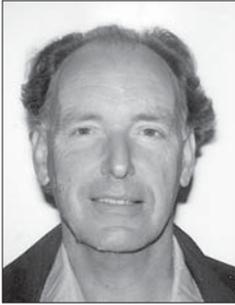


A Strategy to Deliver Sustainable Forestry in the Cree Valley



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Abstract

The objectives used to justify an afforestation policy in the UK have changed over the years. Recently, international and national directives, together with public concern, have helped to influence the future of forestry. The new Scottish Forestry Strategy is discussed, together with a mechanism for its implementation, at a District level by Forest Enterprise.

Forestry in a Historical Context

The current state of forestry within the Cree Catchment, which is part of the Galloway Forest District in South West Scotland, is here considered against a historical background of forest development in Scotland. It is also an industry, which in recent years has gone through radical change and has been influenced by international consensus, political devolution and consultation at many levels.

The last great event affecting the clearance of forests in Scotland was the Agricultural

Revolution of the 18th century. The native woodlands we have today are the result of stewardship through the ages to ensure continued supplies of building materials, firewood charcoal and tanbark. As the British Empire emerged in the 19th century the timber economy became essentially import based from the colonies. By the turn of the 20th century only 5–7% of Britain supported forests and woodland, and our limited timber reserves were all but depleted during the submarine blockade of the Great War (1914–1918). The Forestry Commission was formed in 1919 in response to a need to establish a strategic reserve of timber in the UK, mainly through conifer planting. Prior to this, forestry within Britain had been expanded by various private initiatives, involving pioneers such as the Dukes of Atholl. During the 1930's there were indications that afforestation would be uneconomic but its role in providing rural employment and stable communities was a major factor in its ensured survival.

In 1957, in a world now dominated by the spectre of atomic warfare, it was concluded

that the strategic reserve argument in Britain to maintain the forestry industry was redundant. Other justifications for the industry, with social and economic objectives replaced strategic ones as the chief justification for the forestry policy.

In the 1960's recreation and amenity were given greater emphasis by the Forestry Commission. By the 1970's it had been demonstrated that afforestation for timber production was barely making a 3% rate of return on the original investment, at a time when the test discount rate for investments by the British Government was 5%. It was at this time that recreation, conservation, landscape and rural employment were clearly accepted as policy objectives rather than as by-products of forestry. The Treasury permitted these as acceptable justifications for the low rate of return from the timber economy.

In 1980 import-saving was advanced as the principal justification for the continued expansion of forestry and new planting targets were announced. The private sector forestry was encouraged with companies encouraging individuals and syndicates to take advantage of tax incentives and grants provided by the Treasury and Forestry Commission respectively to carry out afforestation schemes.

In the 1980's there was a growing environmental awareness and concern was expressed at the damaging impact of agriculture and forestry on habitat losses, some of them of major nature conservation interest, including the afforestation of extensive areas in the Flow Country in Sutherland and Caithness. Relations with conservation organisations such as the Royal Society for the Protection of Birds, the Scottish Wildlife Trust and the Nature Conservancy Council had been poor. Poor relations with conservation organisations was compounded by the dependence of the forest industry on introduced conifers, especially Sitka spruce, and on progressive loss of native woods to conifers since the Second World War. (This was to change begin-

ning with the introduction of a new broad-leaves policy in 1986 driven by the Forestry Commission but very much steered by Dr George Peterken of the Nature Conservancy Council).

Continued afforestation has therefore been justified by appealing to a succession of different objectives. The most recent justification for increased afforestation has been to extend the area of native species woodland (especially under the pinewood scheme) and tentative claims have been made concerning compensatory planting in relation to global warming and tropical deforestation.

During the 1960's there was a rapid expansion of conifer afforestation on semi-natural habitats, especially hill-land where there had been a collapse in land value. Environmentalists argued that there was an over dependence on timber production, often related to one single species, on one single silvicultural system and on too large a scale of operations. The development of improved ploughing techniques ensured that large areas could be prepared for planting in a short space of time. The routine operational practices were those of ploughing deep hillside furrows, the directing of drains into water-courses (as in agriculture), extraction of timber with insufficient care to protect water courses and planting virtually all available land. The resulting scenario was one that included eroding soils; sediment discharge and accumulation in streams, excessive shading from closed conifer canopies over streamsides and consequent degrading of many fresh water ecosystems. Many of the environmental problems associated with deteriorating water quality and biodiversity were not properly considered. River quality problems were also compounded by the growing impact of acid precipitation. Conifers were recognised as having a role to play in the increased scavenging of airborne pollutants. Some major afforestation schemes were on land where the buffering capacity of soils was poor.

This deteriorating scenario was not recognised for some time and when it was there was a period of disbelief and denial. In the 1980s it became apparent that procedures were not in place to ensure effective consultation between the River Purification Boards in Scotland and the Forestry Commission either at a national level or a local level.

In 1988 the Forest and Water Guidelines were published by the Forestry Commission. This document was prepared by a working group drawn from the forest and water industries, which met at the “water workshop”, organised in 1986. It was a major breakthrough in forest management and it did two important things.

- i. It identified the problems associated with forestry and water
- ii. It provided planning and operational advice

The International Debate on Sustainability

There is a general worldwide trend of the attrition of the natural forest resource and an increased development of the plantation type of forestry. The Brundtland Report “Our Common Future” (1987) highlighted the need for sustainable development. The need for all countries involved in forestry to be armed with a declared forestry policy and to take on board the concept of sustainability had been called for at the Seventh World Forestry Congress in 1972. Sadly, the reality of forest management worldwide has not been consistent with this high ideal. Forest production policies have tended to be implemented rather than policies for forests. The “statement of Forest Principles” agreed at the Rio “Earth Summit” in 1992 and the General Guidelines of the Sustainable Management of Forests in Europe and the General Guidelines for the Conservation of Biodiversity of European Forests were agreed by the European For-

estry Ministers at Helsinki in 1993. These agreements have provided the stimulus for the sustainable management of forestry.

The Declaration and Resolutions of the Pan-American Ministerial Conference on the Production of Forests, held in Lisbon in 1998 provided a clear recognition of the social and cultural importance of forests. These international commitments, which set the scene for sustainable development and the social importance of forests, were taken on board by the UK Government with the development of the UK Forestry Standard. In response to consumer demand for “green” products from DIY sheds, the Forestry Commission built upon the UK Forestry Standard to develop the UK Wood Assurance Scheme, which is a mechanism for the voluntary certification of forestry managed woodland within the UK.

The European Union and Forestry

The European Union does not have a common forestry policy but there is increasing recognition of the importance of forestry by member states and the role that it can play in the reform of the Common Agricultural Policy. Many aspects of EU policy affect forestry through agricultural and environmental initiatives e.g.

- EU requirements for Environmental Impact Assessment
- The Protection of priority habitats under the Habitats Directive
- The Common Agriculture Policy
- The Rural Development Regulation, 1999
- The EU Water Framework Directive
- Agenda 21 and communities

The Scottish Forestry Strategy

Since devolution in Scotland, the Scottish Executive has developed a Scottish Forestry

Strategy. This strategy has been developed within the context of wider Scottish Executive policies, including:

1. The Way Forward: Framework for Economic Development
2. Rural Scotland: A New Approach
3. A Forward Strategy for Scottish Agriculture

The Scottish Forestry Strategy describes how the Government will deliver its forestry policies in Scotland. It sets out a vision for the sustainable development of existing woods and forests and a continued expansion of our woodland area to benefit society, business and the environment.

The strategy proposes five Strategic Directions for Scottish Forestry:

1. To maximise the value of the Scottish economy of the wood resource available for harvesting over the next 20 years.
2. To create a diverse forest resource of high quality
3. To ensure that forestry makes a positive contribution to the environment.
4. To create opportunities for more people to enjoy trees, woods and forests in Scotland.
5. To help communities benefit from woods and forests.

Strategy 3 is particularly relevant to the EU Life project and its output of demonstrating “sustainable forestry to improve water quality and aquatic biodiversity”. Currently compliance with the UK Forestry Standard and activities under the Biodiversity Action Plans will do much to ensure that Scotland’s trees, woods and forests make a positive contribution to the environment. There will subsequently be a contribution towards reducing the impact of greenhouse gas emissions. There are a number of important areas where particular effort is required in the coming years to ensure that trees, woods and forests make a positive contribution to the environment. The following priorities have been identified:

- To improve the management of semi-natural woodlands
- To extend and enhance native woodlands by developing Forest Habitat Networks
- To increase the diversity of the farmed landscape
- To aid the recovery of acidified rivers and lochs and improve the riparian habitat
- To encourage alternatives to clear felling
- To contribute to a radical improvement in the quality and setting of urban areas.

Many of these priorities cannot be valued in economic terms. There has to be a clear commitment to an effective partnership approach calling on a range of skills and resources from the private sector, the Scottish Executive Department and agencies, local Government, the European Union, the Non-Government Organisations and Community Woodland Initiatives and a long term monitoring of progress to sustain the agreed objectives.

A number of guiding principles form the basis for the development of the Forestry Strategy and its implementation. The most important of which is that of **sustainability** and that Scottish forestry must meet internationally recognised standards of sustainable forest management. That the needs of the present should be met without compromising the ability of future generations to meet their own needs.

The management of Scottish woodlands should show integration with other rural activities; they should not be managed in isolation. The complex and difficult issues from sustainable management of woodlands should come about by a partnership approach.

Forests and woodlands should contribute to the well being of the people of Scotland. This **positive value** should be clearly recognised and could be in social, economic or environmental terms. The value of non-market outputs although difficult to quantify should be recognised.

For the first time there is a clear recognition that forests should be managed in such a way that they earn **community support**. A mechanism should be set up to allow for the community participation in the sharing and explaining of views and to provide for an opportunity to work towards a consensus.

The **diversity and local distinctiveness** of forests should be pursued at a regional level so that different woodland habitats and species are protected

Forest Enterprise and Implementation of the Scottish Forestry Strategy

Forest Enterprise (FE) is the agency of the Forestry Commission and is responsible for the management of forests and woodland owned by the nation. Forest Enterprise has a Corporate Plan that sets out how it will develop and manage the Forestry Commission forests and woodlands in an efficient and environmentally responsible manner to meet Government policies, including the Scottish Forestry Strategy.

FE is represented at a 'local' level by the Forest Districts. The Galloway Forest District covers approximately 97,000ha, of which 68,000ha is afforested. **The Forest District Strategic Plan** describes how the national and corporate strategies will be applied at a local level. This Plan identifies FE policies and priorities within the Forest District and the rationale behind them. The timber producing industry which has developed in Galloway makes a significant contribution to the local and national economy, but the dominance of forests based on non-native species (*70% of FC land and maybe 30% of all land in Galloway*) continues to focus attention on the need for an appropriate balance between social, economic and conservation objectives. Galloway is also an area where biodiversity is high on the countryside agenda and is recognised

as being an important contributor to the growing tourist trade and the general well being of local people and weekend visitors from the larger urban communities. The bulk of the Strategic Plan comprises boxes of information, which are designed to be easier to assimilate than would the lengthy narrative of a more typical policy document. The reader should be able to isolate an area of interest and "dip into" relevant boxes as necessary. The boxes highlight features of international, regional and local significance of landscape, wildlife (**Table 1**) and archaeology, it highlights policies and describes monitoring strategies to ensure delivery of the targets. With the Strategic Plan document the FE can ensure that the resources are targeted to key priority areas to deliver national objectives whilst addressing local needs.

The Strategic Plan is available for informal consultation involving relevant Government Agencies, Non-Government Organisations and Local Authorities (Councils and Community Councils) with an opportunity for input from private individuals. It is envisaged that the Plan will be reviewed and reissued each March, but as a working document will always be on the table for comments and development. Throughout the development of all plans and their implementation the Forest District has to be committed to meeting best practice and the requirements of the UK Forestry Standard and the UK Woodland Assurance Scheme. The Strategic Plan for the Galloway Forest District fits into the existing planning framework (**Figure 1**). The Plan bridges the gap between national and local plans.

The Strategic Plan is supplemented by the **Strategic Forest Design Plan**, which is a series of large-scale maps (**Figures 2 & 3**) supported by further tables and information. The Design Plan informs staff and partners, especially those on the Environmental Panel. The Plan identifies zones of opportunity in individual forests (**Figure 2**) or groups of wood-

Table 1. Strategic Design of Open Space: Conservation Targets in Galloway Forest Park.

Montane/Upland	Acidic Grassland Relict Alpine Flora	Golden Eagle Golden Plover Dotterel Mountain Hare
Moorland	Blanket Bog Oceanic Wet Heath Grass/Heath mosaic	Upland waders Azure Hawker Mountain Hare Red Grouse
Moorland fringe/treeline	Mosaic of open habitats with native trees and shrubs (and some conifers) occupying up to 50% of the area	Black Grouse Red Grouse Mountain Hare Chats & Meadow Pipit Merlin
Marginal agriculture	Upland grazings	Curlew Other waders Skylark
Low to moderate intensity agriculture	Semi-improved Grassland Woodland edge	Barn Owl Spotted Flycatcher Scrub passerines
Glades	Semi-natural (various) Habitat Linkage	Black Grouse Nightjar Invertebrates Small mammals/Bats Common passerines

Figure 1.

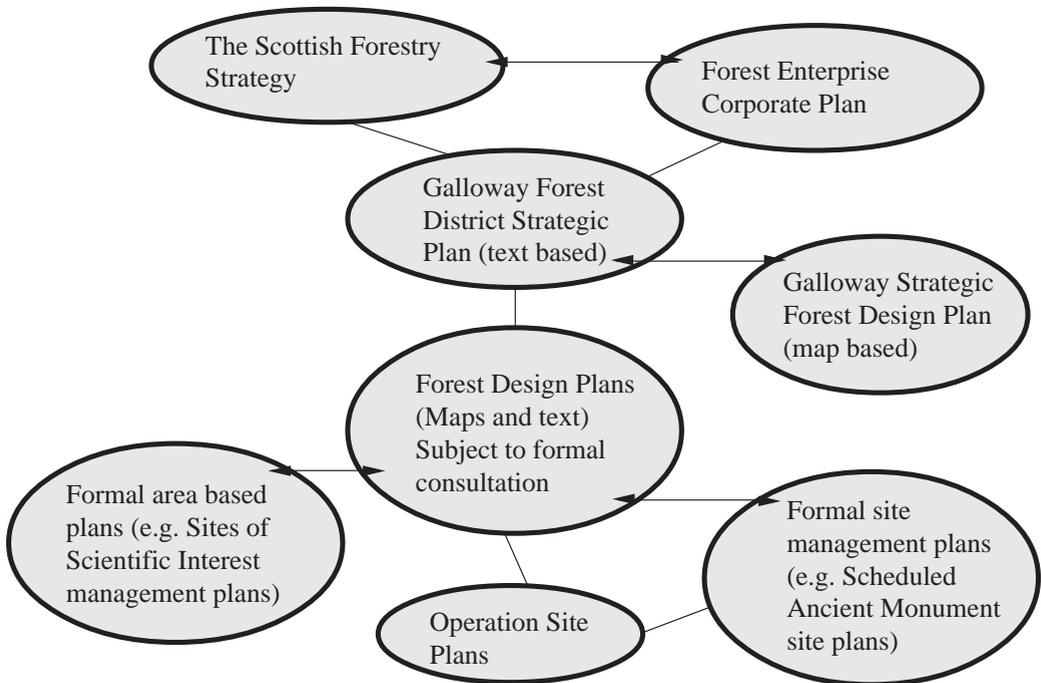
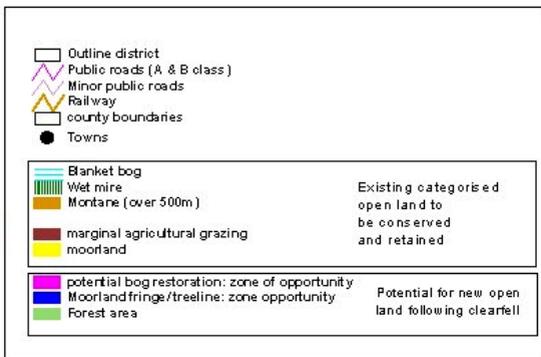
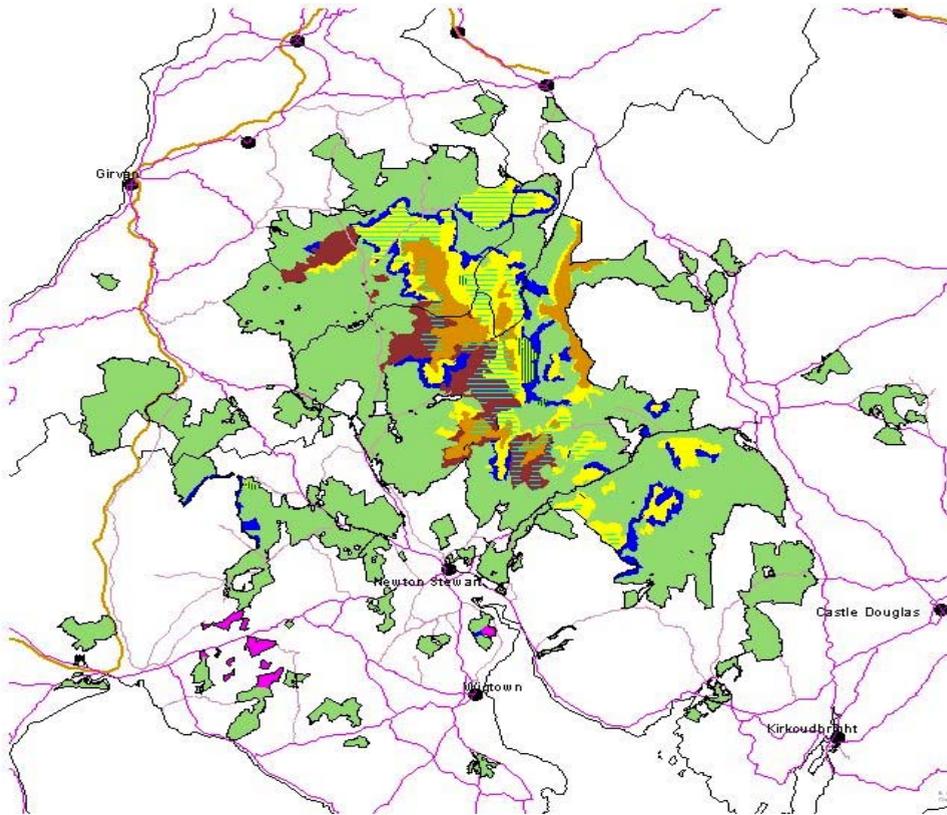


Figure 2. This map identifies zones of opportunity in individual forests.

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Galloway Forest District Strategic Forest Design Plan: Open Ground

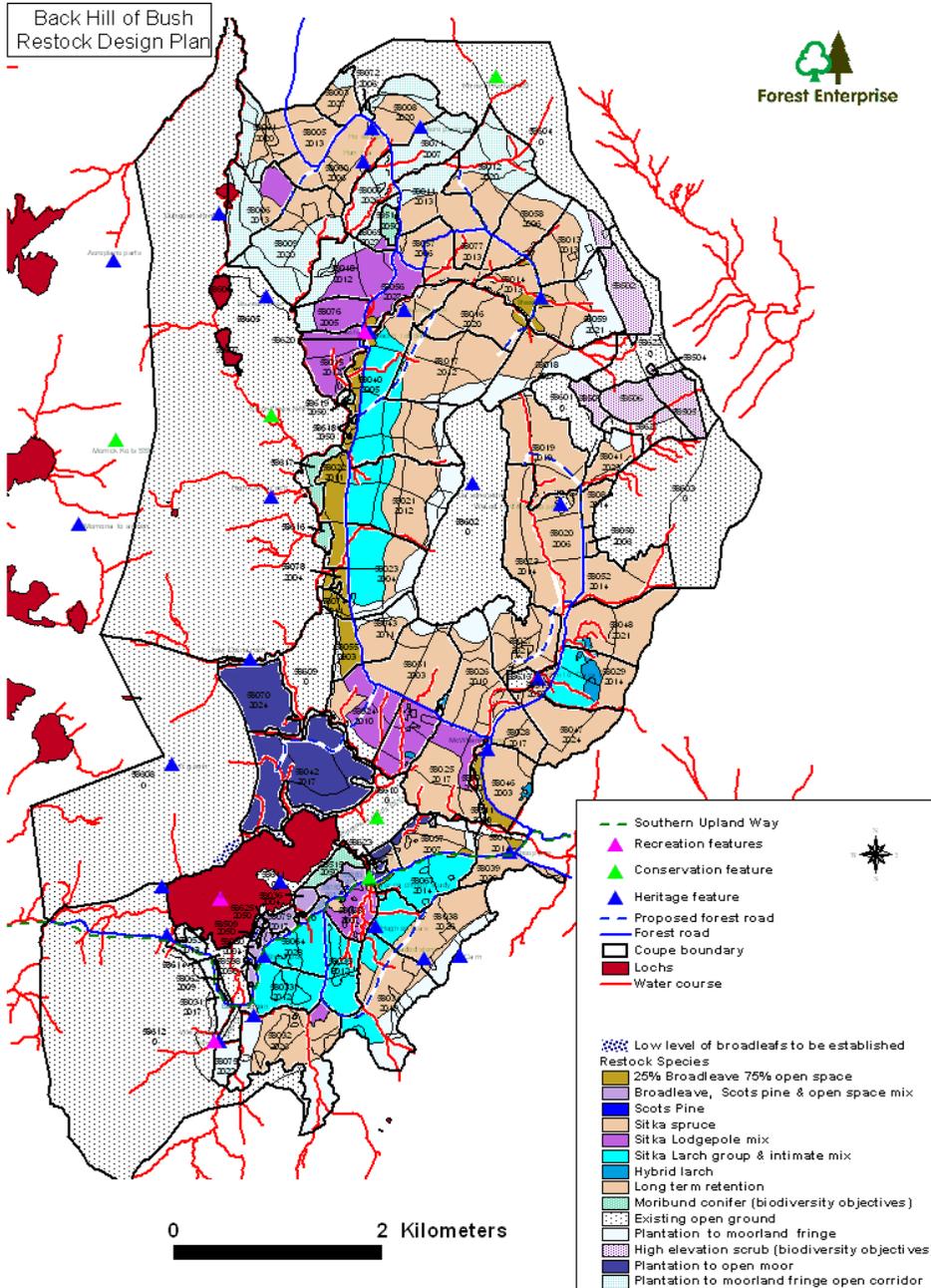


The zones are indicative of opportunities and reflects areas where special emphasis will be placed on potential for permanent removal of forest. It is envisaged that perhaps at least 50% of the indicative area will be restored to open land as will be identified in individual forest design plans.



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Fig 3. This map identifies Long-term felling or re-stocking. This map is based upon the Ordnance Survey material with the permission of the Ordnance Survey on behalf of the controller of Her Majesty's Stationery office © Crown Copyright. Unauthorised reproduction infringes Crown copyright and may lead to prosecution or civil proceedings. Forestry Commission Licence Number GD272388 Published 2001. For reference purposes only. No further copies may be made. © Forestry Commission.



lands. It describes the woodland in context with the surrounding area and identifies issues that are relevant to the woodland or forest. Long term felling or re-stocking plans (**Figure 3**) are prepared and opportunities to improve the woodlands for nature conservation or recreation are considered. These Forest Design Plans are subject to formal consultation processes and have finally to be agreed with the Forestry Commission's Conservator. (The Conservator is independent of Forest Enterprise and oversees the conduct of forestry, private as well as public sector, on behalf of the Forestry Commissioners.) These opportunities and conflicts are resolved within the Forest Design Plans from inputs from the Environmental panel which consists of SNH, non-government organisations, community councils, woodland groups and those who have an informed interest in the forest.

Site Management

Within the Forest District there may be a number of formally recognised nature conservation or archaeological sites. For Sites of Special Scientific Interest (SSSI's) notified by Scottish Natural Heritage, there is a requirement that management plans developed by Forest Enterprise are agreed. For each site SNH will draw up a list of potentially damaging operations for the site. Forest Enterprise also draw up their own management plans for other important wildlife sites e.g. semi-natural ancient woodlands. Within the Galloway Forest District, Forest Enterprise have also entered into long term (25 year) formal management agreements with the Cree Valley Community Woodlands for management of the Upper Cree oak woodlands known as Glenhead, Buchan, Caldons and Camer. Riparian land formerly occupied by Sitka spruce and now planted with broadleaf species is also managed by the CVCWT. Management Plans for these sites have been prepared and

are subject to a 5-year review. There are conservation organisations such as the RSPB and the SWT within the Cree valley who receive financial support for woodland management with input from the FE. Management Plans for the ASNW's management plans show a cross compliance with the Local Biodiversity Action Plans and the key habitats and target species.

Archaeological sites within the Forest District Plans are the subject of formally agreed site Management Plans (SAM's) agreed between FE and Historic Scotland.

Within the Forest District detailed site plans are prepared in advance of all forestry operations. These plans draw upon the Forest Design Plans and identify site constraints, risk assessments, opportunities and areas requiring special protection.

Improved Local Consultation

Within the Galloway Forest District a pilot study was carried out by Environmental Resource management (ERM) on behalf of a partnership involving Dumfries and Galloway Council, Scottish Natural Heritage and the Forestry Commission, with the purpose of providing guidance on future forestry, woodland planting and management according to local interpretation of agreed national and international guidance and commitments. The partnership was supported by a number of agencies, colleges, non-government conservation organisations with community representation. Public consultation is a key feature of the Local Forestry Framework initiative which goes beyond that envisaged in the Indicative Forestry Strategy. The IFS (still in draft after many years) document is seen as being available to local planning authorities but so much has changed in recent years that many initiatives from the Scottish Executive have gone far beyond that proposed in the original IFS's. These documents will however

remain in place and be part of the Regional Council's planning framework until they are superseded by new plans.

Biodiversity Targets

In 1994 the UK Government published the UK's Biodiversity Action Plan which set out the steps needed for biodiversity conservation within the UK. This initiative was in response to the Convention of Biological Diversity held in Rio in 1992. By 1995 Action Plans had been developed for 24 habitats and 290 species. Scotland has a Biodiversity Action Group, which recognises that the UK Biodiversity Action Plan must be translated into local action for it to work. The Dumfries and Galloway Local Biodiversity Action Plan was the first document of its type to be written in Scotland. Therefore the availability of a LBAP for the Galloway Forest District Strategic Plan is a significant contribution in ensuring that sustainability has a prioritised basis from which it can be developed.

The development of the Strategic Plan, Forest Design Plans and Site Plans, together with the taking on board of consultation through the Environmental Panel and the Local Forestry Framework has gone some way

to produce an environment for the sustainable management of the Galloway Forests.

A new research agenda is required to address the fundamental issues such as sustainable forestry, carbon budgeting, multi-purpose forestry, watershed management, forest ecosystem design and integrated land use systems. There is also a need to develop a mechanism to ensure that best practice guidelines are communicated to contractors and adhered to during forestry operations.

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