

**SEA SCOPING REPORT  
COVER NOTE**

Dumfries and Galloway Council  
Forestry & Woodland Strategy

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An SEA Scoping Report is attached for the strategy entitled:  
Dumfries and Galloway Forestry and Woodlands Strategy

The Responsible Authority is: Dumfries and Galloway Council

The Forestry and Woodland Strategy falls under the scope of Section 5(3) of the Act  
and requires an SEA under the Environmental Assessment (Scotland) Act 2005.

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## **INTRODUCTION**

The purpose of this Strategic Environmental Assessment (SEA) Scoping Report is to set out sufficient information on the Dumfries and Galloway Forestry and Woodland Strategy to enable the Consultation Authorities to form a view on the consultation period and scope/level of detail that will be appropriate for the Environment Report.

This report has been prepared in accordance with the Environmental Assessment (Scotland) Act 2005.

## **KEY FACTS**

### Responsible Authority

Dumfries and Galloway Council

### Title of Strategy

Dumfries and Galloway Forestry and Woodland Strategy (DGFWS)

### What prompted the plan?

The current Indicative Forestry Strategy was approved in 1999 and it is now considered appropriate to review and update it following the publication of Government Advice: The Right Tree in the Right Place (May 2010) which replaced Circular 9/1999 and the Scottish Forestry Strategy (2006). This new advice was prepared to inform the preparation of development plans.

The Dumfries and Galloway Local Development Plan (LDP) is now in preparation and it is proposed that the strategy will be prepared in tandem with the LDP.

### Plan Subject

The plan relates to the use of land for trees, woodland and forestry and associated economic, social and environmental considerations within the Dumfries and Galloway region.

### Period Covered by Plan

The period covered by the plan is 2012-2022.

### Frequency of Plan Updates

A review will be considered in 2017 and undertaken as required.

### Area covered by Strategy

The DGFWS will cover the whole of the Dumfries and Galloway region: c. 6,400sq kms (this includes the area of D&G down to the low water mark).

### Purpose and Objectives of the Strategy

The Scottish Forestry Strategy (SFS) sets out a vision that acknowledges the central role that the forestry resource will play in the culture, environment and economy of Scotland through the principles of sustainable development and social inclusion through creating a culture of 'forestry for and with people'.

The framework includes the following key themes for achieving the vision:

- Climate Change – using forestry and changing forest practices to assist in reducing the impact of climate change
- Timber – getting the most from Scotland's increasing and sustainable timber resource

- Business Development – strengthening the forestry industry to underpin sustainable forest management and support economic growth and employment
- Community development – improving the quality of life and well being of people by supporting community development
- Access and Health – improving access to woodland and forestry to help improve physical and mental health and wellbeing
- Environmental Quality – protecting the environmental quality of the natural resources, contributing to and improving our scenery and helping to make the most of our unique historic environment
- Biodiversity – helping to restore, maintain and enhancing biodiversity and increasing awareness and enjoyment of it.

This framework is a movement away from just the locational consideration of where trees should be planted but also encapsulates much wider social, environmental and economic factors. It provides a commitment to expand and improve the quality of woodlands around settlements and to provide an improved landscape setting and widening recreational opportunities. It highlights the role that forests and extending woodland cover can have in developing renewable sources of energy to assist in mitigating the effects of climate change.

The SFS aims to expand woodland cover from 17% to 25% of Scotland's land area by 2020. This expansion will result in a requirement of 12,000ha of new planting per annum and a reduction in the loss of existing woodland. National Planning Framework 2 emphasises that the loss of woodland in the future will only be supported where it results in significant and clear public benefits. If woodland is removed as a result of development then there is an expectation and strong presumption in favour of compensatory planting.

The SFC also sets a target for the forestry sector of delivering annual carbon savings of 0.6 million tonnes of carbon (MtC) by 2010, 0.8 MtC by 2015 and 1.0 MtC by 2020. A further target would also see bringing 80% of the special features on Scotland's nationally important nature sites into favourable condition by March 2008.

In relation to Dumfries and Galloway there is recognition that there is further potential for developing the area's strengths in forestry, particularly in developing the processing capacity which can add value to timber production, as well as enhancing the environmental and social benefits from forests and woodlands.

The DGFWS will be an important document in influencing the future development, management and conservation of woodlands and forestry in the region, providing guidance, advice and recommendations under the following themes:

- Woodlands and Sustainable Economic Growth
- Woodlands for People
- Woodlands and the Environment
- Woodlands and Climate Change
- Woodlands and Development Management

The Strategy is structured around these themes and will include action points and recommendations to allow for its implementation and monitoring.

#### Contact Point

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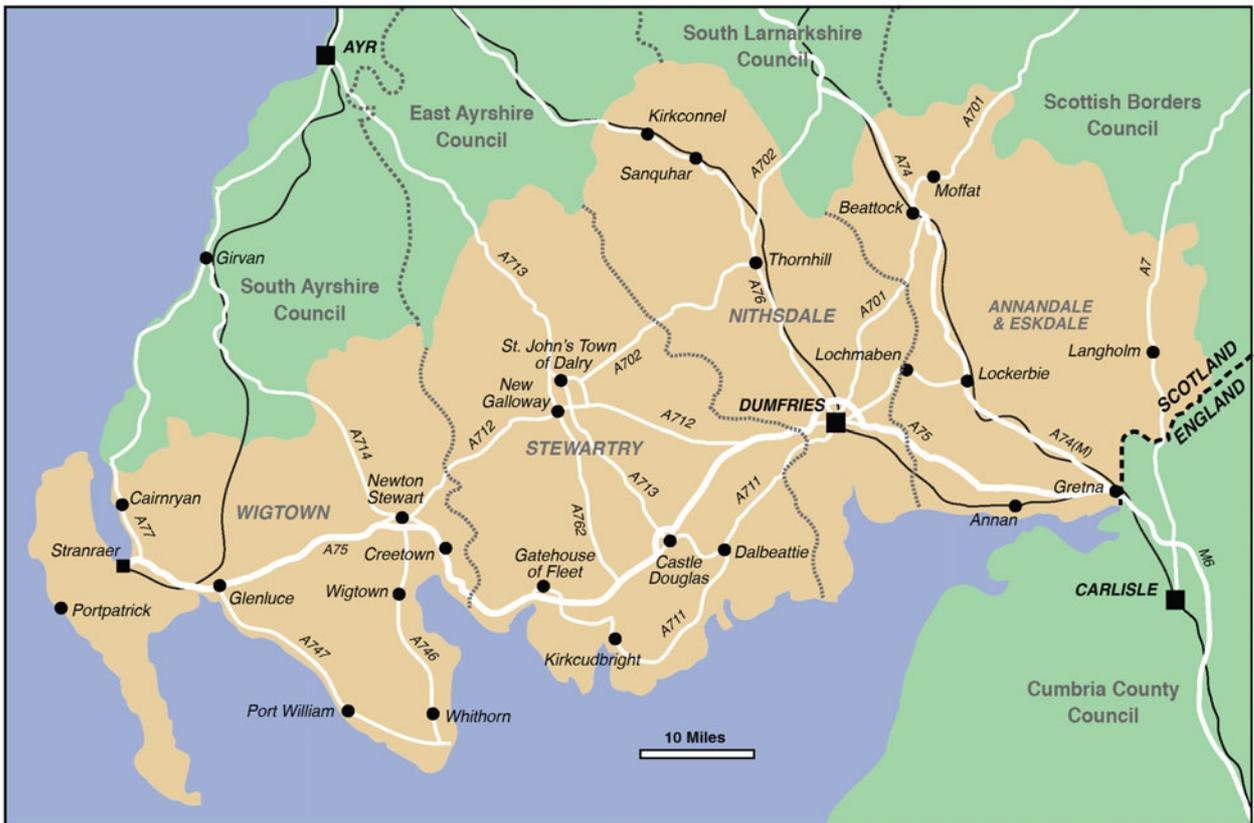
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## 1. INTRODUCTION

- 1.1 Dumfries and Galloway Council (DGC), in partnership with relevant bodies and agencies, is undertaking the preparation of a Forestry and Woodland Strategy for the whole of its area (Map 1.)

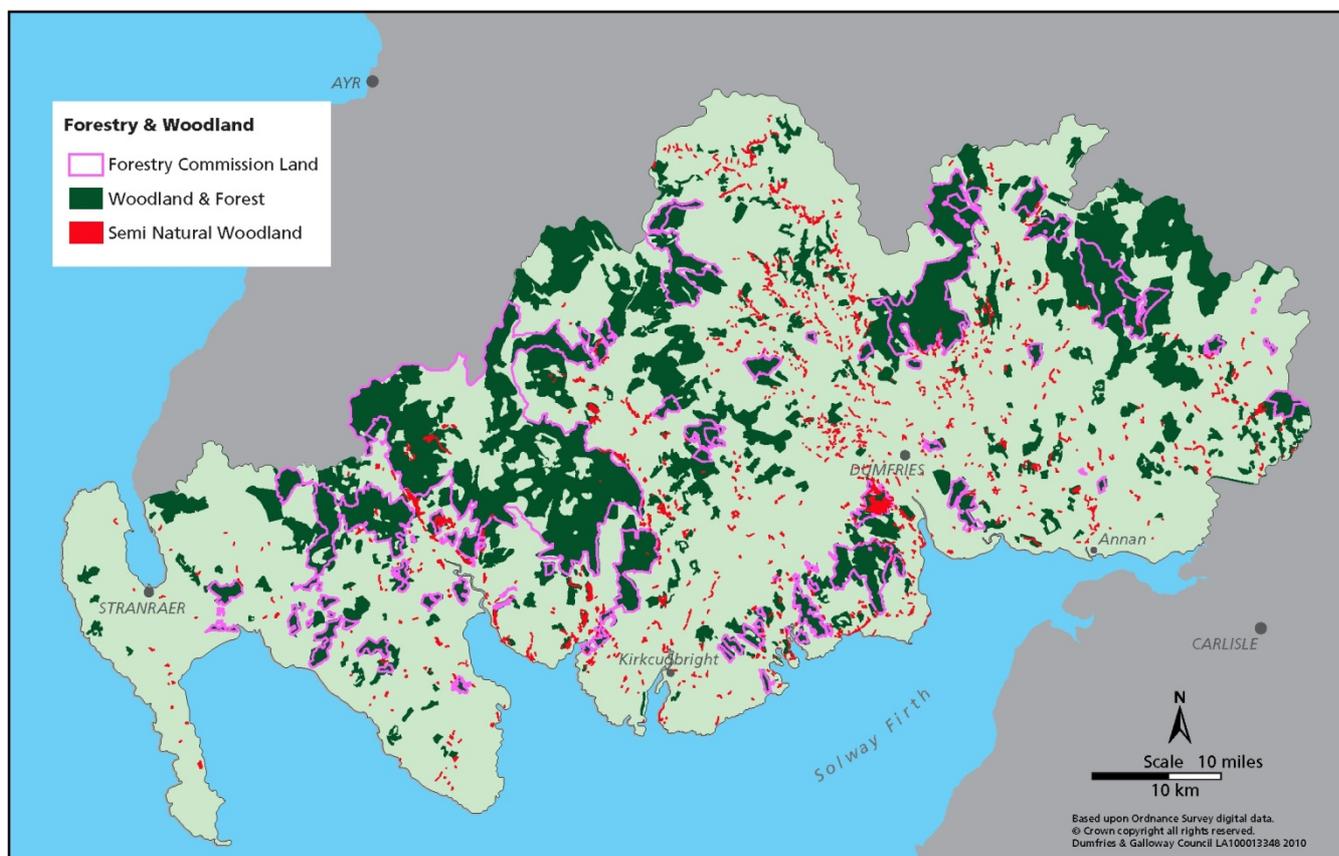
Map 1. The Dumfries and Galloway Area



### Introduction to Dumfries and Galloway

- 1.2 Dumfries and Galloway is the third largest region in Scotland. Its land area covers approximately 6,400 square kilometres of which around 28% of land coverage is forestry (Map 2).
- 1.3 The DGFWS will relate to all types of trees, forests and woodlands across the region, including urban trees, farm woods, native broadleaved woods and extensive conifer forests. It will provide guidance not only on the preferred location of new planting, but the most suitable design of forests and woods in particular locations, the management of existing forests and woods, and the best use of products from forests and woods.

Map 2. Forestry Coverage in Dumfries and Galloway.



## SEA

- 1.4 The Environmental Assessment (Scotland) Act 2005 (referred to in this report as “the 2005 Act”) requires local authorities to assess the environmental impact of certain plans, programmes and strategies (PPS) which they prepare. The mechanism through which this is achieved is Strategic Environmental Assessment (SEA). The aim of SEA is to provide for the full and transparent consideration of environmental issues within plan development processes.
- 1.5 Under the 2005 Act SEA is a requirement for PPS relating to a number of sectors including Town and Country Planning. DGC considers that SEA is required for the proposed DGFWS.
- 1.6 The 2005 Act sets out the requirements for environmental assessment. An environmental assessment is:
- the preparation of an environmental report;
  - the carrying out of consultations; and
  - the taking into account of the environmental report and the result of the consultations in decision-making.
- 1.7 This SEA Scoping Report has been prepared in accordance with Section 15 of the 2005 Act and made use of the guidance provided in the Scottish Executive SEA Toolkit and Templates. (The Council acknowledges that it has

also made use of Scoping Report documents originally prepared for Argyll & Bute and Perth and Kinross Councils and also for the SFC.)

- 1.8 The 2005 Act identifies nine environmental issues to be used during the SEA process. These are:
- biodiversity, fauna and flora
  - population and human health
  - soil
  - water
  - air
  - climatic factors
  - material assets
  - cultural heritage, and
  - landscape
- The interactions between these issues should also be considered.
- 1.9 The Council considers that an environmental assessment and Environment Report and other actions in accordance with Part 2 of the 2005 Act are required for the DGFWS.
- 1.10 The overall aim of undertaking SEA for the DGFWS will be to ensure that all significant environmental effects are considered as an integral part of the process towards adoption of the DGFWS. It is anticipated that the DGFWS will be Adopted in 2012.
- 1.11 An essential element of the SEA process involves consulting with the public and the designated Consultation Authorities, viz. Scottish Natural Heritage (SNH), Scottish Environment Protection Agency (SEPA) and Historic Scotland (HS), at various stages throughout the process. A key stage of the SEA process is the preparation of this Scoping report. The Council is required to consult the 3 Consultation Authorities on this document.
- 1.12 The purpose of this Scoping Report is to set out sufficient information on the DGFWS to enable the Consultation Authorities to form a view on the proposed consultation periods and scope/level of detail that will be appropriate for the Environmental Report (ER).
- 1.13 By issuing this Scoping Report the responsible authority is seeking comments on the proposed methodology and scope of the SEA from the Consultation Authorities. Existing information that may be of relevance to the study is also being sought. This includes data on:
- other relevant plans and programmes
  - environmental protection objectives
  - environmental or sustainability problems
  - the existing and future state of the environment
  - information on relevant additional cumulative or synergistic effects
- Comments received from the Consulting Authorities, and other stakeholders, on the Scoping Report will be taken into account in the SEA. The Environmental Report will also detail how the comments have been addressed in the DGFWS.

## **2. PLAN CONTEXT**

### **Relationship with other plans, programmes and environmental objectives**

- 2.1 A review of other relevant plans programmes and strategies (PPS) is an essential component of SEA. The aim of the review is to:
- identify matters that are significant and could influence the development of the DGFWS;
  - establish links between other PPSs and the emerging DGFWS;
  - identify key national and regional priorities that need to be taken into consideration; and
  - identify any objectives and indicators relevant to the DGFWS in other PPS that could be used to inform the SEA process.
- 2.2 Appendix 1 lists the PPS and environmental objectives we propose to analyse for their relationship with the DGFWS. Any PPS above the Scottish level have generally been excluded from the list, primarily because it is assumed that all relevant international, European and UK environmental legislation has been implemented into national, regional and local strategy and guidance.
- 2.3 The DGFWS will be affected by, and will equally affect, a wide range of other relevant plans, programmes and strategies both within and outside the Council's jurisdiction. It is therefore important to determine whether the DGFWS will give rise to conflicts with other plans, programmes and strategies. Inconsistencies are bound to arise at times between other PPS or environmental objectives. In deciding how to resolve any conflicts, the relative timing of the plans, programmes or objectives concerned will be considered, as well as the degree to which they accord with current policy or legal requirements and the objectives of the Act and SEA Directive. The DGFWS may not be able to accommodate all the requirements of the other PPS; or it may wish to take on board the requirements (e.g. because they are not sustainable).

### **Relevant Environmental Baseline and Data Sources**

- 2.4 The Environmental Assessment (Scotland) Act 2005 Schedule 3 requires that the Environmental Report includes a description of the relevant aspects of the current state of the environment and the likely evolution thereof without the implementation of the PPS, and the environmental characteristics of areas likely to be significantly affected.
- 2.5 Data is required to establish the current baseline condition of the environment in the absence of the DGFWS which will provide a basis for evaluating and monitoring the environmental effects of the Strategy.
- 2.6 Table 1. lists the data sources of the baseline information that will be used to help the environmental assessment. The list will be refined and further baseline information may also be used in the assessment. A list of data used will be included within the Environmental Report.
- 2.7 Considerable information about the environment is already held as part of the DGC Geographic Information System (GIS). It is anticipated that this will be used to assist in the development of the environmental assessment of the DGFWS.

Table 1: Data sources for providing baseline environmental assessment

<b>SEA Issue</b>	<b>Relevant Data</b>
Biodiversity, Flora and Fauna	<ul style="list-style-type: none"> <li>• SACs</li> <li>• SPAs</li> <li>• Ramsar Sites</li> <li>• SSSIs</li> <li>• National Nature Reserves</li> <li>• Local Nature Reserves</li> <li>• Local Wildlife Sites</li> <li>• UK BAP &amp; LBAP priority habitats and species</li> <li>• TPOs</li> <li>• Ancient and long established woodlands</li> </ul>
Population and Human Health	<p>Population figures            Health and Wellbeing Profiles (life expectancy and mortality by cause)            Principle recreation sites in forests            Access to open space            Location of sawmills, wood processing facilities and forestry related businesses            Scottish Index of multiple deprivation            Core paths</p>
Soil	<p>Exceedence of Critical Loads for Soils            Land Capability for Forestry Land Cover Map            Contaminated land</p>
Water	<p>Water quality monitoring data            Indicative river and coastal flood maps</p>
Air	<p>Air quality monitoring data</p>
Climatic Factors	<p>Carbon dioxide emissions by sector/per capita            Levels of greenhouse gas emissions            Local precipitation levels            Local temperature levels</p>
Material Assets	<p>Agreed Timber Transport Routes</p>
Cultural Heritage	<p>Scheduled Ancient Monuments            Listed Buildings            Conservation Areas            Archaeological Sensitive Areas            Gardens and Designed Landscapes</p>
Landscape	<p>D&amp;G Landscape Character Assessment            Inventory and non-inventory Gardens and Designed landscapes            Forestry District Strategic Plans and digital mapping</p>

### **3. SCOPING OF SEA ISSUES**

3.1 Based on the objectives of the DGFWS and the extensive and varied environment of D&G, the Council considers that it could not exclude any environmental issue for the SEA of its Forestry and Woodland Strategy. It therefore does not seek to scope out any environmental issue. As a result the assessment will include consideration of the following SEA issues which are all scoped in:

- Biodiversity, fauna and flora
- Population and human health
- Soil
- Water
- Air
- Climatic factors
- Material asset
- Cultural heritage
- Landscape

There will also be consideration of the inter-relationship between these factors and cumulative impacts

#### **Environmental Issues**

3.2 The extent of environmental information with relevant analysis for D&G available at the time of this Scoping Report is regarded by the Council as sound but requiring further coordination and analysis for the DGFWS. It provides a basis from which to move and to prepare this Scoping Report and initiate work on this DGFWS and its SEA.

3.3 Environmental issues at an area-wide level that have been identified are as follows:

- BIODIVERSITY, FLORA AND FAUNA:

The conservation of biodiversity is an essential part of sustainable forest management. Biologically diverse forests contribute to the diversity and sustainability of the wider landscape, provide a range of ecosystem services, such as nutrient re-cycling, and provide opportunities for people to experience nature close at hand. Although many species have benefited from the expansion of forest cover over the last 100 years the benefits have been limited due to the large scale planting of non-native tree varieties and in some cases such planting has been detrimental to biodiversity due to the removal and disruption to semi-natural habitats. Agricultural intensification has also resulted in the loss of woodland biodiversity.

Through changes in forest practices and policies since the 1970s, which have given a higher priority to the environmental benefits of forest planting and restructuring, forests and woodlands have become more diverse through the use of native tree species, managing and restoring ancient woodland, creating new areas of native woodland and improving habitat conditions for priority woodland species. Species and habitats are still at risk from unsympathetic or inappropriate management and the long-term effect of habitat fragmentation and degradation. A balance needs to be found between achieving biodiversity benefits from restructuring existing forestry and expanding native woodlands with improving some habitats by removing trees or undertaking more controlled planting and there are also issues of balancing this with economic/income generation aims.

D&G has a wide and varied range of environments creating a wide collection of habitats and is widely known for the diversity of its wildlife partly due its wide topographical variations. The region forms the southern limits of many northern species and the northern limit to many southern species..

Forest and woodlands cover approximately 28% of the land area of Dumfries and Galloway which along with agriculture forms the predominant land-uses in this mainly rural landscape. However, tree cover is dominated by conifers with less than 10% being broad leafed varieties, a lower percentage of which are native species, and a lower still percentage are ancient semi-natural woodlands, which are generally regarded as the most valuable for biodiversity. Although many of these high nature conservation value sites are locally, nationally or internationally designated, they are generally small in extent and highly fragmented in distribution. Some parts of the region, notably Wigtownshire, have barely any native woodland at all.

The region is also noted for its peatlands (holding approximately 5.4% of all UK peatlands over 1m in depth). Such habitats are now recognised for their carbon storage capacity, as well as their biodiversity. However, many were afforested in the mod 20<sup>th</sup> century and now require restoration if their carbon and biodiversity benefits are to be maintained.

- POPULATION AND HUMAN HEALTH:

Forestry provides an important role in local communities through both employment opportunities and the local economy and in relation to public health and recreational opportunities. The quality of the physical environment is important for health and wellbeing. Forests and woodlands are seen as having an invaluable role in promoting health opportunities within green environments to increase life expectancy and reduce health inequalities through motivating people to visit and take exercise

D&G is a rural area with farming and forestry being the dominant land-uses. The settlement pattern is one of small settlements spread across a large area. Over a quarter of the population live more than 30 minutes drive from a large town and most people live in small communities of 4,000 or less or in the countryside. The largest town is Dumfries with a population of about 37,000, followed by Stranraer with around 10,500 and Annan with over 8,000. The population of the area has remained relatively steady over many years, but for the projection period until 2031 the underlying demographic characteristics indicate a slight decline in the overall figure. There is a declining birth rate and an average age for the population of 42, compared to the Scottish average of 38.

Training resources in the region are still in need of further development although Barony College, Parkgate is now providing courses specifically designed for the forestry and timber industry.

Tourism is the single most important rural industry in the region and is the only sector that is growing annually even though the tourism economy of the region is considered to be fragile and underdeveloped.

FCS has developed recreational facilities designed to meet both the needs of visitor and assist the local tourism economy. Such facilities could be developed further and improvements and additions could be made to recreational routes (walks and cycle paths) not only for visitors but to improve the health of residents as well.

- SOIL:

Soil is a complex, and variable medium comprising mineral particles, organic matter, water, air and living organisms which can provide an important habitat in their own right. Forestry practices can raise issues in relation to contamination, compaction and erosion of soils. The management of forests and woodlands can have major impacts on the soils through such activities as drainage, cultivation, use of fertilisers and chemical process, planting, harvesting, road building, etc. Impacts on soil quality, and on the function of soils in storing carbon, can occur in areas of low pH/high carbon soils. Forestry and woodlands can contribute positively to soil and slope stabilisation, particularly in relation to increased rainfall associated with climate change.

The soils reflect the glacial past and the climate rather than solid geology. Only at higher elevations and on the steeper slopes is the underlying rock type evident in soil formation.

Peaty soils make up the majority of soil types in the region.
- WATER:

Forests and their management can affect the quantity and quality of water moving through catchments. Poor forest management can lead to increased acidification, exacerbate water shortages, contribute to local flooding and increase soil and stream erosion, turbidity, sedimentation and pollution. Planting and harvesting can have an effect on all of these issues. The relationship between forest and water differs from uplands to lowlands and between forest types. Woodland and forestry have the potential to contribute to catchment wide approaches to flood management by slowing run-off response times.

Within D&G there has been an issue of acidification associated with forestry. Acidification is often considered to be due to a combination of poor air quality caused by atmospheric pollutants, an acidic (non-buffering) geology and planting of conifer forests. Conifer trees extract acid pollutants out of the air which are washed off the trees and into adjacent surface waters after rainfall. 25 water bodies within the Solway sub-basin of the Solway Tweed River Basin District are affected by acidification. These affected bodies include parts of the Bladnoch, Cree, Dee-Ken, and Fleet catchments.

The long term restructuring process being undertaken by FCS should minimise the likelihood of the freshwaters within the Ae district being affected. Within the Galloway District the problem of acidification does seem to be reducing over time and there has been a recovery in fish levels in previously fishless lochs, however this recovery has been slower in headwater streams.

There have also been instances where intensive forestry plantations up to the edge of rivers has caused increases in erosion and sedimentation, loss of habitats and removed links to wetlands and buffers against diffuse pollution.

The Flood Risk Management (Scotland) Act 2009 puts a requirement on all involved in the management of flood risk to consider natural flood management. Forestry therefore has a role to play in reducing flood risk. The publication of the Forest and Water Guidelines (4<sup>th</sup> edition. 2003) sets out some basic principles (although it is understood that this document is due for review, hopefully taking due cognisance of the new Act).

Dumfries and Galloway suffers from flooding in various locations. In planning future planting, this risk might be partly reduced by the utilisation of various forest management systems. Planting high in the catchment is likely to have some impact, but planting in the downstream floodplain could have a greater benefit. At no time should forest works be allowed to increase flood risk – but the status quo must be seen to be the absolute minimum and a reduction in flood risk must be seen as being the aim.

There is therefore the opportunity for those involved in forest management to consider the effects of their works on flood risk. As a method somewhat in its infancy, the involvement of interested parties, probably through the National and Local Advisory Groups (to be established by SEPA to assist in production of Flood Risk Management Plans (FRMP) and Local FRMPs) is to be recommended. FCS have representations at National Advisory Group level.

- AIR:

Forestry tends to have a positive effect on air quality.

Air quality within the region is generally of a high quality in terms of national air quality objectives.

- MATERIAL ASSETS:

The delivery of more sustainable timber transport policies which avoid local level impacts as far as possible has been a focus nationally.

Timber processing can have local level impacts through, perhaps, the provision of new or upgraded processing facilities, which are of a sufficient scale or are potentially within locations where there could be negative environmental effects.

Timber processing generally produces co-products or bio products which, are all sold for use elsewhere in the wood fibre markets. E.g. 100% of a round log enters a site, such as Howies sawmill in Dalbeattie, and it leaves as bark mulch, sawn timber, sawdust, chips, etc. and anything remaining on site is used as bio fuel. As a result timber processing produces little, if any, waste that is unsustainably disposed of.

The South of Scotland (which is larger than the D&G region) contains 38% of the sawmills in Scotland, the majority of which are located within the region. The majority of timber produced in the region is used in the construction industry and quality paper manufacture. This is a thriving sector of the region's employment market and should be maintained, improved and supported. Recent improvements have been made to timber haulage routes, the B709 being one such example, providing a timber extraction route which now bypasses Eskdalemuir and other improvements have been made between Eskdalemuir and the large timber processing plant at Steven's Croft, Lockerbie

- CLIMATIC FACTORS:

The agricultural and forestry systems on which humans depend have developed in a climate that has undergone fluctuations but remained relatively stable since the last ice age. However, the global temperature is now rising and there is evidence that rainfall patterns are changing, sea levels are rising, glaciers are retreating, arctic sea-ice is decreasing and the incidence of extreme weather is increasing.

Forests play a very important role in the carbon cycle. Globally, they account for 80% of the annual exchange of carbon between the land and the atmosphere. Provided that forests are managed in a sustainable way they perform a vital role as carbon stocks, representing an important way of removing CO<sub>2</sub> from the atmosphere. Together, global forests provide an annual carbon sink equivalent to 25% of annual fossil fuel CO<sub>2</sub> emissions. Worldwide, forests re-planted and established over the past 50 years are estimated to take up or sequester approximately 10% of this figure, or 800 million tonnes of CO<sub>2</sub> per year.

The SFS has aimed to promote the use of forestry as a means of adapting to and mitigating climate change by contributing to biomass-based renewable energy, sustainable wood products and achieving carbon sequestration. Growing concerns about climate change suggest that these mitigation responses may become increasingly important.

The region is well placed to contribute towards meeting existing and future renewable energy targets. There are a number of existing operational and proposed renewable energy schemes including wind, biomass and hydro electric. There is scope to develop an appropriately-scaled woodfuel market in the region, both in terms of production of renewable energy and the reduction in the timber transport requirement. Further consideration should be given to potential short rotation energy crops and the expansion of conventional coppice production to help serve the wood fuel market.

Recent climate change guidance suggests that the climate of the District will remain wet and mild, although there is an expectation of increased frequency of extreme weather events. These will have an impact on species choice and may result in threats to wildlife habitats. There may be a higher risk of wind damage which would need to be managed through forest design and silviculture appropriate to succeeding rotations. More intense precipitation can lead to an increase in flooding events which may be addressed through flood and catchment management planning. Riparian woodland enhancement and expansion could have a role in improving sustainable flood and catchment management.

There is also potential for the planting of new woodlands for carbon sequestration. Habitat restoration of priority habitats such as bogs and native woodlands that permanently accumulate carbon can also improve carbon sequestration performance.

- CULTURAL HERITAGE:

Our whole environment has a historic dimension that contributes to its quality and character. It has been shaped by human and natural processes over thousands of years. The context in which specific historic features sit and the patterns of past use are part of our historic environment. The historical, artistic, literary, linguistic, and scenic associations of places and landscapes are some of the less tangible elements of the historic environment. These elements make a fundamental contribution to our sense of place and cultural identity.

It is recognised that all Scotland's woodlands contain a diverse and rich collection of features of archaeological interests. Some of this cultural heritage is evidence of past woodland use and management. The woods and trees themselves may also be considered as essential elements of an historic and designed landscape. The vast majority of archaeological sites that are found within new woodlands pre-date

their establishment and have their origins in the prehistoric and historic landscapes within which people once lived. During the last century when woodland cover was rapidly expanding, such tree planting was considered to be a serious threat to archaeological heritage, particularly in the uplands. Deep ploughing can disrupt ancient field systems and boundaries, destroy buried archaeological deposits and damage the vulnerable earthworks of prehistoric sites. Closely planted fast growing conifers altered the landscape context within which ancient funerary and ritual sites were originally intended to be set. As the trees matured and root systems developed, they could disturb buried archaeological features, deposits and artefacts.

The historic value of the features found in woodlands and the landscapes they create is recognised. Improvements have been made in the way that the historic environment is protected in Scottish woodlands, but there has been less progress in active management to secure and enhance its condition for future generations. Good interpretation, coupled with creating an appropriate setting for features, can also enhance the recreational interest of woodland and help develop a better understanding of the historic dimension and character of the present landscape.

As woodlands and forestry are important to the economy, and historic environments of Dumfries and Galloway, DGC has actively engaged with the FCS, the national Forest Estate, and private woodland owners and managers for the last 20 years to promote good practice in relation to managing, conserving and interpreting the historic environment.

Numerous areas of interest have been identified through survey work in advance of planting proposals and significant areas recommended for non planting. There have also been opportunities to rectify problems that arose from the zealous planting of trees in the past in and over areas of interest. Interpretation and consolidation schemes have been carried out, mainly on the forest estate, in order to add value to the woodland environments for people, e.g. Polmaddy village, Kirroughtree lade walk.

There is an ongoing need to identify areas of historic environment at a strategic level to guide large scale new planting and specifically prior to all new planting, felling and restocking.

- LANDSCAPE:

Landscape constantly changes due to the influences of natural and/or human forces. Sometimes these changes are subtle and imperceptible, reflecting gradual shifts in land management or climate whilst at other times the changes can be more dramatic or intense, such as when mineral sites are worked and restored or new development takes place. Time is a vital consideration in landscape planning, design and management, particularly when dealing with the extended lifecycle of trees and woodlands.

Trees, woods and forests are strong, dynamic elements in the landscape and have great potential to enhance and enrich the environment. They can also be a significant force for landscape change. Woodlands can create new habitats, enhance views, absorb activity and bring people closer to nature in both town and country. Very often they are the defining element of the landscape, shaping and enclosing space, framing views and providing colour, texture and scale.

In the early years of the Forestry Commission the creation of a strategic timber reserve took precedence over environmental considerations, including the landscape and visual effects of the new planting. As a result, many new woodlands were characterised by large scale plantations of non-native conifers laid out in geometric shapes with limited species or age diversity. Many of these earlier plantations were criticised as unnatural and alien features in the landscape. In recent years forest planting patterns have begun to change to emulate more 'natural' patterns, form and contrast. Although practices are changing there are still concerns in relation to the landscape and visual appearance of commercial forests mainly due to the timescales involved in forestry planning.

The region has a wide range of landscape types, identified in the D&G Landscape Assessment, and this diversity is considered to be one of the region's major assets. The region is sparsely populated and considered to be relatively wild as a result. The nature of the landscape character needs to be taken into account in any new planting or restructuring scheme.

### Environmental problems

3.4 Table 2 below indicates and describes some of the existing environmental problems and issues which the Environmental Assessment (Scotland) Act 2005 requires to be considered within the Environmental Report.

Table 2. Existing Environmental Problems relating to the DGFWS

Topic	Problem	Implications for DGFWS
<b>Biodiversity, Flora &amp; Fauna</b>	Historical loss of native woodland cover	Targeted increase in native woodland cover
	Fragmentation of remaining native woodlands	Develop forest habitat network
	Damage to native woodlands, especially ancient woodlands, through coniferisation in the 20 <sup>th</sup> century	Restoration of ancient woodland sites
	Loss of extensive habitats such as heather moorland and acid grassland to afforestation in the 20 <sup>th</sup> century, along with their associated species such as moorland birds, plants and invertebrates	Protection of sensitive open ground habitats and species
	Damage to peatlands, especially raised bogs, through inappropriate afforestation in the 20 <sup>th</sup> century	Restoration of peatlands
	Loss of trees through lack of management in non-woodland environments such as wood pastures and parklands,	Targeted conservation and enhancement of non-woodland trees

	farmland and towns. These habitats contain the majority of D&Gs veteran trees	
<b>Population and Human Health</b>	<p>Continuing issue of declining Ageing population and increase in life expectancy</p> <p>General reduction in levels of health and increasing obesity</p> <p>Skills shortages within forestry sector</p>	<p>Promote awareness and accessibility to woodland recreation facilities</p> <p>Increased outdoor access could contribute to greater social inclusion, and levels of health and physical activity</p> <p>Promote social inclusion in community projects</p> <p>Further promote tourism sector of economy</p> <p>Further develop training resources within the region</p>
<b>Soil</b>	N/A	<p>Ensure that soil disturbance and erosion, changes in nutrient status and adverse impacts on the soil resource should be avoided</p> <p>Ensure forest practices assist positively to slope stabilisation</p>
<b>Water</b>	<p>Exacerbation of acidification issues through scavenging effect of trees. Impact on upland lochs and watercourses and their associated fish and invertebrate species, especially in Galloway where there is little buffering effect from underlying geology</p> <p>Potential flood risk in various locations</p>	<p>Continued modification of forest practices to minimise acidification</p> <p>Promote forest practices that provide flood alleviation and reduced risk of flooding</p> <p>Promote forest practices which minimise potential impacts of forest operations on water quality</p>
<b>Air</b>	N/A	
<b>Material Assets</b>	<p>Need to maintain and improve timber quality to serve current markets</p> <p>Need to develop new markets</p> <p>Need to ensure continued supply of timber</p>	<p>Greater consideration to species choice, provenance and spacing</p> <p>Promote more use of timber for local markets</p> <p>Develop new wood energy business</p>

	Majority of timber is delivered by road	Promote use of practices for improved growing stock and cultivation techniques  Continued development and support for alternative methods of transport and delivery
<b>Climatic Factors</b>	Increasing targets for generation of electricity from renewable sources  Mitigation of climate change	Promotion of renewable energy sources  Development of bio-fuel products  Promote new areas of planting
<b>Cultural Heritage</b>	Extensive historic and environment sources  Further identification of the location and nature of these resources	Ensure protection and enhancement of the historic environment
<b>Landscape</b>	High quality and diverse landscape	Ensure protection and enhancement of landscape features

### SEA Objectives for DGFWS

3.5 Following initial consideration of:

- the SEA issues;
- existing baseline information;
- the objectives of the DGFWS,

3.6 SEA Objectives of assessment for the DGFWS have been derived and are shown in Table 3. It is anticipated that these will be refined as part of the interaction between SEA and the developing DGFWS. The refined objectives will be used in the assessment for the Environmental Report. The objectives are drawn mainly from those used in the Scottish Forestry Strategy SEA.

Table 3: SEA Objectives for DGFWS

SEA Topic	SEA Objective	Indicators
<b>Biodiversity, Flora and Fauna</b>	<p>To help implement the objectives of the Scottish Biodiversity Strategy</p> <p>To halt the loss of biodiversity and continue to reverse previous losses through targeted action for species and habitats</p> <p>To increase awareness, understanding and enjoyment of biodiversity and engage many more people in conservation and enhancement</p> <p>To restore and enhance biodiversity in all our urban and rural environments through better planning, design and practice</p> <p>To develop an effective management framework that ensures that biodiversity is taken into account in all decision making</p> <p>To ensure that the best new and existing knowledge on biodiversity is available to all policy makers and practitioners</p>	<p>Condition of designated sites</p> <p>Loss of designated sites</p> <p>Additional designated sites</p> <p>LBAP species/habitats stable or increasing</p> <p>Invasive Species control/expansion</p>
<b>Population and Human Health</b>	<p>To increase the opportunities for access to and enjoyment of forests and woodlands by all sectors of society</p> <p>To ensure that sustainable tourism and recreation are promoted through the forestry sector</p> <p>To maximise the role of woodland and forestry in contributing to quality of life</p> <p>To maximise the role of woodland and forestry in</p>	<p>Number of improved access routes</p> <p>Number of cycle paths</p> <p>Open space audit quantity and quality</p> <p>Woodlands in and Around Towns (WIAT) – number of applications</p> <p>Damage to environmental resources/ facilities/ information and interpretation</p>

	<p>contributing to health and wellbeing</p> <p>To encourage sustainable timber transport</p> <p>To maximise the contribution of the forestry sector to the viability of rural communities</p>	<p>Number of woodland recreation facilities and improvements to</p> <p>Number of Timber Transport Routes Agreed</p> <p>Levels of employment in forestry and related schemes</p> <p>Levels of productivity from forestry and related sectors</p> <p>Training in forestry and related sectors</p>
<b>Soil</b>	To contribute to sustainable soil management through forestry and woodland planning management	Changes in areas where soils are unsuited to productive woodland expansion
<b>Water</b>	To promote forestry and woodland management which contributes positively to the sustainable management of the water environment and achievement of River Basin Management Plans	Ecological status of waterbodies
<b>Air</b>	<p>To minimise the air quality impacts of timber transport and processing</p> <p>To maximise the role of woodlands and forestry in contributing to air quality</p>	<p>Air quality trends</p> <p>Timber transport trends</p> <p>Location and quantity of new planting</p>
<b>Climatic Factors</b>	<p>To increase the potential of the forestry sector in contributing to Scotland's renewable energy sources</p> <p>To further increase the role of woodland and forestry in achieving carbon sequestration</p> <p>To ensure that woodland and forestry planning and management take account of the need to adapt to climate change</p>	<p>Number of domestic and commercial renewable energy applications and installations</p> <p>Scale and nature of new planting/restructured woodlands</p> <p>Levels of locally produced timber products</p>
<b>Material Assets</b>	To minimise the use of	Number of domestic and

	resources including fuel and chemicals, and to minimise the creation of waste products  To promote the integration and co-ordination of forestry and woodland with other land uses.	commercial renewable energy applications and installations  New planting (location and nature)
<b>Cultural Heritage</b>	Need to ensure that current standards and good practice that have developed over last 20 years are maintained and exemplary best practice extended.  Need to identify areas that are particularly sensitive to change  To further promote the protection and enhancement of the historic environment  To further increase awareness and understanding of cultural heritage related to woodlands	Number and condition of designated and non designated sites
<b>Landscape</b>	To increase the contribution of forests and trees to scenic values, including distinctiveness and diversity of landscape.	Number of EIA for new forest planting

### Alternatives

3.7 The Environmental Assessment (Scotland) Act 2005 requires consideration of reasonable alternatives to the plan to be identified, described and evaluated. The consideration of alternatives relates to the means by which the objectives of the plan can be met by different approaches.

3.8 Potential reasonable alternatives have been identified as follows:

- **Option 1 – Maintain status quo:** Although there is strong Government support for the provision of up to date forestry and woodland strategies and their production is considered to be good practice it is not a legal requirement to produce one. It should be noted, however, that this would result in out of date policies and possibly would not provide sufficient consideration and a strategy in relation to the opportunities that forests and woodlands can provide in terms of the economy, health and the environment.
- **Option 2 – Produce a strategy without taking account of recent Government advice:** Although a strategy could be produced without taking account of the latest guidance (in terms of content or

- **Option3 – Produce a strategy in line with recent Government advice contained in ‘The Right Tree in the Right Place’:** A forestry and woodland strategy could be produced in line with current Government guidance and in the light of recent ‘good examples’.

3.9 The three options outlined above will be assessed against a simplified assessment framework using the agreed SEA objectives and the evaluation framework shown in Table 6. This is laid out in Table 4 below.

Table 4 Assessment Framework for Alternatives

<b>SEA Objective</b>	<b>Option 1</b>	<b>Option 2</b>	<b>Option3</b>
Biodiversity, Flora & Fauna			
Population & Human Health			
Soil			
Water			
Air			
Climatic Factors			
Material Assets			
Cultural Heritage			
Landscape			

### **Methodology for Assessing Environmental Effects**

3.10 The assessment will examine each of the main components and objectives of the DGFWS against the SEA objectives set out in Table 3 above. The objectives draw in the main on those used in the Scottish Forestry Strategy SEA.

3.11 The following table (Table 5) outlines the proposed assessment framework for assessing environmental effects and identifying the proposed measures envisaged for preventing, reducing and offsetting significant adverse effects.

Table 5 Proposed Assessment Framework for Assessing Significant Environmental Effects

Theme:					
Plan Objective:					
SEA Objective	Duration of Effect (short term/temporary: long term/permanent)	Baseline Indicator	Evaluation	Mitigation	Commentary

3.12 Table 6 indicates the proposed evaluation framework to be included in the evaluation column shown in Tables 4 and 5.

Table 6 Evaluation Framework

Large positive impact	Positive impact	Small positive impact	Neutral impact	Unknown impact	Both positive and negative impacts	Small negative impact	Negative impact	Large negative impact
+++	++	+	0	?	+/-	-	--	---

#### 4. NEXT STEPS

4.1 Table 7 below sets out the main stages and milestones in the development of the DGFWS.

Table 7 Main Stages in Production of the DGFWS

<b>Date</b>	<b>Stage</b>
March – June 2010	Scoping key issues
October 2010	Scoping Report submitted to SEA Gateway
November – December 2010	Engagement with Advisory Group
April – June 2011	Public Consultation on Draft DGFWS and Environmental Report
January – March 2012	Public Consultation on Final Draft DGFWS
September 2012	Adopt and Publish DGFWS

4.2 It is proposed that public consultations will last for 6 week periods.

## Appendix 1. Table of Relevant Plans, Programmes and Strategies

Topic	Name of Plan/Programme	Key Considerations	How it affects or is affected by the DGFWS
General			
	Environmental Assessment (Scotland) Act 2005	Sets out the requirement for SEA for relevant plans, programmes and strategies	The SEA requirements must be taken into account formulating and developing the DGFWS
	The UK Forestry Standard (FC) 2004	<p>The two main aims of the strategy are the sustainable management of our existing forests and woodlands and the steady expansion of tree cover to increase the many diverse benefits that forests provide.</p> <p>The Standard has the following key objectives:</p> <ul style="list-style-type: none"> <li>• maintaining or improving the stability of soil condition</li> <li>• protect or improve water quality</li> <li>• protect and enhance value of forests as carbon sinks/stores</li> <li>• maintain contribution of timber production to the economy</li> <li>• conserve and enhance biodiversity in and around woodlands</li> <li>• safe and efficient workforce activities</li> <li>• opportunities are enhanced for rural development; access and recreation; quality of life; awareness and participation; community involvement; and skills training</li> <li>• protect and enhance cultural heritage and landscape quality</li> </ul>	Provides relatively detailed aims, indicators and guidelines providing a framework of good practice that the DGFWS should contribute to and translate in relation to the regional context.
	The UK Forestry Standard Consultation Draft (FC) 2009	As Above	As Above
	The Scottish Forestry Strategy (Scottish Executive) 2006	<p>The SFS sets out the framework and vision for taking the forestry sector forward into the future through the following three outcomes:</p> <ul style="list-style-type: none"> <li>• improved health and well-being of people and their communities</li> <li>• competitive and innovative businesses contributing to the</li> </ul>	The DGFWS will contribute to the delivery of these outcomes at a local level providing community, economic and environmental

		<ul style="list-style-type: none"> <li>• high quality, robust and adaptable environments</li> </ul>	benefits through the identification of proposals and actions to achieve these aims
	The Right Tree in the Right Place – Planning for forestry and woodlands (FCS) 2010	The guidance provides advice to inform the preparation of forestry and woodland strategies and development plans. It highlights the benefits of developing new forestry and woodland strategies to inform future woodland expansion and provides advice on their preparation and content.	The DGFWS should follow the advice and guidance provided if it is to be a robust policy document for the future development of the forestry sector in the region.
	FCS Corporate Plan 2008-11 (FCS) 2008	The Plan sets out specific actions under each of the seven themes contained in the Scottish Forestry Strategy and sets targets against which the three outcomes of the SFS can be measured.	Sets out indicators for monitoring that can be taken into account in developing actions and monitoring systems for the DGFWS
	The Scottish Government's Rationale for Woodland Expansion (FCS) 2009	This Strategy sets out how the ambition stated in the SFS to increase woodland cover can best be delivered. It considers specific issues to be taken into consideration for woodland expansion and possible delivery mechanisms.	The DGFWS will need to take into account and consider the most suitable locations for woodland expansion and the most appropriate form it should take.
	The Scottish Government's Policy on Control of Woodland Removal (FCS) 2009	The purpose of this policy is to provide policy direction for decisions. The policy includes guiding principles and criteria for determining the acceptability of woodland removal.	The DGFWS will need to take account of the guidance contained within the policy document.
	Scottish Planning Policy (SG) 2010	SPP sets out the purpose of the planning system and core principles for its operation. Provides planning guidance on specific issues and topics.	The DGFWS will seek to support the policy objectives identified in SPP

	National Planning Framework for Scotland 2 (SG) 2009	NPF2 provides guidance on nationally important land use planning issues. In relation to D&G it looks to the strengthen key ports and strategic transport corridors; consideration of potential business opportunities through proximity to Ireland and Cumbria, particularly in terms of leisure and tourism; consideration of potential for developing the region's strengths in forestry, quality produce and as a place to live and work	The DGFWS will need to take account of guidance contained in the NPF2.
	Single Outcome Agreement 2008-11 (DGC)	Identifies the region's key characteristics and sets out areas for improvement in delivering key services	Proposals within the guidance will need to be taken account of in preparing the DGFWS.
	Dumfries and Galloway Structure Plan (DGC) 1999	Provides the strategic planning policy framework for decisions within the region	This document is currently being updated and reviewed through the preparation of a Local development Plan
	Area Local Plans (Annandale & Eskdale, Nithsdale, Stewartry and Wigtown) (DGC) 2006	Provides the detailed planning policy framework for decisions within the region	This document is currently being updated and reviewed through the preparation of a Local development Plan
	Ae Forest District Strategic Plan 2007-17 (Draft) (FCS) 2010	Provides guidance as to how the District will deliver its part of the Scottish Forestry Strategy	Proposals and actions within the strategic plans will need to be taken into account in preparing the DGFWS
	Galloway Forest District Strategic Plan 2007-17 (Draft) (FCS) 2007-17	Provides guidance as to how the District will deliver its part of the Scottish Forestry Strategy	Proposals and actions within the strategic plans will need to be taken into account in preparing the DGFWS
<b>Biodiversity Fauna and Flora</b>			
	Nature Conservation (Scotland) Act 2004	The Act provides a duty for public bodies to further conservation of biodiversity and have regard to the Scottish Biodiversity Strategy	The requirements of the Act should be taken into account in preparing the DGFWS

	Scottish Biodiversity Strategy (SE) 2004	<p>The Strategy aims to conserve biodiversity for the health, enjoyment and well being of the people of Scotland now and in the future. It has the following objectives:</p> <ul style="list-style-type: none"> <li>• Halt the loss of biodiversity and continue to reverse previous losses through targeted action for species and habitats</li> <li>• Increase awareness, understanding and enjoyment of biodiversity and engage many more people in conservation and enhancement</li> <li>• Restore and enhance biodiversity in all our urban, rural and marine environments through better planning, design and practice</li> <li>• To develop an effective management framework that ensures biodiversity is taken into account in all decision making</li> <li>• Ensure that the best new and existing knowledge is available to all policy makers and practitioners</li> </ul>	Proposals within the Strategy will need to be taken account of in preparing the DGFWS.
	Woods For Nature – Our Biodiversity Programme 2008-11 (FCS) 2008	<p>This Programme sets out activities to achieve the FC aim to help deliver the objectives for biodiversity in the SFS and Scottish Biodiversity Strategy through:</p> <ul style="list-style-type: none"> <li>• helping to halt the loss of biodiversity and reverse previous losses through targeted action for species and habitats</li> <li>• broader action for biodiversity at a landscape or ecosystem scale</li> <li>• increasing awareness and public enjoyment of woodland biodiversity</li> <li>• improve knowledge of biodiversity and ensure it is integrated into decision-making</li> </ul>	The activities and their objectives outlined in the programme will be taken account of in preparing the DGFWS.
	Forests and Biodiversity Guidelines – Consultation Draft (FC) 2009	<p>Forestry Guidelines address specific elements of forest management identified within the SFS in more detail and set out good forestry practice requirements and legal requirements. Key issues are laid out under the following factors:</p> <ul style="list-style-type: none"> <li>• Priority habitats and species</li> <li>• Functional landscapes</li> </ul>	Proposals within the guidelines will need to be taken account of in preparing the DGFWS.

		<ul style="list-style-type: none"> <li>• The role of natural processes</li> <li>• Tree and shrub species compositions</li> <li>• Structure</li> <li>• Veteran trees and deadwood</li> <li>• Open, scrub and edge habitats</li> <li>• Riparian Zone</li> <li>• Habitat creation and restoration</li> <li>• Genetic Conservation</li> <li>• Problem species</li> <li>• Grazing and browsing</li> </ul>	
	Dumfries and Galloway Local Biodiversity Action Plan (D&G Biodiversity Partnership) 2009	<p>The LBAP aims to:</p> <ul style="list-style-type: none"> <li>• conserve, enhance and re-create biodiversity at the landscape scale</li> <li>• conserve genetic diversity</li> <li>• incorporate biodiversity into all relevant decision making</li> <li>• raise biodiversity awareness, understanding and engagement</li> <li>• allow natural processes to operate wherever practicable</li> <li>• enhance local distinctiveness</li> </ul>	In formulating the DGFWS account will be taken of the guidance and actions contained within the Native Woodland Habitats and Forest Habitats sections, as well as other relevant parts of the LBAP
<b>Population and Human Health</b>			
	Woods For Health (FCS) 2009	The Strategy focuses on how to promote opportunities in our green environment, particularly trees, woods and forests, to improve health and life expectancy and reduce health inequalities in Scotland by supporting the health sector to make greater use of outdoor environments for health improvement activities.	Proposals within the strategy will need to be taken account of in preparing the DGFWS.
	Forests for People – Access, Recreation and Tourism (FCS)2008	<p>The Strategy sets out a framework of national priorities for the management of access, recreation and tourism infrastructure. The main focus of the strategy is on the following aspects:</p> <ul style="list-style-type: none"> <li>• accessible woodland close to communities</li> <li>• low-key, well designed, high quality, welcoming facilities</li> <li>• opportunities to learn</li> </ul>	Proposals within the strategy will need to be taken account of in preparing the DGFWS.

		<ul style="list-style-type: none"> <li>• robust locations</li> <li>• iconic places</li> <li>• access through woodlands</li> </ul>	
	D&G Core Paths Plan – Draft (DGC) 2009	The Land Reform Act requires the Council to formulate a basic framework of paths that will serve the needs of residents and visitors throughout the region.	
	Woods For Learning (FCS) 2009	<p>The Strategy aims to provide places in the green environment, particularly trees, woods and forests, for learning and teaching outdoors in order to:</p> <ul style="list-style-type: none"> <li>• help improve the life chances of young people</li> <li>• show forestry as an exemplar of sustainable development</li> <li>• show how woods and forests can contribute to combating climate change</li> </ul>	Proposals within the strategy will need to be taken account of in preparing the DGFWS.
	The Timber development Programme 2007-10 (FCS) 2007	<p>The aim of the Programme is to contribute to the sustainable development of Scotland's economy by enabling the timber growing and processing sectors to find the highest value and most appropriate end market for Scotland's timber. The Programme lists proposed activities under each of the following key objectives:</p> <ul style="list-style-type: none"> <li>• promote a predictable and stable timber supply</li> <li>• encourage more use of timber and timber products</li> <li>• enable improvements to timber supply chain efficiency</li> <li>• encourage and enable improvements to the quality of the growing stock</li> </ul>	Proposals within the programme will need to be taken account of in preparing the DGFWS.
	The Scottish Government's Policy on Non-Timber Forest products (FCS) 2009	The purpose of this policy is to provide direction for encouraging and supporting the sustainable development of the non-timber forest products sector in Scotland. Non-timber forest products are products of biological origin other than wood derived from forests, other wooded land and trees outside forests.	Policies and guidance contained within the Policy Statement will need to be taken account of in preparing the DGFWS.
	Supporting Business development (FCS) 2009	The purpose of this Strategy is to provide a strategic framework for supporting business development, primarily on the FCS estate, and for stimulating wider economic development in the Scottish forest	Proposals within the strategy will need to be taken account of in preparing the DGFWS.

		<p>industries. The main priorities for providing support are as follows:</p> <ul style="list-style-type: none"> <li>• timber and processing sector development</li> <li>• new woodland creation and management of the existing resource</li> <li>• tourism sector developments</li> <li>• improve skills levels</li> <li>• carbon offsetting</li> <li>• development of the forest estate development</li> <li>• renewable energy</li> <li>• social and environmental aspects of forestry</li> </ul>	
	Regional Economic Strategy 2008-13 (DGC) 2008	The strategy discusses issues faced by the region's economy and agrees a series of focused actions to address these and deliver beneficial change to economic well-being.	Proposals within the strategy will need to be taken account of in preparing the DGFWS.
<b>Soil</b>			
	Forests and Soils Guidelines – Consultation Draft (FC) 2009	<p>Forestry Guidelines address specific elements of forest management identified within the SFS in more detail and set out good forestry practice requirements and legal requirements. Key issues are laid out under the following factors:</p> <ul style="list-style-type: none"> <li>• acidification</li> <li>• compaction</li> <li>• contamination</li> <li>• disturbance</li> <li>• erosion</li> <li>• fertility</li> <li>• organic matter</li> </ul>	Proposals within the guidelines will need to be taken account of in preparing the DGFWS.
<b>Water</b>			
	Flood Risk Management (Scotland) Bill 2009	<p>The bill makes provisions for the following:</p> <ul style="list-style-type: none"> <li>• assessment and management of flood risks (implementing Directive 2007/60/EC)</li> <li>• local authorities' and SEPA's functions in flood risk management</li> </ul>	Provisions within the Bill will need to be taken account of in developing the DGFWS

	Forests and Water Guidelines (FC)2003	<p>Forestry Guidelines address specific elements of forest management identified within the SFS in more detail and set out good forestry practice requirements and legal requirements. Key issues are laid out under the following effects:</p> <ul style="list-style-type: none"> <li>• siltation and turbidity</li> <li>• acidification</li> <li>• nutrient enrichment</li> <li>• colour, iron and manganese</li> <li>• pesticides</li> <li>• chemicals</li> <li>• fuel oils and lubricants</li> <li>• water yield</li> <li>• base flows</li> <li>• peak flows</li> <li>• shade and shelter</li> </ul>	Proposals within the guidelines will need to be taken account of in preparing the DGFWS.
	Solway Tweed River Basin Management Plan (SEPA) 2009	The Plan sets out objectives for the sustainable management of the river basin district's waterways and water bodies and provides a vision for the water environment until 2027 laying out the actions required to produce environmental improvements during the next few years and into the future.	Proposals within the plan will need to be taken account of in preparing the DGFWS.
<b>Air</b>			
	Air Quality Strategy for England, Scotland, Wales and Northern Ireland (DEFRA) 2007	This strategy seeks to increase the use of renewable energy in the UK, as part of the overall strategy for tackling climate change and to meet the UK share of the EU target to generate 20% of the EU's energy from renewable sources by 2020.	Proposals within the strategy will need to be taken account of in preparing the DGFWS
<b>Climatic Factors</b>			

	Climate Change (Scotland) Bill 2008	The Bill sets targets for the reduction of greenhouse gas emissions and makes provision on mitigation and adaptation to climate change, energy efficiency and reduction and recycling waste.	Provisions within the Bill will need to be taken account of in developing the DGFWS
	Climate Change Action Plan 2009-11 (FCS) 2009	The Plan considers actions and priorities in respect of climate change in relation to forests through the following topics: <ul style="list-style-type: none"> <li>• protecting and managing existing forests</li> <li>• woodland creation</li> <li>• adapting to climate change</li> <li>• sustainably produced wood for energy &amp; construction</li> <li>• reducing the forestry sector's carbon footprint</li> </ul>	Proposals within the plan will need to be taken account of in preparing the DGFWS.
	Forests and Climate Change Guidelines – Consultation Draft (FC) 2009	Forestry Guidelines address specific elements of forest management identified within the SFS in more detail and set out good forestry practice requirements and legal requirements. Key issues are laid out under the following mitigation factors: <ul style="list-style-type: none"> <li>• carbon in forest products</li> <li>• carbon in soil</li> <li>• forest ecosystem carbon balance</li> <li>• operational carbon footprint</li> </ul> and adaptation factors: <ul style="list-style-type: none"> <li>• forest design and planning</li> <li>• adaptive forest management</li> <li>• species selection</li> <li>• adaptation and landscape ecology</li> <li>• environmental protection</li> </ul>	Proposals within the guidelines will need to be taken account of in preparing the DGFWS.
<b>Material Asset</b>			
	National Waste Plan (SG) 2003	Confirms targets for reducing waste	Proposals within the plan will need to be taken account of in preparing the DGFWS.
	Ayrshire and Dumfries and Galloway Area Waste Plan	The Plan provides a framework for waste management services in D&G	Proposals within the plan will need to be taken account of

	(SEPA) 2003		in preparing the DGFWS.
	Regional Transport Strategy (SWESTRANS) 2008	The Strategy sets out the transport vision for the region including the connectivity required to sustain and enhance the economy and communities, whilst minimising the environmental impacts of transport. The strategy also promotes the maintenance and improvement of transport infrastructure and services throughout the area.	Proposals within the strategy will need to be taken account of in preparing the DGFWS
<b>Cultural Heritage</b>			
	Scottish Historic Environment Policy (Historic Scotland) 2009	The policy provides the following functions: <ul style="list-style-type: none"> <li>• sets out policies for the historic environment</li> <li>• provides greater policy direction for Historic Scotland</li> <li>• provides a framework to inform work of organisations with a role and interest in managing the historic environment</li> </ul>	Policies and guidance contained within the Policy Statement will need to be taken account of in preparing the DGFWS.
	Scotland's Woodlands and the Historic Environment (FCS) 2008	The purposes of the policy statement are as follows: <ul style="list-style-type: none"> <li>• to communicate the forestry sector's shared understanding of how forests and woodlands contribute towards the historic environment</li> <li>• to promote the appreciation of the history of the forests and woodlands, and their contribution towards are cultural heritage</li> <li>• to confirm how the forestry sector will endeavour to deliver the required outcomes of the Scottish Ministers' strategic policies for the historic environment</li> <li>• to outline what practical measures the forestry sector can take to ensure that all our activities enhance the stewardship of the historic environment</li> </ul>	Policies and guidance contained within the Policy Statement will need to be taken account of in preparing the DGFWS.
	Woodlands in designed Landscapes, Forestry Practice Advice Note 3, (FC 1995)	Provides information and Advice to aid and guide woodland management in designed landscapes	Guidance contained within this practice note will need to be taken into account in preparing the DGFWS

Landscape			
	Forest and Landscape Guidelines – Consultation Draft (FC) 2009	<p>Forestry Guidelines address specific elements of forest management identified within the SFS in more detail and set out good forestry practice requirements and legal requirements. Key issues are laid out under the following factors:</p> <ul style="list-style-type: none"> <li>• landscape character</li> <li>• visual sensitivity and local distinctiveness</li> <li>• historic landscapes</li> <li>• designed landscapes</li> <li>• shape</li> <li>• landform</li> <li>• pattern of enclosure</li> <li>• scale</li> <li>• diversity</li> <li>• unity</li> <li>• spirit of place</li> </ul>	Proposals within the guidelines will need to be taken account of in preparing the DGFWS.
	D&G Landscape Assessment (SNH) 1998	This document provides a detailed assessment of the landscape character of the region and considers the likely pressures and opportunities for change in the landscape. The Assessment also assess the sensitivity of the landscape to change and includes guidelines indicating how landscape character may be conserved, enhanced or restructured as appropriate.	Guidance and information contained within the Assessment will need to be taken account of in preparing the DGFWS.