Scottish Wildlife Trust
Policy

Forestry and woodland

Scope of this Policy

1. This policy (2008) covers Scottish Wildlife Trust's (SWT) views on forestry and woodland in Scotland. The policy covers both 'forestry', which is the activity that takes place within woodland, and 'woodland' itself, which is the habitat affected by forestry activity. The policy focuses on *strategic* policy issues and does not go into detail on *operational* policy relating to the management of individual sites, which will be covered in a sister document.

Policy Statement

2. Woodland provides substantial benefits to both wildlife and people. As the former climax vegetation community over much of Scotland, woodland and scrub supports more species than any other terrestrial habitat, particularly ancient semi-natural woodlands which are the surviving descendants of our original natural forests. These are vitally important, irreplaceable reservoirs from which wildlife can begin to spread back into newly restored habitat thereby helping Scotland's ecosystems to recover from centuries of degradation. In addition to supporting much of our biodiversity, woodland provides highly valued social and economic benefits to Scotland's people through:

    - providing inspiring natural places for formal and informal recreation and education thereby improving physical and mental w ell being;
    - supplying quality renew able resources in the form of hardwood timber, woodfuel and other woodland products;
    - contributing to rural development and job creation in remote rural locations;
    - providing protection for sites of historic and cultural significance;
    - protecting soil structure and below ground biodiversity;
    - enhancing the beauty of managed, natural, cultural and historic landscapes in both rural and urban areas;
    - helping address climate change both by acting as a carbon store (mitigation) and through making ecosystems more resilient (adaptation);
    - helping regulate water flow and thereby ameliorating flooding;
    - improving air quality through pollution absorption, particularly in urban areas;
    - providing a focus for bringing people in local communities together; and
    - contributing to people's sense of place and cultural identity.

3. SWT wishes to see a significant increase in the quantity and improvement in the quality of Scotland native woodlands to the extent they are making a major contribution to the restoration of degraded terrestrial ecosystems in both rural and urban environments. This will contribute to realising SWT's broader vision for a "network of healthy, resilient ecosystems supporting expanding communities of native species across large areas of Scotland's land, water and seas"[1]. In order to achieve this vision, SWT believes we need to take an approach which identifies and tackles 'key threats' at the appropriate scale (usually the landscape scale). Key threats to woodland in Scotland include:

[1] SWT (2006) Natural Connections: a vision for re-building Scotland's wildlife. SWT, Cramond.

- habitat fragmentation (historic and on-going);
- habitat compartmentalisation and lack of mosaics and natural transitions with other habitats;
- historic loss of old growth and veteran trees;
- climate change;
- unsustainable forest management practices;
- non-native invasive and problem species;
- excessive browsing and grazing by wild deer and livestock;
- loss of woodland to development.

4. Addressing these threats will need action across a range of policy areas. SWT has identified the five most important policy areas for action as: protection; enhancement; expansion; people and woodlands; and woodland enterprises.

5. Protection - the existing ancient woodland resource must be protected from any further loss or degradation and there should be no net loss of native woodland.

6. Enhancement - the ecological condition and cultural heritage value of the w hole woodland resource should be substantially improved.

7. Expansion - native woodland cover should be substantially increased through strategically located planting and by encouraging natural regeneration; this w ill contribute to biodiversity, soil protection, water regulation, climate change mitigation and adaptation, habitat network development and enhancement of visual landscapes.

8. People and woodlands - policies and incentives should be designed to ensure more people can experience woodland wildlife, particularly through education, recreation and community woodland initiatives.

9. Woodland enterprises - the timber industry and other woodland dependant enterprises should be exemplars of sustainable development and contribute positively to the biodiversity value of woodland.

Scotland's woodland resources

10. This policy covers all type of woodland. Woodlands can be categorised using a variety of criteria but for the purposes of this policy the most important of these are: semi-natural ancient woodland, plantations of ancient woodland sites, native woodland, non-native woodland and plantation woodland (see Glossary in Appendix 1 for definitions). These categories are not mutually exclusive; for example a plantation woodland can also be a native woodland.

11. Woodlands cover around 1,337,000 hectares (ha) or 17.1% of Scotland's land area. Of this, 1,049,000ha is conifer woodland and only 288,000ha broadleaved woodland. Ancient and native woodland is widely considered to be the type of woodland with the highest biodiversity value and therefore conservation interest. Native woodlands can be further split into Habitat Action Plan types (See Glossary) as shown in the table below. Some plantations on ancient woodland sites, despite being of great conservation interest, do not fall into these HAP types as they are classified as non-native plantations.

Table 1. The extent of native woodland HAP types in Scotland				
Woodland HAP Type	**Estimated area ('000 ha)**		**Percentage of native woodland area**	
	Total	**Semi-natural**	**Total**	**Semi-natural**
Upland birchwood	90	(74)	23	(19)
Upland oakwood	50	(35)	13	(9)
Native pinewood	181	(31)	46	(8)
Upland mixed ashwood	21	(14)	5.5	(3.5)
Wet woodland	21	(14)	5.5	(3.5)
Lowland mixed broadleaves	28	(10)	7	(2.5)

Ancient woodland

12. Ancient, semi-natural woodland is our most species rich habitat yet covers only around 1% of Scotland's land area (see Table 2 for hectares). SWT believes this remaining ancient woodland resource should be afforded legal protection to help ensure there is no further loss or degradation of this precious national asset. Almost 50% of ancient woodland has already been degraded by being wholly or partly planted with commercial species (mostly non-native conifer). SWT strongly believes that these 'plantations on ancient woodland sites' (PAWS) must be gradually restored to at least 80% native species (scattered throughout the canopy)and that this process should be underway on all sites by 2015. Priority must also go to semi-natural ancient woodlands which are in unfavourable ecological condition, often as a result of overgrazing by wild deer and/or domestic stock. The target should be to bring all degraded ancient woodland (both PAWS and non-PAWS) into favourable or improving condition by 2015. A significant proportion of the ancient woodland resource should be retained as long-term retention stands with a high proportion of veteran trees and 'old growth'.

Table 2: Scotland's Ancient Woodland Resource[2]	
Ancient Woodland Resource	**Hectares**
Ancient semi-natural woodland	64,570
Plantations on ancient woodland sites	54,725
Total Ancient Woodland	119,295
PAWS/AW(%)	46

Other native woodland and commercial forestry

13. Other native woodlands and also commercial non-native plantation forestry also have a significant role to play in providing quality habitat for wildlife and contributing more widely to habitat networks and ecosystem services such as water flow regulation, water quality, carbon storage and soil conservation. SWT believes not enough is being done to ensure the management of much of this resource is contributing to either biodiversity enhancement or ecosystem services provision; for example, currently only around one third of woodland is covered by forest plans. SWT believes that this figure should be at least doubled by 2020.

14. There have been a number of welcome guidance publications and certification standards[3] on woodland management in recent years, including minimum standards such as the UK Forestry Standard[4] and the Helsinki Guidelines for the Conservation of Biodiversity in European

[2] Source: **http://www.woodland-trust.org.uk/campaigns/briefingsmore/ancientwoods.htm**
[3] See http://www.ukwas.org.uk/assets/documents/UKWAS%20Sec ond%20Edition%20Web.pdf for the UK Woodland Assurance Standard.
[4] See http://www.forestr y.gov.uk/pdf/fcfc001.pdf/$FILE/fc fc001.pdf for UK Forestry Standard publication.

Forests[5]. Yet much of Scotland's commercial timber industry still pursues a forestry system based on planting monocultures followed by clearfell and restock. SWT believes that guidance, grant conditions, standards and certification schemes should be further developed to ensure better delivery of multiple benefits and improved protection for biodiversity and associated ecosystem services. This is increasingly important in relation to climate change adaptation[6] where increased w inter rainfall and wind intensity in the west of Scotland and increased summer droughts in the east could lead to soil loss, failure of timber crops and flash flooding unless more sustainable forest management systems such as 'low impact silvicultural systems' (LISS) are more widely employed (see also below under Climate Change).

The future woodland resource

15. The Scottish Forestry Strategy sets out a goal of increasing forest cover from the current 17.1% of Scotland's land area to 25% by 2050. SWT would go further and suggest at least 30% (equating to around 2.34 million ha) of Scotland should be woodland by 2050 and that 90% of the proposed expansion must comprise native Scottish species[7] as this is likely to significantly enhance the functional connectivity for a range of woodland species[8]. Native species would of course include Scot's pine which can be a relatively fast growing commercial crop as well being very beneficial to biodiversity. As a general rule, the tree species chosen should reflect local ecological and climatic conditions as guided by such decision support tools as Ecological Site Classification[9]. We note, however, that wet woodland, with only 21,000 hectares in Scotland[10], is a very under represented as a HAP type and there is a need to prioritise expansion of this resource in riparian zones and within any large scale wetland restoration project areas. There is also a dearth of montane scrub above the tree-line which should be addressed as a priority.

16. SWT believes this expansion can be achieved through activity on the public forest estate and through provision of adequate grant incentives for new native woodland creation. Woodland creation should preferably be by natural regeneration, but where this is not feasible there will also be a need for targeted native woodland planting, particularly in locations which contribute to wider strategic habitat networks, enhance the visual landscape or provide ecosystem services such as flood mitigation or land buffering. SWT sees huge opportunities for extensive restoration of upland birch and pine woodlands in the coming decade, particularly in the light of impending Common Agricultural Policy reforms whereby subsidies for hill sheep farming are likely to be substantially reduced. SWT will seek to promote the natural recovery of extensive areas of scrub and woodland in the uplands and upland fringes as a positive development, albeit one that will need careful management in some areas, such as w here the open ground is of ecological or cultural interest.

17. As a general principle, SWT does not support the use of public money for purely commercial forestry as the benefits gained in terms of public goods are not as great as those w here grants are targeted specifically at environmental and social forestry objectives. We recognise that commercial forestry can provide public benefits, including rural development and recreation, but feel that the limited public funds available for forestry grants are better targeted

[5] See http://www.mcpfe.org/files/u1/helsinki_resol ution_h2.pdf for information on the Helsinki guidelines agreed by Ministers in Europe in 1993.
[6] Ray, D. (2008) Impacts of climate change on forestry in Scotland – a synopsis of spatial modelling research. FCRN101. Forestry Commission.
[7] The average forest cover in for European countries is 47%. See http://www.unece.org/trade/timber/docs/sfm/europe-2003.pdf for The MCPFE Report on Sustainable Forest Management in Europe State of Europe's Forests 2003
[8] Peterken, G. 2002. Reversing the habitat fragmentation of British woodlands. Report, World Wildlife Federation-UK Research Centre, Surrey, UK http://www.wwf-uk.org/filelibrar y/pdf/reversing_fragmentation.pdf).
[9] The Ecological Site Classification Decision Support System (ESC-DSS) is a PC-based system to help guide forest managers and planners to select ecologically suited species to sites, instead of s electing a species and trying to modify the site to suit. See http://www.fores tresearch.gov.uk/fr/infd-5v8jdg
[10] Scottish Forestry Strategy (2006) Scottish Executive.

at *native* woodland which delivers a far greater range of multiple benefits (including economic) for each pound spent. SWT particularly supports the development of the native woodland resource as a source of quality hardwood timber and woodfuel and would like to see more woodland brought into sustainable management to produce such products. We believe that well managed woodlands can support high levels of biodiversity through mimicking natural disturbance processes, whilst at the same time providing an income to the owner and supporting the rural economy.

18. The public forest estate constitutes 35% of all woodland in Scotland, but a mere 17% of this is native species. Whilst we accept this is in part a legacy from the boom in Sitka spruce planting after 1960, SWT feels that the Forestry Commission must now take every opportunity to increase the percentage of native species on the public forest estate to at least 60% by 2050 with incremental increases year on year.

19. SWT supports the public ownership of some woodland and the continued role of the Forestry Commission Scotland as stewards of the public forest estate. Direct management of woodland through Forest Enterprise is likely to secure public benefits cost effectively and to a high standard. We would not support any significant disposals of public forest estate land, particularly if this is for development purposes and believe there should be absolutely no disposals of ancient semi-natural woodland (ASNW) or PAWS. Conversely, SWT does support the acquisition by the Forestry Commission of strategically important woodlands, including ASNW, PAWS, forest habitat network linkages and sites on the edge of tow ns and cities, which could be substantially improved for public access and biodiversity. SWT also supports the payment of grants to private owners for the provision of public benefits.

People and woodland

20. Woodland, particularly in and near tow ns and cities, is important for people and contributes to their quality of life through improving health; reducing stress; improving degraded local environments; creating a sense of place; offering opportunities for education (both formal and informal) and improving both the quality and quantity of recreational experience.

21. Individual and community engagement with woodland can range from the occasional casual walk to involvement in a community woodland group or buy out. SWT wishes to see more people involved in their local woodlands and sees scope for Scotland to re-establish a 'forest culture', now largely lost from most parts of Scotland but once a natural part of many communities. This can be achieved through policy measures such as those identified in the Scottish Forestry Strategy's Key Theme 8 on 'community development'. SWT supports these measures, particularly the commitments to promote access, to build on the 'Woods In and Around Tow ns' initiative, to encourage more outdoor learning, and to promote community engagement in, and ownership and management of, woodlands.

Climate change

22. SWT believes that carbon sequestration should not be a primary driver of forestry policy and grant spending in Scotland. Whilst we accept that trees do sequester carbon, and can make a small contribution to combating climate change, primary focus should continue to be on ensuring delivery of multiple public benefits such as enhanced biodiversity, improved access and health opportunities, enhancement of the landscape and historical environment and rural economic development. SWT does not therefore support any *shift* in resources away from existing policy priorities towards support for 'sequestration forestry' per se.

23. SWT calls for a substantial increase in Government spending on 'climate change adaptation forestry' as an urgent response to the threat climate change poses to Scotland's landscapes

and biodiversity. Adaptation forestry includes initiatives such as the restoration and expansion of native woodland, avoiding planting trees on organic soils, developing forest habitat networks and facilitating a move towards LISS systems, which also tend to lock up more carbon than clearfell/replant systems. These objectives are consistent with the current Scottish Forestry Strategy and will also have useful secondary carbon sequestration benefits.

24. SWT also supports emerging policies[11] which support the development of woodfuel to help mitigate against climate change so long as the woodfuel is sourced from sustainably managed woodlands. SWT believes short rotation coppice (SRC) can have a role to play but the design and location of plantations should be carefully considered and a percentage of the area given over to biodiversity enhancement (for example by planting some standard trees which are allowed to mature). In those woodlands where thinnings are harvested for woodfuel, there must be minimum standards to ensure veteran trees are not damaged and enough deadwood is retained to allow the w ildlife communities that depend on this habitat to thrive.

25. SWT wishes to see greater investment in hardwood timber production. It has the potential to deliver quality sustainable materials which can substitute for carbon hungry alternatives such as steel, plastic and concrete. Native hardwoods also deliver much greater biodiversity benefits.

26. Recent research suggests that we should be planting a wider range of species and genetic material in order to increase the resilience of the woodlands in a changing climate[12]. SWT warns against rushing to experiment with planting exotic species from warmer climates in other parts of the world. Instead, we should be looking to species and genetic provenances from 'climate spaces' in countries to the south of Scotland. This will mean introducing a higher proportion of native southern British and northern French species and provenances; likely to be the best adapted to Scotland's future climate and environment (depending of course of the severity of global w arming). Pursuing an approach which invests in unproven monocultures of non-native species would be contrary to research advice and would, we feel, be a very a high risk/low value policy response to climate change.

Removal of trees from open ground habitats

27. SWT believes that the removal of trees from sites w here they have been inappropriately planted in the past should be a priority for some sites. This includes many low land raised bogs and some blanket mires and fens; although it is accepted that some are now likely to be so heavily modified that removing trees may do more harm than good, both ecologically and in terms of carbon release. The Forestry Commission should develop and implement a strategy for removal of trees from all those areas on the public forest estate where the importance of the open ground habitat outweighs the value of the woodland.

Priority species within woodlands

28. As a general principle, SWT believes that woodland management should focus on improving overall habitat condition, rather than on individual species. One of the problems with managing proactively for individual species is that conditions can be created which are to the detriment of other woodland species (e.g. extensive coppicing for woodland glade butterflies could be detrimental to shady deadwood invertebrate communities). By concentrating on ensuring sufficient 'habitat heterogeneity', preferably with a diverse age structure, natural woodland

[11] These include mainly Government and FC l edinitiatives including a Biomass Action Plan for Scotland, a woodfuel information pack, a woodfuel information officer network and carrying out a number feasibility studies for woodfuel projects in Scotland.
[12] Ray, D. (2008) Impacts of climate change on forestry in Scotland – a synopsis of spatial modelling research. FCRN101. Forestry Commission.

edge and multiple ecological niches, conditions are created which allow a wide range of species to co-exist.

29. There may be specific instances where single species management is appropriate. These include small scale 'niche management' measures for rare, threatened or priority species listed under the UK Biodiversity Action Plan and others protected under European and national legislation. Mitigation against damage to such species must also be put in place before forestry operations are carried out. So long as niche management measures are not applied across the entire woodland they are usually beneficial to the overall ecological condition of the site (e.g. small open glades and scalloped ride edges for wood ants improve woodland structure). SWT would not how ever support larger scale manipulation of ancient and/or native woodland structure or composition to benefit single species (e.g. introducing non-native conifers to protect red squirrels against competition from grey squirrels).

SWT priorities for action

30. SWT will endeavour to apply the policy principles outlined in this paper on its own reserves including bringing all PAWS into restoration management by 2012.

Cross reference to other policies

Non-native invasive species policy (2007)
Deer policy (2007)
The planning system (2006)
Reintroductions, translocations and introductions of species (2008 in prep)

Appendix 1: Glossary

Ancient woodland: woodland that has been in continuous existence since before 1750 in Scotland (1600 in England, Wales and Northern Ireland). Ancient, semi natural woodland is ancient woodland comprising mainly locally native trees and shrubs from natural seed fall or coppice rather than from planting.

Ancient and veteran trees: Trees that are or look old relative to others of the same species. Characteristics include:

- very large girth for the species;
- hollow or hollowing trunk;
- a large quantity of dead wood in the canopy

Forest: usually applied to a large area of woodland of varied ages and tree species. There is no agreed size threshold for when a woodland becomes a forest so in effect the terms woodland and forest are interchangeable.

Forestry: the practice of all aspects of tree management, including forest and woodland management, wood production, arboriculture, urban forestry and environmental forestry and research, education and training in these fields.

Forest Habitat Network: a physically or functionally connected network of woodland habitats which by due to their connected nature alleviate the adverse effects of habitat fragmentation and reduced habitat size.

Habitat Action Plans: plans under the auspices of the UK Biodiversity Action Plan which set out targets for principal woodland types. These principal woodland types in Scotland are upland birchwoods, upland oakwoods, native pinewoods, upland mixed ashwoods, wet woodlands and low land mixed broadleaves.

Low Impact Silvicultural Systems (LISS): silvicultural systems which are designed to meet management objectives and include group selection, shelterwood or underplanting, small coupe felling systems, coppice or coppice with standards, minimum intervention & single tree selection systems. These systems are suitable for windfirm conifer plantations and most broadleaved woodlands.

Native woodland: woodland that is comprised of species that colonised Scotland after the end of the last ice age before human influence on natural processes became significant. As a guideline, most woodlands with 80% native tree and shrub species scattered throughout the canopy should be considered native woodland.

Plantation: woodland w here the current trees have been planted, including former semi-natural woodland which have since been felled and planted.

Plantation on Ancient Woodland Site (PAWS): Planted woodlands of any species on an ancient woodland site.