Practical Guidance

Ancient and veteran trees

Caring for special trees on farms

July 2021

WOODLAND TRUST

ANCIENT TREE FORUM

Contents

Introduction

This guide will help you identify any ancient and veteran trees on your land and highlight their importance. It provides the information you need to protect the trees in your care and secure their future.

Our farmed landscape features many ancient and veteran trees; trees that are remarkable because they are old, large or very rich in wildlife habitats. Ancient and veteran trees (AVTs) are widely distributed across all parts of the country[1], where good stewardship and conditions have allowed them to remain rooted for hundreds of years. You might find them around farm buildings, as boundary trees or in hedgerows, in fields, woods, copses and orchards. They might have been working trees that were prized by previous generations for their fruit, nuts, fodder and wood.

Greater integration of trees and farming can deliver wider environmental benefits and add value to many farming systems, whether mainly arable or pastoral. Although ancient and veteran trees have irreplaceable conservation value, today they can be overlooked or underappreciated. As with crops or livestock, they can require active management.

Trees can improve animal health and welfare, boost production and provide wider environmental benefits. Please take extra care of your ancient and veteran trees; let them continue growing old.

Paul Glendell/ WTML

What are ancient and veteran trees?

Ancient and veteran trees are the most valuable trees for nature and are important stalwarts of our cultural landscape. Some of them have lived for hundreds or even thousands of years. These trees don't always look the same, depending on the species, their location and the conditions in which they are growing. In short, you can recognise ancient and veteran trees if they appear old, are large, or display certain features.

Recognising ancient and veteran trees

Trunk hollowing and large decaying branches are key features that help to identify ancient and veteran trees.

They are often, but not always, quite large, depending on the species of tree and the environment in which it is growing. Trees with typically smaller stature, such as hawthorn, are also invaluable.

Ancient trees can display 'old-looking' bark and a squat appearance.

Veteran trees are mature trees that share many of the features of ancient trees. They are recognised by trunk hollows, cavities and rot holes, dead or broken branches and fungal fruiting bodies that indicate wood decay.

Ancient trees are also veteran trees but are the very oldest examples of their kind. Some species usually live longer than others, with birches reaching around one hundred years. Others, such as oaks and yew, top the age charts at over one thousand years. An ancient tree might be distinguished from a younger veteran by a low and squat shape, and a smaller and reduced crown. They often have very wide trunks compared with similar trees growing nearby.

Liz Fleming Williams/WTML

Why are ancient and veteran trees important?

For wildlife

These large, old, or habitat-rich trees are rare, and they cannot be replaced by any number of younger trees. They offer special environments such as fissured or flaking bark, water pockets and sap runs. They provide soft, squishy or crumbly decaying wood resources and a great variety of crevices, holes and hollows. These all take time to develop and are hard to replicate.

A wide range of wildlife will shelter, nest or roost in the various holes, cavities and hollows of AVTs. Birds and bats are perhaps the most obvious. Some birds, such as woodpeckers, play a crucial role by excavating holes in decay-softened wood, while many others nest in naturally-formed or abandoned holes. AVTs also host specialist groups such as insects, fungi and lichens. Around 2000[2] insects and other invertebrates, like slugs and spiders, spend part of their life cycle in AVTs and decaying wood. Certain groups, like beetles, are known to be very threatened[3].


Laurie Campbel/WTML

In the landscape

Ancient and veteran trees have great historical and cultural importance. They have stood through momentous historic events and are local landmarks with associated memories and stories.

Many ancient and veteran trees were part of our ancestors' subsistence and economy. Changes in farming and forestry have meant that old, working trees were somewhat forgotten. For example, pollarding was the practice of pruning trees at regular intervals for leaf fodder or wood. Trees including elm, ash, poplar, oak and holly were all used as fodder trees[4]. Today, this historical practice is of renewed interest as a component of modern agroforestry, offering nutritional and medicinal benefits to livestock[5].


Mervyn Jones

Connecting generations. In 1901, Mervyn Jones' great aunt Polly had her wedding photographs taken under an old oak tree. Now called the Brimmon Oak, this tree still stands on Mervyn's farm today, thanks to his campaign to save it from a new bypass road. It was voted the UK's Tree of the Year in 2016, and narrowly missed out on the European title.

On the farm

Ancient and veteran trees work hard. They are our existing carbon stores that will continue to capture carbon in wood and in the soil around them[6]. They stabilise soil, and are homes for species that boost or provide important farm services. They add complexity to the farm, increasing the number and variety of nests or shelter for the natural enemies of pests and beneficial pollinators.

Protection and care of AVTs could be considered part of an integrated pest management (IPM) approach. For example, studies show that the diversity of caterpillar-eating beetles is higher around veteran oak trees than younger oaks[7]. Some birds can also provide biological control, including insect-eating birds such as the great tit[8] and those that eat small mammals, such as barn and tawny owls.

Some hoverflies[9] are fantastic farm helpers, providing both pollination and pest control. A further 300 species of insect pollinators such as bees, beetles and flies also begin their lives in AVTs and decaying wood, and up to 40% are of conservation concern[10]. Together, these species add up to a lot of pollination for agricultural crops and wild plants.

Unlike archaeological sites and historical buildings, our ancient and veteran trees are often unrecognised and unprotected. Although these trees have demonstrated their resilience through time, many of today's pressures have no precedents.

Ancient and veteran trees are a crucial part of our nature-friendly and productive landscape, so taking care of them is a win-win situation.

Paul Glendell/WTML

Paul Glendell/WTML

Seek the latest news and advice from a farming adviser; there may be funding options to help keep trees living and standing for years to come.

How to care for the trees on your land - guiding principles

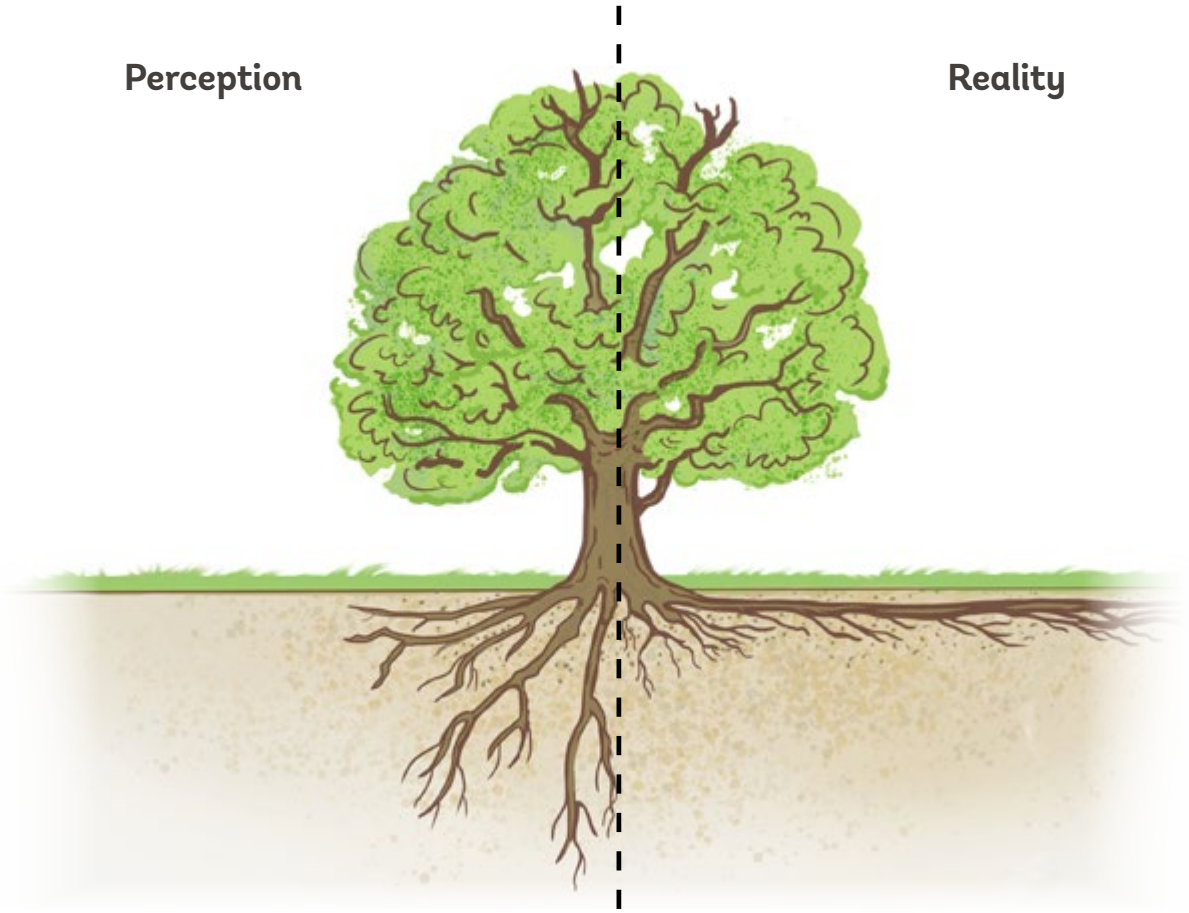
1. Give ancient and veteran trees as much space as possible, both above and below the ground

Allow the tree crown adequate spreading room. Pruning can be stressful for older trees, and removing or damaging large limbs can imbalance them. Drastic changes in their environment, such as light levels or exposure, can also cause stress and should be minimised. Avoid carrying out activities too close to trees. Plan ahead so that access by tall machines or the construction of farm buildings does not result in unnecessary pruning.

Protect the ground surrounding a tree to prevent root and soil damage. Limited activities should occur on the land surrounding ancient and veteran trees because damage to the roots, soil and soil organisms via compaction, cultivation and agricultural inputs can significantly reduce their lifespan. The amount of damage to soil can vary, for example, by your soil type, or by each different farming activity.

Soil is more than a substance. It is a living system, packed full of tiny animals and other microorganisms. It is as fundamental to trees as it is to the farming business. Fungal networks - called mycorrhizal fungi - link to tree roots to provide nutrition and protection from diseases. These networks can spread through soil beyond the spread of tree roots and are vital to a tree's health.

We recommend that a root protection area is usually a circular area around a tree with a radius that is fifteen times the diameter of its trunk (measured at 1.3 metres above the ground). Or, it should extend five metres beyond the spread of the tree's crown if this is a greater area. If you can accommodate a further buffer zone beyond this root protection area, do so, as this can further reduce the amount of wind-blown applications or splashing near the tree.



Hidden from view. Roots are an often forgotten part of a tree but are just as important as the trunk, branches and leaves. Roots in soil are generally shallower, but extend further than is commonly thought.

2. Retain dead trees and decaying wood

Value and keep dead trees and wood wherever possible. Decaying wood supports specialist wildlife that need it to survive, and also slowly recycles valuable minerals and other nutrients back to the soil. All forms and sizes are important; dead attached branches, fallen branches and trunks lying on the ground. Even standing dead trees are rare and precious habitats.

If a tree must be cut down, for example if there are serious safety concerns, it is rarely necessary to cut it at ground level. Instead, leave tall stumps that can continue to break down gradually. Leave fallen branches uncut and where they lie – a little untidiness here can be very beneficial. Alternatively, move them to convenient spots (mix between sunny or shady), or use them to protect trunks and roots from livestock.


Emma Gilmartin

3. Look to the future

Identify veteran trees of the future. Trees can live for hundreds of years but are easily lost. If a veteran tree falls or is felled, its special features will disappear from the area and cannot be replaced by young trees in the short-term. A continuous succession of trees, representing a variety of ages, is key. Are the next generation already growing nearby? Allow these mature or existing trees to become successor trees by also giving plenty of space to their roots, trunk and crown. Record or mark these on a farm plan.

Establish any new trees well away from existing veteran or ancient trees to avoid creating competition for light, water or nutrients. If planting a new generation, establish a mixture of native, locally-grown species, both in fields and in hedgerows. Include flowering trees and shrubs to provide pollen and nectar sources. Create new pollards from young trees, as this practice can deliver useful products as well as increase the rate at which trunk hollows develop[11].


Megan Gimber

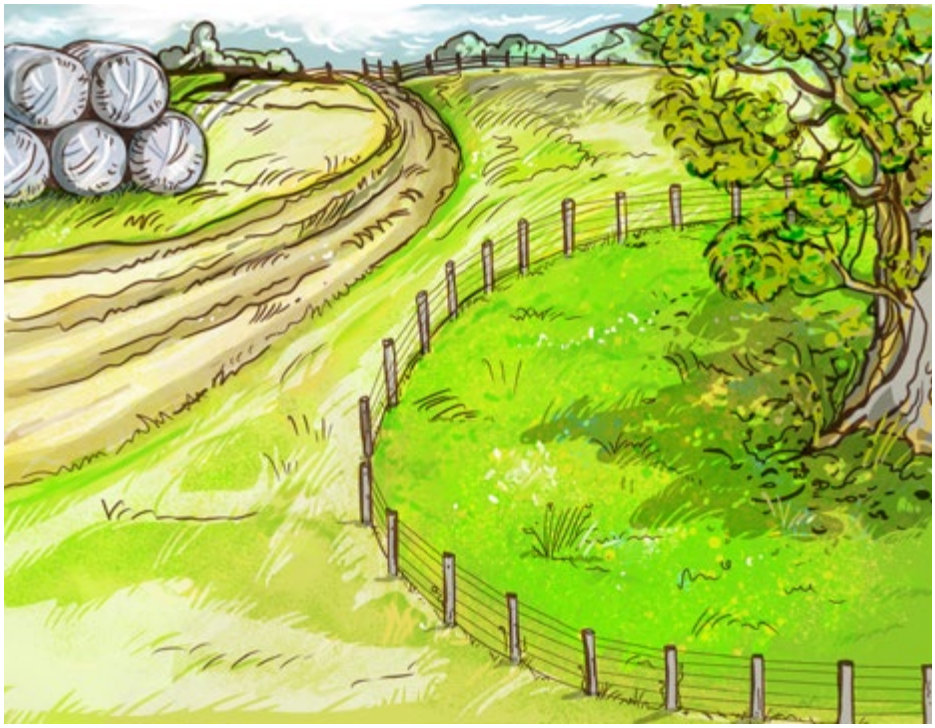
Common farming activities and best practice

Cultivation and ditching

Soil disturbance through ploughing, digging and ditching damages roots and soil structure, disrupts microorganism communities and breaks fungal networks.

Best practice

- Provide a root protection area around trees to prevent damage to roots, soil structure and other organisms. Adopt a policy of no cultivation within this area.



Vehicle access and materials storage

Soil compaction due to heavy vehicles or stacked materials reduces soil pore volumes, air availability and water drainage. Often, the first pass of vehicles do the most significant damage[12]. These effects on soil vary depending on soil type and moisture, and the weight, pressure and speed of vehicles. Compaction around trees can be more difficult to ameliorate than elsewhere on the farm, since methods can cause further harm to tree roots and mycorrhizal fungi.

Best practice

- Avoid creating any new routes within the root protection area. As a last resort, take measures to minimise impact by avoiding work in wet conditions and reducing tyre pressure and the number of trips made across.
- Operate a controlled traffic farming (CTF) system, in which machinery routes are planned and must pass over the minimum possible area of ground.
- Designate storage areas away from trees.

Application of fertilisers, pesticides and animal medicines

The presence of mycorrhizal fungi, soil animals[13] and microorganisms are crucial for good soil and tree health. These are specifically harmed by fertilisers, pesticides and the excreted residues of veterinary medicines. Lichens occurring on the bark of ancient trees are also sensitive to air pollution and are harmed if sprayed by chemicals or slurry.

Alastair Hotchkiss/WTML

Small-leaved lime overlooking a poultry unit. Some impacts to trees and their special wildlife are less visible to us, such as ammonia pollution in the air.

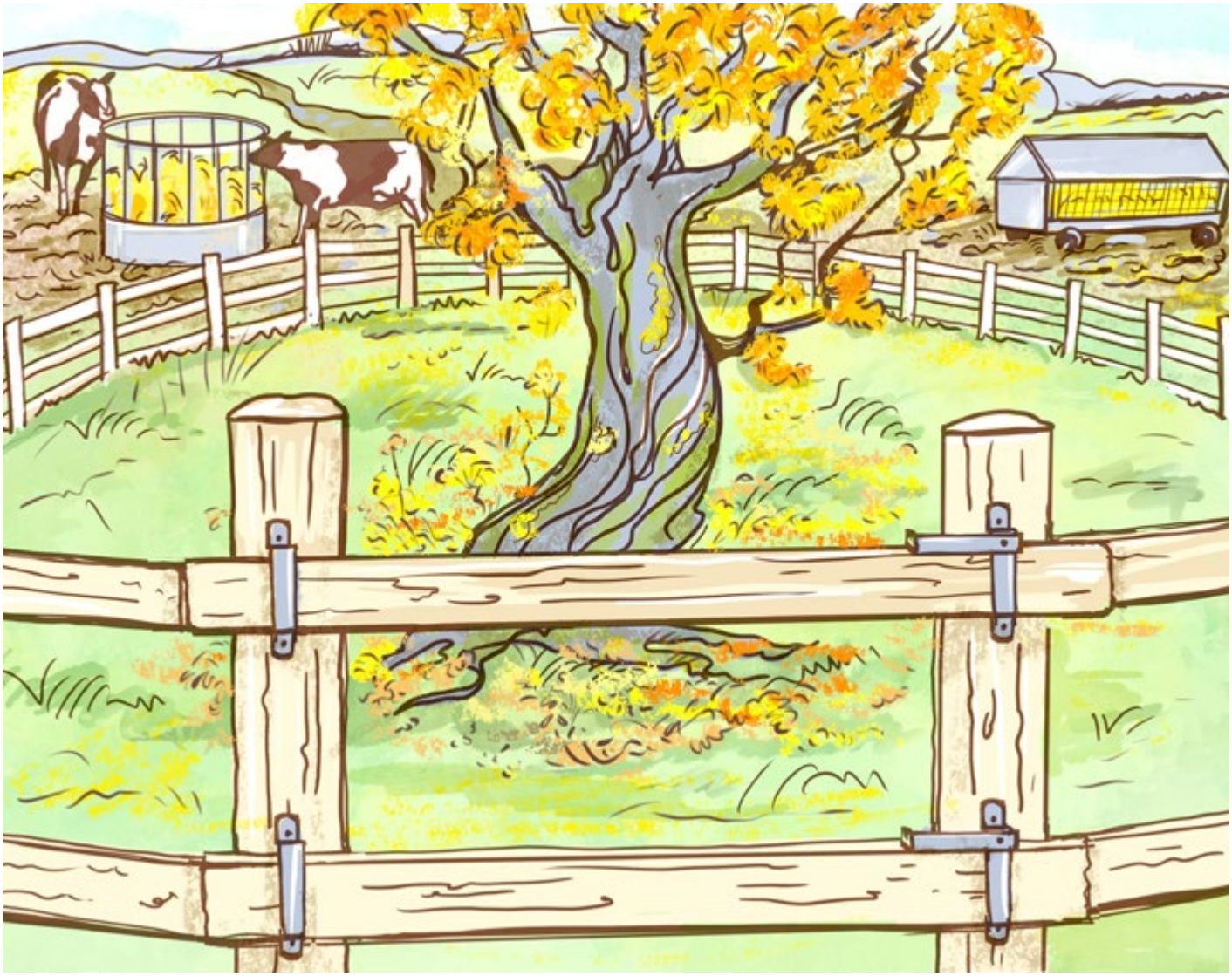
Best practice

- Provide a root protection area and avoid application of fertilisers or pesticides near tree roots and trunks of trees.
- Consider allowing further no-input buffer zones beyond root protection areas and along hedgerows to reduce splash and wind blow of applications.
- Use low emission spreading technology, like trailing shoes, dribble bars and injection systems.
- Establish tree buffers or shelterbelts[14] around sources of pollutants like poultry units. These can recapture ammonia and disperse and reduce nitrogen deposition.
- Move animals treated with veterinary products away from ancient and veteran trees for the duration of the medicine's withdrawal period.

Grazing animals

Appropriate grazing levels are crucial to ancient and veteran tree management; grazing pressure that is too high or too low can each have negative consequences. Larger and heavier herds can cause poached ground beneath trees. Excessive vegetation growth can shade trunks, lichens and insects, creates competition for light and nutrients, and may cause a fire risk.

A balanced grazing regime needs to minimise soil, root and trunk damage while allowing sufficient browsing to reduce competition from vegetation and adequate sunlight.



Tim Kellet

Many AVTs have grown in grazed, unimproved pastures, but high stocking density can also cause damage.

Best practice:

- Locate supplementary feed, salt licks, drinking troughs and manure heaps away from ancient and veteran trees.
- Provide alternative sources of shade or shelter for livestock, including new hedgerows and in-field trees.
- Limit the frequency and length of time that stock graze or congregate near ancient and veteran trees, using slip fencing for intermittent grazing around them, or other physical barriers, like dead wood.

Pruning and cutting of trees and hedgerow management

It can be tempting to cut back trees in order to achieve a tidy, maintained appearance, but excessive pruning can stress trees, reducing their ability to create food for growth, destabilise their structure and limit their lifespan. The removal and loss of large limbs also reduces their wildlife value. However, cyclical pruning through pollarding or coppicing may prolong a tree's life.

Robert Read/WTML

Standard trees within hedgerows also benefit from sensitive management.

Best practice:

- Carefully consider the cutting of AVTs. Where possible leave lower limbs intact. Leave torn limbs or storm-damaged crowns to recover naturally unless there are clear safety[15] or other reasons not to.
- Ask an arboricultural professional for advice before cutting trees, especially lapsed pollards. Plan minimal reductions that reduce tree crowns in stages over several years[16].
- Identify trees within hedgerows and manage them similarly to those in other surroundings - hand-trimming either side of the tree will reduce the risk of accidental damage by the flail.

GOOD

Good veteran tree care focuses on providing space, valuing decaying wood and looking to the future. The rooting area is protected from common farming activities, vehicle access across tree roots is avoided and farming materials are stored away from trees. Decaying wood is present on the ground and a new generation of trees is already growing nearby.

BAD

Poor veteran tree care concentrates impacts around and under trees. Soil damage is evident by vehicle ruts and bare ground, and materials or animal feeding stations are found close to the rooting area. Decaying wood is removed or cut up. The future of this tree looks bleak and there are no other veteran trees around.

Further information

Are there ancient or veteran trees on my farm?

The Ancient Tree Inventory is a database of ancient, veteran and notable trees in the UK. You can view existing tree records or upload new ones. It can be both a useful source of information to find out if there are AVTs in your area, and for recording those on your own land. All trees added to the inventory will be verified by experts.
ati.woodlandtrust.org.uk

Useful links

woodlandtrust.org.uk/farming

ancienttreeforum.org.uk

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