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8th January 2025

To Whom It May Concern,

Reference: Cambourne to Cambridge Busway proposal
Proposal: Transport and Work Act Order to the Department for Transport (DfT) for a new busway, and travel hub, and also providing a path for walkers and cyclists linking Cambourne to Cambridge.

Objection – loss and deterioration of veteran trees

The Woodland Trust is the UK's largest woodland conservation charity and a leading voice in bringing to the attention of government, landowners and the general public the state of the UK's woods and trees. We own over 1,000 sites across the UK, covering over 30,000 hectares and we have over 500,000 members and supporters.

The Trust campaigns with the support of local communities, to prevent any further destruction of ancient woods and veteran trees. We are an evidence-led organisation, using existing policy and our conservation and planning expertise to assess the impacts of development on ancient woodland and veteran trees. Planning responses submitted by the Trust are based on a review of the information provided as part of a planning application.

Woodland Trust Position

The Woodland Trust **objects** to the proposed busway on account of the loss and deterioration of a number of veteran apple trees within Coton Orchard. The trees identified in the arboricultural survey are also recorded on the Trust's Ancient Tree Inventory (ATI)[1]. The table below provides further detail on these trees:-

Tree No.	ATI No.	Species	ATI Categorisation	Grid Ref
T5	248063	Apple (Bramley's Seedling)	Veteran	TL4130359069
T6	248064	Apple (Bramley's Seedling)	Veteran	TL4129759059
T7	248065	Apple (Bramley's Seedling)	Veteran	TL4130659056
T8	248066	Apple (Bramley's Seedling)	Veteran	TL4129659046
T9	248068	Apple (Bramley's Seedling)	Veteran	TL4128859036
T10	248067	Apple (Bramley's Seedling)	Veteran	TL4129559032
T11	248069	Apple (Bramley's Seedling)	Veteran	TL4128959025

[1] http://www.ati.woodlandtrust.org.uk/

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Ancient and Veteran Trees

Ancient and veteran trees are irreplaceable habitats and afforded a high level of protection in planning policy. They possess unique features which provide a rich and diverse range of habitats, playing host to countless other species. In particular, many rare invertebrate, fungi and lichen species are dependent on the decaying wood provided by such trees[2]. Veteran trees are disproportionately valuable parts of the natural environment and where they occur outside of woods they are also particularly important for landscape connectivity.[3] They are also an essential part of our landscape and cultural heritage.

Natural England and Forestry Commission's standing advice on ancient and veteran trees states that they "*can be individual trees or groups of trees within wood pastures, historic parkland, hedgerows, orchards, parks or other areas. They are often found outside ancient woodlands. They are also irreplaceable habitats.*

"A veteran tree may not be very old, but it has significant decay features, such as branch death and hollowing. These features contribute to its exceptional biodiversity, cultural and heritage value.

"An ancient tree is exceptionally valuable. Attributes can include its: great age; size; condition; biodiversity value as a result of significant wood decay and the habitat created from the ageing process; and cultural and heritage value."

The Planning Practice Guidance (PPG) for Natural Environment[4] provides additional clarity on the status of ancient and veteran trees. It states: "*Ancient trees are trees in the ancient stage of their life. Veteran trees may not be very old but exhibit decay features such as branch death or hollowing. Trees become ancient or veteran because of their age, size or condition. Not all of these three characteristics are needed to make a tree ancient or veteran as the characteristics will vary from species to species.*"

As with ancient woodland, Government's '*Keepers of Time*' policy stresses the importance of ancient and veteran trees: "*Ancient and veteran trees are rich in biodiversity. They provide food, shelter and breeding sites to large numbers of species including birds, bats, fungi and insects, which are often restricted in their distribution. They can be found both inside and outside of woodlands.*"

Planning Policy

The National Planning Policy Framework, paragraph 193, states: "*When determining planning applications, local planning authorities should apply the following principles:-*

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[70] and a suitable compensation strategy exists;"

Footnote 70 defines exceptional reasons as follows: "*For example, infrastructure projects (including nationally significant infrastructure projects, orders under the Transport and Works Act and hybrid bills), where the public benefit would clearly outweigh the loss or deterioration of habitat."*

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[2] https://www.ancienttreeforum.org.uk/wp-content/uploads/2015/02/ancient-tree-guide-6-special-wildlife.pdf
[3] Ancient and veteran trees. An assessment guide. (woodlandtrust.org.uk)
[4] https://www.gov.uk/guidance/natural-environment

While we appreciate that this proposal is an order under the Transport and Works Act, we do not consider that the loss of theses veteran apple trees is acceptable and that the applicant must redesign the proposals or identify alternative engineering solutions to ensure their retention and protection.

Net gain

The loss of veteran trees also has context for biodiversity net gain. Paragraph 187 of the NPPF states the following: "*Planning policies and decisions should contribute to and enhance the natural and local environment by: minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures*". Where an application involves the loss of irreplaceable habitats, such as ancient woodland or ancient and veteran trees, net gain for biodiversity cannot be achieved.

Impacts on Veteran / Ancient Trees

The proposal in question concerns the construction of a new busway linking Cambourne to Cambridge. The proposed development takes a route that sees it cross Coton Orchard, a large working orchard on the outskirts of Cambridgeshire that is designated as a Traditional Orchard on the Priority Habitat Inventory. Within Coton Orchard is a row of veteran apple trees numbering 12 individuals. These trees are of particular interest due to their veteran status and size and also cultural and historical value. The trees have special cultural and historical significance in that they are understood to be the surviving Bramley's Seedling apples from the orchard's original planting in 1922.

We are particularly concerned by the impacts of the scheme on these veteran apple trees. The route of the busway scheme is sited through the southern portion of this row of veterans. It appears that the scheme will result in the loss or deterioration of six of the identified veterans due to inclusion within the draft Order limits of the scheme: T5, T6, T7, T8, T9 and T10.

The applicant has addressed the trees in question, particularly within the document '*Appendix TR14.1 Coton Orchard Veteran Tree Review*', as well as mitigation / compensation measures for the trees discussed in '*Appendix TR14.2 – draft Veteran Tree Mitigation (including Compensation) Strategy*'. The applicant has stated that T6, T7 and T8 would suffer loss and T5, T9 and T10 would face deterioration.

From the proposed Order limits and busway layout provided, it is clear that trees T5 to T10 will be within or partially within the Order limits. As the applicant has detailed, trees T6, T7 and T8 would face direct loss while T5, T9 and T10 would be within the order limits and potentially subject to deterioration through encroachment on their root systems and adverse impacts on their rooting environment. It is also possible that T11, while outside the Order limits, could also be subject to deterioration from root encroachment during the construction phase.

It is essential that no veteran trees are lost as part of the development. The loss of any such tree can have a significant impact on local wildlife, particularly those which depend on the habitat provided by veteran trees. Veteran tree habitat is associated with specialist wood decay fungi and invertebrates. Where there is a wider population of veteran trees within close proximity, as in this case, there is a greater likelihood of rare species associated with

decaying wood habitat, aging bark and old root systems, such as specialist wood decay fungi and invertebrates.

As well as physical loss of some of the veteran trees, deterioration can occur where development is sited in close proximity to such trees. Trees are susceptible to change caused by construction / development activity. As outlined in *'BS 5837:2012 - Trees in relation to design, demolition and construction'* (the British Standard for ensuring development works in harmony with trees), construction work often exerts pressures on existing trees, as do changes in their immediate environment following construction. Root systems, stems and canopies, all need allowance for future movement and growth, and should be taken into account in all proposed works on the scheme through the incorporation of the measures outlined in the British Standard. Encroachment on the rooting environment of veteran trees can damage their root systems and result in changes to soil structure and condition that adversely impacts the tree and affect its vitality. Any detrimental impact to the longevity of individual veteran trees on site will have a significant impact on the veteran tree population as a whole.

Furthermore, where trees are retained and remain in close proximity to the busway, the need to manage the veteran trees for safety reasons may increase. Veteran trees feature significant deadwood habitat of great value for biodiversity, e.g. retained deadwood in the crown, broken or fractured branches, trunk cavities and wounds. As they age, these trees will inevitably shed limbs and branches, presenting a risk to their surroundings. As such, the health and safety risks associated with these trees will change and result in a requirement to manage them more intensively. This will lead to a loss of habitat from sanitisation of such trees through removal of deadwood, as well as the potential for consequential decline or need for removal.

Our concerns regarding the increased risk that veteran trees can pose when more exposed to human contact is supported by the guidance within David Lonsdale's 'Ancient and other Veteran Trees: Further Guidance on Management' (2013), which states in paragraph 3.5.2.1 *"…avoid creating new or increased targets: as happens for example following the construction of facilities (e.g. car parks or buildings) which will bring people or property into a high risk zone. Not only does this create targets, it also harms trees and therefore makes them more hazardous*". This is further supported by the BS 5837 guidelines referred to by the consultant, which state: "*particular care is needed regarding the retention of large, mature, over-mature or veteran trees which become enclosed within the new development*" and that "*adequate space should be allowed for their long-term physical retention and future maintenance*".

While we acknowledge the consideration given to these trees within the provided documentation, we have significant concerns both with the proposed loss and deterioration of these veterans, and also with some of the assessments and conclusions made within these documents. These are address further in the below section.

Comments on applicant's assessment of veteran status of trees

The applicant makes their assessment of the veteran status of these trees in Appendix TR14.1. The applicant correctly discerns that there is no single definition for ancient and veteran trees. They have then pointed towards the NPPF definition, as well as the Brislington Meadows appeal case, in which the Inspector provided a conclusion on the NPPF definition's use in decisions on whether to grant planning permission. We accept that the Inspector in

this case concluded that the NPPF definition should be used for ancient and veteran trees in deciding on planning applications; however, it is important to note that this decision was issued in 2023, and pre-dates the Government's most recent definition for ancient and veteran trees, provided within '*The Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024*'[5].

Within Appendix TR14.1 the applicant ultimately concludes that 10 of the trees are not veteran and only "*T9 and T12 are veteran trees in the context of NPPF*". For the reasons outlined below, we consider that the methodology used by the applicant is incorrect and have provided a recap of the relevant policies and definitions.

The National Planning Policy Framework (NPPF) provides the following definition for ancient and veteran trees: "*A tree which, because of its age, size and condition, is of exceptional biodiversity, cultural or heritage value. All ancient trees are veteran trees. Not all veteran trees are old enough to be ancient, but are old relative to other trees of the same species. Very few trees of any species reach the ancient life-stage.*" This definition does not seek to separately define ancient trees and veteran trees, and so other guidance should be referred to for this purpose.

While planning policy uses the terms 'ancient' and 'veteran' to describe trees that are considered to be irreplaceable and therefore worthy of protection, a further definition of these terms is provided by the Government's responsible bodies for the natural environment, Natural England and Forestry Commission. Their joint standing advice[6] states the following:

"Ancient and veteran trees can be individual trees or groups of trees within wood pastures, historic parkland, hedgerows, orchards, parks or other areas. They are often found outside ancient woodlands. They are also irreplaceable habitats.

An ancient tree is exceptionally valuable. Attributes can include its:

- *great age*
- *size*
- *condition*
- *biodiversity value as a result of significant wood decay and the habitat created from the ageing process*
- *cultural and heritage value*

Very few trees of any species become ancient.

A veteran tree may not be very old, but it has significant decay features, such as branch death and hollowing. These features contribute to its exceptional biodiversity, cultural and heritage value."

Further attention should be given to Planning Policy Guidance (PPG) for the 'Natural environment', which is guidance intended to provide further interpretation of the NPPF (updated on 21st July 2019). This states[7]: *"Veteran trees may not be very old but exhibit decay features such as branch death or hollowing. Trees become ancient or veteran because of their*

[5] The Biodiversity Gain Requirements (Irreplaceable Habitat) Regulations 2024
[6] https://www.gov.uk/guidance/ancient-woodland-ancient-trees-and-veteran-trees-advice-for-making-planning-decisions
[7] https://www.gov.uk/guidance/natural-environment

age, size or condition. ***Not all of these three characteristics are needed to make a tree*** *ancient or* ***veteran*** *as the characteristics will vary from species to species."*

The aforementioned Biodiversity Gain Requirements Regs (BNG Regs) published in 2024 by Government includes a definition of ancient trees and veteran trees. This states:

"*Ancient and veteran trees can be found as individual trees or collections of trees in any setting.*

Ancient trees have passed beyond maturity into an ancient life stage or are old in comparison with other trees of the same species which exhibit one or more of the following—

(i) demonstrably great age relative to others of the same species

(ii) changes to their crown and trunk development indicative of the ancient life stage

Veteran trees are mature trees that share physical and other characteristics in common with ancient trees, due to their life or environment, but are neither developmentally nor chronologically ancient. All ancient trees are veteran trees, but not all veteran trees are ancient. Veteran and ancient trees which have died are still recognised as such because they retain significant biodiversity value for many decades.

Veteran trees exhibit one or more of the following—

(i) significant decay features such as deadwood, hollowing or signs of advanced decay in the trunk or major limbs

(ii) a large girth, depending on and relative to species, site and management history

(iii) a high value for nature, especially in hosting rare or specialist fungi, lichens and deadwood invertebrates"

The above sets the context for ancient and veteran tree definitions within Government policy, regulations and guidance. To only consider the NPPF definition – the earliest of these definitions and has not been updated since 2018 – would not accurately represent more recent updates provided by Government on what it considers to be an ancient or veteran tree.

Veteran features are not necessarily a product of tree age or size; they also develop as a result of a tree's life or environment. This is particularly emphasised within the PPG and BNG Regs 2024, in which the key characteristics of size, age or condition are considered separately. A key function of the term 'veteran' is to capture trees that have exceptional habitat value as well as those with cultural and heritage value. The term is not a true ecological grouping and serves to help us to identify trees which are important for biodiversity in their own right, and as part of a wider assemblage; veteran trees are important for the accumulation of features that are unable to be replicated within our lifetime.

Identifying and evaluating veteran features requires the application of knowledge, experience and judgement. We acknowledge that government definitions do not provide precise, measurable parameters against which to easily recognise veteran trees. However, guidance from Natural England and Forestry Commission, definitions within BNG Regs and expert

reference texts do together provide clear instruction that tree girth **should not** be used as the main qualifier for veteran classification.

Turning to the RAVEN2 system – on which the applicant relies fairly heavily for their assessment – a significant part of this methodology is the assessment of size of trees. This is predicated on a table (Fig 1.3) contained within David Lonsdale's publication '*Ancient and other veteran trees: further guidance on management*' (published 2013). It is worth noting that this table was created using records on the ATI from 2013 and therefore this table relies on outdated data. We also consider that this table is not a poor visual representation of data, partly in that it does not show the distribution of data or a measure of error.

Regardless of this, the use of large girth as a disqualifier for veteran status is in conflict with the aforementioned policies and guidance. The basis for this is ecologically unsound; the size of a tree can be affected by growing conditions, soil quality, nutrient availability, light and competition, life history and management, to name a few factors. As such, the approach of size as a disqualifier of veteran status results in erroneous conclusions around their designated status incorrectly facilitating the removal of trees and allowing for inadequate protection.

We consider that the applicant's approach draws on two flawed methodologies to identify veteran trees based on girth criteria. In paragraph 2.2.11, 43.1% of the largest girthed apple (635cm) is set as an arbitrary cut off for certainty to qualify as veteran status. Firstly, it is unclear why 43.1% of the largest girth should constitute a suitable cut off. Secondly, this approach takes the largest tree from the Tree Register, which by virtue of its status as a champion represents an extreme of the distribution and is hence likely to be a statistical outlier and an anomaly amongst the population of apple trees. A more statistically robust and valid approach would be to assess the tree's girth using a population level approach that considers the distribution of girths amongst the population.

Table 1 from Fay (2007), as well as being dated, is not supported by empirical data and thus represents opinion. It also does not include apple, although it does include "*other smaller tree species*". Furthermore, the empirically derived (but also dated) Table 1.3 is in direct contradiction, with rowan, field maple, and hawthorn being examples of trees that could be considered notable while below the 2m threshold of Fay (2007).

The ATI is the most comprehensive database of ancient and veteran trees and is the best source of data for determining the size of ancient, veteran and notable trees. After quality control, filtering, and removal of the top and bottom 25th percentiles to remove the undue influence of outliers, there are 545 records for apple in the ATI. The mean girth of veteran apples is 1.66m and the median 1.58m. Thus, the girth of trees T5, T6, T7, T8, T9 and T10 puts them in the top 50% of girths for veteran apples in the ATI and so discounting these trees as veteran based on their girth (Table 1) does not add up. The distribution of girths for apple trees recorded in the ATI demonstrates that specific and arbitrary girth thresholds cannot be used to distinguish veteran, ancient and notable classes adequately. We have provided some tables and girth distributions of apple trees on the ATI in Appendix 1 at the foot of this response.

Following assessment of age and size, the applicant makes an assessment of condition of the trees. They do so using the RAVEN2 methodology, as well as taking from other works that are over 10 years old, or even 20 years old in some cases. The applicant goes on to argue that no RAVEN2 primary veteran features are present in trees T5, T6, T7, T8, T9 or T10. RAVEN2

specifies that decay and hollowing should be extensive, putting a 400cm^2 prescription on extensive decay. For small tree species, such as apples, this criteria is unlikely to be met and therefore, the assessment criteria and the RAVEN2 methodology fail to consider variation in the size of different tree species. Significant decay features should be assessed in relation to what might be expected considering the size of the species, e.g. features should be "*extensive*" in relation to the size of the individual tree species being assessed.

Furthermore, it is unclear what is meant by "*extensive*" in the RAVEN2 methodology; this is an undefined qualifier. All trees considered feature hollowing according to the applicant's assessment, and by virtue of hollowing being the final state of *extensive* decay, they also must feature significant decay. If these trees don't currently meet the undefined and arbitrary qualifier "*excessive*" in the RAVEN2 methodology, these decay features, and their associated high biodiversity value, would be expected to increase in value over time as decay progresses. Thus, their already high biodiversity value is also expected to increase in time.

The applicant states in paragraph 1.1.5. that the Trust's ATI "*uses definitions not aligned with planning.*" They go on to conclude that "*Trees included in the ATI are therefore not necessarily ancient or veteran in the context of planning.*" It is not specified within this response why the ATI does not align with planning and so this statement appears to be unfounded. Age, size and condition are all emphasised within the online resources provided by the Woodland Trust and within the training afforded to any volunteer verifiers. In the case of these trees, they have been assessed and verified as veterans by David Alderman. David is a freelance dendrologist and Director (Hon) at The Tree Register. As part of the Tree Register partnership with the Woodland Trust he is the Head Verifier for the ATI.

The applicant recognises that when using the definition within the BNG Regs, the trees in question should be considered veteran specimens. We do not agree with the applicant's separation of trees as either NPPF veterans or BNG Regs veterans. This reasoning appears to deliberately confuse the situation with regard to defining ancient and veteran trees, missing the point on why such trees are protected – the presence of irreplaceable and exceptional habitat. The veteran apple trees within Coton Orchard comprise a coherent arboricultural unit and impact to any of the individual trees within the cohort detracts from the ecological, cultural and heritage value of the cohort of veterans as a collective.

In line with PPG (the guidance outline above that is intended to supplement the NPPF policies), all identified trees have significant and long-lasting dead wood habitat, as identified by the consultant. Thus, all trees can be considered veteran under both PPG interpretation of the NPPF and the BNG Regs. They are all large for their species and clearly fully mature trees featuring significant deadwood features and must be protected as the veterans they clearly are.

Mitigation and Buffering

As stated above, veteran trees are susceptible to damage from construction and development activity. Paragraph 5.2.4 of BS 5837 guidelines states that "*particular care is needed regarding the retention of large, mature, over-mature or veteran trees which become enclosed within the new development"* and that *"adequate space should be allowed for their long-term physical retention and future maintenance*".

Veteran trees are irreplaceable habitats and should be protected from loss, deterioration or harm. Natural England and Forestry Commission have identified impacts of development on

ancient and veteran trees within their standing advice[8]. This guidance should be considered Government's position with regards to development impacting on veteran trees. The applicant should ensure that the proposed works will not result in any detrimental impact on veteran trees in line with paragraph 193 of the National Planning Policy Framework (NPPF) and Natural England and Forestry Commission's standing advice.

In particular, the standing advice states that:

"Mitigation measures will depend on the type of development. They could include:-

- *putting up screening barriers to protect ancient woodland or ancient and veteran trees from dust and pollution*
- *measures to reduce noise or light*
- *designing open space to protect ancient or veteran trees*
- *rerouting footpaths and managing vegetation to deflect trampling pressure away from sensitive locations*
- *creating* ***buffer zones*****"**

Whilst BS 5837 guidelines state that trees should have a root protection area of 12 times the stem diameter (capped at 15m), the guidelines also recognise that veteran trees need particular care to ensure adequate space is allowed for their long-term retention. Natural England and Forestry Commission's standing advice states the following with regards to root protection areas/buffer zones: "*For ancient or veteran trees (including those on the woodland boundary), the* ***buffer zone should be at least 15 times larger than the diameter of the tree****. The buffer zone should be* ***5 metres from the edge of the tree's canopy if that area is larger than 15 times the tree's diameter****. This will create a minimum root protection area. Where assessment shows other impacts are likely to extend beyond this distance, the proposal is likely to need a larger buffer zone.*"

It is not clear whether the applicant intends to provide the standing advice buffer zone of 15 times stem diameter to retained trees T5, T9 and T10, or whether the applicant intends to provide the capped 15 metre RPA. As such, we are unable to determine how the veteran trees will be appropriately protected from any encroachment within their rooting area during either the construction or operational phase of the development.

In any case, the Trust's position on this scheme is that redesigns of the scheme layout or alternative engineering solutions must be sought to prevent the loss and deterioration of the veteran trees on site. If the loss and deterioration of these veteran trees cannot be avoided then we consider that this development should not be allowed to go ahead in its current form.

Conclusion

Veteran trees are irreplaceable habitats and must be protected from loss, deterioration or harm. Any development resulting in the loss of a veteran tree should not be taken forward unless there are wholly exceptional reasons.

The Woodland Trust **strongly objects** to this Order on the basis of loss and deterioration of at least six veteran trees, and wider harm to the local environment. We consider that in its

[8] https://www.gov.uk/guidance/ancient-woodland-ancient-trees-and-veteran-trees-advice-for-making-planning-decisions

present form, this scheme should not be taken forward on account of the adverse harm to these irreplaceable habiats.

We hope you find these comments helpful - if you would like clarification or further advice, please contact us at planningcasework@woodlandtrust.org.uk.

Kind regards

Jack Taylor *DipArb (L4), TechArborA*
Programme Lead – Woods Under Threat
Woods Under Threat Team

Appendix 1

Table.1 Summary statistics of apple tree girths reported in the Ancient Tree Inventory (data curation date: 28/8/2024)				
Status	***Mean (SD)***	***Median***	***25th Percentile***	***75th Percentile***
Notable tree	***1.51 ± (0.46)***	***1.50***	***1.13***	***1.85***
Veteran tree	***1.66 ± (0.53)***	***1.58***	***1.27***	***2.00***
Ancient tree	***1.80 ± (0.54)***	***1.83***	***1.43***	***2.15***

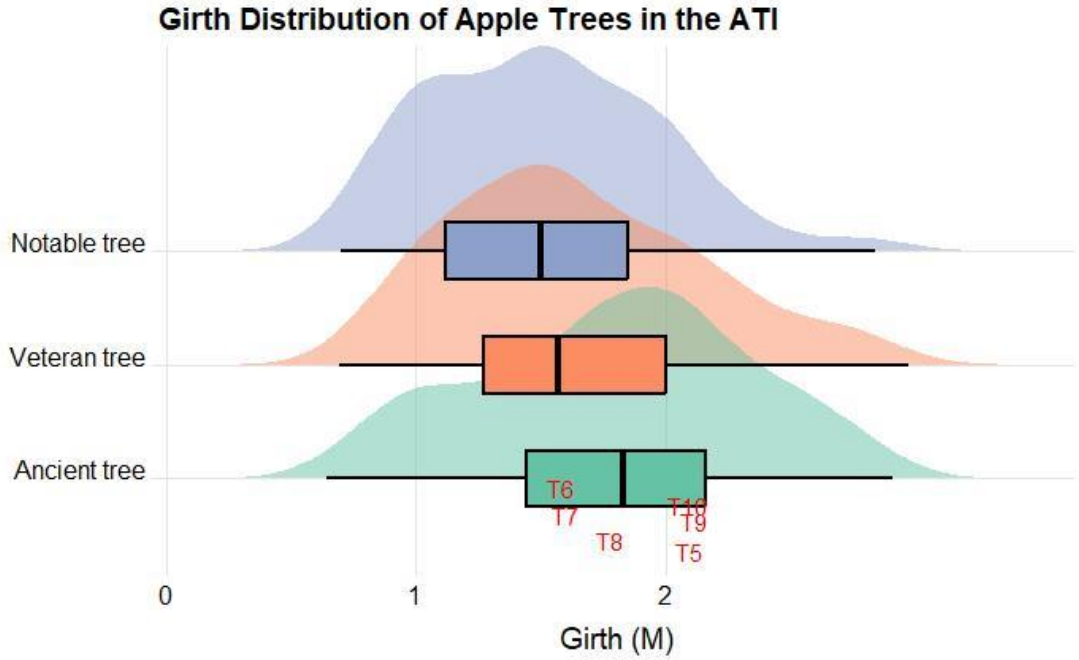

Figure 1. Box and whisker plots showing the distribution of girths for Apple trees recorded in the Ancient Tree Inventory. Boxes ends show the 25th and 75 percentiles respectively and the vertical line the median average.