

1. Appendix 11 Veteran Tree Survey Review

1.1.1 During a visit to Site the existing trees shown as Veteran and Ancient trees on the Woodland Trust website were assessed to determine whether the assessment by OAG was correct in our opinion. The results are set out in table 1 (below).

1.1.2 The following criteria/attributes used to assess the trees are as follows (Lonsdale 2013) 2013);

- *Girth Large for the tree species concerned (>1m diameter for oak Quercus sp)*
- *Major trunk cavities and hollowing*
- *Natural water pools*
- *Decay holes*
- *Physical damage to trunk*
- *Bark loss*
- *Large quantity of deadwood*
- *Sap runs*
- *Crevices in the bark*
- *Fungal fruiting bodies*
- *High interdependent wildlife species*
- *An old look*
- *High aesthetic interest*

1.1.3 The findings of an assessment of the recorded trees within the woodland are in table 1 and the tree locations have been recorded on drawings 51371_DR_ARB_109 (attached).

1.1.4 Table 1 Veteran Tree Survey Findings

ATI Reference	Species	Observations	Status
203824	Oak	2 stems, base form suggests 2 separate trees, which have established close together and since fused at the base, 1 tree has a recently snapped lower limb, minor deadwood in lower canopy as a result of cladoptosis. No hollows, cavities, wounds or damage, no dieback or retrenchment in crown, no visual growth indicators identifying any internal decay and no decay fungi identified. 2x mature trees in good condition	Mature tree
202093	Alder	Deadwood identified, dieback in outer crown, limb failure, decay fungi identified at base. Tree is 26m from boundary fence at bottom of bank.	Veteran

ATI Reference	Species	Observations	Status
202105	Oak	3 stems, not a result of coppice with good unions identified. Tree is a smaller specimen than neighbours, phototropic growth due to competition will have prevented a dominant leader developing allowing a multi stemmed form from near the base. 2x branch failure points at base, both have compartmentalised and no cavity has formed, a result of cladoptosis. No cavities, wounds, damage, decay or decay fungi identified. Crown is not retrenching. Tree in overall good condition	Mature tree
204052	Alder	Large tree with deadwood and large failure wounds, with cavities forming. Very large and significant age for species. Significant distance from boundary >15m.	Veteran
203826	Oak	Tree has been reduced previously with good regrowth forming outer canopy. No retrenchment or dieback identified. No decay identified in pruning cuts. Minor deadwood in lower canopy as a result of cladoptosis. 1 opening found at 1m on south side of stem, hollowing is beginning, minor bulging around site of opening identified as a result of reaction wood growth in response to cavity. No other openings, wounds, damage and no decay fungi. Features identified are conclusive based on the assessment criteria Tree is 9.6m from boundary, closest development is 4.4m from boundary. Stem is 940mm with an RPA radius of 11.3m and is therefore sufficient distance from Development	Mature tree
203751	Oak	Multistemmed tree from base, not as a result of coppicing, smaller suppressed tree with no dominant leader. Old pruning wound on path side, beginning to decay, however, no evidence of decay progression identified. Indicator of compartmentalisation of wound and decay of exposed heartwood only. Modern human influence. Minor deadwood in lower crown only as a result of cladoptosis. Generally in good condition. 8.1m from fence and not in proximity to Development.	Mature tree
200603	Hawthorn	Hawthorn with no retrenchment and very little deadwood. No hollowing identified 1 x small dead limb on north side, which has been compartmentalised, and no associated hollowing or cavities as a result.	Mature tree
200597	Hawthorn	Hawthorn which is multi stemmed, no retrenchment or significant deadwood identified. No hollows, cavities, decay, damage or wounds identified.	Mature tree

- 1.1.5 Overall, trees along the boundary were assessed to be in overall good condition with minimal deadwood as a result of a process called cladoptosis, a natural process by which shaded branches are shut down to save resources and occurs as the tree grows and crowns develop (Thomas 2014), and not through damage, stress or premature aging. Two trees were assessed as veteran and these are located more than 15m from the Development (Tree 202093 – Alder and tree 204052– Alder).
- 1.1.6 One tree along the Site boundary was assessed to have veteran features, which is an unrecorded hawthorn. The tree is positioned away from the boundary fence and is greater than 15x stem diameter from Development.
- 1.1.7 Whilst on Site an assessment of the measurements taken by OAG and provided to the Woodland Trust to determine Veteran /Ancient status were checked for accuracy and table 2 below sets out the comparison between our data and the data provided to the Woodland Trust forming a basis for their decision to include trees on the ATI.
- 1.1.8 Table 2 Comparison of girth measurements of Veteran/Ancient Trees identified by OAG.

ATI Reference	Status	Girth recorded by OAG	Girth Measured by BWB Arboriculturalist	Difference in Measurement
204052	Veteran tree	3.8m	1.07	2.73
202105	Veteran tree	3.7m	1.73	1.97
202099	Veteran tree	1.5m	1.32	0.18
203826	Veteran tree	3.2m	1.07	2.13
200597	Veteran tree	1.8m	1.38	0.42
200603	Veteran tree	2.15m	1.57	0.58
203824	Veteran tree	5.3m	3.40	1.90
200501	Ancient tree	2.28m	1.38	0.90
203751	Veteran tree	3.5m	0.66	2.84
204077	Ancient tree	2.2m	0.58	1.62
204244	Veteran tree	2.3m	0.96	1.34

ATI Reference	Status	Girth recorded by OAG	Girth Measured by BWB Arboriculturalist	Difference in Measurement
204248	Veteran tree	1.7m	0.53	1.17
204250	Notable tree	1.05m	1.49	-0.44

- 1.1.9 The above figures represent a significant disparity between our measurements and those provided to the Woodland Trust as evidence that trees on Site were considered to be Ancient/Veteran. It is assessed that OAG recorded basal measurements as opposed to stem diameters at 1.5m above ground level in line with woodland Trust guidance. A number of trees listed on the ATI and not included in the above assessment could not be identified on Site.
- 1.1.10 It is considered that in light of our own assessment and the comparison of measurements above that a number of trees on Site are simply mature specimens as opposed to Ancient or Veteran in status.
- 1.1.11 In order to ensure a precautionary approach we have however ensured that sufficient buffers are in place around trees currently classified as Veteran and Ancient trees until such time as the Woodland Trust visit the Site and confirm otherwise.
- 1.1.12 In line with the standing guidance an assessment of the direct and indirect impacts of the development upon veteran trees has been undertaken as a supplementary assessment from that undertaken in the proof of evidence. This is summarised in table 3 below.
- 1.1.13 Table 3 Assessment of Direct and Indirect Impacts upon Ancient and Veteran Trees on Site (below).

Direct Impacts	Impact Assessment
Damaging or destroying all or part of them (including their soils, ground flora or fungi)	No trees or groups of Ancient or Veteran trees will be destroyed. All soils within the RPA's of veteran trees would be retained in situ and protected during construction in line with BS5837:2012
Damaging roots and understorey (all the vegetation under the taller trees)	No roots or understorey would be damaged as part of the proposals. All works are outside of the RPA of existing veteran trees and would be protected from damage through tried and tested BS5837:2012 Methodology
Damaging or compacting soil around the tree roots	No roots would be compacted or damaged as a result of the Development due to tree protection in line with BS5837:2012, erected before the start of construction and remaining in place for the duration of the Development and lying outside the RPA of all trees along the northern boundary.

Direct Impacts	Impact Assessment
Polluting the ground around them	No pollution would occur in the ground around trees. An Arboricultural Method Statement (AMS) would be prepared to accompany all works in proximity to existing trees and the AMS would include a separate chapter in relation to Ancient and Veteran Trees.
Changing the water table or drainage of woodland or individual trees	Whilst there are some concerns regarding works to the south of several identified veteran and ancient trees the land was formerly agricultural land and therefore any impacts would be reduced as a result of this previous land use. The open space within the buffer zone is proposed to be utilised for new woodland planting and therefore will remain as a soft landscape area. Mr Bakers evidence also provides greater clarification in this area.
Damaging archaeological features or heritage assets	None recorded

1.1.14 Table 4 Assessment of Direct and Indirect Impacts upon Ancient and Veteran Trees on Site.

Indirect Impacts	Impact Assessment
Breaking up or destroying connections between woodlands and ancient or veteran trees	No connections would be lost as boundary vegetation to the western boundary is retained. The western boundary provides linkage to other offsite veteran and ancient trees in the wider landscape. The northern boundary would be planted with native species of local provenance to create a natural buffer to the Development
reducing the amount of semi-natural habitats next to ancient woodland	Whilst it is proposed to remove predominantly category C regenerating scrub and the southern section of G9a (category B) this removal would be replaced with high quality native woodland of local provenance; together with significant off site improvements as part of the section 106 agreement in line with biodiversity net gain and Helliwell tree evaluation (Appendix 9)
increasing the amount of pollution, including dust	No significant changes in air quality will arise from the development. The proposed development will not generate any changes in ground level within the RPA's of existing trees. The RPA's represent an area required to sustain trees including any hydrological requirements. Whilst there are level changes to the south of the woodland within the 15m buffer zone these changes along the northern boundary are laid to fall along the existing topography which flow towards the woodland. The buffer along the woodland complies with Natural England standing guidance. The proposed development is not industrial in nature and does not require a tailored assessment.
increasing disturbance to wildlife from	Bat surveys were carried in accordance with Bat Conservation Trust guidelines. Transect surveys included the boundary of the development site with the woodland. Low levels of bat activity were recorded (CD2.5).

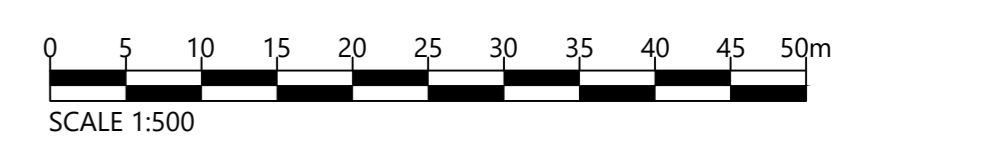
Indirect Impacts	Impact Assessment
<p>additional traffic and visitors</p>	<p>The proposed development does not directly affect any trees which could support bat roosts.</p> <p>The woodland is outside the known distribution for dormice.</p> <p>The proposed development would not affect nesting bird habitat within the woodland.</p> <p>Mr Baker's evidence addresses other aspects of habitat change and concludes there is no basis for concern.</p>
<p>increasing light or air pollution</p>	<p>No significant changes in air quality will arise from the development.</p> <p>It is proposed that a light plan will be agreed with the LPA that will minimise light spill particularly along the boundary between the proposed development and the woodland with the aim of maintaining a dark corridor along the woodland.</p> <p>With mitigation the overall impact on bats is considered to be 'negligible'.</p> <p>It is proposed that biodiversity net gain funds will be used to introduce conservation management to the woodland which will increase structural and species diversity improving the habitat for bats, nesting birds and other species.</p>
<p>increasing damaging activities like fly-tipping and the impact of domestic pets</p>	<p>Existing access within and along the northern boundary of the woodland already occurs. There would be a likely modest increase in visitors to the wood following development. The increase in recreation will be marginal.</p> <p>Mr Bakers proof deals with pest, disturbance and the related possible impacts and concludes they are not a matter of concern.</p>
<p>changing the landscape character of the area</p>	<p>It is assessed that whilst the character of the landscape will change as a result of the Development, the character of the woodland itself would be retained and extensive new planting introduced to help mitigate any impacts of the Development along the northern boundary is proposed</p>



- KEY**
- Site Boundary
 - Category A tree as defined by BS5837:2012
HIGH Quality/ value
 - Category B tree as defined by BS5837:2012
MODERATE Quality/ value
 - Category C tree as defined by BS5837:2012
LOW Quality/ value
 - UNCATEGORISED VEGETATION
As defined by topographical survey or estimated on site
 - RPA (Root protection area)
 - Location of Veteran, Ancient, Notable trees
 - Location of Disputed Veteran, Ancient, Notable Trees
 - 15m x stem diameter of ancient/veteran trees
 - Existing Boundary Fence
 - Tree Protection Fence

Core Veteran Tree Survey Review

ATI Reference	Species	Status (Woodland Trust Assessment)	Status (BWB Assessment)
203824	Oak	Veteran	Mature Tree
202093	Alder	Veteran	Veteran
202105	Oak	Veteran	Mature Tree
204052	Alder	Veteran	Veteran
203826	Oak	Veteran	Mature Tree
203751	Oak	Veteran	Mature Tree
200603	Hawthorn	Veteran	Mature Tree
200597	Hawthorn	Veteran	Mature Tree



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Client
Avant Homes Central

Project
Owlthorpe, Sheffield.

Drawing Title
**Veteran Tree Clarification
Appendix 11**

Scale
1:500 A0

Date
Dec 2020

DB
WM

CB
MT

Drawing Number
51371_DR_ARB_109

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