5 Assessment of Environmental Effects

Introduction

5.1   This section of the ER sets out the results of the assessment of environmental effects that are predicted to result from the implementation of the Stirling and Clackmannanshire Forestry and Woodland Strategy.

5.2   As the SCFWS sits within the overall framework of the Scottish Forestry Strategy – which has already been subject to SEA – the overall potential for significant environmental effects should be relatively low. Similarly, a high level of 'assumed mitigation[4]' is built in to the woodland creation process which makes the occurrence of regionally significant effects unlikely.

5.3   The following paragraphs provide a brief summary of the main assessment findings of the vision, strategic themes, and policy objectives by SEA topic. Summary assessment tables are provided in Appendix 2.

Vision

5.4   The Vision set out for the SCFWS (see Vision) aims to reconcile the economic, social and environmental imperatives driving the Scottish Government's ambitions regarding woodland expansion.

Assessment

5.5   The Vision, by necessity, is very broad in scope and places woodlands and forests' role in contributing to the region's economy, the health and wellbeing of its communities and the quality of its environment at its centre. The contribution the region's woodlands and forests could make to these three sectors is a consistent theme throughout the Vision, as is the benefits that woodlands and forests can provide to people. The communities' involvement in planning, managing and owning woodland is highlighted and health, recreation and active travel are particularly promoted by this Vision. Enhancing habitats for wildlife and protecting attractive landscapes receive specific support.

Alternatives
Action required

5.6   Although identified as a key strategic theme, the Vision makes no reference to the contribution the region's woodlands and forests can make to mitigating and adapting to climate change. There is a significant benefit to ensuring that the Vision accurately reflects the content and aspirations for the SCFWS.

5.7   It should however be noted that climate change is one of the seven key themes within the SCFWS, reflecting its position within the SFS.

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[4] 'Assumed mitigation' refers to those factors that can reasonably be taken into account when potential effects are being assessed. For example, the forestry EIA and site-specific assessments required as part of the FCS grant administration process and mandatory compliance with the UK Forestry Standard (UKFS)

Summary of effects by SEA topic

SEA Objective 1: To conserve and enhance the diversity of habitats and species

5.8   The SCFWS objectives and priority actions specifically promote the development of integrated habitat networks, improvement of woodland biodiversity and significant planting of new woodland, especially on degraded urban and urban fringe sites. Cumulatively the SCFWS objectives are likely to have significant positive benefits for conserving and enhancing the diversity of habitats and species in Stirling and Clackmannanshire. Impacts may start to be felt in the medium term and are likely to be permanent in nature.

5.9   The Strategy has the opportunity to promote low impact methods of timber harvesting which will minimise the disturbance to habitats and species. The SCFWS also has the potential to ensure that planting for biomass does not result in large areas of monoculture which have low values in terms of biodiversity and are difficult for species to permeate through. Furthermore new planting on vacant and derelict land should be sensitive to habitats and species that are already present on the land. Woodlands should be zoned according to which, if any, recreational activities are most suitable for them, minimising the disturbance to wildlife.

5.10   The significant expansion of woodland planned under the SCFWS will have clear benefits for habitats and species but the type of new woodland planted (native woodland, mixed etc.) and also the specific location of that woodland will also help to determine the effect on this SEA objective. The assessment of scenarios on the level of Future Forests provides a detailed assessment of the effects on biodiversity of these variables.

5.11   Some slight uncertainty exists with regard to potential effects on Natura 2000 sites, specifically in relation to water quality effects on the region's SAC rivers, and the potential for woodland expansion to adversely affect winter foraging areas for wildfowl and waders using the Firth of Forth SPA[5]. As it is not possible to accurately predict the:

- type;
- scale;
- location;
- physical characteristics; or,
- operational details

5.12   of woodland creation schemes that are likely to come forward, it has not been possible to make a reasonable assessment of likely impacts. HRA of specific proposals located within a minimum separation distance of Natura sites, or in areas known to be of value to qualifying interests, will provide greater certainty.

5.13   Overall the adverse effects are likely to be outweighed by major benefits of habitat enhancement. However, positive effects rely on assumed mitigation provided by Forestry Commission Scotland's process of assessing SRDP applications for woodland creation, and the planning system for woodland delivered in parallel with development.

Recommendation:

In line with SNH's Scoping Response, it is recommended that HRA screening is undertaken to clarify the potential for significant effects on Natura 2000 interests, and develop suitable measures to avoid / mitigate any such effects.

SEA Objective 2: To avoid further blight in disadvantaged communities

5.14   The expansion of woodland promoted by the SCFWS objectives and priority actions is likely to have significant benefits for disadvantaged communities. The creation of biomass markets, the role that trees can play in improving the quality of the environment particularly on urban fringe,

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[5] Although it is understood that pink-footed geese and waders, including curlew and golden plover, make extensive use of agricultural land in the region for foraging during this winter, no data as to specific locations, levels of use and the availability of alternative habitat resources was publicly available at the time of writing.

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SEA Environmental Report

derelict and vacant land and the opportunities that trees and woodlands can create for business, employment, education and volunteering will have particular benefits for disadvantaged communities. Impacts may start to be felt in the medium term and are likely to be permanent in nature.

5.15   Potential for minor adverse effects on health as a result of wider adoption of woody biomass as a domestic / community-scale fuel source (increased PM_{10} emissions). However, this will be mitigated through the planning system by preventing inappropriate use of biomass technology in Smoke Control / Air Quality Management Areas.

5.16   The specific location of woodland will help to determine the level of benefit that disadvantaged communities receive and the assessment of scenarios on the level of Future Forests provides a detailed assessment of this. In order for beneficial effects to be realised it is critical that new woodland planting is focused near to disadvantaged communities and derelict and degraded land.

SEA Objective 3: To promote and develop Green Network thinking

5.17   The SCFWS objectives and priority actions are likely to have a significant positive effect on promoting and developing Green Network thinking and cumulatively could make a significant difference to the area's Green Network. The general expansion of woodland proposed in the SCFWS is a positive move for the Green Network but of particular benefit is the establishment of new woodlands (especially in and around towns), integrated habitat networks, the promotion of woodland recreation and rural diversification. Impacts may start to be felt in the medium term and are likely to be permanent in nature.

5.18   However, when new woodland is being established it will be vital that links are established to other publically accessible open space and footpaths / bridleways and that access rights to the new woodland are established in order to ensure the woodland's full potential is exploited. The specific location of woodland will also help to determine the level of benefit to the Green Network and the assessment of scenarios on the level of Future Forests provides a more detailed assessment of this.

SEA Objective 4: To avoid adverse direct and indirect impacts on soil stability, structure and quality

5.19   The SCFWS objectives and priority actions are likely to have a positive effect on soil stability, structure and quality. In particular the protection of high carbon content soils from planting and evening out timber harvest over time will benefit the stability and structure of soil. The remediation of polluted, derelict and degraded urban sites will also benefit soil quality across the area. Impacts are likely to be permanent in their effect and occur in the short to medium term.

5.20   The Strategy has the opportunity to promote low impact methods of timber harvesting, e.g. continuous cover forestry, silvicultural practices, which will minimise the disturbance and damage to soil. There is potential for soil disturbance and erosion to occur from intensive recreational use. Zoning recreational use of woodlands may be one way to manage and protect soils.

5.21   Promoting appropriate expansion of riparian and floodplain woodland may also help to reduce soil erosion as a result of runoff.

5.22   The avoidance of the adverse effects relies on assumed mitigation delivered through and adhered to Forestry Commission Scotland's (FCS) 'Forest and Soils' guidance and the FCS assessment process.

SEA Objective 5: To protect and improve relevant waterbody status

5.23   The SCFWS objectives and priority actions are likely to have beneficial effects on the status of water bodies.

5.24   The development of new and enhancement of existing riparian woodlands could contribute to sustainable flood management objectives and improve water quality by reducing runoff and erosion. Planting on VDL has the potential to help remediate contamination, reduce runoff and improve infiltration and absorption/retention capacity. The protection of peat soils will safeguard

catchments' water retention capacity. The promotion of continuous cover forestry will improve outcomes for the water environment over the use of clearfell systems.

5.25 Many of the positive effects on water quality are secondary effects resulting from a decrease in soil erosion and soil contamination. The avoidance of the adverse effects relies on assumed mitigation delivered through the FCS assessment process.

SEA Objective 6: To protect and enhance air quality

5.26 The significant expansion of woodland and number of trees planted planned under the SCFWS will have clear benefits for air quality. The specific objectives and priority actions proposed in the SCFWS will also be positive with new planting in urban environments, urban fringes and degraded environments having particular benefits for urban air quality. The promotion of woodfuel as a source of energy has the potential to replace other more polluting sources of energy, although there is potential for localised impacts on air quality through increased use of woodfuel. The SCFWS also has the potential to reduce air pollution resulting from transportation by reducing the distance that timber is imported from, the distance people have to travel to visit and enjoy woodlands, promoting more sustainable means of transporting timber, and promoting renewable energy to power plant machinery.

5.27 Therefore, mitigation measures include prioritising growing and processing biomass close to markets to help minimise emissions, and establishing woodlands in close proximity to settlements and public transport routes.

SEA Objective 7: To reduce GHG emissions

5.28 As with the effects of the SCFWS on air quality, the significant expansion of woodland and increasing the number of trees planted will have clear benefits for greenhouse gas emissions. Effects are likely to be permanent in nature and be felt in the medium term. The effects of specific objectives and priority actions proposed in the SCFWS will also be positive with the potential for GHG emissions reductions resulting from reducing the distance that timber is imported from, the distance people have to travel to visit and enjoy woodlands and promoting more sustainable means of transporting timber being particularly key to this potential reduction.

5.29 The promotion of woodfuel as a source of energy also has the potential to reduce GHG emissions by replacing other traditional non-renewable fuel sources.

5.30 Therefore, mitigation measures include prioritising growing and processing biomass close to markets to reduce the potential for unnecessary timber miles, and establishing high quality woodland assets close to settlements and public transport routes to reduce GHG emissions from private vehicles.

SEA Objective 8: To support climate change mitigation

5.31 The objectives and priority actions in the SCFWS are likely to have a significant beneficial effect on supporting climate change mitigation. The significant benefit is likely to be permanent in effect and realised in the medium term. The expansion of woodlands on appropriate soils to create 'carbon sinks' and the development of forests and woodlands for biomass are likely to have the biggest influence in terms of climate change mitigation.

SEA Objective 9: To support climate change adaptation

5.32 The objectives and priority actions in the SCFWS are likely to have a significant beneficial effect on supporting climate change adaptation. This significant benefit is likely to be permanent in effect and be felt in the medium term. Riparian and appropriate floodplain woodland expansion will make a positive contribution to climate change adaptation, i.e. through sustainable flood management, increased soil stability, and increased connectivity of habitats.

SEA Objective 10: To support sufficient infrastructure development

5.33 The objectives and priority actions in the SCFWS are likely to have a significant beneficial effect on supporting the provision of sufficient infrastructure development. This significant benefit is likely to be permanent in effect and be felt in the medium term.

5.34   The objectives and priority actions in the SCFWS strongly support the provision of new and, more efficient use of, existing infrastructure for the forest sector particularly for the transportation and processing of timber. The role that woodlands and trees can play in the provision of Green Infrastructure is also recognised and promoted by the FWS. For example, the role that woodlands can have in providing sustainable flood management, new walking and cycling routes and also the provision of educational spaces.

SEA Objective 11: To minimise waste

5.35   The objectives and priority actions in the SCFWS are likely to have mixed effects on minimising waste. Effects, whether they are positive or negative, are likely to be permanent and be felt in the medium term.

5.36   Promoting woodland planting on vacant and derelict land or contaminated land will reduce the amount of underused land particularly in urban areas. Encouraging efficiency in timber production, and the development of a market for woody biomass, which will provide another use for much waste wood, is likely to have significant benefits for the efforts to minimise waste. However, encouraging increased recreation may result in minor increases in the amount of waste produced by visitors. The avoidance of the adverse effects relies on assumed mitigation delivered through the FCS assessment process.

SEA Objective 12: To conserve and enhance the cultural and built environment

5.37   The objectives and priority actions in the SCFWS are likely to have a positive overall effect on conserving and enhancing the cultural and built environment.

5.38   Woodlands may help facilitate the conservation and enhancement of the area's heritage and built environment by developing the area's visitor offer providing the economic stimulus and incentive for regeneration and also the opportunity for education and training. This may help build understanding about the cultural, historic and built environment in the local area and give people the tools and knowledge and incentive to conserve it.

5.39   While there is potential for minor impacts on sensitive assets as a result of improved access and the provision of interpretation, these will largely be avoided at the design stage – or through appropriate mitigation measures agreed with Historic Scotland and/or the local authority archaeological advisor.

5.40   However, there is potential for impacts on the Inventory Battlefields of Stirling Bridge, Bannockburn and Sherriffmuir. These sites were included in the 'potential' rather than 'sensitive' land category, potentially reducing their visibility to users of the SCFWS in the first instance. They are complex, nationally-significant, assets that require careful management to maintain their legibility in the landscape and, while well-planned woodland expansion of an appropriate nature, scale and design could make a positive contribution, the possibility of adverse impacts remains. While it is appreciated that FCS regulatory processes should highlight their presence during the assessment of SRDP applications, it is considered imperative that guidance is sought from the local authority archaeologist and Historic Scotland on the design of schemes in such areas. Similarly, the SCFWS has the potential to result in significant impacts on the undesignated archaeological resource.

Recommendation: Battlefields should be incorporated within the 'sensitive' land category to assist in raising awareness of their presence, significance and likely level of constraint on proposals for woodland expansion. There may be an argument for the provision of specific landscape and design guidance for new woodlands in these areas.

At the strategic level, the SCFWS could help to avoid effects on undesignated archaeology through the inclusion of a statement recommending that land managers proposing woodland creation schemes consult with the relevant local authority archaeologists at the earliest opportunity. This will aid understanding of site-specific sensitivities and avoid impacts through appropriate scheme design.

A statement regarding the protection and enhancement of the setting of sensitive assets would also be a welcome addition.

SEA Objective 13: To conserve and enhance the character of the region's landscapes

5.41   Whilst the objectives and priority actions in the SCFWS may have some mixed effects they are likely to have a significant beneficial effect on conserving and enhancing the region's landscape. This significant benefit is likely to be permanent in effect and be felt in the medium term.

5.42   Restoring ancient and semi-natural woodland, removing woodland from high-carbon soils, planting new woodland and trees on degraded land and in urban and urban fringe areas and evening out patterns of timber production are likely to all strongly benefit the conservation and enhancement of the regions landscape character.

5.43   The planting of large areas of woody biomass monoculture has the potential to have a negative impact on landscape character and areas of plantation need to be carefully located. Creating mixed woodland buffers around the edge of sites will also help to reduce the impact of these monocultures on the landscape.

5.44   Significant increases in woodland cover will inevitably result in relatively large scale landscape change. However, it will be incumbent on FCS and local authorities to judge the capacity of the landscape to accommodate woodlands expansion proposals.

Summary of effects by SCFWS themes and objectives

Table 5.1 Summary of effects by SCFWS Objectives

	Policy Objectives	Overall SEA Score	Comments
CLIMATE CHANGE	To identify areas for new woodland creation/existing woodland restoration	++	Overarching aim of the SCFWS.
	To highlight areas for climate change adaptation, particularly those which will contribute to sustainable flood management	+/++	This objective is likely to have significant positive and positive effects on the majority of SEA Objectives. Positive effects relate to increased soil stability, increased connectivity of habitats and sustainable flood management.
	To support the development of biomass for heating	+/-	This objective is likely to create mixed effects; whilst there are no significant negative effects predicted, some minor effects might result from the presence of large areas of monoculture and also localised air pollution for the increased use of woody biomass. Positive effects relate to employment opportunities for disadvantaged communities, and an overall improvement in air quality.
	To promote the benefits of carbon sequestration through the Woodland Carbon Code	+/-	This objective presents significant benefits in terms of reducing GHG emissions, improved air quality, and improved soil stability (particularly if planting is on VDL) but potential negative effects on the water environment as planting for carbon sequestration may reduce water supplies and ecological flows due to higher water use.
	To advocate forestry and woodland management practices which reduce carbon loss from soils	+	This Objective is likely to have positive effects in terms of improved environmental and air quality.
TIMBER	To encourage continued investment in the local timber processing capacity	+/-	This Objective is likely to have positive effects on the majority of SEA Objectives. Potential negative effects relate to soil and water quality in terms of harvesting practices – although these will be minimised at the operational level by adherence to UKFS. Potential for negative effect on air quality if timber transportation is not carried out

			sustainably.
	To promote the use of timber as a renewable, versatile raw material	0	This objective is likely to have a limited effect on most SEA Objectives.
	To encourage the development of the hardwood timber sector	+/-	This objective is likely to have positive effects on the majority of SEA Objectives. Negative effects relate to soil and water quality in terms of harvesting, felling, etc. practices. Potential for negative effect on air quality if timber transportation is not carried out sustainably – particularly as processing capacity for hardwoods is limited
BUSINESS DEVELOPMENT	To support rural diversification and business development opportunities	+/++	This objective is likely to have a positive effect on most SEA objectives with significant positive effects for disadvantaged communities.
	To promote Stirling & Clackmannanshire as a destination for tourists and visitors	+/-	Improving the tourist offer of the area is likely to have overall positive effects on most SEA Objectives. Potential for minor negative effects on soil, water, and air quality.
	To facilitate opportunities for acquiring new skills and experience	+	This objective is likely to have a positive effect on most SEA objectives with significant positive effects for disadvantaged communities.
COMMNUNITY DEVELOPMENT	To develop opportunities for expanding the existing woodland resource in and around the towns and villages in Stirling & Clackmannanshire	+/++	This objective is likely to have positive or significant positive effects on most SEA objectives particularly air quality, biodiversity, and access & health.
	To promote woodlands as community-owned or managed asset	+	This objective is likely to have positive impacts on most SEA objectives, particularly for disadvantaged communities.
	To facilitate the development of social enterprise networks and capacity building initiatives	+	This objective is likely to have positive impacts on most SEA objectives, particularly for minimising waste.
	To identify opportunities for delivering the Curriculum for Excellence and lifelong learning through Forest Schools and other forest and woodland-based education	+	This objective is likely to have positive impacts on most SEA objectives, particularly for disadvantaged communities.
ACCESS & HEALTH	To highlight opportunities for expanding sustainable recreational facilities in the Stirling & Clackmannanshire for both formal and informal recreation	+/-	This objective is likely to create mixed effects - potential negative effects on biodiversity, soil and water quality, and positive effects for the remaining SEA objectives.
	To support wellbeing initiatives such as Braveheart, Branching out and Green Gym	+/-	This objective is likely to create mixed effects - potential negative effects on biodiversity, soil and water quality, and positive effects for the remaining SEA objectives.
	To promote natural play and active travel through Forest Schools and other forest education initiatives	+/-	This objective is likely to create mixed effects - potential negative effects on biodiversity, soil and water quality, and positive effects for the remaining SEA objectives.
ENVIRONMENTAL QUALITY	To actively promote Stirling & Clackmannanshire's rich cultural heritage	+	This Objective is likely to have a positive effect on most SEA objectives
	To contribute to the management and enhancement of Stirling & Clackmannanshire's historic environment	+	This Objective is likely to have a positive effect on most SEA objectives.
	To promote responsibly public access to, and interpretation of, all suitable	+	This Objective is likely to have a positive effect on most SEA objectives, particularly on

	assets (e.g. archaeology, historic landscapes and buildings)		conserving the cultural and built environment.
BIODIVERSIY	To promote the conservation of key sites and priority habitats	+	This Objective is likely to have a positive effect on most SEA objectives.
	To consolidate and expand functional connectivity through habitat networks in the wider landscape	++	This Objective is likely to have a positive effect on most SEA objectives.
	Highlighting specific woodland types to assist with the protection of key species (e.g. red squirrel, badgers and black grouse)	0	This objective is likely to have a limited effect on most SEA Objectives.

Woodland expansion

Introduction

5.45   The land categorisation process, as set out in '*The Right Tree in the Right Place,*' is intended to be a strategic process, giving a general impression of an area's suitability or otherwise for woodland expansion – on detailed examination there will inevitably be small areas that could readily fall into a different category. The FWS therefore states explicitly that it is intended for guidance only, and that site-specific assessment of individual proposals has primacy in determining their suitability.

Analysis process

5.46   The mapping and attendant calculations were prepared using existing datasets in the public domain, as listed in Table 5.2 below.

Table 5.2 IFS Map Datasets

Category	Dataset	Source
Sensitive	SSSI	SNH
	Special Protection Areas	
	Special Areas of Conservation	
	Wetlands of International Importance (Ramsar sites)	
	National Nature Reserves	
	Ancient woodland	
	Sensitive peat soils	James Hutton Institute
	Local Nature Reserves	SNH
	Scheduled Monuments	Historic Scotland (HS)
	Historic Gardens and Designed Landscapes	
	World Heritage Sites	
	Conservation Areas	
Potential	Local landscape designations	SNH (Local authorities)
	Land capability for agriculture (Class 2-3.1)	James Hutton Institute

	Inventory battlefields	Historic Scotland
	Larger-scale undesignated historic environment assets / archaeological landscapes	Historic Land-use Assessment (RCAHMS / HS)
Existing	National Forest Inventory	FCS
Preferred	Vacant and derelict land	Local authorities
	Areas with no identified constraints	
Urban	Urban areas	Scottish Government
Unsuitable	Land Capability for Forestry (unsuitable class)	James Hutton institute
Consulted, but not used in final data	Less-favoured areas	Scottish Government
	Listed Buildings	HS
	Landscape Character Assessment	SNH

5.47   Datasets were combined in a constraints mapping exercise to identify areas with significant sensitivities to woodland expansion or removal. Given the regional scale of the FWS, these focus primarily on national designations. It should be noted that this classification is not intended to prevent ALL woodland expansion and management activities within sensitive areas, but to ensure that proposals appropriate to local conditions are developed. Similarly, within areas identified as being 'preferred,' detailed assessment is likely to highlight local sensitivities that will influence the nature and scale of woodland that is appropriate (e.g. watercourses, land uses, settings of built heritage).

Assessment

5.48   By identifying key sensitivities – and areas of least constraint – the indicative potential map should effectively steer proposals towards appropriate areas and provide a measure of certainty for land managers, decision-makers and consultees.

5.49   It has the potential to generate significant positive effects, particularly in relation to community benefits and local environmental enhancement. Similarly, there is potential for positive economic effects in relation to facilitating rural diversification, supporting agriculture and development of new productive woodlands.

5.50   Designated natural and cultural heritage interests (excluding Inventory Battlefields) and peat soils are explicitly highlighted as being sensitive to woodland expansion (and removal) and should therefore serve to trigger appropriately detailed design and assessment of proposals affecting such areas.

5.51   'Preferred' land takes in a considerable range of environments and current land uses which, while they do not register as constraints at the regional scale, will have a strong influence on the type and scale of woodland that is appropriate. While this is made clear in the supporting text, it relies on assumed mitigation for the avoidance of adverse effects – particularly in relation to landscape impacts and potential conflicts with existing land uses. (However, it is judged to be reasonable to assume that FCS assessment processes are robust. Additional safeguards are built in through the consultation process).

5.52   The level of interpretation and site-specific judgement required when bringing forward proposals in the 'preferred' area could be viewed as a weakness in the approach – although this was judged to be necessary to ensure that a suitable range of woodland creation proposals were facilitated and were eligible for grant support. No regionally significant effects are predicted as a result of this trade-off.

5.53   The chosen option is therefore assessed as representing a model that protects the key environmental interests in the region, but provides considerable scope to facilitate appropriate woodland expansion to meet the requisite range of objectives.

Alternatives

5.54   It had originally be anticipated that pre-existing national / supra-regional targets set by the SFS and the CSGN would be examined as potential alternatives. However, the Scottish Government refined the original '25% woodland cover' target set by the SFS, and CSGN targets (previously, achieving a 50% increase in cover across the network area) have been realigned to accord with the overarching 10,000ha/y recommendation of the Woodland Expansion Advisory Group. In any case, neither appeared to be appropriate on more detailed examination and, if uncritically applied at the regional level, would have been unrealistic.

Alternative 1 – 'Business-as-usual'

5.55   The 'business-as-usual' scenario would be represented by continued application of the 2004 Stirling and Clackmannanshire Indicative Forestry Strategy Policy and Background Report (as discussed in Likely evolution of the environment without the Stirling and Clackmannanshire Forestry & Woodland Strategy)

5.56   The foregoing Strategy diagrams are less well informed by key environmental constraints (notably natural heritage and historic environment designations) and are based around assigning sensitivity to whole landscape character areas. While a similar level of assumed mitigation can be ascribed to the implementation of these maps, they inevitably increase the potential for impacts on the basis of probability (i.e. the more proposals that come forward in appropriate locations, the higher the likelihood of impacts occurring even with assumed mitigation).

Alternative 2 – Central Scotland Green Network-led approach

5.57   The southern portion of Stirling and all of Clackmannanshire lie within the Central Scotland Green Network activity area. A realistic alternative to the development of the SCFWS could be a green network-led approach to woodland creation and management, which would be in line with Scottish Government planning policy (through National Planning Framework 2 and SPP) and could be seen as a legitimate approach to delivering multi-benefit woodland.

5.58   It is likely that such an approach would intrinsically have a more urban / peri-urban focus than a broader-based forestry and woodland strategy. While this could deliver a range of benefits – particularly in relation to habitat connectivity, placemaking and quality of life – the links to forestry as a larger-scale rural land use are likely to be less well developed. Reconciling the requirements of the region's existing softwood forests – and the forestry sector more widely – with the CSGN agenda would be challenging, and would potentially result in a document with less industry credibility.

5.59   In spatial terms, woodland creation activity is likely to be concentrated in areas that could convey the most benefit in relation to developing habitat connectivity and contributing to health, wellbeing and social inclusion agendas. This is likely to reduce the amount of woodland created for timber production. While there may be positive effects in relation to biodiversity and human health, the wider effects on the sustainability of the region's forestry industry should not be underestimated.

Alternative 3 – pro-rata contribution to Scottish Government 10,000ha target

5.60   The area covered by the strategy equates to around 1.6% of Scotland's land area[6] - a pro-rata contribution to the Scottish Government's target would equate to the creation of 160ha of new woodland every year for an indeterminate period.

5.61   While this target could easily be met by the industry, it is likely that once the 'easy win' sites had been planted up, woodland creation could begin to result in more significant environmental

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[6] The study area encompasses 122,990ha, in comparison to Scotland's land area of 7,710,000ha – although it should be noted that not all of either area is suitable for woodland.

effects. Without strategic guidance as to the most appropriate locations for new woodland – and a policy framework and regional priorities to guide decision-making – an ad hoc approach is likely to both miss major opportunities for enhancement and have the potential to generate adverse effects.

Scenario Planning

5.62   The following four scenarios were developed, as outlined above, to test like likely effects of woodland expansion at the regional scale. As it is not possible to accurately predict the precise locations of new woodland, given the number of variables influencing the process, inferences are necessarily restricted to likely regionally significant effects on each broad character zone.

5.63   It is assumed that each scenario is implemented through the filter of the FWS policies, spatial recommendations and the relevant regulatory framework.

Current distribution of woodland cover

5.64   Over half of the region's woodland resource comprises planted softwood forests, concentrated in upland and upland fringe locations such as the Braes of Doune and the Fintry, Gargunnock and Touch Hills. Large-scale blocks are also present on former peatlands around Flanders Moss and the Lake of Menteith. In the outlying portion of Stirling, large-scale forests are also present on the hills above Glen Dochart and Loch Tay.

5.65   The broadleaved resource is smaller in scale and highly dispersed. It is concentrated in riparian locations and networks of farm and policy woodlands and shelter belts.
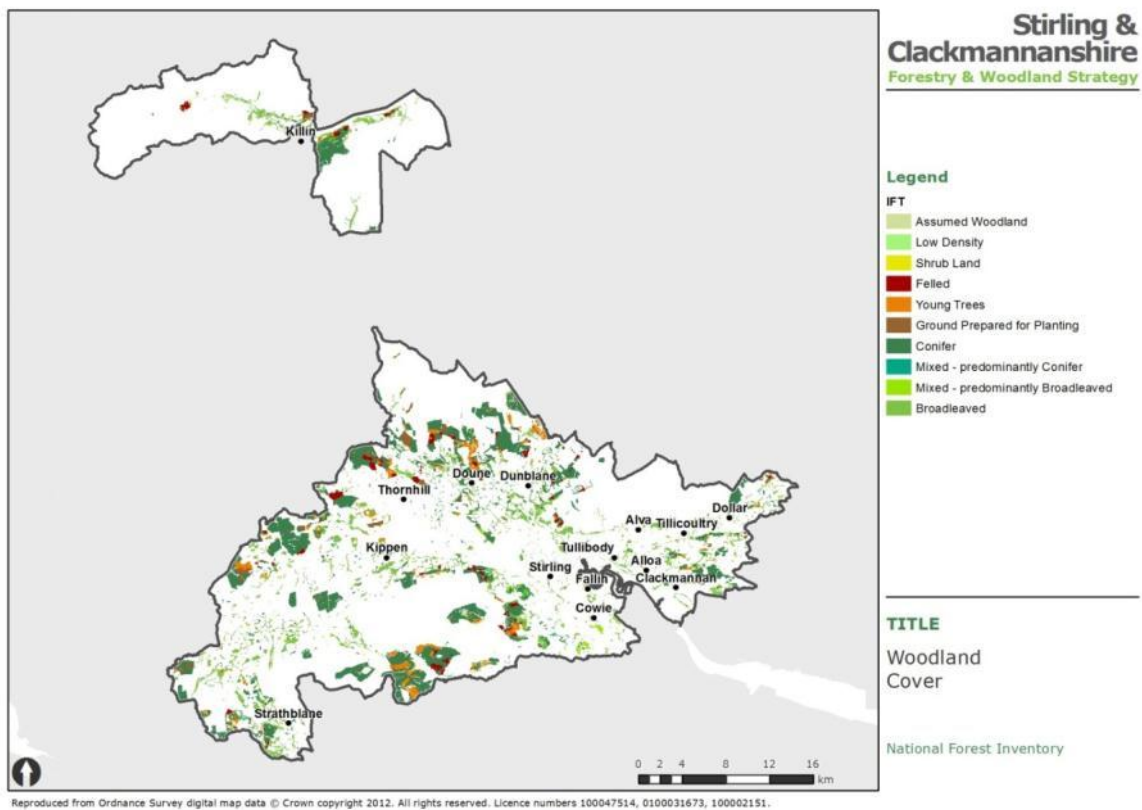
Figure 5.1: current woodland cover
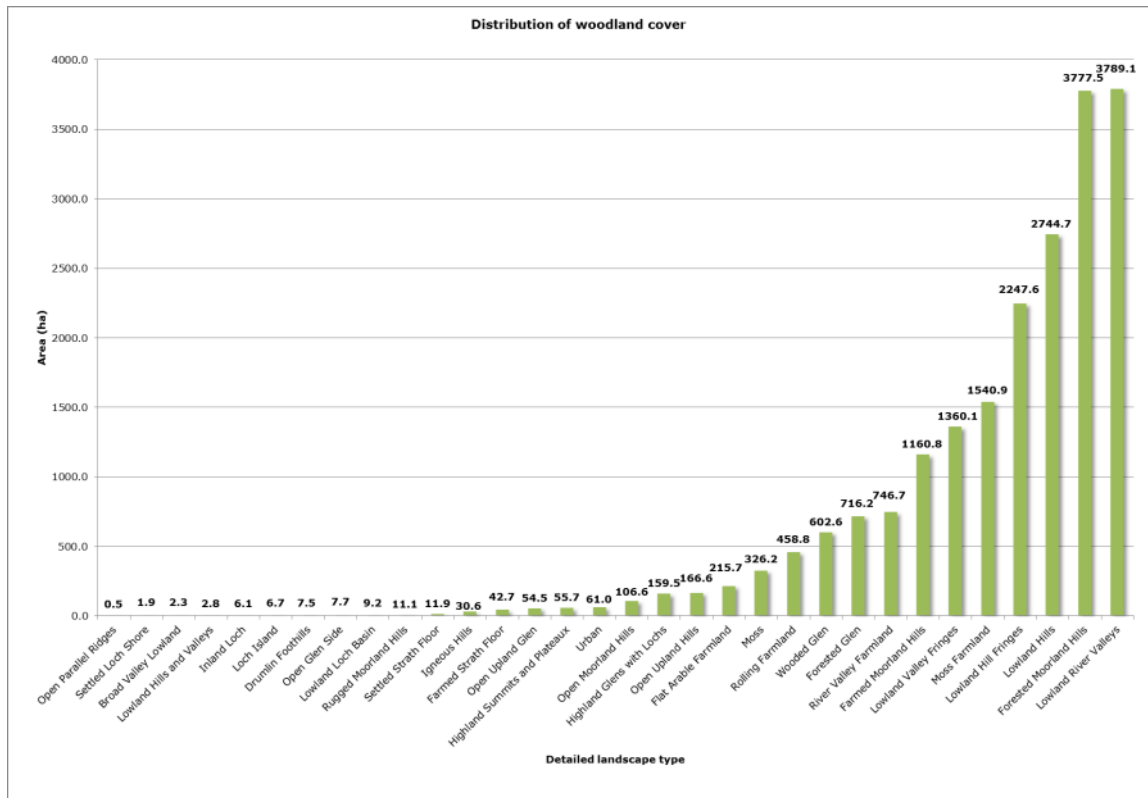
Figure 5.2: graph showing distribution of current woodland cover

5.66   Figure 5.2 above illustrates this disparity in distribution, and demonstrates the relative scarcity of woodland in lowland areas.

Figure 5.3: woodland cover and landscape type
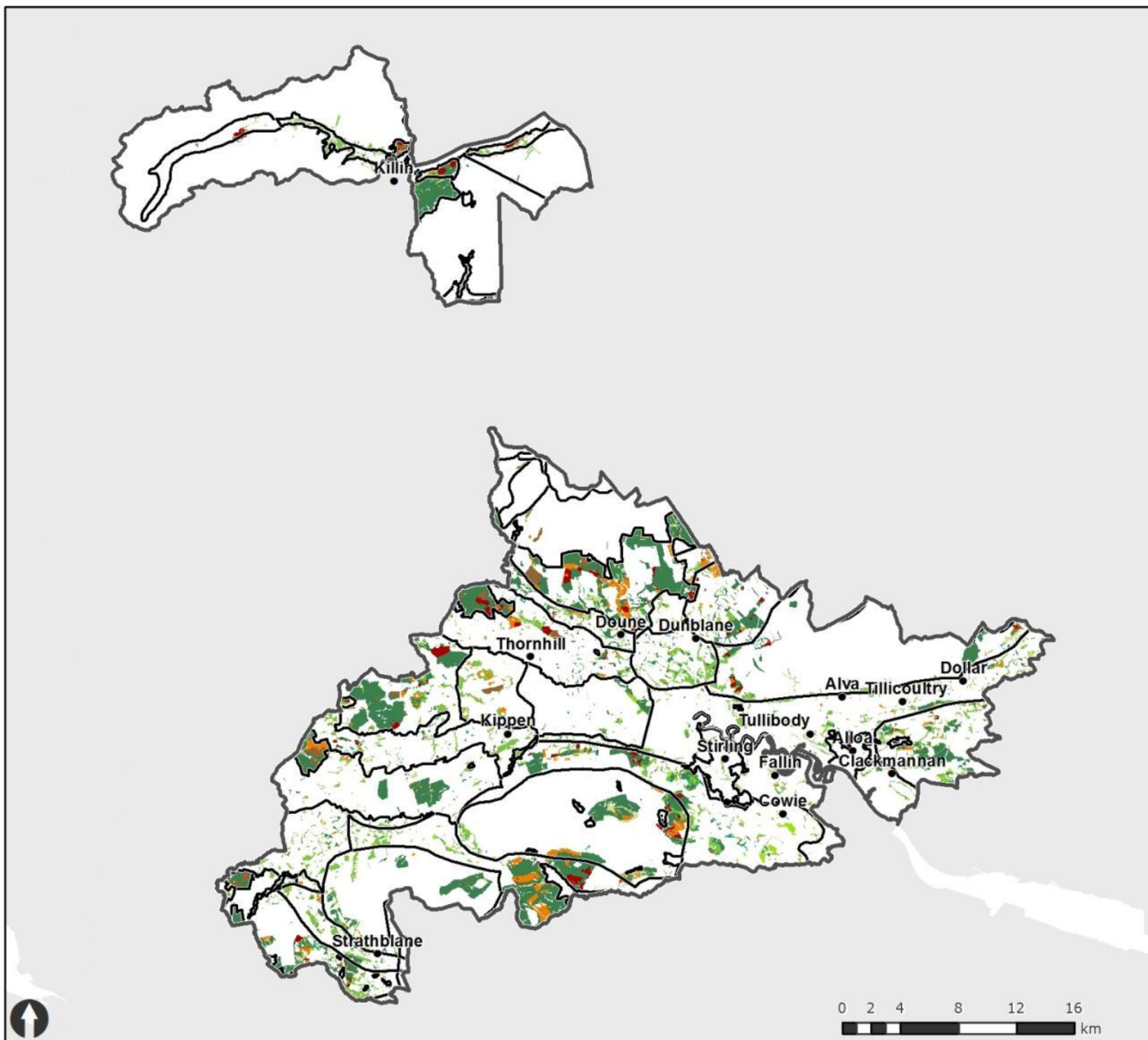
Stirling &
Clackmannanshire
Forestry & Woodland Strategy

Legend

☐ Landscape type boundaries

Woodland classification

- Assumed Woodland
- Low Density
- Shrub Land
- Felled
- Young Trees
- Ground Prepared for Planting
- Conifer
- Mixed - predominantly Conifer
- Mixed - predominantly Broadleaved
- Broadleaved

TITLE

Woodland
Cover by landscape
type

National Forest Inventory

0 2 4   8   12   16
km

Figure 5.4: detailed landscape types

Stirling & Clackmannanshire
Forestry & Woodland Strategy

Legend

LANDSCAPE

- Broad Valley Lowland
- Coastal Flats
- Drumlin Foothills
- Farmed Moorland Hills
- Farmed Strath Floor
- Flat Arable Farmland
- Forested Glen
- Forested Moorland Hills
- Highland Glens with Lochs
- Highland Summits and Plateaux
- Igneous Hills
- Inland Loch
- Loch Island
- Lowland Hill Fringes
- Lowland Hills
- Lowland Hills and Valleys
- Lowland Loch Basin
- Lowland River Valleys
- Lowland Valley Fringes
- Moss
- Moss Farmland
- Open Glen Side
- Open Moorland Hills
- Open Parallel Ridges
- Open Upland Glen
- Open Upland Hills
- River Valley Farmland
- Rolling Farmland
- Rugged Moorland Hills
- Settled Loch Shore
- Settled Strath Floor
- Urban
- Wooded Glen

TITLE

Landscape Character Assessment: 'Landscape' type
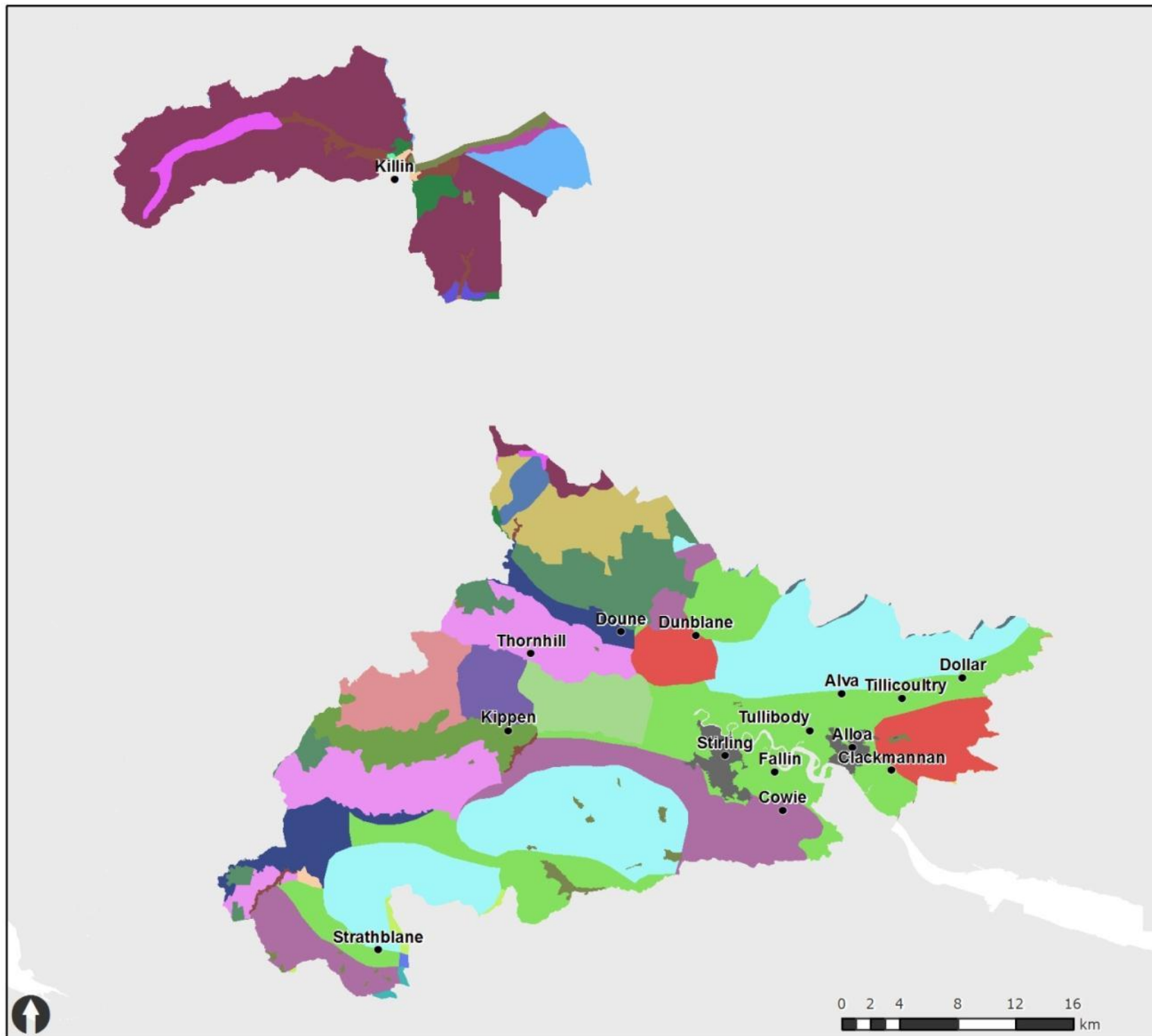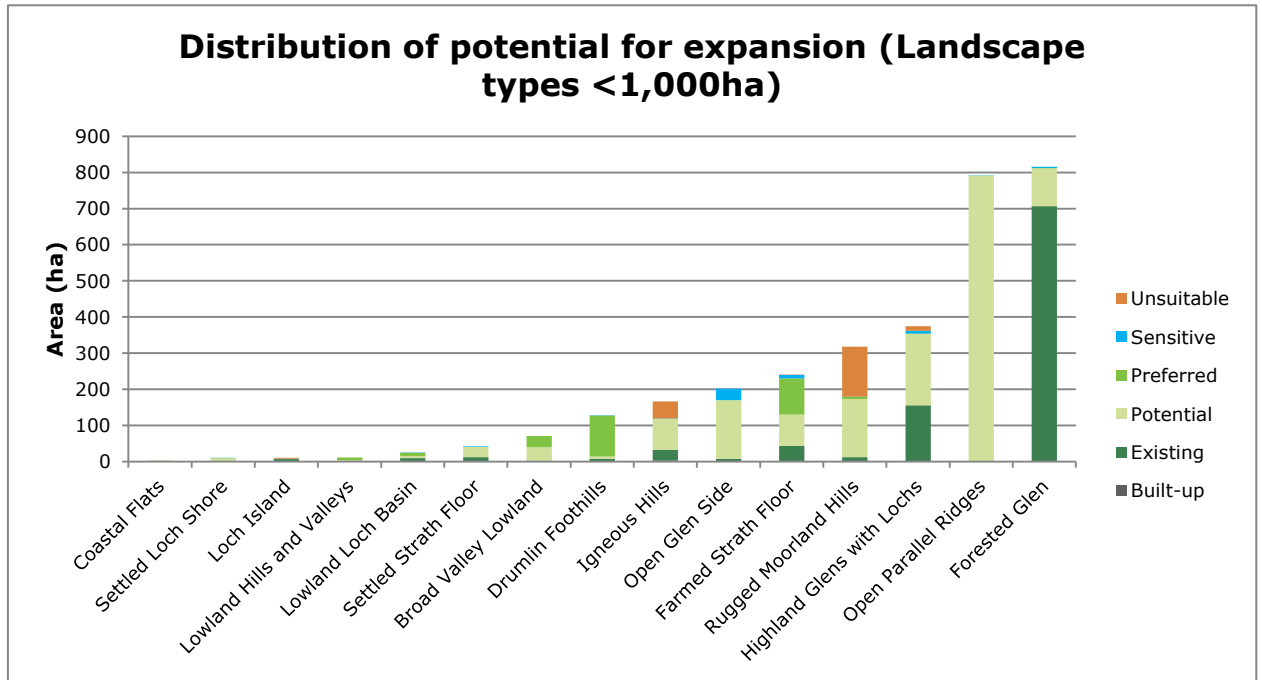
Figure 5.5: Distribution of potential for expansion (landscape types <1,000ha)
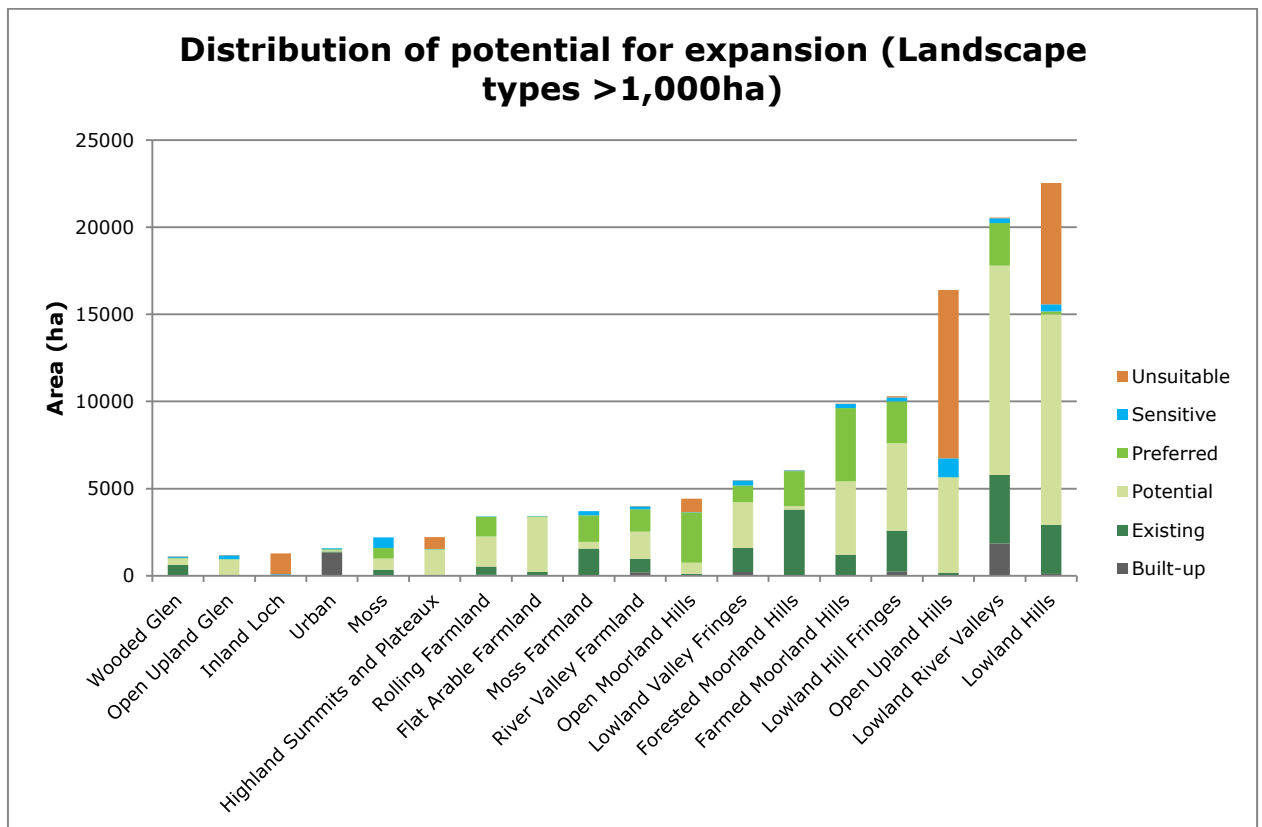
Figure 5.6: Distribution of potential for expansion (Landscape types >1,000ha)

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5.67   Figure 5.5 and Figure 5.6 above illustrate a similar disparity in distribution of potential for woodland expansion (NB. Different areas scales). Relatively few landscape types have high levels/proportions of 'preferred' land, with much of the resource concentrated on lower quality lowland farmland, moorland and moorland fringes. Land with some 'potential' for expansion is more widely distributed, with higher concentrations on the lowland hills and river valleys – reflecting the presence of some level of constraint.

Scenario 1: Low-Level Expansion

5.68   This scenario represents **increasing woodland cover to 19% of land area** (2,603ha of additional woodland, representing a 10% increase on existing woodland cover).

5.69   While this would be an increase over current activity, it is based on a very cautious – and potentially unambitious – approach to expanding woodland cover in the region. It seeks to balance the loss of cover through restructuring of existing conifer forests and implement some expansion across the region.

Table 5.3: Scenario 1 assumptions

Land category	Conversion rate	Assumptions
Built up	+0.5%	Relatively small-scale greening within larger urban areas
Existing	-3%	Limited loss due to forest restructuring
Potential	+3%	Modest conversion, spread across lowland area and foothills
Preferred	+5%	Relatively low level of activity, likely to be concentrated on lower slopes (expansion of forests to mitigate restructuring losses etc)
Sensitive	+1%	Small-scale, conservative enhancement of designated woodland assets (e.g. designed landscapes and woodland SSSI)

Assessment

5.70   Despite the relatively cautious approach to expansion, implementation of Scenario 1 would generate 2,730ha of additional woodland across the region. This is likely to be concentrated in the lowland hills, but with a significant proportion moving 'downslope' into lower-lying areas. The amount of 'potential' land available in lowland areas could help to stimulate growth in the farm woodland sector and would be particularly beneficial in helping to deliver increased resilience to climate change. Given the relatively low conversion factors proposed for these areas, no significant conflict should arise with existing land uses or conservation interests.

Scenario 2: moderate expansion

5.71 This scenario represents increasing woodland cover to 20% of land area (4,149ha of additional woodland, representing a 20% increase on existing woodland cover).

5.72 This scenario looks to effect a substantial increase in woodland cover across the region, delivering woodlands of all types, but with a focus on planting for timber production where this is environmentally acceptable (in line with the recommendations of the recent Woodland Expansion Advisory Group report).

Table 5.4: Scenario 2 assumptions

Land category	Conversion rate	Assumptions
Built up	+5%	Relatively small-scale greening within larger urban areas
Existing	-3%	Limited loss due to forest restructuring
Potential	+5%	More ambitious conversion, spread across lowland area and foothills
Preferred	+10%	More extensive activity; expansion of softwood forests where feasible
Sensitive	+1%	Small-scale, conservative enhancement of designated woodland assets (e.g. designed landscapes and woodland SSSI)

Assessment

5.73 This scenario would expand the existing woodland resource by more than a quarter of its existing area, resulting in potentially significant landscape change – particularly in lowland and upland fringe areas.

5.74 *While the majority of this change would be concentrated in areas identified as having no significant strategic constraints* – i.e. the 'preferred' areas – the more extensive conversion of 'potential' class land raised the possibility of some adverse effects, particularly in relation to change to locally designated landscapes. It should be noted that the majority of landscape change generated by this scenario is likely to be positive – with restructuring of existing forests delivering significant landscape enhancement, new softwood plantings adopting continuous cover techniques and expansion of native woodland networks.

5.75 There may be some minor conflicts with existing land uses in 'potential' areas, with farm woodlands and habitat networks taking relatively small areas of land in agricultural areas out of cultivation – but it is likely that the benefits delivered in terms of landscape enhancement (reinforcing / restoring landscape structure), resilience to climate change (through provision of shelter, shade and erosion reduction) and contributions to sustainable water management are likely to outweigh these effects.

5.76 Again, the level of conversion within 'potential' areas could put pressure on Inventory Battlefield sites and generate adverse effects – although it is acknowledged that other constraints in these areas are likely to limit the scale and type of woodland that would be considered appropriate.

Scenario 3: high level of expansion

5.77 This scenario represents a much more ambitious approach to delivering woodland expansion that would require a step-change in activity. It would increase woodland cover to 23% of land area (7,992ha of additional woodland, a 38% increase on existing levels).

5.78   Delivery of this scenario would likely require significant funding through SRDP and its successor programmes to deliver the increased levels of activity required.

Table 5.5: Scenario 3 assumptions

Land category	Conversion rate	Assumptions
Built up	+1%	More intensive greening within larger urban areas
Existing	-3%	Limited loss due to forest restructuring
Potential	+12%	More ambitious conversion, spread across lowland area and foothills
Preferred	+15%	High level of activity; expansion of softwood forests where feasible
Sensitive	+2%	More ambitious enhancement of designated woodland assets (e.g. designed landscapes and woodland SSSI)

Assessment

5.79   The increase in woodland cover proposed by this scenario – by significantly more than a third of the existing area – substantially raises the potential for environmental impacts. While much of the expansion will be concentrated on 'preferred' areas, therefore avoiding direct impacts on nationally significant sensitivities, the level of planting could result in indirect effects on supporting ecosystem components and functions. This may be particularly significant in relation to the water environment and the potential for impacts on the region's rivers and lowland raised bogs. While the assumed mitigation delivered through FCS regulatory processes and adherence to the UK Forestry Standard should avoid the majority of effects, there may be unforeseen cumulative impacts arising from numerous and/or large woodland creation schemes that could affect the integrity of sensitive assets.

5.80   The landscape change affected by this scenario will clearly be more significant, and will necessarily be concentrated in the areas with the densest distribution of 'preferred' and 'potential' land – notably the moorland and lowland hills and fringes, river valleys and moss farmland. There will be significant opportunities to enhance landscape character, particularly in lowland areas where policy and farm woodlands contribute to landscape structure. In upland and upland fringe areas, changes in character will be readily apparent as forests expand 'downhill' onto lower slopes. This may generate some adverse effects, particularly where open views are a key characteristic, or where poorly-planned woodland could reduce the legibility of important landscape features.

5.81   In 'potential' areas, there may be increased possibility of adverse effects on Inventory Battlefields and undesignated archaeological sites and landscapes.

Scenario 4: Notional Capacity

5.82   This scenario is based on an understanding of the general ability of the 33 landscape types within the study area to accommodate new woodland. Different conversion factors were applied to each land class within each landscape type, based on judgements on the type and scale of new woodland that would be appropriate in broad environmental terms. The figures applied and calculations for this and the other three scenarios are included as Appendix 3.

5.83   The capacity-based approach would increase woodland cover to 21% of land area, equating to an additional 4,344ha of woodland (an increase of 21% over existing levels).

5.84 The landscape-led framework used to model potential expansion in this scenario is intrinsically more sensitive to the environmental characteristics of the region. It is intended to give a more realistic impression of the level of expansion that could be accommodated, taking into account the specific constraints and opportunities within each landscape type which would be taken into consideration through the SRDP / EIA process.

5.85 This scenario would still result in a significant increase in the region's woodland cover – increasing to 21% of land area. Broadly, the distribution of expansion mirrors that of the 'moderate' scenario, but with a slight increase in emphasis on upland and upland fringe areas and larger-scale lowland landscapes of lower sensitivity to change.

5.86 Areas of higher sensitivity to woodland, with particularly open character, cultural heritage value or environmental dependencies relating to key assets were afforded lower levels of expansion.
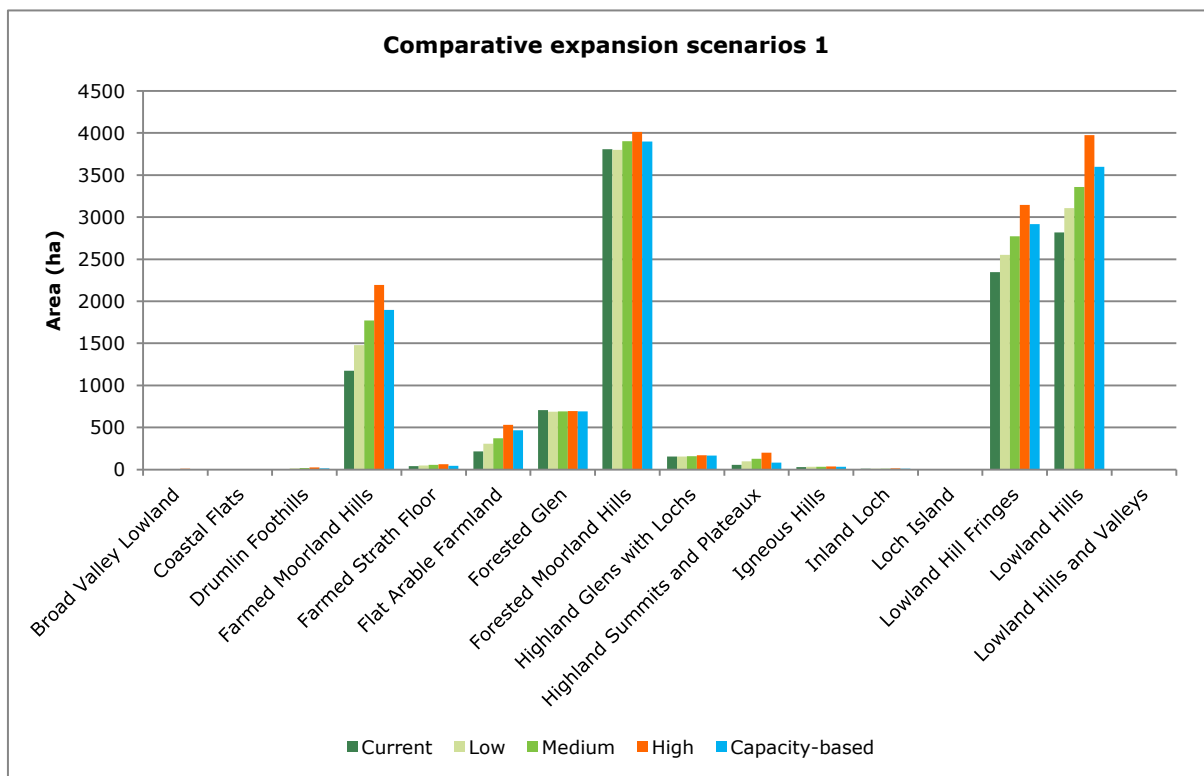
Figure 5.7: graph comparing expansion scenarios (1/2)
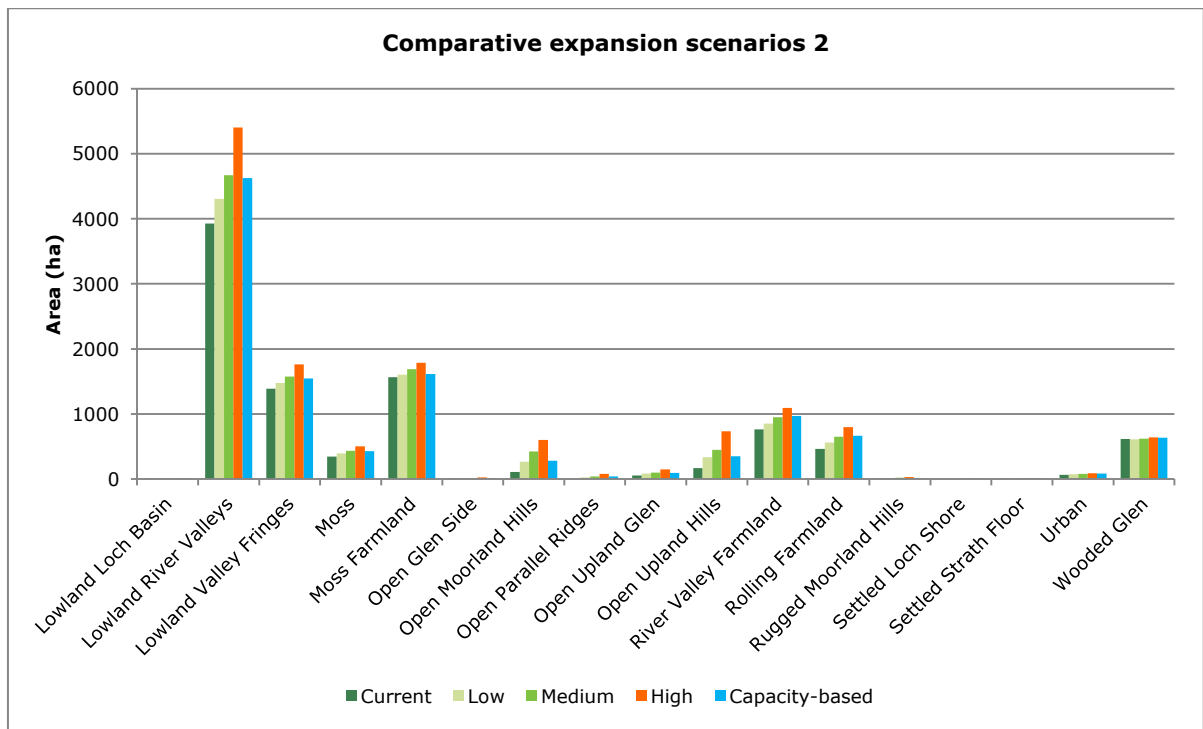
Figure 5.8: graph comparing expansion scenarios (2/2) – note different scale

5.87   Landscape change would still be a significant factor across the region, with some areas experiencing large increases in woodland cover, for example:

- farmed moorland hills, where cover would increase by 62% of existing wooded area / an additional 7% of land area;

  - there are opportunities in this area to expand larger-scale woodlands that incorporate commercial softwoods, creating more naturalistic forests employing lower impact management techniques. In addition, there are opportunities for new native woodlands in riparian locations to contribute to flood management by reducing the rate of flow into some of the Forth's tributaries.

- open moorland hills, where cover would increase by 163% of existing wooded area / an additional 4% of land area;

  - although this is a significant increase, it is set in the context of a very low baseline level – expansion could readily be accommodated through appropriate enhancement of native woodland networks on the lower slopes, providing enhanced connectivity to/through existing large-scale softwood forests.

- open upland hills, where cover would increase by 112% of existing wooded area / only an additional 1% of land area;

  - this – and probably more – could easily be delivered through careful enhancement of existing upland riparian networks to Glen Lochay, Glen Beich (north of Loch Earn) and Strath Tay.

- flat arable farmland, where cover would increase by 115% of existing wooded area / an additional 6% of land area;

  - while this appears to be a major rise in a lowland area, it is starting from a very low base and could readily be achieved through development of appropriate native and mixed woodland, enhancing the landscape structure provided by designed landscape / policy woodlands and contributing to habitat networks. As an area at major risk of flooding, new woodland could also make a contribution to sustainable water management, attenuating flows of floodwater and reducing rates of run-off.

5.88   This scenario is viewed as representing the upper limit of sustainable woodland expansion that could be achieved during the 40 year lifespan of the FWS. In practice, it is likely that a number of external factors will reduce the amount of woodland creation that will occur, principally:

- **Economic issues**: likely to restrain the amount of woodland creation in lowland areas, as land values – particularly in agricultural areas – are likely to remain sufficiently high to make many forms of woodland less attractive, especially where there is a perceived conflict with existing land use[7].
  Uncertainty with regard to future rural development support mechanisms may also reduce uptake.

- **Cultural barriers**: areas currently managed for agriculture or sporting uses may present a significant challenge to appropriate woodland expansion due to potential misunderstanding of government objectives and aspirations for expansion. Areas with higher proportions of tenant farmers may also experience limited expansion, as the longer-term incentives of woodland creation often do not apply due to uncertainty in tenure.

- **Conflict with local sensitivities**: actual levels of expansion would necessarily be lower than this scenario allows for, as site-specific sensitivities (such as priority habitats, historic assets and scheme-specific design issues) will exclude an unknown proportion of 'preferred' and 'potential' land from afforestation.

The input of consultees is welcomed on the notional capacity figures used in the development of this scenario – included as Appendix XXX. For ease of manipulation, the accompanying spreadsheet can be obtained from **glasgow@landuse.co.uk**

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[7] The figures used in capacity-based scenario are unlikely to result in significant actual conflict – and instead could provide support for existing uses and bolster resilience to climate change – but would require overturning of strong cultural barriers to forestry in key sections of the agricultural community.

6 Mitigation and Enhancement

Introduction

6.1   Schedule 3 para. 7 of the Environmental Assessment (Scotland) Act 2005 requires that the Environmental Report includes the measures envisaged to prevent, reduce and as fully as possible offset any significant adverse effects on the environment of implementing the FWS. It is also required to outline opportunities for the enhancement of positive effects.

Recommendations

6.2   In general, the FWS will have a positive overall effect on the environment of the region – the explicit acknowledgement of the assumed mitigation delivered through existing regulatory processes (Appendix V of the FWS) is particularly helpful. However, a useful addition would be a statement highlighting the advantages to land managers of consulting with the relevant local authority archaeology adviser to help avoid adverse effects on heritage assets.

6.3   The following table provides a summary of proposed mitigation measures for the FWS, structured by SEA objective:

Table 6.1: summary of mitigation measures

SEA objective	Mitigation measures	Commentary
SEA Objective 1: To conserve and enhance the diversity of habitats and species	Prioritising protection and expansion of threatened woodland habitats, including montane scrub	Expansion difficult to deliver through SRDP
	The Strategy should ensure that management of woodland for biomass and biomass planting provides optimal biodiversity benefits in line with good practice guidance.	
	The Strategy should ensure that the development of facilities for visitors and access to woodlands is planned with regard to natural heritage sensitivity.	Likely to be at least partly delivered through planning system
	The Strategy should ensure that any improvements to degraded urban/peri-urban environments take into account existing biodiversity.	
SEA Objective 4: To	The Strategy should ensure woodland expansion/creation does not adversely affect sensitive	

SEA objective	Mitigation measures	Commentary
avoid adverse direct and indirect impacts on soil stability, structure and quality	soil resources, including peat, to avoid the loss of soil carbon. The Strategy should target woodland planting to vacant and derelict land or contaminated land which will improve soil stabilisation and quality.	
	Care will need to be taken to ensure that a balance is achieved between making productive use of residues from forest thinnings and leaving enough residues behind to protect and enrich the soil in these areas.	
	The Strategy should promote sensitive forestry and woodland management practices which reduce carbon loss from soil, i.e. carbon conscious site preparation and harvesting, reduced liming, protection against disturbance and reduced harvest residue removal.	
	The Strategy should promote continuous cover forestry as an alternative to clearfell to protect soil quality.	
	The Strategy should promote the establishment of woodland buffer strips alongside surface waters to reduce run-off and intercept pollutants.	
SEA Objective 5: To protect and improve relevant waterbody status	The Strategy should target areas where soil erosion is a concern and ensure woodland expansion/creation conserves key sites and priority habitats.	
	The Strategy should promote the creation of floodplain woodlands which	

SEA objective	Mitigation measures	Commentary
	offer a range of multiple benefits to biodiversity including reduce diffuse pollution, enhanced biodiversity and flood risk management.	
SEA Objective 6: To protect and enhance air quality	The Strategy should promote the use of clean wood burners in the development of biomass to reduce the emission of pollutants. The Strategy should provide stronger commitment to promote the location of biomass production in close proximity to local markets to reduce the potential for unnecessary timber miles.	
	The Strategy should focus on improving the provision of recreational woodlands close to settlements which will have multiple benefits, i.e. by reducing the need for people to travel to participate in outdoor recreation, and improving the air quality and consequently the health of urban residents. The Strategy should encourage joined up access and recreation provision through expansion of integrated habitat networks and improving connectivity of urban/peri-urban woodlands.	
SEA Objective 12: To conserve and enhance the cultural and built environment	Inventory Battlefields should be included within the 'sensitive' land category	
SEA Objective 13: Conserve and enhance the character	The strategy should highlight the value of Landscape Character Assessment in helping guide the development of appropriate woodland	

SEA objective			Mitigation measures	Commentary
	of the region's landscape			

Key Issues Requiring Guidance

6.4   The following issues require special attention, and could benefit from the publication of context-specific guidance to support FCS, local authorities and land managers in developing and assessing proposals:

Design:

- Understanding and supporting landscape form and character is key in designing visually appealing woodlands

- Making use of available tools, such as Integrated Habitat Network data, can ensure that new woodlands protect important habitat resources and build connectivity in the right places

- Understanding the role trees and woodland play in contributing to the character and significance of the historic environment can create opportunities for interpretation and to improve the settings of key assets

- Maximising the potential for trees and woodland to contribute to sustainable water management and habitat networks in new development and to help root schemes within the wider landscapes

- Guidance regarding species choice, stocking densities and silvicultural systems to help 'climate proof' future woodlands could be valuable

Balance with other land uses:

- Understanding the distribution of under-used and (functionally) derelict land in agricultural areas may help clarify where new woodlands can add most value – or help target support for appropriate woodland creation

- Guidance tailored to specific conditions in each local authority area may be useful for clarity, and can support wider sub-regional sustainable development goals

Multi-objective management:

- May be important to acknowledge that specific areas will be subject to different pressures and priorities, and that it may not be possible to apply all of the FWS' recommendations to every site. However, developing more detailed guidance for assessing the potential contribution of new woodlands to each of the FWS' key themes may prove useful in helping local authorities guide developers in the planning, implementation and long-term management of new woodlands

7   Monitoring

7.1   Section 19 of the Environmental Assessment (Scotland) Act 2005 requires the Responsible Authority to monitor significant environmental effects of the implementation of the PPS. This needs to be done in such a way as to also enable them to identify any unforeseen adverse effects at an early stage and to enable them to take appropriate remedial action.

7.2   No significant adverse environmental effects were identified; however monitoring is required to allow identification of unforeseen adverse environmental effects.

7.3   The following activities were undertaken to establish the monitoring approach:

- An initial review of indicators associated with the SEA objectives and emerging from the baseline analysis;

- Review of key issues emerging from the assessment requiring monitoring;

- Consideration of appropriate indicators and monitoring processes.

7.4   No monitoring framework is identified within the SCFWS, but it is understood that this will be delivered through a stand-alone Action Plan.

7.5   The following table outlines the key issues for which monitoring should be undertaken.

Table 7.1: potential indicators for monitoring issues raised by the assessment

Issue	Indicator
Impact of woodland creation on Inventory Battlefield sites	Number of schemes proposed within Inventory sites
	Incidence of local authority archaeologist / Historic Scotland objection to proposals
Impact of woodland creation on Natura 2000 sites	Number of proposals requiring HRA / AA
	Number of proposals refused / modified as a consequence of impacts on N2K sites
	Number of proposals within 1km of N2K sites
Impact on air quality from biomass development (*NB. This is principally a planning issue*)	Number and distribution of proposals for development incorporating biomass technology
	Need for Air Quality Management Areas / Smoke Control Zones (none currently within the study area)

8 Next Steps

8.1   This section sets out the future milestones in the development of the Stirling and Clackmannanshire Forestry & Woodland Strategy, its SEA and the dates when these are expected to be completed.

Table 8.1 Anticipated PPS making and SEA milestones

Expected date	Stage
November 2012	Publication of draft FWS and ER for 4-week public consultation
December 2012	Closing date for responses
February 2013	Publication of finalised FWS and ER
March 2013	Adoption by partner local authorities, and publication of SEA Post-Adoption Statement

Appendix 1
Relationship to Other Plans, Programmes and Strategies

Name of PPS	Environmental requirements of PPS	How it affects, or is affected by the Forestry and Woodland Strategy
BIODIVERSITY		
Nature Conservation (Scotland) Act (2004)	Introduced a 'duty to further the conservation of biodiversity' for all pubic bodies, and sets out more specific provisions within this (e.g. for SSSIs). Also states a requirement for the preparation of a Scottish Biodiversity Strategy, to which all public bodies should pay regard.	Biodiversity: FWS should aim to conserve Scotland's biodiversity for future generations by conserving habitats and species and raising public awareness on the importance of biodiversity.
Scottish Planning Policy (2010)	Protection of international and national environmental designations complemented by local designations. Woodland protection and enhancement.	Biodiversity: FWS should aim to conserve Scotland's biodiversity for future generations by conserving habitats and species and raising public awareness on the importance of biodiversity. The FWS should aim to conserve the ancient and semi natural woodland of the region whilst recognising the potential of forestry for bio-mass.
The Scottish Forestry Strategy (2006) (and associated SEA). Planning for Forestry and Woodland (May 2010)	Key themes include to: • reduce the impact of climate change; • get the most from Scotland's increasing and sustainable timber resource; • make access to and enjoyment of woodlands easier for all to improve health; • protect the environmental quality of our natural resources; and • help to maintain, restore and enhance Scotland's biodiversity.	Biodiversity: FWS should aim to conserve and enhance biodiversity. Population and Human Health: FWS should aim to improve health and well-being by providing biodiversity and green infrastructure benefits. Climatic Change and Air Quality: FWS should aim to reduce impact on and adapt to climate change.
Local Biodiversity Action Plans of the Stirling and Clackmannanshire Local Authorities	The LBAPs translates national targets for species and habitats into effective local action, stimulates local working partnerships into tackling biodiversity conservation, raises awareness, identifies local resources, identifies local targets for species and habitats ensures delivery and monitors progress.	Biodiversity: FWS should support the aims of the LBAPs and avoid adversely affecting key habitats and species as identified therein.
UK Forestry Standard – Forest Nature Conservation Guidelines (1990)	Forests and woodlands are a rich and diverse habitat for wildlife to be recognised and cared for by managers. These guidelines, based on practical measures already being taken, will provide the manager with the advice needed to reach high standards in 'state of the art' nature conservation in forestry throughout the country.	Biodiversity: FWS should reflect these guidelines in planning for biodiversity benefits.
The Conservation of Habitats and Species Regulations (2010)	The Habitats Regulations require competent authorities to carry out appropriate assessments in certain circumstances where a plan or project affects a Natura (European) site.	Biodiversity: FWS should adhere to the regulations and seek to avoid Special Areas of Conservation or Special Protection Areas. If a HRA is deemed appropriate, the FWS should focus on the qualifying interests of the Natura site affected and must consider any impacts on the conservation objectives of the site.

Woods for Nature: Our Biodiversity Programme 2008-2011 (2008)	Forestry Commission Scotland policy to enhance or conserve biodiversity, by managing the national forest estate and encouraging good practice and conservation projects in private woodlands.	Biodiversity: FWS should seek to implement this policy in the Stirling & Clackmannanshire context.
CLIMATIC FACTORS		
Scottish Planning Policy - Renewable Energy, PAN 45 and 84	The Scottish Ministers have set a target of generating 40% (since quantified as 6 GW) of Scotland's electricity from renewable sources by 2020 and confirmed that this target should not be regarded as a cap. The importance of using clean and sustainable energy from renewable sources will continue to increase as a result of global imperatives to tackle climate change and the need to ensure secure and diverse energy supplies. PAN 45 complements SPP and highlights examples of good practice across Scotland. A key role of the planning system is to support a move towards low and zero carbon development through the use of energy efficient, micro-generating and decentralised renewable energy systems. PAN 84 provides information and guidance on implementing the targets set in the SPP.	Climatic Change and Air Quality: FWS should support increased production of woody biomass as a low carbon energy source and development, where appropriate, of other renewable energy infrastructure on woodland sites. Forestry operations should be encouraged to use low carbon fuels.
Climate Change (Scotland) Act 2009	The Act creates the statutory framework for greenhouse gas emissions reductions in Scotland by setting an interim 42 per cent reduction target for 2020 and an 80 per cent reduction target for 2050.	Climatic Change and Air Quality: FWS should contribute towards the targets set by the bill through the development of renewable energy sources (see above), woodland expansion for carbon sequestration, protection of carbon sinks in deep peat soils, and substitution of high carbon building materials (e.g. concrete) by locally sourced timber.
Biomass Action Plan for Scotland (2007)	The Biomass Action Plan sets out a coordinated programme for the development of the biomass sector in Scotland and aims to: • to provide a summary of the wide range of existing activities, actions and initiatives; • to provide a focus for a strategic coordinated approach to developing biomass for energy production across the heat, electricity and transport sectors; • to identify roles and responsibilities for government, industry and public stakeholders to develop a vibrant bio-energy industry in Scotland; and • to identify future actions and gaps.	Climatic Change and Air Quality: FWS should promote increased supply of woody biomass as a low carbon energy source and support development of the biomass fuel processing and supply chain.
Forestry Commission Scotland Climate Change Action Plan (2009)	Describes what the Commission will do to increase the contribution and response of Scottish forestry to the challenges	Climatic Change and Air Quality: FWS should be consistent with the aims of this policy document.

	of climate change.	
Scottish Natural Heritage (SNH) Climate Change Policy Statement and associated Action Plan (Draft) 2009	The Policy Statement sets out four key policies for SNH, namely, • helping to understand and publicise the effects and consequences of climate change for the natural environment; • advising on infrastructure and land management practices which help to mitigate climate change; • guiding adaptation so that nature can as far as possible, adapt to a changing climate and so that people can make best use of natural processes in preparing for climate change; and • promoting action by organisations and individuals by setting an example in the management of SNH's own operations, and through our wider environmental education work.	Climatic Change and Air Quality: The FWS should set out how forestry and woodlands can mitigate climate change (e.g. increased sequestration by growing trees) and adapt to it (flood management, habitat networks, choice of tree species).
Getting the best from our land: A Land Use Strategy for Scotland (2010)	To sustain the net amount of carbon sequestered by forestry we need to increase woodland creation rates to 10-15,000 hectares per year and to sustain this rate thereafter. We will also ensure that deforestation is only permitted with compensatory planting. We must recognise the need to balance the gains arising from tree-planting against potential losses of soil carbon, so that the main focus of woodland creation will be away from areas with deeper peat soil (also stated in FCS Rationale for Woodland Expansion).	Climatic Change and Air Quality: The FWS should set out how the Stirling & Clackmannanshire area can contribute to woodland expansion targets and avoid areas of deep peat soils.
Clackmannanshire Council Sustainability and Climate Change Strategy (2010)	The Strategy sets out a vision for a sustainable Clackmannanshire, how sustainability will be supported and encouraged within the community and identifies the priorities that are critical to making Clackmannanshire more sustainable.	Climatic Change and Air Quality: The FWS should set out how forestry and woodlands can mitigate climate change (e.g. increased sequestration by growing trees) and adapt to it (flood management, habitat networks, choice of tree species).
POPULATION AND HEALTH		
Scottish Planning Policy (2010)	Access to good quality open spaces and opportunities for sport and recreation make important contributions to a healthier Scotland. The planning system has a role in helping to create an environment where physical wellbeing is improved and activity made easier.	Population and Human Health: Outdoor sport and informal recreation are an important part of a healthy life and therefore areas for these activities should be protected and enhanced within the FWS.
Making the Links: Greenspace and the Partnership Agreement, Greenspace Scotland	Green spaces contribute to quality of life, access, health, education, community cohesion, biodiversity and enterprise. They have a significant role to play in relation to housing and the environmental and community services that they	Population and Human Health: FWS should seek to protect, enhance and promote woodland as part of a broader green spaces network.

	offer.	
Core Paths and Access Strategies of the two Local Authorities	Core Paths Plans and Access strategies look to promote themes of: • green spaces; • human health and well-being; • inclusion; • biodiversity.	Population and Human Health: FWS should contribute towards improving the health and well-being of the Stirling & Clackmannanshire area by promoting core paths and accessibility to the countryside and green spaces (GN concept).
Community Planning Partnerships Community Plans of the two Local Authorities	Community Plans focus on achieving measurable improvements to the quality of life for all in the local authority area and provides a framework for delivering long term visions for the area. The Community Plan sets the context for continued joint working between the Local Authority Area and the local community and its partner agencies.	Population and Human Health: FWS should seek to involve and empower communities in woodland planning and management, supporting the goal of Community Plans to foster engagement between planning authorities and the local community.
Economic Strategies for the two Local Authorities	The Strategies provide the context for economic development in the counties, and identify challenges and priorities for building the economies of the two counties.	FWS should seek to demonstrate how it intends to contribute to the economy of the two counties.
EU Environmental Noise Directive 2002/49/EC	To provide a strategic approach to controlling environmental noise including drawing up strategic noise maps and action plans.	Population and Health: It may be possible to address noise hotspots identified by strategic noise maps through tree planting e.g. as a buffer along transport corridors. More generally, woodland conservation and enhancement can help to maintain areas of high tranquillity.
Better Heath, Better Care (Scottish Government 2007)	It aims to deliver a healthier Scotland by helping people to sustain and improve their health, especially in disadvantaged communities, ensuring better, local and faster access to health care. It endeavours to shift care into communities, raise quality and reduce inequality.	Population and Human Health: The FWS to support the work of the Health Boards in promoting health equality.
UK Forestry Standard – Forests Recreation Guidelines (1992 – currently being revised and updated)	These guidelines outline the principles and standards of good recreation management practice in forests and woodlands. The Forestry Commission encourages owners to make at least part of their woodland accessible to the public, particularly close to towns and cities where woodland is scarce.	Population and Human Health: The FWS should take note of these guidelines in planning the role of woodland for outdoor recreation and community use.
Forests for People Recreation Framework (2008)	Forestry Commission Scotland's Recreation Framework sets out the vision, priorities and focus for action for access, recreation, and tourism on the national forest estate.	Population and Human Health: The FWS should seek to implement this policy in a Stirling and Clackmannanshire context.
Woods In and Around Towns 'WIAT' (2008)	The WIAT programme provides the focus for Forestry Commission Scotland's work on improving quality of life in towns and cities.	Population and Human Health: The FWS should seek to implement this policy in a Stirling and Clackmannanshire context.

Woods for Health Strategy (2009)	Woods for Health demonstrates Forestry Commission Scotland's commitment to health improvement.	Population and Human Health: The FWS should seek to implement this policy in a Stirling and Clackmannanshire context.
Getting the Best from our Land: A Land Use Strategy for Scotland (2010)	Community woodland ownership under the National Forest Land Scheme has helped to build community participation and capacity. The Government will continue to encourage and give appropriate guidance on land ownership models that give local communities a stake in their future, and which support sustainable land use.	Population and Human Health: The FWS should take account of opportunities for community woodland ownership.
SOIL		
EU Soil Thematic Strategy 2006	Aims to protect the role of soil in storing CO2, avoiding water pollution and preserving biodiversity.	Soil: The FWS should seek to further the attainment of these soil protection aims e.g. by avoiding forestry on deep peat soils, support for adherence to the UK Forestry Standard and biodiversity measures described above.
PAN 33 Development of Contaminated Land (2000)	Document provides advice with regards to the development of contaminated land, which any developments will need to adhere to.	Soil: The FWS should recognise the potential for woodland planting to contribute to remediation of contaminated land into green space or for future development.
The Contaminated Land (Scotland) Regulations (2005)	Details activities that are prohibited to prevent the contamination of land and watercourses.	Soil: The FWS should not conflict with these regulations.
The Scottish Soil Framework (2009)	The Framework aims to raise awareness of the services soils provide to society and the pressures they face. Scotland's soils are generally in good health but the most significant pressures are climate change and loss of soil organic matter. Both affect most soil functions with national impacts which are difficult to reverse. In the case of greenhouse gas emissions, the impacts are global. The Framework identifies a wide range of activities that will contribute to thirteen soil outcomes.	Soil: The FWS should contribute to the outcomes and related actions where appropriate.
UK Forestry Standard – Soil Guidelines (1998 – currently being revised and updated)	Forests and Soil Conservation Guidelines advise owners and managers how to conserve the soil as a fundamental resource upon which trees and the whole forest ecosystem depend. They deal mainly with the effects of forest operations on the soil itself, although the effects on plant and animal communities supported by the soil have also been taken into account.	Soil: FWS should adhere to the UK Forestry Standard and the Forests and Soil guidelines.
WATER		
The Water Environment and Water	Ensures that all human activity	Water Quality: FWS should follow all appropriate

Services (Scotland) Act 2003 (Designation of Scotland River Basin District) Order 2003	that can have a harmful impact on water is controlled.	guidance and legislation.
River Basin Management Plans: Scotland River Basin District and Forth Area Management Plan	• Identifying areas of the water environment for protection and improvement; • Identifying where current or historic activities are constraining the quality of the water environment and the biodiversity it supports; • Details the actions required to ensure waters of special value (e.g. drinking, biodiversity, shellfish, bathing) are up to standard and maintain the quality where they already meet those standards; • Sets out actions needed to deliver environmental improvements to 2015 and longer to 2027.	Water Quality: FWS should support the river basin management plans and seek to enhance the environmental quality of water in the Stirling and Clackmannanshire area.
Scottish Planning Policy (2010) - Flooding and Drainage Flood Risk Management (Scotland) Act (2009)	Statutory and planning policy framework for delivering a sustainable and risk based approach to managing flooding based upon a catchment focus plans	The FWS should promote opportunities for woodland to provide natural flood risk management (e.g. through tree planting in upper catchments to slow the passage of water).
Marine (Scotland) Bill 2009 (as introduced)	Key measures include: • A new marine planning framework so that increasing use of the seas for energy, fishing, aquaculture, recreation and other purposes is well managed • The new planning system will create a more stable environment for investment • New Marine Planning Partnerships will involve local agencies, communities and stakeholders to ensure a strong local voice • A simpler licensing system will reduce the administrative burden and cut bureaucracy reducing business costs in key growth areas such as renewable energy • Improved marine nature and historic conservation to safeguard and protect Scotland's unique habitats, wildlife and marine archaeology and wrecks • Full regulation of seal management giving much improved protection for seals and a new comprehensive licence system.	The potential for secondary effects on the marine environment will be considered as part of the SEA process. Links between marine spatial planning and land use plans are likely to become increasingly important as a result of the Bill. Water Quality: FWS should take account of the Marine Bill when planning anything that could impact on coastal waters and/ or the sea.
Scottish Planning Policy (2010) Coastal Planning	Development plans should identify coastal areas likely to be suitable for development, areas subject to significant constraints and areas which are considered	This coastal policy may indicate spatial locations which are sensitive to built development but which represent an opportunity for woodland expansion.

	unsuitable for development such as the isolated coast. The identification of coastal locations which are suitable for development should be based on a clear understanding of the physical, environmental, economic and social characteristics of the coastal area and the likely effects of climate change.	
SEPA Position Statement on the Culverting of Watercourses (2006)	SEPA's policy sets out the environmental issues associated with culverting and presents a consistent and pragmatic approach to this aspect of river engineering.	Water Quality: FWS should take account of the environmental issues associated with culverting and opportunities for woodland to form part of any plans to restore culverted rivers to a more natural channel form.
Scottish Water Strategic Asset Capacity and Development Plan	Outlines the current capacity at water and wastewater treatment works across Scotland to let local authorities and developers see "at a glance" what capacity currently exists at a particular location in Scotland. It is intended to use this information to decide whether work will have to be carried out by Scottish Water to increase capacity at treatment works to enable a particular development to go ahead.	Limited interaction with the FWS.
Scottish Water, Water Resource Plan (2008)	In this draft Water Resources Plan we set out our strategy to ensure that all our customers, the length and breadth of Scotland, have a secure supply of clear, fresh, safe drinking water to 2031/32 and beyond. The key environment challenge for Scottish water is to adapt to pressures on water resources due to climate change and environmental constraints.	Water Quality: FWS should not add any additional pressure to Scottish water resources and should seek to help address water quality issues e.g. by reducing soil erosion and associated sedimentation or by providing an alternative economic land use to intensive agriculture in rural areas.
UK Forestry Standard – Forests and Water Guidelines (2003)	Guidelines on the environmental effects of land-use, pollutant inputs and forest operations, and consideration of the impact of lowland and native woodland expansion on the freshwater environment.	Water Quality: FWS should adhere to these guidelines.
The EU Water Framework Directive – integrated river basin management for Europe (2000/60/EC) (2000)	The Water Framework Directive establishes a strategic framework for managing the water environment throughout Europe. It requires a management plan for each river basin to be developed every six years.	Water Quality: The FWS should follow all appropriate legislation and should support the river basin management plans which seek to enhance the environmental quality of water.
The Water Environment (Controlled Activities) (Scotland) Regulations 2011	These are regulatory controls which come under the Water Environment and Water Services (Scotland) Act 2003. Discharges, abstractions, impoundments and	The FWS should not conflict with these regulations.

	engineering works all require to be authorised under these regulations.	
Woodland for Water: Woodland measures for meeting Water Framework Directive objectives (2011)	The report considers the key issues relating to woodland and the Water Framework Directive. The report provides strong evidence to support new proposals to expand woodland in appropriate locations for soil and water benefits.	The FWS should refer to the document for guidance on how careful siting and design of woodland can benefit the water environment.

AIR		
The Air Quality Strategy for England, Scotland, Wales and Northern Ireland. Working Together for Clean Air (2000)	Sets out the air quality strategy for the UK with objectives and targets, referring to the Environment Act 1995 legislation. It seeks a reduction in the levels of 8 harmful pollutants present in the air, which in turn promote: • the protection of human health; • the protection of vegetation and ecosystems	Air Quality, Human Health and Safety, Biodiversity: FWS should contribute to reduction in air pollution e.g. by encouraging sustainable transport choices and by recognising the potential for urban trees to remove pollutants from the air for the benefit of human health and biodiversity.
Local Air Quality Management Act (Part of the Environmental Act 1995)	Sets out duties requiring local authorities to review and assess air quality in their area from time to time, the reviews forming the cornerstone of the system of local air quality management.	Air Quality, Human Health and Safety: AQMAs may indicate where potential air quality benefits from tree planting are greatest.

MATERIAL ASSETS		
Scotland's National Transport Strategy (2006)	• Promote social inclusion by connecting remote and disadvantaged communities and increasing the accessibility of the transport network; • Protect our environment and improve health by building and investing in public transport and other types of efficient and sustainable transport which minimise emissions and consumption of resources and energy; • Improve safety of journeys by reducing accidents and enhancing the personal safety of pedestrians, cyclists, drivers, passengers and staff.	Material Assets: FWS should seek to integrate with the aims of the National Transport Strategy e.g. by providing venues for outdoor recreation and woodland-based tourism that are accessible by sustainable modes.
Strategic Transport Projects Review (STPR) (2008)	STPR complements the National Transport Review and seeks to: • Improve journey times and connections – to tackle congestion and the lack of integration and connections in transport which impact on our high level objectives for economic growth, social inclusion, integration and safety • Reducing emissions – to tackle the issues of climate change, air quality and health improvement which impact on our	Material Assets: FWS should seek to integrate with the aims of the STPR. Population and Human Health: FWS should support the STPR interventions aimed at reducing congestion, emissions etc. and improving human health. Climatic Factors and Air Quality: FWS should support the STPR interventions aimed at reducing congestion, emissions etc. such as tackling issues of climate change and the availability of public transport to reduce dependency on cars.

	high level objective for protecting the environment and improving health, and • Improving quality, accessibility and affordability – to give people a choice of public transport, where availability means better quality transport services and value for money or an alternative to the car.	
Scottish Planning Policy (2010) - Transport	The SPP supports the reduction of emissions from transport sources as a contribution to achieving Scottish Government greenhouses gas emission targets requires a shift to more sustainable modes of transport.	Climatic Factors and Air Quality: FWS should contribute to ensuring that wood fuel and timber transport is achieved in an environmentally sustainable manner, e.g. by encouraging siting of wood production and processing close to markets, reducing air pollutants and thus improving air quality.
Rural Development Programme for Scotland, The Strategic Plan, 2007-2013 (2006)	• Promoting an environmentally sustainable industry by targeting capital investment to mitigate farm pollution and secure environmental improvement; • Developing products that reflect the high quality of the natural and cultural heritage; • Supporting the production of feedstock for renewable energy production.	Material Assets: FWS should support the rural development programme's strategic plan. Climatic Factors: the FWS should support the production of woody biomass for renewable energy production.
Waste Management Zero Waste Plan for Scotland (2010)	The Zero Waste Plan will provide direction and guidance on key waste management issues including: • setting and meeting targets on prevention, reuse, recycling and composting, and setting caps on energy from waste and landfill; • waste management and Climate Change; • complying with the revised EU Waste Framework Directive and the Landfill Directive; • delivery options; • improving waste data, to track progress and stimulate investment; • better waste regulation; • land-use planning for waste management; and, • possible implementation of further Landfill Bans. The Scottish Government has targets for municipal waste including: • increasing the proportion recycled or composted to 40% by 2010, 50% by 2020 and 70% by	Climatic Factors: Limited interaction with this policy although FWS should seek to promote use of forestry waste as a low carbon fuel source.

	2025, • a 5% limit on landfill of municipal waste by 2025, • to stop the growth in municipal waste by 2010, and • 25% limit on energy from mixed municipal waste.	
The Timber Development Programme (2007)	The Timber Development Programme (TDP) is a £1million Forestry Commission Scotland initiative which aims to deliver 60 tasks between 2008 and 2011 through a series of partnerships between the forestry and research sectors.	Material Assets: FWS should seek to implement this policy in the Stirling and Clackmannanshire context.
Non-Timber Forest Products Policy (2009)	This Forestry Commission Scotland document outlines how responsible and sustainable management of products such as berries, lichens, fruits nuts and fungi could bring substantial benefits to rural communities, small businesses and landowners.	Material Assets: FWS should seek to implement this policy in the Stirling and Clackmannanshire context.
Supporting Business Development Strategy (2009)	This document provides a strategic framework for supporting business development on the Forestry Commission Scotland estate, and for stimulating wider economic development in the Scottish forest industries.	Material Assets: FWS should seek to implement this policy in the Stirling and Clackmannanshire context.
CULTURAL HERITAGE (INCLUDING ARCHITECTURAL AND ARCHAEOLOGICAL HERITAGE)		
Scottish Historic Environment Policy (SHEP) (2011)	SHEP is the overarching policy statement for the historic environment. It provides a framework for more detailed strategic policies and operational policies that inform the day-to-day work of a range of organisations that have a role and interest in managing the historic environment.	Cultural Heritage: FWS should safeguard and, where appropriate, enhance the historic environment.
Scottish Planning Policy (2010) - Historic Environment	The historic environment is a vital contribution to Scotland's cultural heritage and contributes to our understanding of the past and present. The Development Plan should set the framework for the protection, conservation and enhancement of all elements of the historic environment to allow the assessment of the impact of proposed development on the historic environment and its setting. This recognises that setting is more than the immediate surroundings of a site or building, and may be related to the function or use of a place, or how it was intended to fit into the landscape or townscape, the view from it or how it is seen from around, or areas that are important to the protection of the place, site or building.	Cultural Heritage: FWS should safeguard and, where appropriate, enhance the historic environment. The spatial elements of the strategy should be informed by considerations such as the capacity of the historic landscape to accommodate afforestation without damage to its historic value.

UK Forestry Standard – Forests and Archaeology Guidelines (2012)	These guidelines set out the Forestry Commission's requirements for archaeological conservation in the creation of new forests and in the management of existing woodlands.	Cultural Heritage: FWS should adhere to these guidelines.
Scotland's Woodlands and the Historic Environment (2008)	Forestry Commission Scotland policy setting out how the forestry sector can tap into Scotland's rich cultural heritage and help develop historic sites - including designed landscapes and ancient woodlands.	Cultural Heritage: FWS should seek to implement this policy in the Stirling and Clackmannanshire context.
Managing Change in the Historic Environment Guidance Notes (various years)	This series of guidance notes explains how to apply the policies contained in the Scottish Historic Environment Policy (2011) and the Scottish Planning Policy (2010). It sets out principles applying to works on listed buildings and in conservation areas and covers topics such as accessibility and setting.	FWS should refer to these guidance notes and seek to safeguard and where possible, enhance the historic environment.
LANDSCAPE AND TOWNSCAPE		
Designing Streets: A Policy Statement for Scotland (2010)	Policy statement on street design changing the emphasis of guidance on street design towards place-making and away from a system focused upon the dominance of motor vehicles.	FWS should recognise the role of urban and peri-urban trees and woodlands in place making and creating a local environment where people want to live and work.
Pan 44 Fitting New Housing Development into the Landscape	• Strategically, establishing landscape capacity and the relationship of new to existing urban forms as primary factors in determining the desirability of settlement expansion; and • Promoting higher design standards relative to form layout and relation with existing urban areas.	Limited interaction with the FWS.
Pan 52 Planning and Small Towns	• Identifying factors which threaten the important legacy of small towns. • Providing for regeneration and expansion • Enabling lively, active and vibrant town centres within small towns • Enabling efficient and effective transport to support economic growth and accessibility • Promoting high quality design that promotes townscape quality.	Limited interaction with the FWS.
PAN 65 Planning and Open Space (2003)	Provides advice on the role of the planning system in protecting and enhancing existing open spaces and providing high quality new spaces.	Landscape and Townscape: FWS should enhance existing open space and provide high quality new spaces.
PAN 71 Conservation Area Management	This provides further advice on the management of conservation	Landscape and Townscape: FWS should not have a negative impact on conservation areas in the

	areas. It identifies good practice for managing change, sets out a checklist for appraising conservation areas and provides advice on funding and implementation.	Stirling and Clackmannanshire area.
PAN 72: Housing in the Countryside	Advice on design of houses in the countryside with a purpose to create more opportunities for good quality rural housing which respects Scottish landscapes and building tradition.	Landscape and Townscape: FWS should promote the role of timber construction in providing high quality and sustainable rural housing.
Pan 74 Affordable Housing	Advice setting out how the planning system can support the Scottish Government's commitment to increase the supply of affordable housing.	Population and Human Health: There is a limited role for FWS to support provision of affordable housing on forest land, e.g. to provide key worker accommodation for forest managers, and this should integrate with the SHIPs.
Scottish Planning Policy (2010) - Rural Developments	Support and promote opportunities for environmental enhancement and regeneration in rural areas to maintain and improve the viability of communities and to support rural businesses.	Landscape and Townscape: FWS should support sustainable economic development in the rural areas of the city region, e.g. farm diversification into growing woody biomass fuels.
Scottish Planning Policy (2010) - Green Belts	The purpose of green belt designation in the development plan as part of the settlement strategy for an area is to: • direct planned growth to the most appropriate locations and support regeneration, • protect and enhance the quality, character, landscape setting and identity of towns and cities, and • protect and give access to open space within and around towns and cities.	Landscape and Townscape: FWS should indicate the role of belts of trees/woodland in defining green belt boundaries within the city region.
UK Forestry Standard – Forest Landscape Design Guidelines (1995 – currently being revised and updated)	These guidelines are intended to provide applicants for the Woodland Grant Scheme and applicants for felling licences with an outline of the principles and practical applications of forest design. They represent the basic standard which will be expected in any application for grant aid in the generally more upland areas of Britain. Comprehensive landscape plans are necessary when new planting is undertaken on a substantial scale or when extensive felling is planned.	Landscape and Townscape: FWS should adhere to these guidelines.
Forestry Commission Scotland Policy on Control of Woodland Removal (2009)	Describes the policy direction for decisions on woodland removal in Scotland.	Landscape and Townscape: FWS should seek to implement this policy, taking into account specific issues for the Stirling and Clackmannanshire area.
Rationale for Woodland Expansion (2009)	Lays out the Scottish Government's thinking on how woodland expansion can best increase the delivery of public benefits from Scotland's land.	Landscape and Townscape: FWS should seek to implement this policy, taking into account specific issues for the Stirling and Clackmannanshire area.
Forestry Commission Scotland Guidance on Planning for Forestry	Provides guidance to planning authorities on preparing new forestry and woodland strategies	Landscape and Townscape: FWS should seek to implement this policy, taking into account specific issues for the Stirling and Clackmannanshire

and Woodlands	to guide woodland expansion, and on how to integrate forestry and woodlands into new development plans.	area.
Clackmannanshire Open Space Framework (2011)	The framework sets out an ambitious target to deliver at least a 50% increase in woodland cover to help mitigate climate change through land management practices which help to capture, store and retain carbon, such as woodland expansion, the protection of peatland and through promotion of active travel.	Landscape and Townscape: FWS should seek to integrate with the aims of the framework.
Clackmannanshire Green Belt Review (2012)	The role of Clackmannanshire Green Belt is to directly support and form part of the strategy to deliver the wider objectives of the Central Scotland Green Network, namely to provide opportunities for outdoor recreation, education, tourism, to protect and enhance biodiversity, the landscape and the historic environment, as well as having a primary role in protecting and giving access to open space around towns.	Landscape and Townscape, Biodiversity, Cultural Heritage: FWS should indicate the role of belts of trees/woodland in defining green belt boundaries within the city region.

Appendix 2
Assessment tables

	THEME: BIODIVERSITY					
	Objective 1: To conserve and enhance the diversity of habitats and species					
	• Expand habitat networks					
	• Conserve and enhance key habitats and species					
	SCFWS Policy Objectives	Evaluation	Timeframe	Duration	Commentary	Mitigation / Enhancement
CLIMATE CHANGE	To identify areas for new woodland creation/existing woodland restoration	++	Medium/ Long term	Permanent	This objective is likely to have a significant positive impact on conserving and enhancing habitat networks. New woodlands will support biodiversity by allowing the free movement and regeneration of species.

Positive scores contingent on appropriate species choice. | Native woodland expansion should be given priority where small areas of semi-natural woodland currently survive. This would ensure some continuity in land cover and help to prevent further loss of native species.

Particular priority should be given to the protection and where possible expansion of Scotland's most threatened woodland habitats, including montane scrub woodland. |
| | To highlight areas for climate change adaptation, particularly those which will contribute to sustainable flood management | ++ | Medium | Permanent | Promoting the development of integrated habitat networks to help species adapt to climate change is likely to have significant positive benefits for conserving and enhancing habitats and species.

The development of new riparian and flood plain woodland is likely to contribute to sustainable water management objectives. | The Strategy should ensure new woodland and tree planting links into the habitat networks, where possible. |
| | To support the development of biomass for heating | +/- | Medium | Permanent | Increasing the supply of woody biomass from existing woodland and linking relatively local sources of biomass with nearby sources of demand may lead to improved management of smaller woodlands whose management may have lapsed due to lack of demand. If timber is harvested in a sensitive way this could benefit woodland habitats and species.

Care will need to be taken to ensure that large areas of monoculture biomass do not spring up, which have low value in terms of biodiversity and are difficult for species to permeate (and therefore migrate) through. It should also not be | The Strategy should ensure that management of woodland for biomass and biomass planting provides optimal biodiversity benefits in line with good practice guidance. |

					assumed that derelict and vacant areas of land are blank canvases – if these pieces of land have been vacant for some time they are often very rich in biodiversity and any new planting should be sensitive to the habitat that is developing and species that are already present. Widespread adoption of biomass could result in diminished air quality, with potential knock on impacts on biodiversity particularly in relation to particulate emissions (this is discussed in more detail under the air quality objective).	
	To promote the benefits of carbon sequestration through the Woodland Carbon Code	+/-	Medium	Permanent	Tree planting does not only sequester carbon but can also improve habitats suitability for wildlife. Preserving native forests may avoid losses in both carbon and native species. On the other hand, replacing diverse ecosystems with single-species timber plantations may generate greater carbon accumulation, but could result in less biodiversity.	The Strategy promotes multi-species, multi benefit woodlands. Assumed mitigation delivered through FCS regulatory processes, UKFS and related guidance should ensure that planting for carbon sequestration occurs in an appropriate context.
	To advocate forestry and woodland management practices which reduce carbon loss from soils	+	Medium	Permanent	Good forest management can help to promote soil carbon retention by selecting species best suited to the changed climate. Adopting continuous cover/lower impact silvicultural systems may benefit biodiversity by helping to ensure that large areas of forest are not being felled at the same time. Following thinning of woodlands where species diversity is limited and considered at risk due to projected climate change, consider species diversity through planting.	Timings and nature of forest operations are outwith the scope of the FWS.
TIMBER	To encourage continued investment in the local timber processing capacity	+/0/-	Medium/ Long	Permanent	Effects on biodiversity are uncertain although unlikely to be significant. Development of appropriate facilities could act as a driver for improved management of existing woodlands or equally could promote inappropriate woodland expansion.	

BUSINESS DEVELOPMENT	To promote the use of timber as a renewable, versatile raw material	0			This Objective is likely to have limited effect on biodiversity.	No mitigation required.
	To encourage the development of the hardwood timber sector	+	Medium/ Long	Permanent	The creation of hardwood forests provides habitats for a wide range of wildlife species. It also could have significant benefits in terms of improving the management of existing broadleaved woodlands.	The Strategy should promote the development of hardwood forests as it provides biological diversity of flora and fauna.
	To support rural diversification and business development opportunities	0/+	Medium	Permanent	The creation of new farm woodlands can contribute to habitat networks.	While there is potential for adverse effects from inappropriate development and diversification, mitigation will be delivered through planning and other regulatory processes.
	To promote Stirling & Clackmannanshire as a destination for tourists and visitors	0/-	Medium	Permanent	Increased tourist levels have the potential to result in habitat damage from tourists wandering off set trails, over-picking of plants, and litter which may hinder movement of some species. In practice impacts are likely to be limited.	The Strategy should ensure that the development of facilities for visitors to woodlands are planned with regard to natural heritage sensitivity.
	To facilitate opportunities for acquiring new skills and experience	+/0/-			This Objective is likely to have limited effect on biodiversity.	No mitigation required.
COMMUNITY DEVELOPMENT	To develop opportunities for expanding the existing woodland resource in and around the towns and villages in Stirling & Clackmannanshire	+	Medium	Permanent	Transforming degraded urban fringe environments is likely to have a significant benefit for habitats and species. However, it should also not be assumed that derelict and vacant areas of land are blank canvases – if these pieces of land have been vacant for some time they are often very rich in biodiversity and any new planting should be sensitive to the habitat succession that is already occurring and the species that are already present.	The Strategy should ensure that any improvements to degraded urban environments take into account existing biodiversity.
	To promote woodlands as community-owned or managed asset	+/-	Medium /Long	Permanent	Involving communities in the management of woodlands is likely to increase understanding and the value placed on biodiversity. It may also increase the pressure for woodlands to be	

					publically accessible, which if not managed carefully could lead to increased disturbance of species and habitats.	
	To facilitate the development of social enterprise networks and capacity building initiatives	-	Medium	Permanent	Care will need to be taken to ensure that the increased volume of people due to events does not result in habitat damage.	The Strategy should ensure that the promotion of access and events is carried out without the disturbance of habitats and species.
	To identify opportunities for delivering the Curriculum for Excellence and lifelong learning through Forest Schools and other forest and woodland-based education	+	Medium	Permanent	This Objective could have a significant positive effect by raising awareness of the importance of woodland biodiversity. Although, management measures may need to be put in place at areas most frequently visited by members of the Forest Schools to avoid habitat damage.	The Strategy should ensure that any activities undertaken by the Forest Schools do not have adverse effects on biodiversity.
ACCESS & HEALTH	To highlight opportunities for expanding sustainable recreational facilities in the Stirling & Clackmannanshire for both formal and informal recreation	0/-	Medium	Permanent	Care will need to be taken to ensure that woodland with high biodiversity value is protected from intensive recreational use and activities which cause significant disturbance. Intensive use or high impact outdoor sports can cause excessive disturbance, particularly for ground nesting species. Categorising or zoning woodlands will help identify which recreational activities are most appropriate for which woodlands. For example, whilst the most sensitive woodlands in terms of biodiversity may have access to them limited, woodlands with lower biodiversity value could be suitable locations for mountain biking sites and 'Go-Ape' style activities.	The Strategy should ensure that formal and informal recreation activities do not adversely impact on biodiversity, i.e. habitat damage or disturbance.
	To support wellbeing initiatives such as Braveheart, Branching out and Green Gym	0/-	Medium	Permanent	Care will need to be taken to ensure that woodland with high biodiversity value is protected from intensive recreational use and activities which cause significant disturbance. Management measures may need to be put in place at areas most frequently visited by members of the wellbeing initiatives to ensure that habitat damage does not occur.	The Strategy should ensure that any activities undertaken by such initiatives do not have adverse effects on biodiversity.

ENVIRONMENTAL QUALITY	To promote natural play and active travel through Forest Schools and other forest education initiatives	0/-	Medium	Permanent	Increased levels of pupils from the Forest Schools can result in habitat damage from pupils wandering off set trails. Management measures may need to be put in place at areas most frequently visited by pupils to ensure that habitat damage does not occur.	The Strategy should ensure that any activities undertaken by such initiatives do not have adverse effects on biodiversity.
	To actively promote Stirling & Clackmannanshire's rich cultural heritage	++	Medium	Permanent	Transforming degraded urban fringe environments is likely to have a significant benefit for habitats and species. Diversifying farmed landscapes through appropriate expansion will positively enhance habitat connectivity.	No mitigation required.
	To contribute to the management and enhancement of Stirling & Clackmannanshire's historic environment	+/-	Medium	Permanent	Many designed landscapes and formal gardens contain rare, non-native trees and shrubs, many of which are now threatened in their native habitats. The expansion of ancient wood pasture and parkland will aid the dispersal of many woodland species.	The Strategy should promote sensitive forestry and woodland management practices which maintain and enhance heritage assets
	To promote responsible public access to, and interpretation of, all suitable assets (e.g. archaeology, historic landscapes and buildings)	++	Short/ Medium	Permanent	This objective will have a significant benefit on the conservation of habitats and species in historic landscapes.	The Strategy should ensure that responsible access is promoted to conserve habitats and species.
BIODIVESITY	To promote the conservation of key sites and priority habitats	++	Short/ Medium	Permanent	This objective directly contributes to the SEA Objective.	No mitigation required.
	To consolidate and expand functional connectivity through habitat networks in the wider landscape	++	Short/ Medium	Permanent	This objective directly contributes to the SEA Objective.	The Strategy should refer to the relationship between FHN and non-forest habitat networks.
	Highlighting specific	++	Short/ Medium	Permanent	This Objective would significant contribute	No mitigation required.

	woodland types to assist with the protection of key species (e.g. red squirrel, badgers and black grouse)				to the protection and enhancement of biodiversity by identifying the most suitable habitats for key species.	

SEA THEME: POPULATION AND HUMAN HEALTH						
SEA Objective 2: To avoid further blight in disadvantaged communities						
• Target woodland expansion in areas where benefits can be optimised						
	SCFWS Policy Objectives	Evaluation	Timeframe	Duration	Commentary	Mitigation / enhancement
CLIMATE CHANGE	To identify areas for new woodland creation/existing woodland restoration	+	Medium/ Long	Permanent	This Objective specifically provides an opportunity for woodland creation to alleviate blight in disadvantaged communities through positive reuse of vacant and derelict land and contaminated land.	The Strategy should target woodland expansion to degraded urban and urban fringe environments where it is likely to have significant benefits for disadvantaged communities by improving the environmental quality of the area.
	To highlight areas for climate change adaptation, particularly those which will contribute to sustainable flood management	+	Medium	Permanent	The role that trees play in maintaining the quality of urban environments by providing shelter, limiting the urban island heat effect etc. may help to create attractive, comfortable environments for disadvantage communities. Also, new woodlands can help reduce the risk of flooding and reduce soil erosion which will help minimise negative environmental effects on disadvantaged communities.	The Strategy should support urban and peri-urban planting which plays an important role in boosting resilience, i.e. providing shelter, shade and (in the right locations) flood attenuation.
	To support the development of biomass for heating	+	Short/ Medium/ Long	Permanent	There is potential for disadvantaged communities to benefit from a biomass market as reduced reliance on fossil fuel use will improve air quality and will have less negative impacts on human health.	The Strategy should recognise the positive impacts for disadvantage communities in developing a biomass market.

	To promote the benefits of carbon sequestration through the Woodland Carbon Code	+	Medium	Permanent	Creating woodlands on degraded and derelict urban environments to increase carbon sequestration can also have benefits for disadvantaged communities through improved air quality, greater access to green spaces for exercise and interaction with nature, and mental health benefits.	The Strategy should support the reuse of VDL for CO2 sequestration as this will also improve the environmental quality of disadvantaged areas.
	To advocate forestry and woodland management practices which reduce carbon loss from soils	+	Medium	Permanent	Good forest management can help to promote soil carbon retention which in turn is likely to benefit deprived communities through improved environmental and air quality.	No mitigation required.
TIMBER	To encourage continued investment in the local timber processing capacity	+	Medium	Permanent	Local timber processing facilities can provide economic opportunities for disadvantaged communities to establish related businesses and services. Promoting the use of smaller-scale local saw mills and reducing the import of timber from further afield may have significant beneficial effects on reducing transport related air pollution. This may help ensure disadvantaged communities do not suffer further through increased road traffic.	The Strategy should support the development of local timber processing facilities as these will provide economic opportunities for communities to establish related businesses and services. The Strategy should promote the use of smaller-scale local saw mills which will reduce the import of timber from further afield as this may have significant beneficial effects on reducing transport related air pollution, particularly in disadvantaged areas.
	To promote the use of timber as a renewable, versatile raw material	0/+	Medium	Permanent	Promoting the use of wood as a versatile, renewable raw material will encourage investment in the timber industry which in turn will provide employment to local communities.	No mitigation required.
	To encourage the development of the hardwood timber sector	0/+	Medium	Permanent	An increase in hardwood forests will improve the environmental quality of disadvantaged areas, particularly if planting is focussed on derelict and degraded landscapes. Promoting the use of smaller-scale local hardwood processors and reducing the import of timber from further afield may have significant beneficial effects on reducing transport related air pollution.	The Strategy should support the development of the hardwood timber sector as it will provide economic opportunities for communities to establish related businesses and services. The Strategy should promote the use of smaller-scale local hardwood processors which will reduce the import of timber from further afield as this may have significant beneficial effects on reducing transport related air

				This may help ensure disadvantaged communities do not suffer further through increased road traffic. Encouraging the development of the hardwood timber sector will provide economic opportunities for disadvantaged communities to establish related businesses and services.	pollution, particularly for disadvantaged areas.
BUSINESS DEVELOPMENT	To support rural diversification and business development opportunities	+	Medium/ Long	Permanent	Using planting to enhance derelict and degraded land will improve the quality of key investment locations and create attractive environments for business developments whist also enhancing the environmental quality of disadvantaged areas. Increasing uptake of biomass through Renewable Heat Incentives may make small-scale local woodlands viable community businesses.	The Strategy should aim to transform key urban sites through woodland creation/expansion to help alleviate the blight of disadvantaged communities.
	To promote Stirling & Clackmannanshire as a destination for tourists and visitors	+	Medium/ Long	Permanent	Greening of stalled sites and vacant & derelict land is likely to positively contribute to improved outcomes in disadvantaged communities. Improving the tourist offer of an area by providing high quality recreational woodlands close to disadvantaged settlements will have multiple benefits, e.g. helping to reduce the distance people have to travel to enjoy woodlands, improved health and wellbeing of the community, encouraging more economic investment in the area, etc.	The Strategy should promote sustainable forest-based tourist activities on stalled or derelict urban sites to encourage economic investment in deprived areas.
	To facilitate opportunities for acquiring new skills and experience	++	Short/ Medium/ Long	Permanent	This Objective is likely to have significant benefits for disadvantaged communities by creating opportunities for education and learning. This may enhance the employment opportunities for people in these communities.	The Strategy should increase the knowledge and awareness of the contribution woodlands can make to the economic/social regeneration of deprived communities.
COMMUN ITY	To develop opportunities for expanding the existing woodland resource in and around	++	Medium	Permanent	The creation/expansion of woodlands on derelict and degraded land will have significant direct benefits for disadvantaged communities and also will	The Strategy should target woodland expansion/creation which can transform degraded surroundings and brownfield sites which will improve the environmental quality

	the towns and villages in Stirling & Clackmannanshire				ensure that areas are not blighted further.	of an area and increase attractiveness to inward investment.
	To promote woodlands as community-owned or managed asset	+	Short/ Medium	Permanent	Increasing community involvement may help disadvantaged communities take ownership of their environment, empowering them and providing them with new skills to improve their area.	No mitigation required.
	To facilitate the development of social enterprise networks and capacity building initiatives	+	Short/ Medium/ Long	Permanent	This Objective is likely to have significant benefits for disadvantaged communities by creating opportunities for learning new skills. This may enhance the employment opportunities for people in these communities.	The Strategy should increase the knowledge and awareness of the contribution woodlands can make to the economic/social regeneration of deprived communities.
	To identify opportunities for delivering the Curriculum for Excellence and lifelong learning through Forest Schools and other forest and woodland-based education	+	Short/ Medium/ Long	Permanent	Targeted education programmes and job-creation activities could make an important contribution to improving outcomes in disadvantaged communities, i.e. through greater employment options, greater appreciation of woodlands, etc.	The Strategy should increase the knowledge and awareness of the contribution woodlands can make to the economic/social regeneration of deprived communities.
ACCESS & HEALTH	To highlight opportunities for expanding sustainable recreational facilities in the Stirling & Clackmannanshire for both formal and informal recreation	+/++	Medium/ Long	Permanent	Improving the environmental quality of urban and urban fringe environments can contribute positively to the physical, mental and spiritual wellbeing of communities. Easily accessible woods providing formal and informal recreational facilities are vital to the health and wellbeing of disadvantaged communities. Improving connectivity of urban/peri urban woodlands can support informal recreational activities, i.e. green byways linking urban populations to prime recreational greenspace.	The Strategy should raise awareness of the role forests and woodlands play in providing cost-effective health benefits. The Strategy should encourage joined up access and recreation provision through expansion of integrated habitat networks and improving connectivity of urban/peri-urban woodlands. The Strategy should target new woodland creation near disadvantaged communities as people's health and wellbeing are improved where woodland environment areas are readily accessible.
	To support wellbeing initiatives such as Braveheart, Branching out and Green Gym	0/+	Medium/ Long	Permanent	Studies have shown that regular moderate exercise in well-designed, accessible woods can lead to a reduction in physical illnesses. However, a disproportionally small percentage of people from multi-ethnic, low income	The Strategy should target woodland creation and woodland access improvements in areas where health and community need is greatest and current provision is weak.

					areas are involved in woodland recreation. With careful siting, design, planning and management it should be possible to adopt measures to balance participation rates, although this is outwith the scope of the FWS.	
ENVIRONMENTAL QUALITY	To promote natural play and active travel through Forest Schools and other forest education initiatives	+	Medium/ Long	Permanent	Improving connectivity of urban/peri urban woodlands can support informal recreational activities by providing safe and attractive settings for footpaths and cycleways connecting disadvantaged communities.	The Strategy should encourage joined up access and recreation provision through expansion of green networks and improving connectivity of urban/peri-urban woodlands.
	To actively promote Stirling & Clackmannanshire's rich cultural heritage	+	Medium/ Long	Permanent	Woodland planting in disadvantaged areas may help enhance the area's cultural heritage for the future and ensure that areas are not blighted further. Sensitive WIAT schemes can contribute to the character and historic setting of assets.	The Strategy should promote woodland planting in disadvantaged areas to enhance the area's cultural heritage in the future.
	To contribute to the management and enhancement of Stirling & Clackmannanshire's historic environment	+	Medium	Permanent	Restoring ancient and semi-natural woodland and establishing new native woodland is likely to conserve and enhance the historic and cultural heritage of an area whilst also having a positive effect on disadvantaged communities by improving the environmental quality of an area.	The Strategy should ensure that new woodland planting improves the environmental quality of disadvantaged areas and contributes to the character and significance of important historic landscapes.
	To promote responsible public access to, and interpretation of, all suitable assets (e.g. archaeology, historic landscapes and buildings)	0	-	-	This Objective is unlikely to have a significant impact in alleviating the blight of disadvantaged communities.	No mitigation required.
BIODIVESITY	To promote the conservation of key sites and priority habitats	0/+	Medium/ Long	Permanent	Where key habitat resources are close to centres of population, conservation work promoted by the FWS is likely to enhance the environmental quality of disadvantaged areas.	No mitigation required.
	To consolidate and expand functional connectivity through habitat networks in the	+	Medium/ Long	Permanent	Improving connectivity of urban/peri urban woodlands can have multifunctional benefits for biodiversity (by allowing species to migrate freely) and	The Strategy should encourage the expansion of integrated habitat networks and the connectivity of urban/peri-urban woodlands as this will have multifunctional benefits for

wider landscape				disadvantaged communities (though improved air quality, greater access to green spaces for exercise and interaction with nature, and mental health benefits).	biodiversity and disadvantaged communities.
Highlighting specific woodland types to assist with the protection of key species (e.g. red squirrel, badgers and black grouse)	0	-	-	This Objective is unlikely to have a significant impact in alleviating the blight of disadvantaged communities.	No mitigation required.

SEA THEME: POPULATION AND HUMAN HEALTH					
SEA Objective 3: To promote and develop Green Network thinking					
• Contribute to community and health benefits by promoting access, recreation and active travel using the green network					
SCFWS Policy Objectives	Evaluation	Timeframe	Duration	Commentary	Mitigation / Enhancement
To identify areas for new woodland creation/existing woodland restoration	+	Medium	Permanent	Woodland creation should be targeted to vacant and derelict land where it can bring a range of economic and environmental benefits (stabilisation of soils, creating attractive settings for new developments, provision of paths to encourage active travel). New planting should be located near communities as people's health and wellbeing are improved where woodland environment areas are readily accessible. Woodland planting should be encouraged where it can improve the connectivity of urban and peri urban environments.	The Strategy should prioritise 'Woodlands In and Around Towns' areas which will be particularly beneficial in terms of linking communities/biodiversity with the surrounding countryside. The Strategy should target new woodland creation near communities, particularly on vacant and derelict land, as people's health and wellbeing are improved where woodland environment areas are readily accessible. Woodland planting should be steered to locations where it will improve the setting of existing settlements and provide green infrastructure and key amenities for new developments.
To highlight areas for climate change adaptation, particularly those which will contribute to sustainable flood management	+	Medium	Permanent	The development of urban greening can mitigate climate change by providing cooler areas around cities and towns, integrating flood prevention measures and sustainable urban drainage. Establishing integrated habitat networks can provide valuable links for the migration and dispersal of species in the wider environment.	The Strategy should support urban and peri-urban planting and IHNs which play an important role in boosting resilience, i.e. by providing shelter, shade (in the right locations), flood attenuation and allowing the migration of species.
To support the development of biomass for heating	+	Medium	Permanent	Creating new areas of woodland for the biomass market may significant benefit the Green Network especially if publically accessible. However, as it is likely that the majority of productive forests will be located outside the peri-urban area, these benefits may be limited to rural communities.	The Strategy should recognise the positive health benefits for rural communities in developing accessible biomass woodlands.
To promote the benefits of carbon sequestration through the Woodland	+	Medium	Permanent	Through the creation of integrated networks and urban greening, woodlands can increase soil stability and quality,	No mitigation required.

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	Carbon Code				thereby improving carbon storage and sequestration.	
	To advocate forestry and woodland management practices which reduce carbon loss from soils	+	Medium	Permanent	Good woodland and forest management practices, e.g. silvicultural practices, can help reduce carbon loss from soils whilst also reducing the disturbance/closure of publically accessible woodland trails used for informal recreation.	No mitigation required.
TIMBER	To encourage continued investment in the local timber processing capacity	+	Medium	Permanent	Creating new areas of woodland for timber processing may significant benefit the Green Network especially if publically accessible. However, as it is likely that the majority of productive forests will be located outside the peri-urban area, these benefits may be limited to rural communities. Adopting low impact silvicultural practices can help to reduce the disturbance/closure of publically accessible trails.	The Strategy should encourage the use of low impact silvicultural practices which can minimise the disturbance/closure of publically accessible trails.
	To promote the use of timber as a renewable, versatile raw material	0	-	-	This Objective is unlikely to have a significant impact in promoting Green Network thinking.	No mitigation required.
	To encourage the development of the hardwood timber sector	+	Medium	Permanent	Creating new areas of hardwood forests may significant benefit the Green Network especially if publically accessible. However, as it is likely that the majority of productive forests will be located outside the peri-urban area, these benefits may be limited to rural communities. Adopting low impact silvicultural practices can help to reduce the disturbance/closure of publically accessible trails.	The Strategy should encourage the use of low impact silvicultural practices which can minimise the disturbance/closure of publically accessible woodland trails.
BUSINESS DEVELOPMENT	To support rural diversification and business development opportunities	+	Medium	Permanent	Targeting woodland expansion/creation to derelict and degraded urban land will improve the quality of key investment locations and create attractive environments for business developments whist also reducing health problems of communities by providing improved	The Strategy should target woodland expansion/creation to degraded urban sites which will increase attractiveness to inward investment and improve the health outcome of local communities.

					opportunities for recreation and active travel.	
	To promote Stirling & Clackmannanshire as a destination for tourists and visitors	+	Medium/ Long	Permanent	Improving the tourist offer of an area by providing high quality recreational woodlands close to settlements will significantly contribute to the Green Network and provide multiple benefits, e.g. helping to reduce the distance people have to travel to enjoy woodlands, improving the health and wellbeing of the local community, encouraging more economic investment in the area, etc.	The Strategy should promote sustainable forest-based tourist activities on woodlands near settlements which will have positive benefits for the Green Network.
	To facilitate opportunities for acquiring new skills and experience	+	Medium	Permanent	This Objective is likely to positively contribute to the management of the Green Network by creating opportunities for communities to learn horticultural skills.	No mitigation required.
	To develop opportunities for expanding the existing woodland resource in and around the towns and villages in Stirling & Clackmannanshire	+	Medium	Permanent	Developing woodland buffers/corridors will improve the connectivity of existing fragmented woodlands and will positively contribute to the Green Network.	The Strategy should prioritise 'Woodlands In and Around Towns' areas which will be particularly beneficial in terms of linking communities with the surrounding countryside.
COMMUNITY DEVELOPMENT	To promote woodlands as community-owned or managed asset	+	Short/ Medium	Permanent	This Objective is likely to have positive benefits for Green Networks by creating opportunities for volunteering which can be directed towards the management of the network.	No mitigation required.
	To facilitate the development of social enterprise networks and capacity building initiatives	+	Short/ Medium/ Long	Permanent	This Objective has the potential to significantly contribute to the green network by increasing the involvement of social enterprise organisations in the creation and maintenance of the green network. For example, social enterprise organisations may undertake duties such as the collection of woody waste which would normally go to landfill, thus improving the accessibility of paths or the creation of open space.	No mitigation required.
	To identify opportunities for delivering the	+	Medium/	Permanent	This Objective could have a positive effect by raising awareness of the importance of	No mitigation required.

	Curriculum for Excellence and lifelong learning through Forest Schools and other forest and woodland-based education		Long		green networks to biodiversity, human health, etc.	
ACCESS & HEALTH	To highlight opportunities for expanding sustainable recreational facilities in the Stirling & Clackmannanshire for both formal and informal recreation	+/++	Medium/ Long	Permanent	Improving the environmental quality of urban and urban fringe environments can contribute positively to the physical, mental and spiritual wellbeing of communities. Easily accessible woods providing formal and informal recreational facilities are vital to the health and wellbeing of communities. Improving connectivity of urban/peri urban woodlands can support informal recreational activities, i.e. green byways linking urban populations to prime recreational greenspace.	The Strategy should raise awareness of the role forests and woodlands play in providing cost-effective health benefits. The Strategy should encourage joined up access and recreation provision through expansion of green networks and improving connectivity of urban/peri-urban woodlands. The Strategy should target new woodland creation near communities as people's health and wellbeing are improved where woodland environment areas are readily accessible.
	To support wellbeing initiatives such as Braveheart, Branching out and Green Gym	+	Medium	Permanent	This Objective is likely to positively support the SEA Objective.	No mitigation required.
	To promote natural play and active travel through Forest Schools and other forest education initiatives	+	Medium/ Long	Permanent	Improving connectivity of urban/peri urban woodlands can support informal recreational activities by providing safe and attractive settings for footpaths and cycleways connecting communities with the wider countryside.	The Strategy should encourage joined up access and recreation provision through expansion of green networks and improving connectivity of urban/peri-urban woodlands.
ENVIRONMENTAL QUALITY	To actively promote Stirling & Clackmannanshire's rich cultural heritage	+	Medium/ Long	Permanent	Woodland planting near settlements may help enhance the area's cultural heritage for the future. Sensitive WIAT schemes can contribute to the character and historic setting of assets.	The Strategy should promote woodland planting near settlements to enhance the area's cultural heritage in the future.
	To contribute to the management and enhancement of Stirling & Clackmannanshire's	+	Medium	Permanent	Restoring ancient and semi-natural woodland and establishing new native woodland is likely to conserve and enhance the historic heritage of an area	The Strategy should ensure that new woodland planting contributes to the character and significance of important historic landscapes.

	historic environment				whilst also contributing to the green network by providing accessible routes which can be used by communities for recreation and access.	
	To promote responsible public access to, and interpretation of, all suitable assets (e.g. archaeology, historic landscapes and buildings)	+	Medium/ Long	Permanent`	Newly created woodlands should be accessible to people and ideally linked into footpath networks in the surrounding area in an effort to promote responsible access to and appreciation of cultural heritage features and other historical assets.	No mitigation required.
BIODIVESITY	To promote the conservation of key sites and priority habitats	+/-	Medium/ Long	Permanent	Carefully planned green networks can positively contribute to the conservation of key sites and habitats through increased vegetation cover and connectivity. Although, possibility that increased connectivity can cause a threat to native species through increased risk of spread of invasive species and disease.	No mitigation required.
	To consolidate and expand functional connectivity through habitat networks in the wider landscape	+	Medium	Permanent	Creating/expanding/improving integrated habitat networks will link existing habitats & important sites, and enable species to migrate freely, whilst also providing improved physical connections between sites encouraging active travel.	The Strategy should encourage the development of integrated habitat networks which will provide a range of multifunctional benefits for biodiversity and communities.
	Highlighting specific woodland types to assist with the protection of key species (e.g. red squirrel, badgers and black grouse)	0	-	-	This Objective is unlikely to have a significant impact in promoting and developing Green Network thinking.	No mitigation required.

SEA THEME: SOIL					
SEA Objective 4: To avoid adverse direct and indirect impacts on soil stability, structure and quality					
• Where appropriate, seek to re-use VDL for a range of woodland / green network purposes					
• Steer woodland expansion away from sensitive soil resources (i.e. peat) to minimise the potential for pollution and loss of soil carbon					
• Safeguard prime agricultural land					
SCFWS Policy Objectives	Evaluation	Timeframe	Duration	Commentary	Mitigation / enhancement
To identify areas for new woodland creation/existing woodland restoration	+/-	Medium	Permanent	Sensitive soil types should be identified and avoided. Avoiding the expansion of woodland to areas with high carbon content soils is likely to protect the structure and quality of these soils thereby reducing carbon loss. Similarly not replacing forests which lie on high carbon content soils once the timber has been harvested will be beneficial. Woodland creation should be targeted to vacant and derelict land to improve soil stabilisation and quality.	The Strategy should ensure woodland expansion/creation does not adversely affect sensitive soil resources, including peat, to avoid the loss of soil carbon. The Strategy should target woodland planting to vacant and derelict land or contaminated land which will improve soil stabilisation and quality.
To highlight areas for climate change adaptation, particularly those which will contribute to sustainable flood management	++	Medium	Permanent	Promoting the role that woodlands can have in reducing soil erosion will directly benefit this SEA Objective by improving the stability, structure, and quality of the soil. Recognising the important role of trees in providing shade may also benefit the structure and quality of soil preventing the extreme drying out and cracking of soil.	No mitigation required.
To support the development of biomass for heating	-	Medium	Permanent	Measures designed to increase biomass yields from existing woodland and forests such as the extraction of harvesting residues could contribute to increased soil acidification. The growing pressure to harvest tree stumps for woodfuel poses a range of threats, including an increased risk of ground damage leading to erosion and siltation.	Care will need to be taken to ensure that a balance is achieved between making productive use of residues from forest thinnings and leaving enough residues behind to protect and enrich the soil in these areas.
To promote the benefits of carbon sequestration through the Woodland	+	Medium	Permanent	Through the re-use of vacant and derelict land, woodlands can target areas at risk of soil erosion or with poor soil quality as land cover by woodland shelters soils from wind	The Strategy should support the use of VDL for woodland expansion for CO2 sequestration.

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TIMBER	Carbon Code				and rain, thus reducing erosion.	The Strategy should ensure that areas of woodland planting are directed away from sensitive soil resources including peat and prime agricultural land to minimise carbon losses.
	To advocate forestry and woodland management practices which reduce carbon loss from soils	+	Medium/ Long	Permanent	Any soil disturbance associated with forest and woodland management practices may release carbon to the atmosphere. Practices minimising the disturbance to litter and soil to avoid carbon emissions and soil degradation should be promoted.	The Strategy should promote sensitive forestry and woodland management practices which reduce carbon loss from soil, i.e. carbon conscious site preparation and harvesting, reduced liming, protection against disturbance and reduced harvest residue removal.
	To encourage continued investment in the local timber processing capacity	+/-	Medium	Permanent	Evening out timber harvesting over time will benefit soil stability, structure and quality, by ensuring that large areas of forest are not being felled at the same time, leaving soils exposed and open to erosion. The method of harvesting will be a significant factor on terms of adverse effects on soil. Small scale feeling operations using horses will cause less damage to soil than larger scale, more automated felling operations that use heavy plant which deeply rut and erode the soil.\n\nPotential impacts from timber processing include:\n\n• Loss of nutrients in soil from timber harvesting and increased leaching exposed; disturbed soils where vegetation has been removed.\n\n• Dramatic increase in temperature after removal of forest canopy during logging leading to drying of soil.\n\n• Soil compaction and puddling by machinery.\n\n• Soil erosion from clearing sites/harvesting.\n\n• Inadequate or non-existent forest management could result in soil erosion.	Establishing new woodlands and tress for timber will need to be carefully managed to ensure that damage and disruption to soil structure is minimised. The Strategy should ensure that timber processing does not adversely affect sensitive soil resources including peat or prime agricultural land, in line with good practice guidance.
	To promote the use of timber as a renewable,	0	-	-	This Objective is likely to have limited effect on soil quality and structure.	No mitigation required.

	versatile raw material					
	To encourage the development of the hardwood timber sector	-	Medium/ Long	Permanent	Forestry and woodland practices, particularly harvesting, felling, etc. have the potential to cause soil disturbance and acidification. Adopting continuous cover/lower impact silvicultural systems may benefit soil quality by helping to ensure that large areas of forest are not being felled at the same time.	The Strategy should promote continuous cover forestry as an alternative to clearfell to protect soil quality. The Strategy should promote natural regeneration of hardwood forest to reduce the need for site cultivation and soil disturbance.
BUSINESS DEVELOPMENT	To support rural diversification and business development opportunities	+	Medium	Permanent	Improving vacant and derelict land with woodlands and trees is likely to have significant benefits for soils as well as providing a more attractive location for businesses. Turning currently marginal and under-used/neglected farmland over to appropriate farm woodlands could result in improvements in soil stability and quality (over bracken-inundated pasture).	The Strategy should recognise the role of environmental enhancement of VDL with woodland and trees in providing an attractive location for business. The Strategy should ensure that areas of woodland planting are directed away from sensitive soil resources including peat and prime agricultural land. The Strategy should ensure that the location of farm woodlands is directed to locations to achieve maximum environmental benefits, e.g. soil erosion.
	To promote Stirling & Clackmannanshire as a destination for tourists and visitors	0/-	Medium	Permanent	Areas with high visitor numbers may experience compaction and trampling of soils. Such damage can be more extensive when visitors frequently stray off established trails. The development of tourism facilities can result in loss of organic matter and accelerated erosion, and should avoid sensitive soil resources such as peat and prime agricultural land.	The Strategy should ensure that the development of tourist facilities in woodlands are planned with regard to soil sensitivity.
	To facilitate opportunities for acquiring new skills and experience	+/0/-			This Objective is likely to have limited effect on soil.	No mitigation required.
COMMUNITY DEVELOPMENT	To develop opportunities for expanding the existing woodland resource in and around the towns and villages in Stirling & Clackmannanshire	+/-	Medium	Permanent	The remediation of polluted, derelict and degraded urban sites will have a positive effect on soil stability, structure and quality. Although it should not be assumed that derelict and vacant areas of land are blank canvases – if these pieces of land have been vacant for some time they are often	The Strategy should support woodland expansion on VDL as a contribution to local environmental quality, in line with good practice guidance. The Strategy should ensure that any improvements to degraded urban environments are undertaken in a sensitive

				very heavily vegetated, and removal of this vegetation in order to plant trees may cause short term disturbance to soil structure and quality if not carried out in a sensitive way.	way. The Strategy should ensure that areas of new woodland planting are directed away from sensitive soil resources including peat and prime agricultural land.
	To promote woodlands as community-owned or managed asset	+	Medium	Permanent	This objective is likely to have benefits for soil quality by promoting volunteering which could be targeted at soil conservation measures along heavily used routes and trails.	No mitigation required.
	To facilitate the development of social enterprise networks and capacity building initiatives	-	Medium	Permanent	Care will need to be taken to ensure that the increased volume of people due to events does not result in soil damage or disturbance.	The Strategy should ensure that the promotion of access and events is carried out without the damage or disturbance of sensitive soils.
	To identify opportunities for delivering the Curriculum for Excellence and lifelong learning through Forest Schools and other forest and woodland-based education	+	Medium	Permanent	This Objective could have a positive effect by raising awareness of the importance of woodlands to soil quality and stability. Although, management measures may need to be put in place at areas most frequently visited by members of the Forest Schools to avoid erosion of soils.	The Strategy should ensure that any activities undertaken by the Forest Schools do not have adverse effects on soil structure or quality.
ACCESS & HEALTH	To highlight opportunities for expanding sustainable recreational facilities in the Stirling & Clackmannanshire for both formal and informal recreation	0/-	Medium	Permanent	Care will need to be taken to ensure that woodland with sensitive soils (for example peat or sandy soils) are protected from intensive recreational use and those activities which may cause significant erosion. Zoning recreation may help identify areas where activities such as mountain biking may be appropriate. Management measures will need to be put in place in areas that experience high visitor numbers to ensure compaction and trampling of soil does not occur.	The Strategy should ensure that formal and informal recreation activities do not have an adverse impact on soils, i.e. compaction and erosion. The Strategy should ensure such initiatives are not carried out on sensitive soils including peat.
	To support wellbeing initiatives such as Braveheart, Branching out and Green Gym	0/-	Medium	Permanent	Intensive recreational use or high impact outdoor sports can cause excessive soil disturbance and erosion. Management measures may need to be put in place at areas most frequently visited by members of the wellbeing initiatives to ensure that compaction and trampling of soil does not	The Strategy should ensure that activities from the wellbeing initiatives do not have an adverse impact on soils, i.e. compaction and erosion. The Strategy should ensure such initiatives are not carried out on sensitive soils including

					occur.	peat.
ENVIRONMENTAL QUALITY	To promote natural play and active travel through Forest Schools and other forest education initiatives	0/-	Medium	Permanent	Increased levels of pupils from the Forest Schools can result in soil damage from pupils wandering off set trails. Management measures may need to be put in place at areas most frequently visited by members of the Forest Schools to ensure that damage and disturbance of soils does not occur.	The Strategy should ensure that any activities undertaken by the Forest Schools do not have adverse effects on soil structure or quality.
	To actively promote Stirling & Clackmannanshire's rich cultural heritage	-/+	Medium/ Long	Permanent	Poor management of soils can lead to loss of archaeological and cultural heritage sites as a result of practice and the effects of erosion.	The Strategy should promote sensitive forestry and woodland practices and ensure that new woodland planting for soil management does not impact on important cultural heritage sites.
	To contribute to the management and enhancement of Stirling & Clackmannanshire's historic environment	+	Medium/ Long	Permanent	Restoring ancient and semi-natural woodland, and establishing new native woodland is likely to conserve and enhance the historic and cultural heritage of an area whilst also having a positive effect on soil stability, structure and quality.	The Strategy should ensure that new woodland planting for soil management contributes to the character and significance of important historic landscapes, in line with good practice guidance.
	To promote responsible public access to, and interpretation of, all suitable assets (e.g. archaeology, historic landscapes and buildings)	+	Medium	Permanent	Access to heritage assets in urban fringe woodlands is likely to be encouraged through WIAT schemes. Promoting responsible access and interpretation of historic assets will avoid trampling of soils and soil disturbance.	No mitigation required.
BIODIVESITY	To promote the conservation of key sites and priority habitats	+	Medium/ Long	Permanent	Soil erosion and soil degradation can lead to a change in natural habitats and possible loss of biodiversity.	The Strategy should target areas where soil erosion is a concern and ensure woodland expansion/creation conserves key sites and priority habitats.
	To consolidate and expand functional connectivity through habitat networks in the wider landscape	+	Medium/ Long	Permanent	Planting trees and woodlands to improve habitat connectivity will also improve soil structure and quality.	No mitigation required.
	Highlighting specific woodland types to assist	+	Medium	Permanent	Broadleaf riparian and floodplain woodlands have the potential to deliver most multiple	The Strategy should promote woodland types which have the potential to deliver the most

	with the protection of key species (e.g. red squirrel, badgers and black grouse)				benefits, e.g. protection of soils from erosion, enhancement of biodiversity, etc.	multiple benefits.

SEA THEME: WATER					
SEA Objective 5: To protect and improve relevant waterbody status					
• Contribute to the delivery of River Basin Management Plans, Area Action Plans and flood management					
• Continue to support sustainable water management					
• Continue to protect groundwater dependent terrestrial systems in accordance with the Water Framework Directive					
	SCFWS Policy Objectives	Evaluation	Timeframe	Duration	Commentary	
CLIMATE CHANGE	To identify areas for new woodland creation/existing woodland restoration	+	Medium/ Long	Permanent	Planting on vacant and derelict land has the potential to help remediate contamination, reduce runoff and improve infiltration and absorption/retention capacity. Woodland buffers along mid-slope or downslope field edges, or on infiltration basins are effective in slowing down run-off and intercepting pollutants. Agricultural land: Woodlands have the potential to reduce the contamination of water bodies with agricultural pesticides. Woodlands should be targeted to edge of field woodland shelterbelts to reduce spray drift, riparian woodland buffer areas to intercept pesticides in run-off, and constructed wooded wetlands to treat contaminated waters. New developments: Woodland planting should be targeted to urban and peri-urban areas to improve water quality, minimise surface water run-off and reduce flood risk.	The Strategy should promote woodland planting on VDL to help remediate contamination, reduce runoff and improve infiltration and absorption/retention capacity. The Strategy should promote the establishment of woodland buffer strips alongside surface waters to reduce run-off and intercept pollutants. The Strategy should target woodlands to urban and peri-urban areas which can provide significant water quality benefits.
	To highlight areas for climate change adaptation, particularly those which will contribute to sustainable flood management	++	Short/ Medium/ Long	Permanent	Promoting woodlands in sustainable flood management is likely to: improve the quality of water bodies as soil erosion will be reduced and slopes near water bodies stabilised reducing runoff; reduce water temperature (and protection of fish populations) through shading by riparian woodland; attenuate downstream peak water flows. Although care will need to be taken to ensure that in facilitating renewable forms	No mitigation required.

					of energy development such as hydro power, disturbances to slop stability and watercourses don't cause an increase in erosion which will result in a decline in water quality.	
	To support the development of biomass for heating	-	Short/ Medium/ Long	Permanent	Measures designed to increase biomass yields from existing woodland and forests such as the extraction of harvesting residues could contribute to increased soil and water acidification. The growing pressure to harvest tree stumps for woodfuel poses a range of threats, including an increased risk of ground damage leading to erosion and siltation, resulting in a secondary negative effect on water quality.	The Strategy should support the use of good forestry practice guidelines to reduce negative impacts on the water environment.
	To promote the benefits of carbon sequestration through the Woodland Carbon Code	-/+	Medium/ Long	Permanent	Planting for carbon sequestration presents a number of significant benefits for the water environment, e.g. delayed flood flows, sediment trapping, etc. However, planting for carbon sequestration presents a potential high cost to water in terms of increased risk of ground damage, erosion, reduced water supplies and ecological flows due to higher water use.	The Strategy should promote the benefits of carbon sequestration but also recognise the potential impacts to water quality.
	To advocate forestry and woodland management practices which reduce carbon loss from soils	-	Medium/ Long	Permanent	An intensification of management practices within existing forests to enhance tree growth for carbon sequestration could present increased risks to the water environment. For example, more intensive cultivation, drainage, fertilisation or harvesting regimes could increase ground damage, sediment delivery and nutrient run-off, with the potential to result in diffuse pollution.	The Strategy should promote the use of good forest practice guidelines to reduce the threats to soil and water.
TIMBER	To encourage continued investment in the local timber processing capacity	-	Medium/ Long	Permanent	Adopting continuous cover/lower impact silvicultural systems may benefit water quality by helping to ensure that large areas of forest are not being felled at the same time. Ground disturbance during forest establishment and harvesting/felling operations can disturb the soil and have the potential to increase water turbidity,	The Strategy should promote continuous cover forestry as an alternative to clearfell to protect water quality. Establishing new woodlands and trees for timber processing will need to be carefully managed to ensure that damage and disruption to the water environment is minimised.

				sedimentation and acidification.	
	To promote the use of timber as a renewable, versatile raw material	0/+/-	-	-	This Objective is likely to have limited effect on soil quality and structure.	No mitigation required.
	To encourage the development of the hardwood timber sector	-	Medium/ Long	Permanent	Forestry and woodland practices, particularly harvesting, felling, etc. have the potential to cause soil disturbance leading to an increase in water sedimentation and acidification. Adopting continuous cover/lower impact silvicultural systems may benefit water quality by helping to ensure that large areas of forest are not being felled at the same time.	The Strategy should promote continuous cover forestry as an alternative to clearfell to protect water quality. The Strategy should promote natural regeneration of hardwood forest to reduce the need for site cultivation and soil disturbance. Establishing new woodlands and trees for the hardwood timber sector will need to be carefully managed to ensure that damage and disruption to the water environment is minimised.
BUSINESS DEVELOPMENT	To support rural diversification and business development opportunities	+	Medium	Permanent	Improving vacant and derelict land with woodlands and trees is likely to have significant benefits for water quality as well as providing a more attractive location for businesses. Turning currently marginal and under-used/neglected farmland over to appropriate farm woodlands could result in improvements to water quality, reduce soil erosion, and alleviate flooding downstream.	The Strategy should recognise the role of environmental enhancement of VDL with woodland and trees in providing an attractive location for business. The Strategy should ensure that the location of farm woodlands is directed to locations to achieve maximum environmental benefits, for example reducing run off and erosion.
	To promote Stirling & Clackmannanshire as a destination for tourists and visitors	-	Medium	Permanent	Areas with high visitor numbers may experience compaction and trampling of soils, which in turn will have a negative effect of the water environment. The location and design of tourist facilities in woodlands can result in pollution of water bodies if developed on inappropriate sites.	The Strategy should ensure that the development of tourist facilities in woodlands avoid locations which could threaten water resources.
	To facilitate opportunities for acquiring new skills and experience	0	-	-	This Objective is likely to have limited effect on water.	No mitigation required.
COMMUN ITY	To develop opportunities for expanding the existing woodland resource in and around	+	Medium/ Long	Permanent	The most deprived populations are more likely to be living in areas of low environmental quality in relation to flood risk, poor water quality, etc. The	The Strategy should support woodland expansion on VDL as a contribution to local environmental quality, in line with good

	Objective	Effect	Magnitude	Duration	Commentary	Mitigation
	the towns and villages in Stirling & Clackmannanshire				remediation of polluted, derelict and degraded urban sites has the potential to help remediate contamination, reduce runoff and improve infiltration and absorption/retention capacity. The use of green infrastructure for sustainable urban drainage systems in the right locations can improve water quality and reduce flood risk.	practice guidance. The Strategy should target woodland planting to appropriate locations to alleviate downstream flooding in towns and villages in Stirling and Clackmannanshire.
	To promote woodlands as community-owned or managed asset	+	Medium	Permanent	This Objective is likely to have positive benefits for water quality by promoting volunteering which could be targeted at soil conservation measures along heavily used routes and trails, reducing run-off into water bodies.	No mitigation required.
	To facilitate the development of social enterprise networks and capacity building initiatives	-	Medium	Permanent	Care will need to be taken to ensure that the increased volume of people due to events does not result in soil erosion leading to increased run-off and pollution of water resources.	The Strategy should ensure that the promotion of access and events is carried out without the damage to water bodies.
	To identify opportunities for delivering the Curriculum for Excellence and lifelong learning through Forest Schools and other forest and woodland-based education	+	Medium	Permanent	This Objective could have a positive effect by raising awareness of the importance of woodlands to flood attenuation and water quality.	No mitigation required.
ACCESS & HEALTH	To highlight opportunities for expanding sustainable recreational facilities in the Stirling & Clackmannanshire for both formal and informal recreation	0/-	Medium	Permanent	Tourism infrastructure/facilities that are poorly planned/located or inappropriate behaviour such as walking of trails or littering can negatively affect water quality.	The Strategy should ensure that formal and informal recreation activities do not have an adverse impact on the water environment.
	To support wellbeing initiatives such as Braveheart, Branching out and Green Gym	0/-	Medium	Permanent	Intensive recreational use or high impact outdoor sports can cause excessive soil disturbance and erosion resulting in increased run-off into water bodies. Management measures may need to be put	The Strategy should ensure that activities from the wellbeing initiatives do not have an adverse impact on water quality.

				in place at areas most frequently visited by members of the wellbeing initiatives to ensure this does not occur.	
ENVIRONMENTAL QUALITY	To promote natural play and active travel through Forest Schools and other forest education initiatives	0/-	Medium	Permanent	Increased levels of pupils from the Forest Schools can result in soil damage from pupils wandering off set trails which may lead to an increase in run-off into water resources.	The Strategy should ensure that any activities undertaken by the Forest Schools do not have adverse effects on water quality.
	To actively promote Stirling & Clackmannanshire's rich cultural heritage	+	Medium/ Long	Permanent	The creation and correct management of floodplain woodlands can reduce the risk of flooding and diffuse pollution which will contribute to the preservation of cultural heritage sites.	The Strategy should promote sensitive forestry and woodland practices and ensure that new woodland planting for soil/flooding management does not impact on important cultural heritage sites.
	To contribute to the management and enhancement of Stirling & Clackmannanshire's historic environment	+	Medium/ Long	Permanent	Restoring ancient and semi-natural woodland and establishing new native woodland is likely to conserve and enhance the historic and cultural heritage of an area whilst also having a positive effect on water quality.	The Strategy should ensure that new woodland planting contributes to the character and significance of important historic landscapes, in line with good practice guidance.
	To promote responsible public access to, and interpretation of, all suitable assets (e.g. archaeology, historic landscapes and buildings)	+	Medium	Permanent	Access to heritage assets in urban fringe woodlands is likely to be encouraged through WIAT schemes. Promoting responsible access and interpretation of historic assets will avoid trampling of soils and soil disturbance, thus reducing run-off into water resources.	No mitigation required.
BIODIVESITY	To promote the conservation of key sites and priority habitats	+	Short/ Medium/ Long	Permanent	Careful siting of woodlands and forests can minimise run-off and diffuse pollution which can be a threat to key sites and priority habitats. The creation of floodplain woodland provides benefits including enhanced protection of other important wetland habitats, greater biodiversity and improved water quality.	The Strategy should promote the creation of floodplain woodlands which offer a range of multiple benefits to biodiversity including reduce diffuse pollution, enhanced biodiversity and flood risk management.
	To consolidate and expand functional connectivity through	+	Medium/ Long	Permanent	Planting trees and woodlands to improve habitat connectivity will also reduce run off and diffuse pollution, thus improving water	No mitigation required.

habitat networks in the wider landscape				quality.	
Highlighting specific woodland types to assist with the protection of key species (e.g. red squirrel, badgers and black grouse)	+	Medium	Permanent	Broadleaf riparian and floodplain woodlands have the potential to deliver most multiple benefits, e.g. interception of diffuse pollution, water run-off, enhancement of biodiversity, etc.	The Strategy should promote woodland types which have the potential to deliver the most multiple benefits.

	SEA THEME: AIR					
	SEA Objective 6: To protect and enhance air quality					
	• Contribute to a reduction in air pollution					
	• Reduce the potential for unnecessary "timber miles" and associated emissions					
	• Contribute to sustainable travel and transport objectives					
	SCFWS Policy Objectives	Evaluation	Timeframe	Duration	Commentary	Mitigation
CLIMATE CHANGE	To identify areas for new woodland creation/existing woodland restoration	+	Medium/ Long	Permanent	The expansion of woodlands has clear benefits for air quality. Increased woodland cover and intensification of woodland management may enhance air quality as trees (especially young trees) are able to absorb air pollutants. New planting should be directed to transport corridors to buffer the effect of emissions which can convey significant benefits in mitigating the effects of roads on nearby communities. New planting should be located near towns and villages to reduce the need for people travelling out to the countryside, thus reducing air pollution.	The Strategy should ensure that new woodland planting is directed to appropriate areas, e.g. urban environments, transport corridors, etc.
	To highlight areas for climate change adaptation, particularly those which will contribute to sustainable flood management	+	Medium	Permanent	Creating urban woodlands can help mitigate local climate change by helping to cool the climate and limit the urban heat island effect. Planting in areas of high pollution, for instance 'hotspots' such as traffic junctions and traffic lights will yield proportionately greater rates of air pollutant removal. Additional greening in urban areas has the potential to reduce air pollution from transportation, by shortening the distances people have to travel to enjoy woodlands.	The Strategy should promote the creation of urban woodlands to help mitigate local climate change.
	To support the development of biomass for heating	+/-	Medium	Permanent	The promotion of renewable energy development and wood fuel will replace other more polluted sources of energy, and therefore help to avoid the consequences of	The Strategy should promote the use of clean wood burners in the development of biomass to reduce the emission of pollutants. The Strategy should provide stronger

					climate change. However on a much localised level, air quality may deteriorate due to the use of wood fuel, so efficient clean wood burners should be promoted and used to reduce the risk of localised air pollution. Promoting local biomass markets and reducing the import of timber from further afield may have significant beneficial effects on reducing transport related air pollution.	commitment to promote the location of biomass production in close proximity to local markets to reduce the potential for unnecessary timber miles.
	To promote the benefits of carbon sequestration through the Woodland Carbon Code	++	Medium	Permanent	Tree planting does not only sequester carbon but can also remove air pollutants such as nitrogen oxides, ammonia and sulphur dioxide.	No mitigation required.
	To advocate forestry and woodland management practices which reduce carbon loss from soils	-/+	Medium	Permanent	Any soil disturbance associated with forest and woodland management practices may release carbon to the atmosphere. Practices minimising the disturbance to litter and soil to avoid carbon emissions will prevent significant amounts of carbon been released into the air.	The Strategy should promote sensitive forestry and woodland management practices which reduce carbon loss from soil, i.e. carbon conscious site preparation and harvesting, reduced liming, protection against disturbance and reduced harvest residue removal.
TIMBER	To encourage continued investment in the local timber processing capacity	-/+	Medium	Permanent	Potential for negative impacts on air quality from plant machinery used in timber processing emitting Co2 and other pollutants. As mentioned above, an increase in biomass use may result in localised air pollution due to increased use of wood fuel. Promoting the use of smaller saw mills and reducing the import of timber from further afield may have significant beneficial effects on reducing transport related air pollution.	The Strategy should promote investment in the local timber processing capacity to reduce overall transport distances/emissions. There is also an opportunity for the Strategy to highlight the potential for local processing infrastructure to make use of renewable energy to power machinery.
	To promote the use of timber as a renewable, versatile raw material	+	Medium/ Long	Permanent	Promoting the use of timber as a versatile raw material will encourage the development of productive forests which will significantly benefit air quality.	No mitigation required.
	To encourage the development of the hardwood timber sector	-/+	Medium	Permanent	An increase in productive woodland areas will improve air quality by absorbing air pollutants. Promoting the use of smaller-scale local hardwood processors and reducing the	The Strategy should promote investment in the local hardwood processing capacity to reduce overall transport distances/emissions. The Strategy should promote sensitive forestry and woodland management practices

					import of timber from further afield may have significant beneficial effects on reducing transport related air pollution. Forestry and woodland practices, particularly harvesting, felling, etc. have the potential to cause soil disturbance and release carbon into the atmosphere. Adopting continuous cover/lower impact silvicultural systems may benefit air quality by helping to ensure that large areas of forest are not being felled at the same time.	which reduce carbon loss from soil and benefit air quality.
BUSINESS DEVELOPMENT	To support rural diversification and business development opportunities	+/-	Medium	Permanent	Using planting to enhance derelict and degraded land will improve the quality of key investment locations and create attractive environments for business developments whist also benefiting local air quality. Timber processing and transportation from farm woodlands may contribute to air pollution levels if not carried out in a sustainable way.	The Strategy should ensure that timber processing and transportation from farm woodlands is carried out sustainably.
	To promote Stirling & Clackmannanshire as a destination for tourists and visitors	-	Medium	Permanent	Developing the visitor offer of the area's woodlands may cause an increase in visitors travelling to them from further afield, often by private vehicle, which may have a significant negative impact on air quality. Recreational woodlands should be located close to population centres and public transport nodes, and efforts should be made to promote the use of sustainable modes of transport to the attractions to reduce transport related air pollution.	The Strategy should encourage the development of high quality woodland assets close to settlements to reduce transport related air pollution.
	To facilitate opportunities for acquiring new skills and experience	0	-	-	This Objective is unlikely to have a significant impact on air quality.	No mitigation required.
COMMUNITY DEVELOPMEN	To develop opportunities for expanding the existing woodland resource in and around the towns and villages in Stirling &	+	Medium/ Long	Permanent	The creation of well planned, mixed woodland buffers/corridors will improve the connectivity of existing fragmented woodlands and thus have positive benefits for air quality e.g. by reducing the need for people to use vehicles to access woodlands,	The Strategy should encourage connectivity of existing fragmented woodlands through the creation of woodland buffers/corridors which will improve air quality by reducing vehicle emissions.

	Clackmannanshire				etc.	
	To promote woodlands as community-owned or managed asset	0	-	-	This Objective is unlikely to have a significant impact on air quality.	No mitigation required.
	To facilitate the development of social enterprise networks and capacity building initiatives	0	-	-	This Objective is unlikely to have a significant impact on air quality.	No mitigation required.
	To identify opportunities for delivering the Curriculum for Excellence and lifelong learning through Forest Schools and other forest and woodland-based education	+	Medium/ Long	Permanent	This Objective could have a positive effect on air quality by raising awareness of the importance of woodlands in trapping air pollutants, cooling air in urban areas, and improving air quality.	No mitigation required.
ACCESS & HEALTH	To highlight opportunities for expanding sustainable recreational facilities in the Stirling & Clackmannanshire for both formal and informal recreation	+	Short/ Medium/ Long	Permanent	Improving the provision of woodlands close to settlements can support informal and formal recreational activities whilst also improving the air quality and consequently the health of urban residents. Creating integrated green networks which connect fragmented woodlands will have a positive effect on air quality whilst supporting informal recreational activities such as walking, and cycling.	The Strategy should focus on improving the provision of recreational woodlands close to settlements which will have multiple benefits, i.e. by reducing the need for people to travel to participate in outdoor recreation, and improving the air quality and consequently the health of urban residents. The Strategy should encourage joined up access and recreation provision through expansion of integrated habitat networks and improving connectivity of urban/peri-urban woodlands.
	To support wellbeing initiatives such as Braveheart, Branching out and Green Gym	0	-	-	This Objective is unlikely to have a significant impact on air quality.	No mitigation required.
	To promote natural play and active travel through Forest Schools and other forest education initiatives	+	Medium/ Long	Permanent	Improving connectivity of urban/peri urban woodlands can support informal recreational activities by providing safe and attractive settings for footpaths and cycleways whilst also improving the air quality.	The Strategy should encourage joined up access and recreation provision through expansion of integrated habitat networks and improving connectivity of urban/peri-urban woodlands.
ENVIR ONME	To actively promote Stirling & Clackmannanshire's rich	+	Medium/ Long	Permanent	Restoring ancient and semi-natural woodlands of high cultural value and establishing new native woodlands will	The Strategy should promote the restoration of ancient and semi-natural woodland to

BIODIVESITY	cultural heritage				contribute to the Objective by trapping air pollutants and improving air quality.	contribute to improving air quality.
	To contribute to the management and enhancement of Stirling & Clackmannanshire's historic environment	+	Medium	Permanent	Sensitive WIAT schemes can contribute to the character and historic setting of assets whilst improving urban air quality and providing sustainable access to heritage sites.	No mitigation required.
	To promote responsible public access to, and interpretation of, all suitable assets (e.g. archaeology, historic landscapes and buildings)	++	Medium	Permanent	This Objective will have a significant impact on the SEA Objective.	No mitigation required.
	To promote the conservation of key sites and priority habitats	0	-	-	This Objective is likely to have limited effect on air quality.	No mitigation required.
	To consolidate and expand functional connectivity through habitat networks in the wider landscape	+	Medium/ Long	permanent	Planting trees and woodlands to improve habitat connectivity will also intercept air pollution and thus improve air quality.	The Strategy should ensure new woodland and tree planting links into the habitat networks, where possible.
	Highlighting specific woodland types to assist with the protection of key species (e.g. red squirrel, badgers and black grouse)	0	-	-	This Objective is likely to have limited effect on air quality.	No mitigation required.

SEA THEME: CLIMATIC FACTORS					
SEA Objective 7: To reduce GHG emissions • Seek to minimise GHG emissions from the sector • Seek to prevent new planting on peat soils to maintain carbon stores					
	SCFWS Policy Objectives	Evaluation	Timeframe	Duration	Commentary	
CLIMATE CHANGE	To identify areas for new woodland creation/existing woodland restoration	+/-	Medium	Permanent	Woodlands planting on sensitive soil types should be identified and avoided. Avoiding the expansion of woodland to areas with high carbon content soils is likely to protect the structure and quality of these soils thereby reducing carbon loss. Similarly not replacing forests which lie on high carbon content soils once the timber has been harvested will be beneficial.	The Strategy should ensure woodland expansion/creation does not adversely affect sensitive soil resources, including peat, to avoid the loss of soil carbon.
	To highlight areas for climate change adaptation, particularly those which will contribute to sustainable flood management	0	-	-	This Objective is unlikely to have impacts on climate change mitigation. Objective is more relevant to adaptation.	No mitigation required.
	To support the development of biomass for heating	+/-	Medium/ Long	Permanent	The promotion of renewable energy development and wood fuel will replace other more polluted sources of energy, and therefore help to reduce GHG emission. However on a much localised level, air quality may deteriorate due to the use of wood fuel, so efficient clean wood burners should be promoted and used to reduce the risk of localised air pollution. Promoting local biomass markets and reducing the import of timber from further afield may have significant beneficial effects on reducing transport related air pollution.	The Strategy should promote the use of clean wood burners in the development of biomass to reduce GHG emissions. The Strategy should provide stronger commitment to promote the location of biomass production in close proximity to local markets to reduce the potential for unnecessary timber miles.
	To promote the benefits of carbon sequestration through	++	Medium	Permanent	Tree planting does not only sequester carbon but can also	No mitigation required.

	the Woodland Carbon Code				remove air pollutants such as nitrogen oxides, ammonia and sulphur dioxide.	
TIMBER	To advocate forestry and woodland management practices which reduce carbon loss from soils	-/+	Medium	Permanent	Any soil disturbance associated with forest and woodland management practices may release carbon to the atmosphere. Practices minimising the disturbance to litter and soil to avoid carbon emissions will prevent significant amounts of carbon been released into the air.	The Strategy should promote sensitive forestry and woodland management practices which reduce carbon loss from soil, i.e. carbon conscious site preparation and harvesting, reduced liming, protection against disturbance and reduced harvest residue removal. The Strategy should ensure that areas of woodland planting are directed away from sensitive soil resources including peat to minimise carbon losses.
	To encourage continued investment in the local timber processing capacity	-/+	Medium	Permanent	Potential for negative impacts on air quality from plant machinery used in timber processing emitting GHGs. As mentioned above, an increase in biomass use may result in localised air pollution due to increased use of wood fuel. Promoting the use of smaller saw mills and reducing the import of timber from further afield may have significant beneficial effects on reducing transport related air pollution.	The Strategy should promote investment in the local timber processing capacity to reduce overall transport distances/GHG emissions. There is also an opportunity for the Strategy to highlight the potential for local processing infrastructure to make use of renewable energy to power machinery.
	To promote the use of timber as a renewable, versatile raw material	+	Medium	Permanent	The use of timber as a renewable versatile raw material can help reduce emissions associated with the manufacture and transportation of more energy intensive materials such as steel and concrete.	No mitigation required.
	To encourage the development of the hardwood timber sector	+	Medium	Permanent	Promoting the use of smaller local hardwood timber processors and reducing the import of timber from further afield may have significant beneficial effects on reducing GHG emissions.	The Strategy should promote investment in the local hardwood timber sector to reduce overall transport distances/GHG emissions.
BUSINE SS	To support rural diversification and business development opportunities	-	Short/ Medium	Permanent	Timber processing and transportation from farm woodlands may contribute to air pollution levels	The Strategy should ensure that timber processing and transportation from farm woodlands is carried out sustainably.

					if not carried out in a sustainable way.	
	To promote Stirling & Clackmannanshire as a destination for tourists and visitors	-/+	Medium	Permanent	Developing the visitor offer of an area's woodlands may cause an increase in visitors travelling to them from further afield, often by private vehicle, which may increase GHG emissions. Therefore, visitor attractions should be located close to population centres and public transport nodes, and efforts should be made to promote the use of sustainable modes of transport to the attractions.	The Strategy should encourage the development of high quality woodland assets close to settlements to reduce GHG emissions.
	To facilitate opportunities for acquiring new skills and experience	0	-	-	This Objective is unlikely to have a significant impact on GHG emissions.	No mitigation required.
COMMUNITY DEVELOPMENT	To develop opportunities for expanding the existing woodland resource in and around the towns and villages in Stirling & Clackmannanshire	+	Medium/ Long	Permanent	The creation of well planned, mixed woodland buffers/corridors will improve the connectivity of existing fragmented woodlands and will reduce GHG emissions e.g. by reducing the need for people to use vehicles to access woodlands, etc.	The Strategy should encourage connectivity of existing fragmented woodlands through the creation of woodland buffers/corridors which will reduce GHG emissions by minimising vehicle emissions.
	To promote woodlands as community-owned or managed asset	0	-	-	This Objective is unlikely to have a significant impact on GHG emissions.	No mitigation required.
	To facilitate the development of social enterprise networks and capacity building initiatives	0	-	-	This Objective is unlikely to have a significant impact on GHG emissions.	No mitigation required.
	To identify opportunities for delivering the Curriculum for Excellence and lifelong learning through Forest Schools and other forest and woodland-based education	0	-	-	This Objective is unlikely to have a significant impact on GHG emissions.	No mitigation required.
ACCESS &	To highlight opportunities for expanding sustainable recreational facilities in the Stirling & Clackmannanshire for	+	Short/ Medium/ Long	Permanent	Promoting the use of local woodlands for outdoor recreation and the inclusion of long distance walking and cycling paths may help to	The Strategy should focus on improving the provision of recreational woodlands close to settlements which will have multiple benefits, i.e. by reducing the need for people to travel

ENVIRONMENTAL QUALITY	both formal and informal recreation				reduce the overall distance travelled by motorised transport, therefore reducing GHG emissions created by visitors to woodlands in the area.	to participate in outdoor recreation, which will reduce GHG emissions from private vehicles.
	To support wellbeing initiatives such as Braveheart, Branching out and Green Gym	0	-	-	This Objective is unlikely to have a significant impact on GHG emissions.	No mitigation required.
	To promote natural play and active travel through Forest Schools and other forest education initiatives	+	Medium/ Long	Permanent	Improving connectivity of urban/peri urban woodlands can support informal recreational activities by providing safe and attractive settings for footpaths and cycleways whilst also reducing the need to use unsustainable forms of transport emitting GHGs.	The Strategy should encourage joined up access and recreation provision through expansion of integrated habitat networks and improving connectivity of urban/peri-urban woodlands.
	To actively promote Stirling & Clackmannanshire's rich cultural heritage	0	-	-	This Objective is likely to have limited effect on GHG emissions.	No mitigation required.
	To contribute to the management and enhancement of Stirling & Clackmannanshire's historic environment	0	-	-	This Objective is likely to have limited effect on GHG emissions.	No mitigation required.
	To promote responsible public access to, and interpretation of, all suitable assets (e.g. archaeology, historic landscapes and buildings)	++	Medium	Permanent	This Objective will have a significant impact on the SEA Objective.	No mitigation required.
BIODIVESITY	To promote the conservation of key sites and priority habitats	0	-	-	This Objective is likely to have limited effect on GHG emissions.	No mitigation required.
	To consolidate and expand functional connectivity through habitat networks in the wider landscape	0	-	-	This Objective is likely to have limited effect on GHG emissions.	No mitigation required.
	Highlighting specific woodland types to assist with the protection of key species (e.g. red squirrel, badgers and black grouse)	0	-	-	This Objective is likely to have limited effect on GHG emissions.	No mitigation required.

SEA THEME: CLIMATIC FACTORS					
SEA Objective 8: To support climate change mitigation • Support appropriate renewable energy development • Safeguard the standing timber carbon resource					
SCFWS Policy Objectives	Evaluation	Timeframe	Duration	Commentary	Mitigation
To identify areas for new woodland creation/existing woodland restoration	+/-	Medium	Permanent	Woodland planting on sensitive soil types should be avoided, particularly planting on peaty soils. Avoiding the expansion of woodland to areas with high carbon content soils is likely to protect the structure and quality of these soils thereby reducing carbon loss and helping to mitigate climate change. Similarly not replacing forests which lie on high carbon content soils once the timber has been harvested will also mitigate climate change. Land use change can result in dramatic changes in soil carbon stocks; therefore the Strategy should encourage the conversion of VDL to woodlands.	The Strategy should ensure woodland expansion/creation does not adversely affect sensitive soil resources to avoid the loss of soil carbon. Land use change can result in dramatic changes in soil carbon stocks; therefore the Strategy should encourage the conversion of VDL to woodlands.
To highlight areas for climate change adaptation, particularly those which will contribute to sustainable flood management	0	-	-	This Objective is unlikely to have impacts on climate change mitigation. Objective is more relevant to adaptation.	No mitigation required.
To support the development of biomass for heating	++	Medium	Permanent	The development of forests and woodlands for biomass will positively contribute to this SEA by supporting the development of renewable energy and also providing carbon sinks by capturing carbon dioxide from the atmosphere and storing it as wood and in associated forest soils.	The Strategy should prioritise VDL or stalled sites to support the growth of the local biomass sector.
To promote the benefits of carbon sequestration through the Woodland Carbon Code	++	Medium	Permanent	This Objective will have a significant positive impact on the SEA Objective.	No mitigation required.

CLIMATE CHANGE

TIMBER	To advocate forestry and woodland management practices which reduce carbon loss from soils	++	Medium	Permanent	This Objective will have a significant positive impact on the SEA Objective.	No mitigation required.
	To encourage continued investment in the local timber processing capacity	+/-	Medium/ Long	Permanent	Forestry operations including road building and maintenance, site cultivation, thinning and harvesting, etc. have the potential to cause soil disturbance thus releasing carbon into the atmosphere. Timber products (furniture, boards, plywood) will help to mitigate climate change as carbon will remain stored in the wood.	The Strategy should promote continuous cover/ low impact silvicultural practices to avoid carbon losses.
	To promote the use of timber as a renewable, versatile raw material	+	Medium/ Long	Permanent	Potential for forest products to act as a substitute for fossil fuels to contribute to mitigation.	No mitigation required.
	To encourage the development of the hardwood timber sector	+/-	Medium/ Long	Permanent	Inappropriate forestry practices can cause soil disturbance leading to an increase in carbon loss. Good management practices should be employed to remove dead or decaying wood which have the potential to release carbon into the atmosphere. Timber products (furniture, boards, plywood) will help to mitigate climate change as carbon will remain stored in the wood. Emphasis should be placed on tree species carbon content and to their rates of carbon sequestration.	The Strategy should promote natural regeneration of hardwood forest to reduce the need for site cultivation and soil disturbance. Establishing new woodlands and tress for the hardwood timber sector will need to be carefully managed to ensure that damage and disruption to the soil is minimised thereby reducing carbon loss. Good management practices should be employed to remove dead or decaying wood which have the potential to release carbon into the atmosphere.
BUSINESS DEVELOPMENT	To support rural diversification and business development opportunities	+/-	Medium	Permanent	Using planting to enhance derelict and degraded land will improve the quality of key investment locations and create attractive environments for business developments whist also mitigating climate change by creating soil carbon sinks. Turning currently marginal and under-used/neglected farmland over	The Strategy should target woodland planting to VDL to create attractive environments for business investment whilst also mitigating climate change by creating soil carbon sinks.

COMMUNITY DEVELOPMENT					to appropriate farm woodlands will also contribute to climate change mitigation by increasing carbon storage in the soil. Increasing uptake of biomass through Renewable Heat Incentives may make small-scale local woodlands viable community businesses.	
	To promote Stirling & Clackmannanshire as a destination for tourists and visitors	-	Medium/ Long	Permanent	Tourist related infrastructure should be sensitively located to avoid soil disturbance and carbon loss.	No mitigation required.
	To facilitate opportunities for acquiring new skills and experience	0	-	-	This Objective is unlikely to have a significant impact on climate change mitigation.	No mitigation required.
	To develop opportunities for expanding the existing woodland resource in and around the towns and villages in Stirling & Clackmannanshire	+	Medium/ Long	Permanent	The protection and enhancement of existing woodlands will make a positive contribution to retaining carbon stores and creating new carbon sinks.	The Strategy should encourage protecting and enhancing existing woodlands which will retain existing carbon stores and creating new carbon sinks.
	To promote woodlands as community-owned or managed asset	+	Medium	Permanent	Greater community engagement in woodland planning will help to raise awareness of climate change mitigation.	No mitigation required.
	To facilitate the development of social enterprise networks and capacity building initiatives	0	-	-	This Objective is unlikely to have a significant impact on climate change mitigation.	No mitigation required.
	To identify opportunities for delivering the Curriculum for Excellence and lifelong learning through Forest Schools and other forest and woodland-based education	0	-	-	This Objective is unlikely to have a significant impact on climate change mitigation.	No mitigation required.
ACCESS & HEALTH	To highlight opportunities for expanding sustainable recreational facilities in the Stirling & Clackmannanshire for both formal and informal recreation	+	Medium	Permanent	Woodlands supporting formal and informal recreational facilities can also contribute to climate change resilience by sequestering carbon.	No mitigation required.

	Objective					
ENVIRONMENTAL QUALITY	To support wellbeing initiatives such as Braveheart, Branching out and Green Gym	0	-	-	This Objective is unlikely to have significant effects on climate change mitigation.	No mitigation required.
	To promote natural play and active travel through Forest Schools and other forest education initiatives	0/+	Medium/ Long	Permanent	Improving connectivity of urban/peri urban woodlands and expansion of IHNs will positively contribute to climate change mitigation and will also provide active travel through woodlands.	The Strategy can promote climate change mitigation by encouraging joined up access and recreation provision through expansion of integrated habitat networks and improving connectivity of urban/peri-urban woodlands.
	To actively promote Stirling & Clackmannanshire's rich cultural heritage	+	Medium/ Long	Permanent	Restoring ancient and semi-natural woodlands of high cultural value and establishing new native woodlands will contribute to climate change mitigation by sequestering carbon.	The Strategy should promote the restoration of ancient and semi-natural woodland to contribute to climate change mitigation.
	To contribute to the management and enhancement of Stirling & Clackmannanshire's historic environment	+	Medium/ Long	Permanent	Prioritising the retention of existing trees and woodland will help maintain the character and significance of historic landscapes.	The Strategy should prioritise the retention of existing trees and woodlands to help maintain the character and significance of historic landscapes whilst also contributing to climate change mitigation.
	To promote responsible public access to, and interpretation of, all suitable assets (e.g. archaeology, historic landscapes and buildings)	0	-	-	This Objective is unlikely to have significant effects on climate change mitigation.	No mitigation required.
BIODIVESITY	To promote the conservation of key sites and priority habitats	+/-	Medium/ Long	Permanent	Tree planting that restores fuller forest cover may not only sequester carbon but could improve habitat suitability for wildlife.	No mitigation required.
	To consolidate and expand functional connectivity through habitat networks in the wider landscape	+	Medium/ Long	Permanent	Planting trees and woodlands to improve habitat connectivity will also sequester carbon.	No mitigation required.
	Highlighting specific woodland types to assist with the protection of key species (e.g. red squirrel, badgers and black grouse)	+	Medium	Permanent	Fast growing hardwood trees have the potential to deliver most multiple benefits, e.g. sequester the most carbon, enhancement of biodiversity, etc.	The Strategy should promote woodland types which have the potential to deliver the most multiple benefits.

SEA THEME: CLIMATIC FACTORS					
SEA Objective 9: To support climate change adaptation					
• Contribute to sustainable water management and erosion prevention					
• Contribute to resilience planning objectives					
SCFWS Policy Objectives	Evaluation	Timeframe	Duration	Commentary	Mitigation
CLIMATE CHANGE To identify areas for new woodland creation/existing woodland restoration	+	Medium/ Long	Permanent	Woodland buffers/corridors are effective in slowing down run-off, improving soil stability and enhancing the connectivity of habitats. Woodland planting should be targeted to urban and peri-urban areas to improve water and soil quality, minimise surface water run-off, reduce flood risk and soil erosion. Planting trees in urban areas also plays an important role in environments by providing shelter, limiting the urban island heat effect, etc. Recognising the important role of trees in providing shade may also benefit the structure and quality of soil preventing the extreme drying out and cracking of soil.	The Strategy should promote the establishment of woodland buffer strips to reduce run-off, improve soil stability and enhance the connectivity of habitats. The Strategy should support urban and peri-urban planting which plays an important role in boosting resilience, i.e. providing shelter and shade for settlements, crops and livestock, and (in the right locations) flood attenuation.
To highlight areas for climate change adaptation, particularly those which will contribute to sustainable flood management	++	Short/ Medium/ Long	Permanent	This Objective directly contributes to the SEA Objective.	No mitigation required.
To support the development of biomass for heating	0	-	-	This Objective is unlikely to have impacts on climate change adaptation. Objective is more relevant to mitigation.	No mitigation required.
To promote the benefits of carbon sequestration through the Woodland Carbon Code	0	-	-	This Objective is unlikely to have impacts on climate change adaptation. Objective is more relevant to mitigation.	No mitigation required.
To advocate forestry and woodland management practices which reduce carbon	0	-	-	This Objective is unlikely to have impacts on climate change adaptation. Objective is more	No mitigation required.

	loss from soils				relevant to mitigation.	
	To encourage continued investment in the local timber processing capacity	+	Medium/ Long	Permanent	A key component of climate change adaptation is diversification. Managing woodland harvesting to provide a more even pattern of timber production may help to mitigate some of the effects of climate change by reducing the risk of losing an entire timber harvest to extreme weather events or pests/diseases caused by climate change. By harvesting more evenly over time the risk to the whole crop is reduced.	The Strategy should encourage the timber sector to increase resilience to climate change by varying management systems, timings of operations, and varying tree species, etc.
TIMBER	To promote the use of timber as a renewable, versatile raw material	+	Medium	Permanent	Supporting the development of renewables will help to reduce reliance on potentially unstable fossil fuel sources.	No mitigation required.
	To encourage the development of the hardwood timber sector	+	Medium	Permanent	Forestry and woodland practices, particularly harvesting, felling, etc. have the potential to cause soil erosion which may lead to an increased risk of run-off and flooding. A greater diversity of hardwood trees, as well as continuous cover forestry as an alternative to clearfell and other low impact silvicultural systems will boost resilience to climate change.	The Strategy should promote greater diversity of hardwood trees, as well as continuous cover forestry as an alternative to clearfell and other low impact silvicultural systems to boost resilience to climate change.
BUSINESS DEVELOPMENT	To support rural diversification and business development opportunities	+	Medium	Permanent	Using planting to enhance derelict and degraded land will improve the quality of key investment locations and create attractive environments for business developments whist also increasing soil stability and contributing to sustainable flood management. Turning currently marginal and under-used/neglected farmland over to appropriate farm woodlands will	The Strategy should promote woodland planting on derelict and degraded land which will increase resilience to climate change by increasing soil stability and contributing to sustainable flood management. The Strategy should ensure that the location of farm woodlands is directed to locations to achieve maximum environmental benefits for climate change adaptation, for example reducing runoff and erosion.

					also contribute to climate change adaptation by providing shelter and shade for crops and livestock, preventing soil from drying and cracking, and flood attenuation.	
COMMUNITY DEVELOPMENT	To promote Stirling & Clackmannanshire as a destination for tourists and visitors	0	-	-	This Objective is unlikely to have significant effects on climate change adaptation.	No mitigation required.
	To facilitate opportunities for acquiring new skills and experience	0	-	-	This Objective is unlikely to have significant effects on climate change adaptation.	No mitigation required.
	To develop opportunities for expanding the existing woodland resource in and around the towns and villages in Stirling & Clackmannanshire	+	Medium/ Long	Permanent	The protection and enhancement of existing woodlands will make a positive contribution to maintaining slope stability, preventing soil erosion and reducing runoff. Expanding existing woodlands will also improve climate change resilience by providing shade for settlements, crops and livestock, and flood attenuation. Developing woodland buffers/ corridors will improve the connectivity of existing fragmented woodlands and will have positive benefits by enabling species to adapt to climate change. The use of green infrastructure for sustainable urban drainage systems in the right locations can improve water quality and reduce flood risk.	The Strategy should encourage expanding the existing woodland resource which will boost resilience (i.e. by providing shade, etc.) and will minimise the risks of soil erosion and flooding. The Strategy should promote the establishment of woodland buffer strips to reduce run-off, intercept pollutants, improve soil stability and enhance the connectivity of habitats. The Strategy should promote the use of Sustainable Urban Drainage Systems which directly increases communities' resilience to climate change.
	To promote woodlands as community-owned or managed asset	+	Medium	Permanent	Greater community engagement in woodland planning will help to raise awareness of climate change and should help to boost community resilience and promote active planning for adaptation.	No mitigation required.
	To facilitate the development of social enterprise networks and capacity building initiatives	0	-	-	This Objective is unlikely to have significant effects on climate change adaptation.	No mitigation required.

ACCESS & HEALTH	To identify opportunities for delivering the Curriculum for Excellence and lifelong learning through Forest Schools and other forest and woodland-based education	+	Medium/ Long	Permanent	This Objective could have a positive effect by raising awareness of the importance of woodlands and forests in climate change adaptation.	No mitigation required.
	To highlight opportunities for expanding sustainable recreational facilities in the Stirling & Clackmannanshire for both formal and informal recreation	+	Medium	Permanent	Woodlands supporting formal and informal recreational facilities can also contribute to climate change resilience by reducing soil erosion, cracking, water run-off, etc.	No mitigation required.
	To support wellbeing initiatives such as Braveheart, Branching out and Green Gym	0	-	-	This Objective is unlikely to have significant effects on climate change adaptation.	No mitigation required.
	To promote natural play and active travel through Forest Schools and other forest education initiatives	0/+	Medium/ Long	Permanent	Improving connectivity of urban/peri urban woodlands and expansion of IHNs will positively contribute to climate change resilience (i.e. by reducing soil erosion, cracking, water run-off, etc.) and will also provide active travel through woodlands.	The Strategy can promote climate change adaptation by encouraging joined up access and recreation provision through expansion of integrated habitat networks and improving connectivity of urban/peri-urban woodlands.
ENVIRONMENTAL QUALITY	To actively promote Stirling & Clackmannanshire's rich cultural heritage	+	Medium/ Long	Permanent	Restoring ancient and semi-natural woodlands of high cultural value and establishing new native woodlands will contribute to climate change resilience (i.e. by reducing soil erosion, cracking, water run-off, etc.).	The Strategy should promote the restoration of ancient and semi-natural woodland to contribute to climate change resilience.
	To contribute to the management and enhancement of Stirling & Clackmannanshire's historic environment	+	Short/ Medium/ Long	Permanent	Establishing woodlands for sustainable flood management is likely to reduce the risk of flooding of historic buildings, and minimise the risk of damage to buried archaeological remains.	No mitigation required.
	To promote responsible public access to, and interpretation of, all suitable assets (e.g. archaeology, historic landscapes	0	-	-	This Objective is unlikely to have significant effects on climate change adaptation.	No mitigation required.

BIODIVESITY	and buildings)					
	To promote the conservation of key sites and priority habitats	++	Medium	Permanent	Establishing new native woodlands and developing integrated habitat networks will help to conserve key sites and help priority species adapt to climate change.	The Strategy should encourage planting of new native woodlands and integrated habitat networks to help priority species adapt to climate change.
	To consolidate and expand functional connectivity through habitat networks in the wider landscape	++	Medium	Permanent	Developing integrated habitat networks will improve the connectivity of existing fragmented woodlands and will have positive benefits by enabling species to adapt to climate change.	The Strategy should encourage integrated habitat networks which will allow species to adapt to climate change by allowing the free movement and regeneration of species.
	Highlighting specific woodland types to assist with the protection of key species (e.g. red squirrel, badgers and black grouse)	+	Medium	Permanent	A mixture of tree species will provide some insurance against climate change as not all will be affected by climate change to the same extent.	The Strategy should promote mixtures of tree species to provide some insurance against climate change.

SEA THEME: MATERIAL ASSETS					
SEA Objective 10: To support sufficient infrastructure development • Protect key mineral resources from sterilisation through inappropriate afforestation • Contribute to the appropriate re-use of VDL					
SCFWS Policy Objectives	Evaluation	Timeframe	Duration	Commentary	Mitigation
CLIMATE CHANGE — To identify areas for new woodland creation/existing woodland restoration	+	Medium/ Long	Permanent	Previously developed, derelict, underused, neglected (brownfield) land in and around urban centres can deliver social, environmental and economic benefits via conversion to green infrastructure.	The Strategy should promote the role of green infrastructure in transforming VDL and delivering a range of environmental services and benefits to people, including services such as flood alleviation which may previously have been delivered by grey infrastructure solutions.
To highlight areas for climate change adaptation, particularly those which will contribute to sustainable flood management	+	Medium/ Long	Permanent	Green infrastructure can help to reduce ambient heat and flooding in urban areas due to the cooling effect of trees, and by slowing the rate at which water reaches the ground through infiltration and interception.	The Strategy should promote the use of Sustainable Urban Drainage systems which directly support the provision of sufficient infrastructure.
To support the development of biomass for heating	++	Medium	Permanent	This Objective will have significant benefits for the SEA Objective.	No mitigation required.
To promote the benefits of carbon sequestration through the Woodland Carbon Code	+	Medium	Permanent	Through the creation of integrated networks and urban greening, woodlands can increase soil stability and quality, thereby improving carbon storage and sequestration.	No mitigation required.
To advocate forestry and woodland management practices which reduce carbon loss from soils	0	-	-	This Objective is unlikely to have any major impact on the SEA Objective.	No mitigation required.
TIMBER — To encourage continued investment in the local timber processing capacity	+	Medium	Permanent	-	The Strategy should support the provision of new and more efficient use of existing infrastructure for the timber processing sector particularly for the transportation and processing of timber.
To promote the use of timber as a renewable, versatile raw material	0	-	-	This Objective is unlikely to have a significant impact to the SEA Objective.	No mitigation required.

BUSINESS DEVELOPMENT	To encourage the development of the hardwood timber sector	+	Medium	Permanent	-	The Strategy should support the provision of new and more efficient use of existing infrastructure for the hardwood timber sector particularly for the transportation and processing of timber.
	To support rural diversification and business development opportunities	+	Medium	Permanent	The creation of green infrastructure as woodland planting can help create more attractive environments and encourage more inward investment.	The Strategy should promote the role of green infrastructure in creating attractive environments and encouraging economic investment to an area.
	To promote Stirling & Clackmannanshire as a destination for tourists and visitors	+	Medium	Permanent	The creation of green infrastructure, particularly on vacant and derelict land, will have positive benefits for tourism, e.g. by creating new walking and cycling routes, etc.	The Strategy should promote the role of green infrastructure in transforming VDL to benefit tourism.
	To facilitate opportunities for acquiring new skills and experience	0	-	-	This Objective is unlikely to have any major impact on the SEA Objective.	No mitigation required.
COMMUNITY DEVELOPMENT	To develop opportunities for expanding the existing woodland resource in and around the towns and villages in Stirling & Clackmannanshire	+	Medium/ Long	Permanent	Developing woodland buffers/ corridors will improve the connectivity of existing fragmented woodlands and will have positive benefits by enhancing the green infrastructure. The use of green infrastructure for sustainable urban drainage systems in the right locations can improve water quality and reduce flood risk.	The Strategy should support the development of woodland corridors which will directly contribute to the Objective of providing sufficient infrastructure. The Strategy should promote the use of Sustainable Urban Drainage systems which directly support the provision of sufficient infrastructure.
	To promote woodlands as community-owned or managed asset	+	Medium	Permanent	This Objective is unlikely to have any direct effects on the provision of infrastructure, but the increased involvement of the local community in planning woodlands may lead to a better understanding of the infrastructure needs of the local community.	No mitigation required.
	To facilitate the development of social enterprise networks and capacity building initiatives	0	-	-	This Objective is unlikely to have any major impact on the SEA Objective.	No mitigation required.
	To identify opportunities for	+	Medium	Permanent	This Objective supports the provision	No mitigation required.

ACCESS & HEALTH	delivering the Curriculum for Excellence and lifelong learning through Forest Schools and other forest and woodland-based education				of educational infrastructure such as forest schools and other woodland based training, thus supporting the provision of infrastructure in the area.	
	To highlight opportunities for expanding sustainable recreational facilities in the Stirling & Clackmannanshire for both formal and informal recreation	+	Medium	Permanent	The creation of green infrastructure, particularly on vacant and derelict land, will have positive benefits for recreation, e.g. by creating new walking and cycling routes, etc.	The Strategy should promote the role of green infrastructure in transforming VDL to create recreation facilities.
	To support wellbeing initiatives such as Braveheart, Branching out and Green Gym	0	-	-	This Objective is unlikely to have any major impact on the SEA Objective.	No mitigation required.
	To promote natural play and active travel through Forest Schools and other forest education initiatives	+	Medium/ Long	Permanent	Green infrastructure which links urban and peri urban woodlands can support informal recreational activities by providing safe and attractive settings for footpaths and cycleways connecting communities with the wider countryside.	The Strategy should encourage joined up access and recreation provision through expansion of green networks and improving connectivity of urban and peri-urban woodlands.
ENVIRONMENTAL QUALITY	To actively promote Stirling & Clackmannanshire's rich cultural heritage	+	Medium/ Long	Permanent	Green infrastructure near settlements may help enhance the area's cultural heritage for the future. Sensitive WIAT schemes can contribute to the character and historic setting of assets.	The Strategy should promote woodland planting near settlements to enhance the area's cultural heritage in the future.
	To contribute to the management and enhancement of Stirling & Clackmannanshire's historic environment	+	Medium	Permanent	Restoring ancient and semi-natural woodland and establishing new native woodland is likely to conserve and enhance the historic heritage of an area whilst providing accessible routes/infrastructure which can be used by communities for recreation and access.	The Strategy should ensure that new woodland planting contributes to the character and significance of important historic landscapes.
	To promote responsible public access to, and interpretation of, all suitable assets (e.g. archaeology, historic landscapes and buildings)	+	Medium/ Long	Permanent`	Green infrastructure should link into footpath networks in the surrounding area in an effort to promote responsible access to and appreciation of cultural heritage features and other historical assets.	No mitigation required.

BIODIVESITY	To promote the conservation of key sites and priority habitats	0	-	-	This Objective is unlikely to have any major impact on the SEA Objective.	No mitigation required.
	To consolidate and expand functional connectivity through habitat networks in the wider landscape	+	Medium	Permanent	Effective networks of green infrastructure provide opportunities for species to move, spread and colonise new habitats.	No mitigation required.
	Highlighting specific woodland types to assist with the protection of key species (e.g. red squirrel, badgers and black grouse)	0	-	-	This Objective is unlikely to have any major impact on the SEA Objective.	No mitigation required.

SEA THEME: MATERIAL ASSETS					
SEA Objective 11: To minimise waste					
• Promote the efficient operation of the sector and the safe treatment and disposal of non-reusable/recyclable arisings					
SCFWS Policy Objectives	Evaluation	Timeframe	Duration	Commentary	Mitigation
To identify areas for new woodland creation/existing woodland restoration	+	Medium	Permanent	Woodlands should be targeted to vacant and derelict land or contaminated land, thereby reducing the amount of underused land.	The Strategy should encourage woodland expansion to VDL or contaminated land to reduce the amount of underused land particularly in urban areas.
To highlight areas for climate change adaptation, particularly those which will contribute to sustainable flood management	+	Medium	Permanent	The use of biomass as a source of low carbon fuel has the potential to reduce emissions of climate-damaging gases, limit the use of fossil fuels, and reduce the amount of forest thinnings and residues sent to landfills. It should be noted that on a much localised level, air quality may deteriorate due to the use of wood fuel (discussed further under the Air SEA).	The Strategy should promote the location of biomass production in close proximity to local markets to reduce the potential for timber to be damaged during transit.
To support the development of biomass for heating	++	Medium	Permanent	The development of biomass fuel for heat and power will enable wood chips, waste wood and residues from forest thinnings and harvesting operations to be removed from the waste stream. Using these materials for electricity generation recovers their energy value while avoiding landfill disposal.	The Strategy should support the development of biomass fuel for heat and power as it significantly contributes to the positive reuse of waste woodland materials.
To promote the benefits of carbon sequestration through the Woodland Carbon Code	0	-	-	This Objective is unlikely to have an impact on minimising waste.	No mitigation required.
To advocate forestry and woodland management practices which reduce carbon loss from soils	+	Medium	Permanent	Encouraging efficient forestry and woodland management practices will reduce carbon loss from soils whilst also minimising the amount of trees lost through decay, extraction etc., and thereby	The Strategy should encourage efficient forestry and woodland management practices which will minimise the amount of trees lost through decay, etc., thereby reducing waste.

CLIMATE CHANGE

					reducing waste.	
TIMBER	To encourage continued investment in the local timber processing capacity	+	Medium	Permanent	Residues and co-products from sawmills such as sawdust can potentially be used for in the production of wood pellets, thus minimising waste by avoiding landfill disposal. Promoting local biomass markets and reducing the distance that timber has to travel is likely to minimise the amount of timber that is damaged in transit.	The Strategy should promote the use of forest residues and other waste products from saw mills in the production of wood pellets, thus reducing waste by avoiding landfill disposal. The Strategy should promote local biomass markets which will reduce the distance that timber has to travel minimising the risk of timber been damaged in transit, thereby reducing waste.
	To promote the use of timber as a renewable, versatile raw material	0	-	-	This Objective is unlikely to have an impact on minimising waste.	No mitigation required.
BUSINESS DEVELOPMENT	To encourage the development of the hardwood timber sector	+	Medium	Permanent	The processing of hardwood timbers produces wood waste, wood chips, and residues from forest thinnings and harvesting operations which can be developed for biomass fuel for heating and power, thereby removing them from the waste stream.	The Strategy should promote the use of forest residues and other waste products from hardwood timber processors in the development of biomass fuel, thus reducing waste by avoiding landfill disposal.
	To support rural diversification and business development opportunities	+	Medium	Permanent	Increasing uptake of biomass through Renewable Heat Incentives may make small-scale local woodlands viable community businesses.	No mitigation required.
	To promote Stirling & Clackmannanshire as a destination for tourists and visitors	0/-	Medium	Permanent	Increasing tourism in the area's woodlands may cause a rise in waste that is produced by visitors resulting in minor negative effects on this SEA Objective.	No mitigation required.
	To facilitate opportunities for acquiring new skills and experience	0	-	-	This Objective is unlikely to have an impact on minimising waste.	No mitigation required.
COMM UNITY	To develop opportunities for expanding the existing woodland resource in and	+	Medium	Permanent	The creation of well planned, mixed woodland buffers/corridors will improve the connectivity of	The Strategy should encourage woodland expansion to VDL or contaminated land to reduce the amount of underused land

	around the towns and villages in Stirling & Clackmannanshire				existing fragmented woodlands and should be targeted to vacant and derelict land or contaminated land, thereby reducing the amount of underused urban land.	particularly in urban areas.
	To promote woodlands as community-owned or managed asset	+	Medium	Permanent	Smaller scale community owned woodland operations may ensure that there is a greater use of harvest residues and more active management of timber for secondary purposes such as biomass rather than adding this material to the waste stream.	No mitigation required.
	To facilitate the development of social enterprise networks and capacity building initiatives	+	Medium	Permanent	Social enterprise organisations can positively contribute to this SEA Objective by collecting woody waste which would normally go to landfill, and turning waste into woodchip for energy or logs for domestic heating.	The Strategy should encourage the development of social enterprise networks as they may ensure that there is a greater use of harvest residues for purposes such as biomass rather than adding this material to the waste stream.
	To identify opportunities for delivering the Curriculum for Excellence and lifelong learning through Forest Schools and other forest and woodland-based education	0/-	Medium	Permanent	Increased levels of pupils at Forest Schools may cause a rise in waste resulting in minor negative effects.	No mitigation required.
ACCESS & HEALTH	To highlight opportunities for expanding sustainable recreational facilities in the Stirling & Clackmannanshire for both formal and informal recreation	-	Medium	Permanent	Encouraging local communities to use the area's woodlands for recreation may cause a rise in the waste that is produced, resulting in minor negative effects.	No mitigation required.
	To support wellbeing initiatives such as Braveheart, Branching out and Green Gym	0/-	Medium	Permanent	Increased levels of visitors for recreational activities may cause a rise in waste resulting in minor negative effects.	No mitigation required.
	To promote natural play and active travel through Forest Schools and other forest education initiatives	0/-	Medium	Permanent	Promoting active travel through woodlands may have a very minor effect on waste.	No mitigation required.
ENV IRO	To actively promote Stirling & Clackmannanshire's rich cultural	+	Medium	Permanent	Woodland planting on vacant and derelict land may help enhance the	The Strategy should promote woodland planting on vacant and derelict land to

	heritage				area's cultural heritage for the future whilst also reducing the amount of underused waste land.	enhance an area's cultural heritage for the future whilst also reducing the amount of underused waste land.
	To contribute to the management and enhancement of Stirling & Clackmannanshire's historic environment	+	Medium	Permanent	Improved management of existing woodlands will minimise waste and consequently the potential impact on the historical features.	The Strategy should encourage the improved management of existing woodlands to minimise waste and consequently the potential impact on the historic environment.
	To promote responsible public access to, and interpretation of, all suitable assets (e.g. archaeology, historic landscapes and buildings)	+	Medium	Permanent	Promoting responsible access and interpretation of historic assets will positively contribute to this SEA Objective.	No mitigation required.
BIODIVESITY	To promote the conservation of key sites and priority habitats	+	Medium	Permanent	The safe treatment and disposal of non-reusable waste arisings is likely to have positive effects on the conservation of biodiversity.	No mitigation required.
	To consolidate and expand functional connectivity through habitat networks in the wider landscape	0	-	-	This Objective is unlikely to have an impact on minimising waste.	No mitigation required.
	Highlighting specific woodland types to assist with the protection of key species (e.g. red squirrel, badgers and black grouse)	0	-	-	This Objective is unlikely to have an impact on minimising waste.	No mitigation required.

SEA THEME: CULTURAL HERITAGE					
SEA Objective 12: To conserve and enhance the cultural and built environment					
• Seek to ensure that woodland expansion safeguards the fabric and setting of heritage assets					
• Contribute to the character and significance of important historic landscapes					
• Seek to promote responsible access to and appreciation of cultural heritage via the green network					
	SCFWS Policy Objectives	Evaluation	Timeframe	Duration	Commentary	Mitigation
CLIMATE CHANGE	To identify areas for new woodland creation/existing woodland restoration	+/-	Medium/ Long	Permanent	New native woodlands should be created where they buffer and extend existing native woodland (particularly ancient woodland) and/or other semi-natural open ground habitats. Prioritising the retention of existing trees and woodland will help maintain the character and significance of historic landscapes. Newly created woodlands should be accessible to people and ideally linked into footpath networks in the surrounding countryside in an effort to promote responsible access to and appreciation of cultural heritage features. Inventory Battlefields are currently in the 'potential' land class. While it is acknowledged that these sites may include some opportunities for expansion, their national significance warrants an enhanced level of assessment and care in managing change – particularly as their significance often relates to complex relationships in the landscape.	The Strategy should promote new woodlands which are designed in such a way as to complement and enhance the visual character and cultural heritage of the surrounding landscape. The Strategy should ensure that new woodland creation is carefully planned to avoid irreparable damage to historical features. The Strategy should prioritise the retention of existing trees and woodlands to help maintain the character and significance of historic landscapes. Inventory Battlefields should be included within the 'sensitive' land category
	To highlight areas for climate change adaptation, particularly those which will contribute to sustainable flood management	+	Short/ Medium/ Long	Permanent	Establishing woodlands for sustainable flood management is likely to reduce the risk of flooding of historic buildings, and minimise the risk of damage to buried	No mitigation required.

					archaeological remains.	
	To support the development of biomass for heating	+/-	Medium/ Long	Permanent	Establishing local biomass markets may help to create new cultural traditions in an area and enrich and renew older traditions and land management practices. There is potential for woodland expansion to affect historic landscapes, although location decisions will be primarily planning led, therefore impacts on the fabric and setting will be mitigated through the statutory planning process.	No mitigation required.
	To promote the benefits of carbon sequestration through the Woodland Carbon Code	+	Medium/ Long	Permanent	Restoring ancient and semi-natural woodland and establishing new native woodlands will improve carbon sequestration but also significantly benefit the quality of the built environment and conserve the cultural heritage of an area.	The Strategy should promote the restoration of ancient and semi-natural woodland to improve carbon sequestration but also to benefit the quality of the built environment and the cultural heritage of an area.
	To advocate forestry and woodland management practices which reduce carbon loss from soils	+	Medium/ Long	Permanent	Low impact silvicultural systems should be promoted to avoid damage to cultural and historic features.	The Strategy should promote sensitive forestry and woodlands management practices which protect cultural heritage sites and historic features.
TIMBER	To encourage continued investment in the local timber processing capacity	+/-	Medium	Permanent	The promotion of local, small scale saw mills may help keep local and culturally important jobs in an area. Opportunity to promote the use of traditional harvesting techniques which not only will have environmental benefits for sensitive locations but also help to keep important local cultural traditions alive. There is potential for woodland expansion to affect historic landscapes, although location decisions will be primarily planning led, therefore impacts on the fabric and setting will be mitigated	The Strategy should promote continued investment in the local timber processing sector as this may help to keep local and culturally important jobs in an area. Establishing new woodlands and tress for timber processing will need to be carefully managed to ensure that damage to cultural/historical features is avoided.

					through the statutory planning process.	
	To promote the use of timber as a renewable, versatile raw material	0	-	-	This Objective does not have a significant impact on the cultural and built environment.	No mitigation required.
	To encourage the development of the hardwood timber sector	+	Medium	Permanent	As much ancient and native woodland is currently undermanaged, the careful use and active management, for example for hardwood timber production, will increase environmental, social and economic value.	The Strategy should encourage the improved management of ancient and native woodlands which will contribute to the character and significance of important historic landscapes.
BUSINESS DEVELOPMENT	To support rural diversification and business development opportunities	+	Medium	Permanent	Using planting to enhance derelict and degraded land will improve the quality of key investment locations and create attractive environments for business developments whist also improving the character of the built environment. Turning currently marginal and under-used/neglected farmland over to appropriate farm woodlands could enhance the character of the surrounding area.	No mitigation required.
	To promote Stirling & Clackmannanshire as a destination for tourists and visitors	0	Medium	Permanent	A great variety of well-preserved archaeological monuments and features within woodlands have become visitor attractions. Where there are high visitor numbers, zoning, path re-routing or appropriate restrictions should be used to protect cultural heritage sites and other sensitive sites.	The Strategy should ensure that there is no loss of environmental value or cultural heritage features due to tourist related activities. The Strategy should promote access to heritage assets in urban environments through WIAT schemes, etc.
	To facilitate opportunities for acquiring new skills and experience	-/+	Medium	Permanent	Through well-designed programmes, it is possible to increase public awareness of their environment, heritage and history within woodlands. As outlined above, care must be taken to ensure that where there are high numbers of people, path re-routing or appropriate restrictions are used	The Strategy should ensure that there is no loss of environmental value or cultural heritage features due to educational activities.

				to protect cultural heritage sites and other sensitive sites.	
COMMUNITY DEVELOPMENT	To develop opportunities for expanding the existing woodland resource in and around the towns and villages in Stirling & Clackmannanshire	+	Medium/ Long	Permanent	New native woodlands should be created where they buffer and extend existing native woodland (particularly ancient woodland) and/or other semi-natural open ground habitats. Prioritising the retention of existing trees and woodland will help maintain the character and significance of historic landscapes. Newly created woodlands should be accessible to people and ideally linked into footpath networks in the surrounding countryside in an effort to promote responsible access to and appreciation of cultural heritage features.	The Strategy should promote new woodlands which are designed in such a way as to complement and enhance the visual character and cultural heritage of the surrounding landscape. The Strategy should ensure that new woodland creation is carefully planned to avoid irreparable damage to historical features. The Strategy should prioritise the retention of existing trees and woodlands to help maintain the character and significance of historic landscapes.
	To promote woodlands as community-owned or managed asset	+	Short/ Medium	Permanent	Community ownership and management of woodlands gives communities a better understanding about the cultural, historic and built environment in their local area which may provide an incentive to conserve and improve their area in the future.	No mitigation required.
	To facilitate the development of social enterprise networks and capacity building initiatives	0/+	Medium	Permanent	Through well-designed programmes, it is possible to increase public awareness of their environment, heritage and history within woodlands. Care must be taken to ensure that where there are high numbers of people, path re-routing or appropriate restrictions are used to protect cultural heritage sites and other sensitive sites.	The Strategy should ensure that there is no loss of environmental value or cultural heritage features due to educational activities.
	To identify opportunities for delivering the Curriculum for Excellence and lifelong learning through Forest Schools and	0/+	Medium	Permanent	Through well-designed programmes, it is possible to increase public awareness of their environment, heritage and history	The Strategy should ensure that there is no loss of environmental value or cultural heritage features due to educational activities.

ACCESS & HEALTH	other forest and woodland-based education				within woodlands. As outlined above, care must be taken to ensure that where there are high numbers of people, path re-routing or appropriate restrictions are used to protect cultural heritage sites and other sensitive sites.	
	To highlight opportunities for expanding sustainable recreational facilities in the Stirling & Clackmannanshire for both formal and informal recreation	+	Medium	Permanent	Ancient and native woodlands which are of high cultural heritage or biodiversity value are best suited to quite informal recreation. Formal recreational facilities (e.g. mountain biking trails) should not usually be developed on sensitive parts of such sites. Improving connectivity of urban/peri urban woodlands can support informal recreational activities and also provide safe and attractive settings for footpaths and cycleways in an effort to promote responsible access to and appreciation of cultural heritage features.	The Strategy should ensure that woodland and forestry recreational development does not adversely impact on the fabric and setting of heritage assets or historic features. The Strategy should ensure that woodland and forestry recreational development promote responsible access to and appreciation of cultural heritage where appropriate.
	To support wellbeing initiatives such as Braveheart, Branching out and Green Gym	+	Medium	Permanent	As above.	As above.
	To promote natural play and active travel through Forest Schools and other forest education initiatives	+	Medium	Permanent	As above.	As above.
ENVIRONMENTAL QUALITY	To actively promote Stirling & Clackmannanshire's rich cultural heritage	++	Short/ Medium/ Long	Permanent	This objective directly contributes to the SEA Objective.	No mitigation required.
	To contribute to the management and enhancement of Stirling & Clackmannanshire's historic environment	++	Short/ Medium/ Long	Permanent	This objective directly contributes to the SEA Objective.	No mitigation required.
	To promote responsible public access to, and interpretation of, all suitable assets (e.g. archaeology, historic landscapes	++	Short/ Medium/ Long	Permanent	This objective directly contributes to the SEA Objective.	No mitigation required.

BIODIVESITY	and buildings)					
	To promote the conservation of key sites and priority habitats	+/-	Medium	Permanent	In both ancient and native woodland, introduced and/or invasive plant species can have profound impacts on both biodiversity and cultural heritage features. Improved management of ancient and native woodlands will ensure that invasive plants and species will be controlled.	No mitigation required.
	To consolidate and expand functional connectivity through habitat networks in the wider landscape	+	Medium	Permanent	Improving connectivity of urban/peri urban woodlands can support habitat networks and also provide safe and attractive settings for footpaths and cycleways in an effort to promote responsible access to and appreciation of cultural heritage features.	The Strategy should promote new woodland corridors which are designed in such a way as to complement and enhance the visual character and cultural heritage of the surrounding landscape.
	Highlighting specific woodland types to assist with the protection of key species (e.g. red squirrel, badgers and black grouse)	0	-	-	This Objective does not have a significant impact on the cultural and built environment.	No mitigation required.

SEA THEME: LANDSCAPE					
SEA Objective 13: Conserve and enhance the character of the region's landscape • Steer woodland expansion proposals to appropriate locations • Support measures to promote good woodland design and appropriate diversity • Encourage the use of woodland to root new development and existing settlements in the landscape • Woodland expansion should reflect current and future capacity to accommodate change					
SCFWS Policy Objectives	Evaluation	Timeframe	Duration	Commentary	Mitigation
To identify areas for new woodland creation/existing woodland restoration	+	Medium	Permanent	This Objective specifically provides an opportunity for woodland creation to enhance the quality of the landscape through positive reuse of vacant and derelict land and contaminated land. Woodland planting should be steered to locations where it will improve the setting of existing settlements and provide green infrastructure and key amenities for new developments. Creating well planned, mixed woodland buffers/corridors will also have significant positive benefits for landscape quality.	The Strategy should steer woodland expansion to vacant or derelict urban/urban fringe environments where it is likely to have significant benefits by improving the environmental quality of the area. The Strategy should encourage woodland planting to locations where it will improve the setting of existing settlements and provide green infrastructure and key amenities for new developments. The Strategy should promote new woodlands and woodland buffers which are designed in such a way as to complement and enhance the visual character of the surrounding landscape.
To highlight areas for climate change adaptation, particularly those which will contribute to sustainable flood management	+	Medium	Permanent	Integrating habitat networks, reducing soil erosion, improving flood attenuation, and increasing tree planting on derelict or contaminated land, may all have a positive impact on the regions rural and urban landscapes.	No mitigation required.
To support the development of biomass for heating	+/-	Medium	Permanent	The development of woodlands for biomass may help to regenerate and enhance an areas landscape. However, care will need to be taken that establishing energy woodlands does not have a negative impact on the landscape even where this is on urban fringe or derelict land. Large areas of monoculture should be	The Strategy should ensure that new biomass planting is designed to contribute to the landscape character in line with good practice guidance.

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					avoided.	
TIMBER	To promote the benefits of carbon sequestration through the Woodland Carbon Code	+	Medium	Permanent	Restoring existing woodlands and establishing new native woodlands will improve carbon sequestration but also significantly benefit the quality of surrounding landscapes.	The Strategy should promote the restoration of existing woodland and the creation of new woodlands to improve carbon sequestration but also to benefit the quality of surrounding landscapes.
	To advocate forestry and woodland management practices which reduce carbon loss from soils	+	Medium/ Long	Permanent	Low impact silvicultural systems should be promoted as these practices will have less impact on the landscape character.	The Strategy should promote sensitive forestry and woodlands management practices which protect the local landscape character.
	To encourage continued investment in the local timber processing capacity	+/-	Medium	Permanent	Evening out patterns of timber production is likely to have a positive impact on the landscape by reducing the size of areas that are felled at the same time and creating woodlands which have a more diverse age class, thus creating a more naturalistic setting for woodlands.

Timber processing and distribution infrastructure would need to take into account landscape character, especially as it may be sited in sensitive and remote locations. Although forest design and planning process will ensure the appropriate design and location of such infrastructure. | The Strategy should promote continuous cover forestry systems and other low impact silvicultural practices which will impact less of the landscape character of an area.

Establishing new woodlands and tress for timber processing will need to be carefully designed and managed to conserve and enhance the character of the landscape. |
| | To promote the use of timber as a renewable, versatile raw material | 0 | - | - | This Objective is unlikely to have a significant impact on conserving and enhancing the landscape. | No mitigation required. |
| | To encourage the development of the hardwood timber sector | +/- | Medium | Permanent | An increase in hardwood forests will improve the environmental and landscape quality of an area, particularly if planting is focussed on derelict and degraded landscapes. Large areas of monoculture hardwoods should be avoided, and greater diversity of species should be promoted.

As mentioned above, the Strategy should encourage the careful siting | The Strategy should promote greater diversity of hardwood species to avoid large areas of monoculture which may impact negatively on the character of the landscape.

Establishing new hardwood forests and tress for timber processing will need to be carefully designed and managed to conserve and enhance the character of the landscape. |

					of timber processing and distribution infrastructure to avoid negative impacts on the character of the landscape.	
BUSINESS DEVELOPMENT	To support rural diversification and business development opportunities	+	Medium	Permanent	Using planting to enhance derelict and degraded land will improve the quality of key investment locations and create attractive environments for business developments whist also improving the character of the landscape. Turning currently marginal and under-used/neglected farmland over to appropriate farm woodlands could enhance the character of the surrounding area.	The Strategy should encourage woodland planting to enhance derelict and degraded land to improve the quality of key investment locations. The Strategy should ensure that farm woodlands contribute positively to the local landscape character, in line with good practice guidance.
	To promote Stirling & Clackmannanshire as a destination for tourists and visitors	+	Medium	Permanent	The creation of high quality woodland areas will have significant beneficial effects on the landscape as it is likely that these will be located close to settlements on the urban fringe.	The Strategy should ensure that new tourism infrastructure development is sensitively located within the landscape.
COMMUNITY DEVELOPMENT	To facilitate opportunities for acquiring new skills and experience	+	Short/ Medium/ Long	Permanent	As derelict and vacant urban land is generally located near disadvantaged communities, the positive reuse of this land will not only enhance the local landscape but will also provide disadvantaged communities with opportunities for acquiring new skills and experience.	No mitigation required.
	To develop opportunities for expanding the existing woodland resource in and around the towns and villages in Stirling & Clackmannanshire	+	Medium	Permanent	The creation of well planned, mixed woodland buffers/corridors will improve the connectivity of existing fragmented woodlands and thus have positive benefits for the quality of the landscape, particularly if these are focussed on land which currently has little value in terms of landscape character.	The Strategy should encourage connectivity of existing fragmented woodlands through the creation of woodland buffers/corridors which are designed in such a way as to complement and enhance the character of the surrounding landscape.
	To promote woodlands as community-owned or managed asset	+	Medium	Permanent	Greater community involvement in woodland planning and management is likely to promote the development	No mitigation required.

					of woodland that protects and enhances key local values, improves the setting of existing settlements and helps to provide green infrastructure and key amenities for new development.	
	To facilitate the development of social enterprise networks and capacity building initiatives	0	-	-	This Objective is unlikely to have a significant impact on landscape quality.	No mitigation required.
	To identify opportunities for delivering the Curriculum for Excellence and lifelong learning through Forest Schools and other forest and woodland-based education	+	Short/ Medium/ Long	Permanent	As derelict and vacant urban land is generally located near disadvantaged communities, the positive reuse of this land will not only enhance the local landscape but will also provide disadvantaged communities with opportunities for education and learning through woodland based education.	No mitigation required.
ACCESS & HEALTH	To highlight opportunities for expanding sustainable recreational facilities in the Stirling & Clackmannanshire for both formal and informal recreation	+/-	Medium	Permanent	The creation of high quality woodland areas will have significant beneficial effects on the landscape as it is likely that these will be located close to settlements on the urban fringe. Although care will need to be taken to ensure that these recreational opportunities are carried out in a sensitive and appropriate manner.	The Strategy should ensure that new recreational infrastructure development is sensitively located within the landscape.
	To support wellbeing initiatives such as Braveheart, Branching out and Green Gym	+/-	Medium	Permanent	The creation of high quality woodland areas will have significant beneficial effects on the landscape as it is likely that these will be located close to settlements on the urban fringe. Although care will need to be taken to ensure that these wellbeing initiatives are carried out in a sensitive and appropriate manner.	The Strategy should ensure that new recreational infrastructure development is sensitively located within the landscape.
	To promote natural play and active travel through Forest Schools and other forest education initiatives	+	Medium/ Long	Permanent	Improving connectivity of urban/peri urban woodlands and expansion of IHNs will positively contribute to enhancing the quality of the local landscape and will also promote	The Strategy should encourage joined up access and recreation provision through expansion of integrated habitat networks and improving connectivity of urban/peri-urban woodlands.

					active travel through woodlands.	
ENVIRONMENTAL QUALITY	To actively promote Stirling & Clackmannanshire's rich cultural heritage	+	Medium/ Long	Permanent	New native woodlands should be created where they buffer and extend existing native woodland (particularly ancient woodland) and/or other semi-natural open ground habitats.	The Strategy should promote new woodlands which are designed in such a way as to complement and enhance the visual character and cultural heritage of the surrounding landscape.
	To contribute to the management and enhancement of Stirling & Clackmannanshire's historic environment	+	Medium/ Long	Permanent	Prioritising the retention of existing trees and woodland will help maintain the character and significance of historic landscapes. Woodland expansion on vacant/derelict sites should be carefully planned to avoid irreparable damage to historical features and also to ensure successful integration into the local landscape.	The Strategy should prioritise the retention of existing trees and woodlands to help maintain the character and significance of historic landscapes. The Strategy should ensure that new woodland creation is carefully planned to avoid irreparable damage to historical features and also to ensure successful integration into the local landscape.
	To promote responsible public access to, and interpretation of, all suitable assets (e.g. archaeology, historic landscapes and buildings)	+	Medium/ Long	Permanent `	Newly created woodlands should be accessible to people and ideally linked into footpath networks in the surrounding area in an effort to promote responsible access to and appreciation of cultural heritage features and other historical assets.	No mitigation required.
BIODIVESITY	To promote the conservation of key sites and priority habitats	+	Medium	Permanent	Transforming degraded urban fringe environments and improving the management of existing ancient and native woodlands are likely to have multi-functional benefits for priority habitats & species and the quality of the local landscape.	The Strategy should encourage the improved management of existing woodlands and sensitive regeneration of derelict/vacant sites to conserve priority habitats and enrich the local landscape.
	To consolidate and expand functional connectivity through habitat networks in the wider landscape	+	Medium	Permanent	The creation of well planned, mixed woodland buffers/corridors will improve the connectivity of existing fragmented woodlands which will aid the dispersal of many woodlands species whilst also enhancing the character of the surrounding landscape. Diversifying farmed landscapes through appropriate expansion will	The Strategy should promote sensitive woodland expansion/creation which maintains and enhances natural features, species and habitat conservation whilst also enhancing the character of the surrounding landscape.

				also positively enhance habitat connectivity and the quality of the surrounding environment.	
Highlighting specific woodland types to assist with the protection of key species (e.g. red squirrel, badgers and black grouse)	0	-	-	This Objective is unlikely to have an impact on conserving and enhancing landscapes.	No mitigation required.

Appendix 3
Scenario planning figures

Table 8.2: detailed expansion scenario figures

SCENARIO / Landscape type	Sum of Area_ha	Current Change	Current Area	Current Zone cover	Current % cover	Low Change	Low Area	Low Zone cover	Low % cover	Moderate Change	Moderate Area	Moderate Zone cover	Moderate % cover	Notional capacity Change	Notional capacity Area	Notional capacity Zone cover	Notional capacity % cover	Rationale
Broad Valley Lowland	70.4			2.3	3.3%			4.9	7.0%			7.2	10.2%			5.7	8.1%	
Existing	2.3	100%	2.3			97.0%	2.2			97.0%	2.2			100.0%	2.3			
Potential	37.4	0%	0.0			3.0%	1.1			5.0%	1.9			5.0%	1.9			
Preferred	30.7	0%	0.0			5.0%	1.5			10.0%	3.1			5.0%	1.5			
Coastal Flats	1.7			0.0	0.0%			0.1	3.3%			0.1	5.6%			0.0	0.0%	
Potential	1.5	0%	0.0			3.0%	0.0			5.0%	0.1			0.0%	0.0			Fragment; unsuited to
Preferred	0.2	0%	0.0			5.0%	0.0			10.0%	0.0			0.0%	0.0			significant expansion
Drumlin Foothills	127.1			7.5	5.9%			13.1	10.3%			18.9	14.9%			13.1	10.3%	
Existing	7.5	100%	7.5			97.0%	7.3			97.0%	7.3			100.0%	7.5			
Potential	6.6	0%	0.0			3.0%	0.2			5.0%	0.3			0.0%	0.0			
Preferred	112.8	0%	0.0			5.0%	5.6			10.0%	11.3			5.0%	5.6			Insufficient area for significant
Sensitive	0.2	0%	0.0			1.0%	0.0			1.0%	0.0			0.0%	0.0			expansion
Farmed Moorland Hills	9884.6			1173.5	11.9%			1477.7	14.9%			1772.5	17.9%			1896.1	19.2%	
Built-up	32.1	0%	0.0			0.5%	0.2			0.5%	0.2			0.0%	0.0			Slight reduction through
Existing	1173.5	100%	1173.5			97.0%	1138.3			97.0%	1138.3			97.0%	1138.3			restructuring of conifer
Potential	4204.4	0%	0.0			3.0%	126.1			5.0%	210.2			8.0%	336.4			plantations; expansion of farm
Preferred	4214.5	0%	0.0			5.0%	210.7			10.0%	421.4			10.0%	421.4			woodlands to support
Sensitive	231.8	0%	0.0			1.0%	2.3			1.0%	2.3			0.0%	0.0			agriculture and resilience to
Unsuitable	28.3	0%	0.0			0.0%	0.0			0.0%	0.0			0.0%	0.0			climate change
Farmed Strath Floor	240.4			42.7	17.8%			49.1	20.4%			55.9	23.3%			46.9	19.5%	
Built-up	0.2	0%	0.0			0.5%	0.0			0.5%	0.0			0.0%	0.0			
Existing	42.7	100%	42.7			97.0%	41.4			97.0%	41.4			98.0%	41.9			Very minor reduction through
Potential	86.8	0%	0.0			3.0%	2.6			5.0%	4.3			0.0%	0.0			restructuring; Potential for
Preferred	100.4	0%	0.0			5.0%	5.0			10.0%	10.0			5.0%	5.0			some native woodland
Sensitive	9.5	0%	0.0			1.0%	0.1			1.0%	0.1			0.0%	0.0			enhancement in Glen Dochart
Unsuitable	0.8	0%	0.0			0.0%	0.0			0.0%	0.0			0.0%	0.0			and Glen Lochay
Flat Arable Farmland	3438.1			217.0	6.3%			307.2	8.9%			371.9	10.8%			467.2	13.6%	
Built-up	4.5	0%	0.0			0.5%	0.0			0.5%	0.0			0.0%	0.0			Minor reductions through
Existing	217.0	100%	217.0			97.0%	210.5			97.0%	210.5			98.0%	212.7			removal for bog restoration /
Potential	3163.0	0%	0.0			3.0%	94.9			5.0%	158.2			8.0%	253.0			restructuring of existing
Preferred	29.9	0%	0.0			5.0%	1.5			10.0%	3.0			5.0%	1.5			woodland; small-scale development of farm woodlands
Sensitive	23.6	0%	0.0			1.0%	0.2			1.0%	0.2			0.0%	0.0			to support resilience
Forested Glen	815.5			706.4	86.6%			688.4	84.4%			690.6	84.7%			690.5	84.7%	
Existing	706.4	100%	706.4			97.0%	685.2			97.0%	685.2			97.0%	685.2			
Potential	105.9	0%	0.0			3.0%	3.2			5.0%	5.3			5.0%	5.3			reduction due to restructuring;
Preferred	0.1	0%	0.0			5.0%	0.0			10.0%	0.0			0.0%	0.0			native and some conifer
Sensitive	3.1	0%	0.0			1.0%	0.0			1.0%	0.0			0.0%	0.0			expansion
Forested Moorland Hills	6052.4			3807.6	62.9%			3799.3	62.8%			3902.8	64.5%			3896.4	64.4%	
Existing	3807.6	100%	3807.6			97.0%	3693.4			97.0%	3693.4			97.0%	3693.4			
Potential	196.9	0%	0.0			3.0%	5.9			5.0%	9.8			2.0%	3.9			losses due to restructuring of
Preferred	1990.8	0%	0.0			5.0%	99.5			10.0%	199.1			10.0%	199.1			large conifer forests; some
Sensitive	51.2	0%	0.0			1.0%	0.5			1.0%	0.5			0.0%	0.0			expansion of conifers and native
Unsuitable	5.9	0%	0.0			0.0%	0.0			0.0%	0.0			0.0%	0.0			woodland networks
Highland Glens with Lochs	374.6			155.6	41.5%			156.9	41.9%			160.9	42.9%			165.5	44.2%	
Existing	155.6	100%	155.6			97.0%	150.9			97.0%	150.9			100.0%	155.6			
Potential	198.7	0%	0.0			3.0%	6.0			5.0%	9.9			5.0%	9.9			
Preferred	0.0	0%	0.0			5.0%	0.0			10.0%	0.0			0.0%	0.0			
Sensitive	7.8	0%	0.0			1.0%	0.1			1.0%	0.1			0.0%	0.0			native woodland enhancement

SCENARIO

Landscape type	Sum of Area_ha	Current Change	Area	Zone cover	% cover	Low Change	Area	Zone cover	% cover	Moderate Change	Area	Zone cover	% cover	Notional capacity Change	Area	Zone cover	% cover	Rationale
Unsuitable	12.6	0%	0.0			0.0%	0.0			0.0%	0.0			0.0%	0.0			
Highland Summits and Plateaux	**2229.1**			55.6	2.5%			98.0	4.4%			127.4	5.7%			84.9	3.8%	
Existing	55.6	100%	55.6			97.0%	53.9			97.0%	53.9			100.0%	55.6			
Potential	1468.4	0%	0.0			3.0%	44.1			5.0%	73.4			2.0%	29.4			
Preferred	0.0	0%	0.0			5.0%	0.0			10.0%	0.0			0.0%	0.0			
Sensitive	10.6	0%	0.0			1.0%	0.1			1.0%	0.1			0.0%	0.0			small-scale expansion of native
Unsuitable	694.5	0%	0.0			0.0%	0.0			0.0%	0.0			0.0%	0.0			woodland networks
Igneous Hills	**166.3**			30.6	18.4%			32.3	19.4%			34.1	20.5%			34.9	21.0%	
Built-up	2.1	0%	0.0			0.5%	0.0			0.5%	0.0			0.0%	0.0			Open uplands, significant
Existing	30.6	100%	30.6			97.0%	29.7			97.0%	29.7			100.0%	30.6			expansion unlikley to be
Potential	86.2	0%	0.0			3.0%	2.6			5.0%	4.3			5.0%	4.3			appropriate on landscape and
Preferred	0.6	0%	0.0			5.0%	0.0			10.0%	0.1			0.0%	0.0			biodiversity grounds;
Sensitive	0.1	0%	0.0			1.0%	0.0			1.0%	0.0			0.0%	0.0			enhancement of riparian
Unsuitable	46.8	0%	0.0			0.0%	0.0			0.0%	0.0			0.0%	0.0			networks
Inland Loch	**1289.5**			11.0	0.9%			11.8	0.9%			12.2	0.9%			11.0	0.9%	
Built-up	0.8	0%	0.0			0.5%	0.0			0.5%	0.0			0.0%	0.0			
Existing	11.0	100%	11.0			97.0%	10.7			97.0%	10.7			100.0%	11.0			
Potential	11.7	0%	0.0			3.0%	0.4			5.0%	0.6			0.0%	0.0			
Preferred	2.5	0%	0.0			5.0%	0.1			10.0%	0.3			0.0%	0.0			
Sensitive	67.9	0%	0.0			1.0%	0.7			1.0%	0.7			0.0%	0.0			
Unsuitable	1195.6	0%	0.0			0.0%	0.0			0.0%	0.0				0.0			-
Loch Island	**10.1**			6.7	66.4%			6.5	64.5%			6.5	64.5%			6.7	66.4%	
Existing	6.7	100%	6.7			97.0%	6.5			97.0%	6.5			100.0%	6.7			
Sensitive	1.3	0%	0.0			1.0%	0.0			1.0%	0.0			0.0%	0.0			management of existing native
Unsuitable	2.1	0%	0.0			0.0%	0.0			0.0%	0.0			0.0%	0.0			woodlands on islands
Lowland Hill Fringes	**10306.2**			2347.0	22.8%			2551.0	24.8%			2772.1	26.9%			2918.2	28.3%	
Built-up	245.1	0%	0.0			0.5%	1.2			0.5%	1.2			0.0%	0.0			
Existing	2347.0	100%	2347.0			97.0%	2276.6			97.0%	2276.6			97.0%	2276.6			
Potential	5003.2	0%	0.0			3.0%	150.1			5.0%	250.2			7.0%	350.2			
Preferred	2419.5	0%	0.0			5.0%	121.0			10.0%	241.9			12.0%	290.3			
Sensitive	215.7	0%	0.0			1.0%	2.2			1.0%	2.2			0.5%	1.1			
Unsuitable	75.7	0%	0.0			0.0%	0.0			0.0%	0.0			0.0%	0.0			
Lowland Hills	**22541.9**			2816.7	12.5%			3107.5	13.8%			3357.3	14.9%			3596.6	16.0%	
Built-up	104.0	0%	0.0			0.5%	0.5			0.5%	0.5			0.0%	0.0			
Existing	2816.7	100%	2816.7			97.0%	2732.2			97.0%	2732.2			97.0%	2732.2			
Potential	12088.4	0%	0.0			3.0%	362.7			5.0%	604.4			7.0%	846.2			
Preferred	161.1	0%	0.0			5.0%	8.1			10.0%	16.1			10.0%	16.1			loss due to restructuring;
Sensitive	402.3	0%	0.0			1.0%	4.0			1.0%	4.0			0.5%	2.0			expansion of mixed woodland
Unsuitable	6969.3	0%	0.0			0.0%	0.0			0.0%	0.0			0.0%	0.0			types on lower slopes
Lowland Hills and Valleys	**11.6**			2.8	24.5%			3.2	27.3%			3.6	30.6%			2.8	24.5%	
Existing	2.8	100%	2.8			97.0%	2.8			97.0%	2.8			100.0%	2.8			
Potential	1.5	0%	0.0			3.0%	0.0			5.0%	0.1			0.0%	0.0			
Preferred	7.2	0%	0.0			5.0%	0.4			10.0%	0.7			0.0%	0.0			
Lowland Loch Basin	**24.3**			9.2	37.9%			9.6	39.4%			10.2	41.8%			9.2	37.9%	
Existing	9.2	100%	9.2			97.0%	8.9			97.0%	8.9			100.0%	9.2			
Potential	5.4	0%	0.0			3.0%	0.2			5.0%	0.3			0.0%	0.0			
Preferred	9.6	0%	0.0			5.0%	0.5			10.0%	1.0			0.0%	0.0			
Sensitive	0.1	0%	0.0			1.0%	0.0			1.0%	0.0			0.0%	0.0			
Lowland River Valleys	**20550.4**			3928.9	19.1%			4305.4	21.0%			4667.6	22.7%			4628.1	22.5%	

SCENARIO		Current				Low				Moderate				Notional capacity				
		Change	Area	Zone cover	% cover	Change	Area	Zone cover	% cover	Change	Area	Zone cover	% cover	Change	Area	Zone cover	% cover	Rationale
Landscape type	**Sum of Area_ha**																	
Built-up	1856.5	0%	0.0			0.5%	9.3			0.5%	9.3			1.0%	18.6			
Existing	3928.9	100%	3928.9			97.0%	3811.0			97.0%	3811.0			97.0%	3811.0			
Potential	12010.2	0%	0.0			3.0%	360.3			5.0%	600.5			5.0%	600.5			Reduction due to restructuring;
Preferred	2440.8	0%	0.0			5.0%	122.0			10.0%	244.1			8.0%	195.3			expansion of conifer and native
Sensitive	272.8	0%	0.0			1.0%	2.7			1.0%	2.7			1.0%	2.7			woodlands; enhancement of
Unsuitable	41.2	0%	0.0			0.0%	0.0			0.0%	0.0			0.0%	0.0			designed landscapes
Lowland Valley Fringes	5492.5			1388.3	25.3%			1476.9	26.9%			1576.9	28.7%			1547.1	28.2%	
Built-up	216.3	0%	0.0			0.5%	1.1			0.5%	1.1			1.0%	2.2			minor loss due to restructuring;
Existing	1388.3	100%	1388.3			97.0%	1346.7			97.0%	1346.7			98.0%	1360.5			planting to enhance urban
Potential	2611.9	0%	0.0			3.0%	78.4			5.0%	130.6			5.0%	130.6			green networks; expanding
Preferred	954.9	0%	0.0			5.0%	47.7			10.0%	95.5			5.0%	47.7			lowland mixed woodland and
Sensitive	303.1	0%	0.0			1.0%	3.0			1.0%	3.0			2.0%	6.1			habitats networks; enhancing
Unsuitable	18.0	0%	0.0			0.0%	0.0			0.0%	0.0			0.0%	0.0			designed landscapes
Moss	2209.4			346.3	15.7%			391.6	17.7%			434.6	19.7%			428.5	19.4%	
Built-up	1.5	0%	0.0			0.5%	0.0			0.5%	0.0			0.0%	0.0			loss due to restructuring and
Existing	346.3	100%	346.3			97.0%	336.0			97.0%	336.0			97.0%	336.0			removals on deep peat;
Potential	648.4	0%	0.0			3.0%	19.5			5.0%	32.4			5.0%	32.4			expanding native networks;
Preferred	601.0	0%	0.0			5.0%	30.1			10.0%	60.1			10.0%	60.1			expanding productive woodland
Sensitive	612.1	0%	0.0			1.0%	6.1			1.0%	6.1			0.0%	0.0			on non deep peat sites
Moss Farmland	3713.7			1562.8	42.1%			1605.9	43.2%			1689.6	45.5%			1613.6	43.4%	
Built-up	0.1	0%	0.0			0.5%	0.0			0.5%	0.0			0.0%	0.0			
Existing	1562.8	100%	1562.8			97.0%	1515.9			97.0%	1515.9			97.0%	1515.9			
Potential	383.6	0%	0.0			3.0%	11.5			5.0%	19.2			5.0%	19.2			
Preferred	1520.6	0%	0.0			5.0%	76.0			10.0%	152.1			5.0%	76.0			restructuring and minor
Sensitive	246.5	0%	0.0			1.0%	2.5			1.0%	2.5			1.0%	2.5			expansion to address loss;
Unsuitable	0.0	0%	0.0			0.0%	0.0			0.0%	0.0			0.0%	0.0			expanding native networks;
Open Glen Side	201.8			7.7	3.8%			12.6	6.3%			15.9	7.9%			15.8	7.8%	
Existing	7.7	100%	7.7			97.0%	7.4			97.0%	7.4			100.0%	7.7			
Potential	162.3	0%	0.0			3.0%	4.9			5.0%	8.1			5.0%	8.1			Management and small-scale
Sensitive	31.8	0%	0.0			1.0%	0.3			1.0%	0.3			0.0%	0.0			expansion of native woodlands
Open Moorland Hills	4421.7			106.6	2.4%			266.7	6.0%			423.4	9.6%			280.1	6.3%	
Built-up	9.2	0%	0.0			0.5%	0.0			0.5%	0.0			0.0%	0.0			
Existing	106.6	100%	106.6			97.0%	103.4			97.0%	103.4			98.0%	104.5			
Potential	629.6	0%	0.0			3.0%	18.9			5.0%	31.5			5.0%	31.5			minor loss due to restructuring;
Preferred	2882.8	0%	0.0			5.0%	144.1			10.0%	288.3			5.0%	144.1			minor expansion of conifer
Sensitive	20.0	0%	0.0			1.0%	0.2			1.0%	0.2			0.0%	0.0			forests; expansion of native
Unsuitable	773.6	0%	0.0			0.0%	0.0			0.0%	0.0			0.0%	0.0			riparian networks
Open Parallel Ridges	791.9			0.5	0.1%			24.2	3.1%			40.0	5.1%			40.0	5.1%	
Existing	0.5	100%	0.5			97.0%	0.5			97.0%	0.5			100.0%	0.5			limited expansion of native
Potential	791.4	0%	0.0			3.0%	23.7			5.0%	39.6			5.0%	39.6			riparian networks and montane scrub - preserving open character and legibility of
Sensitive	0.0	0%	0.0			1.0%	0.0			1.0%	0.0			0.0%	0.0			landform
Open Upland Glen	1182.5			55.1	4.7%			82.5	7.0%			100.4	8.5%			93.1	7.9%	
Existing	55.1	100%	55.1			97.0%	53.5			97.0%	53.5			100.0%	55.1			
Potential	892.5	0%	0.0			3.0%	26.8			5.0%	44.6			4.0%	35.7			
Preferred	0.1	0%	0.0			5.0%	0.0			10.0%	0.0			0.0%	0.0			
Sensitive	226.7	0%	0.0			1.0%	2.3			1.0%	2.3			1.0%	2.3			Enhancing native woodland
Unsuitable	8.1	0%	0.0			0.0%	0.0			0.0%	0.0			0.0%	0.0			networks
Open Upland Hills	16399.3			165.4	1.0%			336.1	2.0%			446.1	2.7%			351.1	2.1%	
Existing	165.4	100%	165.4			97.0%	160.5			97.0%	160.5			100.0%	165.4			Expanding native woodland

Landscape type / Sum of Area_ha	Current Change	Current Area	Current Zone cover	Current % cover	Low Change	Low Area	Low Zone cover	Low % cover	Moderate Change	Moderate Area	Moderate Zone cover	Moderate % cover	Notional Change	Notional Area	Notional Zone cover	Notional % cover	Rationale
Potential / 5467.6	0%	0.0			3.0%	164.0			5.0%	273.4			3.0%	164.0			networks
Preferred / 14.6	0%	0.0			5.0%	0.7			10.0%	1.5			0.0%	0.0			
Sensitive / 1084.0	0%	0.0			1.0%	10.8			1.0%	10.8			2.0%	21.7			
Unsuitable / 9667.6	0%	0.0			0.0%	0.0			0.0%	0.0			0.0%	0.0			
River Valley Farmland / 3981.7			762.2	19.1%			853.4	21.4%			949.3	23.8%			969.5	24.3%	
Built-up / 202.7	0%	0.0			0.5%	1.0			0.5%	1.0			0.0%	0.0			
Existing / 762.2	100%	762.2			97.0%	739.3			97.0%	739.3			100.0%	762.2			
Potential / 1560.1	0%	0.0			3.0%	46.8			5.0%	78.0			5.0%	78.0			
Preferred / 1293.7	0%	0.0			5.0%	64.7			10.0%	129.4			10.0%	129.4			Expansion of farm and mixed
Sensitive / 160.0	0%	0.0			1.0%	1.6			1.0%	1.6			0.0%	0.0			woodlands; enhancing native
Unsuitable / 3.0	0%	0.0			0.0%	0.0			0.0%	0.0			0.0%	0.0			networks
Rolling Farmland / 3405.6			463.1	13.6%			558.8	16.4%			650.8	19.1%			664.3	19.5%	
Built-up / 61.1	0%	0.0			0.5%	0.3			0.5%	0.3			0.0%	0.0			
Existing / 463.1	100%	463.1			97.0%	449.2			97.0%	449.2			100.0%	463.1			
Potential / 1732.8	0%	0.0			3.0%	52.0			5.0%	86.6			5.0%	86.6			Minor expansion of conifer
Preferred / 1145.6	0%	0.0			5.0%	57.3			10.0%	114.6			10.0%	114.6			forests; farm woodland
Sensitive / 3.0	0%	0.0			1.0%	0.0			1.0%	0.0			0.0%	0.0			expansion
Rugged Moorland Hills / 317.9			12.2	3.8%			17.0	5.3%			20.5	6.5%			15.4	4.8%	
Existing / 12.2	100%	12.2			97.0%	11.8			97.0%	11.8			100.0%	12.2			
Potential / 160.5	0%	0.0			3.0%	4.8			5.0%	8.0			2.0%	3.2			
Preferred / 6.9	0%	0.0			5.0%	0.3			10.0%	0.7			0.0%	0.0			
Sensitive / 0.0	0%	0.0			1.0%	0.0			1.0%	0.0			0.0%	0.0			
Unsuitable / 138.3	0%	0.0			0.0%	0.0			0.0%	0.0			0.0%	0.0			
Settled Loch Shore / 9.7			1.9	20.0%			2.1	21.8%			2.3	23.3%			1.9	20.0%	
Existing / 1.9	100%	1.9			97.0%	1.9			97.0%	1.9			100.0%	1.9			
Potential / 7.5	0%	0.0			3.0%	0.2			5.0%	0.4			0.0%	0.0			
Sensitive / 0.2	0%	0.0			1.0%	0.0			1.0%	0.0			0.0%	0.0			
Settled Strath Floor / 43.3			11.9	27.4%			12.5	28.8%			13.2	30.4%			11.9	27.4%	
Built-up / 0.2	0%	0.0			0.5%	0.0			0.5%	0.0			0.0%	0.0			
Existing / 11.9	100%	11.9			97.0%	11.5			97.0%	11.5			100.0%	11.9			
Potential / 29.5	0%	0.0			3.0%	0.9			5.0%	1.5			0.0%	0.0			
Sensitive / 1.8	0%	0.0			5.0%	0.1			10.0%	0.2			0.0%	0.0			
Unsuitable / 0.0	0%	0.0			1.0%	0.0			1.0%	0.0			0.0%	0.0			
Urban / 1575.2			62.0	3.9%			72.5	4.6%			77.1	4.9%			83.4	5.3%	
Built-up / 1335.1	0%	0.0			0.5%	6.7			0.5%	6.7			1.5%	20.0			
Existing / 62.0	100%	62.0			97.0%	60.2			97.0%	60.2			100.0%	62.0			
Potential / 68.9	0%	0.0			3.0%	2.1			5.0%	3.4			1.0%	0.7			
Preferred / 63.3	0%	0.0			5.0%	3.2			10.0%	6.3			1.0%	0.6			expanding urban green
Sensitive / 45.8	0%	0.0			1.0%	0.5			1.0%	0.5			0.0%	0.0			networks
Wooded Glen / 1109.6			612.9	55.2%			608.4	54.8%			617.7	55.7%			634.4	57.2%	
Built-up / 1.8	0%	0.0			0.5%	0.0			0.5%	0.0			0.0%	0.0			
Existing / 612.9	100%	612.9			97.0%	594.5			97.0%	594.5			100.0%	612.9			
Potential / 383.6	0%	0.0			3.0%	11.5			5.0%	19.2			5.0%	19.2			
Preferred / 32.0	0%	0.0			5.0%	1.6			10.0%	3.2			5.0%	1.6			
Sensitive / 74.6	0%	0.0			1.0%	0.7			1.0%	0.7			1.0%	0.7			
Unsuitable / 4.6	0%	0.0			0.0%	0.0			0.0%	0.0			0.0%	0.0			enhancing riparian networks
Grand Total / 122990.0																	

	Current		Low		Moderate		Notional capacity	
Total woodland cover	**20880.2**	17%	**22943.3**	19%	**25029.3**	20%	**25224.2**	21%
Additional area			2063.1		4149.2		4344.0	
Percentage increase over existing			10%		20%		21%	
Indicative planting rate over 40 years			52		104		109	