Scottish Wildlife Trust

Consultation Response

Scotland's Forestry Strategy 2019–2029

Scottish Wildlife Trust Response

29 November 2018

We welcome the Strategy's commitments to innovation, urban forestry, and biodiversity. We encourage the Strategy to focus more on natural regeneration, native species diversity, and connectivity to realise the contribution of woodlands to a sustainable, inclusive, and resilient economy, while enhancing biodiversity.

The Trust welcomes this opportunity to respond to Scotland's Forestry Strategy consultation. Below, we provide a broader-focus overview before answering the specific questions, building on our experience in contributing to the management and enhancement of Scotland's biodiversity. We look forward to remaining involved in the development of an action and implementation plan.

Key Points

- The Scottish Wildlife Trust welcomes the broad vision and acknowledgement of integrated land use, natural capital, and sustainable forest management.
- We strongly support commitments to increasing urban forestry, and we would be keen to see this developed with appropriate funding and research.
- The Strategy would benefit from greater engagement with the Land Use Strategy, especially adopting the **same definition and objectives of the ecosystem approach**.
- We welcome the recognition that "native forests and woodland in good condition are expected to contribute the greatest biodiversity value" but it is not clear whether this has shaped the Strategy. There is little reference to **how more native woodland will be delivered** so we can realise these benefits.
- There should be a commitment for **60% of all new planting to be native trees**, including productive hardwoods, recognising the biodiversity benefits from this. In Scots Pine zone, this should be Scots Pine.
- There should be a greater emphasis on woodland creation by **natural regeneration.**
- **Ecologists should be involved** in the design of new plantations to ensure they are fit for the 21st century.
- To enable natural regeneration, the Strategy should commit to **statutory deer management** to help achieve favourable condition.
- We would like to see **100% of Protected Ancient Woodland Sites in restoration** by 2025.
- We would strongly **challenge any attempt to convert ancient woodland sites to softwood** production.
- There should be **zero regression on existing native woodland planting requirements**, such as in conifer planting.
- The Strategy is **too focused on maximising timber production**, inadequately considering the diverse stakeholders in woodlands.
- A large share of Scotland's woodland is dependent on sitka spruce, to a much greater extent than the rest of the UK. The Strategy **needs to address this overdependency on a single non-native species** and the resilience risks it poses for Scotland's woodland and wider environment.
- The target to raise **woodland coverage to 21% is under ambitious**. The Strategy does not recognise that existing targets are not being met. The Strategy needs to identify why this has been the case and how it will not be repeated with respect to future targets.
- The **National Ecological Network (NEN)** should be a key planning ambition, helping relieve pressure on fragmented habitats and isolated gene pools while opening up access and recreational benefits.
- To help deliver the NEN, the Trust is prepared to lead efforts in riparian woodland regeneration through its **Riverwoods project.**
- In addition to management and afforestation efforts, the Strategy should include and emphasise the role of **forestry design and condition.**
- The Trust believes there are grounds to **explore more innovative ways of expanding tree cover**, such as vertical forests, already being used in Europe and around the world.
- **Silvopasture and silvoarable agroforestry** should be recognised as important elements of integrated land use, with incentive schemes to help delivery.

Overview

Overall, the Scottish Wildlife Trust welcomes the various acknowledgements in the Strategy of the importance of woodlands to the environment, climate, culture, society, and economy of Scotland. Several identified priorities, such as on urban forestry, natural capital, and physical and mental wellbeing are warmly welcomed in their own right, and for the diversity of stakeholders they indicate. Scotland's woodlands, in some way, affect us all, whether through greatly dispersed benefits like carbon sequestration, or the localised, personal health benefits of a walk in the woods.

For this reason, The Trust encourages the Strategy to take greater account of this plurality of interests. We are concerned by the focus on softwood production that locks us in to yet more decades of reliance on a single non-native species, with all the resilience issues this brings from climate change, pests, and diseases. Instead, we should be looking to diversify woodland species, particularly with hardwoods and broadleaves, and age profiles of new and restructured forests, to improve economic resilience, better adapt to climate change, and smooth out production curves over time.

In addition to protected sites, integrated land use, as recognised in Scotland's Land Use Strategy, is essential to recognising the full range of benefits from woodlands and trees on sites where there is potential for multiple uses. South-west Norway actually provides a useful example of how things could be done differently in Scotland. From the early 20th century that landscape, like Scotland's at that time, was almost entirely denuded of trees – deforestation followed by intense sheep grazing and increases in deer density being the key reasons there as they are here. Over the past half-century, the landscape in south-west Norway has been restored, almost entirely through natural regeneration of denuded landscapes, alongside more targeted actions towards some of the drivers, especially deer management.

This part of Norway actually has a higher population density than the Highlands, and, given a very similar geology and climate as the Highlands, it's a great example of what can be done given the right will. Norway has maintained its cultural traditions around hunting whilst moving away from intensively managed landscapes. (Norway's statistical office showed that regenerated woodlands specifically generated about a quarter of total revenue from hunting-related activities, while the sale of cabin plots and rentals was a further 37% - significantly more than timber products). A key result is that incomes are much more diversified than in rural Scotland: agriculture, wood products, fish, grazing, and hunting all contribute revenue streams. So integrated land-use can support livelihoods as we move away from intensively managed land and monocultures.

Without fully recognising this, Scotland's biodiversity, in net terms, continues to worsen annually, while habitats are badly fragmented resulting in poor connectivity and pools of poor genetic diversity, further impacting on the resilience of Scotland's ecosystems. The Strategy does not go far enough in addressing the scale of these issues. Specifically, the Strategy should contain a firm commitment to tackling habitat fragmentation (identified in the Strategic Environmental Assessment but not carried over to the Strategy), through policies including a National Ecological Network. Woodland creation by natural regeneration should also be a significantly higher priority in the Strategy and included in the Vision statement.

The Trust is preparing a flagship *Riverwoods* project to develop riparian woodlands in order to demonstrate the implementation of the National Ecological Network in this important type of woodland. As well as contributing to the wider objectives of the NEN, riparian woodlands play an important role in biodiversity, local flood mitigation, and erosion mitigation.

Wild deer management should be a priority in its own right and not lumped together with pests and diseases, which should also be a stand-alone category. Without any natural predators, deer intensity is the principal reason for the lack of extensive woodland regeneration across swathes of Scotland, and the voluntary approach to management has failed. The Trust therefore supports legislation on statutory deer management.

This is key to achieving natural regeneration and improved conditions of existing native woodlands, as well as reducing the need for fences and walling that contribute to habitat fragmentation and can impede on rights of access. The Strategy should therefore include a call for new legislation on deer management.

The existing commitment on Plantations on Ancient Woodland Sites (PAWS) is too vague. The Strategy should include a commitment to ensure all PAWS are under restoration by 2025. Further, we would strongly challenge any attempt to convert ancient woodland sites to softwood production.

The Trust welcomes mention of the Land Use Strategy (LUS) but notes that the Forestry Strategy has not been substantively informed by it. We would therefore welcome greater alignment between the principles and objectives of the two strategies. In particular, the Forestry Strategy should adopt the same overall ecosystems approach, using the same definition.

In general, and particularly with regard to the LUS's ecosystems approach, habitat fragmentation, and pressures on peatland from tree planting, the Strategy appears to have cherry-picked aspects of its own Strategic Environmental Assessment. The Strategy contains no mentions of these approaches and issues, despite their several mentions and evidence basis in the SEA. The Strategy's guiding principle should be evidence-led. We urge the Strategy to fully consider the impacts covered in the SEA, especially as these are fundamental to commitments on biodiversity, GHG emissions and carbon storage, and ensuring joined-up thinking within and between policy areas.

The Trust has noted over the past several years the tendency for strategies and guidance documents to emerge in place of accountable and binding legislation. We are keen, reflecting the Cabinet Secretary's welcome point, to see an appropriate Forestry Strategy become a key framework rather than a side-lined document. To that end, we sincerely hope the consultation process is taken beyond this stage and key stakeholders remain part of the decision-making process in future action and implementation plans.

Top Priorities

- There should be a commitment for 60% of all new planting to be native trees, including productive hardwoods, recognising the biodiversity benefits from this. In Scots Pine zone, this should be Scots Pine.
- There should be clear commitments on the creation of new wood pasture and High Nature Value farming with silvopasture/agroforestry systems.
- There should be calls for statutory deer management.
- Under the three objectives, 'Economic growth' should not be an end in itself, and GVA/GDP growth is an insufficient metric for measuring inclusivity or sustainability.
- There should be a commitment to a broad range of socioeconomic and ecological metrics to properly assess the extent of deliverability on the identified objectives.
- There should be a larger focus on sustainable forest **design** as well as management.
- The Strategy must be evidence-led, including considering the full implications of the Strategic Environmental Assessment, and addressing the knowledge gaps and occlusions from the other supporting impact assessments.

- There should be a commitment to zero-regression on existing protections for PAWS and native woodland planting requirements.
- All PAWS should be under restoration by 2025.

Consultation Questionnaire

Q1. Do you agree with our long-term vision for forestry in Scotland? Please explain your answer.

Not in full. Whilst there are very welcome aspects, we believe there are some key elements missing.

We believe that in order to bring more of Scotland's forest management into line with the definition of SFM, the vision should outline what a future balance of forestry which will deliver sustainable forest management looks like on the ground, i.e. a move towards a more native tree rich balance.

Also, this vision does not adequately consider the legacy of sites which have been inappropriately afforested in the past (for example, priority peatlands, grasslands, heathlands and coastal habitats). As mentioned previously, the supporting SEA does include mentions of this as they relate to planting and woodlands expansion, but the Strategy has not engaged with this evidence. This also matters for habitat fragmentation – the Vision does not give adequate weighting to the importance of sustainable design and connectivity.

The Vision requires expanding to fully acknowledge the importance of biodiversity, distinct from "the environment". Biodiversity is an important issue, underpinning ecosystem services and requiring consideration as a distinct entity from the wider "environment". The vision also refers to a "resilient, high quality and growing resource". It is unclear what is meant by the term "resilient" in this context, and the term is not defined in the glossary. Bellamy et al (2018) recognise that "resilience" is an ambiguous term and can have various meanings. We suggest that "resilience" is defined in the glossary or is prefixed in the text with "ecological" or "economic", depending on the context. We would hope that the intention here is ecological resilience.

None of the Vision can be achieved without integrated partnership working – as the Cabinet Secretary says in his introduction, the notion of land interests having to compete against each other is a dated one which we must try to move beyond (whilst recognising that there is a lot of work to be done to achieve that). We appreciate that this is included in the explanation of the vision which follows, but we feel that this is so fundamental that the vision needs to embed recognition of it. We support the wording adopted by much of the wider environmental NGO community through Scotland Environment LINK:

> *Scotland will have more diverse and balanced forests and woodlands integrated sensitively into a landscape of other land uses, which will be sustainably managed as a much greater part of the nation's natural capital providing an ecologically and economically resilient, high quality and growing resource that supports the delivery of public goods, contributes to a strong economy, furthers the conservation of biodiversity and a thriving environment, and supports healthy and empowered communities*.

Overall, the Vision is too focused on industry, with limited explorations of genuine innovations, such as vertical forestry in urban areas contributing to greater connectivity for birds and insects. Finally, a 50-year vision should aim to at least explore the role rewilding and reintroductions could play in sustainable self-management, and where this might reduce the need for active deer management. This remains, pending the nature of the UK's relationship with existing EU legislation, an obligation under the Birds and Habitats Directives – lynx in particular being a relevant, named species.

Q2. Does the Strategy identify the right objectives for forestry in Scotland over the next 10 years? Please explain your answer.

Overall, we do not believe the objectives should be in a numbered list as it risks being interpreted as an order of importance. The Strategy should state that these Objectives are to be carefully balanced.

> **1. Increase the contribution of forests and woodlands to Scotland's sustainable and inclusive economic growth.**

We feel that this misses the vital objective of transitioning towards a more beneficial balance in Scotland's forestry.

For us, maintaining the natural capital in our forests, and the soil and water environments on which they depend, means that we should begin working towards a different balance in our forest resource mix. The next 50 years could see a deliberate, mindful transition to a future in which continuous cover native and mixed forests become the predominant form of forestry. Other European countries with similar environments, such as Norway, Sweden and Germany are already on this pathway. We believe this has genuine potential to distribute economic benefits from forestry to local communities and enhance the natural environment while doing so. The outcome at the end of the transition would, through its continuity and diversity, be sustainable in terms of the soil and water environment, be more climate-proof and more resilient against plant pathogens than today's forestry mix.

The Trust would like to see the Scottish Government's own Land Use Strategy (LUS) influence the objectives in the Forestry Strategy. Using a common language and approach would help stakeholder buy-in and implementation of the Scottish Government's stated approach to land use policy. The stated objectives of the Scottish Government's LUS are:

- Land-based businesses working with nature to contribute more to Scotland's prosperity.
- Responsible stewardship of Scotland's natural resources delivering more benefits to Scotland's people.
- Urban and rural communities better connected to the land, with more people enjoying the land and positively influencing land use.

The Trust would therefore like to see this objective changed to:

Increase the contribution of forests and woodlands to a prosperous, sustainable, inclusive and resilient economy, while enhancing biodiversity.

This would be more consistent with the Land Use Strategy wording and embody the ecosystems approach.

As it stands, especially given the lack of appropriate indicators attached to the objective (see Q7), 'growth' in GVA/GDP terms is insufficient by itself to deliver any policy goals. This suggested wording would better reflect Scotland's National Performance Framework and our commitment to the UN Sustainable Development Goals.

Adopting our suggested wording would also clearly show that the contribution of woodland to economic development cannot come at the price of increased biodiversity loss, but rather on the condition of reversing this trend.

The United Kingdom Forestry Standard (UKFS) currently commits only to 'maintaining biodiversity', and continued parity with this ambition would maintain Scotland's exiting biodiversity trends, which, overall, is net-negative. The 2016 interim report on Scotland's progress towards the binding Aichi Biodiversity Targets set by the UN Convention on Biological Diversity outlines that:

> Scotland's biodiversity indicators, the condition of notified habitats and species on protected areas, and progress towards meeting Scotland's biodiversity targets demonstrated that biodiversity loss had not yet been halted and would require renewed and sustained effort over a longer period.

The UKFS requires that devolved administrations commit to its principles as a minimum; there are no legislative reasons for not going further than the baseline requirement, especially given its failure so far to tackle the overall biodiversity decline.

> **2. Protect and enhance Scotland's valuable natural assets, ensuring that our forests and woodlands are resilient and contribute to a healthy and high-quality environment.**

The Trust supports this objective overall, but we would encourage a slight re-phrasing of this objective to acknowledge the ecosystems approach mentioned in the Strategy's Environmental Report as a Strategic Environmental Assessment objective, but not in the Strategy itself. This is already committed to by Scottish Government in the LUS (Policy 1). We recommend the following phrasing:

Protect and enhance Scotland's ecosystems, ensuring that our forests and woodlands are resilient and increasingly contribute to wider ecosystem health.

Both the original phrasing and our proposed phrasing require far more comprehensive indicators than outlined in the proposed Strategy, see Q7.

A key element of this will be achieved by improving the diversity of silvicultural approaches to retain forestry value locally, and this might be better captured in the drafting of the objective.

One of the keys to unlocking this multiple benefit future for forestry lies in shifting to different forms of silviculture, again following changing practices in Europe. Productive native and mixed forests managed under continuous cover regimes offer much greater opportunities for different simultaneous uses than dense, sitka-dominated plantations on clearfell and replant cycles. Continuous cover native and mixed broadleaf forests make significant positive contributions to ecological networks, ecosystem services, recreational opportunities and landscapes.

Moreover, and in line with the strategic direction of travel for Scottish farming, the timber we plan to harvest from such forests can be high value and, with the right investment, processed locally. Small businesses adding value to products before they leave local communities can retain the money and jobs in rural areas, without the need for expensive investment in roads required to take large volumes of lower value timber long distances to centralised processing plants at high carbon costs. The total scale of each such business may be relatively small, but the value in local community terms is often significant. The potential to increase this as a component of local economies is clearly worthy of more strategic attention.

> **3. Use Scotland's forest and woodland resources to empower more people to improve their health, well-being and life chances.**

The Trust welcomes the inclusion of these important social objectives.

More broadly, Scotland's leadership in 'green prescribing' should warrant more integrated strategies on mental health, woodlands, and habitats. Neither the proposed Forestry Strategy nor the recent Mental Health Strategy commit to pursuing this important area that promises multiple benefits if we holistically address these emerging social and ecological crises.

Q3. Do you agree with our assessment of the major issues likely to have the greatest impact on the achievement of our objectives? Please explain your answer.

Overall we would stress that this table is subjective and not a useful a policy tool. Several of these are very important challenges to the viability and sustainability of woodlands, principally climate change, high densities of wild deer, tree pests and diseases (and biosecurity generally), and economic development (when this is irresponsibly pursued). Others listed here are not 'major impacts' or challenges, but important considerations and objectives in themselves: equality and empowerment, urban forestry, and well-being. The remaining display features of both challenge and objective: sustainable economy, biodiversity value, developing future forests and upskilling existing workers. The Strategy needs to be clearer in describing specific challenges to the Strategy's objectives, as at present these are misleadingly lumped together.

To that end, the Trust would welcome several additions that present clear challenges to maintaining, enhancing, and restoring woodland ecosystems and biodiversity:

- Habitat fragmentation (E.g. urban development, energy developments and transport infrastructure)
- Irresponsible afforestation or "wrong tree in the wrong place" (including species, inappropriate location, monocultures, density, etc.)
- Landscape aesthetics (e.g. denuded uplands)
- Sheep grazing/density
- Biosecurity
- Grouse moor management (including muirburn)

Overall, the 'assessment of major issues' is insufficient for a comprehensive risk analysis and identification of challenges. Ignoring agricultural management practices, such as sheep grazing, landscape aesthetics, and grouse moor management, fails to acknowledge major drivers as major issues. This makes the report biased in favour of the status quo by failing to discuss any mitigation strategies or alternatives to these practices.

Wood fibre supply and demand

We have concerns about the ongoing priority to restock felled sites. We recognise the need to maintain a timber supply in order to protect forest resources outwith the UK and support sustainable management of appropriately sited forests. However, many plantations from the 1980s and 1990s were inappropriately sited, particularly those on deep peat, dunes and existing ancient woodland sites, and would not comply with modern guidelines today. We strongly believe there should be a commitment to *not* restock these sites, and instead to focus on restoring them back to their original condition. This will deliver benefits to biodiversity, the wider environment and local communities and help Scottish Government to meet its obligations under the Biodiversity Duty and Climate Change Duty. Such a recognition in the Strategy would complement the existing Control of Woodland Removal Policy, and promote a more consistent approach in its application, which is currently absent.

High value but currently low volume broadleaved timber industry could be expanded, to generate more gross added value per area and offer the biggest area for potential expansion of the forestry industry. This would diversify our forests and make them more economically resilient by accessing a wider range of markets and more high value markets. The biodiversity value of the forests would also be improved and ecological resilience to pests and diseases would be enhanced.

Rural land-use, productivity and integration

The Scottish Wildlife Trust, and our partners in Scottish Environment LINK, have urged the adoption of an integrated, sustainable land use policy post-CAP. We welcome the phrasing, therefore, of ensuring a 'more integrated approach is taken' and that 'there is an opportunity to mainstream integrated land

management in line with the principles of our Land Use Strategy.' However, we continue to stress that these actions are for now, not later; we require far greater and clearer leadership on this central issue.

The Strategy's phrasing ignores the responsibility incumbent on the government now (and over the past 2 years), not as it emerges 'over the next decade'. The Strategy outlines that:

> *The impact of withdrawal from the EU on Scotland's land-use pattern and rural economy will emerge over the next decade, and the first few years of this Strategy will coincide with a critical revisiting of Scotland's approach to rural support. The current primary support regime for forestry, which is part of the EU Common Agricultural Policy, will need to be reviewed and replaced, and there is a key opportunity when designing new policies to ensure a more integrated approach is taken. (Strategy, p.21.)*

We believe that the National Forest Estate and other publicly owned land should be managed as exemplars of best practice, contributing towards the delivery of other statutory duties such as the Biodiversity Duty. The NFE hosts many nationally important populations of key species including (but not limited to) red squirrel, capercaillie, osprey and crested tit, and the Scottish Government should be managing its estate positivity for these species. The Strategy should set out how the Public Forest Estate can be managed as an exemplar of sustainable forest management, demonstrating how biodiversity, climate, social and economic priorities can be met, and tensions managed appropriately. "Economic growth" should not be the overriding priority for publicly owned land assets, they must be managed to deliver a range of goods and services which will benefits wildlife and people. They should not be viewed primarily as a potential source of income, and publicly owned land should not be considered for "disposal" if it is of high value to biodiversity and/ or local communities. Where land is "disposed" of, there should not be an underlying requirement for this land to continue to be forested, as other organisations/ agencies may be better placed to commit to habitat restoration where appropriate. Wildlife habitats are not a bolt on and should be considered as a valuable public good which underpins economic and social benefits. The Strategy should be explicit in how the Scottish Government will make use of publicly owned land to deliver biodiversity, and other, outcomes which will benefit the people of Scotland.

Economic development

We feel that the Strategy emphasises the view that "highly productive" forestry is only that which is related to the value of timber processing. However, the economic value of forestry also encompasses other uses of forests for public access, recreation and tourism, especially in terms of the proportion of forestry-related employment, and we feel there should be more emphasis on that aspect throughout the Strategy.

Ambitions for the economic development of forestry must be considered alongside climate mitigation and biodiversity drivers for Scotland's ambitious woodland expansion targets, as in some cases these drivers may generate conflict if an integrated approach is not taken.

Innovation

This section of the draft Strategy appears to be focussed on the economic opportunities of innovation in the sector; it's limited in its scope and ambition. We would welcome the inclusion of more information on other innovative opportunities for future forestry/woodland creation and management. For example, consideration of the incorporation of trees/woodland as part of green infrastructure schemes (such as vertical forests). This would support the climate change argument for tree planting and would be a novel approach in the UK context.

Greater mention of other silvicultural systems could be mentioned here, for example the various types of agroforestry/trees on farms which could be incorporated into Scottish woodlands, especially in a joined-up National Ecological Network that delivers multiple social and environmental benefits.

We would like to see diversification and capacity building within the forestry sector to process native broadleaf species. The system is currently set up predominately for the processing of sitka spruce. Diversification will be a key component of building a more resilient timber sector, particularly given growing biosecurity risk in a changing climate. With the land reform agenda pushing for greater access to land and greater participation by communities, opportunities may arise for smaller scale timber production from forests and native woodlands. The Strategy should identify opportunities to facilitate innovation and the return of more traditional woodland management practices which support small businesses.

Developing future foresters and upskilling the existing workforce

Ecological skills are not mentioned in this section, but they are a key part of the forestry sector, without which sustainable forestry cannot be practised. It is vital that foresters have a basic ecological understanding relevant to the work they undertake, so they can, for instance, avoid planting on deep peat and other sensitive habitats, avoid illegal disturbance of protected species in forestry operations, etc. There has also been a loss of the more specialised ecological knowledge needed to provide advice on managing native woodlands, open habitats and priority species with the recent restructuring of FES. We would like to see these issues recognised and provision made for maintaining and nurturing these skills in the forestry sector as well.

Climate change

Ecological resilience in the face of climate change is essential for the long-term survival of woodland biodiversity. The Strategy should make clear and strong links to this concept throughout.

Given the welcome concentration on climate change as a key driver for woodland expansion, new planting must not undermine the carbon sequestration potential of other habitats such as peatlands or other carbon rich soils, whose sequestration potential significantly outweighs that of all vegetation types. The IUCN makes it clear that woodland does not naturally occur on wet peatlands and that woodland cover on peat generally indicates that the peatland is degraded in some way Therefore, we strongly suggest that the Strategy makes it clear that woodland removal on peat habitats is a necessary mechanism for the restoration of habitats for carbon and biodiversity.

The Strategy should emphasise the need for the long-term sequestration of carbon. Therefore, consideration should be given to the end use of timber products and a lifecycle analysis of carbon sequestration, storage and fossil-fuel displacement of the timber. End-uses which are likely to release carbon (such as wood fuel) should not be promoted in terms of climate change mitigation.

We are supportive of the promotion of timber in the construction sector, as this will contribute to long term carbon storage, provided the timber remains structurally intact and does not degrade in the short-medium term. However, the Strategy should be cautious about how this is presented – this can only deliver carbon storage in the longer-term given the time taken for even softwood trees to grow, it should not be framed as mitigating climate change in the short-term. This is especially important when considering the use of afforestation in carbon offset schemes. Given the recent conclusions of the IPCC on the 1.5 degrees Celsius target, and the 12-year window of opportunity, new afforestation will not significantly contribute to GHG emissions in the timescale necessary.

Tree pests and diseases

We would reiterate the point that the low diversity of tree species in Scotland's forests leaves the forest industry vulnerable to tree disease which may affect sitka spruce. As identified in UKFS, there is a therefore a strong argument to diversify both the range of conifer and broadleaved species grown commercially and increase the proportion of native woodland in Scotland's forests. The Scottish Wildlife Trust believes this should be 60% of new planting.

Wild deer

The Forestry and Land Management Act Chapter 2, Part 1, section 4(b) (iv) requires this Strategy to have regard to the code of practice on deer management (drawn up under section 5A of the Deer (Scotland) Act 1996) therefore we feel that there should be significantly more on this issue within the Strategy. Deer management principles need to be thoroughly integrated into much of Scotland's land management, in particular to help achieve more native woodland cover. The Trust has previously called for statutory deer management to be developed, and we repeat that call here.

The Scottish Government, through Forest Enterprise Scotland and SNH currently set ambitious objectives for the protection and enhancement of designated sites, by undertaking sustainable deer management. It is vital that this work continues to protect important habitats and protected areas. FES are also a leader in setting industry deer management standards, such as DMQ, Deer Management Best Practice and use of non-lead ammunition.

Current deer population levels add heavily to the costs of establishing and maintaining all forms of forest and woodland, be they commercial, amenity or for nature conservation. Natural regeneration, by far the best way of developing genetic resilience in our forests and more natural adaptation to the changing climate, is not possible without fencing or resource intensive deer culling.

Enhancing our natural assets and improving their biodiversity value

UKFS encourages only a minimum amount of support for biodiversity habitat, and that often areas of "biodiversity habitat" often have poorly defined objectives and deliver little in the way of biodiversity value – for example token areas of "broadleaved" but not necessarily native trees planted in isolated patches on the edge plantation forests. Additionally, there is evidence that the current drive to deliver more timber is placing pressure upon areas which would previously have been managed for biodiversity.

It is disappointing that only 46% of native forest is deemed to be in a "satisfactory" condition for biodiversity. This suggests that biodiversity targets are being missed, and there is a failure to deliver the Biodiversity Duty, as well as international obligations for the conservation of designated sites and protected species. In 2018, the proportion of woodland designated sites in favourable condition fell 1.4% to 66.7%, a worrying trend. The Strategy must give greater recognition to the importance of management of native forests, to improve their ecological diversity and ecological resilience and provide a clear statement on how improvements in biodiversity will be achieved.

Specific emphasis should be placed on the management and restoration of priority woodland habitats, notably Western Atlantic woodland, montane scrub and Caledonian pine forest. Forest Enterprise Scotland (soon to be Forestry and Land Scotland) already manage a high proportion of these important native woodlands, and the Strategy should give a clear commitment to increase the extent and connectivity of these habitats, both in private and public ownership. Greater prominence should be given to the role of natural regeneration in woodland management and expansion.

Invasive non-native species represent one of the many threats to our native woodlands, as well as productive forests. Additionally, self-seeding trees can become invasive if allowed to spread into adjacent open habitats and/or native woodlands. This is an acknowledged issue on some designated sites. We propose that invasive species are addressed as a specific issue, with the Strategy clearly setting out how the Scottish Government intends to address both the removal of INNS that are negatively impacting upon woodland biodiversity, and the legacy of forestry species acting as invasive species on adjacent sites, particularly where this is impacting upon habitat restoration schemes and/or the status of designated sites.

The draft Strategy should set a timescale by which a review of current targets for priority species (e.g. capercaillie) and habitats (e.g. Caledonian pinewood, Western Atlantic woodland) will be undertaken. As many species will benefit from woodland management, a review of action for species should also be undertaken to assess the effectiveness of previous interventions. We acknowledge that this Strategy is at too high a level to incorporate specific species focussed targets. However, as no targets are presented, we would welcome clarity on whether previously agreed species targets are to be retained and reported upon, or if the Government intends to default on its previous commitments.

Environmental and landscape quality

Much of Scotland's landscapes are characterised by historic blocks of plantation forestry, and while we acknowledge that new forests are being more carefully designed to have a less dominant landscape impact, we believe that there is more that can be done – especially in around forestry tracks - and a strong case for "retrofitting" existing forestry with softer edges.

As mentioned above, stronger deer controls would enable more montane shrub to get established and more natural regeneration of woodland with resulting benefits at a landscape scale. In terms of forest design, where fencing is used we have seen cases of access being restricted or blocked where existing routes have not been protected if they are not core paths. In some areas, well used paths have been destroyed during the planting process but not been re-established afterwards as the forestry managers have referred to them as simply "desire lines". Given the block on public access over huge swathes of land due to new or existing forestry plantations, and especially during the phase after harvesting when re-planting is taking place, we strongly suggest that public access needs to be maximised and given a higher priority during the planning of forestry to enable both existing and new routes to be included in the new plan and for existing routes to be improved during the process.

This section provides an obvious opportunity to discuss landscape scale restoration of ecosystems and the role that new woodland creation can play in such schemes. However, this issue is not addressed in the current draft., nor does it adequately highlight the issues regarding forestry on peatland soils, as have been highlighted elsewhere in this response.

We agree that well-managed woods can help manage water quality and biodiversity, but it would be helpful if this section of the Strategy highlighted some of the risks presented by it too, such as acidification and erosion caused by drainage gullies.

Unless it is well managed, new tree planting can be damaging. Trials have shown that in upland areas, atmospheric nitrate condenses out onto trees and transfers to soil/water, to a greater extent than it condenses onto shorter vegetation. Current drainage methods have improved over the last 40 years, but ditches can still run very close to nearby streams. Shading is also somewhat contentious – in some places trees need to be kept back from stream banks to avoid over-shading - aquatic plants such as diatoms and algae need sunlight to thrive, and they are the basis of the trout food-web. Yet, we also see that currently increasing water temperatures are reaching levels potentially detrimental to salmonid spawning in many streams, so the shading effect of riparian planting is clearly needed.

Well-being

We welcome the inclusion of this section but would like to see more emphasis on the role of the forestry sector in positive promotion of public access and recreation to benefit health and well-being. While we welcome the strong support for mountain biking within forestry areas, but as well as creating, improving and maintaining path networks and the associated promotion of these routes, we believe forestry managers could also proactively enable and support more public access through, for example, establishing low cost campsites within and at the edge of woodlands, or by providing facilities for other activities such as horse riding. There is also a role for forest managers in helping to promote responsible access, according to the Scottish Outdoor Access Code.

Equality and Empowerment

We welcome the acknowledgement that local people and communities should have a greater say in, and the ability to, actively manage woodlands and forests. More explicit reference should be made to the Land Reform agenda and to the powers set out in the Community Empowerment Act.

The role of woodlands and forests in education seems to have been largely omitted from the draft Strategy and could perhaps be captured in this section.

We would also welcome a clearer statement on engagement with stakeholders, as tension between various user groups has been perceived as a potential barrier to woodland expansion by some parts of the forestry sector.

Urban forestry

The role of woodlands in providing benefits for the urban population has been clearly demonstrated through the Woodlands In and Around Towns initiative and other projects. The consultation document points to one particular study which shows £14m health benefits arising from £2.5m investment, and this demonstrates the need to continue to provide funding for such projects which have such wide-ranging social benefits. There is also a link to improving air quality in urban areas through expanding woodlands, with further benefits to health as a result.

Woodlands provide a wide range of ecosystem services delivering social benefit, including opportunities for recreation, education and employment. The new Strategy should identify opportunities to facilitate public access and interpretation, support recreational use, tourism and delivery of health and well-being benefits. It should also identify opportunities to facilitate delivery of urban greenspace and new generations of trees outside woodlands, such as hedgerow trees and in-field trees (where appropriate), wood-pasture, parkland and orchards, that sit within and complement a wider ecological network. Greater consideration should be given to novel approaches, such as an increase in the use of trees in green infrastructure projects (for example vertical forests, SUDS schemes etc).

Q4. Do the ten priorities identified in table 2 capture the areas where action is most needed to deliver our objectives and vision? Please explain your answer.

1. **Promote and develop the concept of sustainable forest management as it applies to Scotland.**

"Develop" is a key term – we'd been keen to see this, in practice, mean that the UKFS clause of 'maintaining biodiversity' could be expanded on to include 'restoring and enhancing biodiversity' when applied in Scotland.

2. **Sustainably expand the area of all types of woodlands and forests across Scotland and ensure harvested sites are replanted appropriately.**

It would be useful to include a commitment to the "right tree, in the right place, for the right purpose" principle as outlined in the vision here, also a recognition that not all harvest sites are appropriate for replanting. The Trust would welcome using the National Ecological Network as an organising principle for sustainably expanding the area of woodlands – this would ensure the focus is not predominantly on timber plantations.

3. **Ensure wood fibre availability from Scotland's forests is predictable and increases over time.**

We have no objection to this priority but would emphasise the need to work in tandem with the 'right tree' principle, as well as other biodiversity principles.

4. **Protect forests and woodlands from damage caused by new or existing pests and diseases, promote the sustainable management of wild deer and build resilience to support adaptation to climate change.**

Wild deer should be a priority in its own right and not lumped together with pests and diseases which should also be a stand-alone category. Deer are the principal reason for lack of extensive woodland regeneration across swathes of Scotland and the voluntary approach has failed. The SFS should therefore recognise the need for legislation on statutory deer management. Biosecurity is of particular concern given the dominance of a single non-native species, sitka, and the lack of resilience this provides, and we therefore believe the Strategy should adopt a clearer plan for this.

5. **Increase community ownership and management of forests and woodlands.**

We support this priority. The far greater incidence of owner-occupied land in south west Norway has been touted as a key factor determining the success of afforestation in that area (plus contributing to more diverse revenue streams – timber being only about a third of income from rewilded woodlands). There are, however, many forms of community engagement with forestry, and simple community ownership is not always the most appropriate.

6. **Increase efficiency, productivity and the value generated from forest products and services and help develop forestry's role in creating a low-carbon economy, by supporting technological innovation, improving the capacity and skills of those working in the sector, and developing existing and new markets.**

This could be an important priority depending on implementation – but there's little analysis of this included in the Strategy or as an annex. What does it actually mean in practice? E.G. there are no data in the SEA or main Strategy to substantiate the claim (often repeated by the Cabinet Secretary) that increasing the use of timber in housing construction has a negative (in a good way) carbon impact (because carbon becomes sequestered in housing stock). This does on the surface make sense, but there's no clear analysis to back it up – could be negligible, non-existent, or could be a solid plan. We would therefore welcome clearer analysis as to how much benefit this policy would have. Moreover, this won't show benefits for decades as we don't have enough quality timber for this purpose.

There is some interesting work in the current Finnish Road Map to a Circular Economy 2016-2025 which explores the role which "Forest Loops" can play in a national circular economy, this includes changing the metric by which productivity is measured in the Finnish Forestry Strategy from quantity of wood fibre produced to value of wood product. This promotes a higher quality of forestry with higher environmental benefits.

7. **Increase the natural capital value of Scotland's woodlands and forests by improving the condition of native woodlands and forests, and increasing the positive impacts of forest and woodland management on biodiversity, air, water, soils, flood management, landscapes and the historic environment, mitigating the risks of negative impacts.**

This single priority is insufficient to deliver progress towards all the objectives. Each of the key theme areas (biodiversity, air, water, soils, flood management, landscape and historic environment) should have their own identified SMART actions to ensure delivery. Also, negative impacts should be avoided, not just "mitigated" against as stated in the priority statement.

Moreover, we would welcome clarity about how this will be accounted. The existing Natural Capital Asset Index is a work in progress and not yet a fully-developed policy tool.

8. **Increase the use of Scotland's forests and woodlands to improve health and well-being, help people better understand forestry, and support wider Scottish Government activity to help children become confident and resilient members of Scottish society.**

Whilst good in general, there needs to be more crossover specifically with the 'greenspace design' approach commissioned by Forestry Commission Scotland with the NHS and Centre for Sustainable Healthcare[1], particularly p. 11. We'd also note that this misses out the important role that outdoor education plays more widely in developing all of the people of Scotland's (not just children) understanding of the natural world.

9. **Enhance forestry's contribution to sustaining viable rural communities and increase the positive impact of forest and woodland management on other businesses, especially in agriculture and tourism.**

This is a fair goal but is too vague for a priority. More specifically, how is 'viable community' defined/operationalised?

10. **Increase the positive contribution that urban forestry makes in Scotland's towns and cities.**

We very much welcome the inclusion of this important priority. We would, however, welcome an additional clause exploring benefits and practicalities of vertical forestry (e.g. as in Milan, Paris, Shanghai, Eindhoven, Netherlands), and its research gaps (e.g. what's the right tree, right place, right purpose?).

Q5. Can you provide any examples of delivery mechanisms that have previously been effective in delivering similar objectives and priorities?

There have been widespread calls for recognition of regional variation and approaches across the sector, from eNGOs to the Agriculture Champions to Confor. Spatial recognition of existing forestry will help to direct where future planting may best be focussed. Two regional land use Strategy pilot schemes, in Aberdeenshire and the Scottish Borders, have demonstrated some success in delivering an integrated land management approach. We need a process for identifying regional land use priorities and the public goods and outcomes desired from each region. Regional Land Use Frameworks (RLUF), as proposed by the Land Use Strategy, are our recommended avenue for carrying out this work.

We would like to see RLUFs completed for each Scottish region. These RLUFs should be framed by national level objectives and priorities as expressed in the National Performance Framework and be used to establish regional priorities. These, in turn, could be used to help decide how public funding could be allocated on a more regionalised basis. Two pilots in the Borders and Aberdeenshire

demonstrated the usefulness of this process and some key lessons were learned as to how RLUFs could be developed more widely.

Development of RLUFs should complement the introduction of a National Ecological Network in Scotland, in line with Scottish Government commitments in Scotland's Biodiversity - a Route Map to 2020 and the National Planning Framework 3. Scientific evidence and academic literature overwhelmingly supports the introduction of a National Ecological Network to benefit the environment, wellbeing and economic prosperity- all of which are objectives of this Forestry Strategy. There has been little progress in the roll-out of a National Ecological Network in Scotland, however it would supplement RLUFs by providing an overriding, holistic policy approach that integrates the enhancement and protection of nature into policies, proposals and funding streams, so that they can deliver multiple public benefits more effectively.

The delivery of RLUFs and the NEN can be achieved by securing an appropriate balance between regulation, incentives and the provision of advice to land managers. The current regulatory and incentive systems have had some success in delivering positive outcomes. However, we believe the approach outlined above will be more effective in delivering public goods and a sustainable forestry sector in the long term.

A key foundation of an integrated approach is good engagement and strong relationships with key stakeholders and interested parties. The current system of consultation in the forestry sector is adequate, but it could be much improved to be more responsive to the needs of communities and stakeholders. A revised Customer Charter may assist in improving communication and consultation, but this must be developed with partners, not imposed after the charter is completed.

It is worth stressing that 18% of the current economic value of forestry comes from the contribution of forests to tourism, public access and recreation. Therefore, it is important that funding continues to be available to support these activities, for example by creating and maintaining path networks, providing toilets and car parks and promoting these facilities.

The UKFS has had some success in delivering the objectives of Sustainable Forest Management. However, the Trust believes that it is inadequate to fully deliver the objectives of this Strategy as it is mainly a guidance document, which points to existing legislation and regulations, rather than adding anything "extra" for biodiversity, the environment or social outcomes. It is also insufficiently monitored and there is limited capacity for follow up should its requirements not be met. The EIA regulations are also inadequately applied, and therefore have had limited success in delivering strategic objectives, despite having the potential to deliver positives for the environmental when properly utilised.

The woodlands in and around towns (WIAT) initiative has had success in delivering multiple objectives and is a good model for future delivery of the Strategy in urban areas. As there is now a public authority duty to "promote sustainable forest management", we strongly suggest that additional guidance is provided to assist local authorities in discharging this duty. In particular, the recommendation in SPP that planning authorities develop forestry and woodland strategies should be updated to reflect a regional land use framework approach.

Q6. For any delivery mechanism examples given in answer to question 5, please explain why they worked well?

See above.

Q7. Do you think the proposed progress indicators are the right ones? Please explain your answer.

Strategy Objective	Possible Progress Indicators
Increase the contribution of forests and woodlands to Scotland's sustainable and inclusive economic growth.	• Contribution of woodlands, forests and the forest sector to the Scottish economy (GVA and jobs). • Volume of available wood fibre. • Area of woodland and forests. • Area of new woodland and forest creation

GVA and jobs alone are insufficient indicators, and neither can give any indication of sustainability. GVA is incapable of measuring either 'sustainable' or 'inclusive' growth. As a blunt instrument, GVA measures economic activity without judgement as to whether this is sustainable or damaging. Any increases achieved in GVA must be incidental to genuine sustainability and progress indicators.

The UK as a whole already performs in the bottom third of advanced economies in the World Economic Forum's Inclusive Development Index, even as both Scottish Government and the UK Government have pledged for greater sustainability and inclusivity. Any Strategy targeting inclusivity should use globally-recognised metrics of inclusivity and include specific equality issues, such as intergenerational equity, especially as this related to environmental issues, gender equality, and diversity.

The WEF's Inclusive Development Index concludes that 'GDP per capita is rather weakly correlated with performance on IDI indicators […] This highlights a key finding that relatively strong GDP growth cannot in and of itself be relied on to generate inclusive socioeconomic progress and broad-based improvement in living standards. This finding is even more striking when IDI trends over the past five years are considered. All but three advanced economies have seen GDP expand over this period, but only 10 of 29 have registered clear progress on the IDI's Inclusion pillar.'[2]

A 2009 report authored by renowned economists Joseph Stiglitz (who is on the Scottish Government's Council of Economic Advisers) and Amartya Sen concluded that 'what is of particular concern is when narrow measures of market performance are confused with broader measures of welfare. What we measure affects what we do; and if our measurements are flawed, decisions may be distorted. Policies should be aimed at increasing societal welfare, not GDP. Choices between promoting GDP and protecting the environment may be false choices, once environmental degradation is appropriately included in our measurement of economic performance.'[3]

The Trust would welcome a wider discussion about how to diversify the economic metrics used, especially in determining sustainability and inclusivity, to move away from the current concentration on GVA/GDP only and widen out the metrics. This would help achieve alinement with the National Performance Framework and Sustainable Development Goals.

Previous studies (e.g. Russel and Thomson, 2009) have 'observed a lack of alignment' between the indicator set used by the Scottish Government in the Sustainable Development Strategy and the 'visions, fields of visibilities, forms of knowledge and techniques of government contained in this Strategy'.[4] We therefore encourage the Forestry Strategy to adopt a wide-ranging set of principles for sustainability and inclusivity for implementation plans to be properly accountable.

Strategy Objective	Possible Progress Indicators
Protect and enhance Scotland's valuable natural assets, ensuring that our forests and woodlands are resilient and contribute to a healthy and high-quality environment.	• Woodland contribution to Natural Capital Index. • Proportion of protected woodland and forests with natural features in favourable condition. • Area of new native woodland and forest creation.

The Trust agrees these indicators are essential, but they are not by themselves sufficient to measure their contribution towards a 'healthy and high-quality environment'. The Strategy should commit to adopting at least the existing 13 ecosystem health indicators used by Scottish government, with further commitments to adopting new ecosystem health indicators if and when these emerge.

Moreover, the Strategy should acknowledge that, whilst a welcome start, the Natural Capital Asset Index is very much a work in progress and we need to improve the collection of data that are used in its calculation.

Strategy Objective	Possible Progress Indicators
Use Scotland's forest and woodland resource to empower more people to improve their health, well-being and life chances.	• Numbers of visits to forests and woodlands. • Area of forests and woodlands that are owned by communities.

The Trust strongly supports the recognition of health, well-being, and life chances, and their relationship to access to nature and a healthy environment. We do, however, encourage the Strategy to be far more innovative in both measuring and promoting these human-nature relationships. One key metric should be so-called 'green prescribing' under the 'Natural Health Service' approach defined by Scottish Government: "Outdoor activity has been shown to be beneficial for physical and mental health and wellbeing". Despite the emerging medical consensus of the importance of this, the Mental Health Strategy 2017-2027 failed to mention access to nature anywhere in the Strategy. Another key metric, therefore, should be the extent to which the necessary joined-up, inter-departmental thinking reflects the political will and available evidence.

As importantly, the Trust believes the proposed indicators will be insufficient in acknowledging, let alone addressing, the social inequalities related to access to nature and recreation. Ethnicity, age, disability, gender, and socioeconomic status are all associated, to various degrees, with participation in outdoor activities in Scotland. The Scottish Health Survey (2014) (reported by Active Scotland, 2015), for example, shows a significant gender gap in most age categories, with certain age groups having a profound gender divide of nearly 20% between men and women (16-24, and 65-74).

On socioeconomic status, the Active Scotland Outcomes: Indicator Equality Analysis report highlights

> *Lower socioeconomic status was associated with less participation by older people in active recreation. There was more than a 20 percentage point difference in older people's participation in active recreation between those living in the most and least deprived areas in*

Scotland in 2014, 41% for those in the most deprived areas compared to 66% for those in the least deprived. A similar pattern was observed for educational qualification level and income.

The Trust would therefore welcome a more comprehensive, interlinked set of indicators to acknowledge the complex social and economic pressures on people's empowerment in this context. This could be as simple as beginning with the work already done by the Scottish Government in identifying trends of inequality and their relationship to outdoor recreation. A Forestry Strategy needs to work for all, and for this reason the Trust welcomes the commitment to empowerment but believes the Strategy has not fully considered the implications of this.

On a pragmatic note, we would welcome clarification about how the number of visits to woodlands could be recorded without an intrusive system of measurement, and if this is extrapolated from case studies, how it is proposed that this will be representative of Scotland considering the socioeconomic, gender, ethnicity, age, and disability divides that exist. I.E. How will stratified measures be taken to ensure that increased access to nature benefits all, rather than those in privileged positions?

Q8. Do you have any suggestions for other indicators we could use to measure progress (especially ones which draw on existing data)?

See above. Ecosystem health indicators, Equality Indicators, Inclusive Development Index, and Sustainability Indicators should all be included. Moreover, GDP/GVA should be *incidental* to achieving these genuine development indicators, not a goal in itself.

In addition to these broader socioeconomic and ecosystem health indicators, with respect to woodlands we would welcome consideration of the following indicators:

- % of Scotland's native woodland in acceptable condition according the NWSS' Native woodland condition indicator values, or comparable metric.
- % of Scotland's forests certified against UKWAS
- % of Scotland's forests with an approved forest plan
- % of Scotland's forests under an active deer management plan
- % of Scotland's PAWS under restoration, and completed
- % of understory deadwood within native woodland
- Area of Ancient Woodland lost to development
- A measure of the length of paths through woodland to show access
- Woodland bird populations indicator
- Progress against SBS Routemap 2020 targets
- Inclusive Development Index
- Annual and total areas of land coming under community control

The 'Native Woodland Survey of Scotland' measured the area of healthy native woodland (using 'native woodland condition indicator values') now that a 2014 baseline has been established, it would be very useful to continue to monitor progress against it.

Q9. For any indicators suggested in answer to question Q8, please explain why you think they would be appropriate.

See Q7. In brief, the currently proposed indicators fall short of acknowledging the scale of the problem that the corresponding Strategy Objective aims to help resolve. In particular, GDP/GVA are proposed as indicators of objectives they have no means of measuring, given the evidence that these metrics are not indicative of wider developmental priorities. Whilst we do not propose abandoning these measures, we emphasise the need to include additional and more important indicators that can help

measure against the delivery of the relevant Strategic Objective. The existing Strategy proposals identify blunt instruments and ignore a more precise toolkit.

Q10. Would you add or change anything in the Equality Impact Assessment (which includes our assessment of the potential impact of the Strategy on inequalities caused by socioeconomic disadvantage – Fairer Scotland Duty)?

This has failed to take account of the Scottish Government's own evidence on social divisions and access to outdoor recreation and nature-based sports, including walking, that woodlands are so important for. The only evidence collected is a basic overview of the workforce diversity of the forestry industry. This is important in its own right, but insufficient. This is a missed opportunity to explore issues of access to nature, green space, and recreation, and how these relate to social equality and biodiversity restoration. This should be fundamental to any assessment of a sustainable and inclusive economy. We strongly urge the Strategy to revisit this and produce a more comprehensive report on this basis.

Q11. Would you add or change anything in the Business and Regulatory Impact Assessment?

The seven business groups engaged with do not represent the diversity of business stakeholders in woodlands ecosystems:

- Association of Deer Management Groups
- Confederation of Forest Industries
- Institute of Chartered Foresters
- National Farmers Union Scotland
- Scottish Land and Estates
- Scottish Forest and Timber Technologies Industry Leadership Group
- United Kingdom Forest Products Association.

Left out: local business, tourism, leisure (e.g. cycle hire), cultural industries, conservation, etc. This raises concerns about the extent of engagement in the Strategy overall, an reinforces concerns that it concentrates too much on timber production.

Elsewhere, there is no acknowledgement of the role of environmental entrepreneurship, and no broader grounding of the business impact in the circular economy vision.

Overall, the impact assessments in general all have the same base problem of ignoring the responsibility to provide 'alternative options' – this is simply taken as "Option 1: Do Nothing" and "Option 2: Publish a Forestry Strategy for Scotland". This seems to be a dereliction of duty under the legislation which established these processes by presenting a false dichotomy.

Q12. What are your views on the evidence set out in the Environmental Report that has been used to inform the assessment process?

Overall, the Trust supports the Report's inclusions, but feel there remain important knowledge gaps that require an ongoing commitment to tackle.

In particular, we welcome the acknowledgement that soil functionality could be negatively impacted by increased visitor numbers. However, there is no clear means set out in the Strategy for managing these potential impacts, which would amount to balancing the right to access natural spaces with the need to protect those spaces from excess use, including congestion effects. This is important for acknowledging that increasing 'nature tourism' must be carefully and responsibly balanced. It is little use promoting 'nature tourism' if this ultimately has a net-negative impact on the spaces promoted.

There are also important local, social impacts to consider, such as upward pressures on house prices, business rates, and local air quality from increased traffic.

The Strategy and Environmental Report occlude any possibility of wildlife reintroductions for lost native species that could have an important role in the sustainable self-management of woodlands. The Environmental Report should consider these at least under alternative proposals, or ideally enhancement measures. Whilst it may be too early to set timelines for reintroductions, syntheses of the available evidence, in Scotland and elsewhere, of the existing and potential impacts should be included in the Environmental Report and carried over into the Strategy. The Trust strongly encourages the Scottish Government to take an evidence-led approach to this important principle of conservation that is, at present, committed to in the EU Birds and Habitats Directives.

Q13. Should any additional evidence sources be used in the Environmental Report? Please provide details.

We would welcome a more comprehensive analyses of alternatives. At present, the alternative scenarios give a false impression that the choice is between 'do nothing' and a forestry Strategy. Given the focus on timber in this Strategy, alternatives should include different Strategy focuses. Alternatives should also include stronger legislative commitments rather than non-binding 'strategies'.

Q14. What are your views on the predicted environmental effects as set out in the Environmental Report?

We believe this needs more research. Our initial thoughts are that the current biodiversity net-loss will continue largely unabated by failing to commit to biodiversity restoration and enhancement rather than simply maintenance.

Q15. Do you agree with the conclusions and recommendations set out in the Environmental Report?

We support the inclusions and level of detail in the Environmental Report. We cannot, however, fully support the conclusions and recommendations of the SEA. Whilst we encourage the Strategy to adopt the ecosystems approach mentioned in the SEA (which it currently doesn't), elsewhere the SEA needs to take greater account of alternatives rather than 'do nothing'.

Moreover, the Strategy itself has not clearly accepted the implications and conclusions of the SEA. For instance, mentions of the ecosystems approach and habitat fragmentation in the SEA are excluded from the Strategy. The Trust would welcome clarifications about why the Strategy appears to pick and choose which aspects of the SEA to consider; this goes against the principle of an evidence-led Strategy.

Q16. Please provide any other further comments you have on the Environmental Report.

The Strategy does not identify any priority areas of improving woodlands or forestry condition. The UK Woodland Assurance Standard (UKWAS), which includes Forestry Stewardship Council (FSC) criteria, currently covers all Forestry Commission Scotland woodland, but only covers 35% of non-Forestry Commission woodlands. As such, 65% of private woodlands and forests are without auditing under the Woodland Assurance Standard.

Q17. Do you have any other comments you would like to make about the draft Strategy for forestry in Scotland?

The Strategy does not acknowledge the role of habitat fragmentation. Though this is rightly mentioned in the SEA, there is no mention of it in the Strategy itself. This further illustrates the Strategy's overall failure to substantively tackle biodiversity decline or identify strategies for restoring

biodiversity. Habitat fragmentation, in relation to woodlands, occurs when (normally anthropogenic) development or management divides an existing expanse of woodlands into smaller pockets. The road and rail networks are clear examples of this, as is the co-option of land for agricultural use, the use of fences or walls, etc. This can result in isolated woodlands developing with a reduced genetic diversity, impacting their resistance to disease. In broader terms, particularly non-avian species can struggle with a reduced range, breeding opportunities, and food access due to their isolation in fragmented habitats. The identification of this particular problem requires seeing woodlands in terms other than acreage or number of trees and looking instead at distribution and connectivity.

The Scottish Wildlife Trust and Scottish Environment LINK members are supportive of developing a National Ecological Network as committed to in the 2020 Challenge for Scotland's Biodiversity[5] and the National Planning Framework Three[6]. The Trust sees woodlands and forests as the arteries of a National Ecological Network, helping make connections across the landscape. The Forestry Strategy should seek to help deliver Government ambition in relation to the National Ecological Network.

The Trust is preparing a flagship *Riverwoods* project to develop riparian woodlands in order to demonstrate the implementation of the National Ecological Network in this important type of woodland. As well as contributing to the wider objectives of the NEN, riparian woodlands play an important role in biodiversity, local flood mitigation, and erosion mitigation. Additionally, beaver populations stand to benefit from regenerating biodiverse riparian vegetation, and these buffer zones can result 'in a decreased risk of conflict in any land use further from the watercourse' (SNH, 2018: p.24[7]). In turn, Beavers themselves contribute to regeneration of riparian ecosystems[8]. The Forestry Strategy mentions in several places the contribution of woodlands to 'river bank stability' and 'soil erosion' (e.g. pp. 12, 27), but contains no Strategy or further information about how these will be maximised – riparian woodlands receive no direct mention. We therefore encourage the Strategy to acknowledge the importance and potential of riparian woodlands, and for the SEA to address the additional factors that come from this, including benefits to and from beaver populations.

The Trust's position is that the target of increasing woodland cover from 18% to 21% is too modest to fully realise the environmental, social and economic objectives that will come from increased woodland cover. In particular, we feel that by reducing grazing pressure in the uplands, potentially, tens of thousands of hectares of new woodland, scrub and wood pasture habitat could be created without the need for more expensive woodland creation by planting. This goal should be at the heart of the vision.

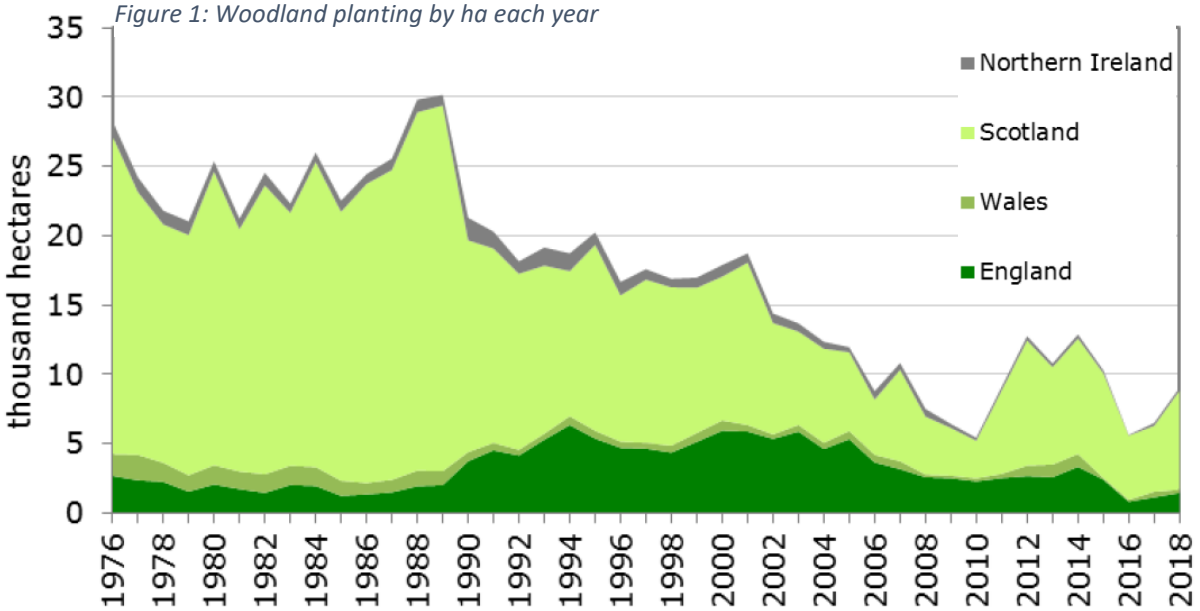
Whilst we acknowledge this target comes from the Climate Change Act, we would welcome a Strategy that treats this as a *minimum standard* rather than the ultimate goal. Scotland's previous Forestry Strategy from 2006 had a higher woodland cover target:

> *We would like to see Scotland's woodlands increase from 17.1% of our land area to about 25%. Work done for Forestry Commission Scotland by Macaulay Research Consultancy Services indicates that this is feasible.*

Given the European average of around 38% and success of reforestation efforts in similar climates and geologies in Europe (such as south west Norway), the Trust does not see any evidence in the intervening 12 years that would support this reduction in ambition.

Moreover, the target of 100,000 ha new woodland by 2030, with 10,000 new ha a year increasing to 15,000 a year, is already not being met. Even in its best year in the past decade, 2017, Scotland missed this target by 29%. The Strategy should outline how the existing delivery gap will be closed, in particular the relative contribution of natural regeneration.

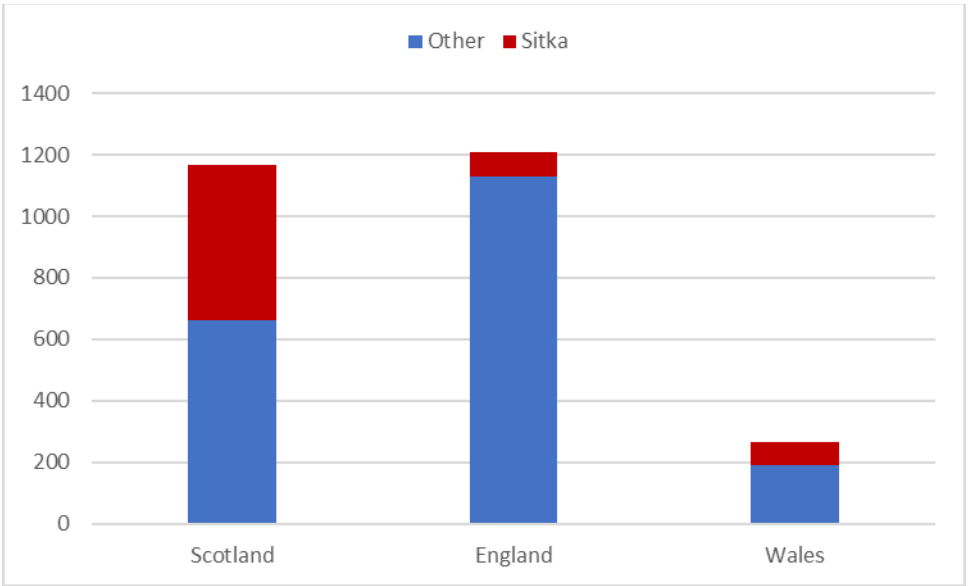
Figure 1: Woodland planting by ha each year



Whilst the poor forest design, location and species selection of the 1960-80s must not be repeated, historic planting rates in Scotland do show that much higher rates of woodland creation might be achieved (see fig. 1).

The 21% target is under-ambitious given woodland creation is so central to our climate change mitigation and adaptation efforts, biodiversity protection and restoration, local flood prevention, access to wildlife and nature, water quality, soil quality, air quality, and a host of other essential ecosystem services. Any one of these benefits alone would justify a more ambitious target but taken together they are an even more compelling argument to aim higher.

Figure 2: Sitka concentration in stocked woodland area across Scotland, England, and Wales. (x1,000ha)



Not only are Scotland forestry targets under-ambitious and being missed but the cumulative effect of past plantation trends is that a large share of Scotland's woodland is dependent on sitka spruce and to a much greater extent than the rest of the UK (see figure 2). The Strategy needs to address this overdependency on a single non-native species and the resilience risks it poses for Scotland's woodland and wider environment. We therefore strongly encourage the Strategy to consider tree species diversity and age group diversity, and commit to more ecologically-informed plantation, as well as to natural regeneration.

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