

# Ancient and Veteran Tree Assessment

Land Rear of Langley Common and South  
of School Road, Barkham, Wokingham



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## 1.0 Introduction

## 1.1 Project Background

**1.1.1** I have been instructed by Tom Ryan of ET Planning (email 29<sup>th</sup> April 2026) to assess whether two trees at a site adjacent to Langley Common, south of School Road have sufficient attributes for it to be considered appropriate to classify them as veteran trees.

**1.1.2** I made a site visit on 6<sup>th</sup> May 2026 and assessed two mature Common oak (*Quercus robur*) trees, identified on drawings and reports submitted as part of an outline planning application to Wokingham Borough Council (planning application number 252595).

**1.1.3** This assessment is intended to provide an opinion on whether the trees should be considered to be veteran trees in planning terms. The assessment has been requested because the effect of the proposals on these two trees (see indicative site plan, top right) were referenced in the Wokingham Borough Council (WBC) Landscape and Trees comments (extract, bottom right), 2<sup>nd</sup> February 2026, as one of the reasons to object to the application, with veteran status being a key element referred to in that recommendation. This assessment does not comment on the suitability of the development proposals or on the proximity of the proposed layout to the trees. It is simply intended to be an assessment of whether or not the trees should be treated as veteran.

## 1.2 The Trees

**1.2.1** The trees considered within this report are T25 (oak) and T28 (oak) according to the data presented in the Arboricultural Impact Assessment provided by ACD Environmental (PRI24777aia\_ams, 19/09/25). In addition, two further trees T13 (oak) and T118 (oak) were observed because they were referenced in the WBC comments document.

**1.2.2** Three of these trees (T13, T25 and T118) have been assigned category A, during the tree survey, according to BS5837: 2012 *Trees in Relation to Design, Demolition and Construction – Recommendations*. One of the trees (T28) has been assigned category B.

**1.2.3** The site design layout shows all three category A trees being retained within the proposed development with one category B tree being shown as required to be removed to accommodate an access road.



### Arboriculture

Many very good quality Oaks are highly represented on the site. Other species on site include Birch, Hawthorn, Ash, Lombardy Poplar, Crack Willow.

The Tree Survey Plan and document dated January 2025 demonstrates the overriding species represented on the site is Oak, with a very high proportion of 'A' quality Oaks designated 'A2' for their landscape contribution (see Table 1 BS5837:2012). The southern and eastern boundaries of Field A are particularly notable with at least 7 trees appearing on the Woodland Trust Ancient Tree Inventory. The Tree Survey identifies the following Oak trees as Veterans;

- T13 'A3' category has a 1260mm diameter girth and displays many signs of veteranisation.
- T118 'A3' category has a 975mm diameter girth and several signs of veteranisation.

Tree T25 'A2' category is the largest tree on the site which has a 1450mm diameter girth, although according to the Tree Survey has minimal signs of veteranisation which include;

... significant buttress roots on all sides, good crown architecture minimal Veteran Tree indicators, scaffold failures leaving branch break/tears, nesting birds, trunk holes consistent with an animal, large sections of deadwood throughout the crown architecture greater than 25mm diameter....

For tree T13 (Veteran) the description reads;

... significant buttress roots on all sides, good crown architecture, multiple Veteran tree indicators; significant scaffold branch failures leaving breaks/tears, trunk cavities obscured by ivy, nesting birds, trunk holes consistent with animal, large

### 1.3 Ancient and Veteran Tree Definitions

**1.3.1** The terms “ancient” and “veteran”, as applied to trees, have been described in various publications (Fay and de Berker 1997, Read 2000, Lonsdale 2013, Woodland Trust, 2008 and 2024) but the terms have not been distinguished in a simple, clear and entirely consistent manner. This is partly explained by the fact that the ageing process in trees is conceptually a very complex one.

**1.3.2** A tree can be ancient in the developmental sense; it has passed through a series of life stages and reached a phase beyond maturity during which the crown had reached, and maintained, its maximum extent for an extended period of time. Alternatively, a tree can be chronologically old; it may be considered ancient because it has aged in a physiological sense, growing very slowly due to less than ideal growing conditions (Del Tredici, 1999). Of course, a tree can be, and often is, both developmentally and chronologically old.

**1.3.3** To further complicate the picture, trees of different species age, in a developmental sense, at different rates. Trees of the same species also age developmentally at different rates depending on local environmental conditions and, inevitably, according to the tree’s individual genetic attributes.

**1.3.4** The term veteran is likely to have become adopted to describe trees that exhibit similar valuable habitat features to those (generally) found in ancient trees, but in trees that are not (or cannot be confirmed to be) either developmentally ancient or chronologically old for the species.

**1.3.5** The term veteran, however, has not been defined in a strict (and easily applied) sense and is often used in one or more of the following ways (generally without explanation):

- As an umbrella term to describe all trees that exhibit the habitat features typically found in an ancient tree
- As a term to describe a tree exhibiting the habitat features typically found in an ancient tree that is neither developmentally nor chronologically ancient
- As a term to describe an ancient tree itself (the term “all ancient trees are veteran, but not all veteran trees are ancient” is often quoted)
- As a term to describe the habitat rather than the tree (“veteran tree habitat features” has become commonly referenced)

- As a term to describe a tree in the long period of transition from late maturity to the ancient life phase, during which damage will inevitably occur as part of the natural ageing process (contradicting the concept that “veteran” status is a reflection of condition, and is not a life stage)
- According to general usage; a resilient, yet damaged, survivor

**1.3.6** This situation has the potential to cause significant issues in the planning context within which ancient and veteran trees are afforded protection because of the irreplaceable habitat that they host, (NPPF, 2024) and where a binary decision on ancient and veteran “status” is required in a context where such certainty is often not possible, nor is it a reasonable expectation.

**1.3.7** To further complicate matters efforts to provide field or survey guidance to assign ancient or veteran status to a tree have often introduced inconsistencies and unforeseen and undesirable consequences by focusing on the size of a tree or by simply and crudely counting habitat features, regardless of significance or extent.

**1.3.8** Appendix A contains Treework Environmental Practice’s internal guidance on how to approach this issue. For the majority of trees it is unlikely that it will be possible to make an indisputable statement regarding veteran status. Our preferred approach is therefore to describe the features and factors that should be taken into account with the aim of building up a justification for the status of the tree. More recently our approach has evolved to consider rather whether the habitat should be considered irreplaceable given that this is what the NPPF seeks to protect. The value of both ancient and veteran trees is primarily due to the longevity of the habitat. This is what makes the habitat irreplaceable.

**1.3.9** Providing a descriptive justification for ancient or veteran status is appropriate because simply listing or counting attributes or features can easily lead to young, not uncommon, damaged trees being erroneously classified as veteran, with equal provision for protection as that offered to ancient trees. Similarly, relying on girth or size alone has the potential to lead to small diameter old trees, or less chronologically old trees with extensive micro habitat features, being denied protection where this would, in fact, be appropriate.

**1.3.10** Considering whether a tree should be classed as ancient or veteran requires all parties to be open, objective, reasonable and proportionate when discussing the value of the tree or trees being assessed.

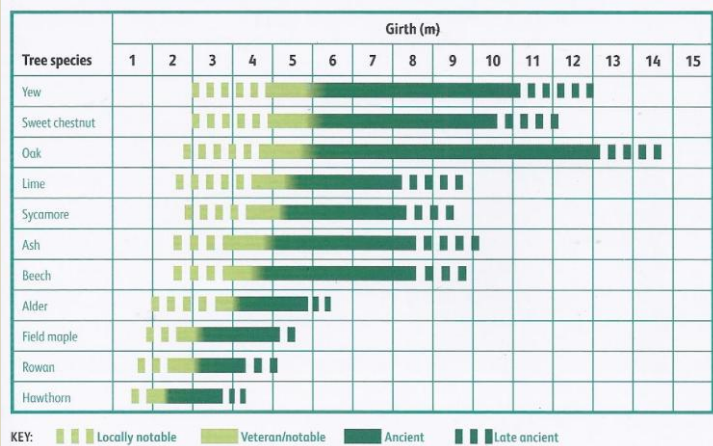
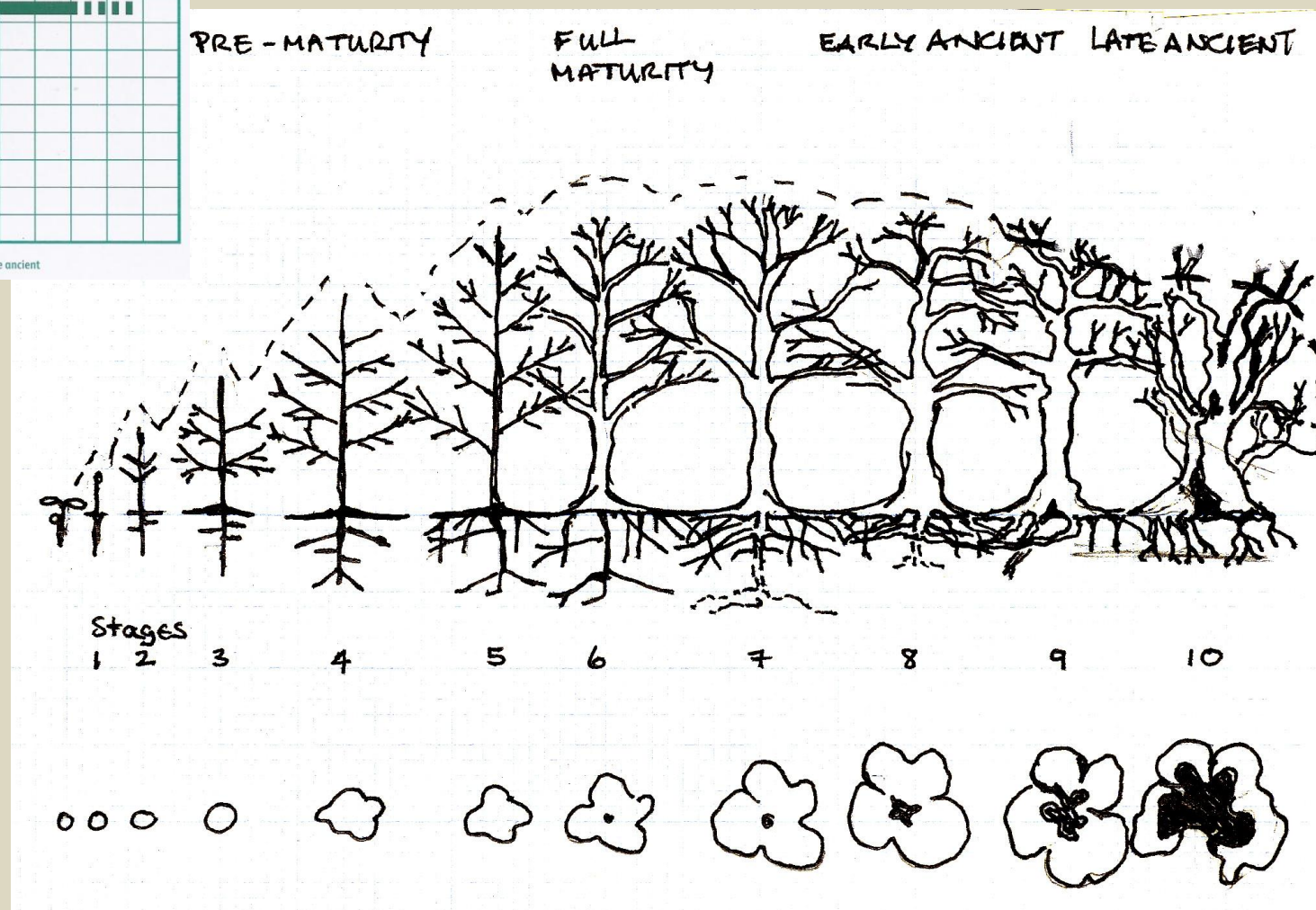


Figure 1.3 (Lonsdale, 2013) (left): Girth can be considered as one of a number of factors providing an indication of the age of a tree.



Morphological Stages (Fay 2002) (above), after Raimbault (1995) and Lonsdale (1999), with stages 8 and 9 showing the long transition between maturity (stage 7) and the ancient phase.

## **2.0 Individual Tree Assessments**

## 2.1 Tree T25 – *Quercus robur* (Common oak)

**2.1.1** Tree T25 is a maiden tree in the mature phase of development (1); stage 7 according to the morphological model proposed by Raimbault (1995). A stem girth of 359 cm (measured at 1.5 m above ground level) (2) gives the tree the potential to be locally notable according to figure 1.3 (Lonsdale, 2013), although a stem diameter of 114 cm is really not at all uncommon for an oak tree in the mature life stage.

**2.1.2** For an oak to be considered likely to be developmentally ancient a suggested girth of 580 cm (185 cm diameter) is proposed in figure 1.3. For an oak to have the potential to be a late mature veteran (*i.e.* entering the ancient phase) a girth of 475 cm (150 cm diameter) is suggested in figure 1.3. Girth is not in itself relevant in terms of irreplaceable habitat and is referred to here only as a potential indicator of chronological age. There is nothing unusual about the growing conditions or crown morphology of tree T25 that provides evidence to suggest that the tree has grown particularly slowly, has been suppressed or restricted such that the stem diameter is not a reasonable metric with which to estimate age and life stage.

**2.1.3** A chronological age of between 129 years and 212 years old, depending on growing conditions, can be estimated from the measured girth (White, 1998). The tree is therefore not particularly old for the species.

**2.1.4** The tree is nevertheless a mature specimen and is significant in the landscape, although as part of a group of trees rather than as an individual. The tree has an estimated height of 22 m (according to the ACD Environmental tree schedule), which is typical for a mature oak.

**2.1.5** The tree is growing along what appears to be a historic hedge bank with a ditch to the west (3). Ground level therefore varies around the base. Stem diameter was measured at 1.5 m above the top of the bank.

**2.1.6** Three principal crown stems originate at approximately 3.0 m (4). The bole below 3.0 m shows no visible signs of hollowing, although it is not unlikely that a tree at this life stage has a degree of decay within the bole.

**2.1.7** One notable, large diameter, second order branch has been recently lost leaving a large tear on the northern principal stem at approximately 4.0 m (with



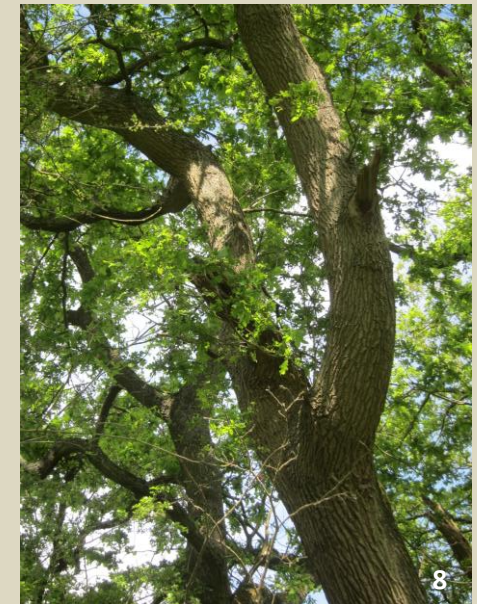
the tear extending down to 3.0 m) (6). The stub that remains supports live shoots.

**2.1.8** Two further smaller diameter second order limbs have been lost leaving a dead stub at approximately 8.0 m (on the southern aspect) and a live stub at approximately 12.0 m (northern aspect) (8).

**2.1.9** There are three dead second order limbs, 15-20 cm diameter, within the crown (7) as well as numerous smaller diameter (5-10 cm), second and third order dead limbs throughout the crown.

**2.1.10** Upper crown morphology shows no signs of dieback, reorganisation or retrenchment in response to either developmental ageing or stress initiated by long term external environmental changes (5).

**2.1.11** The crown contains epicormic shoots typical of a mature oak tree, but these are all of a similar age and size. The exception is one older reiteration on a low lateral limb on the western aspect of the crown, 5-10 cm diameter, likely initiated following the loss of the second order limb at 8.0 m due to the exposure of this limb to increased light levels.



## 2.2 Tree T28 – *Quercus robur* (Common oak)

**2.2.1** Tree T28 is a maiden tree in the mature phase of development (9); stage 7 according to the morphological model proposed by Raimbault (1995). A stem girth of 332 cm (measured at 1.5 m above ground level) (10) gives the tree the potential to be locally notable according to figure 1.3 (Lonsdale, 2013), although a stem diameter of 106 cm is really not at all uncommon for an oak tree in the mature life stage.

**2.2.2** For an oak to be considered likely to be developmentally ancient a suggested girth of 580 cm (185 cm diameter) is proposed in figure 1.3. For an oak to have the potential to be a late mature veteran (*i.e.* entering the ancient phase) a girth of 475 cm (150 cm diameter) is suggested in figure 1.3. Girth is not in itself relevant in terms of irreplaceable habitat and is referred to here only as a potential indicator of chronological age. There is nothing unusual about the growing conditions or crown morphology of tree T28 that provides evidence to suggest that the tree has grown particularly slowly, has been suppressed or restricted such that the stem diameter is not a reasonable metric with which to estimate age and life stage.

**2.2.3** A chronological age of between 115 years and 190 years old, depending on growing conditions, can be estimated from the measured girth (White, 1998). The tree is therefore not particularly old for the species. The girth and therefore estimated age is likely to be distorted by the wound wood development at this bole height. The tree may be younger than the girth suggests.

**2.2.4** The tree is nevertheless a mature specimen and is significant in the landscape, although as part of a group of trees rather than as an individual. The tree has an estimated height of 22 m (according to the ACD Environmental tree schedule), which is typical for a mature oak.

**2.2.5** The tree is growing along what appears to be a historic hedge bank with the remnants of a ditch to the west (12). Ground level therefore varies around the base. Stem diameter was measured at 1.5 m above the top of the bank.

**2.2.6** Extensive surface bark wounds from ground level to approximately 1.5 m have resulted in two sections of exposed and desiccated heartwood with adaptive growth, strong wound wood development and well-developed buttressing within the lower 2.0 m of the bole (10, 11).



**2.2.7** These appear to have originated as surface wounds, possibly stock damage, but most likely from physical damage due to impact from vehicle, plant or machinery. An old wooden five bar gate is fallen and lays within the grass at the base of the tree. It is therefore likely that this tree stood on the southern side of an access track or route between two fields therefore being vulnerable to such damage.

**2.2.8** The internal decay associated within these sections of desiccated heartwood is expected to be minimal in extent. There is little evidence of advanced brown rot decay within the bole. It is likely that much of the heartwood in the lower 2.0 m of the bole is simply dried out and not favourable to the development of the decay processes that are considered to be particularly valuable as habitat.

**2.2.9** There is evidence of the historic removal of lower limbs to a height of 5.0 m above ground level consistent with this tree being adjacent to an access point (13). The wounds are now enclosed with new bark suggesting that the pruning took place many decades ago.

**2.2.10** There are five dead, second and third order limbs with diameters of 15-20 cm, and between 2.0 and 8.0 m long within the lower half of the crown (14). The heartwood remnants of one dead first order limb are present on the north side of the bole (15).

**2.2.11** One small stub remains from a historic limb loss (15).

**2.2.12** Smaller diameter (5-10 cm) dead limbs are present throughout the crown, typical of an oak in the mature life stage.

**2.2.13** Upper crown morphology shows no signs of dieback, reorganisation or retrenchment in response to either developmental ageing or stress initiated by long term external environmental changes (9).

**2.2.14** The crown contains epicormic shoots typical of a mature oak tree, but these are all of a similar age and size.



## 2.3 Trees T13 and T118 – *Quercus robur* (Common oak)

**2.3.1** Trees T13 and T118 have been included within this report for context because they have been referenced in the WBC Landscape and Tree comments, as veteran trees within the site.

**2.3.2** Tree T113 (15) has been recorded in the tree survey by ACD Environmental as a veteran tree, category A3. Whilst the tree does have habitat value, the dramatic lower limb failures (16) have occurred very recently and therefore have not accrued any significant value as irreplaceable habitat.

**2.3.3** A marginally older large limb failure at the base of and in the centre of the crown, has some wound wood development but again is likely to have occurred relatively recently.

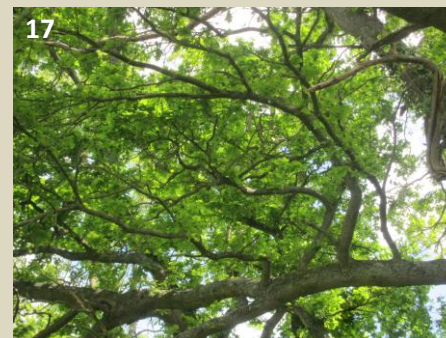
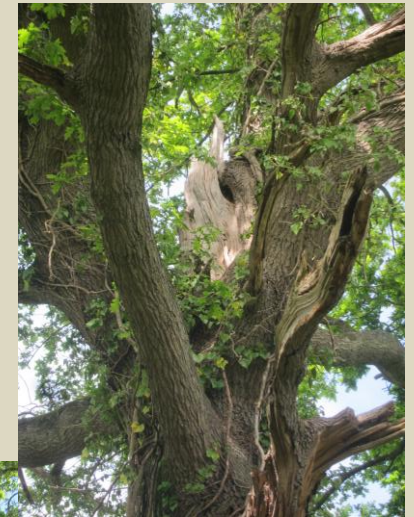
**2.3.4** The tree has deadwood of varying diameters and lengths within the crown, typical of an oak in the mature phase of development.

**2.3.5** Crown morphology is consistent with the tree being in the mature life stage (15). The tree does have interesting well-developed reiterative growth of varying ages. It is not entirely clear why these have developed (there is no evidence of crown dieback). The initiation and development of these epicormic shoots into sustainable limbs provides the tree with a potential for longevity irrespective of the storm damage/limb loss. The prospects that the tree will develop into a veteran can therefore be considered to be good.

**2.3.6** The notes recorded in the tree schedule against tree T118 are as follows:

*“Significant buttress roots all sides. Good crown architecture. DBs over significant ivy stems. Multiple Veteran tree indicators. Significant scaffold branch failures, leaving breaks/tears, trunk cavities obscured by ivy, nesting birds, trunk holes consistent with animal. Large sections of deadwood throughout crown architecture greater than 25mmØ. Several large scaffold branch failures on ground, hung up in tree, leaning against trunk”.*

**2.3.7** This text is a duplicate of the notes recorded against tree T13, and do not describe the attributes of tree T118. It is likely that this is simply an error in the tree schedule. T118 is a mature oak with an apparently defect-free sound bole. There are several dead limbs within the crown but no other habitat features.



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### 3.0 Conclusions

### **3.1 Conclusions**

**3.1.1** With the exception of late stage ancient trees, with either documented great age, exceptionally large girths indicating great age, and all of the attributes typical of very old trees, assigning the status of “veteran” to many trees will often be a relatively subjective assessment. The assessment provided in this document is a subjective opinion based on the features observed during the site visit without any information available relating to the history of the trees or the site.

**3.1.2** Despite the potential complexities of assigning ancient or veteran status to a tree, the two oak trees T25 and T28 do not support habitat features in terms of the number, volume, significance or age of the features that would suggest they are anything other than typical and unexceptional mature trees.

**3.1.3** Neither tree has a girth that indicates great age for the species, and there is nothing to suggest that the growing conditions have slowed growth rates such that girth is not an appropriate metric with which to estimate age; both trees have attained a full crown and a crown height that indicate normal growing conditions.

**3.1.4** The crown morphology of both trees is consistent with what would be expected for an oak tree at the mature life stage. There is no evidence of crown dieback or upper crown decline either due to ageing related retrenchment or crown reorganisation due to stress initiated by long-term external environmental influences.

**3.1.5** Neither tree has the extensive, significant and advanced decay or hollowing within the bole or principal stems that would provide the most valuable and rare habitat that might be considered to be irreplaceable.

**3.1.6** Both of the trees do support some micro habitat features that may be described as “veteran tree features”. However, it should be recognised that a dead limb is a “veteran habitat feature” and all trees in the mature life stage will have dead limbs. This does not mean that all mature trees offer irreplaceable habitat and should be assigned the protection appropriate for a true veteran tree.

**3.1.7** The habitat features observed in the crowns of trees T25 and T28 are not exceptional or unusual, and have not been present for extended lengths of time. They have largely derived from relatively recent damage events. The wounds at

the base of T28 have likely been present for longer than many of the other habitat features, but the nature of the origin of the wounding means that the heartwood in this area of the bole is desiccated.

**3.1.8** T13 has significant and dramatic limb loss, but this has clearly occurred very recently. The habitat provided by the resulting limb tears within the bole may well develop over time, and the established, healthy reiterations within lateral crown limbs suggest that this tree has potential longevity with good prospects for surviving the recent storm damage and developing into a veteran tree. However, the current habitat cannot be considered to be irreplaceable: These features could be replicated immediately by mechanical means.

**3.1.9** It is unfortunate that a data error in the tree schedule accompanying the Arboricultural Impact Assessment delivered by ACD Environmental has erroneously assigned the attributes of T13 to tree T118. T118 is a mature tree. The habitat features present within the crown are limited to several relatively small dead branches.

**3.1.10** Whilst trees T25, T28 and T113 have habitat features that are of value, the significance of these are insufficient for it to be appropriate to classify any of these trees as veteran trees.

**3.1.11** The habitat present within these three trees cannot be considered to be exceptional as required by the NPPF (2024) to afford the trees the level of protection appropriate for irreplaceable habitat.

## Qualifications and Experience

I have worked at Treework Environmental Practice, an industry leading arboricultural consultancy for 25 years and have been working within the arboricultural industry for 30 years (Appendix B).

I have been involved with the management of ancient and veteran tree populations for over 20 years.

I am currently a member of the Technical Advisory Panel for the Ancient Tree Forum.

I am a VETcert certified specialist at the consulting level (2019).

## References

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## Appendix A

### Treework Environmental Practice Internal Guidance - Ancient and Veteran Trees

## **Ancient and veteran trees**

### **Developmental phases or life stages**

As trees age they pass through a series of developmental phases reaching the ancient life stage as a result of a combination of physiological and resource limitations. An ancient tree is generally characterised by a reorganisation of the crown through a process of retrenchment, a tendency towards the development of individual and independent functional units, changes in crown architecture, and by decay processes that lead to hollowing in the bole and in principal stems. In terms of time, progression to the ancient life stage is highly variable between species, is dependent on the genetic disposition of the individual tree and the local tree population and is influenced by local growing conditions and available resources. Because an ancient tree is at a developmental phase, this status cannot be simply or neatly defined either chronologically, or in terms of the tree's size.

A veteran<sup>1</sup> tree is simply one that has developed characteristics that are typically found at the ancient life stage, but that has not progressed through developmental phases sequentially or over a period of time that might be expected for the local population of a certain species in particular growing conditions. An event, or series of events, causing physiological stress or physical damage, either natural or through human intervention, has interrupted the usual developmental processes.

The key attribute common to both an ancient and a veteran tree is longevity. Longevity confers on both ancient and veteran trees their primary value; an ecosystem that supports rare habitat. Longevity also distinguishes a veteran tree from a tree that is simply damaged or in terminal decline. For a tree to be classified as veteran it will have demonstrated a resilience in response to stress or damage. Both ancient and veteran trees can be expected to have, or have had, significant life expectancies within the current developmental phase. What counts as significant will vary between species and according to circumstance.

### **Ancient tree features**

Records spanning hundreds of years, charting the progress of a tree through the typical developmental phases are unlikely to be available to assist with defining the ancient or veteran status of a tree. Classification according to life stage will need to be reached based on the morphological features and characteristics that can be observed during an inspection. These features can then be considered together with a quantifiable dimension, such as stem diameter or girth.

The key characteristics that are likely to be present in many ancient and veteran trees are:

- Crown reorganisation or retrenchment involving the initiation and development of low and mid crown epicormic shoots together with dieback at the crown periphery
- The development of extensive hollowing in the bole and principal stems
- The tendency towards the development of potentially independent functional units (Lonsdale, 2013)

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<sup>1</sup> The term veteran has also been used as an umbrella term to describe ancient and non-ancient trees with comparable habitat features. In this document "veteran" means "non-ancient veteran".

- The tendency towards a shift in crown architecture from the hypertone to epitone mode (the preferential development of shoots on the upper surface of the limb) (Raimbault, 2006)

Further features that are frequently likely to be observed include:

- The development of reiterations and epicormic growth throughout the crown
- Evidence of a history of storm damage resulting in spilt and broken limbs, wounds, tears and scars
- Naturally formed stubs supporting live growth
- The presence of bark fluxes and exudations
- Retained deadwood in the crown and at the crown periphery
- Numerous holes and water pockets
- The presence of fungi and associated decay processes
- Significant bark wounds, loose bark and seams of dysfunctional cambium

Any basis for defining whether a tree is ancient or veteran relying on the presence of these features should take into account not only the number of features present, but the volume, quality and nature of those features with particular consideration being given to longevity. For example, recently initiated reiterations resulting from drought stress likely to precede the death of a tree should be distinguished from old, established reiterations that are evidence of a more progressive crown reorganisation.

### **The problem with the concept of age and size**

At any point during the life of a tree the individual parts will be at a range of ages, both chronologically and developmentally. That all parts of a tree are never at one developmental phase is the central issue in reaching a satisfactory definition of an ancient or veteran tree; the concept of ageing in animals does not transfer well to an understanding of ageing in trees.

In addition to the presence of certain morphological features ancient trees are likely to have large stem dimensions arising from annual increments being laid down over long periods of time. Guidance has been provided to attempt to aid classification of ancient and veteran trees according to stem girth such as Figure 1.3 below. However, growth rates vary between species, individuals and according to growing conditions, such that it is possible for a veteran tree to have a larger stem than a tree that has reached the ancient life stage, perhaps through the latter growing in unfavourable conditions.

A range of stem dimensions should be used in combination with the presence of morphological features with the aim of building an argument that a tree justifies the classification of ancient or veteran.

### **Growing conditions and life history create exceptions**

Basing a classification on the presence of morphological features or stem dimensions or even a combination of both does not guarantee that trees will be easily identified as ancient or veteran. It is

important that exceptions be allowed to properly capture the true population of ancient and veteran trees within a population.

The following are examples of trees that might warrant a deviation from following a rigid set of criteria for ancient or veteran status, based on numbers of morphological features or a minimum stem girth:

- A tree may be very old for the species but may not have attained an expected girth, simply due to extremely poor growing conditions; physiological stress may have delayed the progression of developmental phases. Classification as an ancient tree may or may not be appropriate depending on the presence or absence of morphological features and the corresponding habitat that confers the ecological value on an ancient tree.
- A fast growing individual in favourable conditions may be in the mature or late mature developmental phase whilst having reached a girth typical for an ancient tree of that species; it will not exhibit the morphological features that would be expected for a tree in the ancient phase.
- A regularly cut pollard may have a crown of regrowth in the juvenile developmental phase, and a girth that is diminished as a result of the continual, cyclical removal of the crown, but it may be chronologically old and the bole may be extensively decayed. A regular cycle of pollarding generally favours longevity.
- A lapsed pollard may have a crown in the mature phase, and a girth that is larger than the regularly cut pollard by virtue of the extended period that the crown has remained uncut. It may have ancient features related to the increased likelihood of failure of the mature lapsed pollard stems.
- A young shoot arising from the remnant roots or base of a collapsed decayed bole (phoenix growth) has no ancient features and is both developmentally and chronologically young, but is still the regenerative remnant of a tree that is in the ancient life stage. The decaying remains of the tree, the roots and the unique habitat inherent in the soil ecosystem remaining after hundreds of years of development, may retain value worthy of protection.
- Similarly a historic coppice stool can be thousands of years old, yet the above ground parts may comprise of re-growth in the juvenile or mature phase. The soil and debris within the decayed stool is likely to offer a rare and valuable ecosystem.
- The bole of a tree in the ancient phase may have decayed and broken up, or developed into individual functional units such that the measurable girth no longer reflects the number of years and the progression through developmental phases that have occurred. Morphological characteristics clearly indicate that the tree is ancient.
- A tree may have numerous morphological features consistent with a veteran tree arising from a series of events causing stress or damage, and have a large stem diameter, but it may simply be in a state of terminal decline, and without longevity the classification of veteran tree is arguably not appropriate.

### **Ancient or veteran?**

Ancient trees have the potential to be more valuable than veteran trees due to the length of time that they have supported the rare habitat associated with the typical morphological features present, and this is generally the case. However, given individual and local genetic variability and

wide ranging growing conditions it is possible for veteran trees to be older than ancient trees even where the trees are of the same species.

Given that pollarding interrupts the natural progression of a tree through developmental phases, it can be argued that a pollard can never be considered truly ancient (in a developmental sense) even where it reaches an age equivalent to an ancient tree, and supports the same ecologically rare habitat. However, pollarding tends to promote longevity and a pollard is likely to remain viable for longer than an ancient tree of maiden form. In this sense the distinction between ancient and veteran can be unhelpful if the aim is to conserve the most ecologically valuable trees.

Equally, whilst the soil and decaying remnants of a collapsed ancient tree may have value and this needs to be recognised, the phoenix shoot offers no more habitat value than a young tree.

It is often not possible to distinguish with any degree of confidence between an ancient and veteran tree in the field. Consequently the distinction should be subordinate to an assessment of the relative quality, variety and volume of the unique habitat supported, to the potential for longevity of the individual and to the context within which it is growing; a population of veteran trees within a diverse habitat is likely to offer greater ecological value than an isolated individual ancient tree.

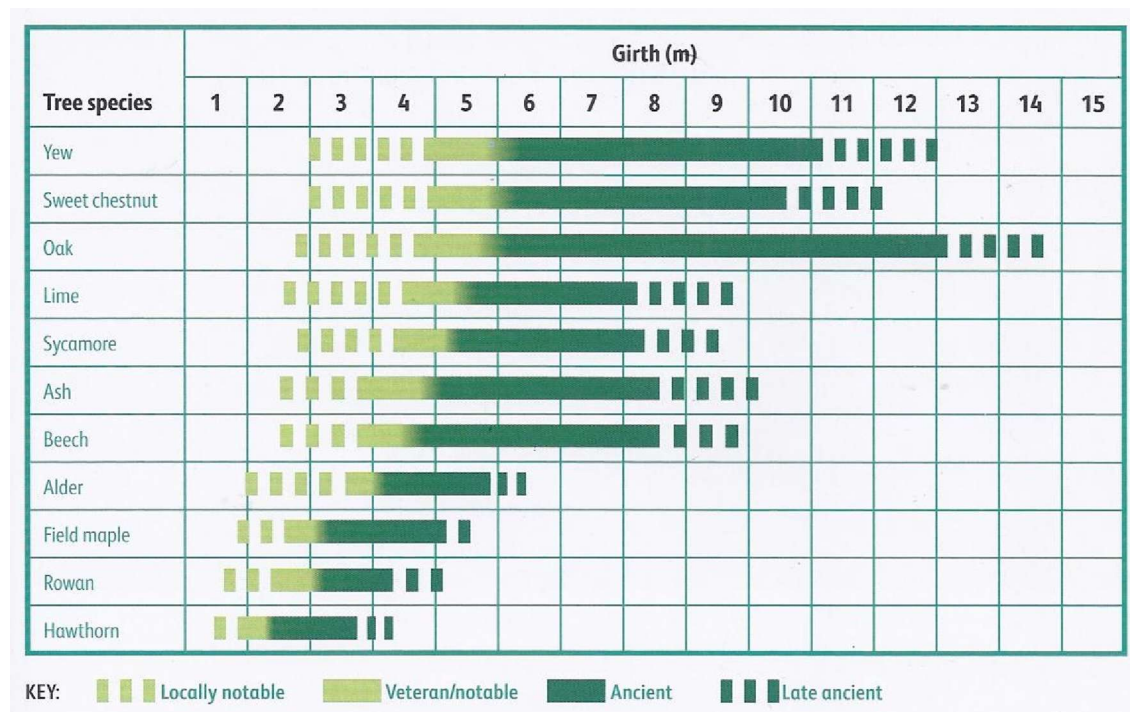


Figure 1.3 Chart of girth in relation to age and developmental classification of trees (Lonsdale, 2013)

## The value of trees

Trees can be chronologically old, of historical or cultural significance or may simply be locally important and loved and can, and should, be valued as such. Lonsdale (2013) proposes that such trees should be identified as “notable” specimens. Similarly, trees that support habitat features can



be noted as having such without being ancient or veteran. Such habitat value can be extremely important depending on the context within which the tree is growing.

Failing to distinguish between chronologically “ancient” trees, or trees that provide unique or rare habitat and those trees that have reached the ancient developmental phase is likely to result in confusion regarding the meaning of the term ancient and veteran. This has the undesirable potential to undermine the unique and rare status that a true ancient tree should possess.

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## Appendix B

### Paul Muir, Principal Arboricultural Consultant – Curriculum Vitae

# Curriculum Vitae



**Paul Muir**

Principal Arboricultural Consultant

## **Qualifications**

MSc Environmental Forestry – Specialising in Arboriculture and Urban Forestry, University College of North Wales, Bangor (1993-95)

BSocSc Economics Class 2.1, The University of Birmingham, Edgbaston (1988-91)

Risk Assessment for Commercial Arboriculture, FASTCO (2001)

Quantified Tree Risk Assessment (QTRA) (2006)

CSCS – Managers and Professionals (2017)

## **Areas of Expertise**

Tree structural stability and biomechanics/tree statics and the static load test

Tree risk management

Tree population management/inventory

Veteran and ancient tree management

## **Professional Membership**

Sachverständigen-Arbeitsgemeinschaft Baumstatik Group (SAG Baumstatik e.V) Member (2010)

## **Professional Experience**

### **2018-Present Treework Environmental Practice**

Principal Arboricultural Consultant

### **2005-2017 Treework Environmental Practice**

Arboricultural Consultant/Senior Arboricultural Consultant

Procurement, administration and management of large scale tree inventories for significant populations of trees managed by Treework Environmental Practice on behalf of a number of large estates and housing associations.

Carrying out individual tree risk/condition assessments and large scale surveys for amenity tree populations and veteran tree populations.

Responsibility for the supervision of contracting teams employed by Treework Environmental Practice's clients to undertake arboricultural work in relation to tree risk, veteran tree (specialist techniques) and on development sites.

Offering advice to developers on issues relating to trees, development and planning according to the principles set out BS5837: 2012.

Providing training for contractors on veteran tree management techniques in the UK and abroad.

The UK's leading authority on tree statics and static load test.

Delivering presentations at national and international conferences and events. Offering training courses in the UK and worldwide.

## 2000–2005 Treework Services Ltd

Arboricultural Department Contracts Manager

Management of a medium sized contracting tree surgery team involved in both domestic and large scale tree surgery contracts and specialising in veteran tree management and retrenchment pruning techniques. Achieved Arboricultural Association Approved Contractor status.

## Presentations

### 2018 Tree Root Stability – Static Load Test Theory and Case Studies

Centre for Urban Greenery and Ecology (CUGE), 8th Regional Arboriculture Seminar “Tree Feet Under”, NParks, Singapore.

### 2018 Safety Factors Versus Strength Loss: Appropriate Tree Failure Criteria and The Static Load Test – Increased Confidence Through Data Collection

One day workshop commissioned by the Centre for Urban Greenery and Ecology (CUGE), NParks Singapore.

### 2018 Long-term management of ancient and veteran trees. Case studies from the UK

Deutsch Baumpflegetage, Kletterforum (German Tree Care Conference, Climbers Forum), Augsburg.

### 2016 Safety Factors Versus Strength Loss. Choosing Appropriate Tree Failure Criteria and The Static Load Test. An Application of the Principles of Tree Statics

Is it VALID? Defects, Decay and Decisions Seminar Series. Tree risk assessment, tree statics and the static load test. Auckland, New Zealand and Brisbane, Sydney, Melbourne, Adelaide and Perth, Australia.

### 2015 Safety Factors Versus Strength Loss. Choosing Appropriate Tree Failure Criteria

Key note speech and biomechanics workshop. Arboricultural Association, Amenity Arboriculture Conference ‘Sustainability and the Urban Forest’, University of Warwick, UK.

### 2013 Tree Statics and the t/R ratio

Arboricultural Association, Regional Training Event. ‘Trees in the Natural and Built Environment’, Cornwall, UK.

### 2013 Strength loss or safety factors? Some basic principles that ought to define tree hazard assessment

London Tree Officers Association Seminar, Camden, UK.

### 2012 An Introduction to the Static Load Test and Static Load Test Demonstration and Case Studies

Municipal Tree Officers Association, West Bromich, UK.

### 2011 The Static Load Test: Tree Structural Integrity, Safety Factors and a Storm Resilience Protocol

Arboricultural Association, Utility Arb Conference. Looking Beyond the Problem. Market Bosworth, UK.

### 2011 Gorsedd Circle, Belle View Park, Newport – Longitudinal Cracks, Case Study

SAG Baumstatik AGM, Cologne, Germany.

- 2011 Static Load Test Demonstration**  
London Tree Officers Association, Mill Hill, UK.
- 2009 Tree Statics. Basic Engineering Principles and The Static Load Test and The role of detailed tree hazard assessments within the context of managing large populations of trees**  
CUGE Regional Arboricultural Conference, Singapore.
- 2008 Veteran Trees and The Principles of Good Management**  
English Heritage Training Course, 'Ecological Management of Historic Buildings and Sites, West Dean, UK.
- 2007 Statics Integrated Method. A practitioners field approach in the UK and The role of detailed tree hazard assessments within the context of managing large populations of trees**  
Treework Environmental Practice Seminar IX, Tree Statics: An Innovative European Perspective for Tree Diagnostics and Management, Blagdon, UK.
- 2005 Tree Statics. What can we learn from this new technology?**  
Arboricultural Association Amenity Conference, Exeter, UK.



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