

**WHARTON**

Natural  
Infrastructure  
Consultants

# Arboricultural Impact Assessment

**SITE LOCATION**

The Coach House, Kenilworth

**PREPARED FOR**

Vasia Architecture Ltd

**ISSUE DATE**

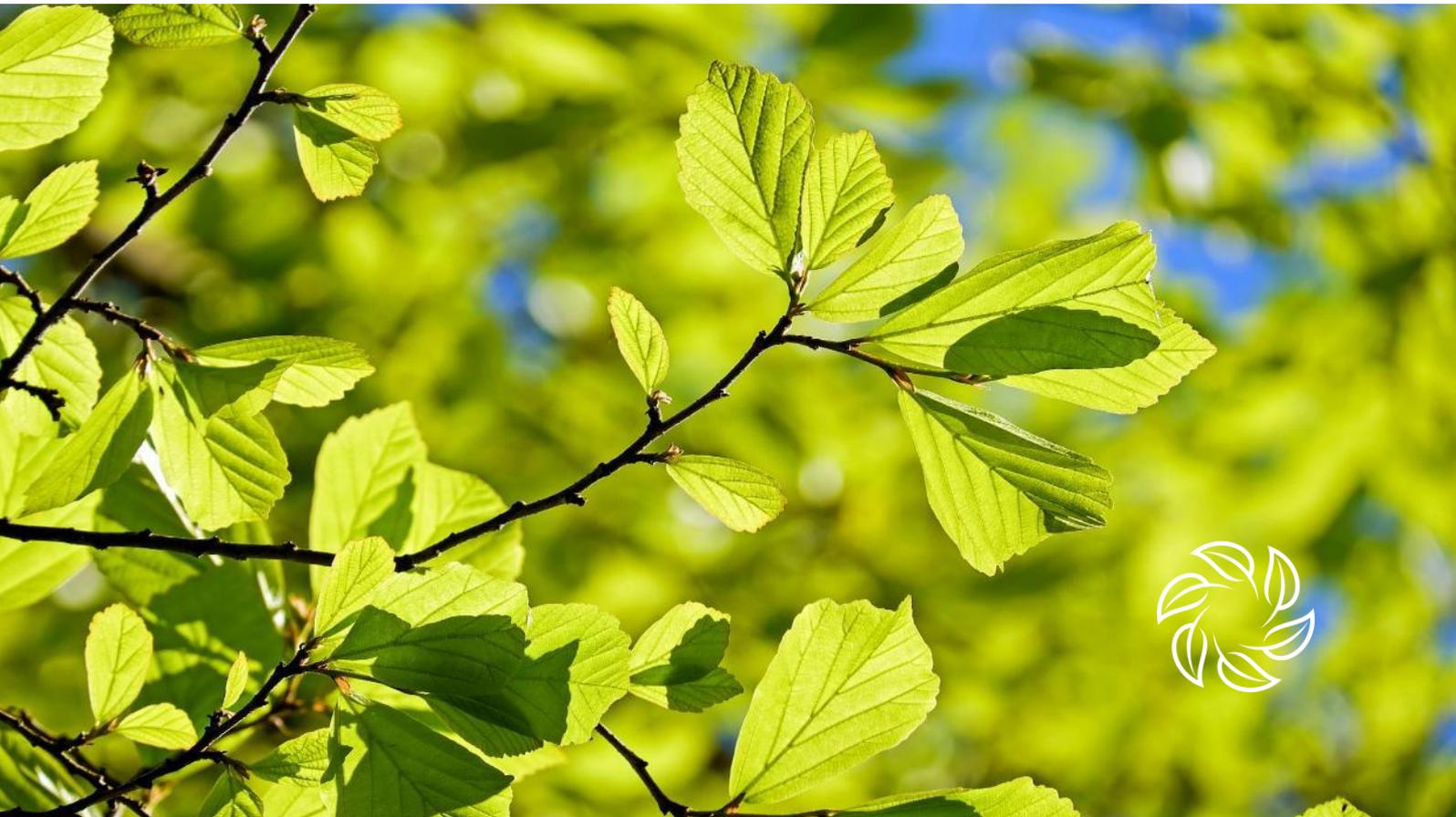
18<sup>th</sup> February 2022

**PRINCIPAL AUTHOR**

Callum Throw – Principal  
Arboricultural Consultant

**OUR REFERENCE**

220218 1427 AIA V1 FINAL



# Arboricultural Impact Assessment

VERSION: V1 DATE: February 2022  
REF NO: 220218 1427 AIA V1



## Quality Assurance

Issue/revision	Issue 1	Revision 1	Revision 2
Remarks	<b>Version 1</b>	<b>Final Version</b>	
Date	<b>17<sup>th</sup> February 2022</b>	<b>18<sup>th</sup> February 2022</b>	
Prepared by	<b>Callum Throw Principal Arboricultural Consultant</b>	<b>Callum Throw Principal Arboricultural Consultant</b>	
Signature			
Non-Technical Review by	<b>Elva Preston Arboricultural Consultant</b>		
Signature			
Authorised by	<b>Callum Throw Principal Arboricultural Consultant</b>	<b>Callum Throw Principal Arboricultural Consultant</b>	
Position	<b>Callum Throw Principal Arboricultural Consultant</b>	<b>Callum Throw Principal Arboricultural Consultant</b>	
Signature			
Client number	<b>1427</b>	<b>1427</b>	



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## 1. Introduction

### 1.1 Terms of Instruction

**We were instructed by Vasia Architecture Ltd to carry out a BS5837:2012 survey**

1.1.1 Vasia Architecture Ltd (hereafter the 'Client'), commissioned Wharton Natural Infrastructure Consultants Ltd ('WNIC') 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 The Coach House, 1 Beehive Hill, Kenilworth ('the Site').

The Site location Plan is shown at Appendix 1.

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**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.

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**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 a proposed Orangery to be constructed in place of an existing Conservatory at the residence (the 'Proposed Development'). The Orangery shall be sited on the same footprint of the Conservatory.

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**The AIA will be considered by Warwick District Council**

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

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**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 any related planning decisions.



## 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 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. 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.

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**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. Furthermore, this report does not rely on ecological or archaeological data. If either is commented upon within the report, further professional advice should be sought.

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**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 WNIC cannot and will not accept liability for any deficiencies in third party information.

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**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.

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## 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 WNIC and the author. This report shall not be relied upon or transferred to any other parties without the prior express written authorisation of WNIC.



## 2. Site Overview

### 2.1 Site Description

**The Site is in Kenilworth, Warwickshire, off Beehive Hill**

2.1.1 The Site is located at Ordnance Survey (OS) National Grid Reference SP 28410 73053. Access to the Site is provided off Beehive Hill, to the northern boundary. Adjoining the east and west boundaries are private, residential properties with a denser sprawl of residential properties along Amherst Road, further to the south and west.

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**The Site comprised the residence, private driveway and its associated garden and grounds**

2.1.2 The Site comprised the private residence, The Coach House, 1 Beehive Hill, and its associated private driveway, garden, and grounds. A mixture of both established, mature tree cover and occasional sections of scrub vegetation were observed along the principal boundaries.

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**The surrounding land use was primarily residential**

2.1.3 The wider landscape is characterised by a residential suburb, bisected north to south by Malthouse Lane, with St Augustine's RC Primary School to the north and an area of open space parkland, known locally as Parliament Piece, immediately to the east, beyond the A452 – Fieldgate Lane.



## 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

**The Warwick District Council online map confirmed that there are TPOs across the Site and the Site is located within a Conservation Area**

3.2.1 The presence of any TPO<sup>1</sup> or Conservation Areas was checked using the Warwick District Council online, interactive map on 16<sup>th</sup> February 2022. The trees assessed were subject to a TPO (ref. TPO No. 63) and the Site is located within Kenilworth Conservation Area (ref. 26/11/1969). Provisional Tree Preservation Orders (TPO) may be made whenever a local planning authority deems it appropriate with only those persons interested in the land served with a copy of the Order.

### 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<sup>2</sup> and ancient, veteran, or notable trees<sup>3</sup> on or adjoining the Site was checked using publicly accessible information, freely available online on 16<sup>th</sup> February 2022.

<sup>1</sup> Warwick District Council (Online). Available at < <https://maps.warwickdc.gov.uk/CNET49LIVE/CMFindIt/> > (Last Accessed 16 February 2022)

<sup>2</sup> Magic (DEFRA), 2018. Multi Agency Geographic Information for the Countryside (Online). Available at: < <https://magic.defra.gov.uk/MagicMap.aspx> > (Last 16 February 2022).

<sup>3</sup> Ancient Tree Inventory, 2018. Ancient Tree Inventory [Online]. Available at: < <https://ati.woodlandtrust.org.uk> > (Last Accessed 16 February 2022).



## 4. Arboricultural Survey Results

### 4.1 Method of Data Collection

**The Site was surveyed using a Topographical Survey**

4.1.1 The arboricultural survey was undertaken in accordance with BS5837:2012, with a Topographical Survey 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 than 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 in February 2022**

4.2.1 The walkover survey and assessment were undertaken by the Peter Wharton, WNIC Director 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 4no. arboricultural features were surveyed and assessed**

4.2.2 All 4no. arboricultural features surveyed across the wider Site (red line boundary) were recorded as individual trees, namely T1, T2, T3 and T4.

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 A and 2no. category B features.**

4.2.3 In line with BS5837:2012, Category A and 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.

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### 5.2 Proposed Development

**It is being proposed to demolish an existing Conservatory and construct a new Orangery in the same footprint**

5.2.2 The Proposed Development comprises the construction of a new Orangery in place of an existing Conservatory.

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### 5.3 Reference Documents

**An Ordnance Survey Tile was used for the base map and a Proposed Development drawing were referenced**

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

**Ordnance Survey Tile** (drwg.no. 4190-01B) prepared by Vasia Architecture Ltd, January 2022

**Proposed Orangery** (drwg.no. 4910-01B) prepared by Vasia Architecture Ltd, January 2022



## 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.

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**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.

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**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

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**All of the 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.

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## 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. 220217 1427 TRRP V1).



**The Proposed Development has been designed so that, where feasible, existing trees are retained**

5.5.2 Most of the trees are situated on the boundaries of the Site or off-site, which provide good screening value from wider vantage points beyond the Site and provide an established level of privacy.

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**None of the features subject to this assessment will be removed to facilitate the Proposed Development**

5.5.3 To implement the Proposed Development, there will be no requirement to remove any of the trees detailed within this AIA. As such, the arboricultural impacts are considered negligible providing that all works within the existing perceived RPAs are carried out sympathetically under a formal AMS.

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## 5.6 Below-ground Constraints

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

5.6.1 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.

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

5.6.2 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. 220217 1427 TRRP V1) illustrates the relationship between the RPAs associated with the trees and the Proposed Development.



**3no. arboricultural features have existing incursions within the RPA**

5.6.3 Arboricultural features T1, T2 and T3 which are set to be retained, have existing incursions into their RPAs from hard standing (an internal private driveway and the existing footprint of The Coach House).

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**Proposed demolition and removal of grey infrastructure will occur within the RPAs of features T1 and T2**

5.6.4 The Proposed Development will require the demolition of the existing Conservatory and may require the uplift of existing grey infrastructure (footings). These modifications to the Site will be confined to the perceived RPAs of T1 and T3, each to be retained. Given that there are existing incursions, and that the footprint of the proposed Orangery is to largely utilise the existing footprint, these incursions are considered acceptable and unlikely to cause any further damage to retained trees.

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**All works within RPAs should be undertaken using hand-tools only following a pre-commencement meeting with an Arboricultural Clerk of Works (ACoW)**

5.6.5 These measures are necessary to ensure that foreseeable damage does not occur to the trees during this phase of works. If any roots with a diameter greater than 25mm are discovered, the Tree Officer will be contacted as recommended within BS5837:2012 clause 7.4.2.7 Note 1.

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## 5.7 Spatial Requirements for Contractors during Demolition and 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. The existing driveway should be maintained and used throughout. Ground guards should be used if scaffolding or machinery is to be used beyond areas of exiting grey infrastructure, within the RPAs of retained trees.



## Installation of underground services

**There is sufficient space outside of the RPAs for services to be located**

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

However, there is sufficient space outside of the RPAs for services to be located. If services do enter RPAs the use of hand digging as detailed in the National Joint Utilities Group publication '*Guidelines for the Planning, Installation and Maintenance of Utility Services in Proximity to Trees*' (NJUG 10, Volume 4, 2007) will be undertaken to minimise the impact on the tree roots.

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## 5.8 Tree Management

### Tree Pruning Requirements

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

5.8.1 The future growth of retained trees is not considered to be a constraint to the Proposed Development. Additionally, the Proposed Development is not considered to have an impact on the future growth of retained trees.

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

5.8.4 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.

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

5.8.3 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

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

5.8.5 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 and are provided in this report**

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.

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**Retained trees will need to be adequately protected by applying the tree protection measures provided in this report during both demolition and construction**

6.1.2 Tree protection will extend to maintaining existing areas of hard standing (particularly the driveway) for use for storing materials, movement of contractors and their machinery, as well mixing of materials providing those additional measures e.g., a spill kit and membrane, are used. 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.

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**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.

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### General procedures and pre-commencement actions

**The Site demolition and 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, where there is no existing unmade ground (hard standing). 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 and spill kits should be used.

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.



**The appointed ACoW will carry out a pre-commencement "Toolbox" talk**

6.1.5 The appointed ACoW will be present on Site prior to any works commencing to discuss the programme of works and to give guidance on working near to retained trees. The ACoW will provide written confirmation that this pre-commencement meeting has been undertaken and any action points which need addressing. This needs to be conducted prior to commencing with all demolition and construction activities.

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## 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.

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**Construction access have been considered appropriate within the root protection areas if the existing driveway and hard standing is maintained**

6.1.12 The existing driveway should be maintained and used throughout. Ground guards should be used if scaffolding or machinery is to be used beyond areas of exiting grey infrastructure, within the RPAs of retained trees. 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, beyond areas of existing made ground, will require the calculation of expected loading and the use of proprietary protection systems.



## 7. Conclusions

**The walkover survey and assessment were undertaken during February 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 Peter Wharton, WNIC Director, and the trees inspected from ground level.

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**Discuss Desk Study findings**

7.1.2 A Desk Study was conducted ahead of the arboricultural walkover survey. The desk study identified that the Site is situated within Kenilworth Conservation Area and the arboricultural features are subject to TPOs. Therefore, statutory constraints apply.

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**A total of 4no. arboricultural features were surveyed and assessed**

7.1.3 All 4no arboricultural features surveyed across the Site (red line boundary), were recorded as individual trees.

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**None of the trees subject to this assessment will be removed to facilitate the Proposed Development**

7.1.4 An Arboricultural Impact Assessment (AIA) has been undertaken. To implement the Proposed Development, none of the existing trees will be removed.



## 8. Future Considerations

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

- 8.1.1 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**

The Coach House, Kenilworth

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## Appendix 2: Tree Schedule

# BS5837:2012 Tree Schedule

**Client Name:** Vasia Architecture  
**Site:** The Coach House, Keilworth  
**Ref No:** 220217 1427 TS V1

**Consultant:** C. Throw  
**Survey Date:** February 2022



Measurements		Age Class		Physiological Condition		Structural Condition	
<b>Height</b>	All tree heights have been assessed using a clinometer. Tree heights are given in metres.	<b>Young</b>	Establishing, good vigour, fast growth rates and strong apical dominance; < 1/3rd estimated life expectancy.	<b>Good</b>	Generally in good health typical of the species.	<b>Good</b>	Few minor risk features of little overall significance.
<b>Stem Dia.</b>	Diameter in millimetres (mm) in accordance with BS5837:2012 paragraph 4.6.1, Annex C.	<b>Semi-Mature</b>	Established specimen approaching 1/3 life expectancy.	<b>Fair</b>	Reasonable health with few risk features.	<b>Fair</b>	A significant risk feature or several small risk features.
<b>Crown spread</b>	Given as an average diameter or measured using a distometer. North (N), east (E), south (S) and west (W) provided.	<b>Early-Mature</b>	1/3 – 2/3 life expectancy, vigorous growth rate and increasing in height.	<b>Poor</b>	Trees that exhibit significant risk features which are irremediable or moribund tree.	<b>Poor</b>	Major risk feature present or many small risk features.
<b>Crown Height</b>	Height of ground clearance is given in metres. Estimate of the height of the first branch above ground level.	<b>Mature</b>	Over 2/3 life expectancy. Generally good vigour and achieving full height potential with crown still spreading.	<b>Dead</b>	Tree has died.	<b>Collapsing</b>	Feature has uprooted or the whole tree, or part of the tree has collapsed.
<b>Species name</b>	The tree species have been recorded with both common and scientific names.	<b>Over-Mature</b>	Declining or moribund trees of low vigour.	<b>Abbreviations and Notes</b> est - Estimated stem diameter av - Average stem diameter for multiple stems upto - Maximum stem diameter of a group erc - Estimated remaining contribution			
<b>Tag no.</b>	Where present, any metal tags attached to trees have been recorded.	<b>Veteran</b>	Exhibiting features of biological, cultural, or aesthetic value characteristic of species surviving beyond the typical age range.				

## 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.

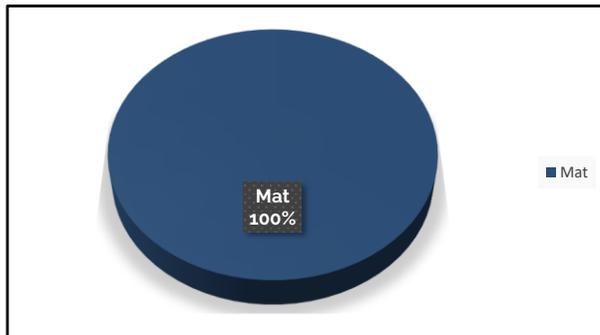
## General Notes

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.

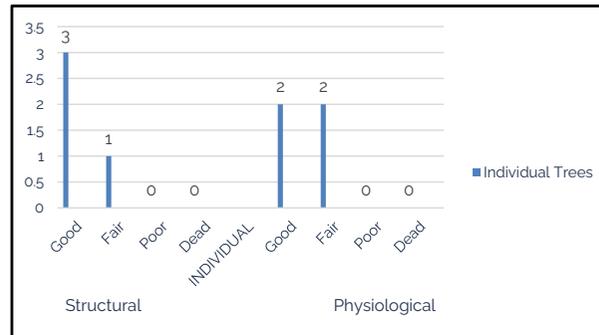


Age Distribution of the Tree Population



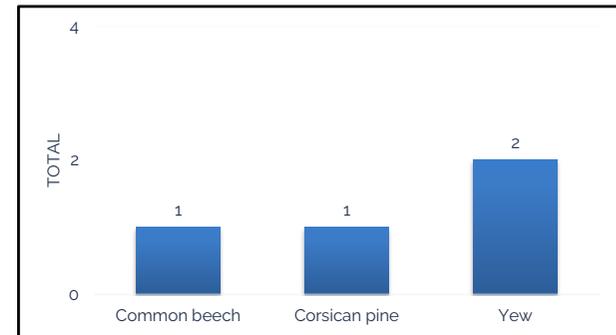
The distribution of age category across the tree population is useful for understanding expected longevity and can be used for determining mitigation, management and replacement.

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**

0

**Ancient Trees**

0

**Vetran Trees**

0

**Notable Trees**

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.	
<b>Sub-categories</b>		Mainly arboricultural value	<b>1</b>	Mainly landscape value	<b>2</b>	Mainly cultural or conservation value	<b>3</b>
Summary of Individual trees, Groups, Woodlands and Hedges							
T1, T3		T2, T4					
<b>2</b>		<b>2</b>		<b>0</b>		<b>0</b>	
Estimated Remaining Contribution (ERC)							
<b>&gt; 40 years</b>		<b>&gt; 20 years</b>		<b>&lt; 20 years</b>		<b>&lt; 10 years</b>	
Breakdown of Arboricultural Features for each BS5837:2012 Category							
Trees	<b>2</b>	Trees	<b>2</b>	Trees	<b>0</b>	Trees	<b>0</b>
Groups	<b>0</b>	Groups	<b>0</b>	Groups	<b>0</b>	Groups	<b>0</b>
Woodlands	<b>0</b>	Woodlands	<b>0</b>	Woodlands	<b>0</b>	Woodlands	<b>0</b>
Hedgerows	<b>0</b>	Hedgerows	<b>0</b>	Hedgerows	<b>0</b>	Hedgerows	<b>0</b>
Percentage of tree population	<b>50.0%</b>	Percentage of tree population	<b>50.0%</b>	Percentage of tree population	<b>0.0%</b>	Percentage of tree population	<b>0.0%</b>

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)				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 <sup>2</sup> )	RPA Radius (m)
						N	E	S	W										
INDIVIDUAL TREES																			
T1	0	Yew	<i>Taxus baccata</i>	13	594.1	5.5	4	4	3.5	3	Mat	Good	Good	Good mature specimen located on boundary fence. Codominant stems form at ground level. Trees shares mutual canopy with adjacent trees. Compacted driveway abuts tree on eastern side. No works required at time of assessment.		>40 years	A1	163	7.2
T2	0	Yew	<i>Taxus baccata</i>	9	490	3.5	3	3	4	3	Mat	Good	Good	Off-site tree within neighbouring garden. Canopy has been suppressed by larger beech tree T3. Garden shed and slabbed base to east of tree. No works required at time of assessment.		>40 years	B1	113	6.0
T3	0	Common beech	<i>Fagus sylvatica</i>	22	1050	8	7	9	9	4	Mat	Good	Fair	Large mature off-site tree which is a dominant landscape feature. Access to make not gained. Large codominant stems form at 4m. Canopy is well formed and has historically been reduced. No works required at time of assessment.		>40 years	A1	499	12.6
T4	0	Corsican pine	<i>Pinus nigra var</i>	18	490	4	1	3	4	5	Mat	Fair	Fair	Mature offsite tree located within neighbouring rear garden.		20 to 40 years	B1	113	6.0

# Arboricultural Impact Assessment

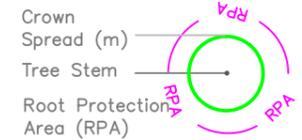
VERSION: V1 DATE: February 2022  
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## Appendix 3: Arboricultural Plans



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



BS:5837 (2012) Category Colours

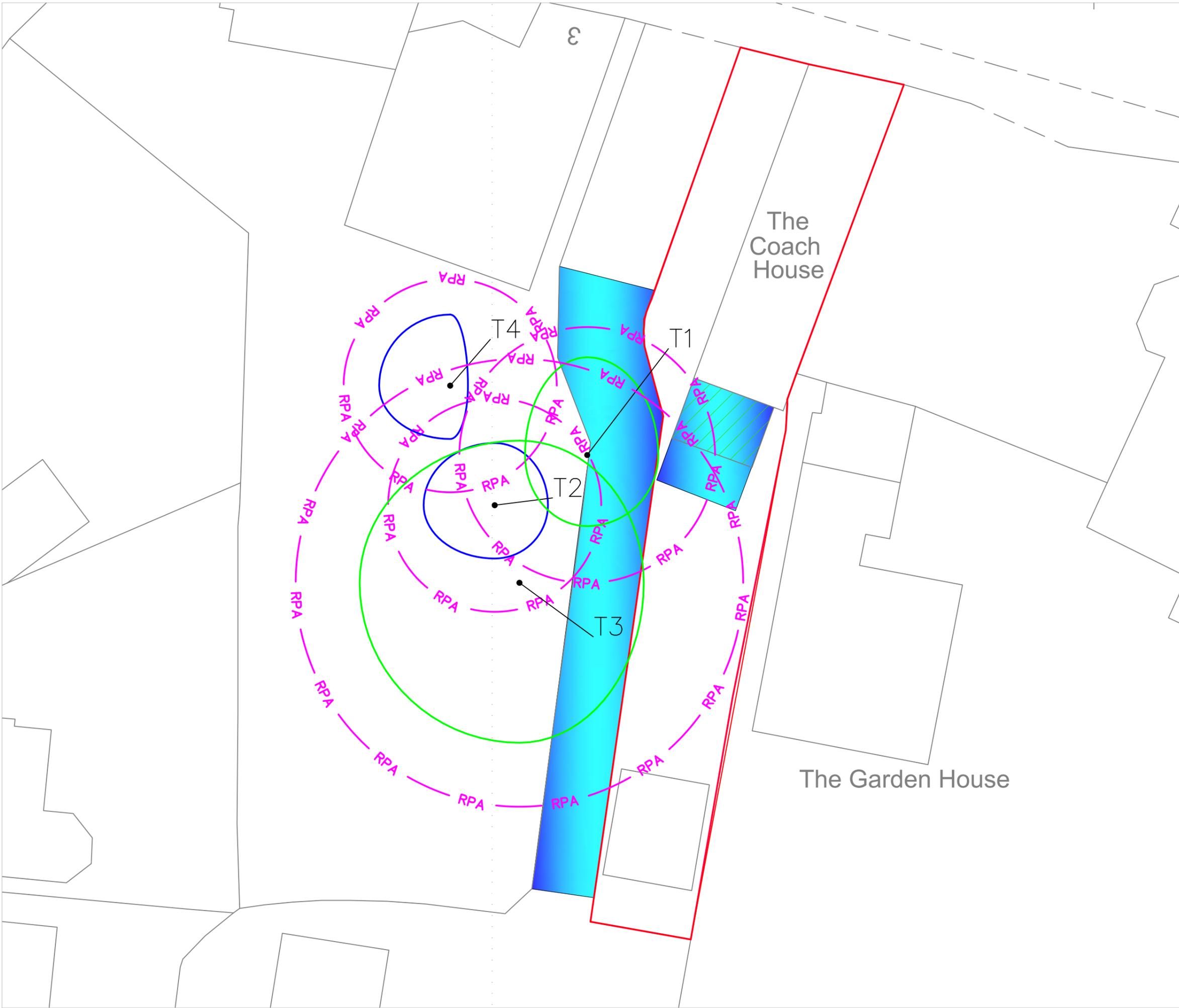
Category A —

Category B —

Additional Attributes

Application Boundary —

Existing RPA Incursions



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.

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Drawing Status:

S4 – Review and Authorisation

Date: January 2022 Drawn: CTT Checked: EKP

Client: Vasia Architecture Ltd

Project: The Coach House, Kenilworth

Title: Tree Constraints Plan

Drawing file reference DWG No

220217 1427 TCP V1

1 of 1

# WHARTON

Natural  
Infrastructure  
Consultants

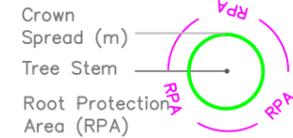
MINERVA MILL STATION ROAD ALCESTER B49 5ET

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

www.wnic.co.uk



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



BS:5837 (2012) Category Colours

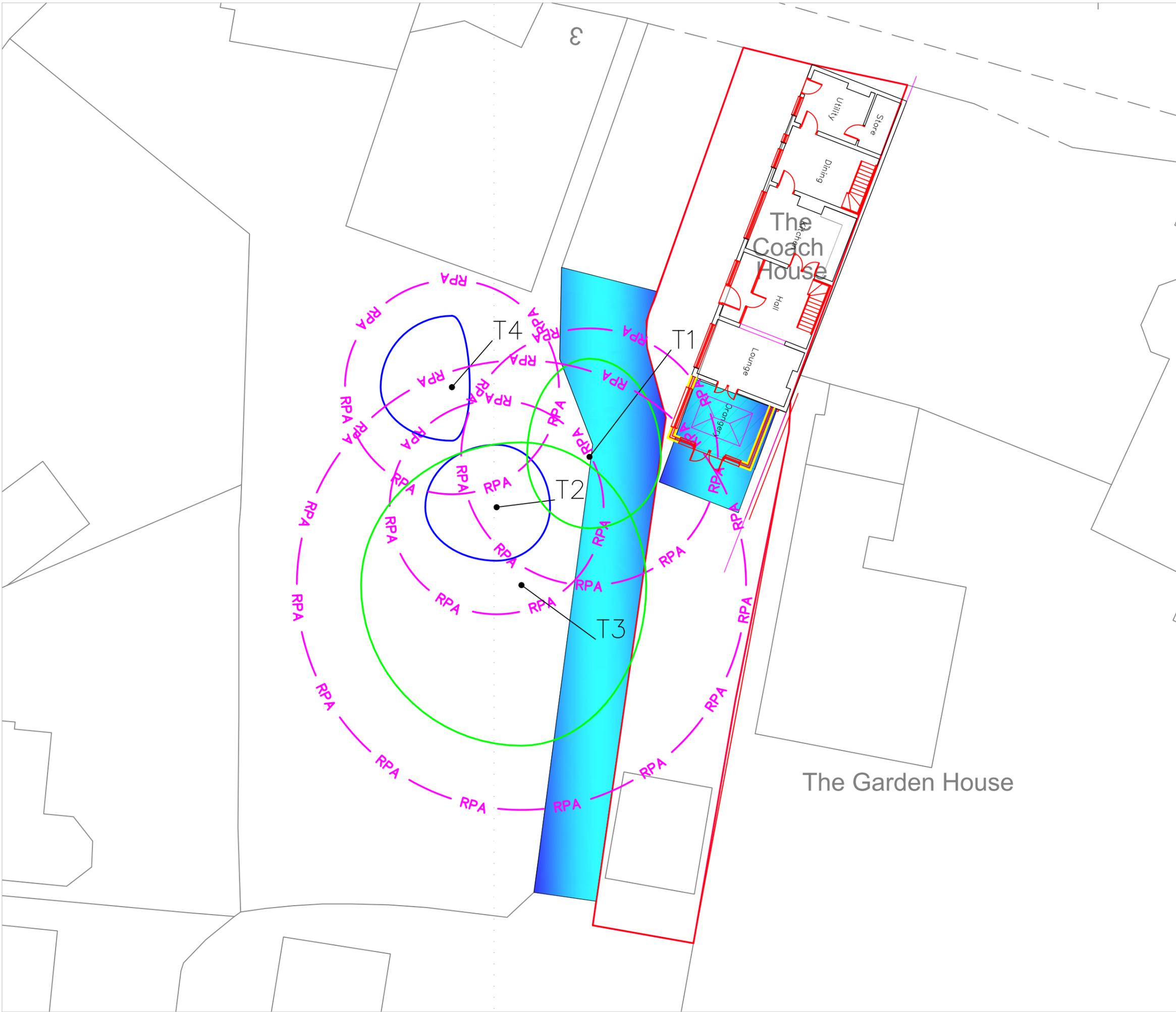
Category A —

Category B —

Additional Attributes

Application Boundary —

Existing RPA Incursions



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.

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Drawing Status:

S4 – Review and Authorisation

Date: January 2022 Drawn: CTT Checked: EKP

Client: Vasia Architecture Ltd

Project: The Coach House, Kenilworth

Title: Tree Retention and Removals Plan

Drawing file reference DWG No

220217 1427 TRRP V1

1 of 1

**WHARTON**

Natural Infrastructure Consultants

MINERVA MILL STATION ROAD ALCESTER B49 5ET

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 reasons<sup>63</sup> 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."

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## 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.



## 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	<p>An element of the British Standard 5837:2012 '<i>Trees in Relation to Design, Demolition and Construction - Recommendation</i>'. An AIA is a report intended to inform the Local Planning Authority of the impacts of a proposed development to the surrounding trees.</p> <p>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.</p> <p>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.</p>
Arboricultural Method Statement	AMS	Part of British Standard 5837:2012 ' <i>Trees in Relation to Design, Demolition and Construction - Recommendation</i> ' 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.

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Term	Acronym	Definition
		It sets out principles and procedures to be applied to achieve a harmonious and sustainable relationship between trees and structures and is to be interpreted by an arboriculturist.
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	<i>Substantial</i>	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.
	<i>Major</i>	These effects are likely to be important considerations at a district scale and may become key factors in the decision-making process.
	<i>Moderate</i>	These effects, while important at a local scale, are not anticipated to be key decision-making issues.
Not Significant	<i>Minor</i>	These effects may be raised as local issues but are unlikely to be of importance in the decision-making process.
Not Significant	<i>Negligible or No Effect</i>	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	<i>Permanent</i>	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	<i>Long</i>	Assessment of the likely significant effects that last for six or more years.

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## 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 than 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:

<b>Young</b>	Young trees aged less than 1/3 life expectancy.
<b>Semi-Mature</b>	Established specimen approaching 1/3 life expectancy.
<b>Early-Mature</b>	Middle age trees 1/3 – 2/3 life expectancy.
<b>Mature</b>	Mature trees over 2/3 life expectancy.
<b>Over-Mature</b>	Over-mature – declining or moribund trees of low vigour; and
<b>Veteran</b>	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:

<b>Good</b>	Few minor risk features of little overall significance.
<b>Fair</b>	A significant defect or several small risk features.
<b>Poor</b>	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:

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<b>Good</b>	Generally in good health typical of the species.
<b>Fair</b>	Reasonable health with few risk features.
<b>Poor</b>	Trees that exhibit significant risk features which are irremediable or moribund tree.
<b>Dead</b>	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 NATURAL  
INFRASTRUCTURE CONSULTANTS**

Minerva Mill  
Station Road  
Alcester  
Warwickshire  
B49 5ET

**T:** 01789 459 458  
**E:** [info@wnic.co.uk](mailto:info@wnic.co.uk)

[WNIC.CO.UK](http://WNIC.CO.UK)

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