Moray & Aberdeenshire Forest District

Banchory Woods

Land Management Plan

Plan Reference No: LMP 35

Plan Approval Date:

Plan Expiry Date:

We manage Scotland's National Forest Estate to the United Kingdom Woodland Assurance Standard – the standard endorsed in the UK by the International Forest Stewardship Council® and the Programme for the Endorsement of Forest Certification. We are independently audited.

Our land management plans bring together key information, enable us to evaluate options and plan responsibly for the future. We welcome comments on these plans at any time.

The mark of responsible forestry

FOREST ENTERPRISE - Application for Forest Design Plan Approvals in Scotland

Forest Enterprise - Property

Forest District:	Moray & Aberdeenshire FD
Woodland or property name:	Banchory Woods
Nearest town, village or locality:	Banchory
OS Grid reference:	NO 688 948

Areas for approval

	Conifer	Broadleaf
Clear felling	196.9ha	3.2ha
Selective felling	11.5ha	
Restocking	117.0ha	133.0ha
New planting (complete appendix 4)		

1. I apply for Forest Design Plan approval*/~~amendment approval*~~ for the property described above and in the enclosed Forest Design Plan.

2. ~~* I apply for an opinion under the terms of the Environmental Impact Assessment (Forestry) (Scotland) Regulations 1999 for afforestation* /deforestation*/ roads*/ quarries* as detailed in my application.~~

3. I confirm that the initial scoping of the plan was carried out with FC staff on July 2015

4. I confirm that the proposals contained in this plan comply with the UK Forestry Standard.

5. I confirm that the scoping, carried out and documented in the Consultation Record attached, incorporated those stakeholders which the FC agreed must be included.

6. I confirm that consultation and scoping has been carried out with all relevant stakeholders over the content of the of the design plan. Consideration of all of the issues raised by stakeholders has been included in the process of plan preparation and the outcome recorded on the attached consultation record. I confirm that we have informed all stakeholders about the extent to which we have been able to address their concerns and, where it has not been possible to fully address their concerns, we have reminded them of the opportunity to make further comment during the public consultation process.

7. I undertake to obtain any permissions necessary for the implementation of the approved Plan.

Signed …… Forest District Manager

Signed …… Conservator

District Moray & Aberdeenshire

Conservancy Grampian

Date ……

Date of Approval ……

Date approval ends: ……

FOREST ENTERPRISE - Request for Approval of Thinnings

To: Conservator

Grampian Conservancy
Portsoy Road
Huntly
Aberdeenshire
AB54 4SJ

I apply for Authority to carry out a programme of thinnings within Banchory woods in Moray & Aberdeenshire Forest District during the 10 years commencing from the date of approval.

I undertake to identify any statutory designations which apply to any of the land to be subject to thinning, and to obtain the necessary permissions from the appropriate statutory body before commencing work under any approval which is granted.

Signed…… Signed……
Forest District Manager Conservator

District Moray & Aberdeenshire Conservancy Grampian

Date …… Date of Approval……

Contents

Appendices

Maps

Forest Design Plan Summary

This plan is a review of Forestry Enterprise Scotland's management of Banchory woods. This plan area is made up of Blackhall and the smaller woods north of Banchory, all the land holding in the river Dee valley around Banchory.

The purpose of the plan is to set out management objectives and prescriptions for the forest for the next ten years in detail, and in more broad terms for the following twenty years, which will fulfil the requirements of the UK Forestry Standard.

The main objective for the woodlands is to manage them to provide a recreational resource for Banchory and the surrounding area. An additional secondary objective is the production of a quality crop of timber.

The forests comprises approx. 1400ha of predominately coniferous plantation with an intrusion of naturally regenerated Birch, established mainly during the 1940's and 50's.

The river Dee runs through the plan area and is adjacent to the northern boundary of Blackhall. It is a Special Area of Conservation for Atlantic salmon, Freshwater Pearl Mussel and Otter. There are a number of small watercourses within the forest that are tributaries of the Dee.

Banchory woods provide a mix of formal recreation provision managed by FES, Aberdeenshire council and local path groups. There are also extensive networks of informal routes used by walkers, horse riders and mountain bikers.

There are is a total of 330ha of plantations on ancient woodland sites. The plan for Glencommon wood is to fully restore it to a mixture of upland oak wood, upland birch wood and native pine wood with biodiversity being the main objective. For Blackhall the objective is to enhance the woodland to improve it for biodiversity while still producing timber.

1.0 Introduction

Refer to Map 1: Location

1.1 Setting and context

Two separate plans for Blackhall and Banchory woods have been amalgamated into one land management plan to cover all the FES land holding in the river Dee valley around Banchory.

Blackhall Forest is 0.5miles south west of Banchory while the other blocks are towards the North West. The forests are prominent features of the landscape and are part of an extensive forest network following the River Dee. The forests rise from an elevation of 70m on the banks of the River Dee to 337m above sea level on the Hill of Goauch.

The forests comprises approx. 1400ha of predominately coniferous plantation with an intrusion of naturally regenerated Birch, established mainly during the 1940's and 50's.

The river Dee runs through the plan area and is adjacent to the northern boundary of Blackhall. It is a Special Area of Conservation for Atlantic salmon, Freshwater Pearl Mussel and Otter. There are a number of small watercourses within the forest that are tributaries of the Dee.

The soils are predominately Brown Earths and Podzols with some wetter areas of Flushed Gleys. Blackhall has a mainly northerly aspect and is relatively sheltered with some more slightly more exposed sites on the ridge. While the smaller blocks are mostly on the smaller hills on the wide valley bottom on the northern side of the river Dee

Banchory woods are a significant amenity resource for the local community and an important recreational area for the wider community and user groups. There is a waymarked cycle trail, a network of footpaths and a car park at Scolty. The smaller blocks such as Corsee woods are also heavily used via the extensive network of informal trails, community managed and core paths.

1.2 Land management objectives

The purpose and objectives for managing these blocks of woodland have been identified following a review of:

- The physical context and existing woodland;
- The land management objectives of other statutory bodies;
- The physical capability of the woodland;
- The locational objectives identified in the Moray & Aberdeenshire Forest District Strategic Plan.

Analysis of the available information has led to the **primary objective** is the management of the woodland to provide a recreational resource for Banchory and the surrounding area.

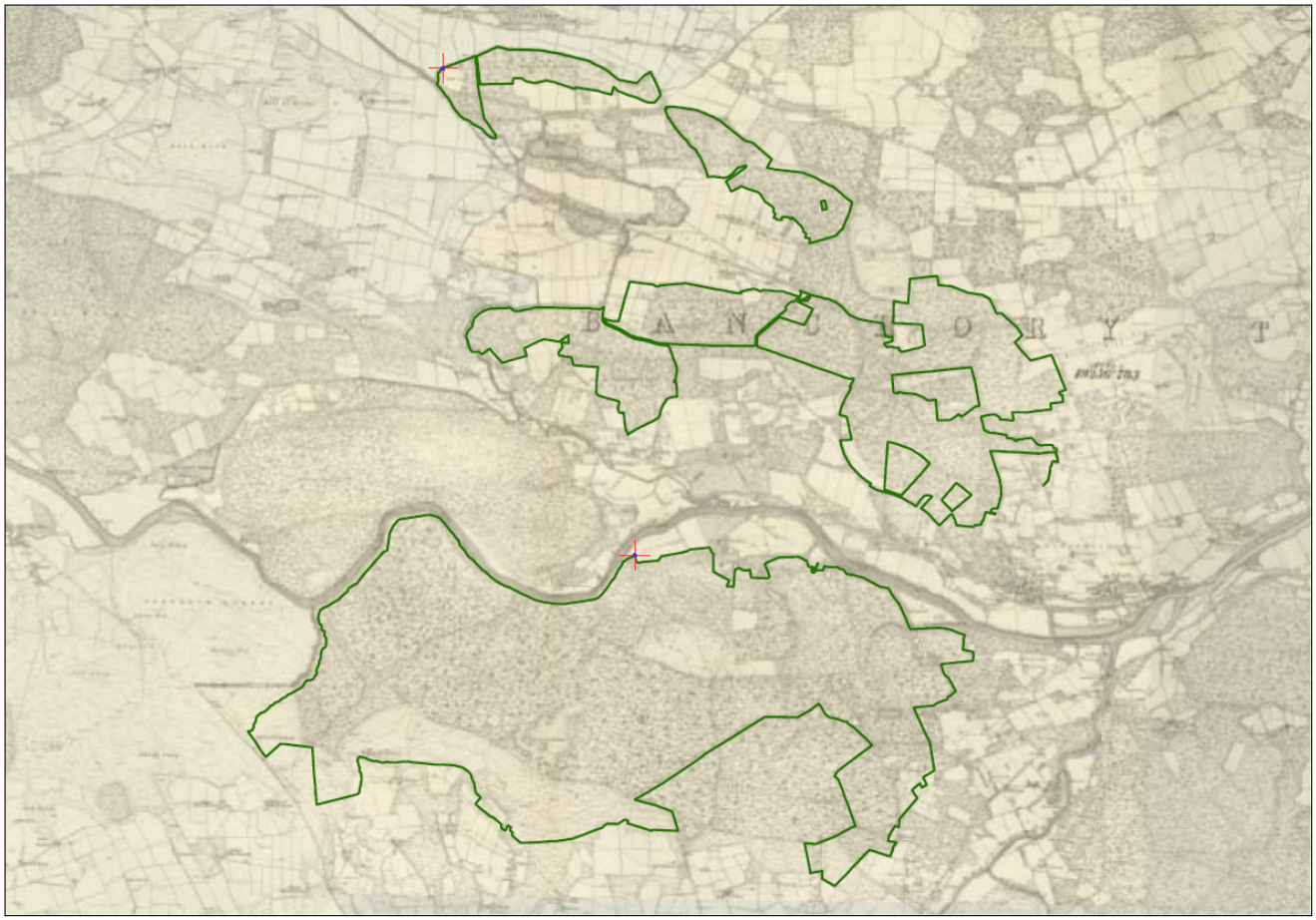
Additional **secondary objectives** have been identified as:

- The production of a quality crop of timber (across the whole plan area).
- The restoration of PAWS (Scolty and Glencommon wood).

1.3 History of the woods

The first Ordnance Survey map of Aberdeenshire and Banffshire was published between 1878 and 1883. The extracts of this map (see below) show that most of Banchory woods were wooded at this time. The biggest change has been the additional planting undertaken at the south of the main block around Tillylair.

This means that the majority of the area is well into its second or third rotation of managed forest.



2.0 Analysis of previous plans

Following the amalgamation of Moray Forest District with Aberdeenshire Forest District in 2008 the forest design plan programme was rationalised. This allowed us to take account of the wider impact of the woods on the local landscape and watersheds. To that end the two separate blocks of Blackhall and Banchory woods have been amalgamated into one land management plan that covers all the FES land holding in the river Dee valley around Banchory.

Since the last plans were approved policy themes have been updated, and as a consequence previous objectives can't be directly compared with the current aspirations for the National Forest Estate. The following table highlights the main priorities set out in the previous plans. It describes how and if those aims were met and what the proposed management intent is to carry these objectives forward in this plan.

Theme	Priority (in current approved plan)	Issue	Plan Objective	Progress to date **0 –** No progress in plan period **1** – Nominal progress **2** – Some progress **3** – Progress as per plan	Proposed action (in this plan)
Timber	**Low**	Timber supply	The plan should aim to create a felling plan that is practical, sustainable and compliments other management objectives	**3** – The majority of the thinning and felling operations approved in plan completed.	This will continue to be an objective in the current plan.
			The plan should maximise the use of alternative systems to clearfell	**3 –** Coupe identified and recorded in GIS. Thinning operation undertaken as per plan.	This plan will continue to identify areas for LISS management provided the crop and site is appropriate for this management regime and it is a suitable way of achieving the objectives for the site.
Community Development	**High**	Community engagement	FCS has a management agreement with the Scolty Woodland Park Association and the plan should reflect the objectives of the Woodland Park committee	**1 –** The Scolty Woodland Park Association has disbanded due to lack of wider community interest.	This will not be a specific objective in this plan.

		Community engagement contd.	The plan should complement the objectives of all interested third parties	**2 –** We have worked closely with a wide range of third parties to ensure their interest in the woodlands has not been compromised by management of the forest.	This will continue to be an objective in the current plan. We will continue to work closely with interested third parties to ensure our management enhances their interest and enjoyment of these woodlands where ever practical.
Access & Health	**High**	Recreation	The plan should address internal landscaping requirements, external views and enhancement of core facilities	**3** – The areas around the core facilities at the Scolty car park and trails have been managed to improve the visitor experience of the forest.	This will continue to be a major driver in the new plan period. The facilities in and around the Scolty car park are one of the key recreational sites for Moray & Aberdeenshire FD. The Deeside way now passes through Blackhall and the continued building of new housing around Banchory has led to increased recreational use of woods neighbouring the town.
Environment quality	**High**	Landscape	Use of LISS should be maximised.	**3 –** Coupe identified and recorded in GIS. Thinning operation undertaken as per plan.	This plan will continue to identify areas for LISS management provided the crop and site is appropriate for this management regime and it is a suitable way of achieving the objectives for the site.
			Species & age diversity should be maintained and enhanced.	**2** – The current species diversity is very similar to the start of the plan period. The figures to compare the current and past age diversity are not available.	The maintenance of a forest with a diverse species and age structure will continue to be an objective of this plan.

	Medium	Heritage	The plan should protect and enhance all heritage features within the wood	**3** - Pre operation surveys identify heritage features and these are protected as per national guidelines.	This will continue to be part of the work plan process during the period of this plan.
			Proposals should be drawn up for the enhancement and/or restoration of PAWS sites with the aid of vegetation survey results	**2** – Conifers felled from part of Cats Craigs. Monitoring of regeneration undertaken. Enhancement of PAWS by opening up of native species included prescriptions for thinning operations.	Enhancement of PAWS will continue to be a high priority for the plan area.
Biodiversity	**High**	Species & Habitats	The plan should diversify the age structure and species diversity of the forest to benefit a range of flora and fauna.	**2** – The current species diversity is very similar to the start of the plan period. The figures to compare the current and past age diversity are not available.	The maintenance of a forest with a diverse species and age structure will continue to be an objective of this plan.
			The plan should preserve open habitats within the forest	**3-** The total area of open ground has increased since the start of the plan period.	The new plan will ensure that the open ground area is a minimum of 10% of the area to meet the UKFS requirements.
			The plan should identify a minimum of 1% of the forest as Natural Reserve.	**3 –** The plan contains 1.8% of the area designated as natural reserve.	All areas designated as natural reserve will be reviewed and only those that are appropriate will be retained. If other suitable areas identified these will be designated. There is a requirement to designate 1% of the district are to meet UKFS but this does not need to be evenly distributed across all plan areas.

	High	Water quality	The plan must comply with the Forest and Water Guidelines as a minimum.	**3** – There have been no incidents of the forest and water guidelines being broken.	This will continue to be the minimum standard worked to during all forest operations. In many cases the standards will exceed those required by the guidelines.
			Opportunities should be sought to enhance the habitat of existing waterbodies and the riparian habitat of the Peelie, Beltie and Canny Burns and all other watercourses within the forest.	**2** - Restoration of reed bed ongoing at Lochton. Conifers have been cleared back from watercourses. Now awaiting natural regeneration .	The restoration and ongoing management of priority open habitats including the reed bed at Brathens Moss will continue to be an objective for the plan period. The river Dee SAC includes most of the tributary burns within Blackhall so improving riparian zones will continue to be an objective in the plan.

3.0 Background information

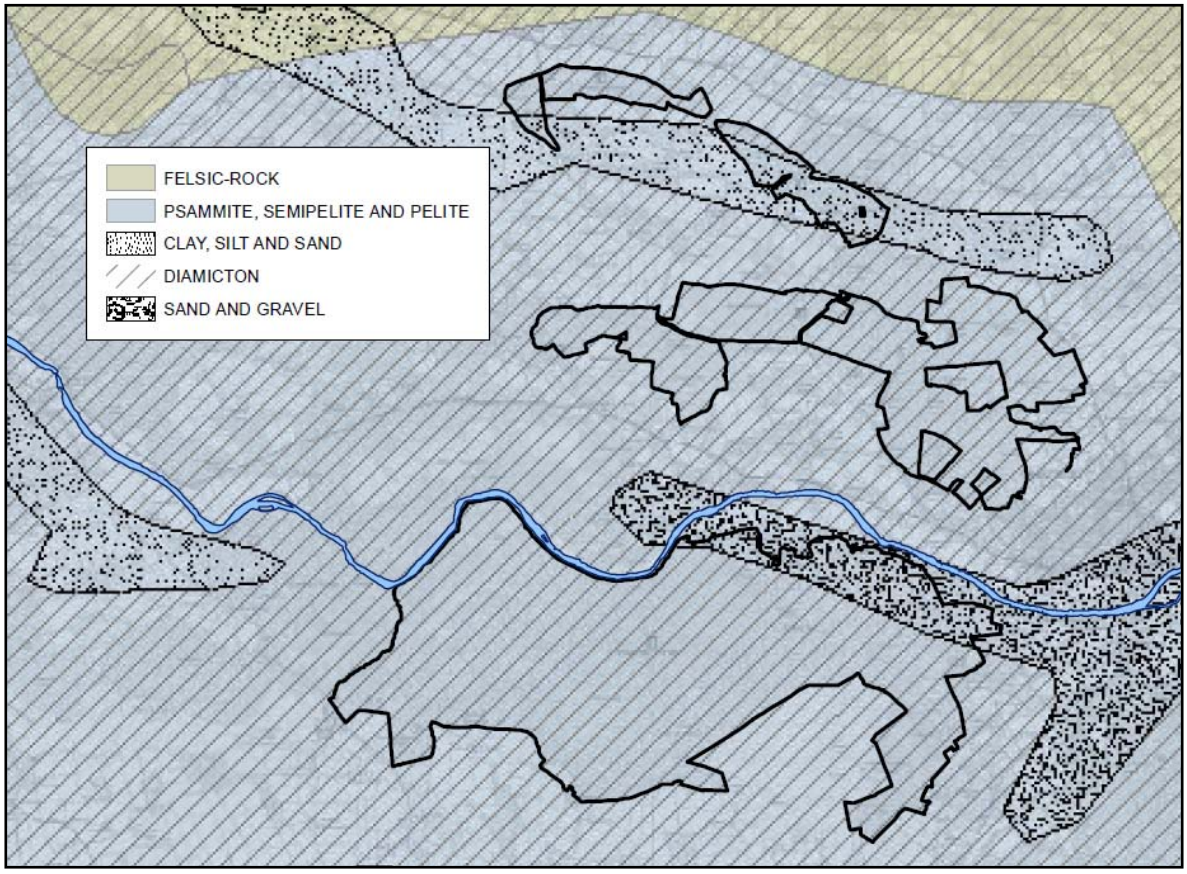
3.1 Physical site factors

Refer to Map 2: Key Features.

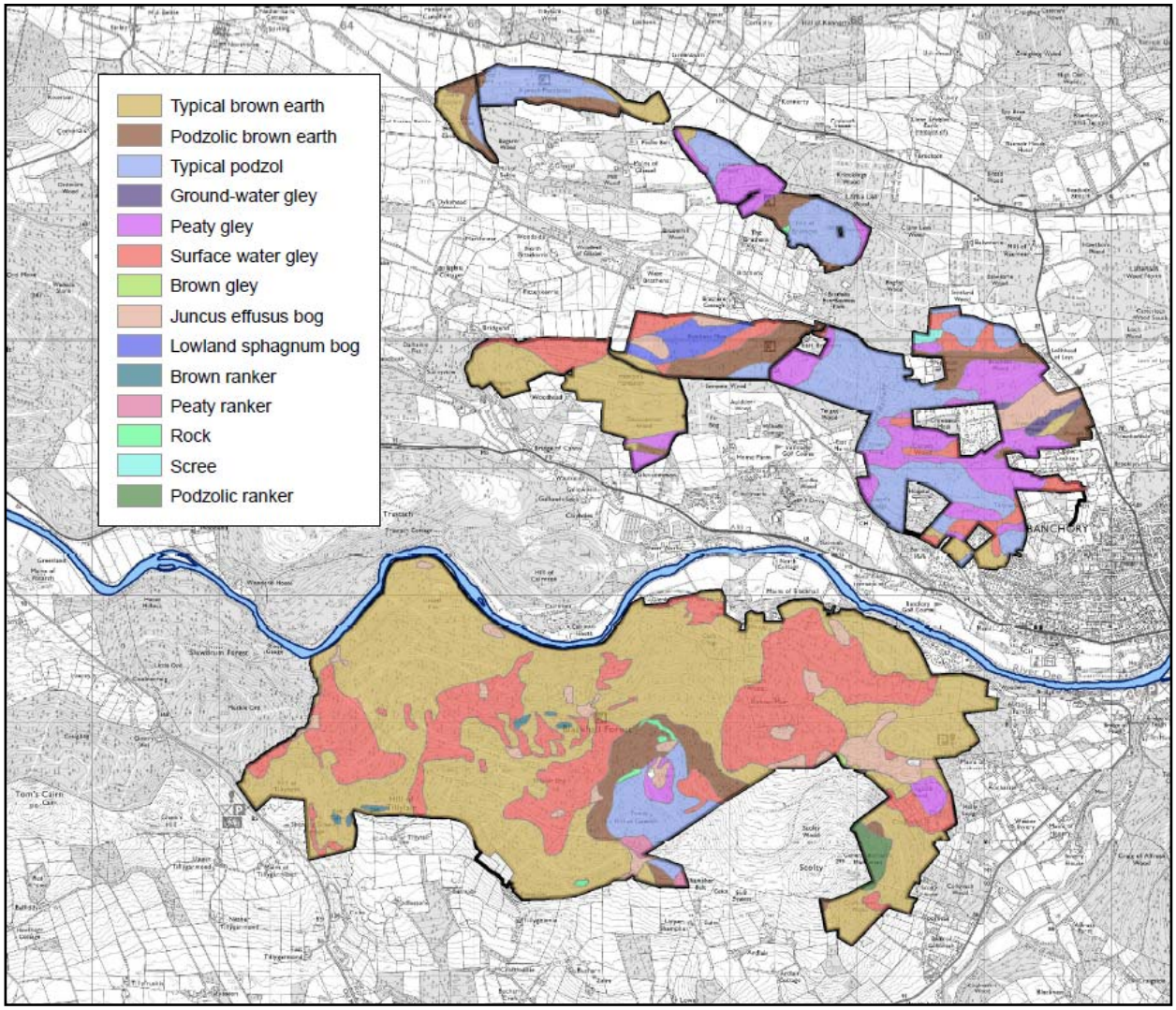
3.1.1 Geology, soils and topography

Geology - According to the British Geological Survey, Geological Map of the UK the whole of the plan area is underlain with Psammite, Semipelite and Pelite (which are all sandstones of differing textures from course to fine). These are overlain by a drift geology of mostly Diamicton, which is a terrigenous (resulting from dry land erosion) sediment that is poorly sorted and contains particles ranging in size from clay to boulders, suspended in a matrix of mud or sand. There are smaller areas of sand & gravel or clay, silt & sand.

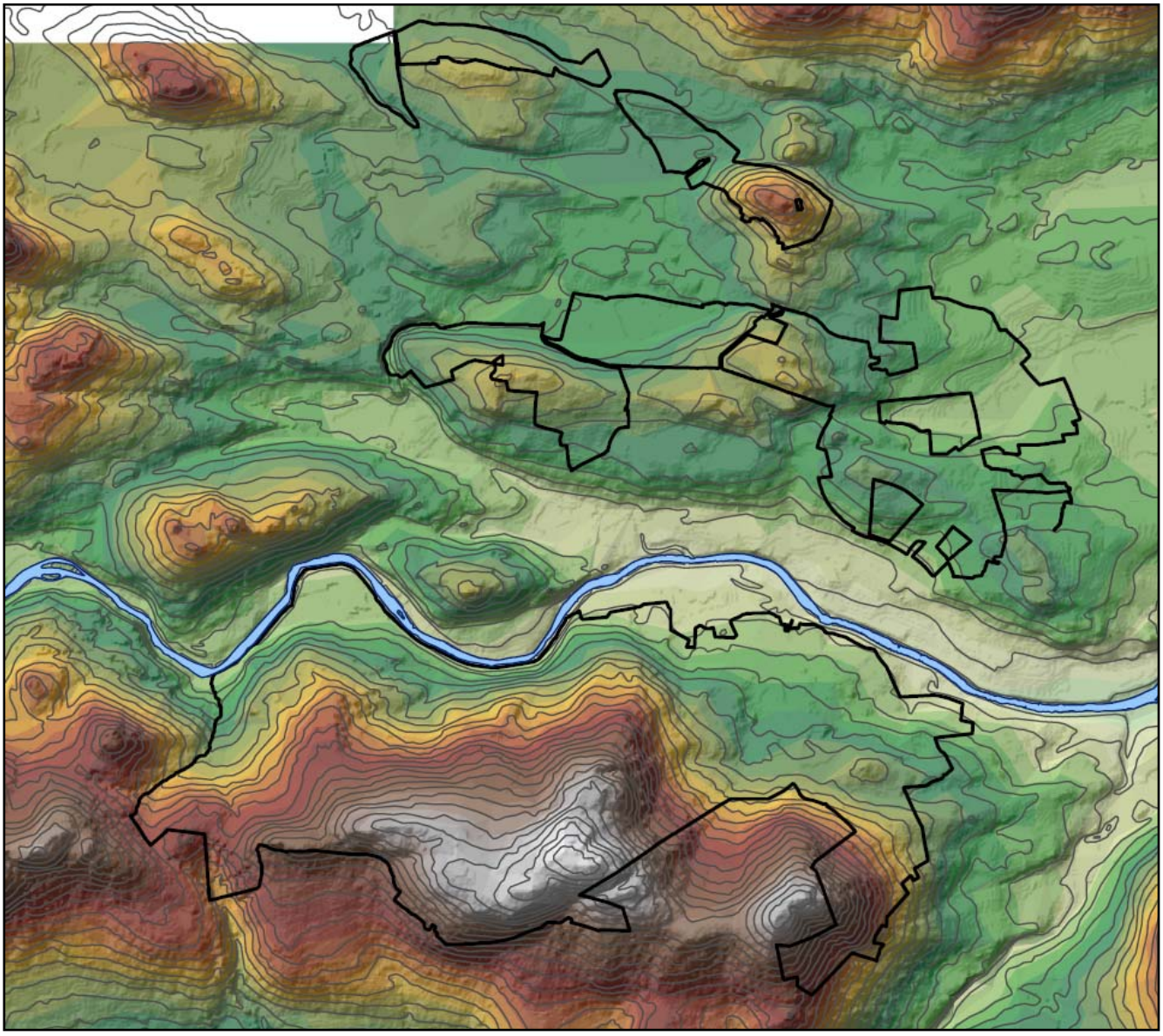
These geological conditions lead to soils with a medium level of nitrogen availability.



Soils – The majority of the Blackhall block has typical brown earths with large areas of surface-water gleys. While the smaller blocks are more complex but are dominated by typical podzol and peaty gley. These soils have a wide range of moisture regimes from very wet through to slightly dry and nutrient regimes that run from very poor to rich. These factors influence the species of trees that will grow successfully in these woodlands. With such a range of conditions these blocks are able to support a wide range of different species.



Topography - The elevation of the plan area runs from about 45m on the banks of the river Dee up to approx. 330m at the top of the Hill of Goauch. The Blackhall block is on the north facing slope of the Hill of Goauch. The smaller blocks are mostly on the smaller hills on the wide valley bottom on the northern side of the river Dee

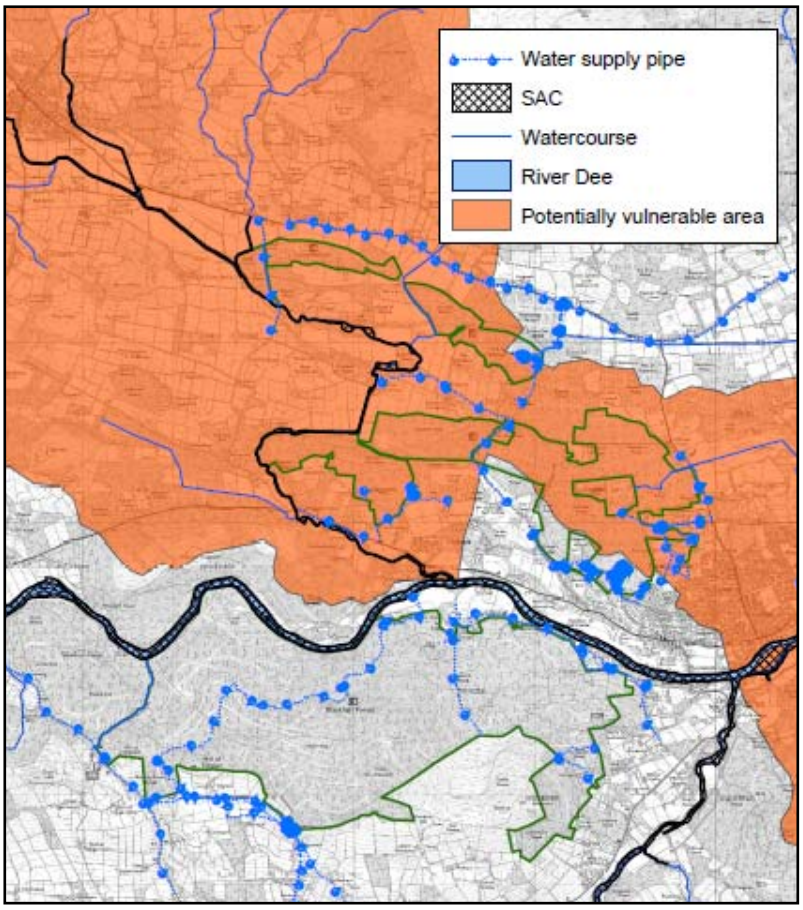


3.1.2 Water

All the woodlands that make up the Banchory Woods land management plan are within the catchment of the River Dee. This is designated as a SAC for Atlantic salmon, fresh water pearl mussel and European otter. A number of tributaries of the Dee have their source within or above the woods.

Additionally there are a number of public and private water supplies that pass through or are supplied from within the woodland area. All these will be protected during any operations by following the UK forest standard guidelines for forests and water as a minimum.

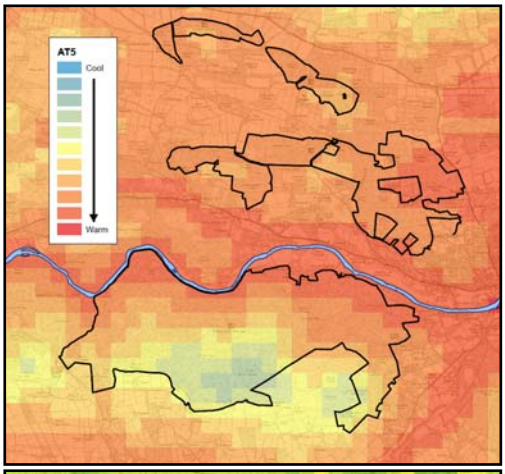
According to the SEPA website there is a Potentially Vulnerable Areas to flooding. This is PVA 06/21 Banchory and Torphins which includes the smaller Banchory woodlands and is downstream of Blackhall. The main flood risk is associated with the river Dee in Banchory. The PVA report does not highlight natural flood management studies or works as an action that will have a major impact on alleviating the flooding threat. However as all the watercourses in the plan area are tributaries of the river Dee all forest operations will be undertaken in accordance with the forest and water guidelines to ensure no additional flooding risk is created. If opportunities present themselves to undertake work to help alleviate flood risks during the course of operations these will be discussed with the relevant flood management authority and undertaken if appropriate.



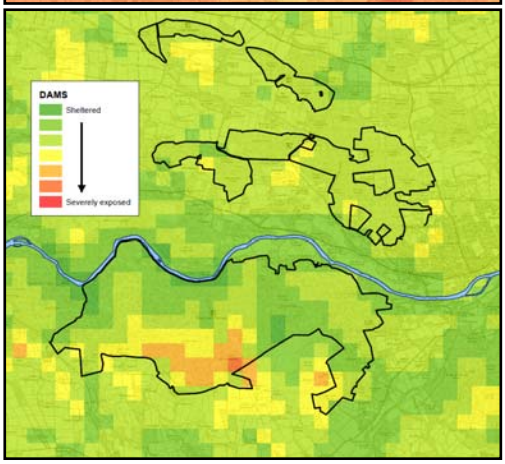
3.1.3 Climate

The climate data for the design plan area is obtained from the Ecological Site Classification system (ESC).
The results of interrogating this system gave the following data.

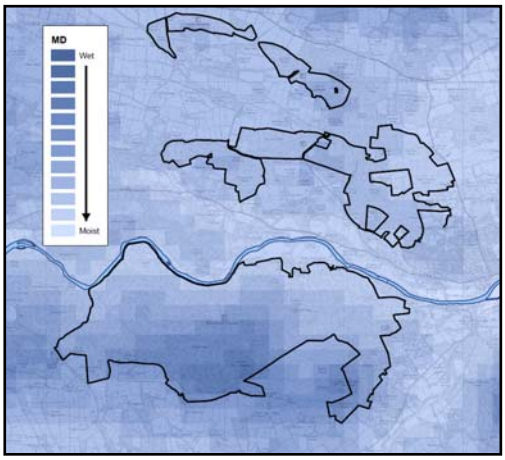
AT5	DAMS	MD
925 - 1264	6 - 16	69 - 140
cool - warm	sheltered – highly exposed	wet - moist



AT5 (Accumulated Temperature) is the accumulated total of the day-degrees above the growth threshold temperature of 5º, which provides a convenient measure of summer warmth. The results for AT5 place nearly all these blocks in the "cool" zone.



DAMS is the Detailed Aspect Method of Scoring. This represents the amount of physically damaging wind that forest stands experience in the year.
The range of DAMS is from 3 to 36 and windiness is the most likely limiting factor to tree growth at higher elevations in Britain. All the Deeside woods are in the sheltered to moderately exposed categories so windblow should not be a major factor in their management.



MD is the Moisture Deficit for the area. Moisture deficit reflects the balance between potential evaporation and rainfall and therefore emphasises the dryness of the growing season (rather than the wetness of the winter or whole year). These results place the blocks mostly in the wet zone.

Each tree species has tolerances for these and other factors and they can be used to identify species suitable for the site conditions. The results above will be used to help assist in the choice of tree species for restocking in this plan.

Further information on these criteria and the application of ESC can be found in Forestry Commission Bulletin 124 - An Ecological Site Classification for Forestry in Great Britain.

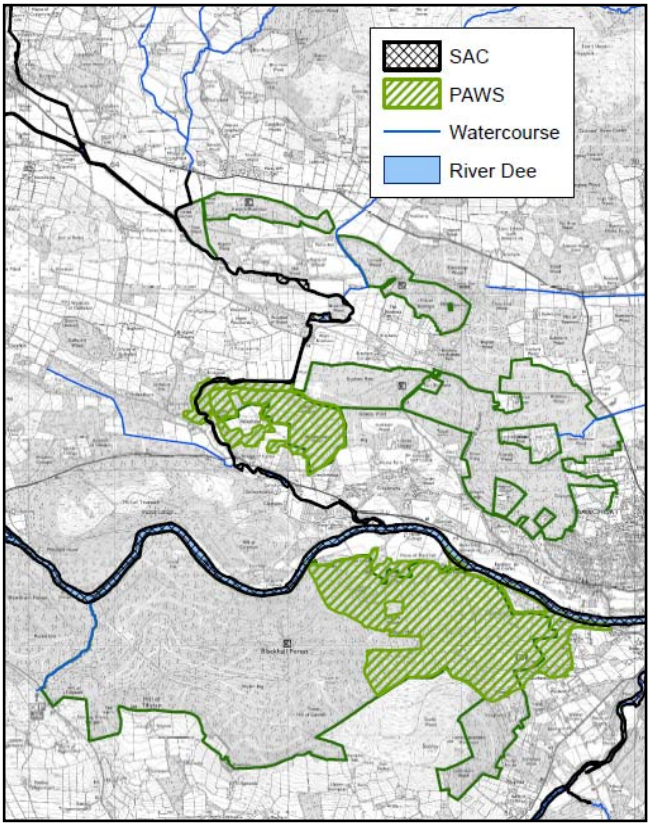
3.2 Biodiversity and environmental designations

The River Dee and two of its main tributaries in the plan area are designated as a **SAC** for Atlantic Salmon, fresh water pearl mussel and European otter. The picture to the left shows the river Dee running along the northern boundary of Blackhall.

There are **PAWS** within Blackhall and Glencommon wood that combined reaches a total of 330ha.

The plan for Glencommon wood is to fully restore the woodland to a mixture of upland oak wood, upland birch wood and native pine wood with biodiversity being the main objective.

For Blackhall the objective is to enhance the woodland to improve it for biodiversity while still producing timber. The picture above right shows the current Norway spruce crop that is growing over parts of the PAWS area.



There are several UK BAP (Biodiversity Action Plan) animal and birds species within these woodlands. The woods will be managed to enhance the habitat for these species.

Red Squirrel (one of the six key species identified in the FCS Biodiversity Action Plan) are present in the woods and operational practice will be undertaken to benefit red squirrels. This will include planning forest operations to help minimise damage to red squirrel dreys and populations, including survey work to locate dreys prior to felling operations and the planning of the forest structure and composition specifically to suit red squirrels. LISS will be utilised where appropriate to enhance the habitat for red squirrels.

Deadwood - Dead and decaying trees are vital components of a properly functioning forest ecosystem and play a key role in sustaining biodiversity. Deadwood also plays a part in mitigating the effects of climate change by acting as a medium-term sink for carbon.

Invasive species – Rhododendron ponticum & Pirri-pirri-bur (Acaena novae-zelandiae)

Rhododendron ponticum is a non-indigenous evergreen shrub. It is an aggressive coloniser that reduces the biodiversity value of a site; it obstructs the regeneration of woodlands and once established is difficult and costly to eradicate.

Originating from Australia and New Zealand and introduced to the country via seeds in imported wool Pirri-pirri bur is especially invasive when it establishes on cool, damp upland habitats. Its hooked burs mean it is easily spread in the wild by sheep and other animals.

There is an ongoing control programme in Banchory woods for both these invasive none-native species.

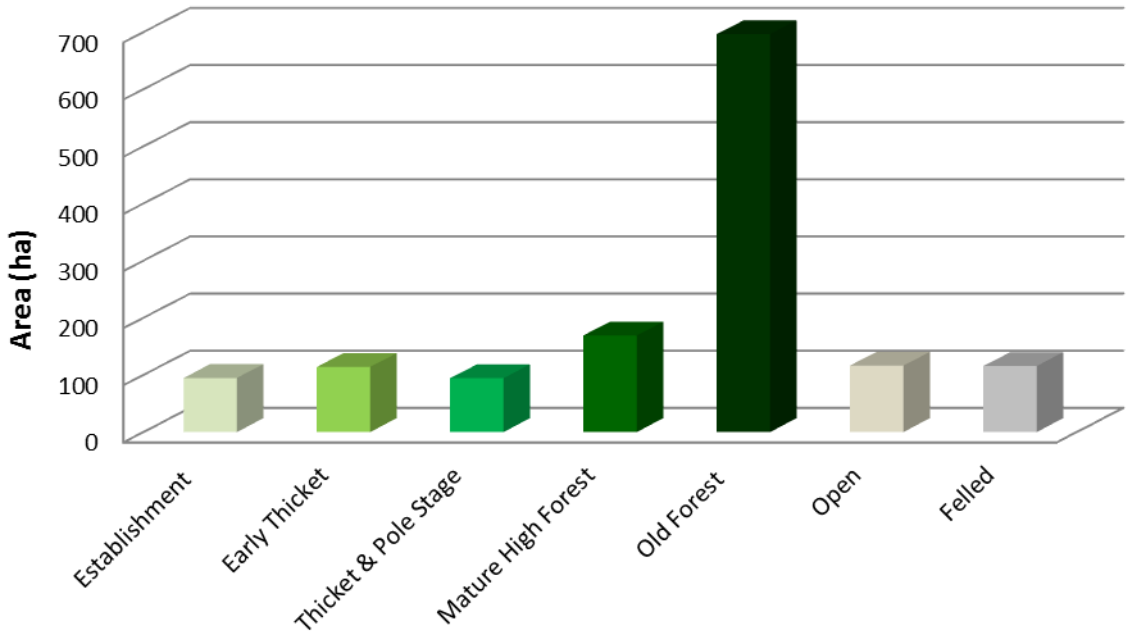
3.3 The existing forest

3.3.1 Age structure, species and yield class

Age Structure
As can be seen from the following table and pie chart the spread of age classes across the plan area is not even. Old forest makes up nearly half the area with very little in the other phases. This is due to the management approach being mostly LISS which leads to older mature forests with regeneration usually appearing only towards the end of the rotation.

The area of open ground within the blocks is below the guideline of 10% and opportunities will be taken to increase this proportion where appropriate.

Ages of Trees (years)	Successional Stage	Area (ha)	%
0 -10	Establishment	94.6	6.8
11 – 20	Early Thicket	113.9	8.1
21 – 40	Thicket & Pole Stage	94.2	6.7
41 – 60	Mature High Forest	169.0	12.1
61+	Old Forest	696.3	49.7
	Open	116.3	8.3
	Felled	115.5	8.3

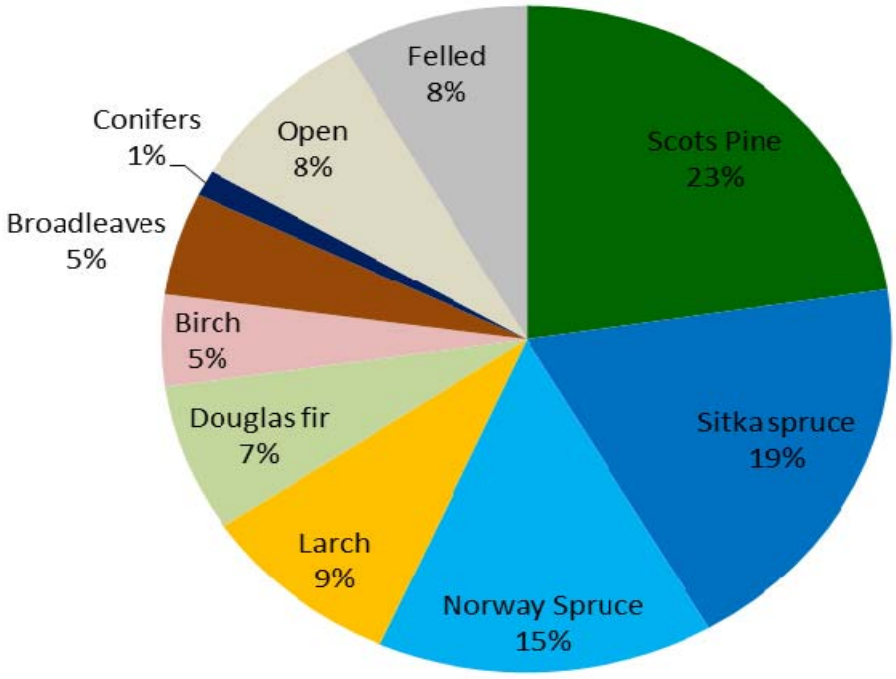


Species

Scots Pine, Sitka spruce and Norway spruce make up the largest components of the forest area. Broadleaves are well represented with nearly 10 % of the area.

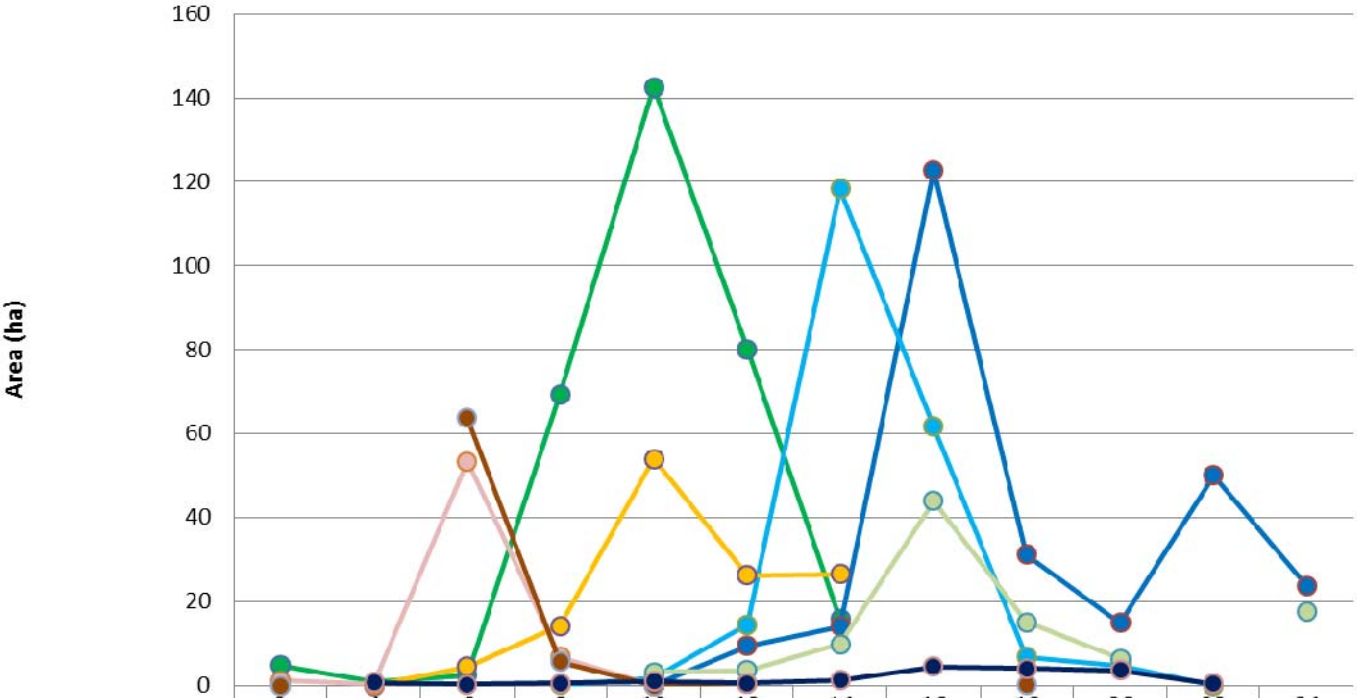
The aim of this plan will be to retain the current level of species diversity as the climate and soil conditions means a wide range of commercial species is suited to the conditions.

Species	Area (ha)	%
Scots Pine	316.4	22.6
Sitka spruce	266.9	19.1
Norway Spruce	208.6	14.9
Larch	125.9	9.0
Douglas fir	100.3	7.2
Broadleaves	70.3	5.0
Birch	62.0	4.4
Conifers	17.6	1.3
Open	116.3	8.3
Felled	115.5	8.3



Yield Class

The yield classes for all species are at or above average due to the climate and soil types. The average yield class of Scots Pine is 10 with Norway spruce at 14 and Sitka spruce at 16.



	2	4	6	8	10	12	14	16	18	20	22	24
Scots Pine	4.87	0.99	2.48	69.38	142.59	80.22	15.84					
Sitka spruce					0.16	9.54	14.18	122.77	31.23	15.02	50.11	23.86
Norway Spruce				0.18	2	14.54	118.34	61.71	6.94	4.85	0.02	
Larch		0.01	4.62	14.21	54.02	26.35	26.68					
Douglas fir					3.26	3.72	9.89	44.09	15.08	6.47		17.74
Birch	1.26	0.37	53.52	6.85	0.03							
Broadleaves	0.02		63.77	5.67	0.06	0.68			0.14			
Conifers		0.73	0.37	0.57	1.1	0.62	1.33	4.54	4.07	3.73	0.54	

3.3.2 Access

Access both to and within much of the plan area is good. The A980 and A93 run through the plan area and are both agreed transport routes*. The forest road network is adequate and well maintained. However the use of the road through Blackhall as the Deeside way has a negative impact on harvesting and haulage operations.

* http://www.timbertransportforum.org.uk

3.3.3 LISS potential

Currently 60% of the plan has been designated for LISS management.

These are defined as '… silvicultural systems whereby the forest canopy is maintained at one or more levels without clear felling.' This means there will be no felling areas larger than 2 ha.

The potential for LISS is based on the wind hazard class of the crop, the soil nutrient regime, the suitability of the species to the site and the past management of the crop, along with can it be thinned.

All areas of LISS will be assessed and if it is clear that this is not the best system to use to achieve the objectives of the coupe then it will be changed to clearfell.

The picture to the left shows the advanced Sitka spruce natural regeneration occurring in some areas of Scots pine and larch.

3.3.4 Current and potential markets

The current breakdown of the timber being harvested from this design plan area across the range of sites, species and ages is shown in the table below.

Material	End product	Percentage
Small/Short roundwood	Chip board, Orientated strand board (OSB), Paper, Fuelwood	20%
Fencing	Posts & rails	0%
Short log	Pallets & slats	20%
Log	Construction	60%

Most of this production is sold into markets in the north east of Scotland, and locally to James Jones and Cordiners. The exception to this is the short pine and spruce roundwood which usually are exported.

An increasing proportion of mainly roundwood material has gone into the local fuelwood market (approx. 10-15%), and this upward trend will likely to continue. The production of hardwood will likely to increase in the long term as well. Despite the increase, both these markets will be of a very limited scale and will have only minor impacts on the current product percentage breakdown.

3.4 Landscape and Land Use

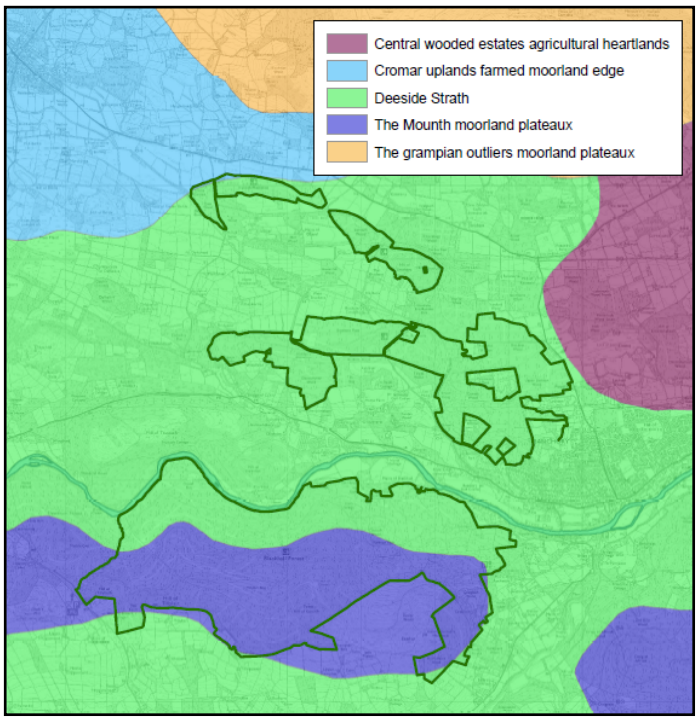
3.4.1 Landscape character and value

Scottish Natural Heritage, in partnership with local authorities and other agencies have carried out a National Programme of Landscape Character Assessment. This programme aims to improve knowledge and understanding of the contribution that landscape makes to the natural heritage of Scotland. It considers the likely pressures and opportunities for change in the landscape, assesses the sensitivity of the landscape to change and includes guidelines indicating how landscape character may be conserved, enhanced or restructured as appropriate.

These assessments are considered during all land management plan reviews and where appropriate efforts made to follow the guidance given, where it matches with current FCS policy.

The Banchory woods is covered by Scottish Natural Heritage Landscape Character Assessment No102 South & Central Aberdeenshire, produced in 1998 by Scottish Natural Heritage.

The northern half of Blackhall along with the smaller blocks are all within the Deeside strath area. While the southern half of Blackhall in the Mounth moorland plateaux area.



The Deeside strath area is bisected by the river Dee and is associated with estates, woodlands and attractive small towns. The key characteristics of this area are:

- Generally narrow valley but expanding into more open land around Strachan.
- A richly wooded landscape often providing a strong sense of enclosure.
- A great diversity of trees and rich understorey forming a landscape of colourful foliage and dappled shade. Striking colours in autumn.
- Pockets of open agricultural landscape along the Water of Feugh that contrast with the woodland along the Dee.
- Sparkling shingly river especially where course runs through the limestone outcrop around Aboyne.
- Numerous estates with fine buildings, grand gatehouses, thick stone boundary walls and long avenues lined with billowing beech trees.
- Major road corridor.
- Well settled area with mix of architectural styles, notably majestic Victorian houses and hotels, large towns and numerous visitor facilities.

The view north across the Deeside strath from Blackhall.

The specific guidance is to conserve the diverse woodland species mix by:

- Managing the woodlands along the lush river valley.
- Extending the woodland planting within the open farmed landscape but retaining periodic open views to the uplands.

The Mounth area is a large expanse of moorland plateaux. The key characteristics of this area are:

- Smooth rolling landform and rounded summits.
- Substantial highland outcrop forming prominent undulating ridge that dominates views south of Aberdeen.
- Extensive central and western ridges of heather moorland and grasses.
- Heavily forested edges particularly in the north and east and within Glen Dye.
- Encroaching patchwork of green pasture on some fringe slopes associated with isolated villages and hamlets.
- Derelict grey stone cottages are occasional features amidst open moorland, but almost all are uninhabited.
- Numerous old routeways which are now used as footpaths for walkers.
- Wild and exposed character with commanding views into tranquil farmed lowland of neighbouring character areas.

The specific guidance is to increase the diversity of landcover :

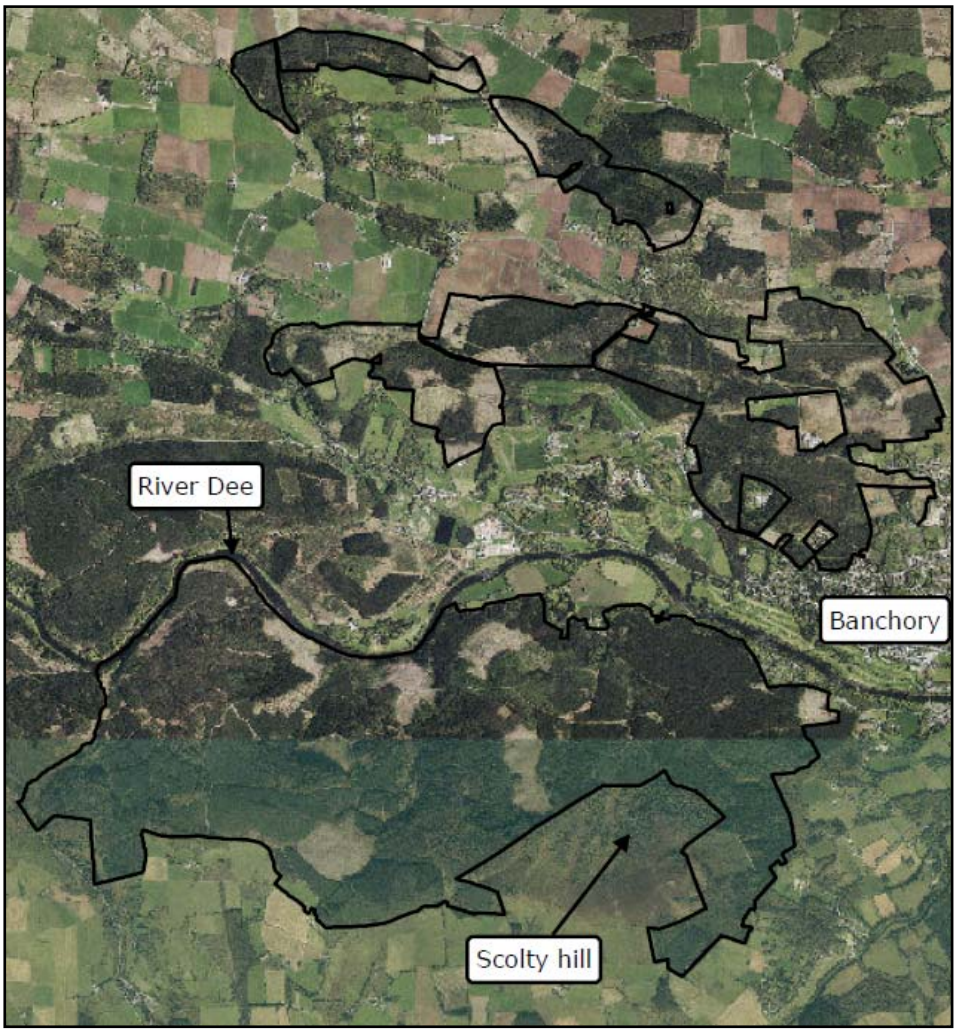
- Extensive monocultures present uniform backdrop to views from lowland areas. Increased species mix will enhance visual diversity and interest.
- Increased proportions of open space/moorland within forest blocks will also create visual interest and appear more natural.
- Small patches of conifer are generally inappropriate, being out of character with the large scale of the upland forms.

3.4.2 Visibility

Banchory woods are prominent features in the Dee Valley. Blackhall forms a wooded backdrop to Banchory on the landscape scale. The smaller woods form a more intimate backdrop to Banchory as they are adjacent to the western end of the town (See pictures below).

3.4.3 Neighbouring land use

Land use around the Banchory Woods is mostly mixed agricultural land with privately owned woodland. There are also areas of housing and a section of the river Dee forms part of the northern boundary on Blackhall.

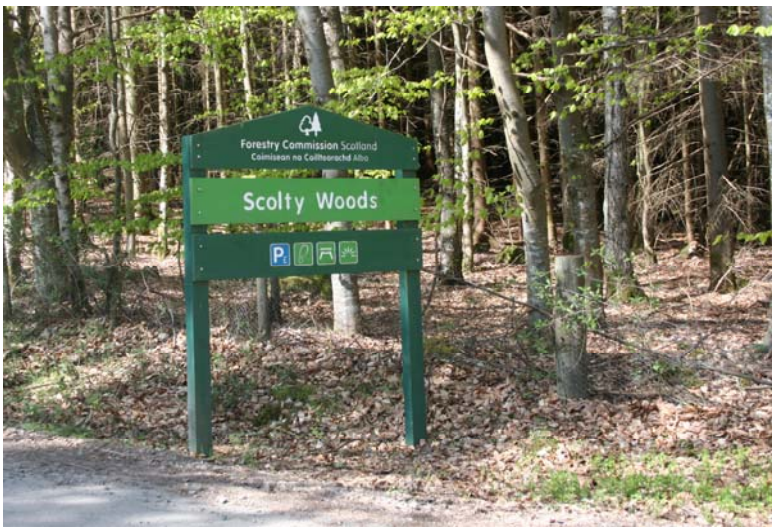


3.5 Social factors

3.5.1 Recreation

The woods around Banchory provide an excellent and very well used resource for local resident. Banchory is also a popular tourist destination with a mix of day trippers from Aberdeen and those using the mix of Caravan/ Self-catering and hotel accommodation that Banchory and the wider Deeside area offers. This means that popular destinations such as General Burnet's monument on Scolty, which is accessed through this plan area, does see many visitors from further afield.

Woods within this plan area feature a mix of formal recreation provision managed by FES, Aberdeenshire council and local paths groups. There are also extensive networks of informal routes used by walkers, horse riders and mountain bikers.



The formal provision includes forest and hill trails around Scotly Hill in Blackhall forest where FES provides a car park and a series of low level forest walks. These trails also provide a link to the privately owned Scolty hill with trails that are managed by a combination of Aberdeenshire Council and Banchory Paths Association. The long distance footpath "The Deeside Way" runs through Blackhall forest. The wider Blackhall forest is also used extensively for informal mountain biking with a further network of ridden in routes leading to significant pressures in some areas.

Corsee & Glen o Dee woods form the North West edge to much of Banchory and as a result these woods see very high levels of use for informal recreation. These woods host some core paths but also have extensive well established informal routes throughout. These woods are estimated to host significantly in excess of 80,000 visits pa.

Other than providing a link to the south via the new acquisition at Tillygownie, in the short term there are no significant FES developments of formal recreation provision within the plan area. There are however several community groups looking to develop facilities themselves. At the time of writing these community developments are still in the early planning stages but if successful would likely come into effect within the lifetime of this plan.

3.5.2 Community

Community interaction in Banchory woods primarily revolves around access issues. FES has regular liaison with Banchory Path Association and with the less formal mountain biking groups.

These forests host outdoor education activities with regular use by independent Forest School providers along with some Secondary School use.

3.5.3 Heritage

There is one scheduled monument within the plan area, Glassel stone circle.

The monument comprises a stone circle which presently consists of 5 granite orthostats which is arranged in a truncated diamond-shaped plan, measuring about 5m from NNW to SSE by 3m transversely. The monument is currently set within an area of open ground which is surrounded by mature conifer plantation. Views out, which may improve our understanding of the setting, are currently obscured.

Within the lifespan of this plan, we will fell the conifers from the area adjacent to the scheduled area as depicted on Map 5. The scheduled area and a further 20m buffer will then be maintained as open ground. The remaining felled area will be restocked with Oak and Birch to further enhance the setting of the monument. We will consider thinning of the broadleaves to the west of the monument at time of felling, however the ground on the west side of the burn rises with mature broadleaves on private ground. Even if we were to fell all the broadleaves on our side of the burn there would still not be a clear view out from the monument.

The monument is monitored annually and any tree or scrub regeneration and over-hanging branches will be removed.

Public access to the site is currently considered low, although occasional fires have been an issue in the past. Consideration will be given to temporary interpretation for the site. This will be reviewed as required.

In addition there are several non-scheduled archaeological sites. A check of both internal records and the SMR has been undertaken to establish the location of these features. The details of these will be included in the work plan that is drawn up for every operation carried out within the plan area

3.6 Pathogens and diseases

The upsurge in the disease threat over the last decade has a range of causes linked to globalization and associated climate change. Disease risk management has always been an integral part of forestry management; however the pace of recent events has created a great deal of uncertainty. While specific outcomes for species are hard to predict, the general principles for creating resilient forests are well known, and these include such actions as promoting diversity in all its forms.

Given the dynamic nature of the disease threat it is proposed to focus on creating a more diverse forest during the plan period and thinning to promote tree vigour and adjust microclimate.

3.6.1 Hylobius

Hylobius can cause extensive feeding damage to young trees used to restock clearfell sites but damage is often highly variable. Previously it has not been possible to predict damage and so insecticides have been routinely used to protect the trees to try to safeguard the young crop. However on clearfells where Hylobius numbers are low this treatment may be unnecessary and conversely when numbers are very high the treatment may be unable to protect the trees. Both of these situations result in losses in valuable resources.

3.6.2 Dothistroma needle blight (DNB)

Dothistroma needle blight is a fungal pathogen affecting the woods within Moray & Aberdeenshire forest district. It is present within Coreen hills but at a very low level currently.

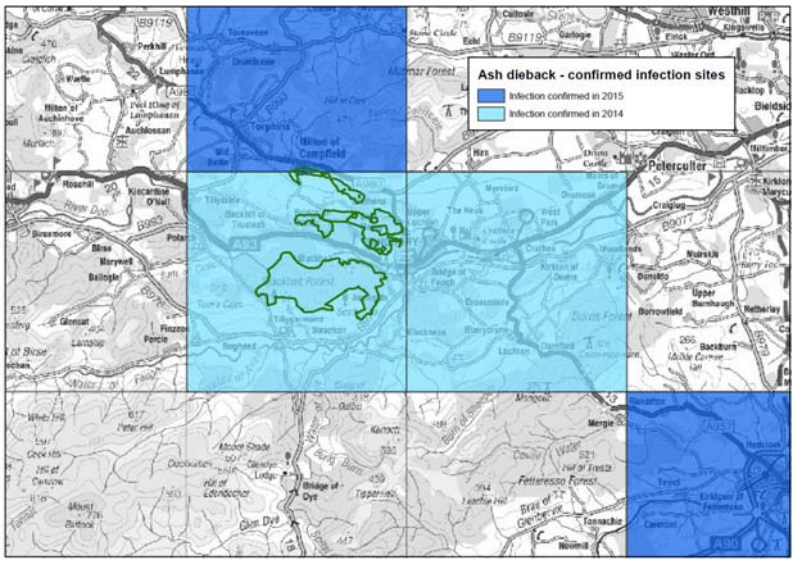
Dothistroma needle blight is an economically important disease affecting a number of coniferous trees, pines in particular. The disease has a world-wide distribution but until recently was mainly of concern in the southern hemisphere. In much of the world, including Britain, it is caused by the fungus Dothistroma septosporum. Dothistroma needle blight causes premature needle defoliation, which results in the loss of timber yield and, in severe cases, tree mortality. Since the late 1990s the incidence of the disease has increased dramatically in Britain, particularly on Corsican pine. More recently the disease has caused significant damage and death to Lodgepole pine and Scots pine. Due to the extent and severity of the disease there is now a five-year moratorium on the planting of Corsican Pine on the national forest estate.

The reasons for the increase in the incidence of this disease are unclear but could be due to increased rainfall in spring and summer, coupled with a trend towards warmer springs, optimising conditions for spore dispersal and infection. Such conditions may become more prevalent in Britain over the next 20 years if current trends in climate change continue. On the national forest estate disease management is currently focused on silvicultural measures to reduce inoculum loads and the use of alternative, less susceptible species in future rotations.

It is not a major issue within the plan area at present. Currently the low levels of infection are not having a significantly impact on the forest structure. We will continue to monitor the situation and keep up to date with the latest research and implement the guidelines produced.

3.6.3 Hymenoscyphus fraxineus (previously Chalara fraxinea)

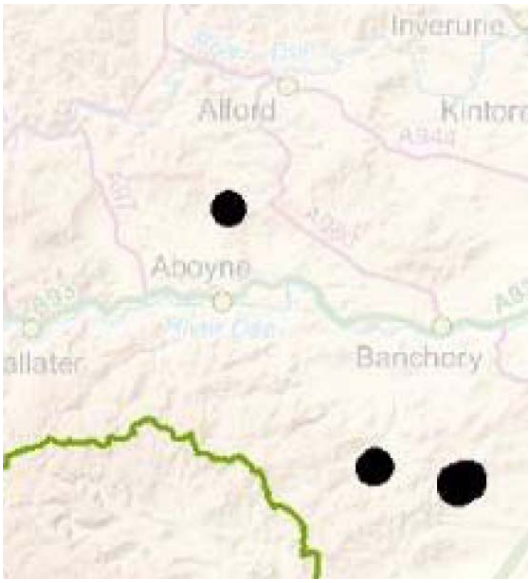
Ash dieback is an aggressive fungal disease and is caused by Hymenoscyphus fraxineus (previously Chalara fraxinea). The disease causes leaf loss and crown dieback in affected trees, and usually leads to tree death. Ash trees suffering with the infection have been found widely across Europe since trees believed to have been infected with this newly identified pathogen were reported dying in large numbers in Poland in 1992. These have included forest trees, trees in urban areas such as parks and gardens, and also young trees in nurseries. The map below shows the confirmed infection sites based on the OS 10km grid squares and is based on information current as of 3 May 2016.



3.6.4 Phytophthora ramorum

P. ramorum is a fungus-like plant pathogen which attacks a wide range of tree and shrub species. It was first found in nursery stock in Scotland in 2002 and in an established garden in September 2007. It was first detected on Japanese larch in south west England in 2009 and in Scotland late in 2010.

Although European and hybrid larch are also susceptible to P. ramorum, current evidence indicates that the impact of the disease is greatest on Japanese larch which can die within one to two seasons, with consequential economic, environmental and amenity impacts. The disease on larch showed a significant expansion in 2013 with a core area of some 5-6000 ha of larch within South West Scotland showing extensive signs of infection. Further, smaller and more sporadic infections have also been identified along the western seaboard of Scotland principally in the Argyll and Cowal areas. There have been isolated outbreaks in the north east of Scotland. The total infected area within Scotland is estimated to be now in excess of 6,500 ha.



● - P. ramorum infection locations.

3.7 Statutory requirements and key external policies

This Forest Design Plan has been drafted to ensure that planning and operations functions will comply with the following legislation and policies:

Biodiversity

- Conservation (Natural Habitats) Amendment (Scotland) Regulations 2007
- Nature Conservation (Scotland) Act 2004
- Wildlife and Natural Environment (Scotland) Act 2011
- Land Reform (Scotland) Act 2003
- The Water Environment and Water Services (Scotland) Act 2003
- Water Environment (Controlled Activities)(Scotland) Regulations 2011
- UK Woodland Assurance Standard 2008
- UK Forestry Standard 2012

Climate Change

- The United Nations Framework Convention on Climate Change
- The Kyoto Protocol
- EC Directive 2003/87/EC
- Climate Change (Scotland) Act 2009

Historic Environment

- Ancient Monuments and Archaeological Areas Act 1979
- Planning (Listed Buildings and Conservation Areas)(Scotland) Act 1997
- Treasure Trove Scotland
- UNESCO World Heritage Convention
- European Convention on the Protection of the Archaeological Heritage Valetta 1992

Forests & People

- Control of Substances Hazardous to Health Regulations 2002
- Employers Liability (Compulsory Insurance) Act 1969
- Equality Act 2010
- Health and Safety at Work Act 1974
- Management of Health and Safety at Work Regulations 1999
- Occupiers' Liability (Scotland) Act 1960
- Provision and Use of Work Equipment Regulations 1998
- Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995
- The Highways Act 1980

Soils

- Control of Pesticides Regulations 1986
- The Waste Management Licensing Regulations 1994
- European Soil Charter

4.0 Analysis and Concept

Refer to Map 4: Analysis and concept.

Theme	Issue	Analysis	Concept
Timber	Timber supply	Despite the predominance of soil with a poor or very poor nutrient regime a quality crop of timber is growing across much of the plan area.	Optimise thinning and felling to achieve a sustainable yield of quality timber over a longer rotation period.
	Timber supply	There are large areas of Blackhall where butt rot is a severe problem which makes LISS management inappropriate.	Prioritise the felling of the most severely affected crops and restock with species that are less susceptible to the infection.
Access & health	Recreation	Formal recreation provision is focused at Scolty, but informal access is widely taken across the plan area.	Maintain the provision of recreation facilities at its current level and standard.
Environmental quality	Soil, water & air quality	The river Dee SAC runs through the plan area and forms part of the northern boundary of the Blackhall block.	Plan management regimes and operations to ensure no detriment is caused to the river Dee SAC and improve riparian zones where practical.
Environmental quality	Landscape	The plan area provides a positive contribution to the local landscape.	Plan management regimes and operations to ensure no detriment is caused to the landscape value of the woodlands. Where clearfells are appropriate carefully plan their scale and shape to fit with the landform.

5.0 Forest Design Plan Proposals

5.1 Management

Refer to Map 5: Management.

5.1.1 Thinning (Map 6 Thinning)

Wherever possible the district will continue to maximise the area managed through thinning. FCS policy assumes that all productive conifer crops will be thinned. The only exceptions are where:

- Thinning is likely to significantly increase the risk of windblow;
- A single thinning operation is likely to require an unacceptably large initial investment in relation to the potential benefits due to access or market considerations; and
- Thinning is unlikely to improve poorly stocked or poor quality crops.

The majority of Banchory woods have a history of successful thinning. However there are some no thin areas due to wet ground conditions, mature crops with high windblow potential, or crops are beyond their thinning window or the basal area of the crop is below threshold.

All the blocks are on a five year cycle due to their good growth rates.

All thinning decisions will be guided by Operational guidance Booklet No 9 'Managing thinning.'

5.1.2 Low Impact Silvicultural Systems (LISS)

LISS is defined as a silvicultural system whereby the forest canopy is maintained at one or more levels without clearfelling. Clearfelling is defined as the cutting-down of all trees on an area of more than 2.0ha.

The attraction of LISS lies in the fact that this approach is suited to an era of multi-purpose forestry where environmental, recreational, aesthetic and other objectives are as important as timber production. In particular LISS is seen as a means of reducing the impact of clearfelling and the associated changes that this produces in forest landscapes and habitats. It also helps to create a diverse forest structure which will increase its biodiversity potential. LISS also helps reduce the potential issue of soil erosion and subsequent watercourse siltation.

The area of coupes selected for LISS management in the current plan has been reduced from the previous plan. The main reason for this is the presence

of butt rot (Heterobasidion annosum) in some mature Norway spruce crops in Blackhall. These are within the recreation area so the safety of visitors needs to be considered and it would be unwise to maintain in the long term trees with an increased potential to become unsafe along with decreasing commercial timber value.

While reviewing LISS coupes other factors are also taken into consideration:

- Does LISS meet the objectives for that area of the forest?
- Is there sufficient site suitability information available (soils, wind hazard data, thinning history)?
- What level of ground vegetation competition is there with any natural regeneration?
- Are the existing species suitability for the site?
- Is any advanced natural regeneration present?

One area identified as not being suitable for LISS management is in Corsee wood adjacent to Roscobie Park. As a result of the trees not having been thinned in the past they are not stable enough to be managed as LISS (see photos below). Therefore they will be clearfelled (see 5.1.3 Clearfell).

Scots pine approx. 23m tall

Norway spruce approx. 26m tall

In the plan area those stands selected for LISS management are generally those that are either showing good sign of natural regeneration or have the potential to do so.

Areas selected for LISS management are highlighted on the Management map. Detailed prescriptions have been prepared for each area and can be seen in appendix 3. Each prescription will be included in the site management plan before any operation commences.

Within the areas of LISS there are stands that are already suffering windblow. These are mainly mature SS, NS or DF within areas of SP and larch. These stands will be assessed and where windblow has started or is likely to occur these stands will be felled up to a maximum of 2ha, as allowed under LISS guidelines, during thinning operations up to a maximum of 10% of the LISS coupe.

Windblow starting in LISS area.

Restocking by natural regeneration will be the aim in these areas provided this will meet the plan objectives of producing a quality crop of timber. For this to be successful deer numbers will need to be controlled and a figure of 5 deer per 100ha is seen as the appropriate level.

All areas identified for restocking by natural regeneration have been recorded and programmed for inspect on a five yearly basis. At each inspection an assessment will be made to establish if the natural regeneration is or is likely to achieve the objectives for the site. If it is decided that the objectives are not being met then replanting with an appropriate species will be undertaken. If natural regeneration is occurring but not yet at the required density then the option to review the site in a further five years may be taken. If after two such inspections, that is ten years following felling, it is felt appropriate to wait a further period for natural regeneration then a discussion and agreement will be reached with the Conservancy woodland officer.

Enrichment planting will be used to ensure the target stocking density is reached if there is insufficient natural regeneration.

5.1.3 Clearfell

The main silvicultural system employed in British forestry is 'patch' clear-felling followed by planting, or occasionally natural regeneration. In addition to the clearfell coupes in the previous plan there are areas in the plan which are suffering from butt rot or where the ground vegetation is not suitable for natural regeneration so LISS is not appropriate. In order for the timber in these areas to be harvested before the onset of windblow clearfell will remain the appropriate silvicultural system.

Although clear-felling can appear to have a negative impact on landscape and habitat it is still an important management system.

Clear-felling, to a degree, mimics natural disturbances such as fire or windblow in a forest and as such allows the forester to alter the even aged structure of the canopy over a relatively short period of time. The adoption of a variable 'fallow' period before restocking creates transient open habitat that is exploited by several species.

Clearfell will be the silvicultural system employed in about 58% of the Banchory woods plan area. LISS management regimes will be used over about 37% of the plan area. The scale of clearfells will be in keeping with the scale and topography of the local landscape. The balance of the area (8%) is open ground.

The area of Corsee wood adjacent to Roscobie Park contains trees that have not been thinned previously and therefore clearfelling is the only suitable management option. This coupe is currently highlighted as a phase two (2023 – 2027) coupe. However the timing of the felling will be reassessed at the five year plan review to decide if felling is required given the condition of the trees and their proximity to neighbouring properties. If it is decided that the threat of windblow is still at an acceptable level then the trees will be retained for a further five years.

5.2 Future Habitats and Species

Refer to Map 7: Future habitats and species.

5.2.1 Restocking

The restocking of felled areas is guided by the objectives for the plan area. These include the creation of woodlands that are attractive for recreation, that are capable of producing a sustainable crop of quality timber and additionally the protection of sensitive water catchments.

The actual species choice for restocking has been guided by the ESC results for this climatic area and soil types (see section 3.1). This has shown that the climate and site conditions make a range of species suitable for restocking. This range will be utilised where possible provided they will meet the objectives of the plan.

The district has the objective of increasing the proportion of broadleaves on the national forest estate. Where appropriate and the site conditions allow, broadleaves will be planted and managed to be productive. Growing broadleaves as a commercial crop requires a long term commitment and comes with higher establishment costs.

5.2.2 Management of open land & non-commercial areas

Areas not considered for commercial management will include permanent woodland, riparian areas and managed open habitats. These areas will require monitoring to ensure they deliver the required objectives. Non-desirable species, such as non-native conifer regeneration, will be removed if it threatens to prevent the objective of the area being met.

Permanent woodland and riparian areas will require monitoring to ensure they deliver the required objectives. Operation required to be undertaken will include the removal of non-native conifer regeneration.

Areas designated as permanent open space have been chosen to help diversify the woodland edges, to enhance riparian areas, complement areas of broadleaves and to protect archaeological features including Glassel stone circle. Open areas will require regular management to maintain their integrity and value.

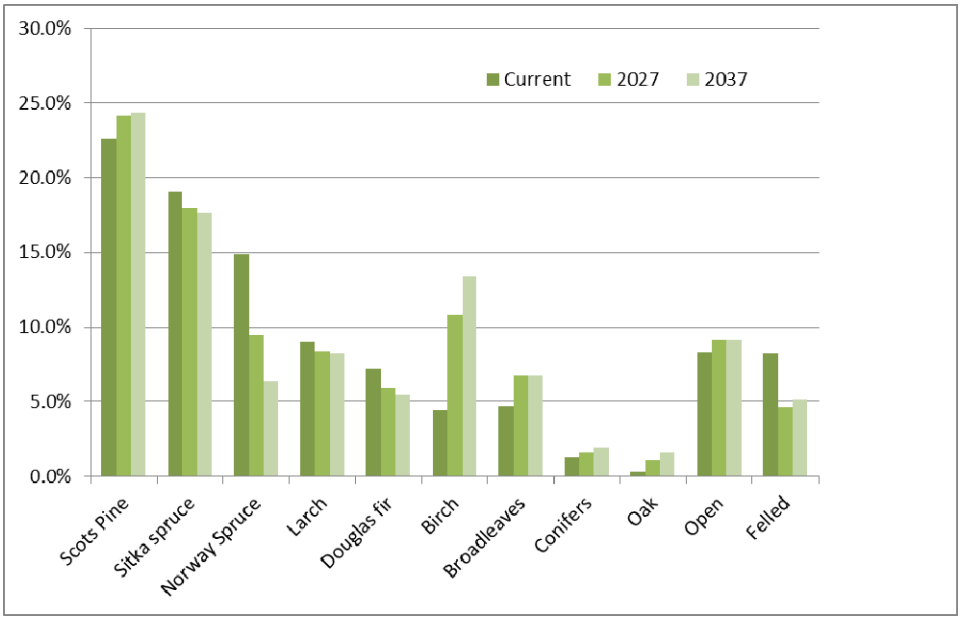
Glassel stone circle was last monitored in October 2017. There was no evidence of damage to the scheduled area from animal burrowing, the public or forest operations. Some work, including removing overhanging branches,

cutting birch, spruce and larch regeneration and removing broom, was identified as requiring attention. This work is planned to be undertaken during this financial year (2018/19). The site is due to be monitored next in Oct 2018.

Glassel stone circle scheduled monument. Photo taken during the annual monitoring inspection, 26 Oct 2017.

5.3 Species tables

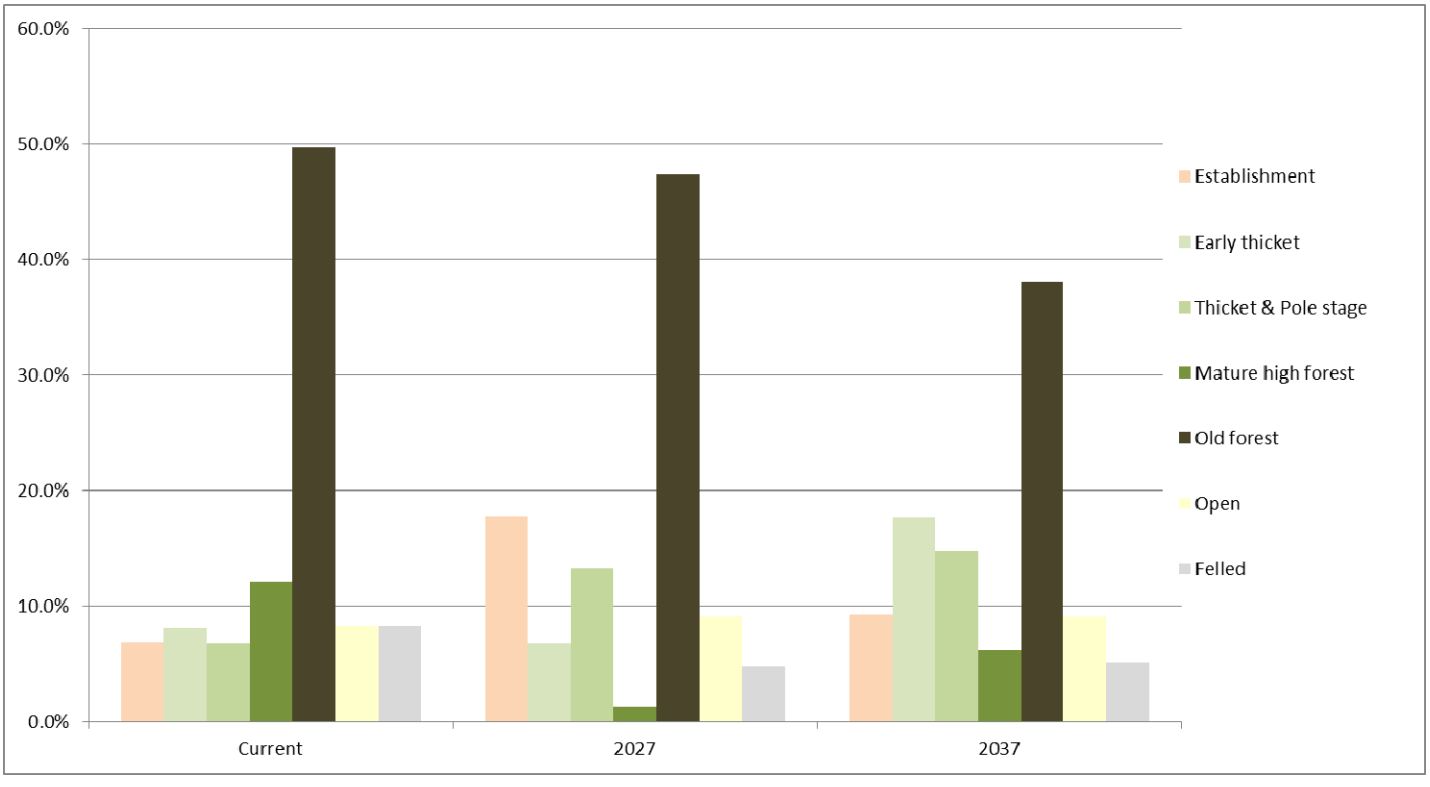
Species	Current species (%)	Projected species 2027(%)	Projected species 2037 (%)
Scots Pine	22.6	24.1	24.4
Sika spruce	19.1	18.0	17.6
Norway spruce	14.9	9.5	6.4
Larch	9.0	8.4	8.2
Douglas fir	7.2	5.9	5.5
Birch	4.4	10.9	13.4
Broadleaves	4.7	6.8	6.7
Conifers	1.3	1.6	1.9
Oak	0.3	1.1	1.6
Open	8.3	9.1	9.1
Felled	8.3	4.7	5.1



The 9.1% of the block that will be open ground by the end of the plan period. This along with the 330 ha (25% of plan area) of PAWS restoration more than meets the UKFS requirement of "10% open ground or ground managed for the conservation and enhancement of biodiversity as the primary objective".

5.4 Age Structure

Age of Trees (years)	Succession Stage	Current Distribution (%)	Projected Distribution 2027 (%)	Projected Distribution 2037 (%)
0 -10	Establishment	6.8	17.7	9.2
11 – 20	Early Thicket	8.1	6.7	17.7
21 – 40	Thicket & Pole Stage	6.7	13.2	14.7
41 – 60	Mature High Forest	12.1	1.3	6.2
61+	Old Forest	49.7	47.3	38.0
	Open	8.3	9.1	9.1
	Felled	8.3	4.7	5.1



5.5 PAWS restoration

There are Plantations on Ancient Woodland Sites within Blackhall and Glencommon wood.

The plan for Glencommon wood is to fully restore the woodland to a mixture of upland oak wood, upland birch wood and native pine wood with biodiversity being the main objective. There are already large areas of birch natural regeneration. Currently there are areas that have been felled. These are to be restocked with natural regeneration which again is likely to be birch. Some of the remaining areas of non-native conifers are due to be felled within the plan period and again these will be restocked by natural regeneration of birch.

For Blackhall the objective is to enhance the woodland to improve it for biodiversity while still producing timber. However a large proportion of this area is suffering from butt rot. Conifer species tend to be more susceptible to infection than broadleaves. Therefore we will take the opportunity to undertake restocking with a mixture of natural regeneration and planting to create areas that both meet the objectives of their PAWS designation while still giving the potential to produce a timber crop in the future.

5.6 Deer management

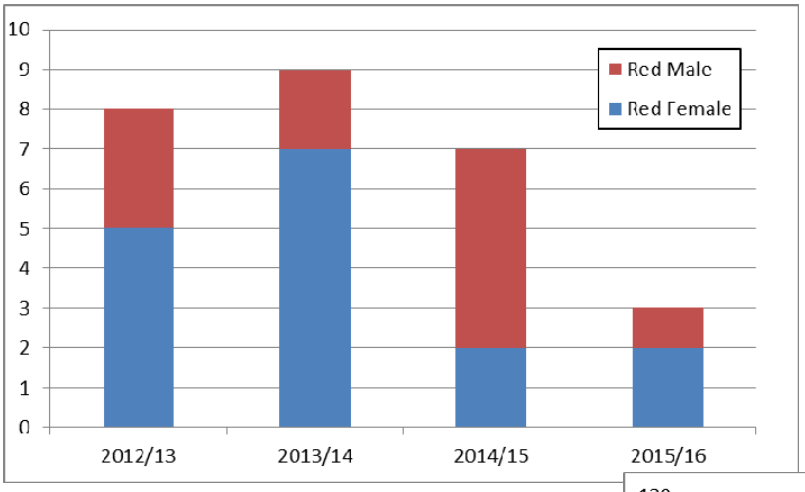
Wild deer on the National Forest Estate (NFE) are managed in accordance with the Scottish Government's strategy "Scotland's Wild Deer a National Approach" and under the auspices of the Code of Practice on Deer Management.

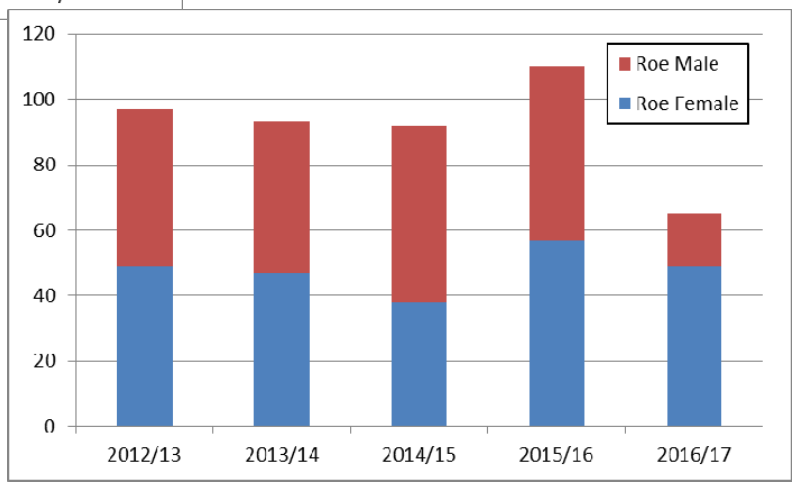
All deer management will be carried out in accordance with OGB 5 - Deer management. The aim is to manage deer density safely and humanely at a level which is consistent with acceptable impacts on forests and other habitats. This is likely to be at a density level of 5 deer per 100 hectares.

Deer cull plans are prepare for each Deer Management Unit and are the responsibility of the Wildlife Ranger Manager. The cull in Banchory wood is currently undertaken under contract and there are no plans to change this.

The red deer are a transitory population that is not resident within the forest. Our neighbour has recently increased their cull which has had an impact of the number of red deer being seen and culled within the forest.

We would like to increase the roe deer cull but the high level of recreational use within the plan area makes doing this in a safe manner very difficult. However we will continue to work with the contractor to increase the cull where this can be done safely.





5.7 Access

Access to and within Banchory woods is good and there are no plans for additional infrastructure during the plan period. The only work on the forest roads will be ongoing maintenance and some upgrade.

5.8 Pathogens

Hylobius weevil can cause extensive feeding damage to young trees used to restock clearfell sites but damage is often highly variable. To help plan the best time to plant while minimising the use of chemicals we will use the *Hylobius* Management Support System (HMSS).

The HMSS is based on a simple monitoring protocol using billet traps to measure *Hylobius* numbers on individual clearfell sites. The numbers recorded are used, with other information entered into the *Hylobius* MSS software, to determine the best way to manage clearfell sites for successful, cost effective and environmentally friendly restocking. This Support System will be used along with past results and experience to determine the optimal time to restock while minimising the use of chemicals.

The aim for this plan area is to replant all sites within two years of them being clearfelled unless the *Hylobius* MSS predicts an alternative timescale is more appropriate.

If the feeding damage of by *Hylobius* is predicted to be high then a four year fallow period will be used. This allows the Hylobius population to peak and then drop to acceptable levels before replanting is carried out. Fallowing has been shown in studies to be the most effective method of establishing trees without intensive chemical input.

However if the prediction is that *Hylobius* population levels, and thus feeding damage, will be low then hot planting will be considered i.e. replanting in the season immediately following the felling of the site.

On all occasions the predictions from the *Hylobius* MSS will be combined with the local knowledge and experience of the forest management forester to reach the final decision on the replanting timescale.

The impact of **DNB** is low in this plan area and no special treatments are required but it will be regularly monitored during the plan period.

Ash would be a suitable species for Banchory woods for restocking but is not currently permitted on the National Forest Estate due to because of the disease Ash **dieback**. Cases of Ash dieback have been recorded within 10km of the block currently so its spread into the block is a real possibility.

Phytophthora ramorum has been recorded within the vicinity of the forest and the disease appears to be expanding its range therefore a precautionary

approach is being adapted with larch plantings currently on hold. Larch is a species suited to the forest, so this is a situation that will be kept under review and if opportunities to use larch natural regeneration present themselves they will be taken.

5.9 Critical Success Factors

- Maintain the recreational infrastructure within the plan area to meet the objective of providing a quality facility for Banchory and the surrounding area.

- Undertake the planned thinning and felling programme in order to increase the quality of the timber within the plan area and to meet the production targets.

- Undertake the thinning planned for the LISS areas in order to manage the light levels to allow the development of the appropriate ground vegetation and natural regeneration.

- Undertake respacing of natural regeneration where required to allow the development of the crop for saw log production.

- Continue with the maintenance of the forest road network to allow forest operations to be successfully completed.

- Control of deer populations to allow natural regeneration within LISS areas.

- Undertake all operations according to the UKFS forest and water guidelines to protect the river Dee SAC from diffuse pollution.

- Undertake the felling, restocking and natural regeneration management within the PAWS areas to continue the process of restoring them to a more natural species composition.

Appendix 1 – Consultation record

Consultee	Date of contact	Response Received	Issues Raised	Forest District Response to Issues
Scottish Environmental Protection Agency (SEPA)	24 June 2015 by email 18 July 2018 by email	17 July 2015 No response to date	…information does not list or indicate that forestry is a pressure but both water bodies (the River Dee and Beltie Burn) have the potential to be affected by forestry operations and measures to reduce any diffuse pollution are welcomed to avoid any further deterioration of the water bodies.	All planning and operations will be undertaken to fully comply with UKFS forest and water guidelines.
Scottish Natural Heritage (SNH)	24 June 2015 by email	25 June 2015	Our main concern is that the management of the woods is done in a way that will benefit/sustain the River Dee SAC (Special Area of Conservation), of which the woods are part of the catchment. Also, we are keen that deer management best practice guidelines are incorporated in the management plan. The River Dee is designated as a SAC for its otter, salmon and freshwater pearl mussel populations. The site's status means that the requirements of the Conservation (Natural Habitats, &c.) Regulations 1994	All planning and operations will be undertaken to fully comply with UKFS forest and water guidelines. An appropriate assessment has been undertaken for the SAC (see appendix 5).

			as amended, (the "Habitats Regulations") apply. Forest operations such as thinning, harvesting and planting have the potential to generate significant quantities of silt which may be washed into the SAC. Both freshwater pearl mussels and salmon are susceptible to the effects of siltation; fine material can smother mussel beds and salmon redds, and freshwater pearl mussels and juvenile salmon/salmon eggs may be killed by sediment deposition. In addition, any pollutants from machinery used during the felling operations entering the SAC may effect freshwater pearl mussels and salmon. As a consequence the Forestry Commission will be required to consider the implications of the forest plan for interests of the SAC. Adhering to the Forestry Commission's 'Forest and water, UK Forestry Standard Guidelines', will be sufficient to protect water quality and to ensure the proposal does not have an adverse effect on either pearl mussels or salmon. We therefore advise that, in accordance with the forest and water guidelines, at an appropriate stage an operational plan is prepared, which includes the site specific measures necessary to adequately reduce the risk of sediment entering watercourses during forest operations. We advise that the River Dee SAC is identified in the long term land management plan and that the plan sets out how and when site specific pollution control measures will be identified.	

	18 July 2018 by email	19 July 2018	In relation to deer management, guidance can be found at http://www.bestpracticeguides.org.uk/ . Thank you for your consultation dated 18 July 2018. We have no comments to make on this case	
Royal Society for the Protection of Birds (RSPB)	24 June 2015 by email	8 July 2015	• Opportunities to manage open ground and wetland creation/management should be considered to provide benefits for wider biodiversity. • Expanding broadleaf cover and open ground along watercourses. • The retention and management of deadwood within the forest would also provide biodiversity benefits and should be included within the plan. • There are nesting red kites in the area so their presence should be taken into consideration. There is likely to be further kite pairs, goshawk and possibly osprey in this complex also, so their presence should be looked for so any work can be planned accordingly. • As above we would recommend that if woodland management such as felling, that may cause disturbance, takes place within the main bird breeding season (April to June) the *FCS Guidance Note 32: Forest operations and birds in Scottish forests (Nov 2006)* is consulted and the area checked for active nests as a precautionary measure. This will avoid unnecessary disturbance of breeding birds and ensure	All planning and operations will be undertaken to maintain and enhance the open ground, broadleaves, deadwood and habitat for birds, and other biodiversity.

	18 July 2018 by email	17 Aug 2018	that the requirements of the Wildlife and Countryside Act, as updated by the Nature Conservation (Scotland) Act 2004 are met. • There are small numbers of Nightjars that have been found in forests across NE Scotland in the last couple of years and the habitats that the Forestry Commission manages have the potential to provide breeding sites for the species. They require a mosaic of clearfells and restocks mixed with semi-natural heath vegetation and insect rich habitats such as grasslands and wetlands. Management issues include avoiding work in young clear fells in summer, leaving frequent song posts (dead trees and/or stray young trees which are unsuitable for timber) when felling and leaving small patches of scrubby birch and young trees with undisturbed ground layer for day roost sites. We welcome the objectives within the plan for the restoration and management of priority open habitats and the improvement of riparian zones. We are pleased to see that PAWS woodland will be restored and enhanced and welcome the objectives to manage the woodlands to benefit the UKBAP species identified. It would be useful to have a list of the species identified within the plan and more detail on the management that will be implemented.	We do not try list all species found in a plan area as we are bound to miss something as we rely on ad hoc reporting of sightings from people on the ground and don't have the resources to undertake full surveys. Therefore we only mention the six species identified as priorities for conservation action in Forestry

				Commission Scotland's Woods for Nature biodiversity programme (capercaillie, black grouse, red squirrel, pearl-bordered fritillary, chequered skipper and juniper) plus other "protected" species. We are not managing the forest for particular species and are try to create a forest habitat that has the highest environmental value while still ensuring we achieve the other objectives/priorities we have for all our forests.
Aberdeenshire council	24 June 2015 by email 18 July 2018 by email	No response No response to date		
SSE (Fiona Maxwell)	18 July 2018 by email	No response to date		
CONFOR (Jamie Farquhar)	18 July 2018 by email	No response to date		

Banchory community council	24 June 2015 by email	28 July 2015	The Banchory woods are a valued resource to our community and are a popular/well used resource with both residents and visitors. I do think community engagement and involvement should be an important part of your plan. For your information, we have just launched a new Community Action Plan the results of which will represent the current desires and needs of the local community. This new Community Action Plan will replace the last plan which was developed out of the Planning For Real exercise.	Maintenance of the recreation value of Banchory woods is the main priority for this plan.
		12 Oct 2015 Attended meeting	General discussion of the potential change to the way the woodlands are managed, particularly the reduction in LISS and increases clearfelling.	No additional response.
	18 July 2018 by email	No additional response		
Birse & Ballogie community council	24 June 2015 by email	No response		
	18 July 2018 by email	No response to date		

Feughdee west community council	24 June 2015 by email 18 July 2018 by email	No response No response to date		
Finzean community council	24 June 2015 by email 18 July 2018 by email	No response No response to date		
Mid Deeside community councill	24 June 2015 by email 18 July 2018 by email	No response No response to date		
Torphins community council	24 June 2015 by email	4 July 2015	1. The Council is in favour of continued active planting to maintain the extent and diversity of Forestry Commission woodland in the area around Banchory and district. 2. Without inferring or making reference to any particular occurrence, the Council is concerned that when tree felling occurs the area felled should be left in a tidy condition rather than as a scene of	1. The plan is to maintain the range of species, both conifer and broadleaves, as site conditions allow. 2. The retention of standing deadwood on clearfell sites is a part of our wider deadwood strategy. We try to ensure any

			devastation, and with odd remnants of trees standing. We understand new legislation addresses this matter, nevertheless, we would still make the point that felled areas be reasonably tidy, rather than an eyesore for years to come until replanted or naturally regenerated. 3. The Council supports public access through the maintenance and development of public access pathways and facilities, to foster the continued enjoyment of these National Resources.	standing deadwood is retain in suitable locations and not just scattered across the sites. 3. The maintaining of the current recreation provision in these woods is one of the main objectives of this plan, we are well aware of how important a resource they are to local people.
		5 Nov 2015 Attended meeting	General discussion of the potential change to the way the woodlands are managed, particularly the reduction in LISS and increases clearfelling.	No additional response
		18 July 2018 by email	Torphins Community Council supports the land management plan for Banchory Woods, with the proviso that public access and development of good public access for recreational and active travel purposes should be maintained and encouraged. We do appreciate your earlier attendance with TCC to explain this planning process and the issues arising.	The district appreciates the time taken to reply to the consultation.
River Dee trust & Dee district salmon fishery board	24 June 2015 by email	No response		
	18 July 2018 by email	No response to date		

Torphins Path Group		14 Aug 2018	We support the land management plan for Banchory Woods and highlight the importance to our Group and the community of maintained public access. Development of good public access for recreational and active travel purposes should be maintained and encouraged.	The district appreciates the time taken to reply to the consultation and the positive comments.
Member of public		12 Aug 2018	I hope that continued public access will remain a clear objective in future woodland plans. Also I am pleased to see your intention to include deciduous trees in future replanting plans. Great for the next generation. Concern expressed regarding the loss of informal paths following felling operations.	The district needs to prioritise the use of resources on the high profile recreation locations. However we try to retain informal paths during all operations where feasible.
"Trail Run" activity at Scolty (Fay Jordon)	18 July 2018 by email	No response to date		
"Mud Pies" Nature Classes (Mandy Tulloch)	18 July 2018 by email	No response to date		
Banchory Paths Association	18 July 2018 by email	No response to date		

Deeside Bike Collective	18 July 2018 by email	No response to date		
Banchory Community Woods	18 July 2018 by email	No response to date		
Neighbour at Corsee wood	From poster in wood.	3 Sept 2018 by email	"…we have enjoyed the woods adjacent to us ever since we moved here in 1980. In fact, the location was one of the major factors in choosing the house initially and over the years we have enjoyed the daily visits from the red squirrels and the various birds especially the woodpeckers." "…the clearfell could be limited to the wet areas where some of the Norway Spuce have already fallen. This would only be a very slight amendment to the overall LMP. The rest of the area could then be managed by LISS in line with the plan for the rest of Corsee Wood. This would also comply with the stated primary objective of the LMP which is to provide a recreational resource."	The area in question has not previously been managed due to the proximity of neighbouring properties and a main powerline for Banchory. The powerline has now been placed underground so the work is more achievable. As a responsible land owner we cannot leave this area unmanaged due to the eventual risk of the trees becoming unstable. As previous thinnings have been missed it is felt that felling, retaining any small stable broadleaves, is more appropriate than a LISS thinning. The timing of the felling will be determined by reviews every five years.

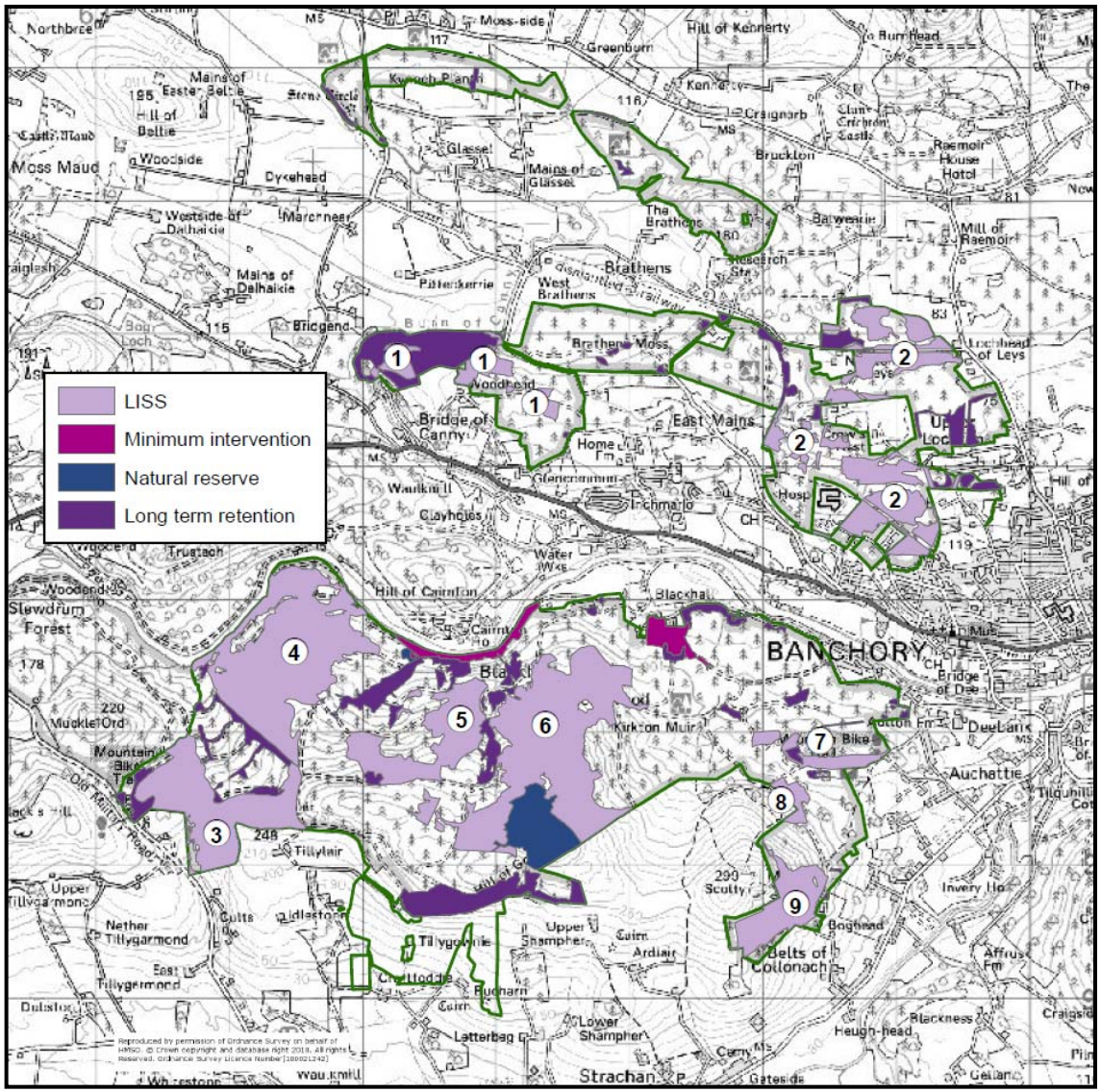
Appendix 2 – Tolerance table

	Adjustment to Felling period	Adjustment to felling coupe boundaries	Timing of restocking	Change to species	Changes to roadlines	Designed open space	Windblow Clearance
FC Approval not normally required	Fell date can be moved within 5 year period and between phase 1 and phase 2 felling periods where separation or other constraints are met	Up to 10 % of coupe area	Normally up to 2 planting seasons after felling. Where hylobius levels are high up to four planting seasons after felling subject to the wider forest and habitat structure not being significantly compromised.	Change within species group e.g. conifers, broadleaves.		Increase by up to 5% of coupe area	
Approval by exchange of letters and map		Up to 15 % of coupe area	Between 2 and 5 planting seasons after felling subject to the wider forest and habitat structure not being significantly compromised.		Additional felling of trees not agreed in plan Departures of more than 60m in either direction from centre line of road.	Increase by up to 10%. Any reduction in open ground within coupe area.	Up to 5 ha
Approval by formal plan amendment may be required	Advanced felling (phase 3 or beyond) into current or 2nd 5 year period	More than 15% of coupe area	More than 5 planting seasons after felling subject to the wider forest and habitat structure not being significantly compromised.	Change from specified native species. Change between species group.	As above depending on sensitivity.	More than 10% of coupe area. Colonisation of open areas agreed as critical.	More than 5 ha

Appendix 3 – LISS prescriptions

- The size and number of groups in the group selection is indicative only. The actual size will depend on the conditions found in each coupe.
- The shape of the groups in the group selection coupes do not have to be circular. Oval shaped with the long axis orientated to receive the most light is preferred.
- The location of the felling areas in the group selection coupes will be located to reflect the conditions in each coupe. Felling areas will be located to:
    - expand existing groups,
    - start new groups taking advantage of existing natural regeneration,
    - start new groups in areas where there is currently no natural regeneration.
- The preferred restocking method is by natural regeneration. However if restocking by natural regeneration is not successful within 10years of felling then the option of replanting will be discussed with FCS.

Banchory woods LMP 2017-26



LISS no. (See map above)		Management objective/Reason for selection	Long-term structure and desirable species	Age Trans. period and return time (years)	Regeneration and ground flora	Observations (e.g. likely barriers to achieving objective)	Next treatment required	Other useful information
1	Group shelterwood 14.1ha	Create diverse canopy structure using natural regeneration for restocking.	Complex structure. 5% MB, 35% MC & 60% SP	Age – <20yrs 5% 20 – 60yrs 60% >60yrs 35% Trans period – 150 years Return time – 10 years.	Grass (some fine) & bracken. Some NBL understorey and regeneration.	Light levels and ground vegetation in places.	Thinning	Extensive birch regeneration in open spaces except where ground vegetation is too thick.
2	Group shelterwood 58.1ha	Create diverse canopy structure while still allowing some timber production using natural regeneration for restocking.	Complex structure. 5% MB, 70% SP & 25% MC	Age – 20 – 60yrs 10% >60yrs 90% Trans period – 150 years Return time – 10 years.	Grass (some fine) & bracken. Some NBL understorey and regeneration.	Light levels and ground vegetation in places.	6.5ha of felling (13 x 0.5ha groups) & thinning.	Extensive birch regeneration in open spaces except where ground vegetation is too thick.
3	Uniform shelterwood 50.4ha	Timber production using natural regeneration for restocking.	Simple structure. 5% MB 45% MC & 50% SP	Age – <20yrs 10% 20 – 60yrs 20% >60yrs 70% Trans period – 100 years Return time – 10 years.	Moss, grass, bracken & bramble with some NS natural regeneration.	Light levels and ground vegetation in places. Age of crop in areas.	Thinning & clearing windblow pockets. Identify areas to start conversion process in MC crops.	Potential for species change to NS & BL. Will need positive management to retain SP.

4	Uniform shelterwood 88.9ha	Timber production using natural regeneration for restocking.	Simple structure. 5% MB 35% MC & 60% SP	Age – >60yrs 100% Trans period – 120 years Return time – 10 years.	Moss, grass, bracken & bramble with some NS natural regeneration.	Light levels and ground vegetation in places. Age of crop in areas.	Thinning & clear windblow pockets. Identify areas to start conversion process in MC crops.	Potential for species change to NS & BL. Will need positive management to retain SP.
5	Uniform shelterwood 35.0ha	Timber production using natural regeneration for restocking.	Simple structure. 60% MC & 40% SP	Age – >60yrs 100% Trans period – 100 years Return time – 10 years.	Moss, grass, bracken & bramble with some NS natural regeneration.	Light levels and ground vegetation in places. Age of crop in areas.	Thinning & clear windblow pockets. Identify areas to start conversion process in MC crops.	Potential for species change to NS & BL. Will need positive management to retain SP.
6	Uniform shelterwood 100.8ha	Timber production using natural regeneration for restocking.	Simple structure. 60% MC & 40% SP	Age – >60yrs 100% Trans period – 100 years Return time – 10 years.	Moss, grass, bracken & bramble with some NS natural regeneration.	Light levels and ground vegetation in places. Age of crop in areas.	Thinning. Identify areas to start conversion process in MC crops.	Potential for species change to NS & BL. Will need positive management to retain SP.
7	Uniform shelterwood 8.5ha	Timber production using natural regeneration for restocking.	Simple structure. 5% MB 25% DF & 70% MC	Age – >60yrs 100% Trans period – 80 years Return time – 10 years.	Moss, grass, bracken & bramble with some NS natural regeneration.	Light levels and ground vegetation in places. Age of crop in areas.	Thinning. Identify areas to start conversion process.	Potential for species change to NS & BL. Will need positive management to retain SP.

8	Group shelterwood 4.5ha	Create diverse canopy structure using natural regeneration for restocking.	Complex structure. 30% MC & 70% EL	Age – <20yrs 15% >60yrs 85% Trans period – 100 years Return time – 10 years.	Grass & bracken. Some MC & MB regeneration greater >2m.	Light levels and ground vegetation in places.	1.0ha of felling (2 x 0.5ha groups) & thinning.	
9	Group shelterwood 22.7ha	Create diverse canopy structure using natural regeneration for restocking.	Complex structure. 45% SP & 55% MC	Age – >60yrs 100% Trans period – 120 years Return time – 10 years.	Grass & bracken.	Light levels and ground vegetation in places.	4.0ha of felling (8 x 0.5ha groups) & thinning.	Area heavily used for mountain biking. Input from rec team needed before operations.

Appendix 4 – LISS management

LISS is an approach to forest management in which the forest canopy is maintained at one or more levels without clearfelling.

The word 'approach' is important because:
• we are not following a system;
• there are no standard prescriptions; and
• flexibility is important – to take advantage of opportunities as they arise.

Any preconceived ideas about systems of managing forests can act as a 'straight jacket' to thinking about CCF.

Stands that have been regularly thinned are more likely to be successful with CCF. Crown thinning will be undertaken when transforming stands to CCF rather than low or intermediate types, as used in plantations. The basis of crown thinning is to remove competition from around selected trees (Frame trees), even if the trees to be removed are as big. Using crown thinning usually increases the average tree size, so there is potential for more income.

There are two main types of structure:
• Simple – in which there will be one or two canopy layers of trees
• Complex – where there are three or more canopy layers of trees

1. Transformation of a young (<40 yrs) stand to a simple structure

The objective is to achieve reasonably even regeneration of the desired species and then remove the canopy in a number of thinnings.

- Early crown thinning will be heavier (10-20%) than management table intensity and aim to develop 100 equally distributed 'frame' trees per hectare.
- 'Frame' trees are well-formed dominant trees with good crowns at reasonably even spacing.
- When the trees begin to cone (see table 1 below) stands will be thinned to the basal areas shown in table 2 to develop good conditions for regeneration to establish.
- If/when natural regeneration occurs it will be more variable than on a planted site, giving more variability in age, density and species.
- Canopy removal will aim to maintain a leader-to-lateral ratio of >1 in the regeneration (see figure 1), generally this will be achieved using the basal areas in table 2.
- The final removal of the overstorey may not involve all the trees depending on management objectives and windthrow considerations (green tree retention).

- If natural regeneration is only partially successful in terms of number and species mix planting will be undertaken. Planting will be concentrated so the location of trees is known and they can be maintained. This will be by using a minimum of 16 trees in distinct group with the trees planted at 1.5 m x 1.5 m to form robust groups.
- If natural regeneration has been completely unsuccessful and CCF is still seen as appropriate planting will be undertaken to form the new canopy layer.
- Before planting the stand will be thinned to the basal areas for 'seedling growth' in the table 2.
- The felling and extraction of the canopy trees will be considered when deciding where to plant.
- Planting will be at 2500 trees per hectare in a well-defined pattern so they can be found for subsequent maintenance. 'Blanks' will be left when the planting position is close (<1 m) to canopy trees. This should ensure restocking compliance with OGB 4, as the area under the canopy is not part of the net area.
- Attention will be paid to site preparation, vegetation management, plant quality and reducing the impact of mammals to make sure of successful establishment. In general opportunities for site cultivation will be constrained by the overstorey.
- If the established crop is between the ages of 20 and 40 years, a transformation period of up to 50 years is expected.

Table 1. Species seed production details.

Species	Age of first good seed crop	Age of max seed production	Interval between good seed crops (yrs)
Sitka spruce	25-35	40+	3-5
Scots pine	15-20	60+	2-3
Douglas fir	30-35	50+	4-6
European larch*	25-30	40+	3-5
Japanese larch*	15-20	40+	3-5
Hybrid larch*	15-20	40+	3-5
Western hemlock	25-30	40+	2-3
Corsican pine	25-30	60+	3-5
Lodgepole pine	15-20	30+	2-3
Norway spruce	30-40	50+	**
Noble fir	30-40	40+	2-4
Grand fir	35-45	40+	3-5

Table 2. Basal area guidance for natural regeneration

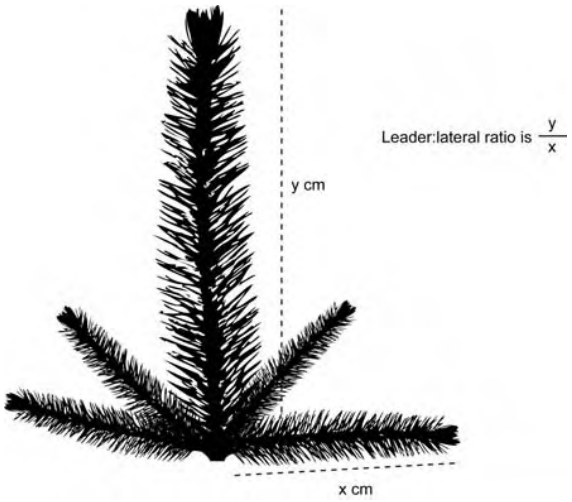
Species/ group	Shade tolerance of seedlings	BA (m2 ha-1) Establishment*	BA (m2 ha-1) Seedling growth**
Larches	Intolerant	20-25***	15-20
Pines	Intolerant	25-30***	20-25
Sitka spruce	Intermediate	30-35	25-30
Douglas fir	Intermediate	35-40	30-35
Norway spruce	Tolerant	40-45	35-40
Western hemlock	Tolerant	40-45	35-40

* On moderate to fertile sites where vegetation regrowth will be faster and more severe the BA for establishment will be increased.

** Seedlings and saplings are growing well under a canopy when the ratio of the length of the leader to the length of laterals in the upper whorl is ≥1, as shown in figure 1.

*** Stands of larch and pine at these basal areas will usually have well-developed ground vegetation layer and control or cultivation will be needed to start regeneration.

Figure 1. Leader-to-lateral ratio.



2. Transformation of a young (<40yrs) stand to a complex structure

The objective is to create a wider dbh range than under a simple system by:

- retaining small trees; and
- encouraging fast growth of selected frame trees

- The pattern of regeneration will be different to a simple structure, and will be arranged in groups that only cover up to 20% of the area at any one time.
- Up to 50 'Frame' trees will be selected per hectare and these will be crown thinned so as to keep as many small trees as possible.
- 'Frame' trees are stable, well-formed dominant trees. They may need to be present on the site for a long time; spacing should be 'clumpy' and not regular. Stable trees will have a larger diameter for a given height.
- The stand will be thinned to a residual basal area of about 18-25 m2 per ha for larches and pines, and 25-35 m2 per ha for spruces and Douglas fir. The choice within this range will depend upon the site and the balance between the overstorey and any regeneration. If there is little or no regeneration a higher value will be chosen to provide suitable conditions for seedlings to establish. If there is enough regeneration, which needs to be released, then a lower value will be favoured. The aim at each thinning is to remove enough trees to achieve the chosen residual basal area.
- If there is too much regeneration thinning will be concentrated on releasing the best regeneration and attempting to hold it back in other areas.
- Planting in complex structures will be considered to increase chances of success.
- Trees will be planted in canopy gaps of 0.1 ha minimum size.
- Trees will be planted in half the area of the gap in the centre.
- Close spacing (1.5 m x 1.5 m) will be used to make the groups robust. For example, when planting a canopy gap of 0.1 ha 200 trees will be planted at 1.5 m spacing on half the area in the middle of the gap. Close spacing will ensure rapid canopy closure and planting only half the area ensures minimal competition from the canopy trees, allowing opportunities for natural regeneration and increasing operational access.

3. Transformation in older (>40yrs) stands

Transformation of stands older than 40 years may be possible, especially on wind-firm sites, but the opportunity to steer the development of the young stand in thinning has been lost.

The main implications of this are:

- for simple systems there will be reduced opportunities for developing the crowns of 'Frame' trees and the window for natural regeneration is reduced. Therefore more 'frame' trees will be retained and a longer regeneration period used.
- in complex systems the main risks are that 'Frame' trees will become too large to be marketable, and the stand will still be quite uniform when windthrow starts. The aim is to establish groups of regenerating seedlings under an irregular overstorey while older trees are progressively felled.

Appendix 5 – Appropriate assessment

Appropriate assessment of forestry proposals which are likely to have a significant effect on a European site under the Conservation of Natural Habitats, &c.) Regulations 1994. Regulation 48.

1. Name of European site affected by the application and current designation status, including name of component SSSI (if relevant).

River Dee SAC (including tributaries)

2. Features of European qualifying interest, whether priority or non-priority; and conservation objectives for qualifying interests.

1. SAC

Conservation objectives

To avoid deterioration of the habitats of the qualifying species:

1. Margaritifera margaritifera (Freshwater pearl mussel)
2. Salmo salar (Atlantic salmon)
3. Lutra lutra (Otter)

or significant disturbance to the qualifying species, thus ensuring that the integrity of the site is maintained and the site makes an appropriate contribution to achieving favourable conservation status for the qualifying features.

To ensure for the qualifying species that the following are maintained in the long term:

- Population of the species (including range of genetic types for Salmo salar only) as a viable component of the site
- Distribution of the species within site
- Distribution and extent of habitats supporting the species
- Structure, function and supporting processes of habitats supporting the species
- No significant disturbance of the species
- Distribution and viability of the species' host species (for Margaritifera margaritifera)
- Structure1, function2 and supporting processes3 of habitats supporting the species' host species (for Margaritifera margaritifera)

1 structure, eg variety of flow types, river morphology
2 function, eg macrophyte growth, macro-invertebrate community
3 supporting processes, eg water table, water quality

3. Details of proposal.

Name: **Banchory Woods** ***Location:*** **Banchory**
Applicant: **FCS Moray & Aberdeenshire** ***Reference:*** **LMP35**

Description of proposal

Land management plan covering a total of 987ha of mixed plantation woodland adjacent to and within the designation. Proposals are to manage the woodland using both low impact systems and clearfell (200.1ha in plan period) to allow restoration of PAWS, on sites where stability and soil conditions do not favour LISS and to expand and create wetland habitats. Clearfell and thinning within the riparian zones of watercourses within the forest plan area. Felled areas to be restocked with high percentage native broadleaves and includes natural regeneration of native woodland on PAWS sites.

Operations:
Mechanised and Manual felling
Mechanical mounding on broadleaf and conifer restock sites (not within 20m of any watercourse)
Natural Regeneration 103ha
Planting 82.6ha conifers
64.2ha broadleaf

4. Assessment of impact on European interest.

4.1 *Is the proposal directly connected with or necessary to the management of the site?*
Yes /No **(if Yes go to 5.)**

No – although the proposals will significantly improve the riparian habitats within the forest, it is not of European Interest.

4.2 *Is the proposal likely to have a significant effect on the European interest on the designated site?*
Yes/No **(if yes assess impact on site)**

Yes – but avoidable if conditions as detailed in section 6 are adhered to.

4.3 *Outline of possible impacts*
Possible impacts

- Sediment release into watercourse
- Pollution of watercourse by machinery
- Blocking of watercourse by debris

4.4 *Summary of assessment in relation to possible impacts*

- Operational guidance in 'Conditions Required' below should minimise the possibility of sedimentation and pollution.
- All operations will be planned and undertaken with due regard to all relevant forest management environmental guidelines and best practice.
- Where practical felling debris will be removed from the riparian zone at the time of felling.

Where it is necessary to leave debris in-situ, breakdown would be expected to occur rapidly due to the wet ground conditions in the riparian zone. (See also 'Conditions Required' below).

4.5 Any other comments

4.6 *What would be the outcome on the site if the proposal is not approved?*

Impact on European Site would be neutral.
Heavy shading by conifers of minor watercourses outwith designation would continue with loss of riparian habitat.

5. Conclusions.

Will the proposal adversely affect the integrity of the European site?

No. With reference to the assessment in 4.4 and the conditions stated in (6), the proposals should not affect the integrity of the site.

6. Conditions required (if any).

- All operations to comply with the Forest and Water Guidelines and Forests and Soils Guidelines as a minimum.
- Motor manual felling to be undertaken within riparian zones
- No fuel or chemical storage or application within 15m of any watercourse
- Direct FCS supervision of all sites and liaison with Dee and District Salmon Fisheries Board ahead of operations
- All operations will be timed to minimise the possibility of siltation (i.e. summer working), accumulation of felling debris and to avoid breeding seasons of key species.
- Otter surveys will be carried out prior to any operation to identify location of holts and there status to avoid disturbance from operations.

Signed

Environment Manager …….

Date …….

Planning Manager…….

Date……

Ops Manager/ Conservator…….

Date…….