

Trees and Woodland Strategy

2019 - 2039

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Foreword

Welcome to Loch Lomond & The Trossachs National Park Authority's Trees and Woodland Strategy.



The National Park is one of Scotland's finest, most valued natural assets and its trees and woodlands are of international importance for nature. From large swathes of ancient woodlands rich in biodiversity, mixed productive forests that provide a sustainable source of timber, to hedgerows and even individual trees in the landscape – they all play a vital role in providing us with many benefits.

Not only do they help to expand habitat networks and improve wildlife and landscape conservation efforts, they also help mitigate the impact of climate change, supporting Scotland's response to the global climate emergency while contributing to a thriving rural economy.

Trees and woodlands are also integral to delivering social and economic benefits to the area including through employment within the forestry sector, community involvement in woodland management, and the simple enjoyment of the people of Scotland and the millions of visitors to the Park each year.

We need to protect and enhance this precious resource for future generations and this Trees and Woodland Strategy sets out an approach to do just that.

Direction from the Strategy will help inform woodland and forestry proposals in the National Park over the next 20 years. These proposals will aim to: increase native woodland cover, better manage existing woodlands, support outcomes on biodiversity, and enhance the connections between nature, the economy and the health and wellbeing of those visiting, living or working within the National Park.

Based on the principles set out in both Scotland's Forestry Strategy and the National Park Partnership Plan, this Strategy sets out an inspiring vision which I hope all those with an interest in the trees and woodlands of the National Park will help to deliver in the coming years.

> Mairi Gougeon MSP Minister for Rural Affairs and the Natural Environment

Ro-ràdh

Fàilte gu Ro-innleachd Pàirc Nàiseanta Loch Laomainn is nan Tròisichean air Craobhan is Coilltean.

Tha a' Phàirc Nàiseanta air aon de na stòrasan nàdarra as luachmhoire agus as fheàrr ann an Alba agus tha na craobhan agus na coilltean aice cudromach gu h-eadarnàiseanta a thaobh nàdair. Bho raointean mòra de choilltean àrsaidh a tha beartach ann am bith-iomadachd, coilltean torrach measgaichte a tha nan stòr seasmhach de dh'fhiodh, gu callaidean agus fiù' s craobhan fa leth san dealbh-tìre - tha pàirt rochudromach aca uile ann a bhith a' toirt mòran bhuannachdan dhuinn.

Chan e a-mhàin gu bheil iad a' cuideachadh le bhith a' leudachadh lìonraidhean àrainn agus a' cur ri oidhirpean glèidhteachas fiadh-bheatha is cruth-tìre, bidh iad cuideachd a' cuideachadh le bhith a' lughdachadh buaidh atharrachadh na gnàth-shìde, a' cumail taic ri fhreagairt na h-Alba do shuidheachadh èiginn gnàth-shìde na cruinne agus iad a' cur ri eaconamaidh dhùthchail a tha soirbheachail.

Tha craobhan agus coilltean cuideachd riatanach ann a bhith a' lìbhrigeadh buannachdan sòisealta is eaconamach dhan sgìre, a' gabhail a-steach cosnadh taobh a-staigh roinn na coilltearachd, com-pàirteachadh coimhearsnachd ann an riaghladh choilltean, agus tlachd muinntir na h-Alba agus na milleanan de luchd-tadhail dhan Phàirc gach bliadhna.

Feumaidh sinn an goireas luachmhor seo a dhìon agus a neartachadh airson nan ginealaichean ri teachd agus tha an Ro-innleachd Chraobhan is Choilltean seo a' cur air adhart dòigh-obrach gus sin a dhèanamh.

Bidh stiùireadh bhon Ro-innleachd a' fiosrachadh mholaidhean a thaobh choilltean anns a' Phàirc Nàiseanta thairis air an ath 20 bliadhna. Bidh na molaidhean sin ag amas air: còmhdach coille dhùthchasach a mheudachadh, riaghladh nas fheàrr air na coilltean a th' ann mar-thà, taic a thoirt do bhuilean air bith-iomadachd, agus cur ris na ceanglaichean eadar nàdar, an eaconamaidh agus slàinte is sunnd nan daoine a tha a' tadhal, a' fuireach no ag obair sa Phàirc Nàiseanta.

Stèidhichte air na prionnsabalan a tha air an comharrachadh an dà chuid ann an Roinnleachd Coilltearachd na h-Alba agus ann am Plana Com-pàirteachais na Pàirce Nàiseanta, tha an Ro-innleachd seo a' mìneachadh lèirsinn bhrosnachail agus tha mi an dòchas gun cuidich gach neach le ùidh ann an craobhan agus coilltean na Pàirce Nàiseanta gus a lìbhrigeadh anns na bliadhnaichean ri teachd.

Màiri Gougeon BPA Ministear airson Cùisean Dùthchail agus na h-Àrainneachd Nàdarra

Online Mapping

Our interactive online map allows you to view the map data included in the strategy in more detail.

www.lochlomond-trossachs.org/treesandwoodland



Glen Massan © David Mitchell

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Executive Summary

This strategy sets out a clear, ambitious vision for how trees and woodlands are to be protected, enhanced and used within Loch Lomond & The Trossachs National Park. It is a key document to inform and offer direction and guidance to all those involved in tree planting and management proposals in the National Park.

The 20-year strategy will enable trees and woodlands to play a key role in tackling the climate emergency and biodiversity crisis in the National Park.

The strategy covers all scales and types of woodland management from small-scale tree planting for landscape and amenity to farm woodland, native woodland and productive conifer schemes of all sizes. It will help deliver both Scottish Government and National Park priorities relating to climate, biodiversity and sustainable development.

31% of the National Park is currently covered by woodland of which a quarter is native woodland. This is above the current woodland extent for Scotland of 18%, but well below the European Union's average of 38%. Our native woodlands are of global importance for nature, including rare temperate rainforests and the most southerly remnants of Scotland's ancient Caledonian pine forests.

This strategy will also guide local implementation of the new national Scotland's Forestry Strategy 2019-2029, help to achieve national native woodland creation targets of 3,000-5,000 ha per year and, importantly, lead to our National Park Partnership Plan target of an additional 2,000 ha of woodland expansion by 2023.

A key priority is enhancing and increasing native woodland within the National Park. This will help us to achieve our National Park Partnership Plan outcomes by improving woodland biodiversity.



There are seven strategic objectives:



Increasing woodland cover to help tackle biodiversity loss and the global climate emergency.



Improving woodland condition and diversifying woodland management.



Protecting and enhancing the landscape.



Maintaining and enhancing economic sustainability through forestry-related skills and business development.



Promoting cooperative woodland management and creation as part of an integrated land management approach.



Improving community empowerment and resilience through active engagement in woodland management.



Encouraging and promoting public access to woodlands for recreation and improving people's quality of life.

The strategy guidance in Section 5 is set out under five topics that should be considered to achieve our objectives. These topics apply to both existing woodland management as well as woodland creation proposals to deliver innovative 21st century forestry proposals appropriate for the first National Park in Scotland.

Landscape integration and Special Landscape Qualities

The strategy offers direction on how to design forestry proposals that enhance and protect Special Landscape Qualities, such as views valued by visitors and local communities. In this topic, the National Park has been divided into ten geographical areas, looking at the Landscape Character of each and how this would be taken into account in any forestry proposals.

Habitat enhancement

The strategy includes guidance on expanding woodland habitat networks, riparian and montane woodland and other key woodland habitats to increase diversity and protect flagship species. The importance of tackling invasive non-native species is also documented, as well as the restructuring of productive conifer forests (including restoration of Plantations on Ancient Woodland Sites - PAWS), impacts of climate change and tree health.

Integrating woodland with other land use

Guidance is included for designated sites, open ground habitats, herbivore management, deer fencing and agricultural land management, including how to integrate woodland creation and management with existing agricultural businesses. This integration would help maximise the potential of the National Park's land, contributing to the fight against climate change. This would likely require the establishment of new Land Use Partnerships.

Social and rural economic development

Opportunities for economic expansion within the National Park are highlighted. In particular, there is focus on improving woodland management skills, maintaining and diversifying the production of timber products, haulage and timber transport.

Woodlands and people

The National Park's woodlands are important for tourism and outdoor recreation activities. The strategy promotes public access and responsible behaviour, and encourages the public use of woodland for recreation and outdoor education.

The strategy contains maps which should be used to guide the development of forestry proposals. However, there remains a need for site-specific surveys and stakeholder engagement to be carried out before any woodland proposal is submitted to Scottish Forestry for assessment.

To view these maps in relation to other spatial data, please view our <u>online interactive map</u> (details can be found on page 3).





1 Introduction

Strategy purpose

The purpose of the strategy is to help deliver the outcomes and objectives set out in the <u>National Park Partnership Plan 2018-23</u> and <u>Scotland's Forestry Strategy 2019-2029</u>, by developing opportunities that:

- Create new woodlands ranging from native woodland to mixed woodland comprising mainly productive conifer species (referred to as productive conifer woodland in this document).
- > Improve woodland biodiversity.
- > Enhance the existing contribution of woodlands to the Special Landscape Qualities (SLQs) of the National Park.
- > Improve the resilience and sustainability of woodlands, both environmentally and economically.

The strategy promotes sustainable forestry based on delivering environmental, economic and social benefits now and in the future.

The strategy details the considerations for woodland creation and woodland management proposals within the National Park ensuring that they contribute to Scottish Government commitments to help mitigate the current crises in the global climate emergency and loss of biodiversity. It is a decision-making tool to help drive the delivery of woodland objectives within the National Park and support effective consultation between all partners on woodland creation and management proposals. The National Park Authority intends to review this document in 2029, and to monitor progress of woodland expansion on an annual basis.



Why a Trees and Woodland Strategy?

Rather than referring to a 'Forestry Strategy', we have named this document 'Trees and Woodland Strategy' in order to recognise the importance of individual trees and tree groups in the landscape and their contribution to natural capital in the context of integrated land management in the National Park. In this document the terms 'woodland' and 'forest' are used interchangeably.

This strategy has been produced in line with the <u>Planning (Scotland) Act 2019</u> and current Scottish Forestry guidance 'The Right Tree in the Right Place', through close working with our partners in Scottish Forestry.

Policy context

Delivering for Scotland

This strategy will contribute towards Scottish Government priorities, commitments in the Programme for Government and the country's transition to a net-zero future:

Global climate emergency

Trees and woodlands in the National Park play an important role in mitigating against and adapting to climate change by storing carbon and slowing water flow, which can help reduce flooding and stabilise slopes prone to landslides. Expanding woodlands in the National Park will also contribute towards meeting national woodland creation targets designed to support biodiversity and increase carbon sequestration.

Valuing nature and reversing biodiversity loss

The native woodlands in the National Park are of national importance for their rich biodiversity. Native woodland expansion and enhancement in the National Park will make a significant contribution to meeting Scotland's 2020 Biodiversity Challenge.

Natural capital

Scotland's National Parks exemplify how the natural environment underpins our economy and quality of life. The National Park is a key place to connect woodland management with sustainable socio-economic and biodiversity benefits.

Community empowerment and resilience

Building on the strong foundation and legacy of community capacity building and action planning in the National Park, there is growing potential and opportunity for community-based woodland projects. Healthy woodlands and forests also help local communities be more resilient to the impacts of climate change, by helping to reduce the impacts of flooding and storm events.

Sustainable development and economic growth

Forestry provides a great contribution to the local rural economy through jobs, education, skills, community development, social enterprise, tourism and business development. The National Park's woodlands provide employment in areas ranging from forest management to recreation and tourism.



Delivering for the National Park

This strategy will contribute to the delivery of outcomes and priorities in other strategic documents published by the National Park Authority (detailed on page 9) which outline how all those with a role in managing the National Park will work together to achieve benefits for the whole of Scotland.

Our strategy objectives will be delivered in line with the four aims of National Parks:

- > To conserve and enhance the natural and cultural heritage of the area.
- > To promote sustainable use of the natural resources of the area.
- To promote understanding and enjoyment (including enjoyment in the form of recreation) of the Special Landscape Qualities of the area by the public.
- > To promote sustainable economic and social development of the area's communities.

These aims are to be pursued together. However, if it appears that there is conflict between the first aim, the conservation and enhancement of the natural and cultural heritage, and any of the others, we must give greater weight to the first aim (Section 9(6) of the National Parks (Scotland) Act 2000). This is often referred to as the 'Sandford Principle.'

UK Forestry Standard

The <u>UK Forestry Standard (UKFS)</u> details how sustainable forestry will be undertaken by setting out relevant legislation and good practice which all forestry proposals must comply with. It is the standard against which all woodland proposals are assessed, covering biodiversity, climate change, historic environment, landscape, people (including access), soil and water. The importance of National Parks is recognised within the UKFS and forestry proposals delivering the objectives set out in this Trees and Woodland Strategy should be in line with it.

In addition to UKFS, there are voluntary certification schemes underpinned by the UK Woodland Assurance Standard (UKWAS). Woodland owners and managers are encouraged to consider these schemes, as compliancy with UKWAS would further the delivery of the National Park's Trees and Woodland Strategy objectives.

The map on page 13 shows the coverage of existing native and productive conifer woodland in the National Park.



An <u>online interactive map</u> is also available for viewing different aspects of our woodland resource. It displays all the map layers that have been used in producing this strategy and would be relevant to any forestry proposal being developed. Instructions on where to view this map are detailed on page 3.



Delivering for Scotland

THE GOVERNMENT'S PROGRAMME FOR SCOTLAND SCOTLAND'S FORESTRY STATEGY SCOTTISH BIODIVERSITY STRATEGY SCOTTISH LAND USE STRATEGY SCOTTISH CLIMATE CHANGE PLAN



Delivering for the National Park

NATIONAL PARK PARTNERSHIP PLAN

WILD PARK

Our biodiversity action programme focuses on tackling the key environmental threats to our natural environment.

LOCAL DEVELOPMENT PLAN

Our framework for the future development of the National Park

OUTDOOR RECREATION PLAN This plan outlines actions and aspirations which enhance outdoor recreation opportunities in the National Park



NATIONAL PARK TREES & WOODLAND STRATEGY

In the National Park there are 54,100 ha of woodland (31% of the land)



Native Woodland 33,550 ha 12,900 ha 3,350 ha 12,600 ha 62% of all woodland 6% of all woodland 24% of all woodland 23% of all woodland is productive conifer has been woodland since Plantations on Ancient **Native Pinewood** woodland 1860 or earlier (recorded Woodland Sites (PAWS), 1,100 ha i.e. areas that are recorded on the on Ancient Woodland Ancient Woodland Inventory but Inventory) 9% of all native woodland are currently under non-native tree cover. Upland Oak 2.250 ha 18% of all native woodland 1,300 ha 1,970 ha 32,100 ha **Upland Birch** 4.000 ha 2% of all woodland 4% of all woodland 59% of all woodland 32% of all native woodland are designated as Special are designated as is managed as part of Areas of Conservation. Sites of Special the National Forest Estate Other native woodland Scientific Interest which includes two Forest types include: Parks. upland ashwoods, wet woodland, lowland deciduous woodland and various scrub. These figures were derived from the 2017 National Forest Inventory, Ancient Woodland Inventory (2010), Native Woodland of Scotland Survey (2014) and These figures were taken from the Native Woodland Survey of Scotland Survey Report - Loch Lomond National Forest Estate boundary as of 2019. and Trossachs National Park (2013).

The designated site figures are based on the extent of 2017 National Forest Inventory within SSSI or SAC sites designated for woodland as of 2019.





2 Vision

Our vision is for the trees, woodlands and forests of the National Park to flourish and to expand, providing future generations with sustainable environmental, social and economic benefits from nature.



Our vision will:

Result in a strengthened native woodland habitat network across the National Park at all scales, allowing a wide range of woodland species to disperse, recolonise and migrate more easily. Ensure the continued F economically t important production N of sustainable highquality timber and other wood products.

Protect and enhance the landscape of the National Park.

Minimise the potential risks of the spread of plant disease, invasive species and wildfires. Improve natural flood management, slope stabilisation, water quality and carbon sequestration. Provide a significant recreational resource. Result in more sustainable populations of wild and domestic herbivores.

Gartocharn looking north-east © Turkey Red Media

3 Our Objectives

Increasing woodland cover for biodiversity and climate change mitigation

The target set out in the National Park Partnership Plan 2018-2023 is an ambitious 2,000 ha of woodland expansion by 2023. This includes both new native and productive woodlands which would contribute to the Scottish Government Climate Change Plan target to increase woodland cover in Scotland to 21% by 2032.

Supporting and encouraging land managers in the National Park to sensitively expand woodland cover is a priority in the National Park Partnership Plan, with a key focus on improving connectivity of existing native woodland and scrub habitats – particularly in the uplands, along hillside burns, and also waterside woodlands on the banks of rivers, burns and lochs in the lowland areas of the National Park.

Currently, native woodland makes up a quarter of the National Park's woodland resource. Increasing native woodland cover is our priority as it delivers multiple National Park objectives, in particular bringing significant biodiversity benefits. However, it is recognised that sensitively sited and well-designed new productive forests also play an important role in the National Park. Early engagement by land managers with stakeholders will ensure that all woodland creation proposals are appropriate.

Implementing objective 1

The Trees and Woodland Strategy promotes woodland creation that provides multiple benefits for the National Park and beyond, especially where it delivers on the conservation objectives outlined in this document.

Improving existing woodland condition and diversifying woodland management

Given the current extent of woodland cover in the National Park (31%), the sustainable management of existing native and productive conifer woodlands is a priority in order to enhance biodiversity and landscape quality as well as producing timber and non-timber products and services. The key constraints are unsustainable herbivore impacts (both domestic and non-domestic), invasive species, limited species diversity and age structure, limited silvicultural options along with limited funding options. Productive conifer woodland with suitable management and species diversity can contribute to a woodland habitat network as well as providing habitat for some priority species, contributing to landscape character, and producing timber. Tree health and woodland resilience are key themes for forestry in the 21st century and development of diverse, 'climate-ready' woodlands will improve resilience and provide more capacity to enable them to respond to rapidly changing natural or socio-economic conditions.

Implementing objective 2

The Trees and Woodland Strategy encourages the development and implementation of solutions to enhance woodland management, with a focus on priority woodland habitats and species found within the National Park (see the Scottish Biodiversity List). The strategy encourages increased woodland diversity in species and age structure to deliver more resilient woodlands.

Protecting and enhancing the landscape

The National Park is a nationally important landscape whose Special Landscape Qualities are defined by the characteristics that give rise to its renowned outstanding scenery. Protecting and enhancing these features is a priority outcome set out in the <u>National Park Partnership</u> <u>Plan</u>. Therefore the location and design of new woodlands, as well as restructuring of existing woodlands and the retention and replacement of parkland and roadside trees, requires recognition of these sensitivities.

Good woodland design takes into account a range of different factors such as public access, key visitor destinations, location and type of woodland. In order to be effective, the impact of woodland on the landscape experience should be considered. For example, poor design could lead to negative implications for the Landscape Character, sites of archaeological importance, local features or key views from main transport corridors, visitor destinations and settlements valued by local communities and visitors.

In sensitive landscapes where large-scale woodland creation may not be appropriate, there may be capacity for individual tree planting or small-scale woodland planting. This would contribute to an improvement of the area's natural capital as well as environmental and economic sustainability.

Implementing objective 3

The Trees and Woodland Strategy identifies how and where different types of woodland and tree planting could bring landscape enhancement while not detracting from the Special Landscape Qualities of the National Park. The strategy provides a toolkit to assist with woodland landscape assessment and design.

Maintaining and enhancing economic sustainability through forestry-related skills and business development

As well as supplying softwood into traditional markets, there is potential to further increase the local economic contribution of forestry in rural areas. This could be achieved by processing and using wood resources near to source, identifying solutions to problematic timber haulage or extraction issues, and delivering tourism and recreation services. This would also include improvement of the local skill base and specialist machinery resources.

New woodlands or improved management of existing woodlands can provide new income streams to farms or estates, while also providing direct benefits such as shelter for livestock. In the face of a warmer, wetter and windier climate, we wish to promote better integration of woodland creation and management alongside other types of land use, including agriculture, game management, tourism services, recreation and renewable energy production.

Implementing objective 4

The Trees and Woodland Strategy promotes integrated land management techniques and the sustainable management of both productive conifer and broadleaf woodlands. Identifying new economic markets and seeking solutions to issues preventing the harvesting and timber haulage of existing conifer forests are key to achieving this objective.

Promoting cooperative woodland management and creation as part of an integrated land management approach

Woodland creation and management has a direct impact on the ecosystems as well as the economy of a specific location, and can also be seen at a wider landscape scale. These implications could include changes to the movement of deer, disruption to established sheep hefts and implications for rural businesses. Even when balanced and informed decisions are taken by individual landowners, these can have impacts on neighbouring properties as well as at a landscape scale. These constraints and opportunities could be assessed at a larger (perhaps even catchment) scale, enabling the delivery of complementary land use based on the principles set out in the Scottish Government Land Use Strategy.

Implementing objective 5

The Trees and Woodland Strategy encourages and supports land managers/owners and local communities to identify a balanced approach to woodland management and creation as part of integrated land management. Doing so will support a more healthy environment along with a sustainable rural economy. This support could be achieved by the formation of new Land Use Partnerships.

Improving community empowerment and resilience through active engagement in woodland proposals

There are a number of existing mechanisms for communities to have greater involvement with woodlands through engagement and consultation on management plans or proposals and discussion with woodland owners and managers. Through the well-established forestry consultation process, local communities can highlight opportunities and constraints which forestry proposals must consider. Recent changes in legislation, including the Community Empowerment Act and Land Reform legislation, have increased the opportunities available for community ownership and community engagement through mechanisms such as the <u>Community Right to Buy</u>, <u>Asset Transfer</u> <u>Requests</u> and <u>guidance on engaging communities in decisions relating</u> to land.

These opportunities will bring enhanced community benefit by improving an area's resilience to climate change, as healthy woodlands and forests help to alleviate the impacts of flooding and landslides.

Implementing objective 6

The Trees and Woodland Strategy encourages better collaboration between local communities and woodland owners or managers to explore opportunities in the use and management of woodlands. This will increase understanding of the opportunities and constraints associated with woodland management and creation among local stakeholders.

Encouraging and promoting public access to woodlands for recreation and improving people's quality of life

The woodlands of the National Park form a vital part of its recreational resource. Many core paths, long distance trails, community path networks, promoted cycle routes and upland paths are located wholly or partly inside woodlands. Our wooded loch shores are hugely popular for day visitors and camping and the overall landscape of the National Park, of which woodland forms a defining characteristic. The Forest Parks with their extensive access network and diverse forest types make a significant contribution to the National Park's recreational resource. Tourism is the largest economic sector in the National Park and an estimated four million visitors come here each year, whether it is for recreation such as active outdoor pursuits, education, art, contemplation or simply enjoying the view and connecting with nature. New tracks for woodland management can create recreational opportunities and link path networks.

However, there are certain operations such as felling or deer control that have the potential to conflict with recreational use. Other plans and strategies in the National Park have a leading role in delivering this objective, including the <u>Core</u> <u>Paths Plan, Outdoor Recreation Plan, Education and Volunteering programmes</u> and the Your Park <u>Camping Development Framework</u>. These all depend on woodlands, so the design, siting and implementation of new woodlands, the infrastructure for woodland management and ongoing woodland management operations need to be considered and undertaken with care to ensure that they contribute to maintaining and improving this tremendous national resource.

Implementing objective 7

The Trees and Woodland Strategy encourages and promotes public access and responsible behaviour as detailed in Land Reform legislation and related guidance, while encouraging and supporting the diversification of the public use of woodland, including for recreation and education opportunities.





Loch Lubnaig © Turkey Red Media

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4 Key Considerations for Woodland Proposals

Management of existing woodlands

The management of existing woodland has a vital role in delivering the objectives of this strategy. Woodland cover within the National Park is varied, covering a whole spectrum of types from designated ancient semi-natural woodland to woodland largely comprising productive conifer species. Due to this, the opportunities presented in each forest management unit will depend on the location and types of woodland present. Opportunities to deliver the key considerations detailed in this section should be identified during the production of any management plan.

Native woodland

Management of native woodland (including designated sites) should aim to deliver improvements in woodland condition such as increased structural diversity. The priority management actions are:

- Management of herbivore impacts to sustainable levels to enable a diverse ground flora and shrub layer, along with natural regeneration where environmental conditions are suitable.
- > Control of non-native invasive species. Focusing on designated sites and ancient woodland sites is key to creating and maintaining resilient woodland as these are core areas in the wider habitat network.

In some circumstances it may be appropriate to undertake thinning or other silvicultural interventions, however this should be in combination with a holistic management approach rather than as a standalone operation.

Productive conifer forests

The key enhancements that management of productive conifer forest should deliver are:

- Creating landscape-scale woodland habitat networks across ownership boundaries incorporating prioritised areas (including Plantations on Ancient Woodland Sites -PAWS) for native woodland conversion and use of low-impact silvicultural systems (LISS).
- > Extending age class diversity throughout a forest to optimise structural diversity and extend economic opportunities.
- > Manage herbivore impacts to sustainable levels for timber production.
- Enhance the contribution of forests to the Landscape Character and cultural heritage through design of the felling coupes, use of LISS and replanting proposals which maintain species and visual diversity.
- > Careful planning and construction of forest roads and other infrastructure.

The enhancements are in line with UKFS General Forestry Practice Requirements:

- No. 11: 'In designated areas, for example National Parks, particular account should be taken of landscape and other sensitivities in the design of forests and forest infrastructure.'
- No. 14: 'Forests should be designed to achieve a diverse structure of habitat, and species and ages of trees, appropriate to the scale and context.'

In order to deliver these UKFS requirements, considerations such as additional open ground, increased species diversity or smaller felling coupes may be required in designs.

Please see Delivering Our Strategy section (page 29) for more details.

Targeting Woodland Creation

The National Park Partnership Plan 2018-2023 has a clear ambition for creating 2,000 ha of sensitive woodland expansion within the five-year plan period. This expansion will deliver multiple benefits such as carbon sequestration, habitat connectivity, landscape enhancement, natural flood management and increased recreational opportunities. However, the careful selection of location, along with design and species choice for any scheme is essential to ensure that multiple benefits are delivered and negative impacts avoided.

The landscape of the National Park is integral to its identity and culture as well as being the foundation of its largely tourism-dependent economy. Proposals for the creation of new woodlands and forests in the National Park need to be designed to high standards, and National Park Authority officers are able to provide advice and support to help deliver this.

As part of the due diligence process for any proposals, factors such as deep peat, designated features, Landscape Character, cultural heritage, priority species and habitats or other wildlife constraints must be assessed on a site-by-site basis. Early engagement with relevant stakeholders is key to identifying the opportunities and issues with a specific site.

There are opportunities to establish woodland using a wide variety of species, both native and non-native, however careful selection is required based on soil types and climatic factors in order to design a scheme which fulfils the owner's objectives while being appropriate for the local landscape.

The use of the Landscape Capacity Study and associated toolkit produced for this strategy (see page 31 and <u>supporting document</u>) will aid in the design of proposals to take into account the sensitivities present for a particular scheme.

The National Park hosts a wide range of open habitats important for the wildlife they support, the jobs they provide and the wider ecosystem services they deliver. These include farmland providing habitat for wading birds, peatlands, moorlands and species-rich grasslands hosting a broad diversity of fungi, plants and animals. If carried out sensitively, new woodland creation will complement and not conflict with these other important land uses.

All woodland creation proposals would be underpinned by UKFS General Forestry Practice Requirements No. 17: 'New forests and woodlands should be located and designed to maintain or enhance the visual, cultural and ecological value and character of the landscape.'

Native woodland

Our priority is to expand native woodland in the National Park for the biodiversity, landscape and socio-economic benefits previously mentioned.

Spatial analysis (Appendix 2) has been undertaken to identify Preferred, Potential and Sensitive Areas where native woodland creation would deliver this strategy's objectives. The analysis is based on Scottish Forestry data sets, native woodland integrated habitat networks, climate suitability for tree growth and the work by <u>Plantlife on Important Plant Areas</u> that identifies climate suitability for bryophyte habitat (see References). Native woodland creation in these areas could include establishment at productive densities.

- Preferred Areas are where native woodland creation would have the greatest impact in improving woodland connectivity, providing a more suitable climate for tree growth and contributing to expansion of the woodland resource in the Bryophyte Important Plant Areas.
- > Potential Areas are those where native woodland creation would contribute to the wider strategy's objectives.
- In Sensitive Areas, there is limited capacity for woodland creation due to higher value nature conservation or landscape objectives. However, individual tree planting, small-scale planting (less than 0.25 ha) or agroforestry may be supported where it contributes to this strategy's objectives with no negative impact on the particular sensitivity.

Notwithstanding the spatial analysis, any proposal would still require surveys to be undertaken to identify any site-specific constraints.

While native woodland generally has a lower impact on the landscape, care is still required when designing the planting boundaries and fence lines to ensure they are sympathetic to the landform, existing woodlands and recreational access routes.

The map on page 25 shows the opportunities for native woodland creation within the National Park.



In order to view this map in relation to other strategic priorities, please view our <u>online interactive map</u> (details on page 3).





Productive woodland

Given the uncertainty in agricultural markets and support along with the current favourable economics associated with forestry, diversifying into productive woodland is likely to be given greater consideration by many land managers. These options range from small-scale woodlands for firewood or integration with livestock management, as well as large-scale, well-designed productive forests as a renewable resource for timber and other uses. Careful selection of site, design and scale would be required given the National Park's landscape designation and biodiversity consideration. The creative use of native woodland, mixed conifers and mixed broadleaves will often be required to ensure that forest design contributes fully to all of the objectives of the National Park.

Productive conifer woodland

Productive conifer woodland proposals should be designed to deliver multiple objectives of the strategy appropriate to their location. Proposals that combine native woodland creation with diverse conifer and/or productive native or non-native broadleaves would be encouraged where significant multiple objectives of the strategy are delivered in locations with suitable landscape capacity.

Productive conifer proposals would be generally favoured where:

- There is landscape capacity labelled as 'medium' or 'high' in the Landscape Capacity Study (see page 33 and supporting document) for productive conifer woodland that would enhance Landscape Character, visual amenity, scenic quality or existing management practices. For example, where new woodland would improve landscape fit of existing conifer blocks. Please see the 'Landscape integration and Special Landscape Qualities' section (page 29) for more details about the assessment of landscape capacity.
- > Existing hill track access and the public road network are suitable for timber extraction.
- > They would extend the woodland habitat network by connecting existing native woodlands and remnant trees with new native woodland or open ground within the proposed woodland.
- > The loss of open ground would not have a significant negative impact on priority habitats and species in the Scottish Biodiversity List.
- > Where the diversification of land use supports an existing holding in continuing other enterprises.
- The introduction of non-native seed sources into upland open habitats, riparian zones, adjacent native woodland or designated sites must be considered and detail of management to prevent establishment of non-native trees in these sensitive areas should accompany any woodland creation proposal.

The design of the productive conifer scheme will require some or all of the following:

- Native woodland, for example in riparian zones to create and connect woodland habitat networks or at the margins to improve landscape fit.
- Appropriate conifer and/or productive broadleaves species diversity where conditions are suitable, these components would contribute to the wider woodland habitat network and wider Landscape Character.
- > The design of future wind-firm boundaries for both felling coupes and extraction infrastructure to minimise the impact on the landscape when the forest is managed in the future.
- > Open ground to deliver conservation or landscape enhancements.
- > Use of different species with different growth rates would not only contribute to diverse woodland as it is established but spread the timing of future felling. Where this is not possible, future thinning should be considered to create more wind-firm coupes in order to widen the period of felling.

Productive broadleaf woodland

Within the National Park there is potential for broadleaves, both native and non-native, to be managed productively in a new woodland.

The use of broadleaves would be encouraged as part of species diversification, contributing to improved landscape fit of a design or as a standalone woodland creation proposal where appropriate.

New productive broadleaf woodland may offer more scope in some locations for new woodlands which are more sympathetic to current Landscape Character than productive conifer woodland.

However, care must be taken when choosing locations of non-native productive broadleaved woodlands so that they do not threaten native woodland by the introduction of non-native tree species.



5 Delivering Our Strategy

The following guidance indicates how each topic should be considered to achieve our strategic objectives and is underpinned by the UK Forestry Standard along with other national policies and guidance.

Landscape integration and Special Landscape Qualities

Special Landscape Qualities and Landscape Character consideration in woodland design

The Special Landscape Qualities of Loch Lomond & The Trossachs National Park (referred to in SNH Commissioned Report No. 376 2010) are defined as 'the characteristics that, individually or combined, give rise to an area's outstanding scenery'. Due to the varied nature of the National Park it is most easily divided into four landscape areas: Argyll Forest, Loch Lomond, Breadalbane and the Trossachs.

The report identifies the qualities that make the landscape and scenery special in the National Park's four landscape areas. These qualities are underpinned by the Landscape Character within them and their key characteristics.

Overview qualities include 'wild and rugged highlands', 'water in its many forms', 'the rich variety of woodlands' and 'tranquillity'. There is already great woodland variety throughout the National Park, with ancient native woodland, wood pasture, farmland trees and policy plantings as well as commercial forest cover. Woodlands define the lower and mid glen slopes and distinguish them from the open uplands. They enclose settlements and clothe loch shores and islands. They are important visually, bringing a tapestry of texture and colour that changes throughout the year.



Specific Landscape Area Qualities include:



'The dramatic pass of the Rest and Be Thankful' of the Argyll Forest – a natural major route leading through the mountains where wild qualities can be experienced and where scope exists for landscape and visual enhancements to the upper treeline within the upland glen.



 'The gateway town of Callander' in the Trossachs is famous for its dramatic natural setting and designed Landscape Character, where there is scope for local enhancements.



'The banks of broadleaved woodlands' of Loch Lomond which are characteristic throughout the lowland loch basin with extensive semi-natural woodland and designed landscapes and estates along the shore.



'The tranquil Lake of Menteith' with its distinctive lowland scenery and backdrop of parallel ridges.



 'Expansive Glen Dochart' in Breadalbane where the strath and glen floor is characterised by pastoral qualities, riparian woodland and has predominantly forested glen sides. The Special Landscape Qualities outlined above will be protected by welldesigned proposals. However, care must still be taken to complement forestry proposals in areas where woodlands sit adjacent to open ground. Sensitive design of the transition between forest and open areas can be achieved using varied planting densities, species diversity and open ground. These design principles should be applied adjacent to important recreational routes to create a varied experience for users. Where proposals are adjacent to other woodlands the design must consider the neighbouring forest proposals to ensure that they work together. These approaches will deliver well-designed proposals which blend with the surrounding landscape.

Landscape Capacity Study

The National Park is a landscape designation and as such the impact of any woodland proposals must consider the current landscape baseline with an aim of achieving landscape improvements where possible. This includes the Special Landscape Qualities, Landscape Character, visual amenity and perceptual qualities (wildness, dark skies and tranquility). Different areas of the National Park have a range of sensitivities and capacity for change, so each type and scale of a woodland proposal has a different impact.

In order to facilitate forthcoming woodland management and woodland creation schemes, a <u>Landscape Capacity Study (supporting document)</u> was commissioned to aid the development of appropriate schemes for each area. It is a strategic study and does not replace the need to undertake site-specific assessments for woodland proposals.

Findings of Landscape Capacity Study

The detailed assessment divides the National Park into ten zones with sub-zones. For each one it highlights the overall landscape sensitivities, assesses landscape capacity, and puts forward guidelines for woodland proposals. The overall capacity summaries for each zone and sub-zones are collated in the table on page 33. Further details of the capacity assessment are in the Landscape Capacity Study (supporting document).

The study was undertaken using selected viewpoints from the major travel corridors where people experience the landscape. These viewpoints do not cover the whole National Park so the assessment cannot be applied to areas beyond them, where capacity may vary quite significantly to the findings identified in this study.

If the woodland creation proposal is visible from one of the viewpoints used in the study then the capacity is as shown in the table. However, if the site is not visible from a viewpoint from the study then an assessment would need to be undertaken, preferably using the Landscape Toolkit (Appendix 1), from viewpoints agreed with Scottish Forestry in consultation with National Park advisors.



See map and Landscape Capacity Summary table on pages 32-33.

In order to view this map in relation to other strategic priorities, please view our <u>online interactive map</u> (details on page 3).

Landscape Toolkit

The Landscape Toolkit (Appendix 1) has been developed by Loch Lomond & The Trossachs National Park Authority from the assessment methodology of the Landscape Capacity Study (supporting document). This will allow specific proposals to be assessed consistently and in the same vein as the study itself.

It consists of a blank pro-forma table to be used by agents or others in considering their specific woodland creation or management proposals, and includes guidance notes on how to use it.

The Landscape Toolkit can be used to assist with the assessment of proposals of any size. Its use is particularly recommended for any proposals for the sensitive areas shown in the map on page 32 and significant schemes in other locations. The National Park Authority can provide advice on its use.

Use of the pro-forma table in the <u>Landscape Toolkit (Appendix 1)</u> will aid the design of a woodland creation scheme or management proposal using the step-by-step assessment approach outlined in the toolkit guidance.





Summaries of overall Landscape Capacity for woodland creation

Zone A Achray and Loch Ard			
SUB ZONE	OVERALL CAPACITY		
	Native	Productive conifer	
1 - Loch Achray and Loch	Medium - High	Medium - High	
Venachar			
2 - Loch Ard and Loch Chon	High	High	
3 - Achray Forest	Medium - High	Medium - High	
4 - Aberfoyle and Lake of	Medium	Low - Medium	
Mentieth			
5 - Gartmore	Medium	Medium	

Zone B Arrochar Alps and Ben Lui

SUB ZONE	OVERALL CAPACITY	
	Native	Productive conifer
1 - Loch Sloy and the	Medium - High	Medium
Inveruglas Water		
2 - Ben Lui and Ben Oss	Medium	Low - Medium
3 - Rest and Be Thankful	Medium - High	Medium

Zone C Cowal			
SUB ZONE	OVERALL CAPACITY		
	Native	Productive conifer	
1 - Glen Croe/Glean Mor/Glen	Medium - High	Medium	
Goil			
2 - Loch Goil/Loch Long	High	Medium - High	
3 - Loch Eck / Glen Finnart	Medium - High	Medium - High	

Zone D Strath Fillan and Glen Dochart SUB ZONE OVERALL CAPACITY Native Productive conifer 1 - Strath Fillan Medium Medium 2 - Glen Dochart Medium Medium

Zone E Lomond North and Glen Falloch				
SUB ZONE	OVERALL CAPACITY			
	Native	Productive conifer		
1 - Glen Falloch	Medium - High	Low - Medium		
2 - Loch Lomond North	Medium - High	Low		

Zone F Loch Lomond Central

SUB ZONE	OVERALL CAPACITY	
	Native	Productive conifer
1 - Arrochar - Tarbet	Medium - High	Low
2 - Loch Lomond West	Medium - High	Medium - High
3 - Loch Lomond East	Medium - High	Low - Medium

Zone G Luss Hills, west of Loch Lomond to south of Tarbet				
SUB ZONE	OVERALL CAPACITY			
	Native	Productive conifer		
1 - Glen Fruin	Medium - High	Medium-high		
2 - Glen Luss	Medium - High	Low		
3 - Glen Douglas	Medium - High	Medium		
4 - Arrochar to Ardmay	Medium - High	Medium		

Zone H Strath Gartney - Braes of Balquhidder

	and the second secon	
SUB ZONE	OVERALL CAPACITY	
	Native	Productive conifer
I - Loch Voil and Loch Duine	Medium - High	Medium - High
2 - Loch Katrine	Medium - High	Low
3- Loch Arklet	Medium	Low

Zone I Strathyre and Loch Earn

SUB ZONE	OVERALL CAPACITY	
	Native	Productive conifer
1 - Loch Earn	Medium	Medium
2 - Strathyre and Loch Lubnaig	Medium - High	Medium - High
3- Callander	Medium - High	Medium
Zone J Loch Lomond South		
SUB ZONE	OVERALL CAPACITY	

SUB ZONE	OVERALL CAPACITY	
	Native	Productive conifer
1 - Loch Lomond south west	Medium	Low - Medium
2 - Balloch - Drymen	Medium	Low - Medium
3 - Drymen - Balmaha	Medium	Low - Medium

See Landscape Capacity Study for further details.

Landscape Capacity explained

High capacity (low sensitivity) The landscape is generally able to accommodate the type of woodland/ forestry without significant landscape change, or in many cases, it might enhance the landscape. In either case, it could potentially relate well to the character and qualities of the area.

Medium-high capacity

(low-medium sensitivity) The landscape is able to accommodate the type of woodland/forestry in some situations without significant landscape change. Many aspects of woodland/ forestry could potentially relate to the character and qualities of the area.

Medium capacity (medium sensitivity) The landscape is quite vulnerable but with some ability to accommodate the type of woodland/forestry in limited situations without significant landscape change and it could potentially relate to some aspects of character and qualities of the area.

Low-medium capacity (medium-high sensitivity) The landscape is vulnerable and the type of woodland/forestry can only be accommodated in very limited situations without significant landscape change. Woodland/forestry relates to only a few aspects of the landscape and some significant landscape impacts are likely to occur.

Low capacity (high sensitivity) The landscape is very vulnerable and is unable to accommodate any woodland/ forestry without significant landscape change as a result of the loss of key characteristics and the introduction of uncharacteristic features. Woodland/ forestry conflicts with the majority of the key aspects of landscape and widespread significant landscape impacts are very likely to arise.

Habitat Enhancements

Woodland habitat networks

Habitat networks are areas of habitat that are connected in such a way that dependent species can disperse between the areas to create linked populations. A healthy and sustainable habitat network enables species to be more resilient to environmental changes.

New woodlands can enhance woodland habitat networks both by linking existing woodlands or remnant tree cover, as well as increasing woodland habitat. Improvements in the condition of existing native woodland would also enhance the resilience of this network and are the core areas on which the networks should be based.

In addition, creating new woodland in a currently unwooded area provides expansion of habitat networks for more mobile species while also establishing future core areas for expansion.

When expanding habitat networks, there is a risk of invasive non-native species (INNS) spreading as a result of improved connectivity and this risk must be controlled by INNS management, as well as careful planning of such networks.

As a guiding principle, when productive conifer forests are restructured, a robust and sustainable woodland habitat network should be designed both within the individual holding and across the wider landscape. This can be achieved through creation of additional areas of open ground and native woodland, which could be complemented by the use of low-impact silvicultural systems (LISS) to link existing native woodland, open ground, PAWS restoration areas or riparian zones.

The creation of landscape-scale woodland habitat networks requires adjacent land managers to cooperate by discussing and sharing their proposals, to ensure that suitable habitat links are created across ownership boundaries. The National Park Authority welcomes the opportunity to help support adjacent land managers to come together to deliver landscape-scale woodland habitat networks.

Forestry proposals that contribute to the improvement of a robust woodland habitat network both within a management unit and at a landscape scale are encouraged.



Restructuring of productive conifer woodland

As conifer forests mature there are opportunities to increase the resilience of the future forests and deliver an increased range of benefits. While these opportunities are greatest in the first rotation, there may be opportunities in subsequent rotations for consideration. The restructuring is also an opportunity to address issues such as water quality problems like diffuse pollution and acidification, protecting and enhancing archaeological features and improving the landscape fit of original planting designs. These outcomes are often achieved by good felling design which considers proposed coupe shape and size, diversifying age classes and species composition. Such considerations will be beneficial in relation to resilience to pathogens and climate change.

A restructuring proposal should include designed open ground and new native woodland which should be linked with existing native woodland (priority woodland habitats in appropriate locations should be included) to form a forest habitat network, while increasing species diversity of productive conifer elements, appropriate to the context of the specific forest. This diversity, along with age diversity, aids the development of a resilient forest against future climate change and potential pests or diseases. The restructuring plan also needs to enhance (where possible) the recreational and visitor experience, while considering the landscape impact of the felling design.

There are opportunities to innovate how this species diversity is provided, either by trialling novel conifer species or using existing species in a different manner (such as using broadleaves as a productive element or increasing the delivery of non-timber products and services). The use of thinning where appropriate aids both the timber quality while also adding further diversity to the felling period of future crops. While it is recognised that clear-felling of conifers would remain a preferred silvicultural approach, due to the environmental constraints in many locations, opportunities to establish lowimpact silvicultural systems (LISS) would be encouraged where they would have a reduced landscape impact or deliver other objectives of the strategy. The restructuring should also establish a future felling structure which would minimise landscape impacts and maintain ecological connectivity.

Riparian woodland

Native woodland within the riparian zone is important as it delivers multiple benefits:

- > Improvement in water quality by reducing diffuse pollution and sedimentation risk from run off.
- > Improvement in aquatic habitat for fish by increased provision of food.
- > Managing erosion by increased bank stability.
- > Shade for management of temperature extremes.
- > Contributing to natural flood management.
- > Enhancement of Landscape Character and visual amenity.

Riparian zones often have remnant woodland and trees which provide network corridors for both aquatic and terrestrial wildlife. This seed source should be protected and enhanced, for example by excluding grazing or enrichment planting.

The riparian woodland should provide an open woodland canopy with dappled shade. Published <u>research by Marine Scotland</u> provides guidance as to locations and river bank aspects vulnerable to temperature extremes which should be targeted for planting.

Future management to maintain this open canopy balance in open and wooded areas must be considered when designing riparian woodland.

Establishment of riparian woodland within productive conifer forests can aid the good design of such schemes by creating both visual and habitat links between montane and upper edge woodland and lower woodland, adding diversity of structure, texture and colour, as well as providing additional protection to the riparian zone during harvesting or restocking operations. Where there are non-native conifers within the riparian zone, these should be managed to enhance riparian habitats as part of any approved management plan.

Woodland creation proposals should create riparian native woodland where it is lacking and enhance existing riparian woodland through appropriate design.

Montane woodland

Within the National Park there are relatively limited areas of native montane woodland as a result of historic land management practices, although remnant trees persist on some inaccessible areas such as cliffs or steep gorges.

The increase in montane woodland would have benefits for many species by providing diversity in habitats and forage. Montane woodland when associated with existing forests would also deliver landscape enhancement by removing a sharp transition between afforested and open habitats by the establishment of natural tree line. These woodlands are generally established at lower planting density with reduced species diversity.

Enhancing remnants of montane woodland and trees by protecting natural regeneration from herbivores should be a priority because these surviving trees will generally be well adapted to the local conditions and likely persistence of mycorrhizal soil fungi (beneficial fungi found near roots), leading to more resilient woodland.

The inclusion of montane and edge woodlands in all appropriate woodland creation and restructuring proposals are strongly encouraged due to their contribution to improved landscape fit and habitat provision for priority species, such as black grouse and golden eagles.

Ancient woodland and trees

Ancient woodland (woodland since at least 1860) should be a focus of enhancement and restoration efforts such as herbivore management and invasive species control due to their high level of biodiversity. These woodlands form important core areas of any woodland habitat networks.

Ancient trees and iconic landscape trees, both in and outside woodland, represent significant biodiversity hotspots and often are locally significant. Use of resources such as the Woodland Trust's <u>Ancient Tree Inventory</u> can aid recording and identification of such trees. They can be found in a formal designed landscape or in wood pasture settings, as well as in the wider landscape. The management of these trees should be accompanied with planting trees to create future hosts of fungi, bryophytes, invertebrates and replacement landscape features.





Native woodland restoration on Plantations on Ancient Woodland Sites (PAWS)

3,350 ha of woodland in the National Park (6% of all woodland) are Plantations on Ancient Woodland Sites (PAWS) – i.e. areas that are recorded on the Ancient Woodland Inventory but are currently under non-native tree cover. These areas should be considered a focus for restoration to native woodland as they often retain ancient woodland remnants and consequently produce more diverse native woodland when restored.

It should be recognised that ancient woodland remnants, as well as other important native woodland, can be found outside these recorded PAWS areas and so it is likely that detailed surveys of a wider area within a woodland may be required to identify all the priority areas for restoration. Restoration can be undertaken over a number of rotations or by establishing a productive broadleaves crop, as well as conversion to native woodland in a single step. These restoration areas should form part of the woodland habitat network.

Climate change and tree health

Climate change is leading to the spread of existing and novel diseases and pathogens that effect tree health. In the National Park, there have been outbreaks of various Phytophthora and Chalara ash dieback is now established. The loss of larch due to Phytophthora ramorum is already occurring both through felling of infected stands and as larch is no longer recommended for replanting. This will over time have an impact on the visual diversity of the productive conifer forests, especially in prominent locations where a significant proportion of larch is present, such as Loch Eck and the Achray Face (east of Aberfoyle). Replanting proposals where larch has been felled must consider maintaining the species and seasonal diversity. This is likely to require the use of additional native or non-native broadleaves along with diverse conifer species.

Management of Chalara infected ash stands must be carefully considered and conservative intervention such as thinning and protecting regeneration would be encouraged so that any tolerant strains can emerge to maintain ash's contribution to woodland biodiversity. Enrichment planting may be appropriate in some cases, but must be considered on a site-by-site basis and guided by current best practice.

In addition to creating resilient woodland, it is important to raise public awareness both in reporting possible plant health issues and influencing behaviour to reduce the risk of diseases. This would include the use of citizen science initiatives such as <u>Open Air Laboratories (OPAL)</u> and <u>Observatree</u>.

Wild fires may be a risk during woodland establishment from drier springs and the build-up of an ungrazed field layer. Once trees are established, introduction of managed grazing can be a possible approach to manage this risk in native woodland.

Woodland creation and restructuring proposals should consider the impacts of predicted climate change as this may influence species or provenance selection; the use of <u>Ecological Site Classification tools</u> would help inform such selection.

Key woodland habitats

The native woodlands of the National Park represent a wide range of priority woodland habitats as defined in the Scottish Biodiversity list. However, the extensive tracts of Atlantic woodland with internationally important bryophyte assemblages (mosses and liverworts) and lichens along with small remnants of Caledonian Pinewood are considered key woodland habitats and therefore are a priority for protection and expansion.

The <u>Native Woodland Survey of Scotland</u> identified the location of the different native woodland types within the National Park. Any proposal for restocking or woodland creation should use this data to help identify the most appropriate woodland type for creation based on the adjacent existing native woodland as well as other considerations such as soil and altitude. The following woodland habitats have been identified as priorities for restoration and creation in forestry proposals.

Atlantic woodlands

The management of the existing Atlantic woodland and creation of new Atlantic woodland is a high priority within the National Park, due to the designated status of many of the existing native oak woodlands and the need to improve ecological connectivity between them. The high rainfall and humidity of the oceanic climate of the National Park makes them an ideal habitat for internationally important populations of bryophytes. <u>Plantlife's</u> <u>'Important Plant Area'</u> data (see References) for bryophytes has been used to inform the woodland creation priority mapping for this reason. When expansion of oak woodland is considered, either by woodland creation or a restructuring proposal, use of Plantlife's data would identify areas which would have maximal suitability for bryophytes.

The National Park Authority is a member of the Atlantic Woodland Alliance which is also made up of Butterfly Conservation Scotland, the Community Woodlands Association, Forestry and Land Scotland, Future Woodlands Scotland, John Muir Trust, the National Trust for Scotland, Plantlife Scotland, the Royal Botanic Garden Edinburgh, RSPB Scotland, Scottish Forestry, Scottish Land and Estates, Scottish Natural Heritage, the Scottish Wildlife Trust, Trees for Life and the Woodland Trust Scotland. This strategy will enhance and expand the important habitats in the National Park and contribute to the Atlantic Woodland Alliance Strategy.

Caledonian pinewoods

There are two remnant areas of ancient native pine woodland in the National Park and the expansion and improved connectivity of these areas is a priority. Given the location of these remnants, opportunities to improve connectivity exist both within and outside of the National Park. Current guidance is that expansion from these core areas into their buffer areas should be by natural regeneration of Scots pine in order to minimise the risk of Dothistroma Needle Blight infection. The inclusion of native pine in the design of restocking proposals would improve connectivity of these remnants, in terms of habitat and landscape, so would contribute to this objective. New native pine woodland has recently been established in Glen Dochart and, where suitable, there are site conditions for new Caledonian woodland within the National Park. These opportunities should be explored as part of any new scheme.

The map on page 39 shows areas where these two key woodland habitat types would be particularly favoured in forestry proposals.



In order to view this map in relation to other strategic priorities and data, please view our <u>online interactive map</u> (see page 3).



Key species

Many of the iconic species of the National Park will benefit from expansion in woodland extent and improved management of existing woodland.

Notable tree species

Juniper

There are locally significant populations of Juniper in the Strathyre area and opportunities to protect and enhance these populations should be encouraged.

Crab Apple

Research has found that Loch Lomond and its islands have a significant number of true crab apple trees. Opportunities to protect and enhance these populations should be undertaken.

With these and other native species, establishment of a seed collection and seedling availability for woodland creation would be important steps to delivering these enhancements.





Black grouse

Black grouse are a priority UK Biodiversity Action Plan species, and on the red list of Birds of Conservation Concern due to significant declines over the past 25 years in parts of the UK. As a good indicator of the health of upland ecosystems, they are a priority for conservation action within the National Park and as such are identified as a flagship species in the National Park Partnership Plan. Black grouse are widely distributed across



the National Park although at low numbers with some areas being critically low. Appropriate native woodland creation in the Great Trossachs Forest National Nature Reserve, along with some open ground management, has led to an increase in and stabilisation of records from 2008 to 2017.

Woodland design features that would benefit black grouse include having a proportion of low-density native woodland, connected open ground focusing on nesting (good quality heathland) and brood-rearing habitat (such as bog myrtle, blueberry rich habitat, wet flushes, bogs and mires). Fencing should be minimised where possible, and carefully sited and marked according to standard guidance for both woodland creation and re-stock sites.

Where possible, appropriate open ground management should be implemented in combination with woodland management or woodland creation proposals in order to maximise benefits for black grouse.

All relevant woodland creation proposals should be assessed to determine potential impacts on black grouse and, if deemed an appropriate location for planting, incorporate measures to benefit the species. Woodland management proposals must enhance the habitat to benefit black grouse where the woodlands are near known black grouse populations.

Red squirrels

Red squirrels are widely distributed in the National Park apart from the southern Loch Lomond area where they are only starting to recolonise. The south east boundary of the National Park approximates to the current priority grey squirrel control area. In this area, woodland management and creation proposals should consider the risks of grey squirrel spread through control measures or selection of tree species to favour red squirrels. However, this needs to be balanced



against other benefits from creating diverse native woodland. Glen Branter is one of Scotland's long-term red squirrel strongholds and additional care is needed here to keep this area unattractive and inaccessible to grey squirrels. Currently the combination of control efforts and woodland composition around Arrochar and Glen Croe helps to maintain conditions that prevent the infiltration of grey squirrels. While red squirrels thrive in native broadleaved woodland in the absence of grey squirrels, in control areas the exclusion of large seeded broadleaves should be considered to prevent habitat enhancements for grey squirrels. In productive conifer forests, establishing mature stands of species such as Norway spruce, Douglas firs and Scots pine will provide good forage for red squirrels.

Woodland management plans where red squirrels are present should aim to maintain seed bearing stands and design restructuring plans to ensure further seed bearing stands are created. This could be achieved by the use of additional diverse conifer species and use of low-impact silvicultural systems (LISS) as well as native woodland.

Brown trout

Trout are the most populous native freshwater fish species in Scotland and are ubiquitous in many water bodies of the National Park. They require clean and cool water to thrive and are therefore a good indicator of aquatic health. Well designed and managed riparian woodland would benefit trout by provision of leaf litter and dead wood to enhance insect provision and refuge areas, reduce risk of pollution and sedimentation, and to protect against water temperature extremes.

Eurasian beavers

This native species has recently returned to Scotland following a reintroduction project and unregulated releases. In riparian woodland, beavers can be a valuable addition to the ecosystem by maintaining the matrix of canopy cover and open areas. Currently within the National Park, beavers occur within the upper Tay, Earn and Forth catchments, but evidence suggests that the species is steadily colonising new areas to the south. River systems which have lost historic riparian woodland and trees and also have a lack of riparian woodland regeneration limit the extent of suitable beaver habitat, although beavers can disperse through such systems. There is a need to ensure browsing levels by other herbivores in riparian woodlands enables tree regeneration to become established following beaver feeding. There is a minor risk that woodland creation sites close to water courses may become negatively affected by beavers during the establishment phase, particularly if aspen is present. Consideration will be required to protect these areas through stock fencing to ensure establishment.

Other notable species

Aside from the species highlighted above, there are a number of notable species present within the National Park that require consideration when devising woodland creation and management proposals. These include species protected by law and those listed on the Scottish Biodiversity List. Depending on the nature and location of proposals, potential impacts on species such as raptors, geese and wading birds; lamprey, fresh water pearl mussels and Atlantic salmon; red squirrel, pine marten, bats, otter, water vole and badger may need to be considered. The potential presence of such species should be established through a desk exercise, using sources such as the NBN Atlas Scotland, and early consultation with Scottish Forestry, the National Park Authority and relevant organisations such as RSPB and Raptor Study Groups. This information should then be used to determine: if a proposal is appropriate, the need for specific survey work, mitigation measures and inform the design of the proposals to avoid negative impacts and provide enhancement where possible. If the implementation of mitigation measures is not sufficient to avoid offences under protected species legislation, a licence will be required from Scottish Natural Heritage (SNH) before works can proceed. Further guidance on the consideration of protected and priority species in relation to woodland creation and management can be found in UKFS Forest and Biodiversity.



Invasive non-native species

Invasive non-native species (INNS), such as invasive rhododendron and Himalayan balsam, are recognised as one of the major threats to native woodland due to their impact of suppressing tree regeneration, the field and shrub layers, along with impacting on internationally important bryophyte populations. These species (especially rhododendron) can also negatively affect productive conifer forests, due to the impact on restock sites where replanting is delayed. As well as plants, species such as grey squirrel are considered INNS and as such their control would be supported (see section on red squirrels for more details).

Invasive non-native species control projects should be developed and supported where they would deliver sustainable catchment or populationscale protection using designated sites and other important woodland and open habitats as focal points. For example, a rhododendron control project is likely to be based around existing efforts to remove remaining seed sources which often exist outside of woodlands but still represent a significant threat to any sustainable control effort.



Any control project would require close and effective partnership working between agencies, land managers or owners, domestic homeowners and community representatives. Such projects will likely have overlap with riparian INNS control efforts and implementation of combined catchment-scale INNS control should be considered. These projects should also consider habitat restoration as well as control of INNS.

Development of projects in areas without existing control work would also be considered where sustainable control is considered feasible. Where INNS are present, any forestry proposals must consider management to control the species present especially when this would contribute to a landscape-scale control project.

Where INNS are present on multiple adjacent holdings, the National Park Authority will assist by: facilitating discussion between land managers/ owners and identifying suitable funding sources with the aim of ensuring INNS management is sustainable.

Natural regeneration of non-native conifers represents a risk to upland open habitats as well as native woodlands (especially designated sites) and is likely to increase with the reduction of herbivore pressure.

Forest management plans must aim to minimise this risk and should include design and management as recommended in <u>Scottish Forestry</u> <u>guidance</u> (Managing invasive and non-native forestry species) to control any establishing stand, along with their removal from riparian zones, peatland and other priority habitats.

🗴 The map on page 42 shows priority areas for rhododendron control.



In order to view this map in relation to other strategic priorities, please view our <u>online interactive map</u> (see page 3).

Integrating woodland with other land use

Designated sites

This document has been subject to Habitats Regulations Appraisal (HRA) and this has informed the opportunities map for native woodland expansion and identified mitigation measures for specific European Designated sites as set out in <u>Appendix 3</u>.

All proposals for woodland creation or management within – or likely to have a significant effect on – the qualifying interests of a European Designated site will be required to be subject to Habitats Regulations Appraisal. Early consultation with Scottish Natural Heritage is recommended in these circumstances. The opportunities map for native woodland expansion has also been screened for potential conflicts with the notified interest of Site of Special Scientific Interests (SSSIs) at a broad scale. Where it was clear that the interests of an SSSI would not be compatible with native woodland expansion, these sites were classified as 'sensitive' on the map unless another notified interest of the site would benefit from native woodland expansion.

All proposals for woodland creation or management within or affecting a SSSI will need to demonstrate that they will protect all notified interests of the SSSI. Again, early consultation with Scottish Natural Heritage is recommended in these circumstances. Details of the broad scale assessment of the sensitivity of SSSIs to native woodland expansion are presented in <u>Appendix 3</u> along with a general indication of the issues that will need to be addressed by proposals.

To ensure species of appropriate provenance and to avoid the risk of introducing pathogens via planting stock (e.g. Dothistroma needle blight in native pine woodland areas), natural regeneration is the preferred means of expanding woodland cover within or adjacent to designated sites. Planting will only be considered where it can be demonstrated that this is consistent with maintaining or enhancing the interests of the site and appropriate planting stock can be obtained (increased species diversity might be desirable in some circumstances). These principles also apply to proposals for woodland expansion within or adjacent to ancient woodland.

Any management plan which includes or is adjacent to a designated site should consider proposals that would improve the condition of the designated site features.

Geological Conservation Review Sites (GCRs)

The Geological Conservation Review (GCR) is the register of known nationally and internationally important Earth science (geological and geomorphological) sites in Great Britain. The majority of GCR sites have protection through designation as geological features in SSSIs but there are more than 200 GCR sites in Scotland that have no protective SSSI designation status. There are currently 11 of these 'un-notified GCR sites' within the National Park and the location of these sites can be viewed on <u>Scotland's Environment website</u>.

Woodland expansion within earth science sites can obscure views of important exposures and landforms. Larger tree roots can also disrupt buried interests. As a consequence, any proposals for woodland creation or management within or affecting an un-notified GCR site will need to demonstrate that they will not compromise the interest of the site. Proposals for the management or restructuring of existing woodland should also seek to maintain and, where possible, enhance views of important exposures/ landforms and protect buried interests. Similar consideration should be given to sites of geological importance in the National Park identified through future research and audit.

Designed landscapes

The National Park contains seven sites recorded on the National Gardens and Designed Landscapes inventory, along with a further 30 sites recorded as being of local significance. Details of these sites can be found in <u>Appendix 4</u>. Any woodland management plans must consider measures to maintain and enhance these designed landscapes. Some designated landscapes do have capacity for woodland creation and are shown as being preferred or potential on the native woodland creation opportunity map on page 25. It is recognised that the use of specific non-native species may be appropriate to maintain and enhance some designed landscapes.

Those landscapes which do not have capacity have been shown as sensitive on the aforementioned map. In order to view this map in relation to other strategic priorities, please view our online <u>interactive map</u> (see page 3).

Open ground habitats

The impact of woodland creation proposals on current open ground habitats must be assessed and particular consideration given to conserving, enhancing or restoring priority open ground habitats identified in the <u>Scottish</u> <u>Biodiversity List</u>. Particular consideration needs to be given to avoiding significant negative impacts on these habitats and incorporating them into a wider habitat network which should include the variety of open ground habitats present. As part of this assessment, the extent, condition, quality and connectivity of any priority habitats present must be established to inform how that habitat is considered in relation to a woodland creation proposal. The relative value of existing habitats versus the proposed woodland creation must be taken into account. In large-scale woodland creation design, use of tools such as Integrated Habitat Networks mapping could be used to maintain connectivity for open habitats and maximise the woodland habitat network benefits from proposals (see SNH interactive habitat network user tool).

Peatland

The importance of protecting and restoring peatland as a means to reduce the impacts of climate change is internationally recognised. Within the National Park, there is a target to restore 2,000 ha by 2023. There is a presumption against tree planting on deep peat (more than 50 cm) and on sites that would compromise the hydrology of adjacent bog habitats. Woodland creation sites must be designed so there would be no impact on the habitats on deep peat or adjacent bog habitats. Where productive conifer on deep peat is being restructured, consideration of peatland restoration, creation of bog or wet birch woodland would be encouraged in line with current Scottish Forestry guidance.



Wild deer and other herbivores

Sustainable management of herbivores should be undertaken at a landscape scale to deliver public benefits, such as reducing the current herbivore impacts which are negatively affecting woodland and upland habitats. In the National Park, there are nine collaborative groups set up to manage deer, but who also look to manage other wild herbivores, such as feral goats, when the need arises. A number of these public benefits are relevant to woodland creation and management:

- > improvement in native woodland condition, especially designated sites; and
- > identifying opportunities for woodland creation.

These public benefits for each group are balanced with differing management objectives for the members, such as conservation management, productive forestry, domestic stock management and commercial stalking. The inclusion of forest managers and owners in these groups is key to holistic herbivore management in a specific area. The effective management and husbandry of livestock, particularly sheep, is also important in managing woodland health and creation.



Effective herbivore control and management will improve the condition of native woodland, aid the establishment of new woodland and replanting of productive conifer woodland, while also helping to mitigate the risk of vehicle collisions with wild deer. Therefore, herbivore control and management must be included in all management plans. Where woodland creation is undertaken there is a presumption that there will be a proportionate compensatory cull based on the landscape impact of the proposal. The requirement for a compensatory cull would also depend on the size of the scheme, current domestic and non-domestic herbivore densities, condition of habitat and adjacent land management objectives.

Herbivore impact assessments for upland and woodland habitats should be used to set annual cull levels that deliver individual estate objectives, as well as public benefits from deer management. These assessments should be used alongside other data, such as cull and count information, herbivore movement patterns, mortality and reproductive rates.



Deer and stock fencing

In the majority of the National Park, current deer density requires most woodland creation sites to be protected by deer fences. The majority of restock sites with soft conifer also require this protection until the trees are established. The need for deer fences increases the cost of woodland creation and establishing diverse productive conifers. In addition, they have potential negative impacts such as increasing the risk of fence strike (with species such as black grouse), limiting recreational access and landscape impact, as well as potentially affecting deer and other animal movements and welfare.

In some circumstances, stock fencing can be a useful stock management tool to enhance woodland condition such as shrub layer establishment and tree regeneration.

These negative impacts can be mitigated by, for example, compensatory culls, micro-siting of fences, fence marking, use of open ground between planting and fence lines to soften the transition, commitments to remove redundant fences or reduce to stock height when trees are established. There could be some short to medium negative impacts even with mitigation, however this may be acceptable due to the wider benefits from woodland creation or increased species diversification in restock sites. In the medium to long term, the sustainable management of deer must enable a significant reduction in the need for fencing in order to reduce the environmental and economic impact.

Agricultural land management

In the south and east of the National Park and on the floors of many of the straths and glens, agricultural management shapes the landscape and remains central to the identity of local communities. Through the delivery of integrated land management advice for land management businesses by both National Park and private agricultural advisers, land managers will be able to better plan and deliver multiple environmental and social benefits, alongside economic return. The availability of better quality lower agricultural ground is limited and the maintenance of this resource is currently favoured, however, there may be capacity for small-scale woodland planting which can benefit stock welfare by shelter provision. The maintenance of livestock grazing in these locations would often assist maintaining open views from the transport corridors.

Appropriately located woodland creation can be important for a holding's diversification in terms of biodiversity and climate change resilience while providing a future source of income from timber and non-timber products. Agricultural productivity can also be increased through improved stock shelter. The establishment of increased tree cover in riparian areas would help to manage the risk of diffuse pollution, bank erosion as well as maintaining and enhancing local landscapes. The extent of woodland creation potential on a single holding depends on the long-term management objectives of the holding, its location and associated sensitivities.

The use of managed livestock grazing with appropriate stocking densities within established native woodland can lead to improvements in woodland conditions as well as improvements in stock welfare and productivity. Establishment of agroforestry or silvo-pastoral systems would be a key method of combining both agricultural production and this strategy's objectives.

Water and soil management

Within the National Park there are significant public and private water supplies, along with aquatic designated sites such as the Rivers Tay, Endrick and Teith Special Areas of Conservation (SACs) as well as iconic lochs such as Lochs Eck, Lomond and Lubnaig.

Careful planning and implementation of forestry operations is required to prevent detrimental impacts to the water quality. Any proposal should be designed so that it does not increase the risk of flooding – especially near vulnerable areas. Given the legacy of previous afforestation, assessment of historic drainage prior to harvesting is often required to prevent issues developing during the operations. During ground preparation for restocking these historic drainage systems should be modified to comply with current best practice. Maintenance and upgrading of existing forest roads are also opportunities to improve historic drainage systems to prevent future pollution events.

Woodland creation can help with reducing flood risk by runoff reduction and floodplain storage. However, careful design, species choices and future management along with appropriate ground preparation is required to ensure these benefits are maximised. In order to deliver most benefit, these measures should be combined with other methods of flood mitigation, such as peatland restoration, woody debris dams, river bank restoration and river re-alignment.

Management plans for existing forests should consider delivering improvements to mitigate flood risk, especially in Potentially Vulnerable Areas (PVA). This could be achieved by establishment of native woodland, open ground riparian zones and appropriate management of instream woody debris to help manage flood risk as well as carefully considering the scale and timing of felling coupes. When developing any woodland creation and management plans within PVAs, a flood officer from the relevant local authority should be consulted. This is to reduce the proposal's flood risk as well as provide advice on opportunities for positive contribution to flood mitigation. Details regarding <u>natural flood</u> <u>management opportunities</u> and Potentially Vulnerable Areas can be found on SEPA's website.

Appropriate woodland management can contribute to improvement in slope and river bank stability, such as new native woodland creation to protect the A83 Rest and Be Thankful. Historic afforestation in some locations has led to challenges associated with slope stability and the difficulties in harvesting these sites e.g. Glen Croe and the Ptarmigan Plantation on East Loch Lomond.

The benefits of flood mitigation and slope stabilisation from woodland creation generally occur in the medium to long term as they occur once the trees have developed a well-established root system.



Social and rural economic development

A vibrant and sustainable rural economy is key to the delivery of this strategy and the promotion of woodland creation and management will lead to increased opportunities for employment. In some areas of the National Park this may require novel methods to provide this advice, such as shared forester schemes or co-operative woodland management. The forests and woodlands of the National Park contribute to the £1 billion Gross Value Added of Scotland's economy. At a national level, they provide the equivalent of 25,000 full-time jobs in sectors ranging from forestry and timber processing to forest recreation and tourism.

Skills

The maintenance and enhancement of forestry skills and contractors is important to deliver both forestry management and secondary processing of products. These skills are often transferable to and from other land-based industries. This resource should be able to deliver forestry management in the diverse woodland present in the National Park, though there may need to be a shift in focus to support smaller scale management options. Owners of woodland must be able to obtain advice to enable appropriate management to be progressed. This advice could be provided through co-operative mechanisms such as the 'shared forester' approach as well as traditional business models. Demonstration events and Modern Apprenticeships will be encouraged, and where possible supported, which enable the sharing of best practice and skills to aid the delivery of the strategy's objectives.



Timber products and biomass

The softwood production from the c.34,000 ha of productive conifer woodland in the National Park helps support the processing industry located throughout Scotland and Northern England, contributing to this nationally important industry. Timber from the National Park supplies mills producing construction-grade timber, particle board, fencing, paper and biomass.

Improvement in the quality of the timber harvest can be achieved through plant breeding to improve timber quality, as well as thinning to improve final crop quality.

Given the current extent of woodland cover, along with limited local markets for biomass production and end users, there is potential to increase the economic return of both final harvesting and thinning by developing local markets which would minimise transport costs.

Currently there are a number of small-scale wood chip producers and a 5 MW combined heat and power plant in the north east of the National Park. The National Park Local Development Plan (LDP) supports biomass proposals where they are located in close proximity to the source of demand for the generated heat and power and use a sustainable source of fuel. There are also permitted development rights that allow farms to diversify into biomass energy generation or storing of biomass subject to a set of conditions and submitting prior notification to the planning authority. The production of firewood or other biomass products may require planning permission. More advice can be found in the National Park's Local Development Plan and from the development management team.

There is potential to develop markets for broadleaf timber within the National Park, e.g. firewood and sawn timber. Broadleaved sawn timber is currently a niche but high value market and local milling of timber can add significant value where there is insufficient volume to warrant haulage to a sawmill.

Forest roads and tracks

Forest roads and tracks are often required for forestry management, from establishment through to harvesting and extraction. UKFS highlights the sensitivities of forest roads in National Parks in General Forestry Practice Requirement no. 11: 'In Designated areas, for example National Parks, particular account should be taken of landscape and other sensitivities in the design of forests and forest infrastructure.' Well designed forest tracks can also contribute to recreational access networks and can provide alterative access when public roads are affected by flooding or landslips.

The Scottish Natural Heritage guidance titled 'Constructed tracks in the Scottish Uplands' gives clear guidance as to how this infrastructure should be situated in order to prevent adverse impact on the environment, especially in relation to water courses and landscape impacts. Proposals affecting watercourses must comply with Controlled Activity Regulations (CAR) and advice can be found on SEPA's website. Careful planning of the construction, including design briefs, Landscape and Visual Impact Assessments, or Landscape Appraisals for simpler cases, use of non-standard construction methodologies in key locations and Landscape Clerk of Works involvement at key interventions will minimise landscape, visual and environmental impacts.

The early consideration of forest infrastructure requirements in woodland creation and restructuring design can enable these designs to contribute to the mitigation of associated impacts. Forest roads and tracks along with other potentially conspicuous man-made structures can detract from the perception of wildness and need to be considered with great care. They should be avoided where possible in areas with high wildness attributes in order to protect the Special Landscape Qualities of the National Park.

Within the National Park, all forest roads, tracks, borrow pits and quarries require screening under The Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017 by Scottish Forestry. In addition, as a planning authority, the National Park Authority must be notified of any private way for forestry (or agricultural) purposes under The Town and Country Planning (General Permitted Development) (Scotland) Amendment (No. 2) Order 2014 (SSI 2014 No. 300) and prior approval may be required. Planning permission will also be required for private ways where any part of the development would be within 25 metres of a road.

<u>Appendix 5</u> explains how these two regulatory systems interact and the approach agreed between the National Park Authority and Scottish Forestry to ensure appropriate regulation occurs while providing an efficient process for the applicant.

Haulage/timber transport

In order to manage timber haulage on the public road network, timber transport groups have been set up with key stakeholders such as local authorities and forest managers to decide upon and implement agreements in specific locations to minimise the impact of these operations on other road users and road infrastructure. Such agreements are in place in locations such as Balquhidder and East Loch Lomond. Investment in infrastructure such as in-forest haulage routes to bypass weaker road networks have been put in place in Strathard.

There are a number of locations where historic afforestation has left a legacy of mature conifer forest which is challenging to extract due to being isolated from the public highway by a railway line or where the only access is via a weak public road.

The National Park Authority wishes to work with landowners, forestry companies and timber transport groups (including local authorities) to develop and implement solutions to these constraints to enable the extraction of the currently isolated timber resource. Currently funding for such solutions can be applied for from the Strategic Timber Transport Scheme.

Rural development and planning

The current Local Development Plan details policies to guide and determine planning applications. In some cases, these may impact on trees and woodland. These policies protect and enhance existing trees and woodland, especially ancient and native woodland. Any compensatory planting schemes must deliver the multiple benefits expected from any other woodland creation scheme as detailed in this strategy. In some areas of the National Park, future Rural Development Frameworks or Local Place Plans may add detail to the rural development and natural capital requirements for a specific area. Where these plans exist, forestry proposals should have consideration of their aims and objectives.

Woodland creation and management proposals have the potential to deliver tourism and visitor services which are important local priorities identified in the National Park Partnership Plan. Consideration of this potential should be included in proposals where relevant. Depending on the type of service proposed, planning permission may be required and advice can be found in the Local Development Plan and Visitor Experience Supplementary Guidance.



Community empowerment and social development

Community management or ownership of woodland can help promote local engagement and understanding as to the opportunities associated with woodland, including the recreational, environmental and economic benefits woodland can deliver.

Communities are encouraged to engage with the stakeholder and consultation process associated with woodland proposals and highlight to relevant land managers the opportunities to help deliver community action plan objectives. There will be support for community-based, small-scale tree planting where it would deliver this strategy's objectives.

The National Park Authority would support increasing community awareness of modern forestry practices along with the requirements of sustainable forestry and responsibility of a forest owner.

Where communities wish to consider forestry acquisitions, support and guidance is available from Scottish Forestry, the National Park Authority and Community Woodland Association. These acquisitions have the potential to both increase local skills and develop into sustainable, social enterprises.

Stakeholder engagement and consultation

The importance of stakeholder engagement in relation to forestry proposals is well established and is incorporated in both forest plan and woodland creation proposals. This can be used to develop productive long-term relations between the land manger and local stakeholders. Guidance such as that produced by Scottish Forestry, <u>Confor</u> and <u>Scottish Land Commission</u> provides a framework for such stakeholder engagement to be undertaken. After the initial stakeholder engagement, which is led by the land manager, there is a subsequent formal consultation process which is led by Scottish Forestry.

There can be key local stakeholders who may be overlooked and it is encouraged that circulation of proposed stakeholders to Scottish Forestry and the National Park Authority prior to the engagement process starting would help prevent omissions and enable appropriate and proportionate process. It would be expected that Community Councils, Deer Management Groups and the Fisheries Trust along with appropriate NGOs are included where relevant.

It is also important that stakeholders engage early with the engagement process to ensure all potential issues are highlighted and can be included in the assessment of a specific proposal.

As well as engagement on a case-by-case basis, there may be opportunities to develop catchment-scale stakeholder engagement forums to discuss issues in a proactive manner such as Land Use Partnerships.

In terms of forest operations, it would be considered best practice to inform relevant local stakeholders when operations which could be locally sensitive such as quarry blasting, felling or timber haulage will occur.



Woodlands and people

Establishing and managing woodlands using modern forestry design and a well-considered, holistic land management approach can bring multiple benefits including providing safe public access, maximising public health through outdoor recreation, providing volunteering opportunities and bringing about positive economic change.

Access rights and responsibilities

The Land Reform (Scotland) Act 2003 established public access rights, meaning that any forest design and management must fully consider public access when exercised responsibly for walkers, horse riders, cyclists and those with mobility aids. Access rights apply to most areas of all woodlands, so it is vital that woodland managers understand where the public wish to access path networks and ensure there is appropriate gate provision. Clear signage and interpretation should be in place that provides for the needs of the general public while reducing the likelihood of conflict between public access and land management operations. This allows land managers and the public to fulfil their duties around responsible behaviour and land management as well as providing opportunities for education about woodland and forestry.

Inevitably, forestry and deer management operations will have an impact on safe public access at times and it is essential that all signage is correct, positive, time limited and follows national standards to ensure compliance from the public. We would encourage the use of public access management plans to inform forest management and balance the needs of recreational visitors, timber producers, conservation, and sporting interests.

Access rights allow the public to responsibly enjoy the National Park's woodlands and develop an appreciation for the value that habitat networks and well-managed woodlands bring to Scotland. The right of public access to forests and woodlands is essential in maintaining existing levels of recreational visits at a national level.



Recreation, health and wellbeing

Over recent years, the benefits to physical and mental health of spending time in well-managed woodland have been better understood and accepted. Various national and regional policy documents reflect this understanding and there is a responsibility on the National Park Authority and land managers to ensure that the health benefits of previously under-used woodland access are maximised. This is particularly true in woodlands in and around towns and villages which offer easy access to a range of recreational and educational activities.

The <u>Scottish Government's Active Scotland Delivery Plan</u> is clear that all partners are expected to ensure that Scotland's natural environment provides opportunities for increased levels of physical activity for everyone. Initiatives which can achieve this goal include the creation of attractive, safe, and wellmaintained greenspace and woodlands within easy walking distance of every home in Central Scotland. This aspiration is also shared across the National Park area.

The next iteration of the current National Park Authority Outdoor Recreation Plan will further develop the policy thinking around health in the outdoors and it should be referenced to ensure all opportunities for wider health benefits are being considered. For example, well-designed short loop paths which follow national standards or the protection of priority woodlands adjacent to communities for long-term recreational enjoyment. Initiatives such as 'Our Natural Health Service' and Green Health Partnerships led by Scottish National Heritage or Woods for Health and Woods for Learning led by Scottish Forestry should also be considered.

6 How Will We Measure Success?

Monitoring the outcomes of the Trees and Woodland Strategy is required so that it can be refined and updated over time. To ensure efficient use of resources and integration with other plans and programmes, this requirement will be met by gathering information from the existing monitoring protocols and processes:



Loch Lomond & The Trossachs National Park Partnership Plan 2018-2023

The <u>National Park Partnership Plan</u> has 14 indicators and associated targets which are reported annually. The following indicators are particularly relevant to the Trees and Woodland Strategy:

Area of new woodland
 2,000 hectares of woodland expansion by 2023

2. Percentage of designated sites in favourable condition Increase from 2017 baseline of 76% of designated site features to 80% by 2023

Wild Park

<u>Wild Park</u> is the biodiversity action programme for the National Park. It identifies four Key Environmental Threats. The Trees and Woodland Strategy will address the following three threats and their indicators of success will be reported on annually by the relevant working groups:

- 1. Unsustainable levels of grazing
 - Indicators of success by 2023: Park-wide habitat impact assessments occurring in upland and woodland habitats.

Number of native woodlands in the 'high' and 'very high' herbivore impact categories reduced or management in place to ensure there will be a reduction in impacts. 2. Invasive non-native species

Indicators of success by 2023: Increase the area and number of sites under active rhododendron management (to tackle invasive rhododendron).

Increased sightings of red squirrels (as they respond to declines in invasive grey squirrels).

3. Climate change pressures

Indicators of success by 2023: Increase area (ha) of woodland expansion (as reported under National Park Partnership Plan).

Increase area (ha) of existing native woodland under positive management.

Increase number of people engaged in woodland creation and management through training or demonstration days.

National Forest Inventory

The National Forest Inventory is a rolling programme designed to provide accurate information about the size, distribution, composition and condition of our forests and woodlands and also about the changes taking place in the woodlands through time. <u>Find out more on Forest Research's website</u>.



Plantlife

- Important Plant Areas

Flooding and Natural Flood Management

- SEPA Flood Map
- Natural Flood Management Network Handbook
- Marine Scotland Water Temperature Data

National Park Data

- Local Development Plan
- National Park Partnership Plan 2018 2023
- <u>Core Paths Plan</u>
- Carver Wildness Study

SNH web links

- Wildlife and Countryside Act 1981
- Habitats Regulations 1994 (European Protected Species)
- Protection of Badgers Act 1992
- <u>Scottish Biodiversity List</u>
- Habitat Definitions
- NBN Atlas Scotland
- Integrated Habitat Networks

Scottish Government

- Planning (Scotland) Act 2019
- Community Right To Buy
- Asset Transfer
- Engaging Communities in Decisions relating to Land
- <u>SEWebb</u>

Scottish Forestry Guidance

You can find these documents on the Scottish Forestry website:

- Scotland's Forestry Strategy 2019-29
- Design Techniques for Forest Management Planning Practice Guide (2014)
- Woodland Creation Application Guidance (2017)
- The Creation of Small Woodlands on Farms (2006)
- Ecological Site Classification Version 4
- Achieving Diversity in Scotland's Forest Landscapes Practice Guide (2012)
- Management of Ancient Wood Pasture Guidance (2009)
- Managing Forests as Red Squirrel Strongholds Practice Note (2012)
- <u>Guidance for Forest Owners and Managers Managing Invasive and Non-Native</u> Forestry Species (2015)
- Expanding Woodlands in Special Protection Areas for Golden Eagles -Practice Note (2013)
- <u>Conserving and Managing Trees and Woodlands in Scotland's Designed Landscapes</u> - <u>Practice Guide (2011)</u>
- Practice Guide for Forest Managers to Assess and Protect Groundwater Dependent Terrestrial Ecosystems When Preparing Woodland Creation Proposals (2018)
- Implementing the Flood Risk Management (Scotland) Act 2009 Briefing Note (2016)
- Managing Woodland Access and Forest Operations in Scotland Practice Note (2013)

Confor

- Stakeholder Engagement Guidance Note

Scottish Land Commission

- Community Engagement

8 Supporting Documents & Appendices

Landscape Capacity Study

Landscape Capacity Study and Guidelines for Landscape Zones and Sub Areas

Appendix 1 Landscape Toolkit

Appendix 2 Spatial analysis for native woodland creation opportunity

Appendix 3 Designated Site assessment in relation to sensitivity to woodland creation Appendix 4

Designed Landscape assessment in relation to sensitivity to woodland creation

Appendix 5 Way of Working between Scottish Forestry and Loch Lomond & The Trossachs National Park Authority on Forest Road/Private Way Regulations

Thank you for taking the time to read our Trees and Woodland Strategy.

If you would like any further information or advice, please contact: landmanagement@lochlomond-trossachs.org



View our online interactive map

www.lochlomond-trossachs.org/treesandwoodland





Published by:

Loch Lomond & The Trossachs National Park Authority Carrochan, Carrochan Road, Balloch G83 8EG

t: 01389722600

w: lochlomond-trossachs.org

e: info@lochlomond-trossachs.org

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