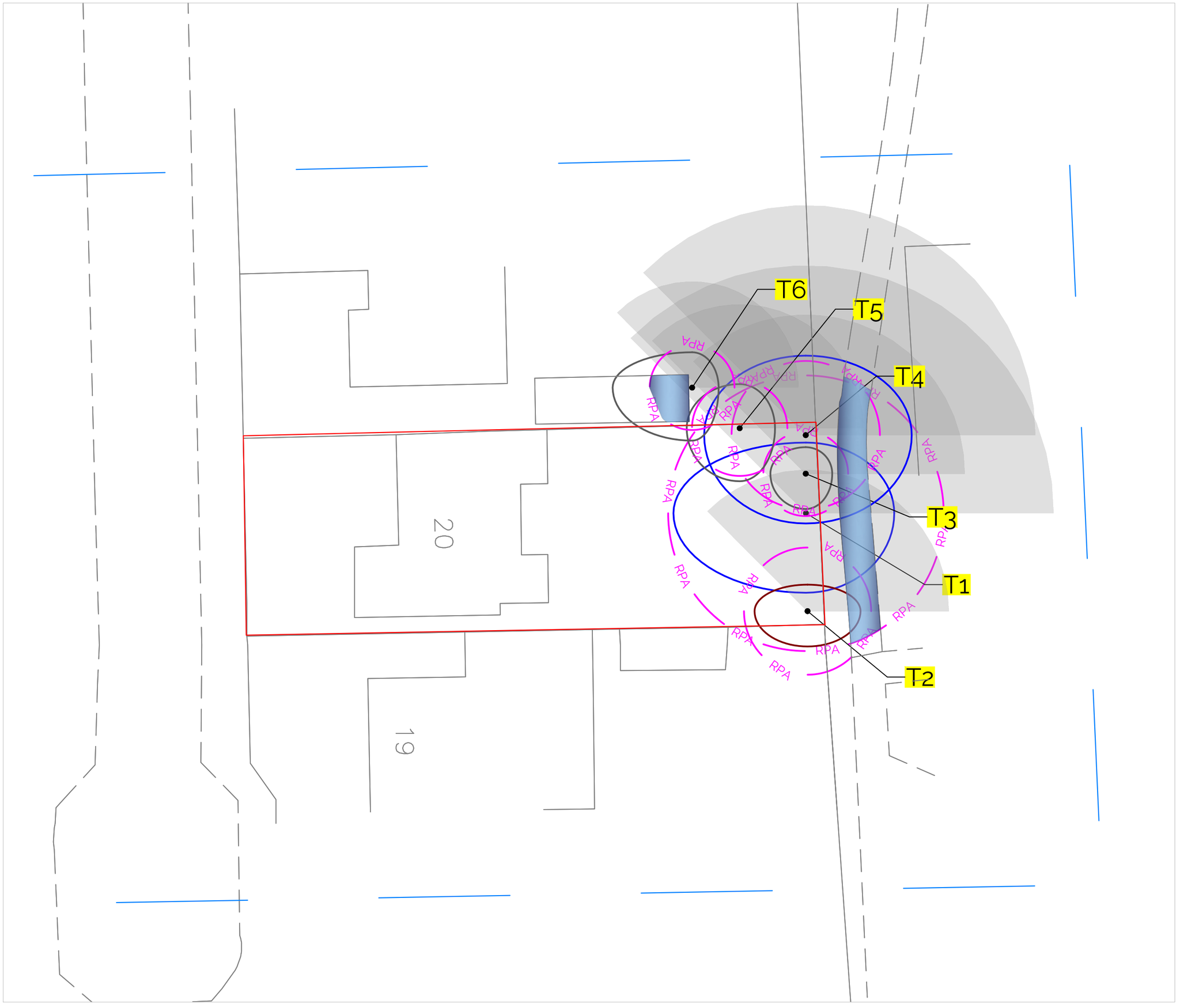
Breakdown of Arboricultural Features for each BS5837:2012 Category							
Trees	**0**	Trees	**2**	Trees	**3**	Trees	**1**
Groups	**0**	Groups	**0**	Groups	**0**	Groups	**0**
Woodlands	**0**	Woodlands	**0**	Woodlands	**0**	Woodlands	**0**
Hedgerows	**0**	Hedgerows	**0**	Hedgerows	**0**	Hedgerows	**0**
Percentage of tree population	**0.0%**	Percentage of tree population	**33.3%**	Percentage of tree population	**50.0%**	Percentage of tree population	**16.7%**

In assigning the BS5837:2012 Category, particular consideration has been given to the the presence of any structural defects for each feature, the size and form of each feature, its suitability within the context of a proposed development, and the location of each feature relative to existing site features e.g. its screening value or landscape amenity value.

BS5837:2012 Tree Schedule

Tree No.	Tag No.	Species (Common Name)	Species (Scientific Name)	Height (m)	Stem Dia (mm)	Crown Spread (m) N	E	S	W	Height of Crown Clearance (m)	Age Class	Phys Con	Struc Con	Additional notes	Statutory and Non-statutory Considerations	Estimated remaining contribution (erc)	Ret Cat	RPA (m^2)	RPA Radius (m)
INDIVIDUAL TREES																			
T1	No Tag	Sycamore	*Acer pseudoplatanus*	14	660	4	5	4.5	7.5	2.5	E/Mat	Good	Good	Located at the eastern boundary of the rear garden. Entire structural canopy heavily colonised by ivy, restricting complete assessment. Multi stemmed at c.2m. Form typical of species. Canopy in contact with adjacent trees. Stem 15.7m from recessed wall	Hillingdon London Borough Council's online mapping system indicates that statutory protection applies under TPO reference;TPO357	>40 years	**B1**	191	7.8
T2	No Tag	Myrobalan Plum	*Prunus cerasifera*	8	290	1.5	3	2	3	0	O/Mat	Poor	Poor	Located at the eastern boundary of the rear garden. Dysfunctional tree in terminal decline. Fungal fruiting bodies associated with stem and canopy. C.10% functioning canopy remains. Deadwood throughout canopy. Dead branch extending over off-site, footpath. Tree would benefit from being removed.		<10 years	**U**	41	3.6
T3	No Tag	Lawson's cypress	*Chamaecyparis lawsoniana*	9	190	1.5	1.5	2	2	0.5	S/Mat	Fair	Good	Located at the eastern boundary of the rear garden. Heavily suppressed specimen. Sparse canopy. Twin stemmed at c.4m	Hillingdon London Borough Council's online mapping system indicates that statutory protection applies under TPO reference;TPO357	10 to 20 years	**C1**	18	2.4
T4	No Tag	Norway maple	*Acer platanoides*	13	340	4.5	6	5	5.8	6	E/Mat	Good	Good	Located at the eastern boundary of the rear garden. Suppressed by larger, adjacent sycamore. Asymmetrical form. Deadwood suspended in canopy.	Hillingdon London Borough Council's online mapping system indicates that statutory protection applies under TPO reference;TPO357	20 to 40 years	**B1**	55	4.2
T5	No Tag	Lawson's cypress	*Chamaecyparis lawsoniana*	7	220	2.5	2	3	3	0.5	S/Mat	Good	Good	Located at the northern boundary of the rear garden. Suppressed by larger, adjacent Norway maple.		20 to 40 years	**C1**	23	2.7
T6	No Tag	California lilac	*Ceanothus sp.*	6	190	2	1.5	3	4.5	2	S/Mat	Good	Good	Located beyond the northern boundary in adjoining rear garden. Off-site tree. Unable to fully assess. Measurements have been estimated.		10 to 20 years	**C1**	18	2.4

Appendix 3: Arboricultural Plans



Scale: 1:200 @ A3

N

Individual Trees - Crown colour in accordance with BS:5837 (2012) category

Tree Shade
Tree Stem
Crown Spread (m)
Root Protection Area (RPA)

BS:5837 (2012) Category Colours

Category B
Category C
Category U

Additional Attributes

Redline Boundary
Arboricultural Study Area
Trees plotted without topographical reference — T1
Existing RPA Incursion

Tree locations are based on aerial imagery and measurements taken onsite. No topographical survey has been provide. As such tree locations must not be taken as exact.

This TCP is created as a design tool and does not make an assessment of the impacts or subsequent effects of the Proposed Development to trees. Therefore, the TCP must not be submitted solely to inform the planning application. An Arboricultural Impact Assessment or similar report will be required to inform the planning application which the TCP may form part of.

Drawing Status:
S2 - Information / Reference

Date: November 2022 Drawn: DH Checked: CT

Client: Paula Gaillard

Project: 20 Hamilton Road, Uxbridge

Title: Tree Constraints Plan

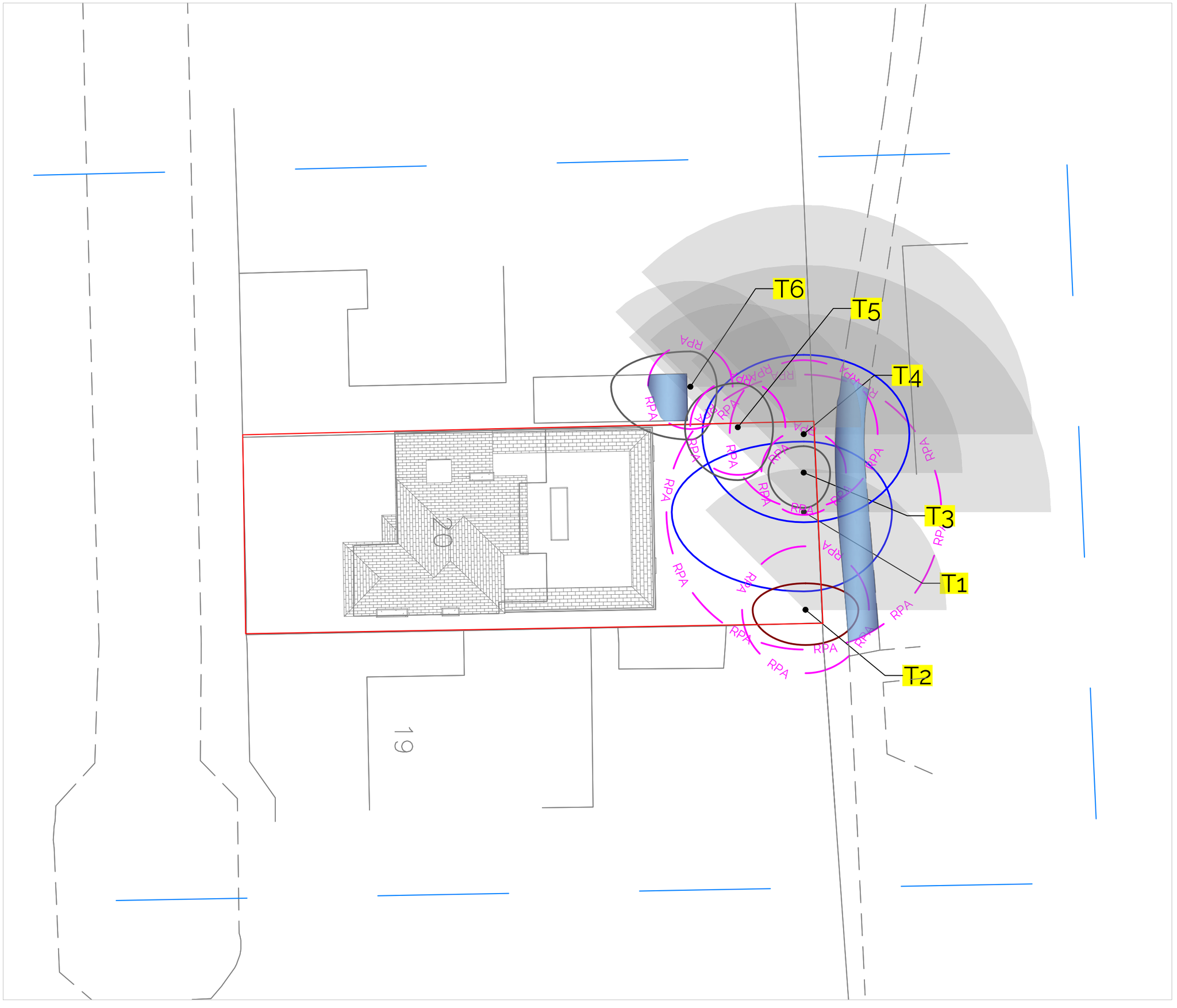
Drawing file reference	DWG No
221128 1613 TCP V1	1 of 1

WHARTON
Natural Infrastructure Consultants

The Coach House| Birmingham Road | Alcester | B49 5HU

E. info@wnic.co.uk
T. +44 (0)1789 459458

www.wnic.co.uk



Scale: 1:200 @ A3

Individual Trees - Crown colour in accordance with BS:5837 (2012) category

Tree Shade
Tree Stem
Crown Spread (m)
Root Protection Area (RPA)

BS:5837 (2012) Category Colours

Category B
Category C
Category U

Additional Attributes

Redline Boundary
Arboricultural Study Area
Trees plotted without topographical reference — T1
Existing RPA Incursion

Drawing Status:
S2 - Information / Reference

Date: November 2022 Drawn: DH Checked: CT

Client: Paula Gaillard

Project: 20 Hamilton Road, Uxbridge

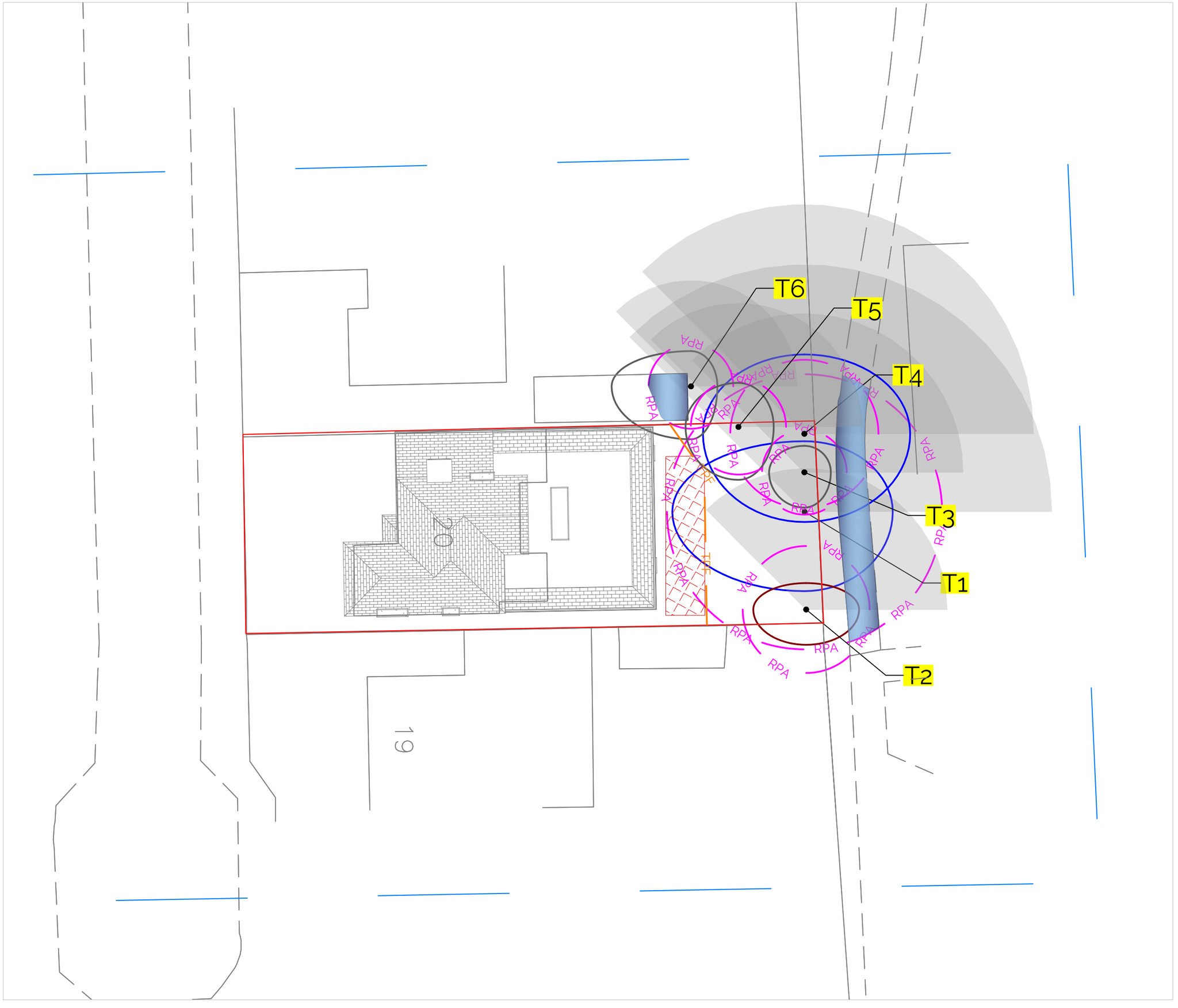
Title: Tree Retention and Removals Plan

Drawing file reference	DWG No
221128 1613 TRRP V1	1 of 1

WHARTON
Natural Infrastructure Consultants

The Coach House| Birmingham Road | Alcester | B49 5HU

E. info@wnic.co.uk
T. +44 (0)1789 459458
www.wnic.co.uk



Scale: 1:200 @ A3

N

Individual Trees - Crown colour in accordance with BS:5837 (2012) category

Tree Shade
Tree Stem
Crown Spread (m)
Root Protection Area (RPA)

BS:5837 (2012) Category Colours

Category B
Category C
Category U

Additional Attributes

Redline Boundary
Arboricultural Study Area
Trees plotted without topographical reference — T1
Existing RPA Incursion

Tree Protection Measures

Tree Protection Fencing — TPF
Ground Protection

Tree locations are based on aerial imagery and measurements taken onsite. No topographical survey has been provide. As such tree locations must not be taken as exact.

Drawing Status:
S2 - Information / Reference

Date: November 2022 Drawn: DH Checked: CT

Client: Paula Gaillard

Project: 20 Hamilton Road, Uxbridge

Title: Tree Protection Plan

Drawing file reference	DWG No
221128 1613 TPP V1	1 of 1

WHARTON
Natural Infrastructure Consultants
The Coach House| Birmingham Road | Alcester | B49 5HU
E. info@wnic.co.uk
T. +44 (0)1789 459458
www.wnic.co.uk

Appendix 4: Legislation and Policies

Legislation

Town and Country Planning Act 1990	Section 197 places a duty on the local planning authority to ensure that, where appropriate, planning conditions are imposed which require the preservation or planting of trees. Section 198 provides local planning authorities with the powers to impose Tree Preservation Orders where it is expedient in the interests of amenity. The role of a TPO is to protect specific trees, groups of trees and woodlands for the purpose of amenity. In the Secretary of State's view *'Orders should be used to protect trees and woodlands if their removal would have a significant negative impact on the local environment and its enjoyment by the public'.*
Town and Country Planning (Tree Preservation) (England) Regulations 2012	These Regulations govern the administration of Tree Preservation Orders. They make it a statutory offence to undertake specified activities without the formal consent of the local planning authority. **Prohibited activities include:** • cutting down; • topping; • lopping; • uprooting; • wilfully damaging; and, • wilfully destroying. **Exemptions for the need to obtain formal consent include, but are not limited to:** • dead trees; • the removal of dead branches; • works necessary to remove a risk of serious harm; and, • works necessary to implement a planning permission (excluding outline planning permission) or where permission is granted under the *Town and Country Planning (General permitted Development Order 1995)(as amended).*

Legislation

Forestry Act 1967	Tree felling is also restricted under the Forestry Act 1967. Under this act, there is an exemption from the need for a felling licence for "Felling trees immediately required for the purpose of carrying out development authorised by planning permission (granted under the Town and Country Planning Act 1990) …" If full planning permission is granted, then any trees which require felling to implement the approved plans are exempt from this statutory protection. Outline planning permission does not provide an exemption to the regulations that control tree felling in the Forestry Act 1967. If permission is granted on the reserved matters application, then any trees which require felling to implement the approved plans are exempt from this statutory protection. Outline planning permission does not provide an exemption to the regulations that control tree felling in the Forestry Act 1967.
The Wildlife and Countryside Act 1981 (as amended) and the Conservation of Species and Habitat Regulations 2017 (as amended)	Provides statutory protection of birds, bats and other species that can inhabit trees. The Natural Environment and Rural Communities Act 2006 (Section 41 England and Section 42 Wales) also places a duty on Local Planning Authorities to consider biodiversity when carrying out their duties. The Conservation of Habitats and Species Regulations 2017 specifically provides safeguards for European Protected Sites and Species (as listed in the Habitats Directive). This has recently been amended by the Conservation of Habitats and Species Regulations (Amendment) (EU Exit) Regulations 2019 which continue the same provision for European protected species, licensing requirements, and protected areas now that the UK has left the European Union. Great care is required to avoid an offence under the above legislation, and consideration should be given to the potential presence of protected species within a tree subject to future works. Where the presence of protected species is suspected, the project ecologist or Natural England should be contacted for advice before works proceed.

National Planning Policy

National Planning Policy Framework (NPPF) (July 2021)

When determining planning applications, Local Planning Authority's (LPA) should apply the following principles from the NPPF:

Paragraph 131

"Trees make an important contribution to the character and quality of urban environments and can also help mitigate and adapt to climate change. Planning policies and decisions should ensure that new streets are tree-lined, that opportunities are taken to incorporate trees elsewhere in developments (such as parks and community orchards), that appropriate measures are in place to secure the long-term maintenance of newly-planted trees, and that existing trees are retained wherever possible."

Paragraph 174 (B & D)

"Planning policies and decisions should contribute to and enhance the natural and local environment by:

b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;

d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures."

Paragraph 180 (A, C & D)

"When determining planning applications, local planning authorities should apply the following principles:

a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;

c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons63 and a suitable compensation strategy exists; and

d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate."

Local Planning Policy

London Borough of Hillingdon Local Plan Part 2 – Development Management Policies

Part 2 of London Borough of Hillingdon's Local plan is issued as informal planning guidance, building upon policies in The Hillingdon Local Plan: Part 1: Strategic Policies that was adopted in November 2012. This policy was created to provide a detailed point of reference for the Council, to enable them to formulate planning decisions in line with local guidance.

[4]Policy DMHB 14 relates specifically to trees development and trees.

A) All developments will be expected to retain or enhance existing landscaping, trees, biodiversity or other natural features of merit.

B) Development proposals will be required to provide a landscape scheme that includes hard and soft landscaping appropriate to the character of the area, which supports and enhances biodiversity and London Borough of Hillingdon Local Plan Part 2 - Development Management Policies 55 amenity particularly in areas deficient in green infrastructure.

C) Where space for ground level planting is limited, such as high rise buildings, the inclusion of living walls and roofs will be expected where feasible.

D) Planning applications for proposals that would affect existing trees will be required to provide an accurate tree survey showing the location, height, spread and species of trees. Where the tree survey identifies trees of merit, tree root protection areas and an arboricultural method statement will be required to show how the trees will be protected. Where trees are to be removed, proposals for replanting of new trees on-site must be provided or include contributions to offsite provision.

Guidance

Forestry Commission and Natural England, Ancient woodland, ancient trees, and veteran trees: protecting them from development (2018)

The Forestry Commission and Natural England published guidance giving information for the protection of ancient woodland, ancient trees and veteran trees from development. In summary this guidance advises on the use of semi-natural buffer zones as a means of protection with minimum distances identified as:

- Fifteen metres between any development and ancient woodland.
- Fifteen times the diameter of its stem or 5m from the edge of its canopy, if that's greater, around any ancient or veteran tree.

Further guidance is provided on the compensation measures which may be applied should adverse impacts arise.

[4] LONDON BOROUGH OF HILLINGDON COUNCIL. (2020). LONDON BOROUGH OF HILLINGDON LOCAL PLAN PART 2 DEVELOPMENT MANAGEMENT POLICIES. [Online]. Unknown. Available at: https://www.hillingdon.gov.uk/media/3084/Hillingdon-Local-Plan-Part-2-Development-Management-Policies/pdf/LPP2_Developme [Accessed 28 November 2022].

Appendix 5: Glossary and Acronyms

Term	Acronym	Definition
Ancient Tree	-	A tree that has passed beyond maturity and is old, or "aged", in comparison with trees of the same species. Characterised by biological, cultural, or aesthetic features of interest.
Ancient Woodland	AW	Any wooded area that has been continuously wooded since 1600 AD.
Arboricultural Clerk of Works	ACoW	The ACoW is a competent arboriculturist that is employed to oversee all construction matters relating to trees. Typical site monitoring tasks include but not limited to: checking tree protection fencing is installed and positioned correctly, oversee excavation works that are within the RPA of trees and deliver toolbox talks.
Arboricultural Impact Assessment	AIA	An element of the British Standard 5837:2012 *'Trees in Relation to Design, Demolition and Construction - Recommendation'.* An AIA is a report intended to inform the Local Planning Authority of the impacts of a proposed development to the surrounding trees. The report acknowledges the direct and indirect impacts that the development will (or may, in relation to outline applications) have on the trees and conversely, the trees on the development. The aim is to establish if the trees can co-exist in harmony with the development and continue to contribute to the site for many years.
Arboricultural Method Statement	AMS	Part of British Standard 5837:2012 *'Trees in Relation to Design, Demolition and Construction - Recommendation'* the AMS specifies what works are required in relation to tree protection and retention and details any alternative construction methods necessary to protect and avoid foreseeable damage to retained trees.
Arboriculturist	-	A person who has, through relevant education, training, and experience, gained professional expertise in the field and study of trees.
British Standard 5837:2012	BS5837:2012	The nationally recognised British Standard for the integration of trees and development, providing guidance and recommendations on the relationship between trees and design, demolition, and construction processes. It sets out principles and procedures to be applied to achieve a harmonious and sustainable relationship between trees

Term	Acronym	Definition
		and structures and is to be interpreted by an arboriculturist.
Construction Exclusion Zone	CEZ	The CEZ is a designated area decided by the project arboriculturist. It is where pedestrians, storage of materials and vehicular movement is prohibited during the construction period. This is identified on a tree protection plan, where lines are annotated onto the site plan, indicating where fencing must be installed onsite to form an exclusion zone.
Root Protection Area	RPA	The RPA provides the minimum amount of space deemed sufficient to sustain a trees viability. This area is typically calculated by measuring the diameter of a trees stem at 1.5m from ground level in millimetres and multiplied by 12. This equals the radius in metres and is used to create a circular radius centred off the stem. There are external factors that means there are sometimes variations to this method.
Tree Constraints Plan	TCP	The initial stage of a BS5837:2012 tree survey. A site assessment of all trees on or within influencing distance of the site, trees are denoted on a plan overlaid with the existing context of the site, often in the form of a topographical survey or OS map. Trees are superimposed onto the plan to show their reference number (e.g., T1), canopy spread, retention categorisation and RPA,
Tree Retention and Removals Plan	TRRP	A plan denoting which trees will be lost because of the development and the trees that can viably be retained within the proposed setting. Trees are often denoted in green and red, for retention and removal.
Tree Protection Plan	TPP	A plan showing the retained trees will be protected through construction of the proposed development. Various annotations are added to demonstrate what mitigation and protection is required; pre, during and post development.
Veteran Tree	-	A tree that has the biological or aesthetic characteristics of an ancient tree but is not ancient in years compared with others of the same species.

Impact Assessment Methodology

Significance	Level of Effect	Criteria
Significant	*Substantial*	Effects assigned this level of significance represent key factors in the decision-making process. These effects are generally, but not exclusively, associated with sites and features of national or regional importance. The effects may result in a change at a county scale site or feature may also enter this category.
	Major	These effects are likely to be important considerations at a district scale and may become key factors in the decision-making process.
	Moderate	These effects, while important at a local scale, are not anticipated to be key decision-making issues.
Not Significant	*Minor*	These effects may be raised as local issues but are unlikely to be of importance in the decision-making process.
Not Significant	*Negligible or No Effect*	These effects are imperceptible, or within normal bounds of variation, or in the margins of forecasting errors. Such effects should not be considered by the decision-maker.

Assessment of Environmental Effects

Significance	Level of Effect	Criteria
Permanent	*Permanent*	A change that is irreversible (e.g., permanent land take) or will last for the foreseeable throughout the operation, the operation of the Proposed Development and are more generally associated with the completed development.
Temporary	*Long*	Assessment of the likely significant effects that last for six or more years.

Significance	Level of Effect	Criteria
	Medium	Assessment of the likely significant effects that last between one and five years.
	Short	Assessment of the likely significant effects that last between one and five years.

Appendix 6: Detailed Arboricultural Survey Methodology

i. The position of each tree was plotted with reference to the supplied ordinance survey plan. Small trees with a stem diameter less the 75mm were generally not surveyed as they would either be easily replaced or relocated.

ii. Each individual tree has been given a tree identification number, the groups and hedges clearly defined for the purpose of this report. Metal tags have not been used for this survey as identification on-site does not require this.

iii. The tree species have been recorded with both common and scientific names.

iv. Arboricultural features have been recorded as tree groups or wooded areas where this has been deemed appropriate. Hedges have been recorded where they form substantial internal or boundary features or where they contribute meaningfully to the landscape character of the local area.

v. All tree heights have been assessed using a clinometer and were indicated in groups the height of the tallest tree was measured unless otherwise stated. Tree heights are given in metres.

vi. All stem diameters were measured at 1.5 metres above ground level and are given in millimetre units (unless otherwise stated where "gl" is an abbreviation for ground level where diameter was measured just above root flare, "est" is an estimate and "av" is an average).

vii. The canopy spread is recorded in either the four cardinal points or is given as an average diameter for the crown, especially in groups or where the crown is evenly weighted. Canopy spreads are measured in metres.

viii. The height of the ground clearance is given in metres and is an estimate of the height of the first branch above ground level.

ix. In absence of detailed information on the age the following classification has been used:

Young	Young trees aged less than 1/3 life expectancy.
Semi-Mature	Established specimen approaching 1/3 life expectancy.
Early-Mature	Middle age trees 1/3 – 2/3 life expectancy**.**
Mature	Mature trees over 2/3 life expectancy**.**
Over-Mature	Over-mature – declining or moribund trees of low vigour; and
Veteran	Veteran trees – specimens exhibiting 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.
	N.B. *Age class is indicative and will vary between species.*

x. The trees have been inspected using the Visual Tree Assessment methodology developed by Mattheck and Breoler. The tree survey was carried out from ground level only.

xi. The structural condition of the trees has been assessed and is summarised as:

Good	Few minor risk features of little overall significance.
Fair	A significant defect or several small risk features.
Poor	Major defect present or many small risk features.

xii. The physiological condition has been recorded to provide an indication of the tree's general health and vitality. The trees have been described thus:

Good	Generally in good health typical of the species.
Fair	Reasonable health with few risk features.
Poor	Trees that exhibit significant risk features which are irremediable or moribund tree.
Dead	Tree has died.

xiii. Each tree was individually assessed and comments, where appropriate, were recorded for the condition of each tree's roots, main stem, and crown.

xiv. General comments have also been made where appropriate, with recommendations when relatively immediate works are given.

xv. The quality of arboricultural features has been determined in accordance with BS5837:2012 Table 1. The purpose of the quality assessment is to enable informed decisions to be made regarding the removal and retention of arboricultural features in the context of development.

xvi. The quality of each arboricultural feature is defined based on its sub-category. Sub-categories carry equal weight and do not influence retention priority. Sub-categories 1, 2 and 3 are intended to reflect arboricultural, landscape and cultural values, respectively.

xvii. Estimated remaining contribution has been categorised as: less than 10 years, 10-20 years, 20-40 years or over 40 years, based upon an assessment of the tree's potential safe useful life expectancy. The remaining contribution in years has not always been directly followed in relation to the retention categories of the trees as trees may have a long remaining life however be of little significance in terms of development.

WHARTON

01789 459458 hello@wnic.co.uk wnic.co.uk

Head Office | The Coach House, Birmingham Road, Alcester, Warwickshire, B49 5HU
Lichfield Office | Georgian Mews, 24a Bird Street, Lichfield, Staffordshire, WS13 6PR

Institute of Chartered Foresters
Registered Consultant

Land Trees Ecology