

Policy Paper

Our Conservation principles and approach



WOODLAND
TRUST

Front cover: The Tawny Owl (*Strix aluco*) is a much-loved but rarely seen nocturnal inhabitant of large mature trees in woods from northern Scotland to southern England. (L. Campbell)

We need to act now to protect, restore and create ecosystems that are diverse and rich in wildlife, resilient to pressures and shocks, and relevant to people's lives

Ferns and mosses festoon a tree in the Atlantic rainforest of west Wales. (C. Reid)

It's vital that our approach to our conservation activities is consistent and widely understood across all of our work. This means in the woods we own, when we work with others, through our research, policy and campaigning and embedded in our volunteering, fundraising and communications.

What is conservation?

Conservation means perpetuating, restoring and enhancing the richness, abundance and diversity of life on Earth and the natural processes which underpin it - through care and respect for the natural environment, and the sustainable use and management of natural resources.

We are all part of the natural world, bound to it by our evolutionary history, reflecting it in our cultural development and dependent on its resources. The natural world, including woods and trees, provides us with clean air and water, food, fuel and materials, space for recreation and inspiration, as well as places for wildlife.

People also have the ability to shape the environment and to cause massive and rapid change. Environmental change is not new. The planet's natural systems are dynamic and constantly adapt and evolve. However, the current rate and scale of man-made change and exploitation of natural resources is unprecedented - there is a real danger that the environment will suffer catastrophic and long lasting harm, in turn affecting our quality of life and potentially human existence.

The UK's environment has been modified to the extent that there are no truly wild places left. Multiple pressures - from climate change, pollution, habitat fragmentation and loss, species extinctions, increased pest and disease impacts and unsustainable land-use - are undermining ecological systems, impacting their ability to provide the foundation for the survival and well-being of humans and other species.

We need to act now to protect, restore and create ecosystems that are diverse and rich in wildlife, resilient to pressures and shocks, and relevant to people's lives.

Conservation at the Woodland Trust: our principles and approach

Our conservation activities focus on the protection, creation, restoration and management of native woodlands and trees in the context of the wider landscape - both rural and urban.

We are seeking to achieve a network of woods and trees that are bigger, better. more and more joined up.

Delivering landscape-scale conservation requires a collaborative approach, working with partner organisations, landowners and communities to develop diverse, wildlife-rich and resilient landscapes that engage and benefit people.

Our six key principles for conservation, and the rationale for each, are explained below. We then outline the approach we will take to deliver our conservation outcomes, adhering to these principles.

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Showing the love for an ancient oak in the Fowey Valley, Cornwall (C. Reid)

Our six key principles

1. We prioritise native woods and trees
2. We take account of whole ecosystems, landscapes and catchments
3. We consider the geographical and historical context to inform the future
4. We actively create and manage woods and trees
5. We aim to secure the many values of woods and trees for the long-term
6. We put people at the heart of conservation

The rationale for our principles

1. Why we prioritise native woods and trees

Native species are those which have colonised the UK naturally since the last ice-age. Native trees and shrubs have a long history of co-evolution with other native species such as fungi, insects, birds, and mammals. Because of this, our native habitats tend to be the richest and most diverse for wildlife. They are also well adapted to the geology, soils, topography, climate, day length and biotic environment of the UK. They form characteristic and interdependent communities of species and help shape our distinctive landscapes.

All the UK's natural habitats have been modified to some extent through use and management. Since they can no longer be considered completely untouched, we often refer to them as 'semi-natural'.

The introduction of non-native trees, shrubs and other plants has been happening for thousands of years – to provide food for people and livestock, for fuel or energy, for timber products, to enhance the landscape or as garden plants. Some of these have become valued by society for their utility or beauty, or even become valued for their contribution to some aspects of conservation. However, 40% of surviving ancient woodland sites have been heavily modified, with many areas of native trees replaced with non-native tree species. The year-round dense shade cast by introduced non-native conifers, for example, poses particular problems. These recent additions to our ancient woods cannot support long-established native woodland wildlife, making them a real threat.

Some non-native plants can be highly invasive, and climate change may increase the invasive nature of some species in the future. Western hemlock (*Tsuga heterophylla*), Turkey oak (*Quercus cerris*), rhododendron (*Rhododendron ponticum*), shallon (*Gaultheria shallon*), and Himalayan balsam (*Impatiens glandulifera*) are examples of plants which can be very damaging in native woodland ecosystems, and difficult and expensive to get rid of once established. Similarly, introduced animals such as grey squirrels and deer can cause serious impacts that threaten the long term outlook for semi-natural habitats.

Currently, many woods and landscapes are undergoing accelerated change due to the impacts of tree diseases and pests and the effects of climate change. Successive generations of trees, plants and wildlife can become more fitted to their local conditions through the process of natural selection thus adapting to these pressures. This also allows other woodland species to evolve and adapt in parallel to the trees. Available evidence suggests that adaptation of native trees and woodland is best achieved by allowing our woods to regenerate naturally or by using locally-sourced native tree seed for new generations of planting.



Wild service tree (*Sorbus torminalis*), a native to England and Wales, and indicative of ancient woodland. (C. Reid)

Healthy woods and trees provide space and necessary resources for the many species reliant on them



Adder (*Vipera berus*) prefers 'mosaics' of woods and heaths. It has suffered population declines through habitat loss and lack of open ground in woods. (P. Wheeler)

2. Why we take account of whole ecosystems, landscapes and catchments

Trees and shrubs are the most visible architecture of our woodland ecosystems. Processes such as photosynthesis, reproduction, decomposition and wood decay, competition for space, light, water and nutrients, and predation, are all essential elements in a functioning ecosystem with a diversity of habitat niches. Healthy woods and trees provide space and necessary resources for the many species reliant on them, and on which they rely – from fungi and invertebrates, to birds, mammals and reptiles.

In water catchments, processes like tree roots binding soils, vegetation slowing the rate of runoff, and better soil structure increasing water infiltration rates, can be important in reducing flood risk and improving water quality.

When operating effectively, these components and their associated natural processes enable woodland ecosystems

and whole landscapes (in rural and urban areas) to be healthy and more resilient to the stresses caused by climate change and tree disease.

However, there remain many aspects of this complex web of life about which we have little understanding – especially around the biodiversity and processes happening down in the soil or up in the canopy of trees, as well as the complex functions of trees and woods in wider landscapes.

When elements of natural ecosystems are missing or have been removed or disturbed, things can start to go wrong. The introduction of non-native species, impacts from pollution and changes in land use resulting in a loss of connectivity with nearby habitats, means that many ecosystems are experiencing pressures. These are causing species extinctions, declines in functions and benefits, and a loss of the ability to recover or loss of historic cycles of management.

3. Why we consider the geographical and historical context to inform the future

The landscapes and types of woods and trees we have today are a product of their geographical location, their development over time and not least their interactions with people. For example, the wildflower rich ancient woods of the south east contrast starkly with the moss-covered weather-beaten woods of the Atlantic coast. Our ancient woods have a very different character to those that have grown up in the last few decades. And, woods which have been shaped by people coppicing or grazing livestock will have very different structures and values. When considering what to do next for conservation purposes it is vital to take this complex evolution into account to ensure appropriate and lasting outcomes.

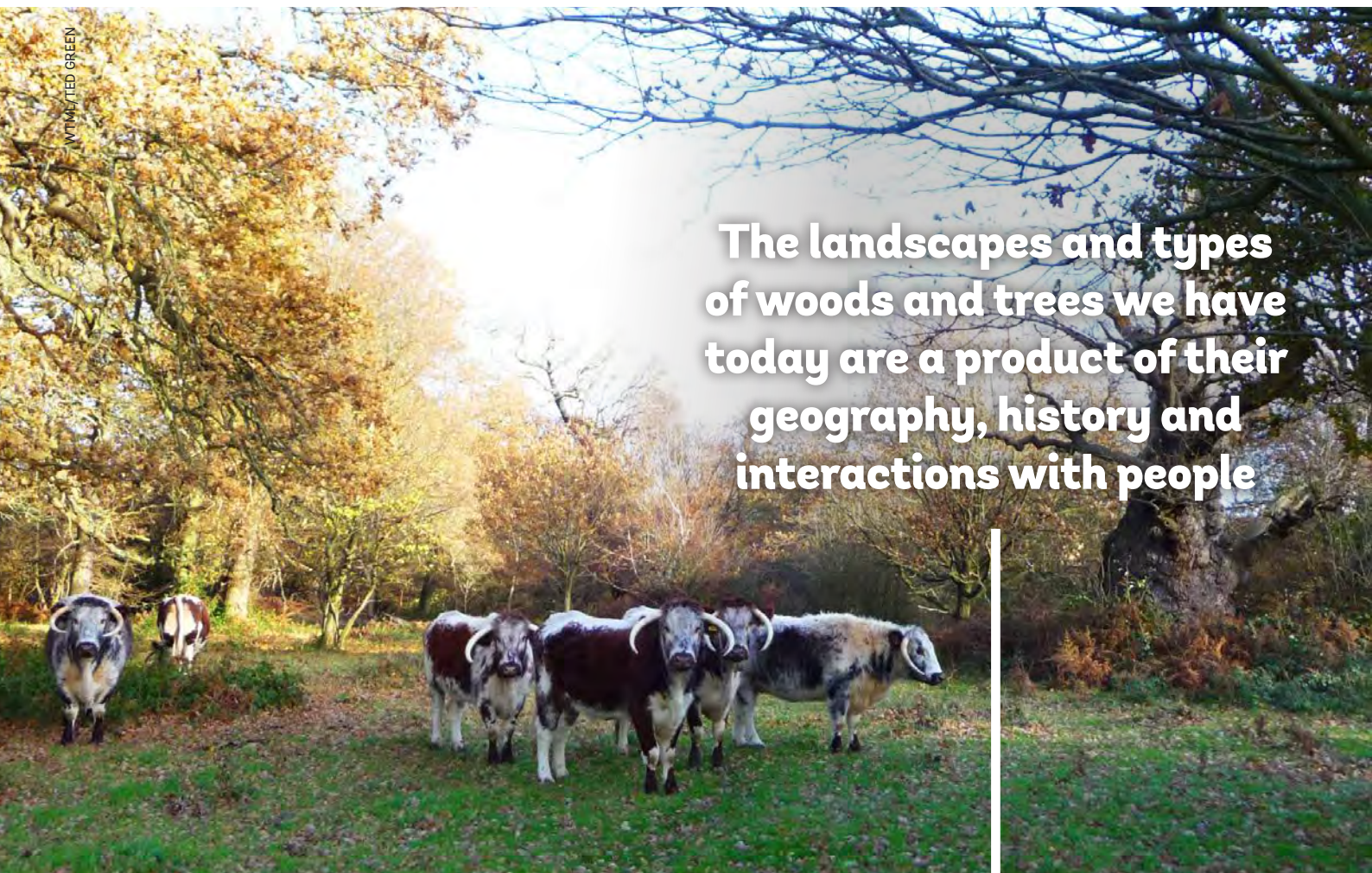
We are strong advocates for the protection and better care of ancient woodland and ancient trees. This has a sound conservation basis. Together they are hugely important for their biological diversity, their cultural and historical associations and the landscape character they help create – providing a deep sense of place and time, as well as a stable habitat for wildlife.

In the UK, over centuries many trees and areas of woodland have been actively cleared for agriculture and built development, or have been worn down by

uncontrolled grazing and expansion of conifer plantations. Today, many ancient woods are a fraction of their former size and survive as scattered fragments surrounded by intensively managed land, itself now quite hostile to wildlife. People have also had a longstanding influence over woodland composition and structure; by nurturing trees that were most useful for building materials, animal fodder or fuel. They have also shaped the spatial pattern of woods and trees in the landscape – for example, the ancient trees in a landscape might be the legacy of Medieval Royal Hunting Forests, or surviving boundary markers or remnants of hedgerows from past field management systems.

Ancient woods do not exist in isolation. They can often form a mosaic with other habitats; thriving within woods or nearby. This might include ponds, or pockets of species-rich wetland, flower-rich grassland, scrub or heaths. These open habitats have often been lost from the wider countryside to farming or development, so their remaining presence within woods is much valued.

Trees outside woods - whether scattered through the landscape, or as part of hedgerows, along river banks, within parkland or urban areas - can provide habitat in themselves and also play a vital role in ecological connectivity, offering 'stepping stones' for other species as they move through landscapes.



The landscapes and types of woods and trees we have today are a product of their geography, history and interactions with people

Long-horn cattle grazing an ancient wood-pasture, help to create important wildlife habitats. (T. Green)

4. Why we actively create and manage woods and trees

In the words of “Making Space for Nature” (the influential 2010 report on wildlife conservation), “the essence of what needs to be done to enhance the resilience and coherence of England’s ecological network can be summarised in four words: **more, bigger, better and joined**. There are five key approaches which encompass these, and also take account of the land around the ecological network.

We need to:

- I. Improve the quality of current sites by better habitat management
- II. Increase the size of current wildlife sites
- III. Enhance connections between, or join up, sites, either through physical corridors, or ‘stepping stones’
- IV. Create new sites
- V. Reduce the pressures on wildlife by improving the wider environment, including buffering wildlife sites.”

To improve the quality of existing woods, significant management interventions may be required: for example, to avoid any further wildlife loss or restore populations of lost species; to develop varied and robust native woodlands; and to re-start absent processes like natural regeneration, wood decay or grazing in wood-pastures.

Management may include tree felling to encourage natural regeneration and promote a more diverse and complex structure. Tree planting in existing woods may be necessary in specific circumstances, for example to enhance resilience by reintroducing site native tree species lost due to past management, particularly to support the recovery of woods impacted by tree disease.

Woodland management systems such as coppicing or wood-pasture may also be appropriate, especially where these can maintain or increase the variety of woodland structure at the level of an individual wood or across a landscape, or perhaps support specific wildlife interest.

In woods which already appear to be resilient (e.g. diverse woods, with a broad range of native tree and shrub species of different ages and sizes), it may be appropriate to limit interventions to those aimed at controlling invasive plant species and other threats, such as excessive deer browsing. We may also make a conscious choice not to intervene in some woods as part of a deliberate approach to allow nature and natural processes to take their course.

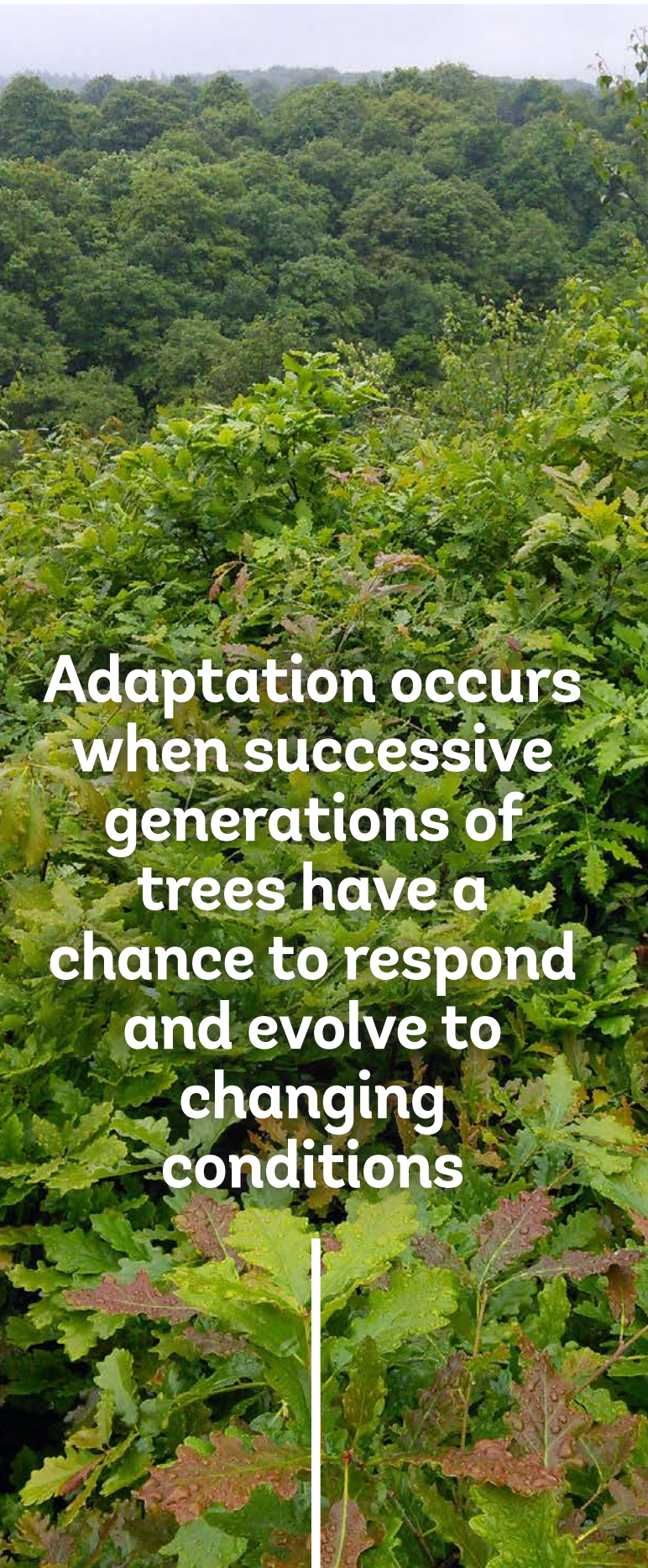
Decisions about management interventions should be informed by a sound evidence base, and a good understanding of the historic and landscape context of each site.

Creating new native woodland and planting more trees in rural and urban landscapes is crucial to provide additional habitat and increase the connectivity between existing habitats. This will allow movement of wildlife and adaptation to changing conditions. Creating new woods alongside existing ancient woods is particularly valuable. Allowing woods to spread outwards by natural regeneration, or planting the right combination of native species, will effectively increase the ecological value of the core area of those ancient woods, acting to buffer them from external negative influences such as agricultural spray drift, invasive species, nutrient deposition and disturbance.

More woods and increased tree cover can also help people and their communities to adapt to the impacts of climate change. Well-placed tree planting will absorb water and slow peak flows in times of flood reducing downstream impacts. New urban woods, along with street trees and hedges, will help regulate temperature and absorb pollutants.



Well-placed tree planting will absorb water and slow peak flows in times of flood, as well as creating better connected wildlife habitats. (J. Quinton)



**Adaptation occurs
when successive
generations of
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5. Why we aim to secure the values of woods and trees for the long-term

Trees are long-lived organisms that are inherently resilient and adaptable to change. Some trees can live to be over 1,000 years old in the UK, withstanding many changes to climate, weather, and the interactions with organisms around them. However, there are now big questions over how well they might withstand the accelerated rate and scale of changes they are experiencing. If our climate changes at the rate that is projected over the next 100 years, how will trees, woods and the species and habitats they support respond? If we continue to see an ever increasing number of tree pests and diseases becoming established in the UK, how will our trees and woods be able to cope and adapt? Will changes in agricultural production or the consequences of changes to government grants and subsidies act to support nature or work against it?

As described in the earlier sections, through carefully planned and effective management of woods and trees - built on an understanding of the ecosystems and landscapes in which they sit - we can work to support larger, better connected and more robust woods and extend the type of tree cover outside woods that will contribute to long-term landscape resilience.

However, we also need to reduce the risk of damage from new pests and diseases, and help woods, trees and landscapes adapt to the threats and pressures we have to live with. Adaptation occurs when successive generations of plants and animals have a chance to respond and evolve to changing conditions. Protecting and fostering the genetic diversity and integrity of woods, trees and their associated wildlife will be critical in allowing this to happen.

Trees and woods also have the potential to contribute to adaptation and resilience to climate change impacts on other habitats and forms of land use across whole landscapes. Some examples include reducing flooding and soil erosion; improving air and water quality; supporting crop and livestock productivity on farms using agroforestry; and locking up atmospheric carbon.

We are also recognising and appreciating the contribution that woods and trees can make to our long-term health and well-being by providing places for recreation and access to nature, by providing shade and tackling air pollution in our cities and by contributing to beauty and aesthetics in the environments where we live and work.

Abundant oak regeneration in the Wyre Forest, one of England's largest ancient woodlands (C. Reid)

6. Why we put people at the heart of conservation

In a small country with an expanding population the space available for nature and its conservation is being increasingly squeezed, even though the need for the benefits provided by nature, especially woods and trees, is growing exponentially. This dichotomy is one that can only be solved by engaging many more people with the multiple ways in which nature, trees and woods are essential to our lives, and can add value to them. Through increasing our collective understanding and connection with nature, we are more likely to value it, make space for it and support conservation actions that work.

Many of the outcomes we are seeking for conservation can only be achieved by working collaboratively with others at a large scale, tackling the many different aspects of a challenge at the same time. For example, to protect woods and trees from diseases, we need to collaborate with scientists to understand the epidemiology, with landowners to appreciate and learn from the impacts, with Government to improve biosecurity, with funding bodies and businesses to enable action and with the public to show what we stand to lose and how everyone can help. How we communicate and work together will be critical in addressing the multiple conservation challenges of the 21st century and beyond.



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Our approach: how we will deliver outcomes for conservation

Working in the ways described in the 11 'approaches' below we will demonstrate how we are embodying the six principles. Because of the complexity of the natural world and our interactions with it, each approach may draw on more than one principle.

- 1. Native woods and trees are at the heart of our work** to protect, restore, create and enhance functioning woodland ecosystems and the landscapes they support. We **promote processes and woodland management systems that are closer to nature** e.g. using natural regeneration, protecting undisturbed forest soils and wood decay; and, where needed, planting a diversity of locally-sourced native tree and shrub species which are well adapted to their environment.
- 2. We consider the past - without being constrained by it** - to inform the future by making management decisions for woods and landscapes based on

our understanding of their historic, cultural and geographical context, and by **working at the appropriate scale**.

- 3.** By following the principles of "bigger, better, more and joined" we **build resilient landscapes**: seeking to prevent any loss of ancient woodland; increasing cover of native woods and trees; buffering and extending ancient woodland and improving the connectivity of fragmented wood and tree habitat networks across landscapes. We make decisions at the appropriate level for the species, habitats, landscapes and people we hope will benefit.
- 4.** Where there is a conservation case, we **actively manage woodland and trees**, creatively combining historic management practices, a broad range of silvicultural and agricultural systems and innovative approaches - such as agroforestry and continuous cover forestry - in order to protect and increase the



Members of the Woodland Trust's Conservation Advisory Group discuss restoration management of ancient woodland at Fingle Woods in Devon.

- diversity (including genetic diversity) of native trees and associated wildlife, increase the complexity of age structure and restore ecological processes in woods and landscapes.
5. We **champion the recognition and protection of ancient trees and ancient hedges** and work to restore, create and enhance wood-pasture and parkland habitats and increase the number of open grown trees in the wider landscape to improve continuity and connectivity of veteran tree and decaying wood habitats.
 6. Our plans for management and delivery **recognise the value of other wildlife-rich habitats** and the benefits of woods and trees in habitat mosaics with flower-rich grassland, heathland, fen and mire, rivers and streams.
 7. We work to achieve healthy and robust woods and trees by **managing threats and reducing pressures** through deer and grey squirrel management; non-native invasive species control; restoration of ancient woodland damaged by non-native planting, intensive agriculture and development pressure; and improving biosecurity and control of pests and pathogens.
 8. We only use **locally sourced and grown trees and shrubs** for planting projects and advocate this approach to others – to ensure plants are better adapted to their environment and to reduce the risk of importing infected planting material.
 9. We make **decisions informed by sound evidence**, but recognise the limitations of our knowledge and understanding of the complexities of ecosystems. We strive to **build our evidence base** through monitoring and research and to be responsive to the new understanding that this brings.
 10. We seek to **bring the direct benefits of woods and trees to more people** and provide opportunities to engage and inspire people, to develop understanding of conservation challenges and act positively for woods and trees.
 11. We are **open to collaboration and actively seek to build effective partnerships** with conservation organisations, communities and businesses, the forestry and land management sector, and policy makers to deliver the widest possible conservation gains at a landscape scale.



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