

# The National Wood Strategy

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A path towards a sustainable  
forest products industry in England







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# Foreword



Thriving trees, woods and forests, and the products they provide, are essential to help us tackle some of society's biggest challenges. The benefits they provide range from reducing and storing carbon and creating habitats for biodiversity, through to supporting rural economies, providing timber security, and improving health and wellbeing.

Nearly 15% of England is already covered with trees, and the UK Government is committed to increasing this to at least 16.5% by 2050. A thriving and resilient timber industry is an essential part of this, as well as being at the heart of our countryside, boosting local economies and creating jobs across the country. The UK forestry and primary wood processing sector is already worth over £2 billion each year and employs over 30,000 people. However, the sector has grown more slowly than we would like, and the UK is currently the third largest net importer of timber and wood products.

In order to meet our statutory targets to increase tree cover, it needs to be easier, quicker and more financially viable to grow trees, and an enhanced sector capacity and seed supply is required. We must also not forget the 1.3m hectares (ha) of existing woodland, of which only around 60% is currently sustainably managed. Bringing more of this woodland into management is essential if we are to have a resilient woodland resource with trees that both absorb carbon from the atmosphere and are of a quality that can be transformed into products that will store this carbon long term. This will be further enhanced by innovation in the forestry and processing sector.

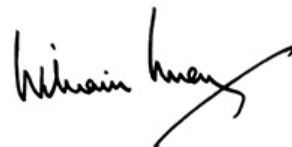
Along with others in government, we recognise these challenges, and have been working harder than ever to solve them. In part kickstarted by the £750 million Nature for Climate Fund: we have introduced new grant funding; we are continuing to reduce tree scheme application processing times and improving guidance; we have published maps identifying areas with the least constraints for planting trees; we have big ambitions to bring deer populations to a sustainable level and to control the grey squirrel population; we are boosting the nursery sector with £25 million of funding to ramp up our supply of seeds and saplings here in the UK; and we are awarding millions of pounds through Woods into Management Forestry Innovation Funds to develop new technologies and working practices to boost home-grown timber. As part of the UK Plant Health services, we are also working hard to protect our trees from pests and diseases.

In the England Trees Action Plan 2021, we set out how we want to increase the quantity and quality of our treescape, including through the Nature for Climate Fund and Environmental Land Management Scheme. This vision has been bolstered by the Environmental Improvement Plan 2023, where we committed to growing and maintaining a sustainable and long-term domestic timber supply in the UK. However, we cannot do this alone. Everyone with a stake in our treescape needs to be working together to make sure that woodland and forests thrive and continue to provide benefits to society long into the future.

We are continuing to boost our support for productive forestry by working with key stakeholders to set out and deliver on our plans for increasing the safe use of timber in construction. This is an unprecedented opportunity for the forestry and wood products industry, with a legal commitment to plant thousands of hectares of trees over the coming decades, combined with efforts to decarbonise the economy.

Domestic timber has a crucial role to play – we have already seen the proportion of softwood-producing woodland rise in England to 9% of those planted over the last three years. We want this to increase to at least 30%, as well as seeing more hardwood timber coming to market from our woodlands. There are opportunities for increasing investment in tree breeding, species diversification, and innovation for softwoods and hardwoods to make the most of our trees and timber.

I hope this publication supports positive, long-term, cross-sector efforts to increase sustainable domestic timber security, support our net zero targets, and deliver a resilient forestry sector. I look forward to seeing more productive forests in our landscapes, more investment and innovation in our timber industries, and more timber used in our buildings. We thank the authors for the opportunity to collaborate and look forward to continuing our partnership to deliver positive change for future forestry.



**Sir William Worsley**  
Chair of the Forestry Commission

# Supporting Statements

## Confor

“In the 21st Century we face the global challenge of climate change. The forestry and wood processing industry can assist through tree planting and greater use of home-grown wood. In England, policy support and public funding for wood production has all but disappeared, undermining achievement of net zero. This strategy gives wood production its proper place and is firmly rooted in a modern, responsible approach that delivers for rural economies, people and wildlife. We all now need to unite to deliver the strategy and make a meaningful difference that we can take pride in. Confor is up for that challenge, and ready to work with willing partners.”

## Friends of the Earth

“Friends of the Earth supports action to boost England’s low tree cover for a range of reasons. Restoring the nation’s depleted nature, capturing and storing carbon without gimmicks, and raising resilience to changing weather conditions due to failures to curb climate change sooner are imperatives for life today.

Boosting home-grown wood for construction and other higher-grade uses also makes sense. We can replace our high reliance on harmful imports of timber and wood products, including from high-risk areas and biodiversity hotspots, and shift to the sustainable economy we need. Results will include better and more rewarding land uses, a new legacy of skills and employment, less wood waste and fewer low-grade uses, and really knowing where our wood comes from.”

## Future Trees Trust

“Future Trees Trust welcomes the publication of the National Wood Strategy. The strategy identifies the challenges facing organisations involved in the production of sustainable wood, from research organisations to the sawmills, and identifies very sensible and coherent actions that will go some way to resolving a number of the issues faced by the industry. We particularly welcome the call for increased investment in tree breeding and the call for greater collaboration across the sector.”

## Grown in Britain

“Grown in Britain welcomes the National Wood Strategy and especially the emphasis on substituting unnecessary imports with home-grown products. In particular we support a greater focus on the productivity and resilience of both hardwoods and softwoods and the crucial need to encourage businesses to invest in ways to add value to home-grown timber.”



## Royal Forestry Society

“The development of a National Wood Strategy is very welcome and much needed, if we are to realise all the benefits from managed and productive woodland, such as achieving national net zero and biodiversity targets. We need more land committed to woodland, and that new woodland needs to be resilient and well-managed, for which we need sustained investment in the sector and its workforce.

I hope this strategy can be seen as a long-term compact for government and industry to line up behind, and ensure the country fully benefits from the great potential of a thriving forestry sector. The National Wood Strategy clearly articulates what is needed to achieve these ends and more, and the Royal Forestry Society is pleased to support it.”

## Structural Timber Association

“Most of our timber currently comes from abroad and we would welcome the opportunity to work in collaboration with the forestry sector to ensure the home-grown timber produced is suitable for our members to use within their structural timber frame systems.

This strategy sets out in detail what is required of government and industry alike and we will play our part in helping to deliver the objectives set out. We look forward to its launch and implementation.”

## Timber Development UK

“Demand for timber is set to grow enormously over the coming years as governments and businesses look to decarbonise construction and product supply chains. This means the UK, with some of the lowest productive forest cover in Europe, will face increased competition for available global resources.

The National Wood Strategy aims to address this and help increase forest cover to balance national production with international imports.

As the largest timber supply chain organisation in Britain, Timber Development UK is proud to support the aims of the National Wood Strategy and we look forward to putting its recommendations into practice.”

## Woodland Heritage

“This timber strategy is significant for several reasons. Firstly, for the first time, it gives equal recognition to both the hardwood as well as the softwood industries. Secondly, it is informed by silviculture as much as the economics of productive woodland: it gives equal ranking to construction lumber as to high-quality furniture timber. It reveals the current low productivity of most of our woodland. And, finally, it brings together for a common purpose those who give as much importance to the management and aftercare of existing British trees as the planting of new stock.

We welcome this strategy as the start of a new and important conversation and Woodland Heritage looks forward to working with partners to continue to take the actions required for positive change.”

# Key Terms and Abbreviations

Throughout this strategy, we use the terms 'conifer' and 'broadleaved' to describe trees, as well as 'softwood' and 'hardwood' to describe the corresponding timber. Here we offer a brief guide to clarify the distinctions between the two broad categories.



## Conifer / Softwood

### Description

Cone-bearing trees with needles

### Common species

Spruces, pines, larches, firs, cedars, hemlocks, yew

### Wood type

Softwood

### Harvesting age

30 – 70 years

### Common uses

Fencing, pallets, panel boards, furniture, construction, paper and packaging, cladding, biomass

### Volume to UK processors

10,366,000 tonnes <sup>(9b)</sup>



## Broadleaved / Hardwood

### Description

Trees with broad flat leaves

### Common species

Oak, ash, sycamore, birch, beech, alder, poplar

### Wood type

Hardwood

### Harvesting age

70 – 150 years

### Common uses

Woodfuel, biomass, furniture, windows, doors, flooring, oak framed buildings

### Volume to UK processors

823,000 tonnes <sup>(9b)</sup>





**C16 / C24**

Structural strength grades for softwood

**EIA**

Environmental impact assessment

**EWCO**

England Woodland Creation Offer

**FMU**

Forestry management unit

**Ha**

Hectare

**ILG**

England Forest and Wood-Based Industry Leadership Group

**M3**

Cubic metre

**M3 obs**

(Cubic metre overbark standing)  
A unit of wood volume in a standing tree, including bark

**Productive forestry**

The processes and places that produce timber and other wood products\*

**Roundwood**

Logs

**Statutory target**

A legally binding target

**Stocked area**

The area currently stocked with living trees. Not including open space, shrubs or fallow land

**UKFS**

UK Forestry Standard

**WCC**

Woodland Carbon Code

**Woodfuel**

Wood sold for burning

**Woodland**

Area of tree cover over 0.5 hectares (ha), 20 metres wide, with 20% canopy cover, and the potential to reach a height of at least 5 metres (2)

**Yield**

The increase in a tree's volume per year

\*This is our own definition for the purposes of this strategy.



# Purpose

To describe how England's forest and wood-based industries – in collaboration with government, non-governmental organisations (NGOs) and professional membership organisations – can increase the growing, harvesting and production of timber in England. All as part of an expanding patchwork of multifunctional woodlands that are managed to balance the needs of society, the economy and nature.









# Executive Summary

## Setting the Scene

Well-managed English woodlands provide a phenomenal array of services to nature, society and the economy. They are incredibly biodiverse, they absorb carbon and, if managed correctly, they can provide a sustainable timber resource to help decarbonise other industries, including the construction industry.

Expanding the area of woodlands in England and increasing the quality and the level of management of current woodlands are two of the best tools available for tackling the climate and biodiversity crises.

Planting the right species and quality of trees, and managing more woodlands for timber production, will increase supplies of renewable home-grown wood for building and for the low-carbon markets of the future.

The Government has recently set a statutory target committing England to achieving 16.5% tree and woodland cover by 2050. This is the first target of its kind, and we believe it is a big step forward, although it currently lacks specific detail describing the what, where and how.

## Strategic Goals

To provide direction and focus for this strategy we settled on six strategic goals. Under each goal we have suggested actions for government and industry, and actions that will need collaboration.

### The strategic goals we have selected are as follows:

#### Goal 1

Stabilise and then increase the timber resource in England.

#### Goal 2

Exceed the Government's statutory target for tree and woodland cover.

#### Goal 3

Increase the use and lifespan of English wood.

#### Goal 4

Create a predictable and consistent investment environment.

#### Goal 5

Present a consistent and positive message on productive woodlands.

#### Goal 6

Develop a skilled workforce.



## Key Actions

Later in this strategy, we suggest specific actions necessary for achieving each of the strategic goals.

The most urgent actions are the following:

## For Government

- Support a more ambitious target of achieving at least 17.5% tree and woodland cover in England by 2050.
- Add specific detail to the statutory target by describing woodland types and the proportions of planned planting by type.
- Adopt a specific target of 104,000 hectares of new stocked conifer forest in England by 2050.
- Create a predictable, transparent and time-bound application process to encourage landowners and investors to create woodland.
- Continue to improve the offer to farmers, starting with an end to the permanency rule for new fast-growing productive timber crops.

## For Industry

- Work with partners to develop effective resilience plans for productive woodlands.
- Invest in new wood processing technologies and capacity, in line with wood fibre availability and demand.
- Invest in accelerated research, development and manufacturing of long-term products made from a range of tree species grown in the UK, now and in the future.
- Explore opportunities for improving resource efficiency and adding value.
- Support and fund research into the structural characteristics of wood from selected conifer species.

## For Collaboration

- The England Forest and Wood-Based Industry Leadership Group (ILG) should assemble a representative board to deliver this strategy and to monitor its implementation.
- Develop and implement a 'Timber Sector Deal'.
- Form a collaborative cross-sector group to support delivery of the statutory target.
- Accelerate improved tree breeding programmes for selected timber-producing tree species.
- Develop a strategy for sustainable seed and sapling supply in England.
- Continue support and funding for the Forestry Skills Forum.





# Introduction



# Authors' Statement



**Tom Barnes**  
Managing Director  
of Vastern Timber,  
a sawmill and timber  
processing company  
based in Wiltshire.



**Andy Leitch**  
Deputy Chief Executive  
at the Confederation  
of Forest Industries  
(Confor) and Chair  
of the ILG.

We were invited to write this strategy on behalf of the ILG. The ILG is a community of leaders in the wood supply chain, from seed to structure, including wood recycling. The ILG also includes visiting representatives from the Department for Environment Food and Rural Affairs (Defra), the Forestry Commission and Forestry England.

A number of catalysts spurred the writing of this strategy.

The first was climate change. The effects are becoming obvious, and the outlook is alarming. Reducing carbon emissions is the number one priority, while the second most important priority is to mitigate the effects. Increasing woodland creation and developing an expanding, resilient domestic timber resource can help on both fronts.

The second catalyst was a comment we had heard repeatedly: "We should grow more of the timber we use in this country, instead of importing so much."

We agree. So do organisations as diverse as Friends of the Earth, The Woodland Trust, Natural England and the UK's Climate Change Committee.

However, despite this widespread agreement, there is little understanding of how to transform this statement into reality.

The third catalyst for writing this strategy was the Government's new statutory target of achieving 16.5% tree and woodland cover in England by 2050. The forestry and processing industries now share responsibility for meeting this target.

The fourth catalyst was our concern about the shrinking area of productive conifer forest in England, which is now 10% smaller than it was in 1997 <sup>(21)(9)</sup>. These are the forests that supply 93% of all of the home-grown wood we consume and export <sup>(9)</sup>. Without a rapid change in policy, Forest Research predicts that the area will continue shrinking for at least the next 25 years <sup>(8)</sup>. This predicted decline in wood fibre supply is already delaying investment decisions within the timber processing industry.

Alongside this, there has been widespread concern that much of the broadleaved woodlands in England are under-managed and in a poor condition. Consequently, they are failing to provide people and nature with the wide range of economic, ecological and environmental benefits that these wonderful ecosystems are capable of offering.

### How we define productive woodland

At the outset, it is important to be clear about what we mean by the term 'productive'.

Although woodlands can be productive in many ways, for this strategy, we use this term to describe the planting and active management of woodland where sustainable wood production is the primary objective, or one of the primary objectives.

### Our vision for productive woodlands in England

By 2050, we would like to see woodlands in England covering at least 1.7 million ha, amounting to 13% of the land area. These woodlands will be managed to provide a wide range of benefits to both society and nature, including timber production.

Although our focus is on productive woodland, we are clear that significantly increasing the area of woodland that is designed and managed to prioritise nature recovery is fundamentally important.

Our vision for 2050 includes having 435,000 ha of stocked conifers, making up 25% of the total woodland estate. These are the forests that provide the vast majority of timber produced and consumed in England and the UK.

Furthermore, we envisage a time when broadleaves are again nurtured and valued for their timber. This will improve the quality of English woodlands and give landowners a sustainable source of income for the future.

### Achieving our vision

Our optimistic vision is built on the foundation of a consistent and continuous public policy that recognises the long-term nature of forestry, along with its economic, social and environmental benefits.

We believe that in the future, English forestry will be an attractive proposition for institutional investors and a reliable source of carbon units. The influx of private capital will be the driving force behind large-scale afforestation, while government grants will stimulate commercial forestry activities and provide extra support for smaller and less productive areas of woodland.

### Our collaborative approach

We approached the writing of this strategy with a desire to be as collaborative as possible. We contacted relevant professional bodies representing forestry and agriculture. We talked to charities and NGOs that have engaged in the forestry debate, as well as departments within the public sector. The ILG provided us with a link to the wider wood supply chain, including investors, growers, harvesters and processors, as well as wood recyclers.

Alongside these conversations, we have drawn on the evidence contained in the recent Environmental Audit Committee's inquiry into 'Sustainable timber in the UK and the UK's contribution to global deforestation'.

The public sector team (led by Defra) who are developing the 'Valuing timber in construction' report also shared their draft reports with us. We are keen to ensure our work successfully dovetails with theirs.

### Common ground in our conversations

During the many conversations that supported the development of this strategy, we were encouraged to discover a high level of consensus. This spanned industry, the public sector, environmental charities and NGOs.

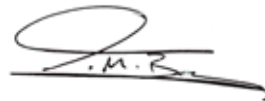
We came to realise that the vast majority of these organisations support the need for more trees and better management of our current woodlands. There is also common agreement that more timber should be produced in this country in order to reduce our reliance on imported wood products.

All of this is extremely positive, but of course we appreciate that there are many challenges to overcome.

### Support from government

We are heartened by the very positive discussions that we have had with the Minister for Forestry, Defra, and senior management of the Forestry Commission. We hope their support of productive forestry will be followed up by more equally positive actions, such as those identified in this document.

We sincerely hope this strategy will stimulate a step change in the rate of woodland expansion in England, along with increasing the resilience of our woodlands and ensuring a thriving forestry sector. We also hope that this strategy will foster even greater collaboration between sectors.



Tom Barnes



Andy Leitch



# The Scope of this Strategy

This strategy is primarily concerned with the future availability of timber and wood fibre. While there are many other facets to a successful forest products industry, the planting, growing and harvesting of wood fibre is fundamental.

While this strategy references the general state of forestry and woodlands in England, our primary focus is on ‘productive’ forestry and woodlands. By this we mean the processes and places that produce timber and other wood products.

By honing in on this area, we are in no way downplaying the importance of other outputs of, and benefits from, woodlands, including carbon sequestration, nature recovery and alternative forms of natural capital. We are simply narrowing our focus.

The growing and harvesting of wood in England has not been a priority for more than 30 years. With global demand for timber forecast to outstrip supply in the coming decades, and with the area of productive forest in England shrinking, productive forestry is now in need of special attention.

As forestry and land use are devolved issues across the UK, this strategy focuses primarily on the situation in England, although we acknowledge that supply chains have no respect for borders.

# Why 16.5% is Not Enough

One of the objectives of this strategy is to encourage all sectors, including government, to support a more ambitious target of 17.5% woodland and tree cover in England. NGOs, including Friends of the Earth and the Woodland Trust, believe that even this is too low.

The Government's statutory target of 16.5% equates to a 2% increase in England's land area that is under trees.

In the face of climate change, biodiversity loss and an impending global timber shortage, we firmly believe that achieving an extra 2% of woodland and tree cover over the next 26 years is simply not enough.

The environmental services that trees and woodlands offer nature and society are well-known and tried and tested. Unlike many of the proposed technological solutions to climate change, this solution is available now.

It is surely possible to find 3% of the land area in England on which to plant more trees and create more woodland.

# Why More Productive Woodlands?

Driven by decarbonisation, industries in England and the UK more widely will demand a lot more wood fibre over the coming decades. As the second biggest importer of wood products behind China (37), the UK is particularly vulnerable to future global shortages.

During the next 25 years, global demand for timber and woodfuel is predicted to double (14), thereby substantially exceeding sustainable levels of global supply (22).

This growing demand is driven by the knowledge that using renewable and low-carbon materials such as wood will help to decarbonise many industries, most notably construction, which is responsible for 37% of global greenhouse gas emissions (34). Wood is one of the few renewable and low-carbon building materials that is available at scale.

Sourcing more timber and woodfuel from English and UK woodlands will reduce the possibility that domestic wood consumption has a negative impact on forests in other countries and will create unnecessary emissions from shipping and transport.

Growing more trees and harvesting more wood in England will also have the added benefit of attracting additional investment in forestry and wood-based industries. Given the distribution of land that is suitable for large-scale productive afforestation, the majority of the investment is likely to occur in regions that need it most.

As a country, we must once again consider the importance of growing a strategic timber reserve for the future.







A close-up photograph of a pine tree trunk, showing the rough, textured bark. The trunk is the central focus, with green pine needles visible in the foreground and background, creating a sense of depth. The lighting is natural, highlighting the texture of the bark and the vibrant green of the needles.

# Opportunities



By taking the actions described in this strategy, we believe there are exciting opportunities ahead for English woodlands and the forestry industry.

- By working collaboratively across sectors, we will achieve the Government's statutory target of 16.5% tree and woodland cover in England. The expanded area of woodland will deliver a multitude of benefits for people, nature and the economy.
- More woodland cover will allow space for a greater diversity of woodland types, management styles and ownership models, while at the same time providing the scale that is necessary to make productive forestry viable.
- Breaking down the term 'woodland' into types, describing the management objectives and creating targets for each, is the basis of a specific and equitable implementation plan. Such clarity will also encourage a narrative that celebrates the full suite of outcomes and benefits from woodland creation.
- Through investment in tree breeding and genomics, there is a practical route to increasing the profitability of a wider number of productive tree species. This will help to balance the twin priorities of woodland resilience and commercial viability.
- By demonstrating the desire for productive forestry, while simultaneously creating a timely and predictable application process, the Government could unlock considerable private capital that will help fund woodland creation in England.
- At a time when there is a growing recognition that more sustainable forms of land management are needed, farmers are likely to respond favourably to a better offer to plant trees and woodlands on their land.
- Achieving our suggested conifer planting targets will ensure a sustainable supply of home-grown timber in the UK. This will go some way to reducing the risk posed by the country's reliance on imported timber.
- An expanding timber resource will encourage domestic and foreign investment in the processing industry, while stimulating further market demand through product innovation.
- It will also attract emerging industries that are already developing petrochemical alternatives, including biofuels, bioplastics, textiles and soil conditioners.
- Focusing on productivity will create better-managed woodlands across the country: primarily because the value of the timber crop provides a strong incentive for landowners to manage woodlands well.
- A growing and vibrant industry at the heart of efforts to decarbonise society and improve the state of nature will attract young people to a career in the forestry and processing sectors.



A photograph of a dense forest of bare trees, likely in late autumn or winter. The trees are thin and their branches are intricate and bare. The ground is covered in green moss and fallen twigs. The word "Challenges" is written in a large, white, sans-serif font across the center of the image.

# Challenges



We recognise the inherent challenges in meeting the Government’s statutory target for tree and woodland cover, coupled with the ambition to enhance productivity from English woodlands. Within this context, we have identified several of the most prominent constraints.

## Climate Change

The changing climate arguably poses the biggest challenge to England’s trees and woodlands. Climate change not only increases the risk of drought, fires and storms, it also assists the movement of diseases and pathogens that attack our trees.

## Current Planting Rates

New woodland creation rates remain well below the level needed to reach the statutory target.

In 2022, new woodland creation in England amounted to 3,130 ha (31). This is approximately a third of the 10,000 ha per year needed to reach the statutory target of 16.5% tree and woodland cover by 2050.

## The Government’s Policy and Approach

During the last 30 years the Government’s policy and approach have discouraged landowners and investors from planting areas of productive conifers. This has also applied to productive broadleaves.

While Defra has rightly pointed out that the England Woodland Creation Offer (EWCO) is ‘species agnostic’, it is evident that the generous additional contributions for delivering a range of public benefits has favoured native broadleaves and shrubs. By default, the same contributions have restricted the opportunity for planting conifer species.

Until recently, government communications have not been overtly supportive of productive forestry and have rarely cited timber production as more than a ‘nice to have’ by-product of woodland creation.

The England Tree Action Plan (5) included very little about growing trees for timber, other than the line: “Not only do we need to plant trees, but we also need to make good use of those felled – both hardwood and softwood.” It was nevertheless encouraging to note that the plan did include an ambition to use more timber in construction.

The focus of forestry policy in England is clearly changing and we welcome the open support from the Minister for Forestry for an increase in productive forestry and a greater use of home-grown timber in construction.

While this is encouraging, it is important to point out that there remains a disconnect between what is being said and the present reality on the ground. There remain many pieces of guidance, regulations, mechanisms, processes and misconceptions that continue to squeeze the net area of productive woodland in England.

Figure 1 illustrates the variety of factors that continue to restrict productive forestry in England.

Figure 1  
Factors contributing to the decline of productive forestry



## A Vague Target

Having a statutory target for tree and woodland cover is a welcome step. However, we believe that the target could better reflect SMART\* principles by making it more 'specific' and more 'measurable'.

The term 'woodland' is non-specific. The description captures everything from a community orchard to a large commercial plantation, but says nothing about the tree species, the silvicultural approach or the management objectives.

In a consultation on the statutory target (2), Defra rejected the idea of differentiating between woodland types, on the basis that the 'granularity of reporting' would be too complicated to administer.

This lack of clarity concerns many stakeholders, including the Royal Society for the Protection of Birds (RSPB), Confor and potential investors.

Without clarity around the types of woodland or the management objectives, it will be difficult to scale up the necessary infrastructure, training, planting stock and expertise to meet the target. The lack of clarity will also make it much harder to monitor achievement of the target.

Furthermore, the statutory target does not begin to tackle the thorny issues of where this new woodland will be located and who will pay for it.

## Woodland Creation Application Processes

The slow and unpredictable administration of application processes appears to be the number one deterrent to those considering afforestation schemes in England. The number of stages in these processes is often not known at the outset and consultees are permitted multiple opportunities to lodge protests throughout.

We have heard many individual reports of EWCO applications taking many years to complete. Those we spoke to highlighted inconsistencies in the management of consultee responses, and inordinate delays.

A number of commercial land managers and investors told us they had almost given up trying to plant productive conifer schemes in England because of the opaque nature of the EWCO application process.

### CASE STUDY

**Stourhead (Western) Estate, Wiltshire**  
600 ha of Forestry Stewardship Council (FSC) certified woodland.

The estate is one of the leading examples of the application of continuous cover forestry in the UK.

#### Application Summary

- Scheme area: 82 ha on ex-arable land.
- Conifer - 67%, broadleaves - 17%, open ground - 16%.
- Application started in April 2018 for a Woodland Creation Planning Grant.
- Environmental impact assessment (EIA) determined June 2021.
- Reapplied under EWCO July 2021.
- Area of Outstanding Natural Beauty (AONB) objected at each stage.
- The land owner received a positive decision in July 2023, after more than five years.

\* SMART goals are Specific, Measurable, Achievable, Relevant and Time-bound.



## A Shrinking Conifer Resource

The removal and restructuring of conifer plantations during the last three decades have resulted in a significant reduction in the stocked area. Combined with the very low levels of new conifer planting, the net result has been an overall loss of productive conifer forest in England.

Forestry Commission data from 1997 (21) indicates that in the last 24 years, the area of conifer in England has decreased by 40,000 ha.

If the 40,000 ha had been replanted, or replaced elsewhere, it could potentially have provided a crop of approximately 16 million cubic metres (m3) of timber – the equivalent of eight years of harvest in England.

Forest Research's most recent 25-year softwood availability forecast (8) (excluding planting since 2020) predicts a 50 million m3 reduction in conifer volume in the next 20 years. Nearly 14 million m3 of this reduction will be from English forests.

### CASE STUDY

#### Northumberland National Park

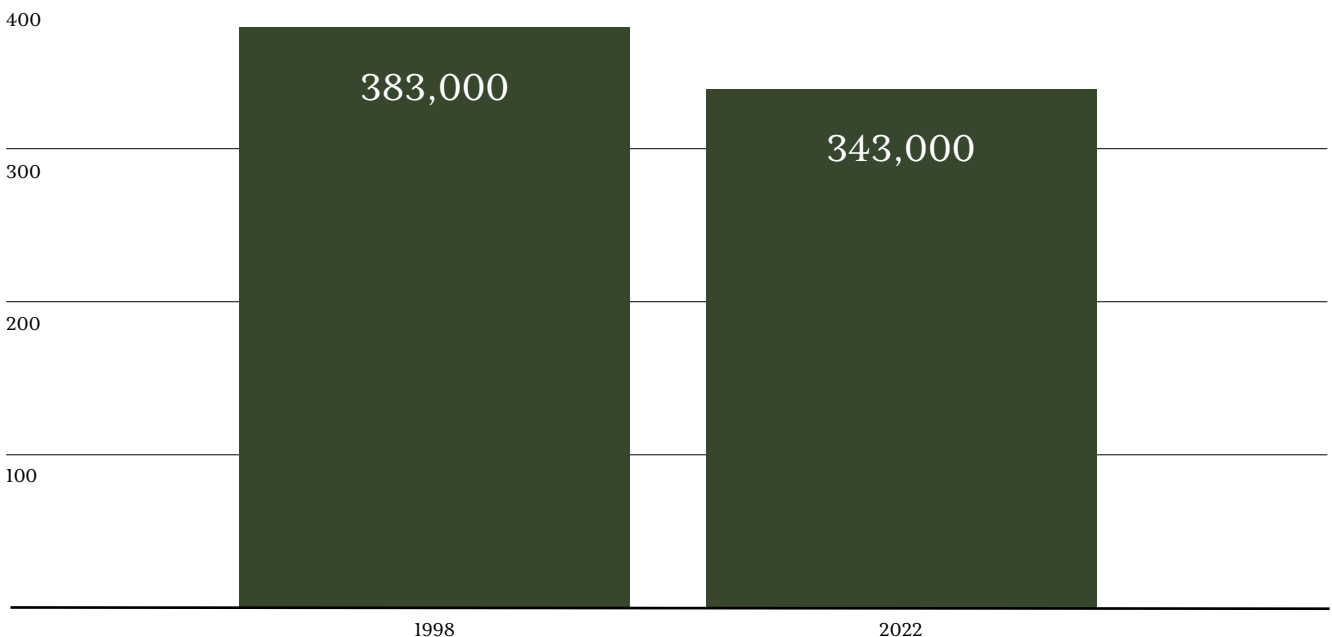
The Northumberland National Park Authority, which is responsible for Kielder, Kidland and Redesdale forests, has recently announced that it plans to “remove or restructure 2,000 hectares of commercial conifer plantation by 2030 in order to achieve nature, climate and landscape enhancements”. (49. P18. Section 1.2)

As a result of this action, a conservative estimate suggests there will be a potential loss of 1 million m3 of timber over a single future rotation (the time between planting and felling).

Figure 2  
**The shrinking area of conifer in England**  
 Measured in ha

Since 1998, the area of conifer forest in England has decreased by

**40,000** ha



Coniferous Woodland

(Based on Forestry Commission (1998) FICGB Yearbook. Hardcopy (21); and Forest Research (2022) Forestry statistics 2022. Chapter 1. Woodland area and planting (9a).)



## Lack of Improved Species

Through significant public/private sector investment, the UK has succeeded in breeding some of the fastest growing Sitka spruce in the world. This is being used widely in commercial forestry and is a welcome success story.

However, one improved conifer species is not enough. Climate change-related risks, including drought, fires, pests and pathogens, dictate that the resilience of future productive woodlands must be improved by developing a wider range of commercially viable conifers.

The Conifer Breeding Cooperative Ltd, a public-private partnership, is working on improved breeding programmes for conifer species, but the scale of current funding is not sufficient.

Current tree breeding programmes take up to 30 years to yield results but, with more funding, there are encouraging signs that genomics could accelerate the process and potentially cut the timeframe in half.

There has also been a lack of significant investment in the genetic improvement of broadleaved species. The Future Trees Trust, along with its supporters, is the only organisation currently working on the improvement of broadleaved trees for timber production. The current level of funding is relatively small in comparison to the scale of planned afforestation.

## Woodland Management

According to Forestry Commission figures, as at March 2022, 58% of all woodland in England was sustainably managed. The equivalent figure for privately owned woodland was 50% <sup>(29)</sup>. These figures indicate that there has been little improvement over the last 40 years <sup>(42)</sup>.

The Forestry Commission definition of 'sustainably managed' is woodland managed to the UK Forestry Standard that has a Woodland Management Plan, or for which they have provided a grant or felling licence in the last 15 years <sup>(29)</sup>.

In line with this definition, 50% of privately owned woodland in England was categorised as 'unmanaged', implying that 556,000 ha <sup>(31)</sup> was not achieving its economic or ecological potential.

A report on the subject produced by the Institute of Chartered Foresters and the Chartered Institute of Ecology and Environmental Management <sup>(42)</sup> summarises the reasons for the lack of management as relating to "funding, knowledge and attitudes to ownership and management of woodland".

The report goes on to explain that "Ownership of woodlands [in the UK] is fragmented – many woodlands are small, and it is not always viable to manage them in isolation, whether for timber or for conservation".





## Capital

The Forest Canopy Foundation calculated that there is a £1.8 billion financing gap in regard to reaching woodland creation targets in England. Without new streams of finance and the ability to stack income from various sources, lowland woodlands, in particular, are uninvestable.

According to asset managers at Gresham House and Foresight Group, there is “a wall” of capital looking for natural capital projects with low-risk returns. Yet very little of this capital is finding its way into English forestry.

According to Olly Hughes of Gresham House, the current problem in England is one of “uncertainty of outcome”. This uncertainty is deterring would-be-investors from directing capital towards new forestry schemes.

Investors seek predictability and consistency – neither of which they can find in English forestry. However, they can find an investable environment north of the border and further afield. In fact, none of the specialist asset managers we spoke to are actively looking for planting sites in England.

## Land

260,558 ha of suitable land will be required to reach the 16.5% woodland and tree cover statutory target.

The Forestry Commission has mapped 3.2 million ha of low-risk and low-grade land in England that is potentially suitable for tree planting. Friends of the Earth estimates that 1.3 million ha of land is suitable for new trees and woodlands in England <sup>(13)</sup>.

In theory, there is enough land available to achieve the planting target, but in practice it is likely that this land is being double counted. Be it for housing, onshore wind, infrastructure or a desire to protect nature, there is a good chance that various interest groups will be eyeing the same land for mutually exclusive uses.

According to those we consulted, the intense level of often restrictive land designation makes it hard to find suitable land for afforestation. 37.4% of land in England is protected by one or more natural designations <sup>(24)</sup>. Within this figure, nearly 25% is covered by 10 National Parks and 34 AONBs. In fact, land classed as vacant or undeveloped only accounts for 1.1% of England’s land mass <sup>(24)</sup>.



## Farmers

Farmed land occupies 70% of England's land mass. 29% of all current woodland is located on farms. Enticing landowners to plant trees on less productive farmland is a crucial step to achieving the Government's tree and woodland cover target.

Overall, the current offer to farmers is not attractive. A combination of permanency rules, tax implications, uncertainty about stacking benefits and complicated grant structures is dissuading farmers from planting woodlands.

Permanence is one of the biggest issues. Currently, a farmer effectively loses control of future land use choices when woodland is created. Some farmers have described this as constituting the 'nationalisation' of farmland.

## The Carbon Market

The current structure of the carbon market risks undermining the creation of productive woodland. In October 2022, the carbon additionality rules within the Woodland Carbon Code (WCC) were tightened. As a result, it is now harder to access carbon offset money through productive forestry projects (20).

According to Emma Kerr of Scottish Woodlands, this leaves applicants having to choose between carbon or timber production. In many cases, the productive element of a new woodland scheme is reduced to fit within the WCC rules.

Emma Kerr also pointed out that "WCC additionality indirectly forces planting schemes down the hill onto better productive farmland" where they are more likely to pass the additionality test. This situation creates direct conflict with food producers.

Another issue is that the WCC only calculates the carbon 'in the forest'. It does not account for carbon that is 'locked up' in timber products after harvesting, or the longer-term carbon sequestration potential of woodlands that are harvested.

Without a change to the code, or its application, it is likely that landowners will be dissuaded from maximising the outputs from their land, and thereby diversifying their income streams. This is clearly not a desirable outcome.

## Diseases

Pests and diseases are an emerging threat to woodlands in England and the warming climate is exacerbating the situation.

*Phytophthora ramorum* in larch and Douglas fir, *Dothistroma septosporum* in pine, *Ips typographus* in spruce, ash dieback, and acute oak decline are just some of the threats that are already causing mortality in native woodlands.

Almost every tree species in UK woodlands is under threat from at least one pest, pathogen or disease. Additionally, drought in some parts of the country is weakening trees and leaving them more susceptible to these threats.

The two main factors driving the spread of disease are international trade in plants and a warming climate.





## Browsing Mammals

Grey squirrels and deer cause huge damage within English woodlands, particularly to broadleaved tree species. According to the European Squirrel Initiative, grey squirrels are responsible for over £40 million of damage to broadleaved woodland each year.

Without dramatically reducing grey squirrel and deer populations in England, in a coordinated manner, the planting of broadleaved trees in southern England is futile, and there will be little chance of increasing productivity in broadleaved woodlands.

We acknowledge that the UK Government is the primary donor of the UK Red Squirrel Accord, with funding committed to 2025. We also welcome the news that the Government is developing a grey squirrel and deer Action Plan. These are welcome interventions, but on the ground, action to reduce populations appears to be limited and disjointed.

## Recruitment and Skills

In England, it is estimated that by 2030, the forestry workforce will need at least an additional 2,500 skilled people to deliver the Government's statutory 2050 tree and woodland cover target (44).

In recent years, the provision and uptake of forestry-related education at further and higher education levels has fallen considerably. This lack of new entrants, combined with other structural needs in the sector, has created significant challenges in recruiting and retaining skilled professional foresters, supervisors and other operatives.

The Forestry Skills Forum launched the Forestry Skills Plan (46) in 2019 and has produced follow-up reports in the years since. These documents lay out a detailed strategy and implementation plan for recruiting and training the personnel that the industry needs. A highlight has been the introduction of forestry apprenticeship schemes at Levels 3 and 6.

## Public Perceptions

Many of those outside the forestry industry hold a negative perception of harvesting trees for wood. According to public surveys carried out by Forest Research, there is an increasing belief that landowners should let nature take its course and that trees should not be felled for any reason. The word 'deforestation' is often used in the media to describe the felling of trees, regardless of its purpose or whether they will be restocked.

Figure 3  
Extract from Public Opinion of Forestry Questionnaire, England, 2021

Survey questions	Percent of respondents who agree or strongly agree				
	2013	2015	2017	2019	2021
Trees should not be felled in any circumstances, even if they are replaced	23%	26%	27%	30%	37%
No action is needed, let nature take its course	18%	23%	24%	26%	30%

(6)

## Constrained Global Supply

As the demand for wood outstrips supply over the next 25 years, industries in the UK will find it increasingly difficult and costly to import wood from abroad. This will become problematic as the UK strives to achieve a low-carbon economy.

The Wuppertal Institute for Climate, Environment and Energy and the University of Kassel estimated the amount of timber available globally under sustainable conditions up to 2050. The resulting research paper found that the realistic global potential for sustainable supply of industrial roundwood (logs) and woodfuel ranges from 3,740 million m<sup>3</sup> to 4,670 million m<sup>3</sup> (22).

According to the United Nations Food and Agriculture Organization (FAO) Forestry Statistics (2020), current global consumption of roundwood and woodfuel is 3,912 million m<sup>3</sup> (27).

By 2050 it is predicted that the total consumption of industrial roundwood and hardwood woodfuel will total 7,500 million m<sup>3</sup> (14). In other words, demand is predicted to nearly double by 2050, and to far exceed sustainable levels of supply.

Environmental groups, including Friends of the Earth, are concerned that increased global demand for wood will place extra pressure on the planet. This is especially worrying for the remaining natural and semi-natural forests, as well as the flora, fauna and people that live within them.

## The Good News

The good news is that the UK Government has signalled a strong desire to speed up the rate of woodland creation in England, and to expand the planting of conifer trees, with a view to increasing the use of home-grown timber in construction. The challenge is now to convert this desire into quick and effective action.

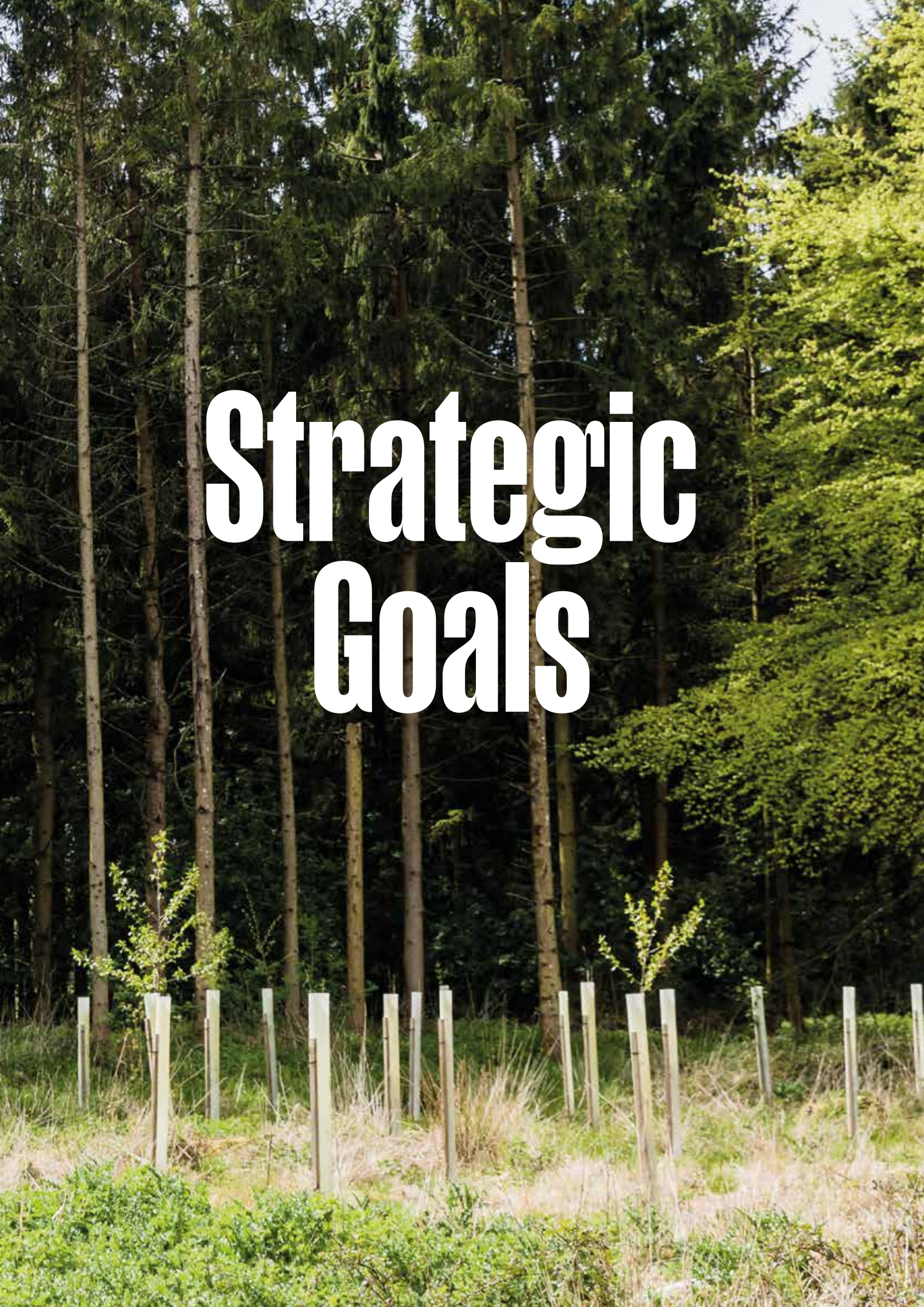
The forestry and wood processing industries, along with many NGOs and professional bodies, stand ready to work with the Government to meet – and exceed – the statutory target of 16.5% of tree and woodland cover by 2050.







# Strategic Goals





So far in this document we have outlined opportunities for English woodlands and the forestry industry. We have also described the challenges that stand in the way of achieving our vision of bigger, better and more productive woodlands. Next, we set out a plan to fundamentally change the delivery of forestry in England.

To this end, we present six strategic goals.

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- 1.** Stabilise and then increase the timber resource in England

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  - 2.** Exceed the statutory government target for tree and woodland cover

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  - 3.** Increase the use and lifespan of English wood

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  - 4.** Create a predictable and consistent investment environment

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  - 5.** Develop a consistent and positive message on productive woodlands

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  - 6.** Develop a skilled workforce

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# Targets and Actions

## Goal 1

### Stabilise and then increase the timber resource in England

#### Targets

- A detailed implementation plan to underpin the statutory target.
- A stable stocked area of productive conifer in England by 2030.
- 40% of annual new planting in England until 2050 to be stocked coniferous species.
- 104,000 ha\* of extra stocked productive conifer forest in England by 2050.
- An extra 130,000 m<sup>3</sup> of sawn C16 graded English spruce for the construction market per year, by 2060.
- 52,000 ha of new productive broadleaved woodland by 2050.
- A positive perception of productive forestry in England.

\*104,000 ha equates to 40% of the extra woodland area required to meet the statutory target of 16.5%.



## Actions for Government

### Continue developing strong and clear signals of support for productive forestry.

With overt support, landowners, investors, land agents, nurseries and the wider industry will have the confidence to invest time and money in the English forestry sector.

The recently published 'Net Zero Review' by Chris Skidmore (23) states that: "Overwhelmingly, the common message has been the need for clarity, certainty, consistency and continuity from Government." The situation is precisely the same for the forestry sector.

### Describe woodland types.

In our opinion, a major reason for the current failure to achieve tree planting and woodland creation targets is a lack of clarity.

The current Defra approach is to promote the concept of mixed woodlands that are managed for a variety of purposes. While this sounds eminently sensible, it is, in our view, a far too simplistic construct. Like farming, forestry is a collection of land use activities: the connection being that all of these activities involve trees. We cannot discuss farming without also talking about livestock, dairy, arable and possibly agroforestry. In the same way, it makes sense to identify types of woodland, based on their species composition and the key or primary management objectives.

Such an approach does not imply competition between the woodland types. Instead, it allows supporters of all approaches and objectives to understand where their favoured type of woodland fits in to the future landscape.

We strongly recommend that Defra, together with the Forestry Commission, publish a more descriptive implementation plan to underpin the statutory target, including a breakdown of woodland types.

In support of this approach, the authors of the recent Environmental Audit Committee report suggested "the Government divide its overall tree planting targets into sub-categories for the types of woodland needed to achieve different goals" (37).

We recognise that many organisations will wish to provide input into such a list. If Defra and the Forestry Commission accept the general premise of this proposal, we recommend applying a period of cross-sector consultation.

We suggest that the term 'woodland' be split into at least four components:

- Productive conifer, where timber production is the primary objective.

- Productive broadleaves, where timber production is one of the key objectives.
- Native woodland, where nature recovery is the primary objective.
- Mixed woodlands managed to provide a broad range of objectives.

In addition, trees outside of woodlands could form three further categories:

- Urban trees.
- Rural trees.
- Trees on farms, including agroforestry.

### Identify high-opportunity areas for productive woodland planting in England.

The Government's 25-year plan to improve the environment (2018) (38) recommended the creation of 'Forestry Investment Zones'. It suggested the identification of suitable areas for large-scale woodland creation and the promotion of Forestry Investment Zones to attract community, commercial and landowner investors. This proposal does not seem to have gained traction, but the idea of identifying high-opportunity areas is valid and should be revisited.

We urge the Forestry Commission to continue developing sensitivity maps for woodland creation, to identify not only low-risk areas but also potential high-opportunity areas in England.

### Implement a fast-track approval process for high-opportunity areas.

Offering an approval process for applications in high-opportunity areas that is both faster and time-bound will engender confidence among potential applicants and investors. We believe that removing the uncertainty that currently exists in the minds of potential applicants will have a dramatic effect on uptake.

We hope that Defra will consider this action when considering reforms of the EIA regulations.

### Issue guidelines for the regulation of planting applications in high-opportunity areas.

Once high-opportunity areas have been identified, the Forestry Commission and Defra must then clarify the guidelines for these areas and how they differ from those elsewhere. The guidelines should provide clarity about desirable project types, as well as EIA requirements, and the process and timeframe.

To function efficiently on the ground, these guidelines should also be agreed with Natural England.

**Re-balance the emphasis, towards productive planting.**

More balanced policies and advice that focus on delivering for nature, timber production and carbon sequestration are needed.

Productive forestry will attract much-needed private capital and, in turn, accelerate woodland creation. The silvicultural practices involved in productive forestry will also ensure high-quality woodlands are planted and actively managed. Many of these woodlands will also provide excellent places for carrying out recreational activities.

We suggest that up until 2050 the total area of new woodland creation in England should incorporate the following components by area:

- 40% stocked conifer.
- 20% stocked productive broadleaves.
- 20% native broadleaves and natural regeneration.
- 10% open space.

Mixed woodlands would incorporate elements of all of these components.

By way of context, the current policy in Scotland is for 60% of woodland creation to be planted with the principal aim of timber production.

**Ensure that timber production is incentivised alongside ecosystem services.**

The recently published Nature Markets framework (36) states that “[ecosystem] markets should incentivise land and seascapes which maximise environmental benefits alongside food, timber and other goods and services”. While there is a strong case for channelling private capital to produce environmental benefits, the Government must make sure that physical outputs, such as timber and food, are not priced out.

**Stabilise the current area of productive conifer in England by 2030.**

Where conifer is being removed for reasons such as habitat restoration and infrastructure development, we ask that an equivalent area of conifer is replanted in a more suitable location. This is vital to maintain the current resource.

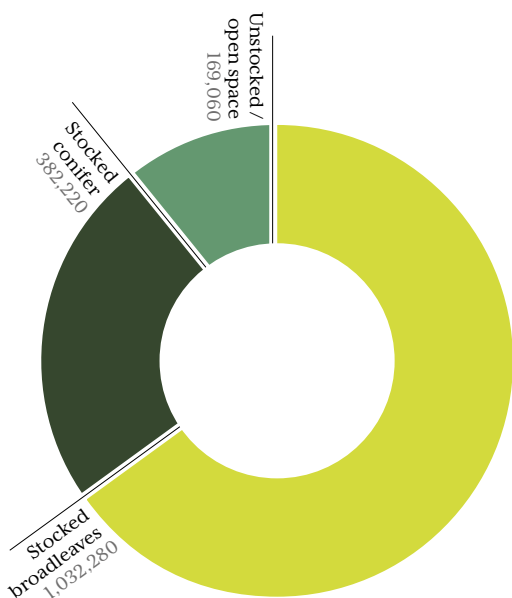
There may be a case for allowing Forestry England to purchase or lease appropriate land to plant new areas of productive conifer.

**Support the 104,000 ha target of extra stocked conifer forest in England by 2050.**

This equates to 40% of the 260,500 ha that must be planted in England in order to achieve the statutory target.

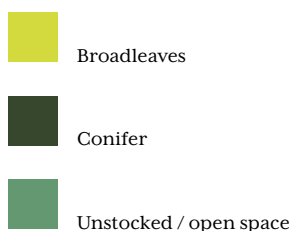
Figure 4  
**Areas of stocked conifer and broadleaves in England at 2050, having achieved the statutory target, in line with our recommendations**

Measured in ha



Total area of woodland (in ha)

**1,583,560**



(Calculations in Appendix 1. Based on achieving 16.5% statutory target by 2050 and 40% of all new planting being stocked conifer. All new planting UK Forestry Standard (UKFS) compliant.)



In addition to the current area of 278,000 ha of stocked conifer (9a), the new planting will bring the total area of stocked conifer in England to 382,220 ha. Such an expanded resource will provide a potential future wood supply of approximately 1.2 million m<sup>3</sup> obs per year from 2055 (see Appendix 2).

This increased volume will help to reduce potential imports, decarbonise construction, create new jobs and encourage investment in new emerging markets in the bioeconomy.

**Review restocking guidance for existing productive conifer forests.**

More intensive restocking of existing conifer forests would help to minimise the loss of productive forest and reduce the pressure on new land to achieve wood supply targets.

New guidance could include encouragement for restocking up to the maximum level of 85% stocked conifer.

**Encourage and support the planting of 52,000 ha of productive broadleaves managed for timber production.**

The fact that 85% of the hardwood crop is used as woodfuel and only 7% is good enough for sawmilling (9a) indicates that the current approach to growing broadleaves in the UK is not compatible with increasing hardwood timber production.

**Communicate the productive woodland target to all levels of the Forestry Commission and throughout Defra.**

Creating an extra 104,000 ha of stocked conifer forest and 52,000 ha of hardwood-producing woodland should be considered priority targets.

Adopting these targets and communicating them to Forestry Commission staff will empower them to encourage and support new productive forestry schemes.

It is important that applications for productive woodland are met with a positive, transparent and timely response, in line with UKFS. 'Good news' stories relating to successful planting applications will help to persuade others to commit.

**Consider a change of approach, to apply UKFS at the landscape level, rather than at the forest management unit (FMU) level.**

The productive forestry sector broadly supports the principles of sustainability within the UKFS, but it does not believe that it is practical to expect every piece of woodland, large or small, productive or otherwise, to achieve all of the elements within the standard.

We believe that the focus should be on resilient and diverse landscapes, rather than individual FMUs. With appropriate planning and collaboration between landowners, such landscapes could contain a complementary patchwork of productive forests and woodlands focused on nature recovery.

**Consider a higher level of support within the Woodland Carbon Guarantee scheme for woodlands that are planted with timber production as a primary objective.**

This change would reinforce the message that the Government is firmly behind productive forestry.

## Actions for Industry

**Confor's carbon members' group should work with the Forestry Commission to address challenges associated with the WCC**

Issues for discussion should include the following:

- How to encourage timber production as well as carbon capture.
- How to account for the carbon contribution of harvested wood products.
- How to account for the carbon benefits of product displacement.
- Increasing the resources in the WCC team focused on processing projects, to speed up the approval of applications.
- How to increase the resourcing of accreditation bodies and speed up deployment.
- Widening the governance of the WCC to provide for a greater role of the private sector and to build business confidence in the future development of the WCC.

**Commission work to model the carbon flows resulting from the harvesting and use of wood.**

It is vital to understand how carbon that is 'locked up' in forest products can complement carbon systems within trees, plants and soils.

The recent Forest Research report 'Quantifying the sustainable forestry carbon cycle' (25) provides an academic basis from which to progress towards the accounting of carbon in wood products. Further work is required to understand the carbon cycle in forest products beyond the forest gate.

A species-specific audit of the supply chain could assess the typical end uses, yield and lifespan of wood, thereby providing a carbon benchmark for harvested forest products.

## Actions for the NGO Sector

### Explain to stakeholders the benefits of home-grown timber.

Charities and other NGOs are some of the most trusted bodies in society, and this provides them with the opportunity to educate people.

We acknowledge that a number of organisations, including Grown in Britain and Woodland Heritage, have been promoting the use of home-grown timber for furniture making and construction for many years.

Growing and using more wood and timber in this country, rather than importing it, makes sense. We ask NGOs to use their trusted status to promote this message.

## Collaborative Actions

### Ensure that the productive woodlands of the future are as resilient as possible.

The challenge facing those creating new productive woodlands is how to achieve commercial viability while accounting for current and future effects of climate change, pests and diseases.

Commercial viability is necessary to encourage investment and land use change. Resilience is vital to protect the investment for the long term.

It will be for individual land managers and investors to decide how to achieve this tricky balance, but the forestry sector must be agile enough to respond to the changing environment.

### Collaboration between organisations from government and industry to create a ‘Timber Sector Deal’.

We hope the Timber Sector Deal will be built on the foundations of this strategy, as well as other relevant findings. These include the ‘Valuing timber in construction’ report and the Environmental Audit Committee’s recent report.

We recommend that the following form the cornerstones of the Timber Sector Deal:

- Agreement on a target for an established area of productive conifer and broadleaved forest.
- An agreement to systematically remove barriers to the creation of productive woodland in England.
- A commitment to prioritise timber production alongside nature recovery and carbon capture.
- A target to increase the amount of English timber used in long-term and recyclable products and systems.
- A target for investment in the wood processing industry in England.
- A target for private investment capital in woodland creation in England.
- The creation of a ‘Strategic Forestry Fund’ to attract and deploy private capital in English forestry.
- A joint communications strategy to explain and promote the Deal.

### Begin a process of consultation to create an agreed list of woodland types.

Breaking the statutory target into a detailed set of woodland types and associated management objectives is key to the success of achieving the overall target. We suggest that a cross-sector group begin a consultative process without delay.

It is important that this process is inclusive, although the usefulness of the list of woodland types will rely on it not becoming unwieldy in its complexity.

### Support improved squirrel and deer management.

Increased support is needed to further research and testing directed towards the reduction of grey squirrel and deer populations using methods that are acceptable to the public. These methods must be effective at scale and financially viable for land managers.

### Encourage landowners and woodland managers to implement improved squirrel and deer control.

It is incumbent on all parties to persuade those that own and manage woodlands of the importance of managing both grey squirrels and deer. Without collective action it is very difficult for individual landowners to control browsing wildlife.







## Goal 2

# Exceed the Government's statutory target for tree and woodland cover

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## Targets

- At least 16.5% tree and woodland cover in England by 2050, with an ambition to reach 17.5%.
- A sub-target of 1.6 million ha of conventional woodland cover in England by 2050, equating to 12.3% of the land area.
- An attractive offer for farmers that does not penalise them for putting agricultural land under trees by 2025.
- The removal of the permanency requirement for short rotation forestry, short rotation coppice and fast-growing timber crops by 2025.
- An end-to-end woodland creation application process that is streamlined, predictable and time-bound.
- A cross-sector group focused on supporting the delivery of the statutory target.



## Actions for Government

### Support a more ambitious target for tree planting and woodland creation in England.

Organisations including Confor, the Woodland Trust and Friends of the Earth believe that the current target is not ambitious enough to meet the escalating challenges posed by climate change and biodiversity loss.

We acknowledge that the statutory target represents a minimum rather than an upper limit, and, as such, we are asking for the Government to support a greater ambition, rather than to change the statutory target.

### Create a woodland-only target of 1.6 million ha by 2050, equating to 12.3% of land area in England.

As discussed under Goal 1, we believe that it is necessary to elaborate on the statutory target. As a first step, it makes sense to separate the target for woodland creation from that for individual trees. Both categories are important, but for practical reasons they should be approached separately.

### Streamline the woodland creation application system.

According to many of those that we consulted, a slow and unpredictable application system is one of the main barriers holding back new woodland creation in England.

Bureaucracy could be reduced by connecting all of the elements of the application process. We suggest combining the planning grant application, EIA decision, UKFS approval and the EWCO application into one end-to-end process, and to allow only one round of consultation at the outset.

As well as being streamlined, an improved process should also be transparent, predictable, and, most importantly, time bound.

We welcome the recent announcement by the Forestry Commission describing the modernisation of consultation arrangements to help accelerate tree planting rates.

### Urgently review planting applications that have been in the system for more than one year.

Despite all the challenges that we have described, landowners are applying to plant trees and create woodland in England. However, some of these applications have been stuck in the system for years.

Such delays are creating a negative mindset among land owners and managers. In addition, stories of delayed planting schemes are dissuading others from attempting tree planting and woodland creation projects.

### Continue to improve the offer to farmers to encourage woodland creation on farms.

Farmland covers 70% of the country and contains 29% of the nation's woodlands (9a). Achieving the statutory planting target hinges to a large extent on enticing farmers to become foresters as well.

To achieve this, we recommend the following changes to the current offer:

- **Remove permanency for new planting of fast-growing timber crops.** This single action would have a significant impact. It would give farmers autonomy while also removing some of the friction between tenant farmers and landowners. What is more, it would turn trees into a crop and make the switch from agriculture less of a cultural change.
- **Balance tax incentives for agricultural activities and forestry activities.** An offer that leaves farmers worse off is not an attractive one.
- **Streamline and annualise woodland creation grant payments.** Simplifying and annualising woodland creation grant payments would ensure the process dovetails more effectively with current and future grant structures.
- **Confirm the situation with the Environmental Land Management Scheme as soon as possible.** Farmers are delaying land use decisions until they know how future incentives will be structured. Confirming the situation will help to get the ball rolling.

### Counteract the view that woodland creation is less of a priority than other land designations, historical land formations and cultural sensitivities.

Without a recalibration of land use priorities, it will be very difficult to achieve the statutory target for woodland and tree cover.

There is little land in England that is not subject to more than one claim to either change it or maintain it. The English landscape contains many historical, cultural and environmental features that are valuable and that deserve protection. At the same time, the Government has committed to finding suitable land to plant 10,000 ha of woodland each year until 2050.

The challenge is to find enough land where woodland creation will take precedence.

### Create a national land use framework.

The Chris Skidmore 'Net Zero Review', along with the House of Lords Land Use in England Commission and the National Food Strategy, have all called for a national land use framework.

To reach the statutory target for tree and woodland cover, there is a clear need for a robust overview of current and future land use.

Such a framework would benefit from the inclusion of potential high-opportunity zones, along with the granular detail of woodland types, rather than generic references to woodland and trees.

**Invest in a new Protected Landscapes Partnership to enable National Parks, AONBs and National Trails to collaborate more closely on national priorities, including tree planting and woodland creation.**

During our many discussions, the National Parks and AONB partnerships were repeatedly described as organisations standing in the way of woodland creation within their boundaries.

We ask that these organisations be encouraged to develop their own strategies to contribute to the achievement of the tree planting and woodland creation statutory target.

## Actions for Industry

**Review the capacity and structure of the seed supply and nursery sector.**

Accelerating tree planting without compounding biosecurity problems will require an enlarged domestic nursery sector that is capable of supplying the necessary seeds and saplings. It is essential that all relevant industry and NGO sectors understand the future shape of seed and sapling availability and what changes or innovations are needed to expand capacity.

The nursery sector will want to understand how the risks associated with increasing capacity will be shared across the supply chain.

The ‘Tree Supply Report’ (45), recently published by the Forestry Commission, provides useful data and interpretation for those undertaking this action.

**Develop and disseminate best practice for the writing of new woodland creation applications.**

The Forestry Commission has pointed out that additional delays in the new woodland application process can occur due to poorly drafted applications and lack of knowledge on the part of some applicants. Industry should work with the Forestry Commission to develop a best practice guide and disseminate it throughout the sector to minimise these delays.

**Support the creation of non-productive woodland**

The industry is inviting NGOs to support the creation of more productive woodland and many are doing so. In return, those same organisations would like to see and hear industry supporting the creation of more woodland that is focused on nature recovery.

## Collaborative Actions

**Continue to develop an evidence base and a strategy for building woodland resilience.**

Many of the contributors to this strategy are also partners in the Forestry and Climate Change Partnership and signatories to the 2022 Forestry & Climate Change Adaptation Accord (40). Through the Accord, the signatories have committed “to take urgent action, recognise the need to work together, and commit to promote the importance of the adaptation of our trees, woods, and forests to climate change”.

We would like to see the Forestry and Climate Change Partnership develop into a provider of practical information and advice on building woodland resilience for land owners and woodland managers. This should be underpinned by an evidence base that is informed by ongoing research.

According to the Government’s National Adaptation Programme, published in 2013 (41), actions to improve resilience in woodlands include the following:

- Actively managing sites.
- Preserving and enhancing species diversity.
- Embedding adaptation skills and knowledge.

Additional approaches include the following:

- Tree breeding for health and drought resistance.
- Genomics to encourage resistance to diseases and pathogens.
- Diversification of age structure.
- Employing various silvicultural approaches.
- A focus on soil health and mycorrhiza to promote tree health.

**Build an evidence base on the commercial viability of various silvicultural systems.**

Building resilience into woodlands is in part a function of silvicultural diversity. Approaches include coppicing, shelterwood systems, nurse cropping, the three-compartment model and continuous cover.





The forestry sector would benefit from an economic evidence base to inform future productive woodland creation projects and to help strike the tricky balance between resilience and commercial viability.

**Form a cross-sector group to deliver the statutory target.**

There is undoubtedly a shared desire across industry, government and the NGO sector to dramatically increase the area of woodland in England, and a desire to manage current woodlands better. There is also a shared aspiration to produce more of the wood used in this country from our English woodlands.

During the conversations that fed into this strategy many contributors voiced their desire to collaborate more and to continue talking and thinking together.

After the publication of this strategy, we suggest a series of collaborative events be held to establish a collective approach to delivering the statutory target and to lay the groundwork for an ‘implementation strategy’.

High-level topics to engage on include the following:

- Delivering and exceeding the 16.5% statutory target.
- Descriptions of woodland types.
- Creating targets for various woodland types.
- Mapping high-opportunity areas.
- Identifying information and data gaps.
- Cooperation with regional authorities.
- Increasing levels of management in private woodlands.
- Productivity in woodlands.
- A joint communication strategy.

## Goal 3

# Increase the use and lifespan of English wood

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## Targets

- Increased use of home-grown wood products and timber systems in construction.
- A detailed understanding of the wood supply chain in England and the UK, including data on the lifespan of wood fibre and the carbon stored within it.
- Adequately funded breeding programmes for six conifer species (other than Sitka spruce) and three broadleaved species by 2025, focused on improving quality, yield and resilience.
- A resilient supply chain that can provide sufficient seed orchards and forest nursery capacity to fulfil increased demand for the improved planting stock of selected diverse species.
- 75% of private woodlands to be under active management by 2040.
- An established research and development programme for product and market development to increase the value and lifespan of harvested wood.



## Actions for Government

### **Utilise policy and guidance to increase the planting of softwood-producing conifers.**

95% of timber used in the UK is softwood from conifer trees. Therefore, increasing the use of home-grown timber means, for the most part, the planting of more conifer trees.

### **Define different types of woodland management.**

Woodland management is a generic term that describes everything from conscious non-intervention to intensively managed plantations. Recognising that the ambiguity of the term is not useful, we suggest that it would benefit from greater elaboration, based on activities and desired outcomes.

We understand that a working group within the Forestry Commission is considering how to better describe woodland management. We hope those involved will develop a detailed framework for describing what is happening in English woodlands.

### **Embed 'buy local' into government policy for timber.**

Alongside government policy, local authorities should be encouraged to develop and implement sustainability targets for building with natural, sustainable and locally grown materials.

As an example of such an approach, the French Government previously announced that all new public buildings must be made from at least 50% wood or other sustainable materials from 2022 (39).

To support the woodland economy in England and to help reduce our reliance on imported wood we urge the Government and local authorities to encourage the use of locally grown wood as a preference. The 'Grown in Britain' Standard and chain of custody provide the mechanism to underpin such a policy.

### **Assess 'Grown in Britain' accreditation against Category A evidence for public procurement, as well as FSC and PEFC certifications.**

This change in approach will encourage the use of more locally grown timber in construction projects.

Defra is currently working on a review of the Timber Procurement Policy and the assessment of certification schemes.

## Actions for Industry

### **Commission a supply chain audit in England to better understand the circularity of wood.**

There is currently insufficient knowledge about the end uses of many UK wood products: how long they stay in service, how much is reused and how it is disposed of.

A clear understanding of the journey and lifespan of wood fibre will inform future efforts to improve circularity in the industry, as well as efforts to channel more wood into long-term products.

This knowledge is also important for evidencing the carbon benefits derived from the potential increased use of wood products in construction, and for benchmarking where these can be improved.

### **Accelerate the research into, and development and manufacturing of, long-term timber products made from a range of species.**

We recommend directing new investment towards the development of products that will expand the market for home-grown wood and increase the longevity of the wood supply chain.

Opportunities in this area could include the following:

- Increasing the market share of home-grown C16 graded timber and wood panel products.
- Developing timber-rich retrofit products and systems.
- Creating manufacturing capabilities for added-value wood products which are currently imported, such as wood fibre insulation, engineered flooring and cross-laminated timber (CLT).
- Experimenting with modification technologies to enhance the properties of wood.
- Identifying product designs that allow a wider range of species inputs.

### **Support and fund research into the structural characteristics of softwood from UK-grown conifer species.**

This will help to inform designers and structural engineers about the full potential of using a diverse range of UK-grown softwood species.

### **The ILG should build relationships with relevant industries, companies and research organisations.**

This includes exploring opportunities for the future use of wood fibre and particularly exploring ways in which wood fibre could drive economic development and climate change mitigation. This should include the identification of opportunities for cross-border collaboration within the UK and beyond to encourage knowledge sharing and avoid duplication of work.

## Collaborative Actions

### Identify barriers that are preventing greater use of home-grown timber in long-term or circular products and systems.

There does not appear to be a clear and collective understanding of why some species are underutilised. Outside of the processing industry there is also a lack of understanding about why much of the harvested wood is used in relatively short-term products.

Investigative projects, funded by the Forestry Commission and others, tend to identify how more home-grown wood 'could' be better utilised, but without identifying why this is not currently the case (based on the authors' experience).

Reasons for this could include customer perceptions, availability, quality, lack of processing capabilities, the cost of labour, or supply chain constraints. The reasons will vary for each wood species and product.

Once equipped with a deep understanding of these barriers and reasons, industry can begin to create a strategy to alter supply chains and product specifications in order to increase the use of home-grown timber.

### Identify appropriate species for investment.

It is widely acknowledged that there is a need to maintain, and indeed increase, the diversity in English woodlands. To achieve this, without impacting the commercial viability of productive forestry, it is necessary to improve the yield of a wider range of species.

We suggest that the focus be narrowed to a maximum of six conifer species (other than Sitka spruce) and three broadleaved species.

The Conifer Breeding Co-Operative is currently working on the improvement of Norway spruce and Douglas fir. In the south, growers might also appreciate the inclusion of western hemlock, western red cedar and Scots pine. Forest Research has identified exemplar specimens, known as 'plus trees', for all of these species.

Future Trees Trust has made progress with broadleaved species, including birch, sycamore, sweet chestnut and wild cherry.

Forest Research is continuing long-term research focusing on key conifer species.

Accepting that diseases will increasingly pose a challenge, breeding programmes must consider the potential for improving disease resistance.

### Advocate for the use of improved broadleaved tree stock for productive woodlands.

Using selected and improved broadleaved saplings will improve the opportunities for timber production in the future. Trees that grow faster, straighter and cleaner will be more valuable when harvested, and will potentially sequester more carbon.

### Work together to explore incentives for increasing woodland management.

Low levels of management in English woodlands can, in part, be explained by the fact that these woodlands are, on average, relatively small and are often difficult to access. Furthermore, woodland ownership is increasingly fragmented. Nevertheless, unlocking the commercial and ecological value in the 50% of unmanaged private woodlands is in everyone's interest.

What is more, the process of thinning and harvesting provides an opportunity to restructure and open up woodlands, allowing in light and generating greater biodiversity.

We suggest that the first task is to describe and define woodland management in all its forms. Next, the activities and outcomes that indicate woodland management is taking place should be described. Activities such as harvesting, thinning, grey squirrel and deer control and the removal of invasive plants, and outcomes such as the creation of open space, are all examples of indicators of woodland management.

Solutions to the enduring challenge posed by low levels of woodland management are likely to take the form of financial incentives and disincentives for different activities and outcomes.

Incentives are likely to be a combination of direct government grants and private funding, through mechanisms such as Biodiversity Net Gain or those described in the Government's Nature Markets Framework (36). Through the Countryside Stewardship scheme, Defra is introducing supplements for deer and squirrel management.

Disincentives could include a policy to only offer new woodland-related grants to landowners who demonstrate that they are managing all current woodland on an appropriate unit of land.

### Adopt and implement the 'Valuing Timber in Construction' report.

Industry must work closely with Defra, the Forestry Commission and others to ensure the success of this important piece of work.





Photograph courtesy of James Jones and Sons.

## Goal 4

# Create a predictable and consistent investment environment

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## Targets

- English forestry is considered a low-risk and profitable destination for 'green capital'.
- Commercial forestry in England is marketed as an attractive opportunity for investors.
- A predictable, consistent and timely application process for woodland creation.
- A Strategic English Forestry Investment Fund.
- An increasing softwood availability forecast beyond 2050.





## Actions for Government

### **Continue to provide funding through EWCO.**

Although the EWCO budget does not have the capacity to deliver the entire statutory target on its own, it does provide a positive signal that the Government is serious about achieving it.

### **Demonstrate that productive forestry in England is a low-risk investment opportunity for 'green capital'.**

There is an exciting opportunity to attract UK and global pension funds, and other long-term 'patient' capital, to English woodland creation projects. The investment community are eagerly awaiting signals that policymakers in England support private investment in commercial forestry in England.

Although it is for asset managers and financial advisors to judge the merits of potential investments, the Government has an important role to play in demonstrating that private capital is a welcome funding model for woodland creation in England.

The investment community will seek assurances that the upgraded application system is transparent, predictable and timely. They will be looking for clear guidance on where low-risk / high-opportunity zones are located.

## Collaborative Actions

### **The Government, asset managers and industry should explore new opportunities to introduce private capital into productive woodland creation projects.**

We support a collaborative approach to creating a Strategic English Forestry Investment Fund. Such an approach could release significant capital while allowing the Government to retain control over forestry policy and land use planning decisions.

Current examples include the collaboration between the Irish Wealth Fund, Gresham House and Coillte. Another example is NatureScot partnering in a private finance investment pilot that could mobilise £2 billion in landscape-scale restoration of native woodland (32).

Releasing significant private capital for productive woodland creation projects in the near future will have a positive impact on the softwood availability forecasts post-2050. This in turn will provide the confidence needed in the processing sector to invest in extra capacity and product development.

## Goal 5

# Develop a consistent and positive message on productive woodlands

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## Targets

- A positive and consistent narrative on the creation of productive woodlands and the use of harvested wood products.
- An ongoing forum for collaboration between government, industry and the NGO sector, where they can discuss and craft the narrative.
- An understanding among all stakeholders of the different types of woodlands and the benefits each of them provides to society and nature.





## **Actions for Government**

**Continue to promote the statutory target and engage in wider dialogue to explain to landowners and the public why woodland cover is necessary.**

It is necessary to explain to landowners and the public how tree planting and woodland creation will change the landscape, as well as what the trade-offs might be, and how society and nature will all benefit.

It will be much easier for woodland creators to win over local stakeholders and concerned groups if they have the backing of a national campaign.

**Continue to deliver more balanced external and internal communications across and from Defra departments.**

It is necessary to highlight the importance of productive woodland and harvested wood products for both climate change mitigation and the economy. In future communications about woodland creation we hope to see timber production listed in the top three priorities, alongside nature recovery and carbon sequestration.

## **Collaborative Actions**

**Collectively paint a positive picture of forestry, for farmers, the public and investors.**

Develop a collective narrative to promote the high levels of consensus that exist across sectors. Further to this, promote woodland creation as a good news story.

If there is a consistent and positive narrative, landowners are more likely to view woodland creation as a credible opportunity.

Creating a positive and coherent narrative will also prevent the media from exploiting divisions between organisations for the purpose of presenting a good story.

As trusted organisations with large networks, NGOs have a particularly important role to play.

## Goal 6

# Develop a skilled workforce

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## Targets

- A well-funded and supported Forestry Skills Forum.
- An ambitious Forestry Sector Skills Plan.
- Clear milestones for nursery and forestry workforce capacity from 2025 onwards.
- A fresh image for forestry careers that are embedded within the green economy.
- Sustainable provision of further and higher education models that are suited to the needs of the sector.
- A high-level cross-border reference group that can identify common skills, requirements and challenges.



## Actions for Government

**Public sector agencies should continue to work closely with industry to identify and resolve recruitment and training challenges in the forestry sector.**

The Government's continued funding and support for skills and training in the forestry sector is vital.

## Actions for Industry

**Continue to work proactively with the Forestry Skills Forum, the Scottish Industry Skills Group and existing cross-border groups.**

Collaboration between industry stakeholder groups, the Forestry Commission and others is essential to address the evolving needs and challenges within the forestry sector. We encourage industry groups and individual companies to participate in regular meetings and workshops with these groups to share insights, developments and challenges in the forestry sector.

Industry representatives should encourage open dialogue and information exchange to communicate the industry's needs and priorities.

**Develop and implement initiatives to address strategically important gaps in technical training.**

Industry is currently developing a technical training service to address market failure in important areas of technical training, such as machine operator training and upskilling forest works managers.

**Develop innovative and effective training systems.**

Larger companies within the sector are taking the initiative by providing structured in-house training. In some cases, courses are being opened up to external applicants. One example in England is the Green Skills Training Academy offered by Maydenecroft.

In Wales and Scotland, Tillhill and the Foresight Sustainable Forestry Company have partnered with colleges to offer fully funded forestry skills training programmes.

## Collaborative Actions

**Support the work of the Forestry Skills Forum.**

The Forestry Skills Forum is an independent group, supported by the Forestry Commission, which is dedicated to promoting education, skills, learning and development across the forestry sector in England and Wales.

As an established collaborative group, the Forestry Skills Forum is best placed to address recruitment and training challenges in the sector going forward.

Long-term funding for the Forestry Skills Forum relies on support from industry and the public sector forestry agencies. Additionally, achievement of the Forestry Skills Forum objectives will depend on participants dedicating sufficient time to group activities.

**Develop and support a Forestry Sector Skills Plan.**

This plan will enable all relevant stakeholders to focus resources and activities to address key challenges and opportunities in skills development and recruitment in the sector.

**Continue developing apprenticeship schemes that meet industry needs.**

Along with partners, including The Institute of Chartered Foresters (ICF) and Confor, the Forestry Commission has successfully developed forestry apprenticeships at Level 3 and Level 6. These courses not only address the immediate skills needed in, and knowledge gaps in, the workforce, but also help in nurturing the next generation of forestry professionals.

It is important that these apprenticeship schemes are regularly reviewed and updated to ensure that they align with industry requirements.

Feedback from apprentices and employers will be equally beneficial to refine and enhance the content and structure of the apprenticeship schemes.

**Develop an intermediate qualification to bridge the gap between basic apprenticeships and more advanced skills.**

It would be beneficial for the Forestry Skills Forum to develop a qualification that can serve as a valuable stepping stone in the progression of a forestry career after the completion of an apprenticeship.

**Ensure that apprenticeship schemes and training initiatives are accessible to a wide and diverse range of participants.**

Providers should offer flexible learning opportunities, including part-time and online courses, to accommodate various learning styles and schedules.

They should also endeavour to promote inclusivity by providing support for underrepresented groups to enter and thrive in the forestry sector.

**Support the promotion and adoption of apprenticeships among employers in the sector.**

A collaborative effort between organisations is needed to build awareness and promote the apprenticeship schemes and training initiatives among the current workforce and those considering a career in the sector.

**Undertake regular studies of the sector skills plan and workforce demand.**

To understand workforce capacity and anticipate the future needs of the forestry and nursery sectors, industry should work with the Government to carry out sector skills plan and workforce demand studies. The frequency of these should align with the reporting cycle for the statutory target.

**Set clear milestones for nursery and forestry workforce capacity beyond 2025.**

This was a recommendation made by the National Audit Office in a recent report considering tree planting in England (47). We believe that this is a sensible step towards ensuring the forestry and nursery sectors can meet the increased demands posed by the goal of tripling woodland creation rates.

Milestones will provide the SMART outputs from the skills plan and workforce demand studies.

**Create a collaborative public relations campaign to demonstrate the breadth of forestry careers and their green credentials.**

A well-executed public relations campaign can significantly impact the perception of forestry careers and attract individuals who seek meaningful, environmentally conscious employment.

**Promote participation in the Forestry STEM Ambassador scheme.**

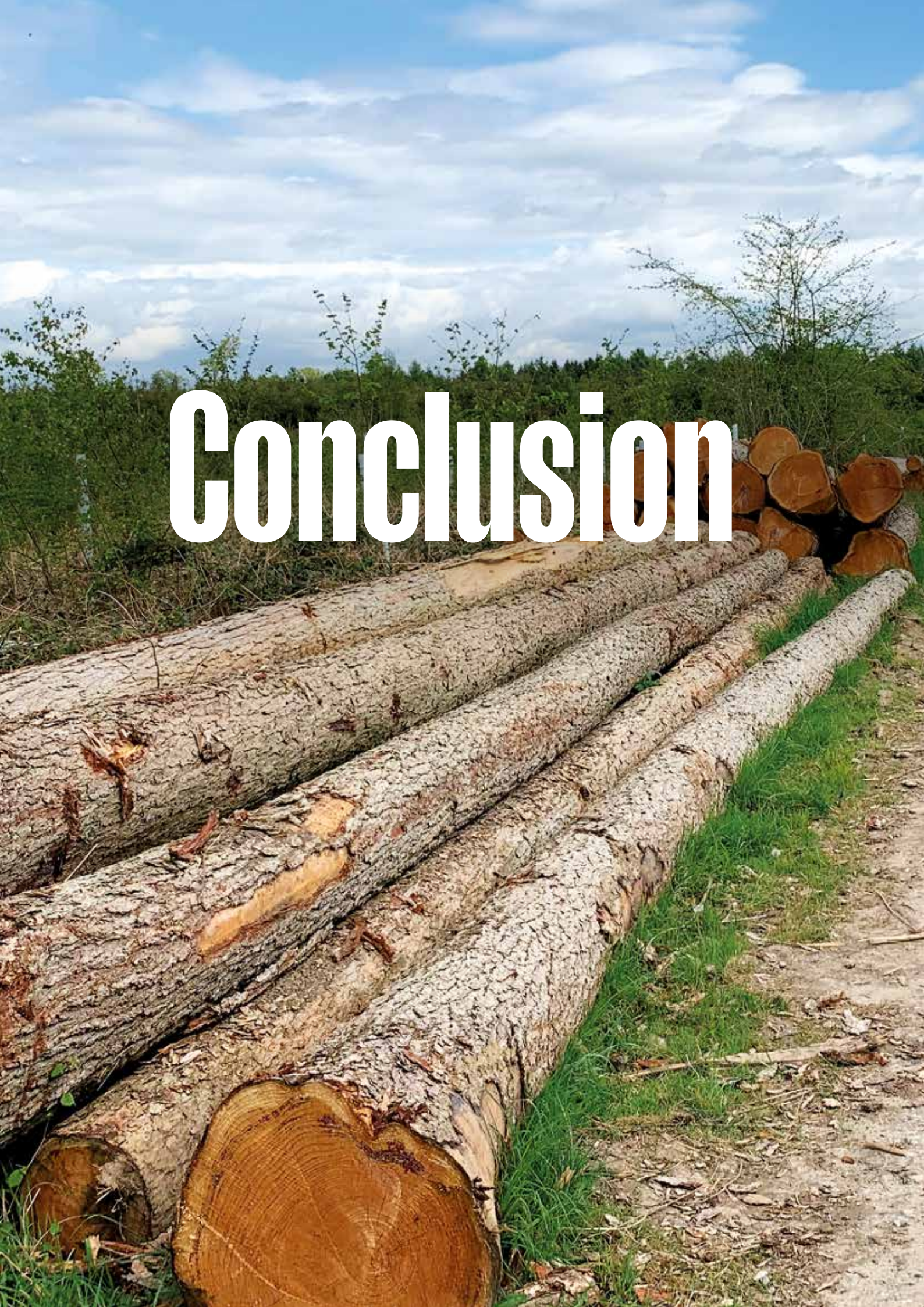
This provides an excellent opportunity for the forestry industry to engage directly with school children and highlight the wide variety of rewarding jobs there are in a sector which contributes positively to addressing climate change and strengthening the economy.







# Conclusion





To conclude, we leave you with ten statements that pull together the key themes in this strategy.

1. With looming global wood shortages and the need to decarbonise society, we believe that timber and wood fibre production should rank alongside nature recovery and carbon sequestration as one of the primary reasons for planting and managing woodland in the UK.
2. All woodland is important, but it is not all the same. Describing woodland types, along with management objectives, is necessary to recognise and value the outcomes and benefits of each.
3. Creating enough new woodland to achieve the statutory target will be expensive. Government funding is essential, as is that from the charitable sector, but it's not enough. Institutional green capital, channelled in the right way, has the capacity to make up the shortfall.
4. The importance of refining the application process for woodland creation cannot be over-emphasised. Transparency and predictability are the two key ingredients.
5. More timber means more conifer trees. 95% of the timber used in the UK is softwood. It is important to understand that, because hardwood has different properties and grows more slowly, it cannot replace softwood at scale.
6. To increase the levels of active 'management' in current and future woodlands, it is necessary to clarify what the term means and decide which activities indicate that it is happening.
7. Stabilising, and then expanding, the timber and wood fibre resource in England is a necessary first step. A positive forecast of raw material availability will generate the confidence needed for the processing industry to invest in capacity and product innovation.
8. Trees, soil and harvested wood can all hold carbon for the long term. The more wood that is used, and the longer it stays in service, the greater the positive impact on the Government's net zero ambition.
9. Productive woodlands must be resilient to climate change, pests and diseases, but they must also be commercially viable. The answer is not to sideline the best performing species but to expand the choice by investing in the performance of others.
10. Only by collaborating across sectors will it be possible to create the quantity and quality of woodland that is needed in England. We hope that this strategy serves as a catalyst for such collaboration.

# Next Steps

This strategy is intended to form part of an ongoing process that will deliver more productive woodland in England.

We hope to have captured the most important challenges and to have proposed sensible and achievable actions. However, the challenges will evolve and the actions will have to do likewise.

We are open to feedback about what we have missed and how this strategy can be improved.

Within the next twelve months the next steps include the following:

- The Government responds to the strategy.
- ILG / Confor and other willing organisations promote the strategy to their members.
- ILG assembles a representative board to deliver the strategy and monitor progress.
- A series of collaborative cross-sector workshops are organised to formulate a route to 16.5% woodland and tree cover by 2050.
- Development begins of a cross-sector campaign to promote woodland creation, woodland management and wood production.
- Recording and promoting successful woodland creation applications begins, as part of a 'positive progress' campaign.
- Progress reviewed after twelve months.







# Context

A photograph of a dense forest with tall, thin trees and a grassy foreground. The trees are mostly deciduous with bright green leaves, and some evergreens are visible in the background. The word "Context" is overlaid in large white text in the center of the image.



# Facts and Figures

To appreciate the challenges, and to frame potential actions, we thought it would be useful to look briefly at the context. This section provides a picture of English woodlands and the domestic wood processing industry.

## English Woodlands and Forests Historic Planting

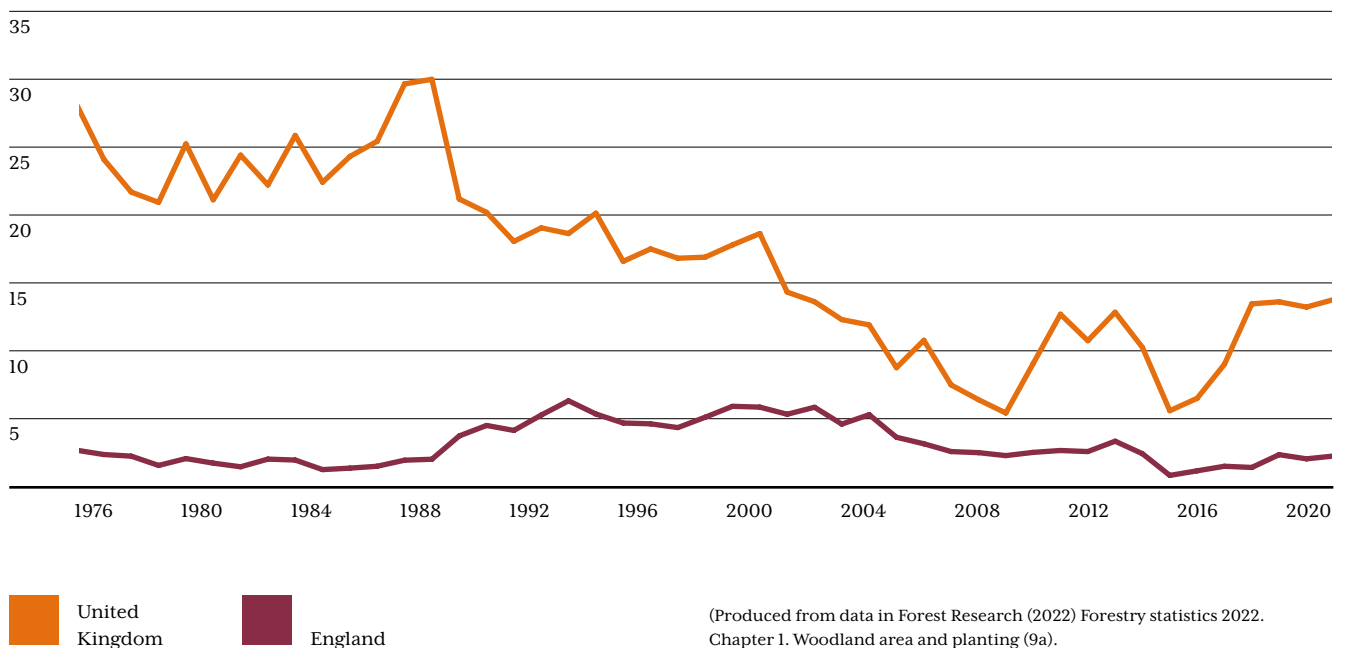
The rate of tree planting in the UK reached its highest point in late 1989, when woodland creation hit the current UK target of 30,000 ha per year. The dramatic drop-off after this point coincided with the phasing out of tax relief for tree planting schemes.

In England, the planting peak came later, in 1994, when 6,360 ha of new woodlands were created (9a).

Between 1997 and 2021 the woodland area in England increased by 333,000 ha (21)(9a).

Figure 5  
New tree planting, UK, 1976–2022

Measured in '000 ha



(Produced from data in Forest Research (2022) Forestry statistics 2022. Chapter 1. Woodland area and planting (9a).

**From conifer to broadleaves**

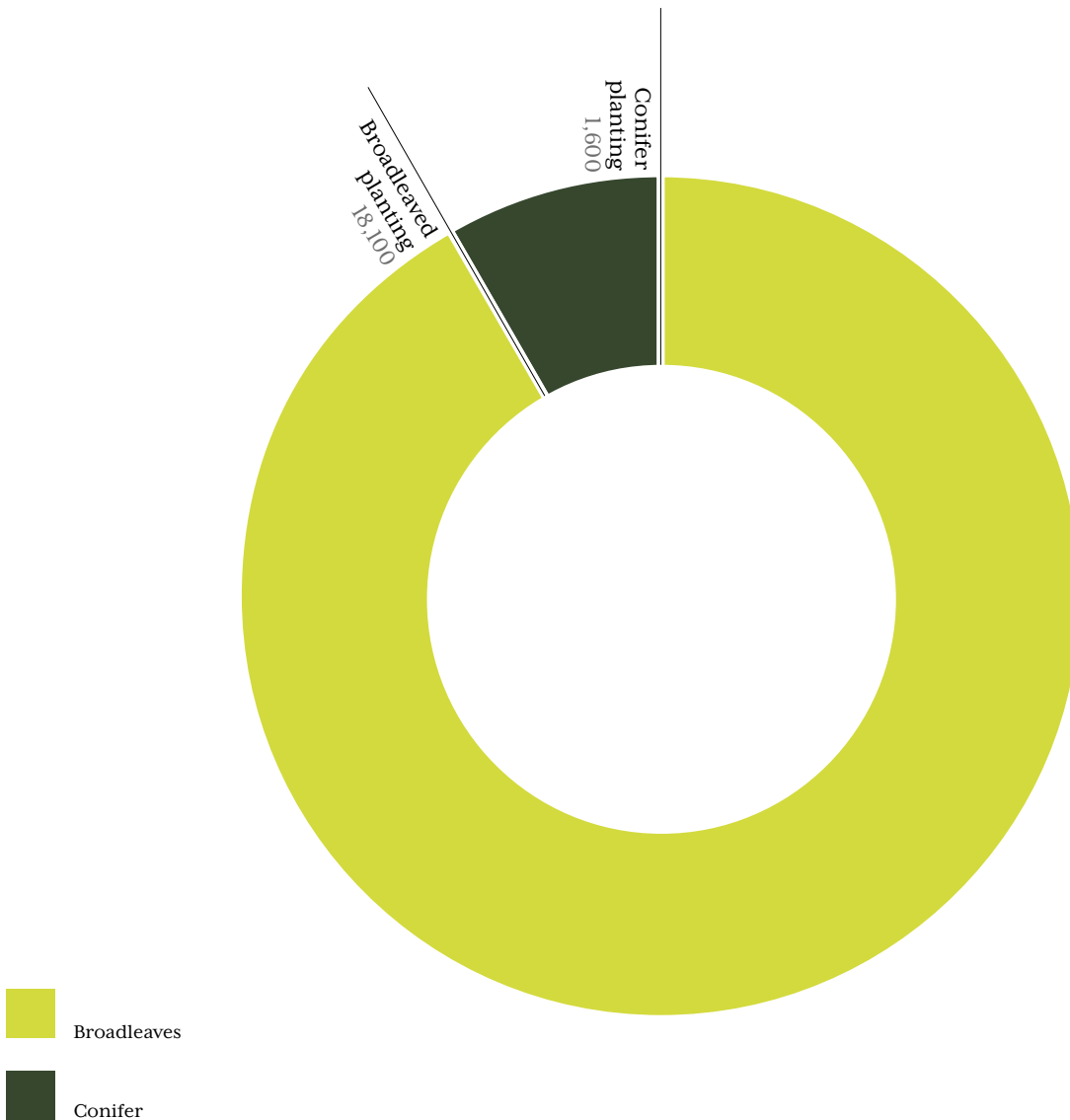
In the early 1980s, there was growing concern about the adoption of monoculture plantations in England. This included their general appearance within the landscape, as well as the planting, which often took place on deep flushed peat. Today, this is acknowledged as poor practice.

Very little conifer forest has been planted in England since.

Sadly, much of the broadleaved woodland creation over the last 30 to 40 years has resulted in poor-quality woodland. Damage by grey squirrels and deer, plus general lack of care after planting, has left us with woodlands that are failing to deliver for nature and are unlikely to yield any usable timber in the future.

Figure 6  
**New planting by woodland type, England, 2012–2022**

Measured in ha



(Produced from data in: Forest Research (2022) Forestry statistics 2022. Chapter 1. Woodland area and planting (9a); and Forestry Commission (2016). Forestry statistics 2016. (48))



## The 16.5% Statutory Target

In December 2022, the Government published a set of legally binding environmental targets. One of these was to increase tree and woodland cover to 16.5% of the total land area in England by 2050.

The current level of woodland cover in England is 10.2% (31). This is defined as areas of trees over 0.5 ha, with 20% canopy cover, that are 20 metres in width, and with the potential to reach a height of at least 5 metres (2).

The current level of tree and woodland cover in England is 14.5% (2).

Therefore, the ambition of the target is to increase tree and woodland cover in England by 2% of the total land area – that is equivalent to 260,558 ha.

Reaching this target will require a net increase of 10,000 ha per year from 2024 onwards. During 2022/23 the area of new woodland creation in England was 3,130 ha (31).

## UKFS

Modern forestry is underpinned by UKFS. This represents clear guidelines and recommendations for land managers, to ensure all woodlands in the UK are managed sustainably, while delivering social, economic and environmental benefits.

One of the key changes implemented through UKFS was to limit the opportunity for monoculture plantations in forests planted since the 1990s. The maximum permitted percentage of a single species in woodland planting is now 65%, and a minimum percentage of native tree species and open space is also stipulated. The total allowable area of conifer species is 85%.

## England’s Woodland Resource

At the start of the twentieth century woodland covered just 5% of England (30). Today, it stands at just over 10% (31).

Figure 7

Woodland cover comparison by region

**10%**

England

**13%**

UK

**46%**

Europe

**31%**

Worldwide

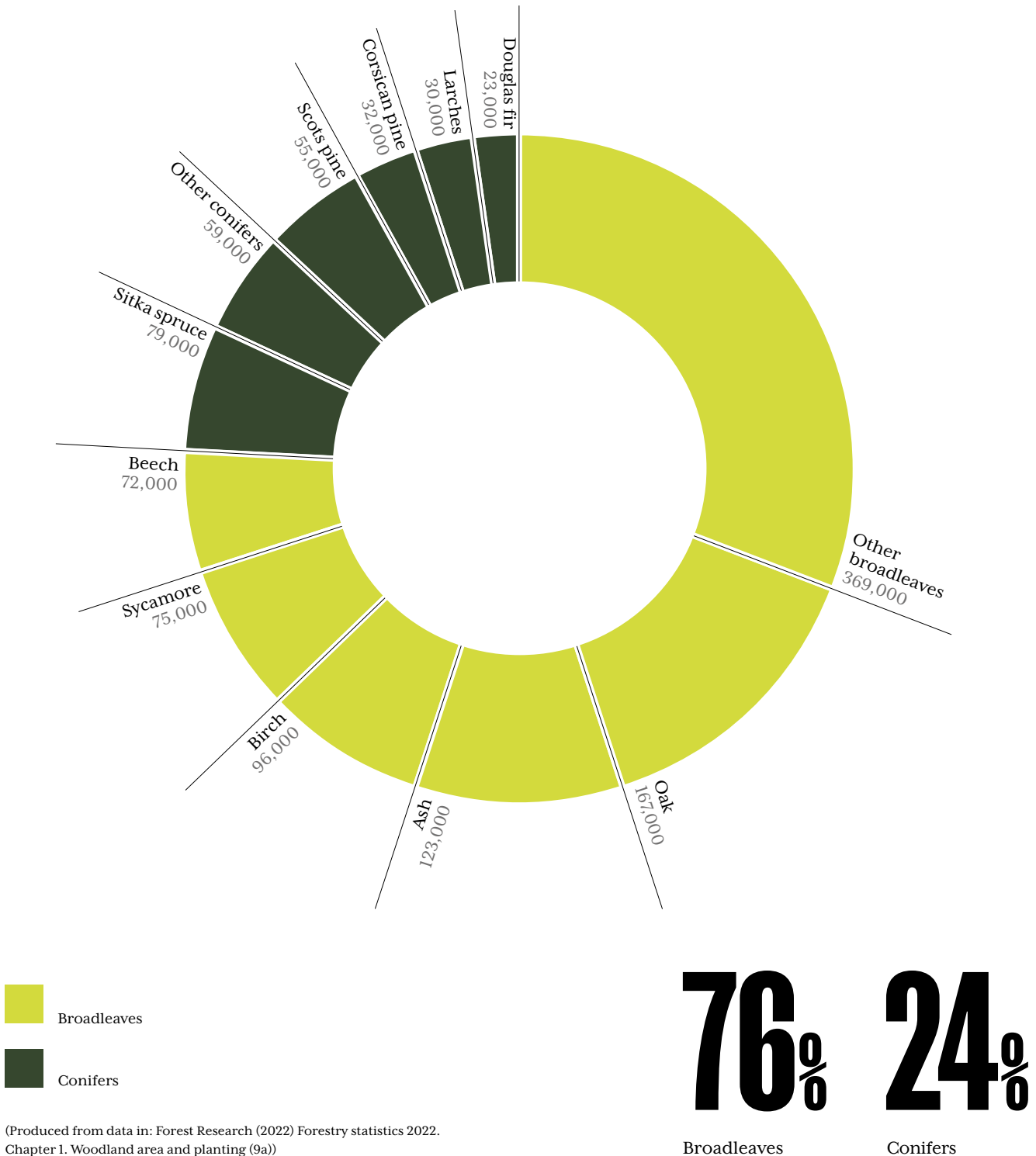
(Produced from data in: Forest Research (2022) Forestry statistics 2022. Chapter 1. Woodland area and planting (9a).)

## Tree Species in English Woodlands

Figure 8 illustrates the range of tree species currently grown in England. The three predominant species are oak, ash and birch.

Figure 8  
**Total stocked woodland area in England  
 by principal species, 2021**

Measured in ha



(Produced from data in: Forest Research (2022) Forestry statistics 2022. Chapter 1. Woodland area and planting (9a))



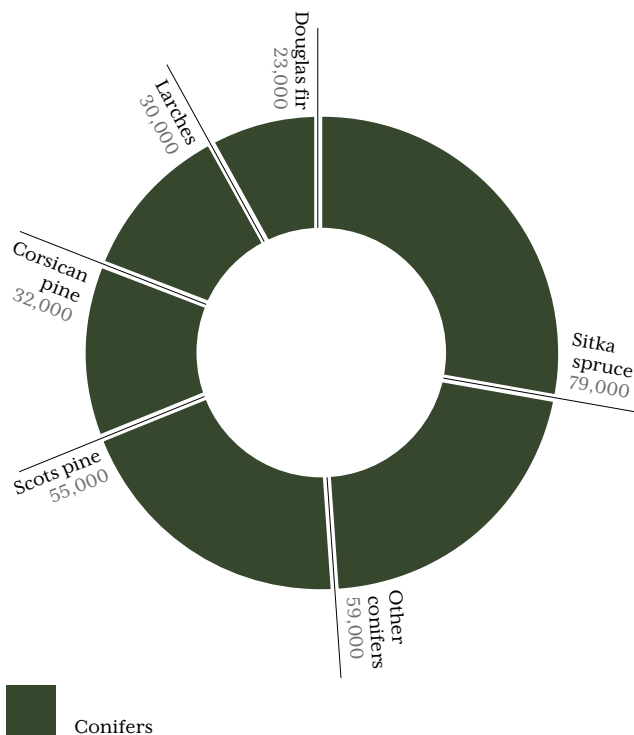
**Softwood Species**

Figure 9 highlights the relatively broad mix of productive conifer species grown in England.

Sitka spruce makes up 28% of the conifer area and 7% of the total woodland area.

**Figure 9**  
**Total stocked coniferous woodland area in England by principal species, 2021**

Measured in ha



(Produced from data in: Forest Research (2022) Forestry statistics 2022. Chapter 1. Woodland area and planting (9a).)

**In Support of Sitka Spruce**

During the conversations that fed into this strategy it became clear that Sitka spruce, and the intensive plantation style of forestry that this species symbolises, is contentious.

We think it is important here to offer a reminder of why Sitka spruce is a useful and popular species in the context of English forestry and local economies. We also think it is important to point out that the species is a relatively minor part of the mix in England.

The productivity and quality of Sitka spruce, the primary commercial timber species in the UK, has been developed by Forest Research over the last 30 years through a cutting-edge improved tree breeding programme. With a rotation length of 30 years, rather than the 40–60 years for other conifer species, improved Sitka spruce can produce double the yield per hectare when compared to other conifer species grown in the UK. As a consequence, it is also the species with the fastest rate of carbon sequestration.

Sitka is an essential component of our productive forests because it produces the quality of whitewood demanded by the large wood-using industries, such as construction (sawmills and panelboard), packaging, as well as distribution pallets. Spruce is the only species that can be machine graded at scale for structural timber in this country.

Without Sitka or other whitewood-producing species many large wood-using businesses in northern England and Scotland would not be viable.

The forestry sector acknowledges the potential risk associated with the various pests and diseases that threaten our current commercial crops, including Sitka spruce. That is why it is important to accelerate tree breeding to ensure alternative high-yielding tree species will be available in the future, if landowners are to be encouraged to diversify planting species. The sector also acknowledges the potential to breed resistance into existing productive tree species by using innovative breeding technologies.

Figure 8 indicates that, in terms of species mix, English woodlands are relatively diverse. It is of fundamental importance to keep them this way as they expand in the future.

**Broadleaved Species**

Broadleaved trees make up 76% of the total area of woodland in England (9a). The most prevalent broadleaved species are oak, ash, birch, beech and sycamore.

Broadleaved trees generally grow more slowly than conifers. In commercial terms, this means they have much longer rotation lengths (some over 100 years) and consequently much lower yield classes.

In carbon terms it means that the carbon is sequestered more slowly, but it typically remains locked up in the tree for longer. In terms of ecology, we know that broadleaved trees, especially those that are considered native, are powerhouses of biodiversity.



While conifer forests are usually planted to produce timber, broadleaved woodlands have commonly been planted (or regenerated) to achieve a wider range of objectives. These include nature restoration, leisure, carbon, shooting and often just the enjoyment of owning a woodland. That being said, there are plenty of examples of well-managed mixed woodlands in England that yield good-quality hardwood logs for the sawmilling industry, if in relatively small volumes.

Producing good-quality hardwood timber requires planning, intensive management and a significant reduction in pests, such as deer and grey squirrel.

The lack of woodland management, and specifically a failure to control grey squirrels and deer, has had a detrimental impact on English broadleaved woodlands.

#### **In Support of Ancient Woodlands**

Over the last 30 years new policies and practices have been introduced to address the environmental shortfalls that resulted from the planting of monoculture plantations during the 1960s, 70s and 80s.

As a result, mature conifer plantations have been restructured after felling, and where conifers were planted on ancient woodlands (PAWS), there have been efforts to reverse the change and bring back the native broadleaved mix.

Ancient woodland sites contain the seed banks and the mycorrhizas necessary to host a complex native broadleaved woodland, and often contain specialist plants that do not exist in newer woodlands. Because such preferential conditions can take many hundreds of years to develop within new sites, ancient woodlands are rightly considered a valuable natural asset.





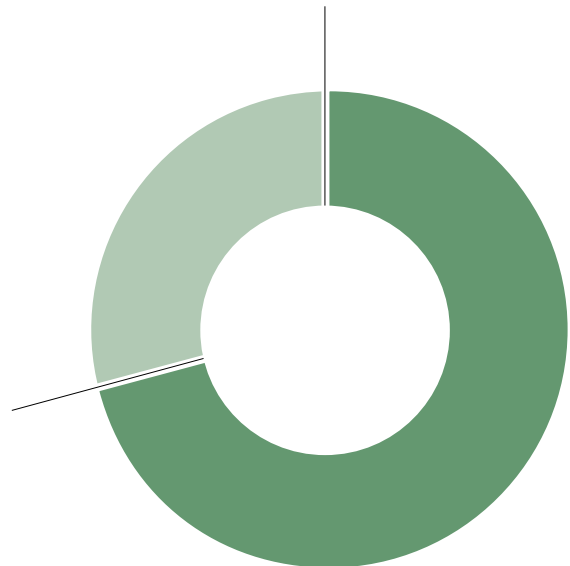
## Trees on Farms

According to the National Food Strategy (4, p.93) there is enough space to plant the trees that we need without significantly affecting food supply. The strategy goes on to say that the least productive 20% of agricultural land in England produces only 3% of the calories consumed by people. This means there are approximately 1.8 million hectares where trees could be planted without creating a conflict with food supply.

Furthermore, there is a growing body of evidence from the Soil Association and others that agroforestry, combining trees with crops and livestock, can enhance farm productivity, increase wildlife, improve soil health and animal welfare, manage water flow and contribute to climate change mitigation (43).

Above: Early stages of agroforestry adoption at Newhouse Farm.

Figure 10  
Area of woodland on farmland, England



**29%**

of woodland  
is on farmland

(Produced from data in: Forest Research (2022) Forestry statistics 2022. Chapter 1. Woodland area and planting (9a).)



## Sequestered Carbon

One of the driving forces behind the desire to plant more trees is that they have a fantastic ability to sequester carbon and lock it away as wood. Trees are one of the cheapest and most established tools in our climate change mitigation toolbox.

CO<sub>2</sub> emissions from the manufacturing of building materials represent around 9% of all global emissions <sup>(34)</sup>. Building with wood that has sequestered carbon from the atmosphere and replacing other energy-intensive materials offers an opportunity to reduce the overall carbon footprint of construction.

Forest Research has published the report 'Quantifying the sustainable forestry carbon cycle' <sup>(25)</sup>, which attempts to "estimate and compare the potential for carbon sequestration and greenhouse gas emissions avoided by the use of harvested wood products, that could be realised by creating different types of woodlands."

The report shows that different types of woodland and management systems can contribute towards greenhouse gas emissions mitigation in different ways and over a range of timescales.

Slow-growing, broadleaved woodlands offer a long-term store of carbon, whereas fast-growing conifer forests offer faster carbon sequestration and greater potential for displacing other fossil carbon-intensive products and fuels.

As well as growing more trees, it will be necessary to innovate and adapt, to prolong the lifespan of the wood that is harvested. This will ensure that the carbon is locked up for as long as possible.



# Availability of Home-grown Wood

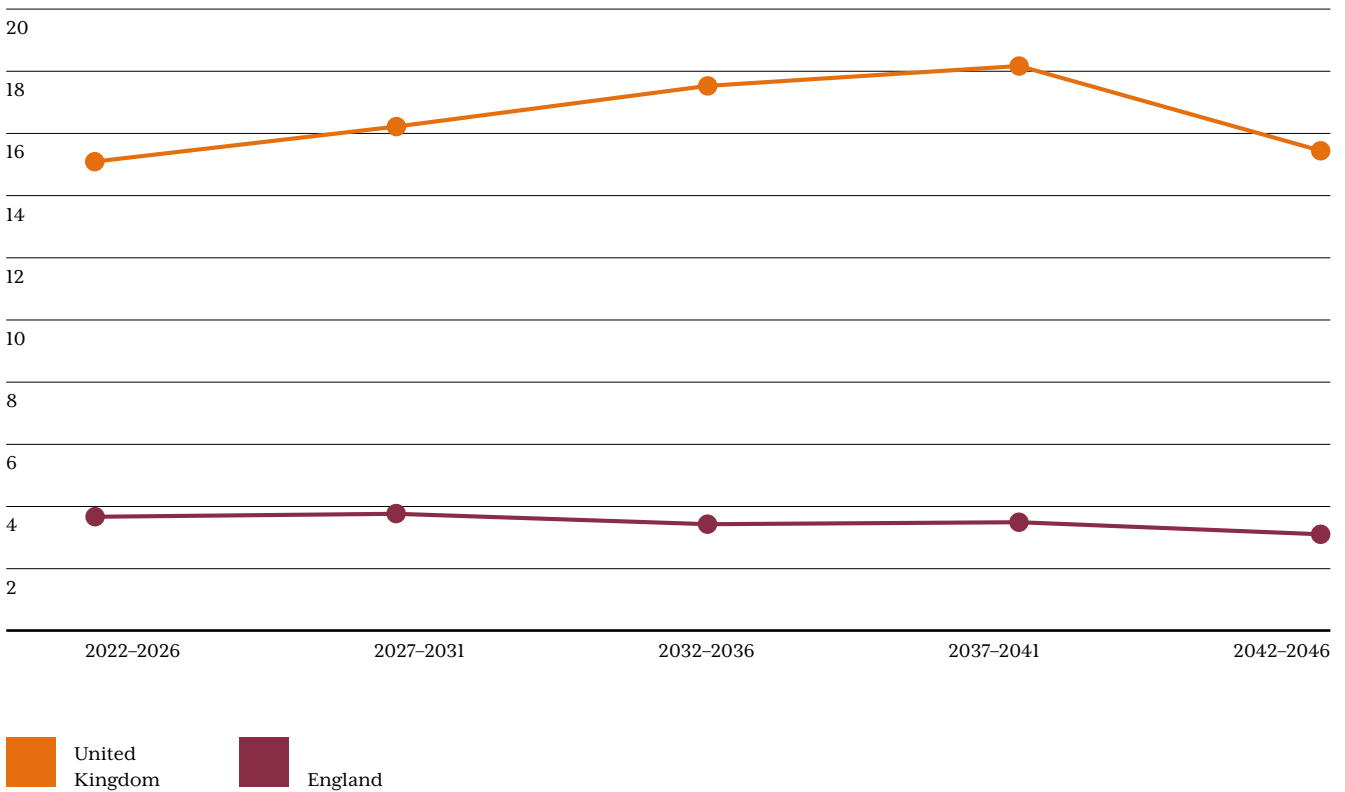
## Softwood Availability Forecast

According to Forest Research (8), softwood availability in the UK will peak between 2037 and 2041. After 2042, availability will decline.

In England, availability is predicted to peak as early as 2031 (8), after which it will decline steadily over the next 25 years.

Figure 11  
25-year softwood availability forecast

Measured in millions of m3 obs



(Produced from data in: Forest Research (2022). Forestry Statistics 2022 Chapter 2: UK-Grown Timber (9b).)

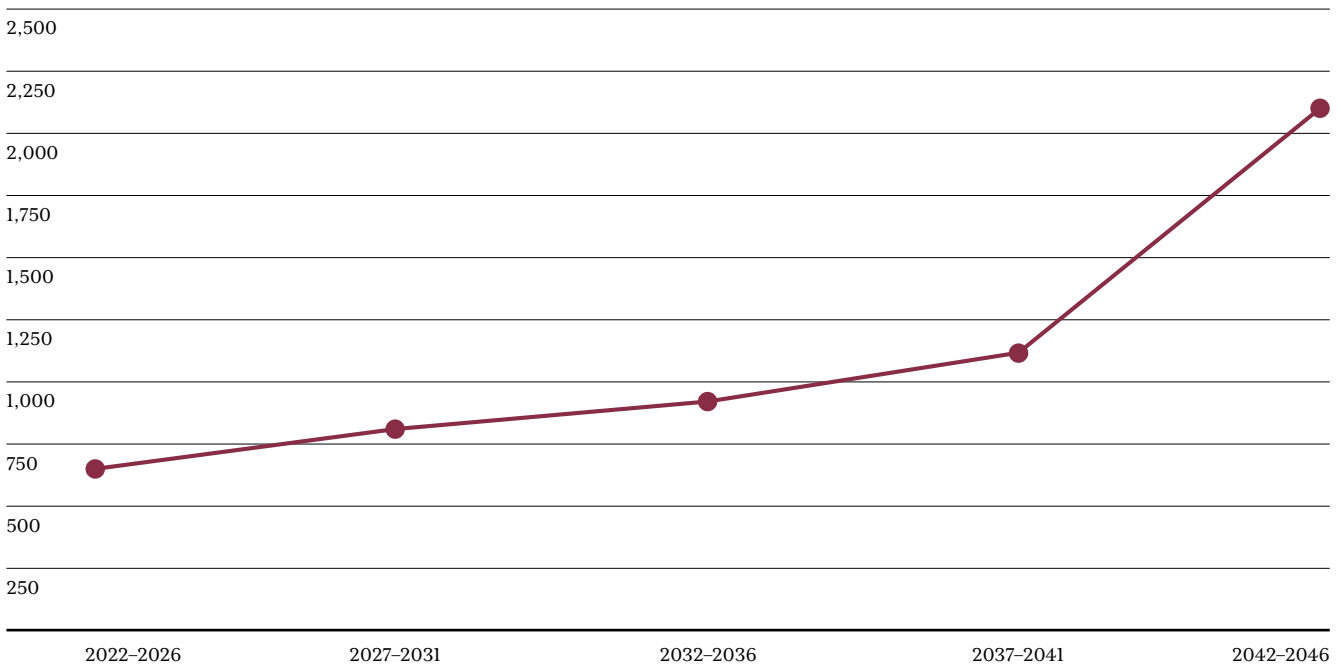
## Hardwood Availability Forecast

Hardwood availability in England will peak in the mid-2040s, at just over 2 million m3 obs per annum (8), although this does not consider the significant volumes of ash that are currently being felled due to ash dieback.

This sounds like a significant volume of wood, but the majority is likely to be of poor quality and unsuitable for sawmilling. Based on current usage patterns, most will end up as firewood and biomass.

Figure 12  
**25-year hardwood availability forecast**

Measured in '000 m3 obs



■ England

(Produced from data in: Forest Research (2022).  
Forestry Statistics 2022 Chapter 2: UK-Grown Timber (9b).)



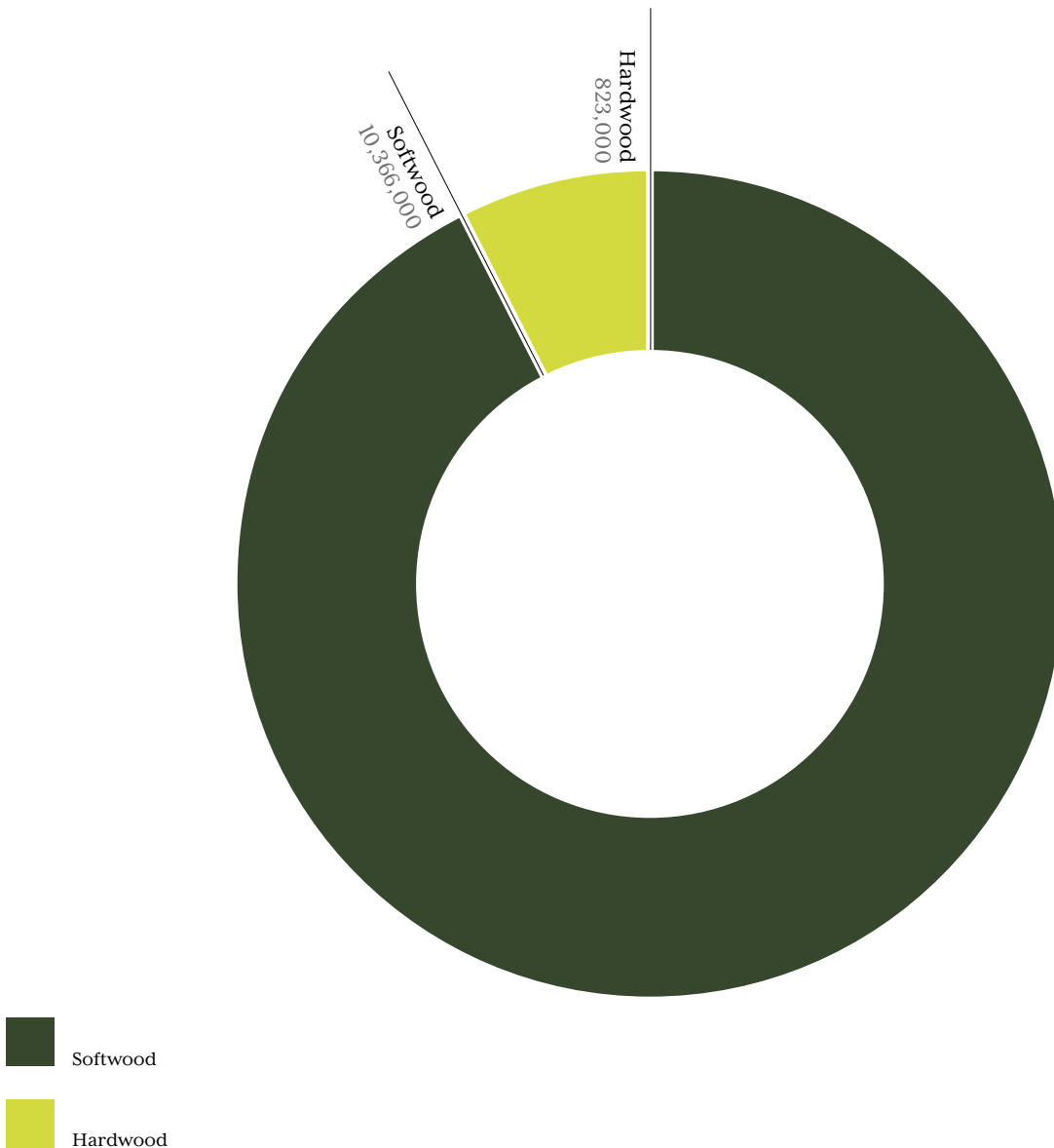
## The Wood Processing Sector

Over the last 30 years the UK domestic wood processing sector has been growing in line with increasing wood availability.

The sector contributed £1.73 billions of gross value added to the UK economy in 2020 and employed 73,000 people (separate figures for England are not available) (9c).

Figure 13  
**Timber deliveries to UK processors, 2021**

Measured in green tonnes



(Produced from data in: Forest Research (2022).  
Forestry Statistics 2022 Chapter 2: UK-Grown Timber (9b).)

## The Softwood Supply Chain

In 2021, 1.85 million green tonnes of softwood were harvested from England's forests (9a).

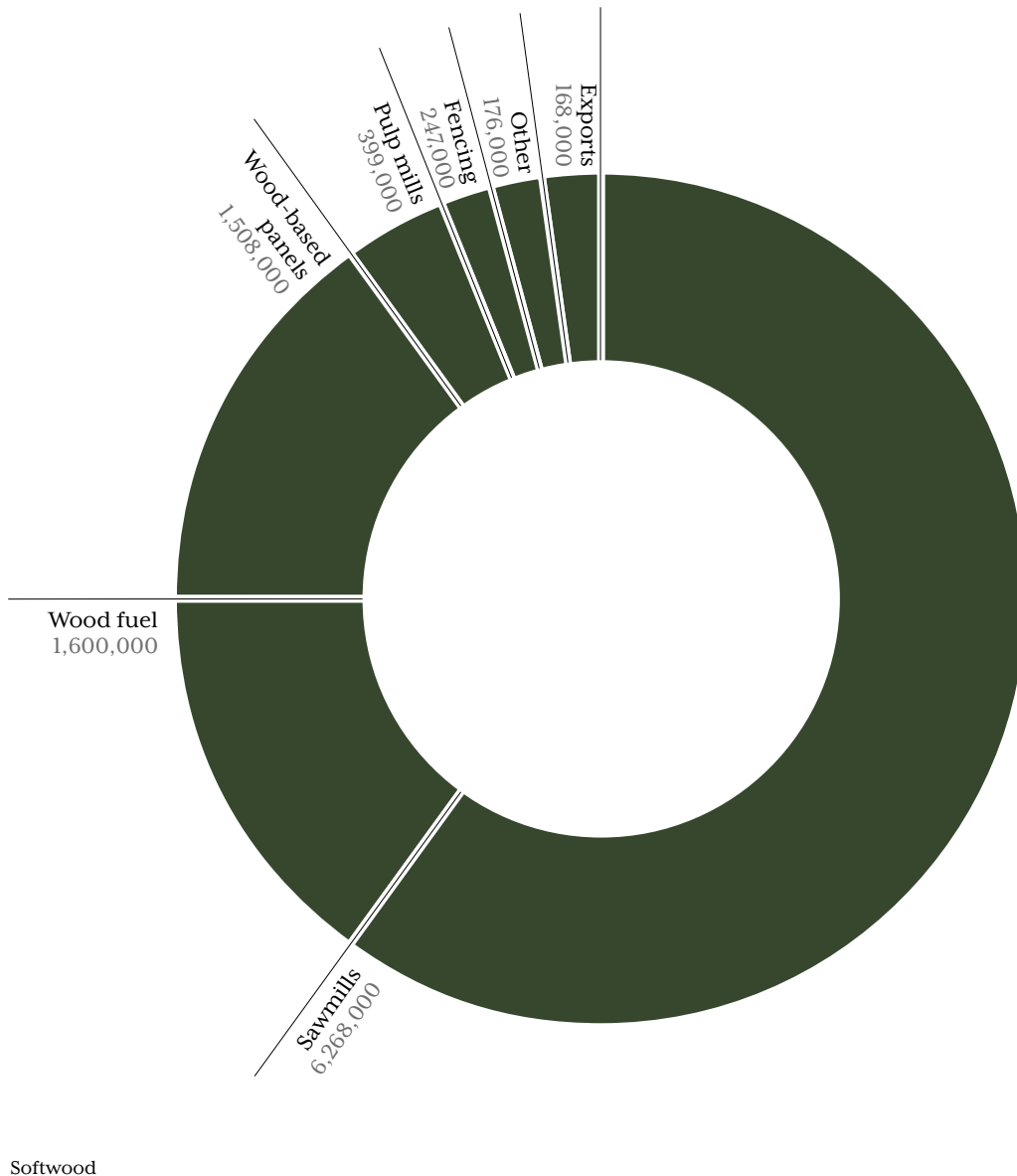
93% of wood harvested in the UK and 99% of the wood consumed by sawmills in the UK is softwood (9b). This reflects the data for total timber consumption in the UK, which indicates that 95% of all timber consumed is softwood (9c).

The notable point here is that production and consumption of softwood in the UK is on a different scale to that of hardwood. A decline in softwood availability cannot be offset by a marginal increase in hardwood volumes. Furthermore, because the properties of hardwood and softwood are different, they are used for different purposes.

Approximately £750 million has been invested in the UK softwood processing sector during the last 15 years (Confor). Processing companies have derived confidence from forecasts of an increasing wood supply, and their financial injections have created world-class wood processing facilities in the UK.

Figure 14  
Deliveries of softwood logs to UK processors, 2021

Measured in green tonnes



(Produced from data in: Forest Research (2022). Forestry Statistics 2022 Chapter 2: UK-Grown Timber (9b).)



Figure 15 illustrates that a relatively low proportion of sawn softwood from English sawmills is sold as long-term products for construction. The majority is sold as fencing and packaging. This is in part because of the low levels of timber-framed construction in England. According to the Structural Timber Association, 90% of new builds in Scotland are constructed with a timber frame, while in England the figure is only 9%.

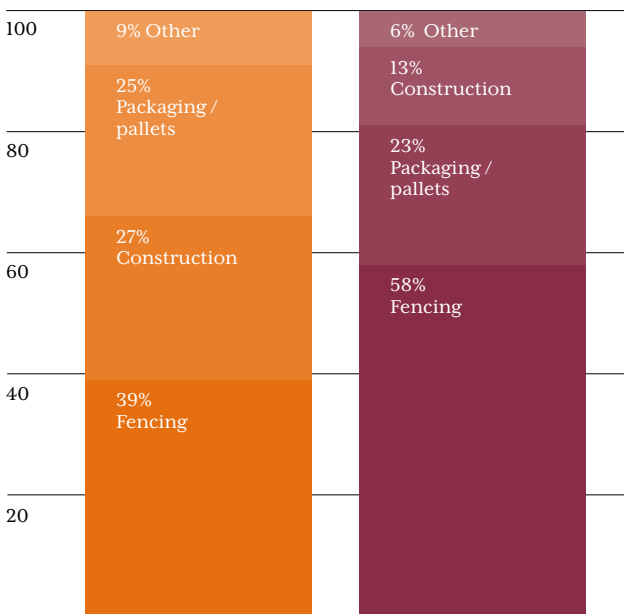
Additionally, some English-grown conifer species are not deemed suitable for the construction market. These include Corsican pine, Scots pine, hemlock and the fir species.

For high-volume timber-framed housing, Sitka spruce is the only species that is currently suitable for C16 graded structural timber. For low-volume bespoke timber framing, Douglas fir and larch are commonly used. Western red cedar is often manufactured into timber cladding for the outside of buildings.

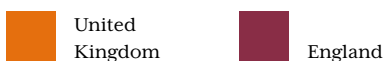
The majority of co-products from the sawmilling activity, along with a good proportion of the harvested small roundwood, is supplied for panel board manufacture, which tends to stay in use for the long term.

Figure 15  
Sawnwood production from sawmills, 2021

Percentage of total sawnwood product markets



Sawmills producing at least 25,000 m3 sawnwood (softwood and hardwood)



(Produced from data in: Forest Research (2022). Forestry Statistics 2022 Chapter 2: UK-Grown Timber (9b).)

## The Panel Board Supply Chain

Wood-based panels are a large user of wood fibre in the UK and a great industrial success story. Products include oriented strand board (OSB), chipboard, particle board and medium-density fibreboard (MDF).

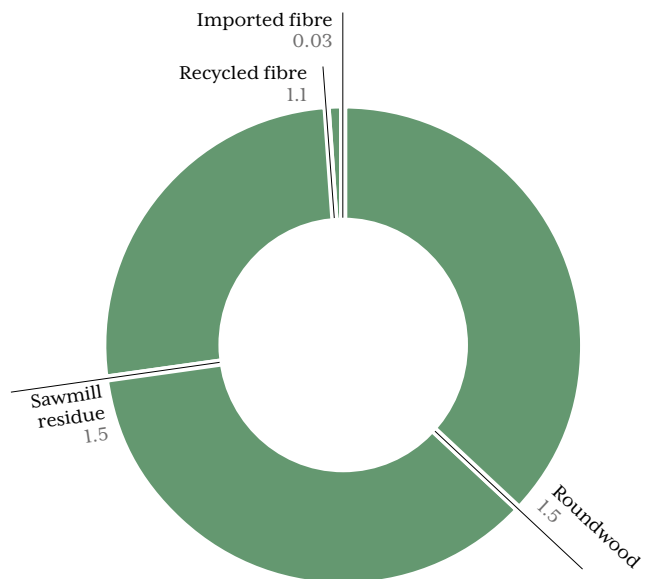
The panel mills in the UK used a total of 4.1 million tonnes of wood material in 2021 (9a) and produced 3.486 million m3 of wood-based panels. On a like for like basis this represented 64% of the total UK consumption.

Individual companies within the panel board sector continue to invest considerable sums in primary processing capacity and product development. The industry as a whole is well placed to respond to increased demand in the future.

While the roundwood currently consumed by panel board mills is softwood, there is potential for some small-diameter hardwood to be used if a viable supply chain can be established.

Figure 16  
Volumes of wood material delivered to panel mills in the UK, 2021

Measured in millions of tonnes



(Produced from data in: Forest Research (2022). Forestry Statistics 2022 Chapter 2: UK-Grown Timber (9b).)

## The Hardwood Supply Chain

Between 2017 and 2021 England’s forests produced an average of 425,000 tonnes of hardwood per year, equating to 52% of the total UK harvest (9a). Harvesting figures have risen by 54% in the last 10 years, although this has been driven by increased demand for firewood and biomass, rather than higher-quality sawn timber.

The striking figure here is that 85% of all hardwood harvested in the UK is sold as woodfuel. Only 7% is good enough to be delivered to sawmills that will convert it into timber for long-term products, such as flooring, furniture and joinery (9c).

The supply of sawmill-grade hardwood logs from English woodlands is relatively small and sporadic.

Despite there being a wide range of broadleaved species in English woodlands, there are only a handful of commercial species. Together, oak, ash, sweet chestnut and sycamore account for the bulk of the domestic hardwood timber market. There is little demand for beech and no sawmills are capable of processing birch.

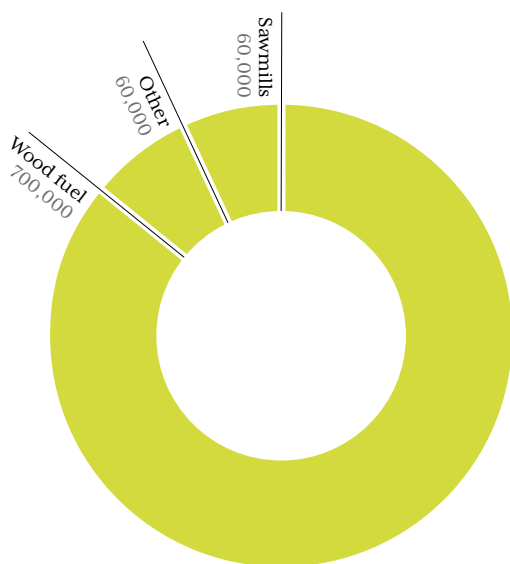
Today, the remaining hardwood sawmilling industry in England is teetering on the edge. A further reduction in the availability of logs from local woodlands, combined with tightening restrictions on the import of oak logs from France, will render the remaining sawmills untenable (based on the authors’ experience).

## The Recycled Wood Loop

In the face of growing demand for virgin wood fibre and the drive to be more efficient, the UK wood processing industry is continuing to work with the supply chain to improve the levels of recycling and reuse. Panel board manufacturers use significant amounts of reclaimed wood, especially old pallets. They have ambitions to further increase this, but current government incentives for other end uses makes the sourcing of this material challenging.

According to the Wood Recyclers Association, 26% of wood waste in the UK is reused by the panel board manufacturing industry, thereby creating a long-term second life. The remainder is converted into biomass, animal bedding and other short term uses.

Figure 17  
Deliveries of hardwood logs to UK processors, 2021  
Measured in green tonnes

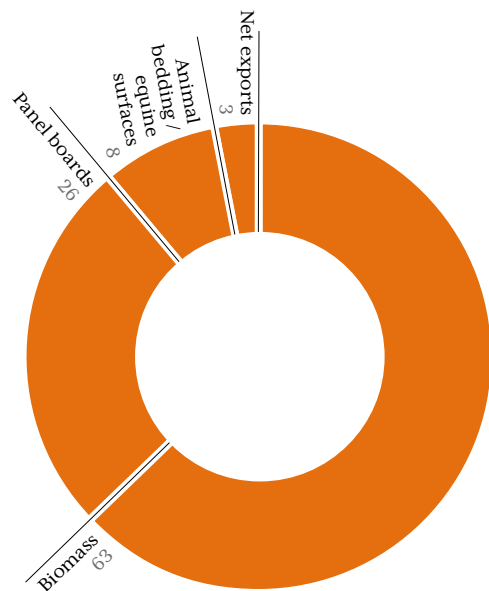


**85%**  
of harvested hardwood  
is burnt as woodfuel

■ Hardwood

(Produced from data in: Forest Research (2022). Forestry Statistics 2022 Chapter 2: UK-Grown Timber (9b).)

Figure 18  
Destinations for UK waste wood, 2021  
Measured in percentages



■ UK waste wood

(Produced from data provided by Wood Recyclers Association.)



## Increasing Future Timber Demand

There is a working assumption that over the next few decades timber will become increasingly popular as a building material and as a feedstock for emerging industries, such as biorefining. Being renewable and healthy, and containing low levels of embodied carbon, timber has a lot going for it.

Defra is currently developing a report called 'Valuing Timber in Construction', in response to a commitment within the England Trees Action Plan. The report outlines the opportunities and barriers relating to the use of timber in construction in England, with a specific focus on home-grown wood products.

An accompanying report commissioned by Confor, the Structural Timber Association (STA) and Timber Development UK (TDUK) to inform 'Valuing Timber in Construction' has highlighted a particular opportunity to use more home-grown sawnwood and panel board in housebuilding.

The accompanying report considers three scenarios for increasing the market share for timber-framed homes and suggests that the medium scenario would increase demand for C16\* by 1.27 million m<sup>3</sup> per annum. This equates to approximately double the current UK output of C16 timber from all UK sawmills.

To provide a contextual link with this strategy, we have calculated approximately how many hectares of new planting would be required to produce this quantity of whitewood (spruce) sawnwood (Appendices 2 and 3).

Our calculations indicate that to produce an extra 1.27 million m<sup>3</sup> of sawn C16 would require 1.014 million ha of additional stocked conifer (Appendix 3).

This is by no means an achievable target for England or the UK, but it does help to put other numbers into context.

By comparison, achieving the Government's statutory target for England with a ratio of 40% stocked conifer will result in the creation of an extra 104,000 ha of new conifer planting. This equates to approximately 10% of the 1.014 million ha.

Of course, spruce is not the only timber that is usable in construction and housebuilding. There are opportunities for smaller volumes of other species of softwood and hardwood in kitchens and joinery, or for cladding, flooring, panel boards and potentially wood fibre insulation.

## Timber Imports and Global Supply

The UK imports 81% of all timber products, including sawn wood, panels, wood pellets and paper. The figure for sawn wood is 69% (9c).

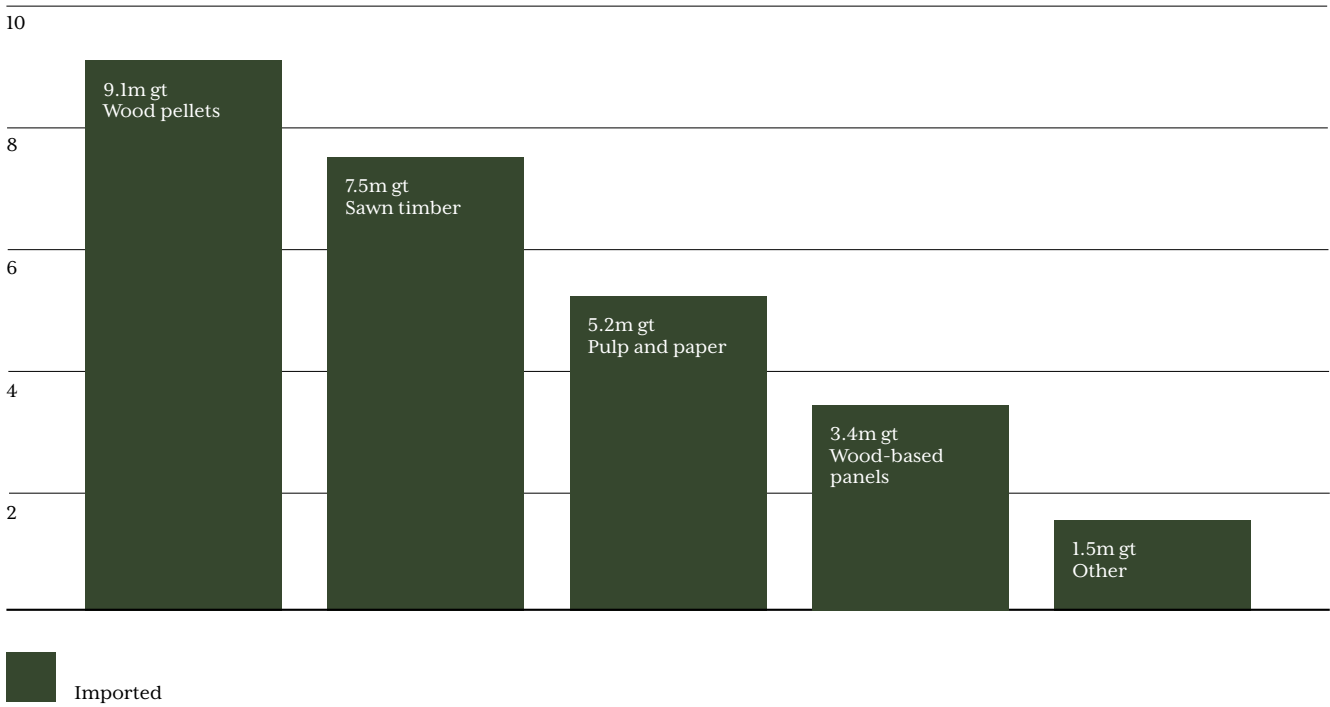
Up until quite recently, it was believed that the UK could reliably import all the timber that the construction industry needed. However, recent events, including the Covid pandemic and the war in Ukraine, have demonstrated that supply chains are less reliable than was previously thought.

Figures 19 and 20 (overleaf) depict the scope of wood product imports into the UK, and how these imported quantities relate to domestic supply.

\*C16 is the most common strength grade for softwood grown in the UK.

**Figure 19**  
**Total import volumes for different product types**

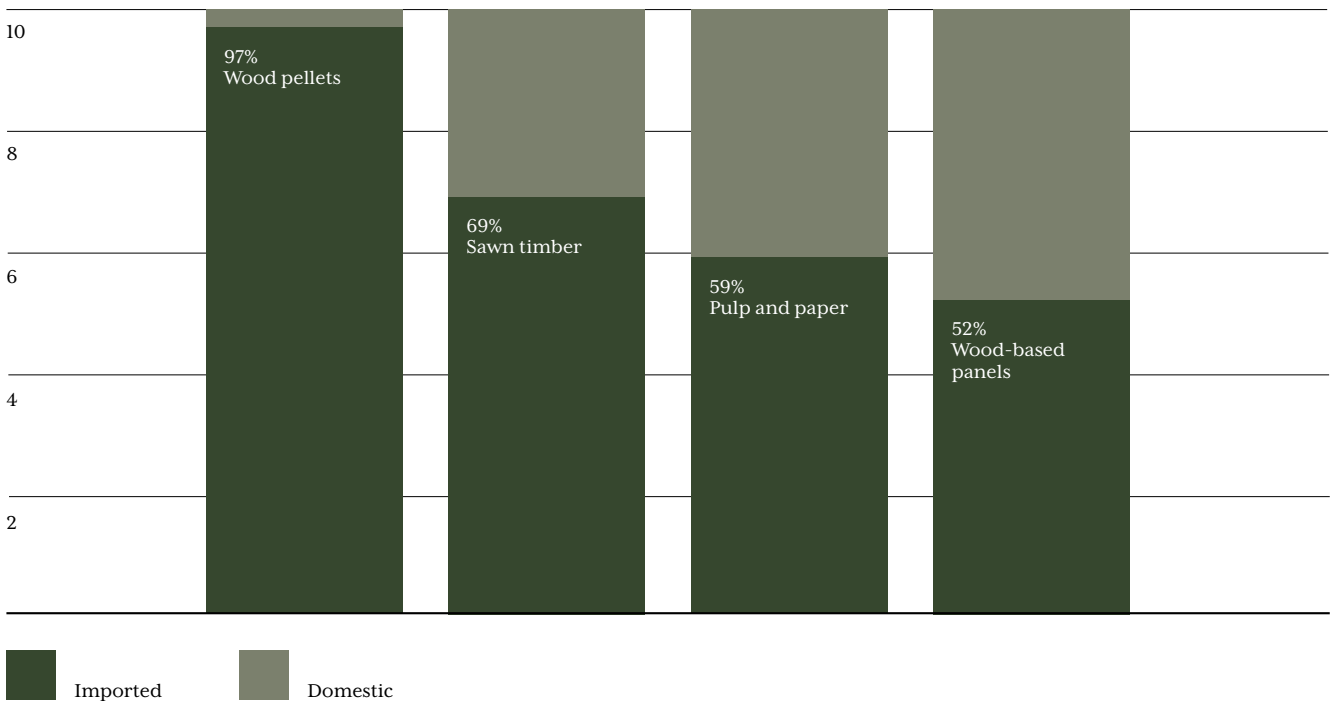
Measured in millions m3 green tonnes



(Produced from data in: Forest Research (2022) Forestry Statistics 2022. Chapter 3: Trade (9c).)

**Figure 20**  
**Percentages of imports versus UK production by product type**

Measured in percentages



(Produced from data in: Forest Research (2022) Forestry Statistics 2022. Chapter 3: Trade (9c) and Chapter 2: UK-Grown Timber (9b).)





Panel products produced in the UK.  
Photograph courtesy of EGGER Forestry UK.

# Appendices

## Appendix 1

### Woodland Area Calculations

Calculations and assumptions for woodland area split between broadleaves and conifers under 16.5% and 17.5% tree and woodland cover scenarios.

	Conifer '000 ha	Broadleaf '000 ha	Total '000 ha
<b>FR Forest Inventory Stats 2022</b>			
2022 FR stats area of woodland	343.00	980.00	1323.00
2022 FR stats stocked area	278.00	902.00	1180.00
<b>Wood Strategy – achievement of 16.5% target at 2050</b>			
NWS area of woodland 16.5%	117.25	143.31	260.56
NWS stocked area 16.5%	104.22	130.28	234.50
<b>Wood Strategy – ambitious 17.5% target at 2050</b>			
NWS area of woodland 17.5%	175.96	215.06	391.02
NWS stocked area 17.5%	156.41	195.51	351.92
<b>Total woodland cover – statutory 16.5% target by 2050</b>			
Area of woodland with 16.5% NWS target	460.25	1123.31	1583.56
Stocked area with 16.5% NWS target	382.22	1032.28	1414.50
<b>Total woodland cover – ambitious NWS 17.5% target by 2050</b>			
Area of woodland with 17.5% NWS target	518.96	1195.06	1714.02
Stocked area with 17.5% NWS target	434.41	1097.51	1531.92

- Calculations based on land area of England as 13.046 million ha (24).
- Assumption is that the full 2% increase (260,558 ha) is achieved through woodland creation, with tree cover outside woodlands remaining static.
- The base calculations for the National Wood Strategy targets above are worked on an initial basic 50/50 split between conifer and broadleaf woodland.
- To concur broadly with the Forest Research Inventory differences between area of woodland and stocked area, the following adjustments have been made to our National Wood Strategy figures:
  - To calculate the area of woodland values we moved 10% of the area from the conifer category to the broadleaf category. UKFS requires broadleaf planting within conifer planting.
  - The UKFS minimum native broadleaf enrichment is 5%, but we use 10% as we believe this better reflects actual practice.
  - The area of woodland values in the National Wood Strategy figures for both categories include open space.
  - The stocked woodland area for both categories includes a 10% deduction for open space.



## Appendix 2

### Conifer Areas and Corresponding Timber Volumes

NWS additional conifer area and corresponding timber volumes	'000 ha	Volume m <sup>3</sup> obs/yr	Volume over one rotation m <sup>3</sup> obs	Potential C16 volume m <sup>3</sup>	Yield per Ha	Rotation length	Yield class check
Additional gross conifer area by 2050	130.0						
Additional stocked conifer @ 80% stocking	104.0	1,213,857					12
35% spruce	36.4	676,000	23660,000	130,502	650	35	19
20% pine	20.8	120,000	6240,000	0	300	52	6
45% other conifers	46.8	417,857	17550,000	0	375	42	9

- Calculations based on achieving the 16.5% statutory target, resulting in the creation of 260,558 ha of extra woodland cover, of which 40% is stocked conifer.
- We have allowed for reductions in planting of pine, along with a 7% increase in spruce to support C16 production and a 7% increase in other conifer species.
- Yield per ha and rotation length figures are conservative average estimations based on experience of past felling and outturn for different species. These figures do not include potential volumes achieved through thinning activities.
- 80% stocking density based on assumption of 10% open space and 10% broadleaves.

## Appendix 3

### Relationship Between Volume of C16 Graded Timber and Area of Stocked Conifer Forest

The table contains our methodology for calculating the relationship between the output of C16 grade structural timber and the area of stocked conifer required to produce it.

We include a comparison between the increased demand for C16 as outlined in the draft version of 'Valuing Timber in Construction' (VTIC) report and the increased area of stocked conifer suggested within this document (National Wood Strategy - NWS).

C16 graded spruce availability calculations for NWS and VTIC scenarios	VTIC scenario	Stocked spruce area ha	Stocked conifer area ha at 80%	Additional conifer gross area ha	Total volume of spruce m <sup>3</sup> obs	Annual supply with 35y rotation m <sup>3</sup> obs	M3 overbark felled @ 0.9 ratio	M3 yield from log @ 65%	M3 graded sawnwood @ 55%	M3 C16 @ 60%
VTIC: Additional annual spruce output for UK	Low	205,000	585,714	732,143	133,250,000	3,807,143	3,426,429	2,227,179	1,224,948	734,969
	Med	355,000	1,014,286	1,267,857	230,750,000	6,592,857	5,933,571	3,856,821	2,121,252	1,272,751
	High	590,000	1,685,714	2,107,143	383,500,000	10,957,143	9,861,429	6,409,929	3,525,461	2,115,276
VTIC: Additional annual spruce output for England	Med	118,333	338,095	422,619	76,916,667	2,197,619	1,977,857	1,285,607	707,084	424,250
NWS target: 104,000 ha of new stocked conifer	NWS	36,400	104,000	130,000	23,660,000	676,000	608,400	395,460	217,503	130,502
Shortfall between NWS target and VTIC medium scenario		318,600	910,286	1,137,857	207,090,000	5,916,857	-	-	-	1,142,249

- 'Valuing timber in construction' scenarios: increased annual demand in C16 graded sawnwood volume for UK: low 735,000 m<sup>3</sup>; medium 1.27 million m<sup>3</sup>; high 2.11 million m<sup>3</sup>.
- All calculations based on spruce at 35% of stocked conifer.
- 'Valuing Timber in Construction' medium scenario used for comparative purposes.
- National Wood Strategy: 104,000 ha of stocked conifer resulting from the achievement of the 16.5% statutory target, with 40% of new planting being stocked conifer.



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