Forest Enterprise Scotland
Managing the National Forest Estate

Forestry Commission Scotland
Coimisean na Coilltearachd Alba

Camilty

Land Management Plan

Central Region

Approval date:	8th March 2019
Plan Reference No:	032/19/01
Plan Approval Date:	8th March 2019
Plan Expiry Date:	7th March 2029

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.

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FOREST ENTERPRISE - Application for Land Management Plan Approvals in Scotland

Forest Enterprise - Property

Forest Region:	Central
Woodland or property name:	Camilty
Nearest town, village or locality:	West Calder
OS Grid reference:	NT 0678 5933
Local Authority district/unitary Authority:	West Lothian

Areas for approval

Hectares	Conifer	Broadleaf
Clear felling	106.92	-
Selective felling	0.00	-
Restocking	70.82	-
Deforestation (bog restoration)	36.1	-

1. I apply for Land Management 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) Regulation 1999 for afforestation*/ deforestation*/ roads*/ quarries* as detailed in my application
3. I confirm that the initial scoping of the plan was started with FC staff on 30/01/15
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 ..... Signed .....
Planning Manager Conservator

District ..... Conservancy .....

Date ..... **Date of Approval** .....

Date approval ends: .....

*delete as appropriate

Environmental Impact Assessment Determination Enquiry Form

Complete this form to find out if you need consent, from the Forestry Commission (under the EIA Regulations 1999), to carry out your proposed work.

Section 1 Proposed work							
Please put a cross in the box to indicate the type of work you are proposing to carry out. Give the area in hectares and where appropriate the percentage of conifers and broadleaves.							
Proposed work	cross	Area in hectares	% Conifer	% broadleaves	Proposed work	cross	Area in ha
Afforestation	-	-	-	-	Forest roads	-	-
Deforestation	X	36.1	100	0	Forest quarry	-	-
Location and District			Camilty, West Calder, West Lothian – Central Region				

Please attach map(s) showing the boundary of the proposed work and also give details of the operations.

Section 2 Property details	
Property Name	Camilty
Grid Reference (e.g. AB 123/789	NT 0678 5933
Local Authority	West Lothian
Nearest Town	West Calder

Section 3 Applicant's category ***(please put a cross in one box)***			
PE Personal occupier	-	PU Public ownership	X
BU Business occupier	-	OT Other	-
VO Voluntary organisation	-	CT Crofting tenant	-

Section 4 Applicant's type *(please put a cross in one box)*			
LS Lessee		OW Owner	X
TE Tenant		TR Trust	

Section 5 your agent or woodland manager's details					
Title	Ms	Initials	Y	Surname	Grieve
Organisation	Forestry Enterprise Scotland – Central Region				
Address	Five Sisters House				
Five Sisters Business Park					
West Calder			Postcode	EH55 8PN	
Tel No	0300 067 6735		Mobile	07769 725691	
Fax	-		e-mail	yvonne.grieve@forestry.gov.uk	
Is this the address for correspondence?			yes X	No	

Section 6 Applicant's details					
Title	Mr	Initials	S	Surname	Gordon
Organisation	Forestry Commission Scotland – Scottish Lowlands Forest District				
Address	Five Sisters House				
Five Sisters Business Park					
West Calder			Postcode	EH55 8PN	
Tel No	0300 067 6734		Mobile	07990 838 275	
Fax	-		e-mail	scott.gordon@forestry.gsi.gov.uk	
Is this the address for correspondence?			yes X	No	

Section 7 Sensitive Areas: Give the area of the proposal that is covered by any of the following designations	
Sensitive Area as listed in "Schedule 2" of the 1999 EIA Regulations Area (ha)	Area in hectares
a. Sites of Special Scientific Interest (SSSI) or Proposed Sites of Special Scientific Interest (PSSSI)	N/A
b. SSSI's with a Nature Conservation Order (Section 29 of the Wildlife and Countryside Act 1981)	N/A
c. National Park (NP)	N/A

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Summary of Proposals

This plan is a renewal of Forest Enterprise Scotland's management plan for Camilty forest block

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

Main Priorities

The Main Priorities for this woodland are:

- To retain where reasonably practical the production of a sustainable timber crop of conifer & broadleaves for both local and national markets.
- Assist in business development and the local economy through the development of a windfarm and creating additional employment in the forestry, timber and wood processing industries.
- Maximise biodiversity value and environmental quality of both woodland, water and open habitats including bogs.
- Manage woodland sustainability to assist with Government targets on climate change.
- Increase and improve both formal and informal access to promote responsible recreation.
- Preserve and enhance historical features within the forest.
- Manage the forest in a way that reduces the potential impact of climate change and increased vulnerability to disease.

1.0 Introduction:

1.1 Setting and context

Camilty forest block lies 10 miles west of Edinburgh and straddles the Lang Whang, the A70 and the B7008 and is comprised of 2 main blocks, Camilty Plantation to the West and West Cairns Plantation to the East of the A70. The nearest town, West Calder lies 3 miles to the north-west and the town Livingston lies 4 miles to the north. Agricultural holdings and a few private residences surround much of the bocks periphery and Harburn Wind Farm directly to the west of the site.

The LMP area spans 4 miles west to east and 2 miles north to south at its greatest extents. Around 340ha of the forest block lies within the western end of the Pentland Regional Park at the foot of the Pentland hills. The total area of the plan covers a land area of 754ha.

The forest block sits entirely within the West Lothian local authority area and south eastern tip of the block meets the boundary of the Scottish Borders local authority area.

See **Map 1 - Location** & **Map 2 - Context**.

1.2 History of the Forest

The total land area (754ha) was purchased by the Forestry Commission in stages as the land became available between 1956 and 1968 at the time of purchase the land was open moor and farm/grazing land. The block name was originally Camilty and Buteland however the Buteland element, a 30ha shelterbelt type plantation, was leasehold which expired in 2014.

The site has been managed principally for timber production since the original plantings in the mid 1950's with access improvements being made as required to harvest the maturing stands.

A portion of Camilty forest Block north of the A70 received a planning consent from West Lothian Council to construct a 6 turbine windfarm in January 2016 (Planning reference 0219/FUL/13).

2.0 Analysis of Previous Plans

2.1 How Previous Plan Relates to Todays Objectives

The previous plan relates well against a few of today's objectives as follows:

Timber – 'In the period of the pervious plan, over 85000m^3 of timber was produced from the plan area.'

Environmental Quality – 'enhance the value of the area to wildlife by increasing age and species diversity and developing an extensive area of wet, mixed woodland and protect water quality and the physical integrity of streams.'

Access Health & Biodiversity – 'improve the recreation value of the forest and preserve features of archaeological interest.'

2. Aims of Previous Plan and Achievements

Camilty

Aims & Objectives	Achievements
To provide a sustainable source of timber to industry	Production of timber from this block has been an average of 8500 m^3 per annum
To enhance the value of the area to wildlife, by increasing age and species diversity and integrating the distribution of open space into a beneficial network	Improvements in this regard have been made with increased use of open ground and low density broadleaves to create a linked network.
To protect water quality and the physical integrity of streams	Restocking with conifer species has been kept clear of water courses and low density broadleaves have been planted. Coniferous regen requires further control.
To improve the external views of the forest and internally to enhance the view from the forest walks and principal forest roads	Restocking has been kept back from the main A70 and clumps of broadleaves have been planted to soften the roadside edges.
To provide public recreation. Also by preserving features of archaeological and historic interest to use the forest as an educational resource.	The picnic area has been abandoned due to persistent antisocial behaviour and fly-tipping. The car park has suffered and is proposed to be reduced in size to try and alleviate these issues.

3.0 Background information

3.1 Physical site factors

3.1.1 Geology Soils and landform

British Geological Survey (BGS) mapping shows that the underlying geology of the site to be Limestone, Limestone Coal formation and Swanshaw Sandstone underlie the majority of the site with the sandstone being predominately to the North and the Limestone to the South. This is overlaid with a variety of Glaciofluvial deposits, Till, Peat and Alluvium.

The site can generally be split as divided by the A70 with deep peat soils to the north and peaty podzolic gleys to the south sporadic instances of 'Artificial Deposits' from the coal, shale and iron ore extraction industries, these deposits take the form of bings a few of these have been planted in the past.

FC Soil Code	Description	%age by Area
11b	Blanket Bog (Calluna, Eriophorum vaginatum)	59.2
6	Peaty gley	22.2
7	Typical surface water gley	9.0
N/A	Complex (riparian soils)	4.3
3p	Peaty podzol	2.3
4z	Humus-ironpan podzol	1.8
1g	Typical Brown Earth – Gleyed	1.0
6z	Peaty podzolic gley	>1

The Soil Moisture Regime for the majority of the site is very wet or wet, with localised fresh and slightly dry soils depending on geology, soils, slope, aspect and drainage. The Soil Nutrient Regime varies from Very Poor through to Very Rich, again depending on geology, soils, slope, aspect and drainage.

See **Maps 4a – Soils**, **4b - SNR** & **4c – SMR**

The land form of the site is predominantly shallow valley with an West to East aspect and has a significant plateau area in the northern corner at 260-265m above ordnance datum (AOD) the valley itself from its highest point in the west of 290m drops down to 274m at the Crosswood Burn, next to the A70 then gradually rises to the East to a height of 390m then rises sharply for the last

500m to the south east to 562m AOD at the highest point to the summit of West Cairn Hill in the Pentland Hills.

3.1.2 Water

In terms of water and hydrology, the Crosswood Burn flows south-west to north-east through the north eastern portion of the forest block, joining the River Almond at Mid Calder.

The majority of the eastern block falls within the public water catchment area of Harperig Reservoir. The Water of Leith, with its headwaters arising from the Pentland hills meets with Sinkie Syke a tributary thereof within this block and then flows to feed the Harperig Reservoir.

The ground water levels on the site varies according to soil types with precipitation and in periods of prolonged wet weather the water table on the main plateau of Camilty Moss can be at surface level.

3.1.3 Current Climate & Exposure

Camilty Forest is mainly within the Cool Wet climatic zone. The accumulated temperature (day-degrees above 5.0 C, an indication of growing season length) varies between 720-1135 which places the site within the Cool Zone <1200. Average maximum temp is 11.9°C and a minimum of 4.6°C, with 66.4 days of air frost and 1329 sunshine hours per year.

The soil moisture deficit (which provides an indication of the dryness of the growing season) varies between 11 and 86 which places the site within the Wet Zone <90. Annual average rainfall is 974mm dispersed over 155 days of the year.

The average windiness of a site is measured using Detailed Aspect Method Scoring (DAMS). DAMS is based on location, elevation and topographic exposure, and gives a good representation of both the average wind speed and the frequency of strong winds at a site. Values of DAMS in Britain typically range from 10 (sheltered) to 24 (exposed). Small differences in DAMS can result in large differences in predictions of wind damage. Given the open south westerly orientation of this shallow valley of much of the site it is openly exposed to the prevailing west and south westerly winds and the DAMS for this site range from a minimum of 14 to a maximum of 18 however 92% of the block is in the **highly exposed** category between **17 & 20**. This limits the choice of species suited to these conditions.

See Map 4d – DAMS

3.2 Biodiversity and Environmental Designations

Camilty Forest is lies immediately east of Cobbinshaw Moss SSSI, a blanket bog, but has no designations within the forest block.

3.2.1 Site of Special Scientific Interest (SSSI)

Cobbinshaw Moss SSSI lies to the south of the western block and is a blanket bog. Lowland raised and blanket bogs are a European Protected Habitat and is under threat globally.

3.2.2 Priority Habitat Types

PHT's are protected under the UK Biodiversity Action Plan and FCS policy is to protect, enhance and expand these habitats where suitable. There are a range of open space and woodland types. There is a reasonable extent of deep peat within the forest block with significant remnants of bog vegetation in some areas. One main area in the north east of the block has been identified as being suitable for potential bog restoration/ open habitat.

See **Map 2 – Context**

3.2.3 Ancient woodland

Camilty has only some very minor remnants of ancient woodland status – 4.26 ha of LEPO (Long Established of Plantation Origin 1860 2b)

See **Map 4 - Key Features & Survey Map**

3.2.4 Breeding Birds

The most comprehensive ornithological survey of Camilty was conducted by RPS in 2011/12 in light of a proposed windfarm development the results of this survey identified a number of breeding birds of note are present –

Bullfinch, Crossbill, Curlew, Goshawk, Greylag Goose, Redwing, Skylark, Woodcock.

More notably a breeding pair of Goshawks has been studied by a local raptor group and found to raise 2 chicks in 2017.

Sound woodland management practices, FC Best Practice Guidance and a very robust site planning system, mean that forest operations and planned works take full consideration of breeding birds.

3.2.5 European Protected Species

European Protected Species are listed on the EC Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna (Habitats Directive)

as species of European Community Interest and in need of strict protection. The Habitats Directive is transposed into domestic legislation by The Conservation (Natural Habitats, &c.) Regulations 1994 (as amended 2004, 2007 and 2008) There are a number of protected species present at Camilty.
Further to the FES records for the site an in depth survey for European protected species (EPS) was undertaken by the windfarm developer during the course of its site investigations for the environmental statement and concluded that there are currently no EPS within the bounds of the site.

3.2.5.1 Otter

Otter activity is present a number watercourses at Camilty most notably Crosswood burn, Shear Burn and Otter Burn. There are however no known breeding locations within the forest blocks

3.2.5.2 Bats

Bats are known to be present within the forest block, this has been confirmed by a bat survey commissioned in 2012. The survey confirmed that there were low number of bats present, which comprised Soprano and Common Pipistrelles and Daubenton's Bat. Currently the make-up of the forest does not support large populations of bats.

3.2.6 Other Protected Species

Other species protected under the Wildlife and Countryside Act 1981 schedules 5 and 6 are also present on or adjacent to the forest.

3.2.6.1 Water Voles

Water vole receives partial protection under Schedule 5 of the above act. There are several records of water vole burrows along the course of the Sinkie Syke watercourse.

3.3 The Existing Forest:

Camilty Forest block is 754 ha, 581ha around 77% of which is considered productive commercial forest.

The majority of the forest is a coniferous plantation the predominant species being Spruce (Picea spp) which covers 46% of the block. Other conifer species include Pines (Pinus spp) making up a further 7% with Lodgepole pine (Pinus contorta) accounting for the majority of this, and Larch (Larix spp) making up a further 4.2%.

Mixed broadleaves account for 4% of the planted area consisting of species such as Alder, Birch, Willow Spp, Rowan & Sycamore. Of these broadleaved areas 36% is considered productive mostly mixed broadleaves with a few small coupes of pure Common alder

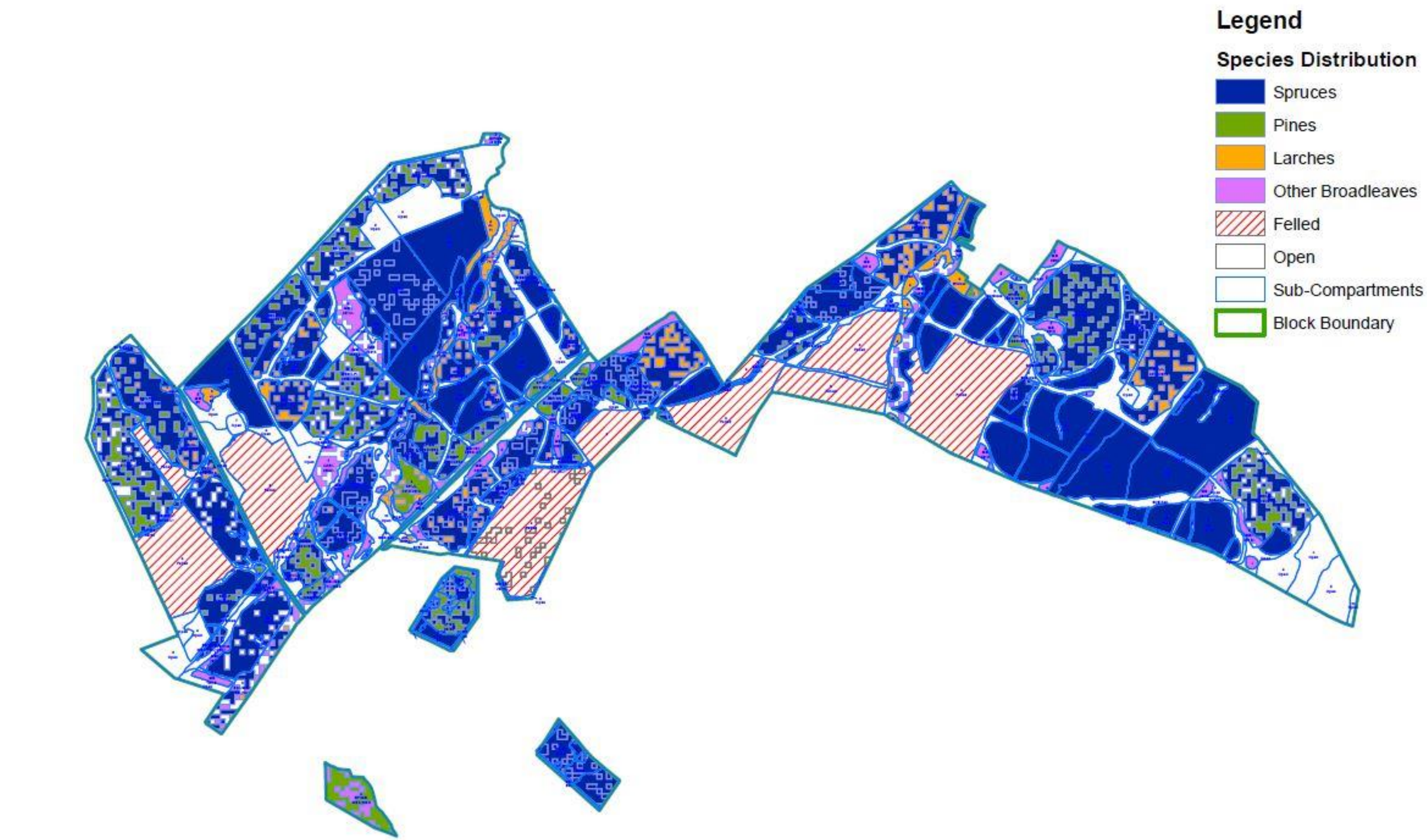
Felled areas presently account for nearly 16%, all of which are currently proposed to be restocked with commercial species.

Open ground accounts for just under 20% of the forest block area, with the remaining areas 3% comprises of, stream sides, unplantable ground and quarries.

Camilty plantation and West Cairns Plantation are physically separated by the A70 the main road between Edinburgh and Ayr road and Camilty plantation is further sub divided by the B7008 Harburn to West Calder road. While the B7008 is not suitable for timber transport north of the site it provides adequate access to the A70 which is convenient for timber transport further afield.

3.3.1 Age Structure, Species Distribution, Yield Class

The following pages contain maps tables and a chart which detail the age structure, yield class and species distribution and composition.


Legend
Species Distribution
Spruces
Pines
Larches
Other Broadleaves
Felled
Open
Sub-Compartments
Block Boundary

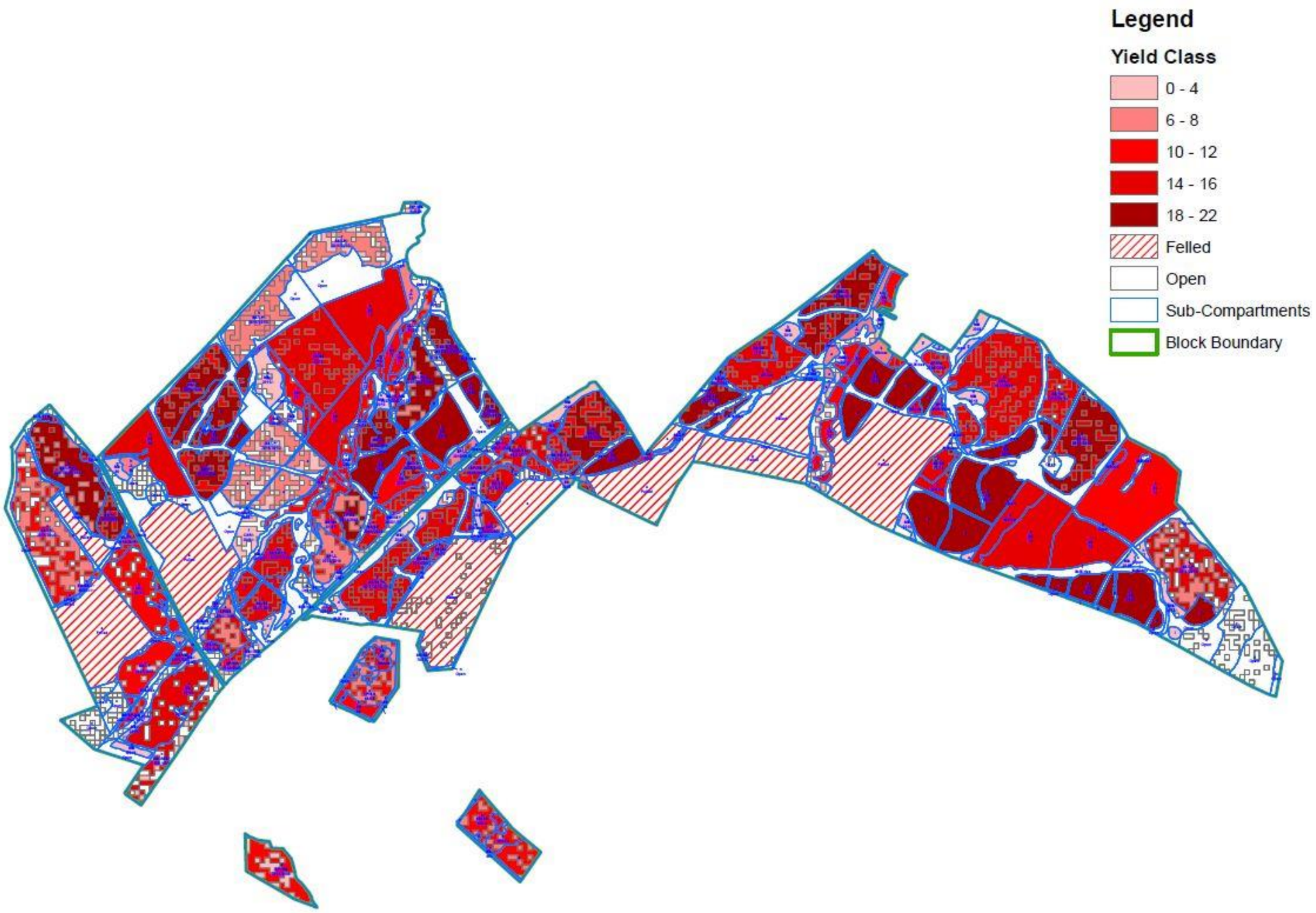

Legend
Yield Class
0 - 4
6 - 8
10 - 12
14 - 16
18 - 22
Felled
Open
Sub-Compartments
Block Boundary

Table 1 below shows the full details of the species composition and land use types.

Species & Land use composition 2018	Area (Ha)	% of Block
Open	147.5	19.56
Felled	119.6	15.86
Mixed Broadleaves	26.9	3.57
Sitka spruce	329.0	43.64
Scots Pine	13.2	1.75
Norway spruce	18.2	2.41
Lodgepole pine	39.3	5.21
Larch Spp	32.6	4.32
Alder Spp	1.9	0.25
Sycamore	0.4	0.05
Unplantable Ground	4.0	0.53
Stream sides	21.0	2.79
Quarries	0.3	0.04
	753.9	100
Total Productive areas	**581.1**	**77**

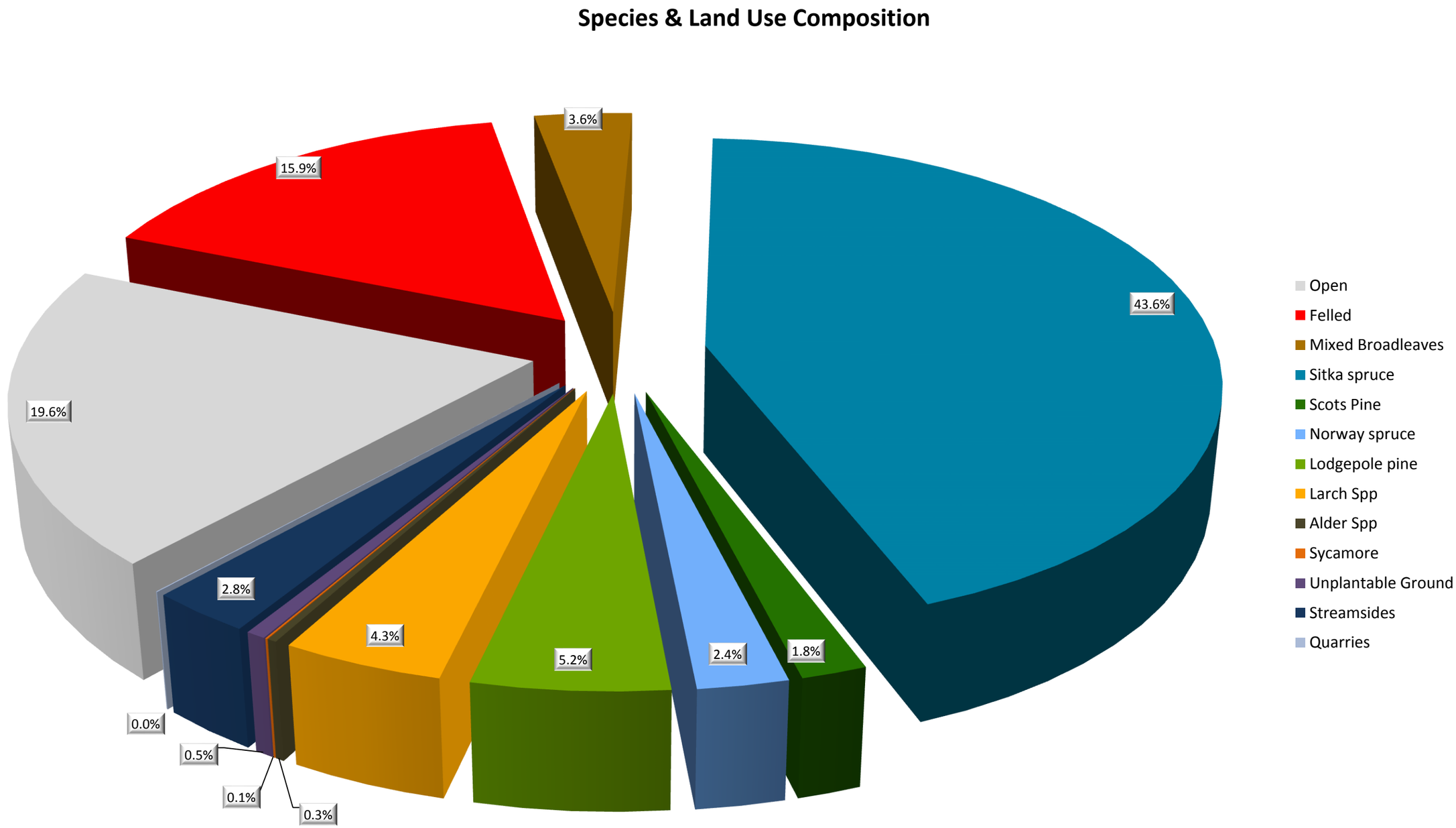
Table 2 below shows the areas of windblow by species and overall percentage of the planted area.

Windblow N.B. included in the figures above.	Area (Ha)	% by Spp
Larch	1	5.59
Lodgepole pine	0.7	3.91
Sitka Spruce	16.2	90.50

Total crop area windblown	**17.9**	
Total % age of Productive area		**3.08**

For a detailed overview see **Map 3 – Stock Map**

Figure 1 below is a pictorial representation of species and land use



3.3.2 Access

Camilty is well serviced by public roads the 3 individual blocks are separated west to east by the A70 and partially north to south by the B7008. Both blocks have formal vehicular access from this road.

The blocks North and West of the A70 and B7008 respectively have numerous access points off these roads suitable for HGV's and light vehicles. The block to the west of the A70 only has one access point from this road for HGV's there is also a light vehicle access from north via and unclassified road at Harperig reservoir.

All main blocks are currently adequately roaded internally for planned forest operations. There are however two small outlier coupes/blocks to the south of the main blocks and northeast of Crosswood Reservoir which are currently inaccessible

There are various informal pedestrian access points and desire lines along the block boundaries from neighbouring land. There is a public car park north of the A70 which is independent of the operational access points on site.

3.3.3 Ancient Woodland/LEPO

There are 2 recoded areas of ancient woodland (LEPO 1860/2b) amounting to 4.3 Ha. The largest 3.07Ha runs from where the B7008 meets the A70 and runs south west parallel to the A70 for nearly 500m this area was felled and restocked with broadleaves and conifers in 1993.

The smaller area 1.25 Ha, lies within what is now the Shear Burn Plantation this was felled and restocked in 1966. Over the years both areas have remained as woodland.

3.3.4 LISS potential

Low impact silvicultural systems are currently in place along the watercourses of Crosswood burn and the Water of Leith where the soils are deeper and more freely draining. Elsewhere across the blocks a combination of soil types and exposure are not conducive with this management practice.

3.3.5 Renewable energy - Wind

EDF Energy are in the process of finalising plans to progress their consent for 6 turbines in the North eastern block of Camilty known as Camilty plantation, however whilst this plan is mindful of their proposals thus far, it is not principally designed to accommodate the windfarm; any impacts pertaining to the finalised windfarm layout not accounted for and approved by this plan will be described in, and approval sought by way of plan amendment.

3.4 Landscape and land use

3.4.1 Landscape character and value

The site lies within 3 individual landscape units which fall within a further 2 Landscape Character types according to the West Lothian Landscape Character Classification (Aug 2014) The site is also considered to sit within an Area of Great Landscape Value According to West Lothian Local Landscape Designation Review (June 2013)

Landscape Unit		Landscape Character Type	
1	Western Pentland Hills	1	Western Pentland Hills
2	North West Pentland Fringe	2	Upland Hill fringes
3	Gladsmuir/Woodmuir/Camilty Fringe	2	Upland Hill fringes

Key Characteristics of the Western Pentland hills

- Distinctive upland hills of Devonian Old Red Sandstone –gently rolling, sweeping slopes rising to level topped ridges and pronounced hill masses of varying shape, mass, height and scale
- Individual hill masses often separated by steep-sided valley features of different scales creating distinctive, recognisable skylines
- Heather, coarse acidic grassland and upland raised / blanket bog peatland dominant on the highest ground
- Large areas dominated by sedge and rush, with unimproved rough grazing on the lower slopes
- Distinctively shaped straight sided conifer plantations and shelterbelts on the lower slopes and valley sides
- Strong sense of place due to remoteness, wildness & stillness, with huge skies, wide horizons and infinite complexity of distant unobstructed views
- Strong historical and heritage associations: archaeological remains including East and West Cairn Hills,
- An important, frequently visited recreational facility: enjoyed by visitors to the Pentland Hills Regional Park in pursuit of a diverse range of activities or just the peaceful enjoyment of the countryside
- Very low settlement density confined to a number of isolated dwellings
- Number of small disused quarries at the western end

Key Characteristics of the Upland Hill Fringes

- Generally broad, sweeping, gentle slopes with a subtle landform and occasional igneous intrusions exposed through the Carboniferous sedimentary bedrock, strongly characteristic of the Pentland Hills
- Generally between 180m – 300m AOD but rising to 350m in places
- Area characteristically dips SW-NE in which direction numerous burns flow towards the River Almond to the north of the area, and, where deeply incised, add complexity to the landform
- Open standing water ranges from upland bogs and ponds to large reservoirs
- Varied scale, openness and land use reflects the transitional nature between upland and lowland; a mosaic of extensive open moorland, large scale open semi-improved and improved grassland, extensive coniferous plantations, and smaller scale more intimate landscape of naturally wooded burns, wide mixed shelterbelts, and designed parkland
- Extensive views from high points
- Major transport corridors generally follow the pattern of the landform either through the area or bordering it

3.4.2 Visibility

The site is nestled in the base of a shallow valley the majority of external views are from a low level. The views most commonly observed are from East & West on the A70 and often it's only the forest edges that can be seen. These edges can appear flat and linear from the majority of viewpoints.

3.4.3 Neighbouring land use

Much of the land to the south and east of the site is agricultural grazing, to the west is the Harburn Windfarm and adjoining the forest south western edge is Cobbinshaw Moss SSSI. To the north of the site is Harburn house a longstanding estate house with designed gardens surrounded by Christmas tree plantations.

The land to the south and west known locally as Colzium and Crosswoodburn has recently been purchased by a local farmer who is currently developing plans for the land which may include forestry and holiday accommodation and in the interim intends to graze the land.

3.5 Social factors

3.5.1 Recreation

Due to the relative remoteness of this forest there is a low recreational interest. The majority of recreational routes are via forest roads. That said the forest is used by a very small number of local people walking their dogs and commercial dog walkers. There is also occasional use by horse riders. The forest itself serviced by one carpark located on the northern side of the A70 where an informal mown grass path follows the route of the Crosswood burn but does not lead to anything in particular forcing users to return by the same route.

During the period of the previous plan an anglers carpark has been developed at the western end of Harperrig reservoir, which links to the forest via private tarmac road, this has become a popular route for recreation within the forest.

3.5.2 Community

The nearest village is West Calder which is some 5.5 km away via the B7008 which has no roadside footpath or bus service. The nearest local 'community' would be the residents of Harburn, which is a scattered low density rural community.

3.6 Heritage

There are 3 Scheduled Ancient monuments recorded in this forest.

The following features can be found on: **Map 5 - Analysis and Concept.**

3.6.1 Castle Greg (SM1933)

Castle Greg particularly fine Roman fortlet is in excellent condition. It measures c. 38m from NNW to SSE by c. 20m transversely within a rampart and double set of ditches. The fortlet is rectangular in shape with a well-defined entrance in the ENE side. The fortlet could have housed a unit of 80 soldiers. Although it was one of the first Roman monuments to be excavated in Scotland (in the mid 19th century), its exact date of construction remains unknown. The absence of a Roman road in the vicinity suggests a date in the late 1st century AD, before the programme of road construction was under way in this part of Scotland.

3.6.2 Camilty Hill Enclosure (SM1165)

This monument is a circular enclosure, defined by a turf bank about 4m in width and 0.6m in height, enclosing an area approximately 12m in diameter. There is a poorly defined entrance, 4m wide, on the south side. The enclosure lies 90m to the northwest of Castle Greg Roman fortlet and an association with the fort has been speculated; however, it seems more likely that the enclosure is a post-medieval stock pen.

3.6.3 Harperrig Cairn (SM2980)

This cairn is situated on the summit of West Cairn Hill. Its outline is largely obscured by three drystone dykes which meet on top of it. It has been heavily robbed and is now reduced to a circular grass-grown mound of stones, about 45ft in diameter and 3 1/2 ft high. An Ordnance Survey triangulation station has been erected on it (RCAHMS 1929). The scheduled area has been divided into three portions - that to the W (c. 45%) is situated on the national forest estate. The scheduled area measures c. 25m in diameter.

3.6.4 Unscheduled Features

There are just over 25 unscheduled features that have also been recorded within the bounds of the forest including artefact finds, agricultural earthworks enclosures and a previous industrial site.

Details of these, and of the scheduled features can be found on:
Map 4e – Heritage Features

3.7 Statutory requirements and key external policies

3.7.1 UK Forest Standard

The purpose of this plan is in part to address the legal management requirements and guidelines as set out in the latest version of the UK Forest Standard.

3.7.2 Control of Woodland Removal

The Scottish Government's Policy on the Control of Woodland Removal provides policy direction for decisions on woodland removal in Scotland defined as the permanent removal of woodland for the purposes of conversion to another type of land use. In the context of this plan this relates to intermediate bog restoration and to a lesser extent renewable developments which have been consented through the Town and Country Planning Act

4.0 Analysis and Concept

4.1 Analysis

Through survey work and research, a broad range of factors have been identified which are potentially relevant to the future makeup and management of the land. These have been analysed in order to better understand the way these interact, and to draw out the most important features and trends.

4.2 Concept

This analysis was used to develop the initial design concepts, identifying themes and outlining key considerations and activities which are to be most relevant during the plan period. These initial concepts can be found in table 3 below, where the opportunities and constraints of these concepts are explored.

Table 3. Initial Concept Review

Factor	Initial Concept	Constraint	Opportunity
Climate/Soils / Elevation	• Felling windblown coupes early. • Plant broadleaves and/or allow natural regeneration for carbon sequestration on unproductive areas where habitat restoration is not suitable. • Utilise ESC principles and future climate data when considering species suitability.	• Poor quality soils and deep peats predominantly north of the Powfastle and Crosswood burns, restricts range of suitable species. • Exposed plateau showing poor growth in current crop with increasing levels of wind throw/risk. • Deep peats and high water table make harvesting very difficult and uneconomical/ recoverable	• Better quality soils across various areas of the site, particularly to the south & east, make better use of these areas for commercial species. • Plant wet woodland/lag areas as a carbon sink. • Wet woodland managed as a carbon store with minimum intervention. • To consider bog habitat restoration
Species Range	• Increase species diversity that offer longer term woodland cover better resistance to climate change and long term carbon storage.	• Limited species choices due to soil type, mainly deep flushed and unflushed peat and peaty/surface water gleys.	• Explore open habitat opportunities. • Maximise the use of proven performing commercial species.
Disease	• Change species structure of coupes when restocking with disease tolerant or resistant species.	• Site already has DNB-infected pine stands, and is in the low risk zone for developing *P. ramorum* on larch. • Species choice restrictions	• Some coupes no longer suitable for commercial forestry consider wet woodland species which are naturally resistant to current disease threats.

Factor	Initial Concept	Constraint	Opportunity
Restructuring /Age diversity	• Restructure larger even aged coupes. • Gradually introduce broadleaved fringes on external boundaries and road corridors.	• Remaining coupes are large and generally single species	• Windfarm development may allow for further restructuring and localised felling regimes and species diversification.
Utilities – OHP, UGP, Water, Gas	• Manage (felling/brush cutting) wayleaves as open habitat for flora and fauna.	• OH and UG powerlines and water pipelines unplantable. • Threatened by encroaching tree regeneration	• Manage as wildlife corridor forest edge habitat with dense ground vegetation.
Biodiversity	• Increase buffer area between commercial forest and Cobinshaw moss. • Water Vole Habitats - manage water margins to improve habitat. • Improve and/or increase riparian woodland	• Unable to be planted with potential future harvesting difficulties. • Encroaching vegetation and conifer regeneration • Need to maximise areas of commercial forestry	• Manage as buffer lag area for increased biodiversity. • Manage forest water courses for optimal vegetation cover for water voles. • Improve buffer between commercial forestry and riparian zones.
Archaeology	• Protect known historic features Roman fortlet SAM, sheep fanks • Preserve the most important views within the site and enhance where possible • Provide on-site interpretation • Create route from Carpark to roman fort.	• Limited funding available. • Potentially limited with regards to retained crop stability • May increase undesired attention? • This would involve the design and construction of 3 burn/river crossings.	• Continued monitoring of site condition • Consider alternative restocking options and to protect and improve the setting • Could bring a potentially more desirable interest to the site. • Windfarm road network would reduce resource requirement to achieve link path.
Community	• Increase community interest	• Widely dispersed community. • Nearest towns and villages not within walking distance • None of the site within a WIAT area.	• Raise awareness of the features areas of interest within the site through management plan consultation. • Assess local community usage

Factor	Initial Concept	Constraint	Opportunity
Landscape	• Soften visible external hard edges through broadleaved fringe planting. • Sensitively manage coupes felling avoiding where possible coupe edges on horizon	• Limitations in species choices due to available soils. • Practicalities of harvesting in difficult ground conditions, remaining/retained crop stability.	• Increase biodiversity and external views • Creates screening from harvesting in the longer term • Improve the appearance of the forest and reduce visual impact of felling operations.
Renewables Development	• Windfarm Development has been designed to maximise use of poorer performing/ existing open areas of the site. • Exclude windfarm Footprint and associated habitat management areas from LMP	• No-planting restriction around windfarm infrastructure for bat habitat. • Areas to be excluded from LMP. • Restrictions on tree heights surrounding turbines. • Increased UG electricity lines on site	• Increased revenue generated by windfarm development will benefit this under-productive forest block. • Increased roading network allows better access to manage the block and recreational routes.
Recreation	• Improve/formalise most appropriate access links to surrounding areas and connect to areas of interest natural beauty. • Increase and protect informal path route. • Create circular walking route to carpark • Improve car park area.	• Limited resources and limited public use. • Current anti-social behaviour and use of carpark	• Optimising existing retained woodland along the Crosswood burn will create a diverse woodland walk. • Improved visitor experience. • Improved managed appearance may help reduce anti-social behaviour and misuse.
Harvesting	• Reduce areas of poor growth commercial forestry in the deepest peat areas • Continue to manage sustainable commercial areas to maximise timber outturn.	• Deep peats with high summer water table and poor brash availability seriously restrict harvesting operations. • Degraded areas of windblow • High risk of machine bogging. • Full timber out turn potential of affected coupes often has previously not been realised.	• Bog habitat degraded by previous commercial forestry activity, but may be better suited to transitional mixed wet woodland. • Maintain/improve carbon storage potential of site • Bog habitat restoration areas. • Continue restocking with disease resistant commercial species such a Sitka spruce and Alaskan Lodgepole pine
See **Map 5 – Analysis & Concept**			

5.0 Management Proposals

5.1 Forest Stand Management

All proposals have been designed in accordance with sound silvicultural and environmental principles, falling within the framework outlined by the UK Forestry Standard, the UK Woodland Assurance Scheme, FC Bulletin 124 Ecological Site Classification for Forestry and the current FC edition of Forest & Water Guidelines.

Coupe clear-felling remains the most appropriate silvicultural system for the forests and it is the intention to move toward generally smaller coupe sizes in future in order to facilitate the further restructuring of the blocks and allow for more structurally and biologically diverse forests as well as imparting greater flexibility for future management options.

See **Map 6 - Management**

5.1.1 Clear Felling

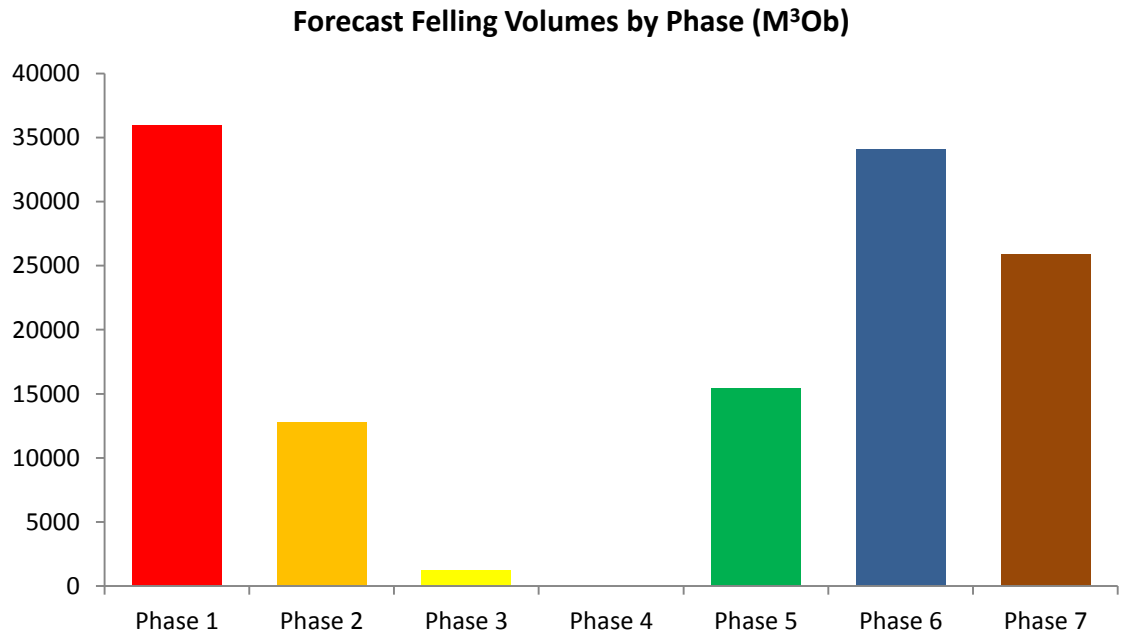
Patch clear felling will continue be the most appropriate management approach for this forest which is predominantly productive conifer. While generally coupe fell years are based on the optimal rotation lengths to reach Maximum Mean Annual Increment, various coupes will fall slightly out with these limits to facilitate age restructuring and others will be for retention; enhancing biological and structural diversity.

During the 10 years of the plan period, a total of 107 Ha, with a projected volume of 49,254 m^3, are designated for clear felling (see Table 4 & Figure 2 below).

Table 4 – Projected Felling Phase Volumes

Felling Phase	Area Ha	Est Vol (m^3Ob)
1 (2019-2023)	79.43	35,958
2 (2024-2028)	27.49	12,776
3 (2029-2033)	2.95	1,249
4 (2034-2038)	0	0
5 (2039-2043)	43.50	15,450
6 (2044-2048)	78.89	34,059
7 (2049-2053)	53.25	25,847

Figure 2 – Projected Felling Phase volumes



Sitka spruce (SS) forms the major component of the productive conifers, either planted pure or in mixture with Larch (Larix spp) or Norway spruce (Picea abies).

The ability to harvest conifers in certain areas of this site over the period of the previous plan has proven difficult, particularly to the north and west of the blocks, due primarily, but not limited, to ground conditions, mainly deep saturated peat. The lack of sufficient lateral branch material or suitable 'lop & top' to form supportive brash mats on site has in many cases hampered harvesting operations to the point that some coupes had to be stopped until weather allowed the site to dry out sufficiently to allow felling to continue. It is for this reason that the productive element of this block is to be reduced by just over 6% from 581Ha to 545 Ha.

In view of the above and in keeping with the Forestry Commission Scotland - Strategy for Lowland Raised Bog and Intermediate Bog on the National Forest Estate in Scotland, these poorer performing conifer areas are proposed to be felled, mulched or marketed as appropriate and restored to bog habitat or wet woodland, W4 woodland as identified through ESC.

Areas where ground conditions and soils are better suited for efficient harvesting practices will continue to be manged with a view to maximising commercial conifer production.

See **Map 6 – Management & Map 7 Future Habitats & Management**

5.1.2 Thinning

FCS policy generally assumes that all productive crops will be thinned, unless:

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

SLFD policy is not to thin crops on areas with a DAMS score greater that 15; In the case of this LMP area, as described in section 3.1.3, the forests are 'highly exposed' which means thinning operations would likely significantly increase the risk of windthrow. Not only this but as the soils are predominantly wet and soft, thinning operations would likely lead to significant ground damage and therefore thinning should not be prescribed in these blocks for future rotations.

5.1.3 Low Impact Silvicultural Systems (LISS)

As mentioned in the previous section these sites are not best suited for thinning as the intended benefits of enhanced crop stability, increased tree volume and improved regenerative potential would be negated by the risks to the crop from windthrow and therefore not conducive for management through Alternative to Clearfell methods such as LISS or Continuous Cover Forestry (CCF).

Whilst this is indeed the case for most of the site, the banks of the water courses running through the site have more stable soils and will be managed in such a way as to gradually remove conifer species in favour of regenerating broadleaves.

5.1.4 Minimum Intervention

There is only one small area of the block that has been selected for minimum intervention as the best management method. This lies at the most northern tip of the block and is effectively being left as a physical screen to the forest/operations for the residents living at High Camilty.

5.1.5 Operational Access

The site is currently sufficiently roaded to harvest the coupes proposed in the plan. Additional roading resulting from the windfarm construction would provide improved access to some areas. There are no new forest roads required to accommodate harvesting operations of this plan.

5.1.6 Windfarm Development

Camilty Wind Farm has been consented (details in section 1.2) within the bounds of the Camilty Plantation section of the block confined to the eastern side of the

B7008. At the time of writing this plan it is anticipated that the windfarm would begin construction in the later part of 2019 and operational by Autumn 2020.

Once constructed, the wind farm layout will have been finalised at which time an amendment will be submitted to this Land Management Plan to remove the areas approved under the Town & Country Planning, essentially as-built windfarm infrastructure footprint area.

5.2 Future habitats and species

Taking into account all the survey and analysis information, and the objectives set out in the brief, a mix of productive conifer and elements of broadleaved woodland are proposed, along with areas of open ground.

The species choices will be matched to the soils and ground vegetation, using the guidelines set out in the Forestry Commission's Ecological Site Classification (ESC) Bulletin 124, which uses climatic zone, exposure, soil moisture, and soil nutrient levels to inform the type of woodland most suited to particular areas within the site.

See **Map 7 – Future Species & Habitats**

5.2.1 Proposed Restock Species

While it is important to recognise the challenges posed to forestry in the future from predicted climate change and the increasingly diverse range of pests and diseases afflicting a range of tree species; the soils, climate and topography of the blocks within this particular plan area limit opportunity to significantly diversify the species make-up of the forests.

For the most part this plan proposes continued use of Sitka spruce as the predominant productive conifer species with increased use of more disease resistant Alaskan Lodgepole pine as a nursing mixture.

Despite the species limitations faced, this plan continues to build on work of previous plans to diversify the forests' age structure. This is achieved, where appropriate, by reducing the size of existing coupes and, when restocking, designing in more wind firm edges to increase the stability of neighbouring coupes and therefore allow for a greater range of options for future management decisions.

5.3 Prescriptions

5.3.1 Productive Conifers

The primary function of these forests is generally to produce high volumes of softwood timber of relatively standard quality, predominantly providing for the small roundwood and woodfuel markets rather than the saw-log market.

As such and as per the SLFD restocking strategy a reduced management input will generally be employed; meaning:

- lower cost or alternative ground prep methods
- restocking at average initial density of 2,700 stems/Ha to achieve a final density of between 2,250 and 2,500 stems/Ha with an emphasis on achieving overall stocking
- top-up spraying may be employed based on evidence from the Hylobius Management Support System.
- a restricted SDA process to ensure that the objectives that are set for the site are being met, and to inform any future management desisions.

Sitka spruce will continue to form the primary component of the productive conifer as it is well suited to the site with generally higher yield classes. Sitka will be planted pure where the soils are better, but on the poorer deep peat areas it will be planted in intimate mixture with Alaskan Lodgepole pine where the pine will act as a nurse.

Although Scots pine and larch were planted in various areas previously, due to the threat posed by pest diseases Dothistroma needle blight and *Phytophthora ramorum* eluded to previously, there will be no further restocking carried out using these species.

5.3.2 Mixed woodland

In terms of management input the areas intended as semi-natural and mixed woodland along with designed open space will be managed as per the SLFD restocking strategy using minimal intervention with no/limited ground preparation. Restocking will be at low densities according to site objectives with no SDA process and with low future management input.

5.3.3 Habitat restoration

The bog restoration at Camilty is an area of deep peat with the boundaries of a dome identified from pre-afforestation aerial photography. The crop was identified as in check and not suitable for restock either commercially or as wet woodland due to the nature and depth of the peat. The area is currently retaining water and has some suitable bog vegetation present. Restoration is proposed over two coupes (98018, 15.64 Ha & 98019, 20.62Ha) to be felled/mulched/cleared within the period of this plan (circa 2019-2025).

The intention is to restore the hydrology and eventually the vegetation to an intermediate-lowland raised bog habitat. There is sufficient existing seed source for sphagnum and other bog species to make this successful.

A survey will be carried out to plan the bog restoration including understanding the site drainage and any slopes to plan appropriate drain blocking and lag areas. The crop will be felled in 3 phases and restoration will also be in 3 phases thus spreading the costs of restoration and this can be either externally funded or fit within the current Regional environment budget.

Once the crop is felled restoration will involve ground smoothing and ditch blocking with peat and composite dams, and monitoring and removal of any tree regeneration. The ground smoothing will remove furrows to ensure the water table can be as high as possible across the site and therefore be optimal for appropriate bog vegetation recovery. A review of this proposal will be taken at the mid-point of this plan and confirmed or updated as appropriate.

5.3.4 Water

All operations will follow best practice as detailed in the current Forest and Water Guidelines. Timber extraction will normally avoid crossing burns or main drains, but, where necessary, each crossing point will be piped or bridged. Branches will be kept out of watercourses and trees will generally be felled away from the watercourses. In areas where the old forest drains lead to water courses, these drains will be diverted and silt traps deployed prior to commencement of operations.

5.4 Biodiversity & Environment

5.4.1 Habitat Management

The various woodland and open priority habitats as well as the species they support will continue to be conserved and developed as per the management detailed in the previous and following sections.

5.4.2 Deadwood

The aim is to use natural processes by retaining dead, windblown or snapped stems or those created during previous operations. Deadwood can be trees or limbs in the early stage of decomposition, e.g. veterans or dying individual trees. These should be retained wherever possible to create an even mix of standing, fallen or stacked deadwood.

Deadwood will be concentrated in areas where it will provide the highest ecological benefit, such as;

- Riparian and wet woodland areas
- Long-term retention areas
- Areas of significant existing deadwood

The UKWAS target is for an average of 20 m3/Ha, although it is expected that actual concentrations will vary widely across the site.

Assessed DEP	Area (Ha)	Future Volume 123333 Estimate (m^3/Ha)	Total Future Volume (m^3)
High	137	77	10549
Medium	39	29	1131
Low	430	17	7310
	606		18990

Total future potential is thus estimated at **31.3** m^3/Ha.

Given that a relatively high total volume of deadwood is expected to come from high & medium DEP areas, in line with FES Deadwood Policy the following additional actions should be adopted in the remaining low DEP areas:

- Retaining large-diameter (> 20cm) logs at the edge of coupes following operations.
- Retain windblown trees in appropriate locations

5.4.3 European protected species

As noted in previous sections bats and otters are known to make use of the forest block but the nature of the crop/watercourses is such that these species have not been found to be resident in the forest and principally use the area for foraging. There are no proposals to augment habitats to encourage these species within this plan simply to note these species use of the forest and implement the appropriate checks prior to major forest operations and mitigate instances of recorded activity accordingly.

5.4.4 Other Protected Species

5.4.4.1 Water Vole

Water vole habitat will be managed in line with the Forest district Water Vole Management Plan. This includes monitoring and where necessary maintaining targeted areas along forest ditches and waterbodies as suitable habitat. These areas are identified in the analysis and concept map.

5.4.4.2 Badgers

Badger sett locations are held on record and will be checked prior to major forest operation to assess activity levels with appropriate protection zone put in place as appropriate in accordance with Forestry Practice Guide 9 Forest operations and Badger Setts.

5.4.5 Wildlife (Deer Management)

Full details of proposed deer management can be found within Scottish Lowlands Forest District Deer Management Strategy (in conjunction with the Deer Overview Map), but the main objectives within the plan area are:

- To enable restocking to take place without the need for deer fencing and to achieve a stocking density of 2500 stems per hectare at year five in accordance with OGB 4.
- The District aim for damage allowance is to keep leader damage levels below 10% on all commercial plantations.
- Ensure all Biological resources on the National Forest Estate remain in favourable condition (as per SNH guidelines).
- To maintain a sustainable deer population.

Deer populations will continue to be managed by a contracted stalker. The deer stalker will be kept informed of newly restocked areas to allow appropriate levels of control to be targeted to those areas.

5.5 Heritage

All Scheduled Monuments within the Camilty forest block have their own individual management plan and are monitored on an annual basis and managed in accordance with the Scottish Lowlands Forest District Monument Management Plan 2015.

5.5.1 Castle Greg (SM1933)

Geophysical surveys were conducted in 2009 and later in 2013 which confirmed this is a particularly fine Roman fortlet, in excellent condition, however it has been subjected to several incidents of illegal metal detecting over recent years.

Scheduled monument signage posts are to be installed in the hope that this will discourage illegal activity.

5.5.2 Camilty Hill Enclosure (SM1165)

The scheduled area is circular in plan and measures 24m in diameter. It is currently in a stable condition and is very likely a later post-medieval sheep stall. It is in open moorland and requires almost no management whatsoever other than to maintain the current condition should any change be noted through annual monitoring.

5.5.3 Harperrig Cairn (SM2980)

The cairn has been heavily robbed and is now reduced to a circular grass-grown mound of stones, about 13.7m (45ft) in diameter and 106cm ($3^1/_2$ft) high. The scheduled area has been divided into three portions - that to the W (c. 45%) is on the national forest estate. The entire scheduled area measures c. 25m in diameter. The main objective of management is to ensure the stable condition of the monument. The area is to be kept free of potentially harmful rank vegetation.

5.6 Community & Recreation

The Community closest to the site is widely dispersed and very much rural and as such there is little use of the forest by the local community. The site is mostly used by dog walkers and commercial dog walkers and the occasional horse rider and for this reason the intention is to monitor informal path routes for increased use and managed accordingly.

This situation will be reported on at the 5 year review of this LMP. The forest blocks only carpark is used mostly by commercial dog walkers and occasional visitors but is subject to antisocial activities and fly tipping. The resources required to continue to maintain this carpark are currently overstretched and alternative solutions are being explored to enable this carpark to remain open.

5.7 Critical Success Factors

To achieve the main objectives of the design plan the following should be completed:

1. The clearance and restoration of 36.10 Ha of intermediate/raised bog.

2. Removal/felling of disease susceptible species in line with the management plan and the restocking of disease resistant commercial species where appropriate conditions prevail ensuring a financial viability of the site for the future.

3. Vegetation management for identified areas of water vole activity, to maintain and expand the range of existing habitats.

4. Continued management of transitional woodland areas adjacent to Cobbinshaw moss to encourage and select preferred tree and plant species.

5. Carpark are reduction, significantly reduces resource requirements.

Changes Summary Table 5.1

Habitat type or change	Effect of change	Area (Ha)	Productive conifer reduction (Ha)
Intermediate/raised Bog Restoration	Reduction in productive conifer Loss of woodland cover	36.1	36.1
Transitional Woodland	Reduction in productive conifer continued woodland cover	6.7	6.7
Changes through Land Management Plan		42.8	**42.8**
Windfarm Development infrastructure Changes approved through the Town & Country Planning Act	Once constructed and leased the footprint area will no longer covered by this plan and will be removed from this plan by an amendment	23.3	17.93
Changes from Wind Farm Development		23.3	**17.93**
	Total loss of productive area (Gross)		**60.73**

Appendix I: Land Management Plan Consultation Record

Statutory Consultee	Date contacted	Date response received	Issue raised	Forest District Response
West of Scotland Archaeological Service	11/12/18	09/01/19	Lack of information in the LMP pertaining to unscheduled features	LMP updated to include this information and WoSAS informed accordingly.
West Lothian Council	11/12/18	N/A	No Response	
SNH	11/12/18		No Objections subject to all good practice guidance with respect to forestry operations and protected habitats/species being followed.	N/A
Scottish Water	11/12/18	17/01/19	Attention brought to additional guidance for Forestry and SW Assets *'Guidance on Forestry Activities near Scottish Water Assets'*, with a list of SW assets within the site.	The operational workplan process takes this information into consideration and appropriate action is taken. Assets noted held on record.
RSPB	11/12/18	08/01/19	Majority of proposals welcomed	N/A
SEPA	11/12/18	09/01/19	Referred to UK Forest Standard and notes on restocking deep peat areas.	All guidance in this regard will be adhered to accordingly.
SPEN	11/12/18	N/A	No Response	
Pentland Hills Regional Park	Jan 19	N/A	No response	

Appendix I: Consultation Record Continued

Community Consultation	Date contacted	Date response received	Issue raised	Forest District Response
Via E-consultation Postcards delivered to nearly 70 rural residencies and posters posted in community centres, libraries, clubs, local shops and schools. Areas covered • Harburn • Harperrig • West Calder	Consultation Period: 19/11/18 to 19/12/18	04/01/19	1. Request to retain the carpark at Crosswoodburn just off the A70 2. Request to improve the condition of the asphalt road to Colzium 3. Concerns expressed regarding the safety roadside regeneration along the Colzium road 4. Request to provide a footpath at the Harperrig end of the block	1. The decision to reduce remove this car park as proposed in the draft LMP has been rescinded as further development of this facility will be reviewed with the construction of the wind farm. 2. FES Civil Engineers to provide a report to residents on condition and repair costs. 3. Tree inspection carried out and FES Community Services instructed to carry out clearance works. 4. FES Community Services to establish level of interest and explore options with community.
'A. Hamilton Crosswoodhill Farm (Recently acquired the lands at Colzium and Crosswoodburn.)	Meeting held at West Calder Office 18/12/18		1. Condition of march fences. 2. Concerns regarding retention/condition of outlying forest blocks with an offer to assist and facilitate access over land holding. 3. Concerns regarding the proposals for Crosswoodburn carpark	1. This has been brought to the attention of the operations team and details have been exchanged to facilitate a resolution. 2. These blocks have been moved into Phase 1 felling, subject to a successful outcome for access provision. 3. The decision to reduce remove this car park as proposed in the draft LMP has been rescinded as further development of this facility will be reviewed with the construction of the wind farm.

Appendix II: Tolerance Table

	Adjustment to felling period	Adjustment to felling coupe boundaries	Timing of restocking	Change to species	Windthrow response	Adjustment to road lines	Designed open ground
FC Approval not normally required (record and notify FC)	Fell date can be moved within 5 year period where separation or other constraints are met	<10% of coupe size.	Up to 5 planting seasons after felling (allowing fallow periods for hylobius).	Change within species group E.g. Scots pine to birch, Non-native conifers e.g. Sitka spruce to Douglas fir, Non-native to native species (allowing for changes to facilitate Ancient Woodland policy).	**Low sensitivity area** Where windthrow represents more than 40% of the crop the area, including standing trees may, be felled plus up to 5Ha beyond in order to seek a windfirm edge.	**Low sensitivity area** Creation of turning points/ loading bays. Deviation of <100m either side of the predicted centre line of the road/ track. **High sensitivity area** Deviation <75m in either direction from centre of road/track.	Location of temporary open ground e.g. deer glades if still within overall open ground design Increase by 0.5 ha or 5% of area - whichever is less
Approval by exchange of letters and map		10-15% of coupe size.	5 years +	Change of coupe objective that is likely to be consistent with current policy (e.g. from productive to open, open to native species).	**Low sensitivity area** As above to include 5-10 Ha of standing crop to seek a windfirm edge. Areas where windthrow represents <40%. **High sensitivity area** Areas where windthrow represents <60%.	**Low sensitivity area** Deviation of 100-150m in either direction from centre of road/track. **High sensitivity area** Deviation of 75-100m in either direction from centre of road/track.	Increase of 0.5 ha to 2ha or 10% - whichever is less Any reduction in open ground
Approval by formal plan amendment	Felling delayed into second or later 5 year period Advance felling into current or 2nd 5 year period	>15% of coupe size.		Major change of objective likely to be contrary to policy, E.g. native to non-native species, open to non-native,	**Low sensitivity area** As above. Windblown area + an area>10 Ha to find a windfirm edge. **High sensitivity area** Felling of standing trees beyond the area of windblow.	Deviations exceeding the above.	More than 2 ha or 10% Any reduction in open ground in sensitive areas Colonisation of open Areas agreed as critical

Appendix III. Design Plan Brief

Brief & Objectives

Introduction

The work of Forestry Commission Scotland (FCS) is guided by the Scottish Forestry Strategy 2006, which sets out seven Key Themes:-

- Climate Change
- Timber
- Business Development
- Community Development
- Access & Health
- Environmental Quality
- Biodiversity

From this Strategy, Scottish Lowlands Forest District prepared the Scottish Lowlands Forest District Strategic Plan 2009-2013 and more latterly the 2014 -2017 District Strategic Plan which draws upon the district's priorities and actions Identified in the Scotland's National Forest Estate and strategic directions on the most important strands of the Key Themes relevant to the forest areas we manage and sets out the policies and objectives under which other District plans are prepared and monitored.

In preparing the Brief and Objectives for this Land Management Plan (LMP), issues were grouped under these Key Themes and assessed for their importance. Those relevant are set out in Table 1 below.

Table 1. Relevant issues under the SFS Key Themes

SFS Key Theme	Issues assessed as relevant by staff team for the Camilty LMP	Scottish Lowlands Strategic Plan Reference
Climate change	• Provide timber for national long-term contracts for biomass supply including where suitable the provision of forest residues. • Adapting to Climate Change – with site suited species choices and habitat connectivity	1.03, 1.06
Timber	• Productive forestry with quality timber production • Improvement of access road quality	2.06, 2.07, 2.09, 2.11,
Community development	• Limited scope for community development as the site is located within a rural area with a very dispersed community. •	4.05, 4.09, 4.10
Business Development	• Income diversification, Development of an 8 Turbine windfarm	3.01, 3.06, 3.07, 3.08 3.13
Access & Health	• Maintain entrances and car park to make site attractive for transient recreation. • Maintain existing informal access routes for occasional recreation opportunities.	5.01
Environmental quality	• Scheduled monuments (archaeological remains) • Monitor condition and manage SM Site accordingly. • Manage watercourse corridors to remove conifer elements.	6.07, 6.08
Biodiversity	• Restore selected intermediate lowland raised bog and associated habitats • Manage habitat for water vole • Deer Management	7.10 7.18

Following the analysis above, Table 2 sets out the Brief and Objectives agreed for developing the management proposals for Camilty

Table 2. Initial Brief and Objectives for developing management proposals

Brief	Objectives
Maximise plantable ground and suitability of tree species	• Plant site suited species • Maximise the productivity of species used • Suitable pest management to ensure success of planting and regeneration
Preserve important landscape and historic features	• Preserve the most important views within the site and enhance where possible • Protect known historic features – Roman fortlet SAM, sheep fanks
Increase biodiversity value	• Develop options for expansion of riparian woodland and habitat • Explore opportunities for intermediate/lowland raised bog restoration. • Monitor and manage water vole habitat
Landscape	• Enhance roadside corridor experience
Protect informal access	• Protect informal access routes

Appendix IV: Maps

The table below lists the Maps which support and form part of this Land Management Plan.

1. Location
2. Context
3. Stock
4. Key Features & Survey
    - 4a. Soils
    - 4b. SNR (soil nutrient regime)
    - 4c. SMR (soil Moisture regime)
    - 4d. DAMS (detailed aspect method scoring)
    - 4e. Heritage Features
5. Analysis and Concept
6. Management
7. Future Species & Habitats

Appendix V: Relevant Reference Documents

In addition to those already referenced within the main text the following key policy or guidance documents which have influenced this plan are listed here:

- UK Forestry Standard (4th Edition)
- UK Woodland Assurance Standard 4.0
- Scottish Forestry Strategy 2006
- Scottish Lowlands Forest District Strategic Plan 2009-13 & 2014–17
- Central Scotland Forest Strategy
- SNH Landscape Character Assessments for 'The Lothians'.
- West Lothian Local Plan 2009 (adopted)
- West Lothian Local Development Plan 2015 (proposed)
- Forestry Commission Bulletin 62 – Silviculture of Broadleaved Woodland
- Forestry Commission Practice Guide – Deciding Future Management Options for Afforested Deep Peatland.
- Forestry Commission Practice Guide – Managing Open Habitats in Upland Forests
- Forestry Commission Scotland - Strategy for Lowland Raised Bog and Intermediate Bog on the National Forest Estate in Scotland 2012-2022
- Forestry Commission Practice Guide 8 – The management of semi-natural wet woodlands
- Minimum Intervention Areas - Guidance for their selection and management on the NFE in Scotland
- Long-Term Retentions - Guidance for their selection and management on the NFE in Scotland