

**WHARTON**

Natural  
Infrastructure  
Consultants

# Arboricultural Impact Assessment

**SITE LOCATION**

Willow End, Salts Lane, Drayon  
Bassett

**ISSUE DATE**

18<sup>th</sup> January 2022

**OUR REFERENCE**

220114 1395 AIA V1

**PREPARED FOR**

Whitebox Architecture and  
Design  
2 Kenswick Manor  
Kenswick  
Lower Broadheath  
Worcestershire  
WR2 6QB

**PRINCIPAL AUTHOR**

Elva Preston – Arboricultural  
Consultant





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Signature			
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Signature			
Authorised by	<b>Peter Wharton</b>		
Position	<b>Director</b>		
Signature			
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## Table of Contents

<b>1. Introduction.....</b>	<b>3</b>
1.1 Terms of Instruction .....	3
1.2 Scope of the Report .....	4
1.3 Caveats and Limitations.....	4
1.4 Confidentiality .....	5
<b>2. Site Overview.....</b>	<b>6</b>
2.1 Site Description.....	6
<b>3. Arboricultural Baseline and Desk Study .....</b>	<b>7</b>
3.1 Baseline Data Collection .....	7
3.2 Tree Preservation Orders (TPO) and Conservation Areas.....	7
3.3 Ancient woodland, Ancient, Veteran and Notable trees .....	7
<b>4. Arboricultural Survey Results .....</b>	<b>10</b>
4.1 Method of Data Collection.....	10
4.2 Summary of Arboricultural features recorded.....	10
<b>5. Arboricultural Impact Assessment .....</b>	<b>10</b>
5.2 Proposed Development .....	10
5.3 Reference Documents.....	10
5.4 Assumptions and Limitations of the Impact Assessment .....	11
5.5 Impact of the Proposed Development.....	11
5.6 Below-ground Constraints .....	13
5.7 Spatial Requirements for Contractors during Demolition and Construction.....	14
5.8 Tree Management.....	17
<b>6. Tree Protection Guidance (AMS 'Heads of Terms').....</b>	<b>18</b>
<b>7. Conclusions .....</b>	<b>22</b>
<b>8. Future Considerations .....</b>	<b>23</b>

**Appendix 1: Site Location Plan**

**Appendix 2: Survey Schedule**

**Appendix 3: Arboricultural Plans**

**Appendix 4: Legislation and Policies**

**Appendix 5: Glossary and Acronyms**

**Appendix 6: Detailed Survey Methodology**



## 1. Introduction

### 1.1 Terms of Instruction

**We were instructed by Whitebox Architecture + Design to carry out a BS5837:2012 survey**

1.1.1 Whitebox Architecture + Design (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 Northbank Industrial Estate, Irlam, Manchester ('the Site').

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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 the construction of 2no. residential dwellings, with associated green infrastructure and car parking provision (the 'Proposed Development').

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**The arboricultural features will be considered by Lichfield District Council**

1.1.4 This AIA is required to fulfil the requirements of the Local Planning Authority (LPA), Lichfield 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 related planning decisions.

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**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.

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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. 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.

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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 to the north of Salts Lane, Drayton Bassett, Tamworth, B78 3UD**

2.1.1 The Site is located at Ordnance Survey (OS) National Grid Reference SK 19422 00036. Access to the Site is provided along Salts Lane. Immediately surrounding the Site is agricultural field parcels to the north, east and south and to the west is residential dwellings in Drayton Bassett.

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**The Site comprised an area of c.0.36ha comprising an existing residential property**

2.1.2 The Site comprised an existing residential dwelling with associated driveway, areas of hardstanding and hard and soft landscaping. The outside space mostly comprised ornamental planting, occasional scattered trees along the periphery of the Site and mown lawn areas.

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**The surrounding land use was residential properties and agricultural fields**

2.1.3 The town of Tamworth is c.3 miles north from the Site. In the wider landscape to the north is Fazeley and other villages surrounding Tamworth. To the south and west is farmland.

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## 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 Site does not fall within a local Conservation Area. The presence of TPOs has not been confirmed**

3.2.1 The presence of any TPO<sup>1</sup> or Conservation Areas was checked using the Lichfield District Council website on 14<sup>th</sup> January 2022. 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. A further search for the presence of TPOs should be carried out prior to commencement of any tree works or removals specified within this report.

### 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 14<sup>th</sup> January 2022.

<sup>1</sup> Lichfield District Council (Online). Available at < <https://www.lichfielddc.gov.uk/countryside-2/protected-trees/1> > (Last Accessed 14 January 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 14 January 2022).

<sup>3</sup> Ancient Tree Inventory, 2018. Ancient Tree Inventory [Online]. Available at: < <https://ati.woodlandtrust.org.uk> > (Last Accessed 14 January 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 OS master maps and 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 on 9th December 2021**

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.

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**A total of 10no. arboricultural features were surveyed and assessed**

4.2.2 Of the 10no. arboricultural features surveyed across the wider Site (study area), 9no. individual trees and 1no. group of 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.

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**The survey included 1no. category A, 5no. category B and 4no. category C 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.

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**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 the existing building and construct 2no. residential dwellings, with associated green infrastructure and car parking provision**

5.2.2 The Proposed Development involves demolishing the existing residential dwelling and for the erection of 2no. new properties in its place. The Proposed Development is looking to compensate for any losses to existing arboricultural features to facilitate the incorporation of an additional residential dwelling to the Site, through new landscaping (green infrastructure) provision.

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### 5.3 Reference Documents

**A Topographical Survey and a Proposed Development layout/masterplan were referenced**

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

**Topographical Survey** (drwg.no. WHB-SAOS0002) prepared by Whitebox Architecture + Design and dated 1<sup>st</sup> December 2021.

**Proposed Development** (drwg.no. WHB-SAOS0003) prepared by Whitebox Architecture + Design and dated 1<sup>st</sup> December 2021.



## 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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**Several 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. 220112 1395TRRP 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, which provide good screening value from wider vantage points beyond the Site and provide an established level of privacy. The majority of these are to be retained. However, the Site will be subject to a redesign, with the Proposed Development not able to be retrofitted without the impacts to the existing, tree cover.

**There will be an overall loss of 1no. category C group of trees**

5.5.3 To implement the Proposed Development, there will be an overall loss of 1no. category C group of trees (G1).  
 The features impacted by the Proposed Development have been summarised in Table 1.

**Table 1** 1no. arboricultural feature is to be removed for the Proposed Development

Reason for removal	Proposed works or reason	Tree retention category			
		A	B	C	U
<i>Proposed Development</i>	<i>Fell for development.</i>	-	-	G1	-
	Total	0	0	1	0

**The proposed removals are confined to a category C (low quality) feature**

5.5.4 The 1no. feature offered a low retention value and was not considered to be a material consideration, being replaceable in the short-term with the incorporation of new tree planting. G1 was set within the confines of the Site and largely obscured from view beyond the Site boundaries. Its removal would result in minimal residual effects.

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

5.5.5 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. 220112 1395 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**

5.6.2 Arboricultural features T7, T8 and T9 which are set to be retained, have existing incursions into their RPAs from hard standing (an internal driveway). The RPAs of these three features have been modified to demonstrate the perceived rooting area allowing for the existing restriction to root growth.

**Proposed demolition and removal of grey infrastructure will occur within the RPAs of features T7, T8 and T9**

5.6.3 The Proposed Development will require the removal (uplift) of existing driveway, along the edge of the modified RPAs of T7, T8 and T9. Providing that these works are carried out sympathetically, under a formalised Arboricultural Method Statement (AMS), this activity should not cause any further damage to these surrounding trees.

**The removal of the existing surfaces within the RPA must be detailed within an Arboricultural Method Statement (AMS)**

5.6.4 A working methodology (AMS) is to be formalised prior to works commencing.

**All works within RPAs should be undertaken using hand-tools only under the supervision and guidance of 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.



## New RPA Incursions

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

5.6.6 Where there is an overriding justification for construction within the RPA, technical solutions might be available to prevent damage to the tree(s). Recommended within BS 5837:2012, paragraph 5.3.1.

**There will be no new incursions within the RPAs of retained arboricultural features**

5.6.7 The Proposed Development would not require any new, permanent incursions within existing RPAs, with the built form set to be incorporated into the Site, away from areas of existing vegetation.

## 5.7 Spatial Requirements for Contractors during Demolition and Construction

**Contractors will require sufficient working room to construct the proposed properties**

5.7.1 It is considered likely during both demolition and construction that contractors will require sufficient working room which may fall within the RPA of retained trees. This is particularly evident for the western aspect of the proposed car port and the RPA of T6, and an assumed requirement for the use of scaffolding during construction.

**Construction scaffolding within the RPAs will be installed with ground protection**

5.7.2 To ensure that T6 is 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

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

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 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.



## 5.8 Tree Management

### Tree Pruning Requirements

**T9 will require facilitation pruning prior to construction works commencing**

5.8.1 It is envisaged that pruning works to T9 are likely to be confined to facilitation pruning during the construction phases. The extent of pruning shall extend to cutting back (reduction) of the lateral crown growth on the east of the crown and lifting to provide greater ground clearances. This will be necessary to avoid any injurious contact from the erection of scaffolding, plant or machinery.

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

5.8.3 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**

5.8.3 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**

5.8.4 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**

5.8.5 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**

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 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. 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.

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**Erect all protective barriers prior to commencement of any demolition and/or construction activities**

6.1.6 Retained arboricultural features on site will be protected by suitable barriers 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. 220112 1395 TPP V1). Tree protection fencing / barriers should be specified by an appointed ACoW and following a specification as detailed within an AMS.

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## 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.

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**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 at 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.

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**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.

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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 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 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 9th December 2021**

7.1.1 The arboricultural survey was undertaken in accordance with BS5837:2012 with OS master maps and a Topographical Survey forming the base mapping. The walkover survey and assessment were undertaken by the Principal Author and the trees inspected from ground level.

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**The Site is not within a Conservation Area but the presence of TPOs will need to be confirmed**

7.1.2 A Desk Study was conducted ahead of the arboricultural walkover survey. The desk study identified that the Site is not within a local Conservation Area. The presence of TPOs was not confirmed and therefore, statutory constraints may apply.

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**A total of 10no. arboricultural features were surveyed and assessed**

7.1.3 Of the 10no. arboricultural features surveyed across the wider Site (study area), 9no. individual trees and 1no. group of trees were recorded.

---

**There will be an overall loss of 1no. category C group of trees**

7.1.4 An Arboricultural Impact Assessment (AIA) has been undertaken. To implement the Proposed Development, there will be an overall loss of 1no. category C group of trees (G1).



## 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.

DRAFT

## Appendix 1: Site Location Plan

Willow End, Salts Lane, Drayton Bassett

DRAFT

# Arboricultural Impact Assessment

VERSION: V1 DATE: January 2022  
REF NO: 220114 1395 AIA V1 DRAFT





## Appendix 2: Tree Schedule

DRAFT



# BS5837:2012 Tree Schedule

Client Name: DWX Services Ltd  
 Site: Willow End, Salts Lane, Drayton Bassett  
 Ref No: 220112 1395 TS V1

Consultant: E. Preston  
 Survey Date: December 2021



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 than 75mm were not surveyed as they would either be easily replaced or relocated.

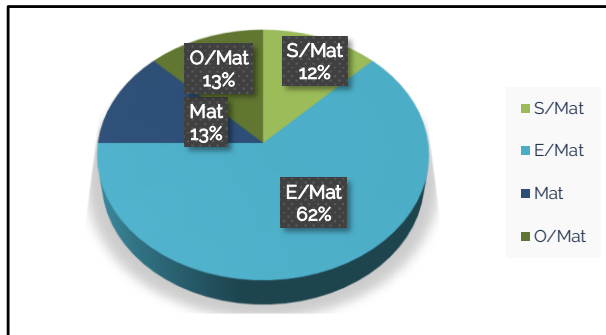
# BS5837:2012 Tree Schedule

**Client Name:** DWX Services Ltd  
**Site:** Willow End, Salts Lane, Drayton Bassett  
**Ref No:** 220112 1395 TS V1

**Consultant:** E. Preston  
**Survey Date:** December 2021

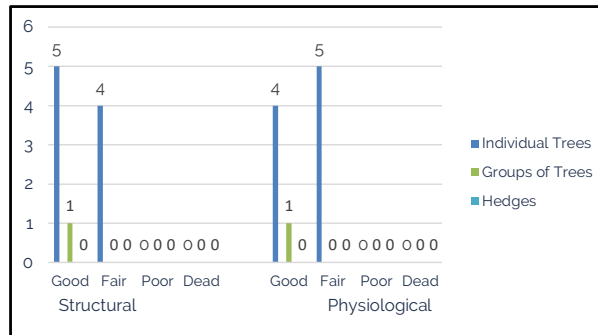


## Age Distribution of the Tree Population



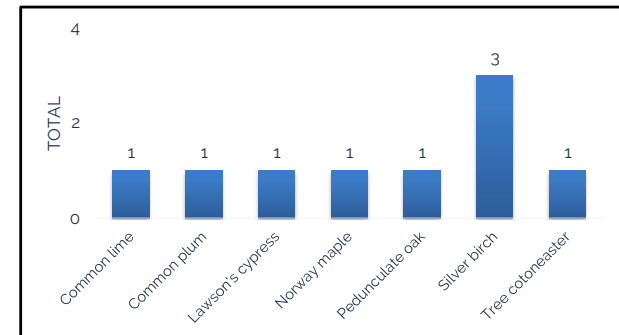
The distribution of age category across the tree population is useful for understanding expected longevity and can be used for determining mitigation, management and replacement.

## 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

Client Name: DWX Services Ltd  
 Site: Willow End, Salts Lane, Drayton Bassett  
 Ref No: 220112 1395 TS V1

Consultant: E. Preston  
 Survey Date: December 2021



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	1	Mainly arboricultural value	2	Mainly landscape value	3	Mainly cultural or conservation value	
Summary of Individual trees, Groups, Woodlands and Hedges							
T4		T1, T2, T3, T7, T8		T5, T6, T9, G1			
1		5		4		0	
Estimated Remaining Contribution (ERC)							
> 40 years		> 20 years		< 20 years		< 10 years	
No. of trees	1	No. of trees	5	No. of trees	3	No. of trees	0
No. of groups	0	No. of groups	0	No. of groups	1	No. of groups	0
No. of woodlands	0	No. of woodlands	0	No. of woodlands	0	No. of woodlands	0
No. of hedgerows	0	No. of hedgerows	0	No. of hedgerows	0	No. of hedgerows	0
Percentage of tree population	10%	Percentage of tree population	50%	Percentage of tree population	40%	Percentage of tree population	0.00%

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										
<b>INDIVIDUAL TREES</b>																			
T1	No Tag	Silver birch	<i>Betula pendula</i>	10	4.08	4	3	3	4	1	E/Mat	Good	Good	Single stemmed tree, close to access, eastern RPA incursion with hardcore driveway.		20 to 40 years	B1	55	4.2
T2	No Tag	Lawson's cypress	<i>Chamaecyparis lawsoniana</i>	9	3.84	3	3	3	3	1.3	E/Mat	Good	Good	Off site, circa. 3m from site boundary.		20 to 40 years	B1	48	3.9
T3	No Tag	Silver birch	<i>Betula pendula</i>	11	3.36	3	3	1	2	2.5	E/Mat	Good	Good	Single stemmed tree. Off site circa. 1.5m from boundary.		20 to 40 years	B1	34	3.3
T4	No Tag	Common lime	<i>Tilia x europaea</i>	22	15	9	7	8	8	3	O/Mat	Fair	Fair	Off site lime tree. Positioned beyond the boundary by circa. 10m. Dense basal suckers established at ground level to circa. 8m. Base and lower stem obscured from view, close inspection not possible. Large diameter dead wood (less abundant) in lower crown.		>40 years	A1	1307	20.4
T5	No Tag	Pedunculate oak	<i>Quercus robur</i>	7	2.57	3	3	3	3	1	S/Mat	Good	Fair	Included union at base. Three stems from ground level. Limited future value.		10 to 20 years	C1	23	2.7
T6	No Tag	Common plum	<i>Prunus domestica</i>	8	3.36	3	4	3	3	3.5	Mat	Fair	Fair			10 to 20 years	C1	34	3.3
T7	No Tag	Silver birch	<i>Betula pendula</i>	13	3.24	5	5	3	3	4	E/Mat	Fair	Fair			20 to 40 years	B1	34	3.3
T8	No Tag	Norway maple	<i>Acer platanoides</i>	10	4.08	4	2	5	5	4	E/Mat	Good	Good	Asymmetrical crown. Light ivy cover. Branch stubs.		20 to 40 years	B1	55	4.2
T9	No Tag	Tree cotoneaster	<i>Cotoneaster frigidus</i>	6	2.76	5	5	5	5	2	E/Mat	Fair	Fair	Light ivy cover. Fence attached to stem. Historic pruning wound at c.1m which has failed to occlude. Hard standing incurs into the RPA to the east.		10 to 20 years	C1	23	2.7

BS5837:2012 Tree Schedule

Consultant: E. Preston  
 Survey Date: December 2021



Client Name: DWX Services Ltd  
 Site: Willow End, Salts Lane, Drayton Bassett  
 Ref No: 220112 1395 TS V1

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	Ret Cat	RPA (m <sup>2</sup> )	RPA Radius (m)
						N	E	S	W										
TREE GROUPS																			
G1	No Tag	Lawson's cypress, Hawthorn species, English holly, Cherry laurel	<i>Chamaecyparis lawsoniana</i> , <i>Crataegus sp.</i> , <i>Ilex aquifolium</i> , <i>Prunus laurocerasus</i>	1.5 - 6.5	80 - 150	2	2	2	2	0	E/Mat	Good	Good	Mixed species tree group. Situated long the boundary of the Site. Interlocking crowns.		10 to 20 years	C2	10	1.8

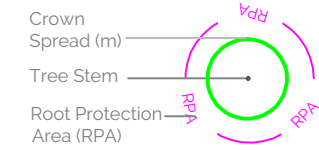


## Appendix 3: Arboricultural Plans

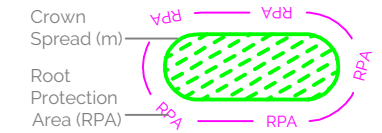
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Individual Trees - Crown colour in accordance with BS:5837 (2012) category



Groups and Hedgerows - Crown colour in accordance with BS:5837 (2012) category



BS:5837 (2012) Category Colours

Category A —

Category B —

Category C —

Additional Attributes

Redline Boundary —

Arboricultural Study Area - - -

Where no topographical information has been provided, tree locations are based on aerial imagery and measurements taken onsite. 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:

S2 - Information / Reference

Date: January 2022 Drawn: EKP Checked: CTT

Client: DWX Services Ltd

Project: Willow End, Salts Lane, Drayton Bassett

Title: Tree Constraints Plan

Drawing file reference

DWG No

220112 1395 TCP V1

1 of 1



MINERVA MILL | STATION ROAD | ALCESTER | B49 5ET

E. info@wnic.co.uk

T. +44 (0)1789 459458

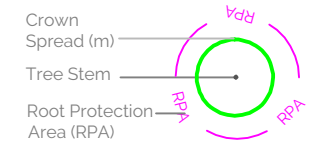
www.wnic.co.uk



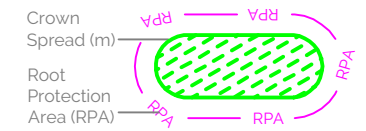
Scale: 1:500 @ A3



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



Groups and Hedgerows - Crown colour in accordance with BS:5837 (2012) category



BS:5837 (2012) Category Colours

- Category A —
- Category B —
- Category C —

Additional Attributes

- Redline Boundary —
- Arboricultural Study Area —

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Drawing Status:

S2 - Information / Reference

Date: January 2022 Drawn: EKP Checked: CTT

Client: DWX Services Ltd

Project: Willow End, Salts Lane, Drayton Bassett

Title: Tree Retention and Removal Plan

Drawing file reference DWG No

220112 1395 TRRP V1

1 of 1

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Natural Infrastructure Consultants

MINERVA MILL | STATION ROAD | ALCESTER | B49 5ET

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

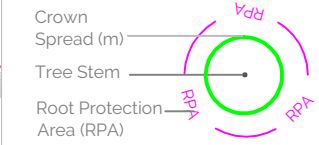
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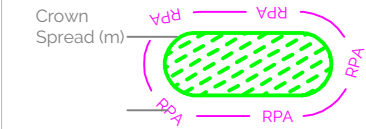




Individual Trees - Crown colour in accordance with BS:5837 (2012) category



Groups and Hedgerows - Crown colour in accordance with BS:5837 (2012) category



BS:5837 (2012) Category Colours

- Category A —
- Category B —
- Category C —

Additional Attributes

- Redline Boundary —
- Arboricultural Study Area —
- Tree Protection Measures —
- Tree Protection Fencing —



# DRAFT

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Drawing Status:

S2 - Information / Reference

Date: January 2022    Drawn: EKP    Checked: CTT

Client: DWX Services Ltd

Project: Willow End, Salts Lane, Drayton Bassett

Title: Tree Protection Plan

Drawing file reference    DWG No

220112 1395 TPP 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."



## 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.

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## 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 ' <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.  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 ' <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. It sets out principles and procedures to be applied to achieve a harmonious and sustainable relationship between trees

# Arboricultural Impact Assessment

VERSION: V1 DATE: January 2022  
REF NO: 220114 1395 AIA V1 DRAFT



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	<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.



# Arboricultural Impact Assessment

VERSION: V1 DATE: January 2022  
REF NO: 220114 1395 AIA V1 DRAFT



## 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.

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## 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:

# Arboricultural Impact Assessment

VERSION: V1 DATE: January 2022  
REF NO: 220114 1395 AIA V1 DRAFT



<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.

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**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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