

Forestry and Land Scotland Coilltearachd agus Fearann Alba

# Appendix VII: Glenisla Woodland Creation Plan

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# **VII Introduction**

This document outlines the Woodland Creation proposals which forms part of the Glenisla LMP. It is recommended that Appendix VII should be read in conjunction with the Glenisla Land Management Plan for context.

#### Scope

This document covers only those areas identified for Woodland Creation. These areas can be identified in the Future Species & Woodland Creation maps at the end of this Appendix and the species breakdown is summarised in Table 1 - Proposed Woodland Creation by Coupe (2024 – 2033).

#### Location

The forest of Glenisla lies to the east of the village of Glenisla and is located 15 km north-east of Blairgowrie. In total, Glenisla Forest is 2,082.07 hectares.

# **Aims and Objectives**

#### Aims

The broad strategic aims of the Glenisla block are:

- Productive timber a forest resilient to climate change •
- Carbon sequestration – to ensure that Scotland's Forests and Lands maximise as far as appropriate carbon sequestration.
- Increase the area of broadleaves, as the forest it is currently below UK Forest Standard (UKFS) • requirements.
- Biodiversity and Ecosystem Services maintain and enhance existing habitats for species and • protect existing ecosystem service functions.
- Recreation maintain the existing recreation use that is experienced in the forest. ٠

# **Objectives**

- The scope of this plan is to increase the proposed area of woodland by 284.41 ha.
- Connect existing open areas through habitat corridors by establishing low density planting. •
- Plant broadleaves along riparian areas to protect watercourses and to improve the water environment for associated aquatic species.
- Enhance water quality leaving the forest and to protect the Drinking Water Protected Area (DWPA).
- Increase the carbon sequestration potential of Glenisla forest.
- Meet the UKFS by increasing the broadleaf planting area.
- Help meet Scottish Government tree planting targets.

In addition, the above objectives will help to build on those set out in the previous Glen Isla LMP, as summarised in Table 2.



# Summary of proposals

# Proposed Woodland Creation by Coupe 2024 – 2033

Coupe	Species 1	Area (ha)	Species 2	Area (ha)	Species 3	Area (ha)	Species 4	Area (ha)	Open Area	Total Area (ha)
Reference									(ha)	
35000	BI	7.39	NMB	4.04	MC	2.56	-	-	3.31	17.30
35007	BI	0.64	ALD	0.10	-	-	-	-	0.73	1.47
35010	BI	5.14	NMB	5.14	-	-	-	-	6.86	17.14
35012	NMB	14.23	SP	1.05	BI	0.63	-	-	9.89	25.8
35014	NMB	9.81	-	-	-	-	-	-	14.72	24.53
35034	BI	2.87	ALD	1.38	ASP	1.38	SP	1.25	6.87	13.75
35038	BI	14.94	NMB	5.80	MC	4.20	SS	2.28	21.32	48.54
35040	BI	0.55	SP	0.31	NMB	0.17	ASP	0.14	0.55	1.72
35053	BI	8.47	NMB	8.47	-	-	-	-	11.30	28.24
35080	BI	7.60	SP	1.02	ALD	0.97	-	-	7.07	16.66
35102	NMB	0.98	-	-	-	-	-	-	0.25	1.23
35103	BI	1.62	NMB	1.08	-	-	-	-	2.69	5.39
35108	BI	0.50	ALD	0.50	-	-	-	-	4.01	5.01
35113	BI	1.88	SP	0.63	ALD	0.63	ASP	0.63	2.48	6.25
35114	BI	0.20	ALD	0.07	SP	0.07	ASP	0.07	0.25	0.66
35115	SS	0.78	BI	0.57	NF	0.34	ALD	0.11	0.45	2.25
35117	BI	4.97	SS	2.24	MC	0.96	ALD	0.80	8.71	17.68
35122	BI	1.85	SP	0.93	NMB	0.93	BL	0.93	4.61	9.25
35123	NS	0.39	BI	0.22	ALD	0.22	SP	0.1	1.79	2.72

Coupe	Species 1	Area (ha)	Species 2	Area (ha)	Species 3	Area (ha)	Species 4	Area (ha)	Open Area	Total Area (ha)
Reference									(ha)	
35125	BI	0.89	-	-	-	-	-	-	2.07	2.96
35126	NS	2.63	BI	1.60	NMB	0.96	SS	0.74	-	5.93
35127	SP	2.02	BI	1.34	-	-	-	-	3.36	6.72
36002	BI	2.92	ОК	0.74	NMB	0.72	ASP	0.61	1.07	6.06
36006	BI	2.57	NMB	1.28	SP	0.64	-	-	1.93	6.42
36011	BI	0.80	NMB	0.40	SP	0.20	-	-	0.61	2.01
36018	BL	0.44	SP	0.08	Mace P	0.08	SS	0.04	3.94	4.58
36033	BI	1.09	NMB	0.18	-	-	-	-	0.54	1.81
36101	BI	0.62	NMB	0.31	SP	0.16	-	-	0.46	1.55
36104	ОК	0.39	NMB	0.16	-	-	-	-	0.23	0.78
Woodland Creation total area									284.41	

Table 1: Proposed Woodland Creation by Coupe 2024 – 2033

# **Ground preparation & Stocking Densities**

The FLS Guidance on Ground Cultivation for Forestry and Land staff will be adhered to in decisions related to ground preparation. This FLS guidance recommends a range of ground preparation methods, and these are selected on an area-by-area basis depending on soils and vegetation on site at the point of commencement of the woodland creation operation. Environmental surveys will be undertaken by the FLS Environment Team prior to the commencement of ground preparation operations.

In general, areas to be restocked with a commercial conifer crop on gleyed soils will likely use hinge mounding, whilst on podzols this will likely be via patch scarification. Ground preparation for broadleaves would likely be done via screef planting. We aim to plant commercial conifers uniformly to a stocking density of 2,700 stems / ha to achieve 2,500 stems / ha by year 5. The broadleaf restock areas will be planted at 1,600 stems / ha and FLS will undertake Stocking Density Assessments to ensure establishment to the specified tree densities.



# Summary Table of Objectives from previous LMP:

	Objectives
Brief	
Minimise impact of forestry on the landscape	Retain stable thinned crops beyond normal felling age to improve and vary the forest structure and reduce the visual impact of clearfelling. Improve the edge and internal views by planting more broadleaves. Fragment the upper margin to improve the transition to open moorland.
Maintain production of quality timber	Carry out continuing programme of thinning and clearfell restock according to good silvicultural practice for species selection and planting density
Maintain and enhance existing natural habitats	Improve the moorland and forest edge to provide a better habitat for species such as Black grouse. Improve the riparian zones by planting more broadleaved woodland especially in the lower
Preserve historic features	Protect all known features including Scheduled and unscheduled Ancient Monuments

Table 2: Summary of objectives from previous Land Management Plan

# **Site Description**

#### Soils

There is considerable variation in the soil types in the proposed Woodland Creation areas. On plateaus on the highest ground there are some areas of deep peat / blanket bog, and these will not be planted with trees. As would be expected topographically, below these areas the soils transition and are predominately a mixture of podzols, ironpans, upland brown earths and gleyed soils. In the valley bottoms the soil types within the riparian areas are typically groundwater gleys. There are small discrete areas where it sits wetter for longer due to aspect and impeded drainage.

# Water & hydrology

The headwaters of several watercourses originate approximately 1 mile to the north of the forest. These are the Finlet Burn and Glen Taitney Burn. The latter becoming the Glen Damff Burn, and these burns discharge into different catchments. It is key to note the importance of these burns, as there is hydraulic connectivity with a Drinking Water Protected Area (DWPA). Other burns, the Muckle Burn and

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Newton Burn merge with the River Isla once they exit the forest and the River Isla becomes part of the River Tay Special Area of Conservation (SAC), approximately 6 miles south of Glenisla forest at a location just south of Loch of Lintrathen.

Tree planting on open ground and riparian areas will contribute to a small reduction in the slowing of surface water run-off and will help to reduce soils particles being washed into water courses. Current land use for all the proposed areas of Woodland Creation is on open ground. There are some small areas where Sitka spruce regen is establishing and Woodland Creation will help to restrict and limit this.

# Climate

The site is described by Ecological Site Classification (ESC) terminology as between Cool - Highly exposed and Wet and Cool – Sheltered. These ESC predictions are typical of the Angus Glens area.

- Elevation: 300 m 650 m
- Accumulated temperature: 590 1050 C
- Moisture deficit: 0 90 mm
- DAMS: 10 19

ESC suggests the Soil Moisture Regime (SMR) for the Woodland creation areas range from "Fresh" & "Slightly Dry" in the lower lying areas at around 300 m. On high altitudes on open ground, this is categorised as "Wet". Within riparian areas the SMR is defined as "Moist" and "Very Moist", likely due to elevated groundwater from peaty gley soils.

# **Designated Sites**

None of the proposed Woodland Creation sites have been identified as located within a Designated Area. However, a length of 1,200 m of march fence does bound the Cairngorm National Park, and there is also hydrological connectivity with the river Tay SAC, with this riparian designation commencing six miles downstream of the forest.

#### **Historic Environment**

There are no Scheduled Monuments within or adjacent to the forest. The blocks include and border with several historic rectilinear field systems and there are a small number of remnant shielings and historical agricultural remnant buildings within the forest.

FLS have owned Glen Isla since 1949 and the proposed new planting areas have been cross-checked against archaeological records held by FLS. These are records of both scheduled and non-scheduled heritage features and designations derived from the FLS Forester Web GIS system. This system is

populated with our own GIS information, as well as other GIS layers shared by external organisations, such as Historic Environment Scotland. The FLS Environment Team also check Pastmap as part of the process of protecting the historic environment.

Our in-house Environment Team undertake further checks via the FLS Work Plan system which helps to protect and conserve "important environment features" in line with UKFS and UKWAS guidance. Prior to the actual commencement of forestry operations such as new plantings, the FLS Environment Team again cross-check our Forester web system for records of both scheduled and non-scheduled heritage features and designations.

Archaeological walkover surveys may also be undertaken, so significant heritage features are known and evaluated prior to their integration into a work plan. Any features found will be provided with suitable buffer zones as per the FLS Archaeology and Historic Environment Practice Guide and FLS business rules, in full compliance with UKWAS and UKFS.

### **Social Factors**

Glenisla forest has low visitor numbers. In terms of recreational infrastructure, there is a small visitor car park at Freuchies, which links to a core path which follows the forest roads. This is a circular route, passing adjacent to Loch Shandra and returning via the quarry at NO 2249 6577 on the Glenmarkie to Freuchies forest road. The Cateran Way passes just outside of the forest on the western boundary and is accessible via a path from Loch Shandra.

There is an additional core path which links Glenisla with Glen Prosen and enters the forest at NO 2450 6413. This route mainly follows forest roads in the block. The proposed Woodland Creation sites will not impact or restrict any of these routes.

# Utilities and Infrastructure: Water

There are private water supplies in the forest and the proposed new riparian planting will help to protect these. These riparian areas will be stocked with broadleaves helping to protect both water quality and water supplies, and this will mean minimal requirement for operational mechanised machines in these areas.

As previously highlighted, there is hydrological linkage with a DWPA, and low-density riparian planting will help to protect and improve water quality entering this area.

# **Electricity**

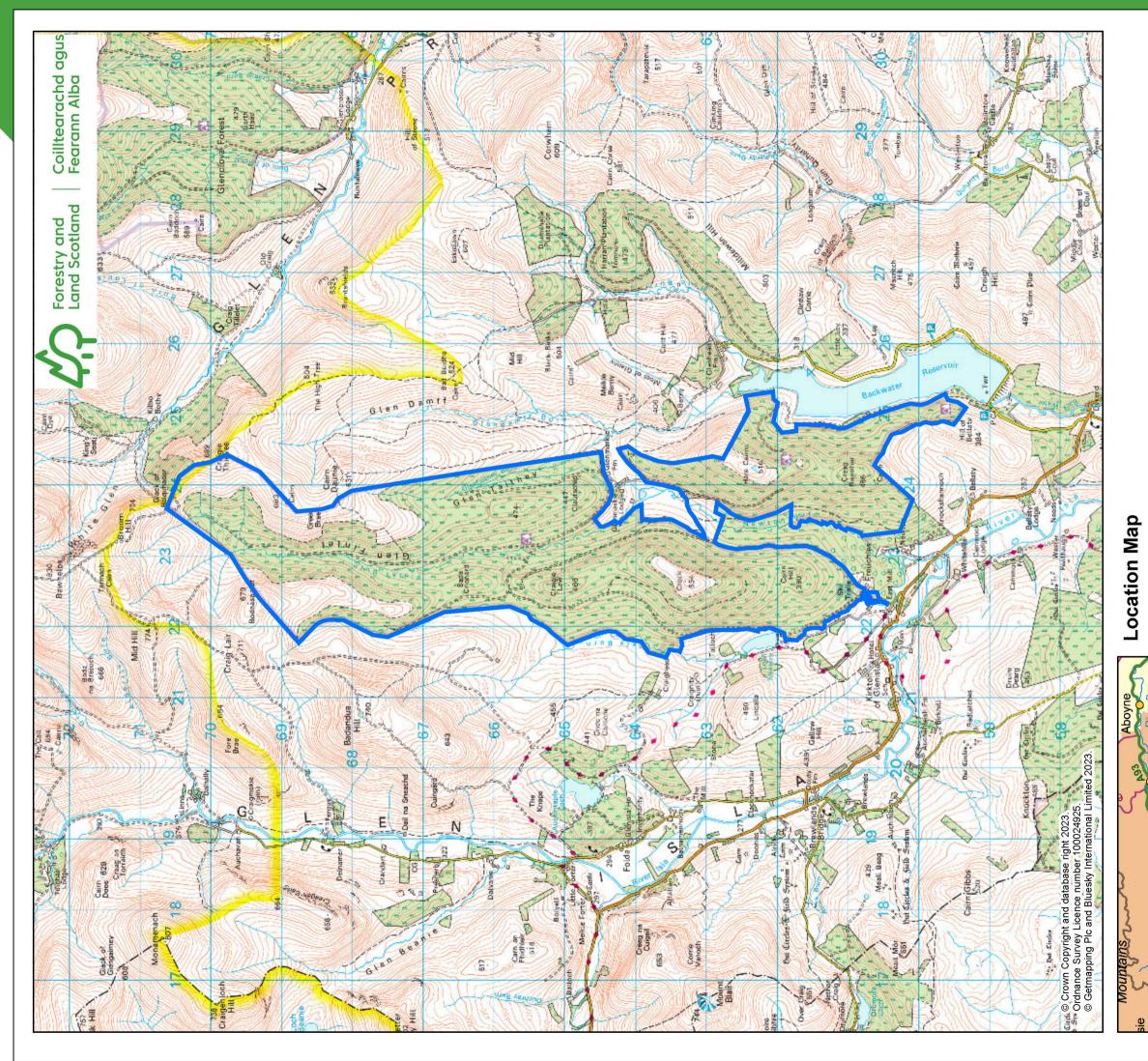
The only powerlines entering the block serve the communities of Freuchies and Glenmarkie. These skirt the edge of the forest and do not traverse through the block. There is only one Woodland Creation coupe where powerlines and new planting would meet, and planting around the wayleave will be managed accordingly to mitigate risk.

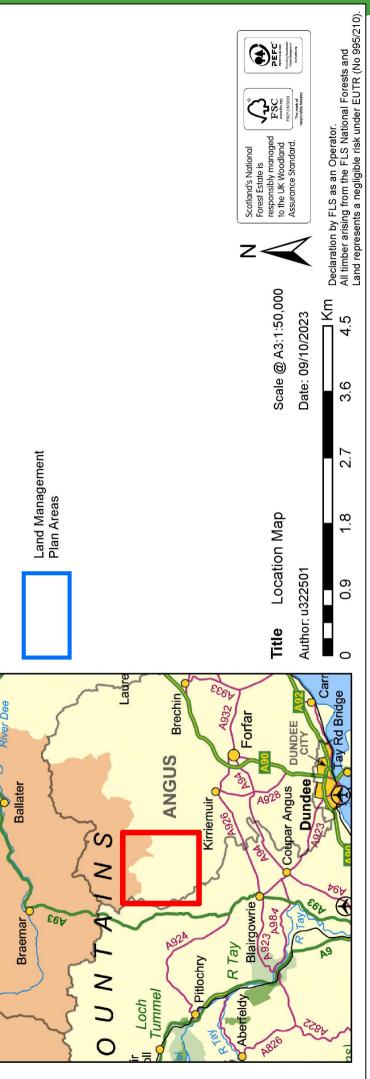
# Site Ecology: Habitats

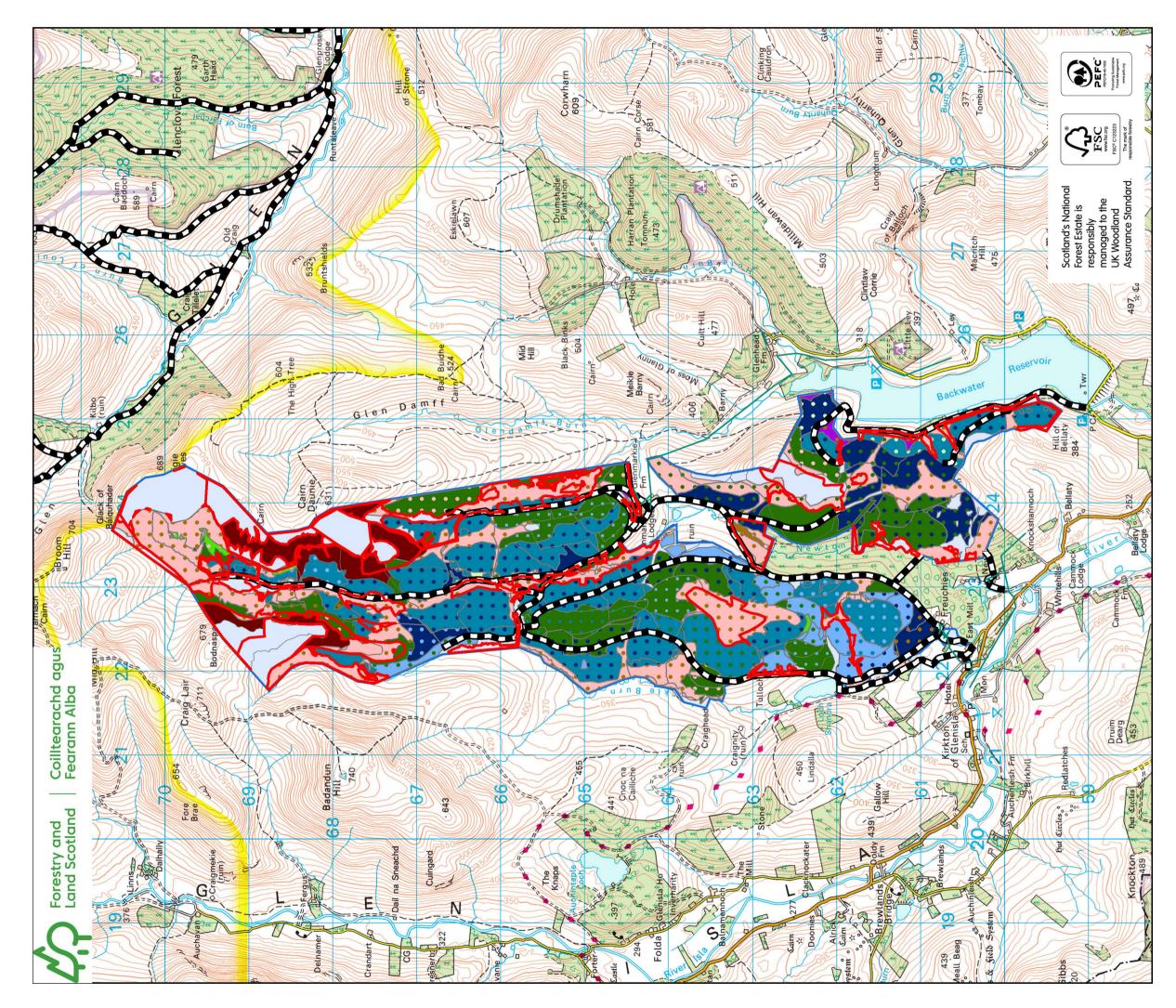
A number of proposed Woodland Creation coupes have been identified as recorded on the FLS Important Habitats Polygons maps (see New Planting & Priority Open Habitats maps at the end of this appendix). The proposed planting stocking densities and retention of areas of open ground reflect the quality of the habitat and potential to maintain the integrity of these habitats. The important habitats are defined as those in Table 3 below:

	Important Habitat Type							
	Upland Heathland	Acid Grassland	Neutral grassland	Other UK BAP				
Woodland	35007 35012	35012 35014	35034	35034				
Creation Coupe	35053 35080	35038	35113	35038				
number	35125	35126	35123	35115				
	35127			35117				
				35122				

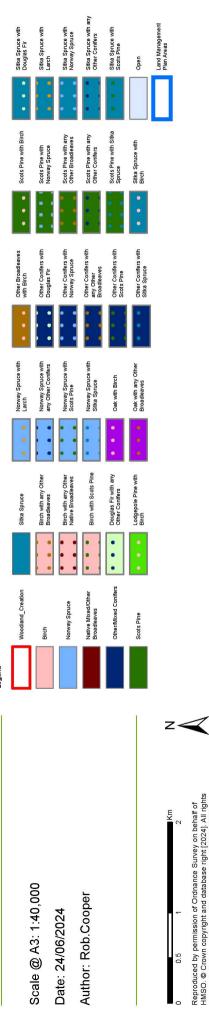
Table 3: Woodland Creation Coupes & Habitat type

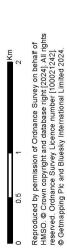


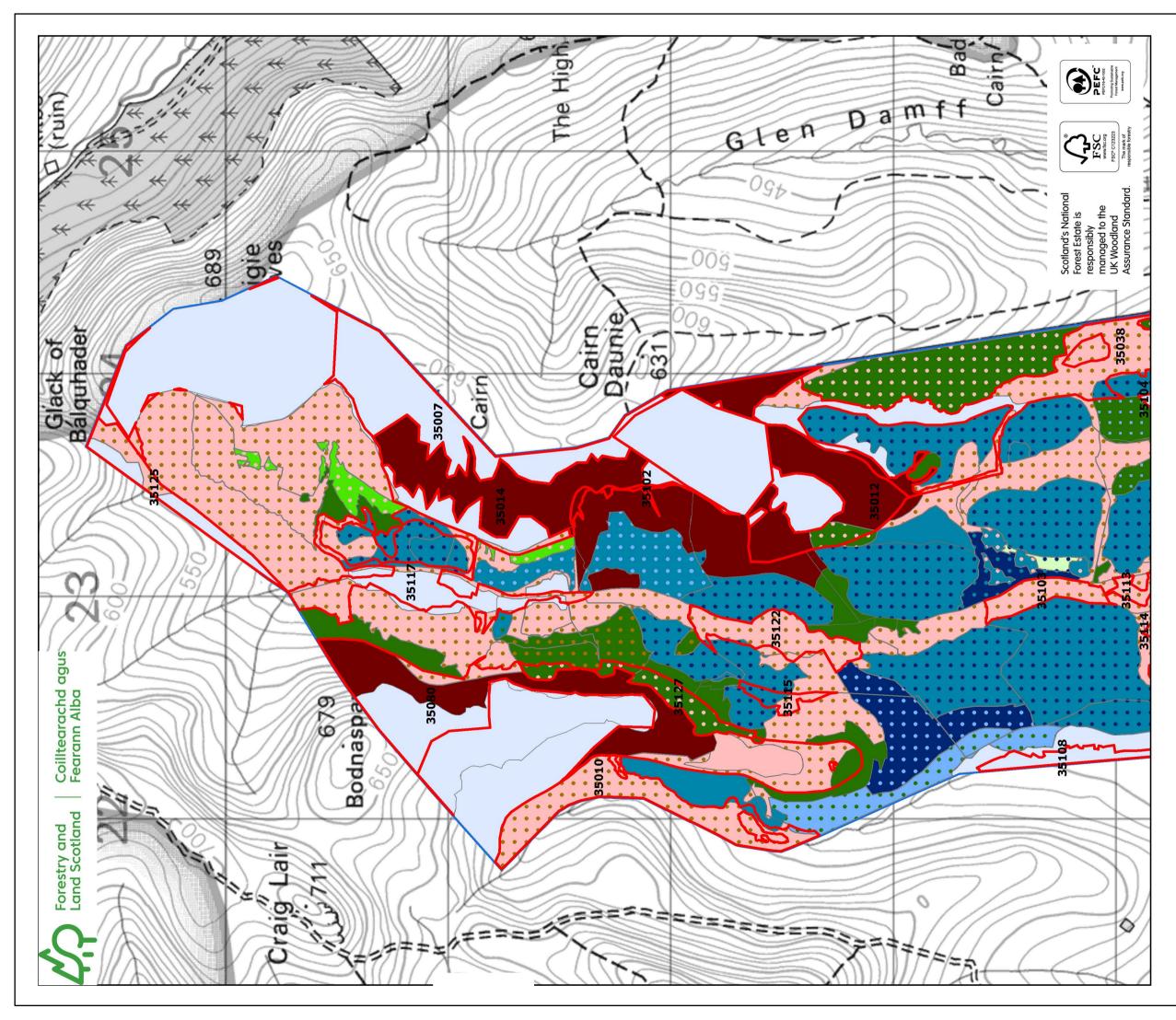




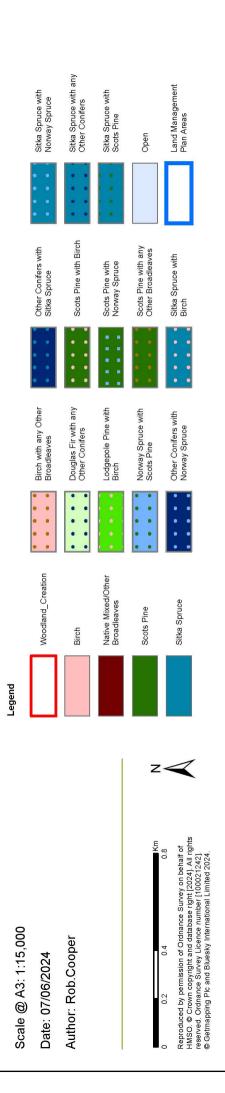


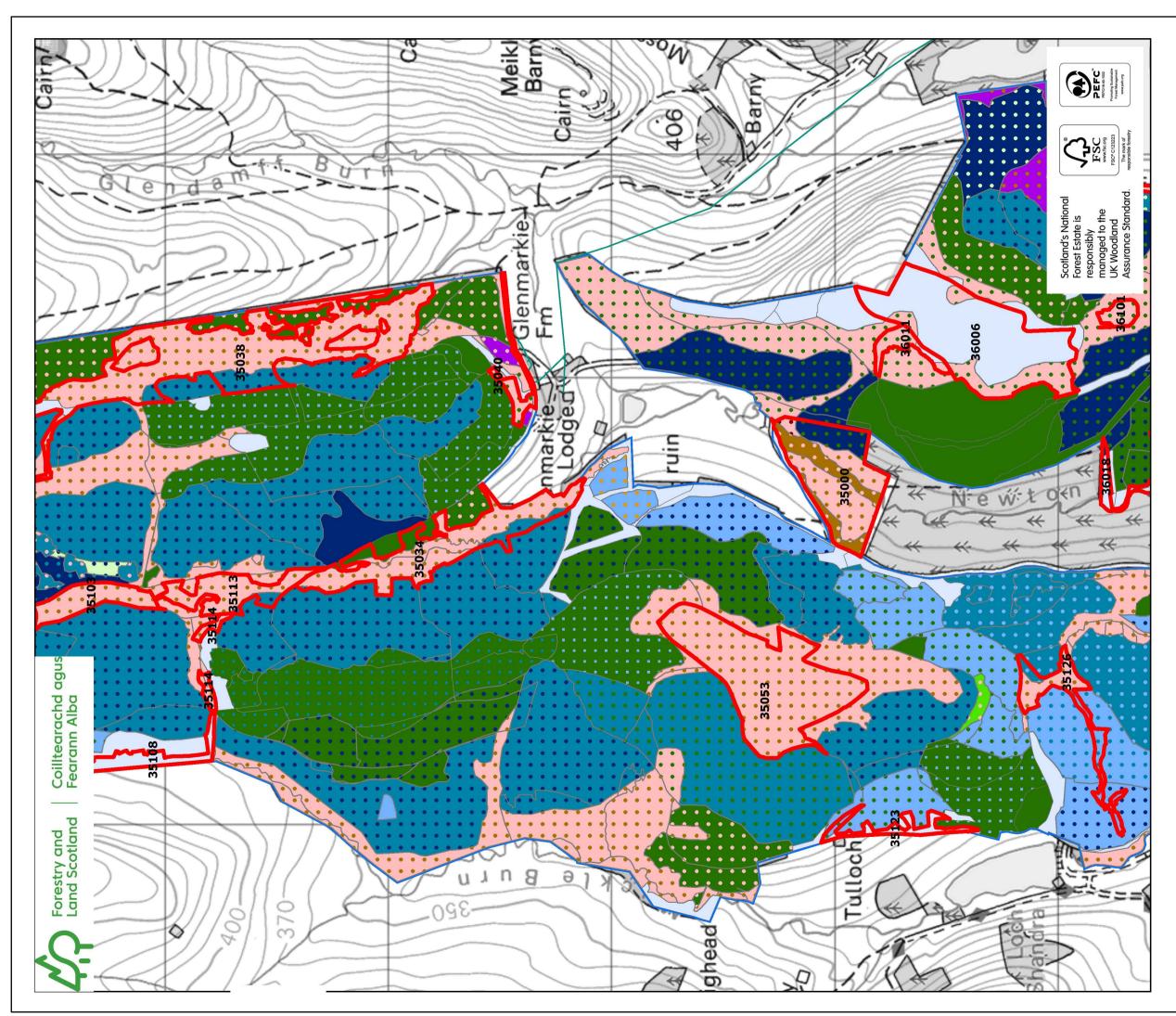




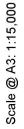


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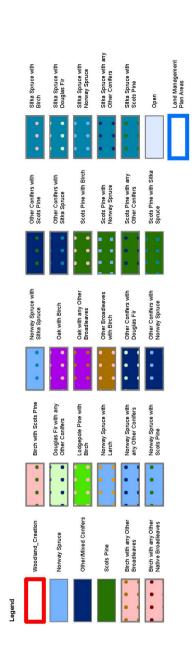


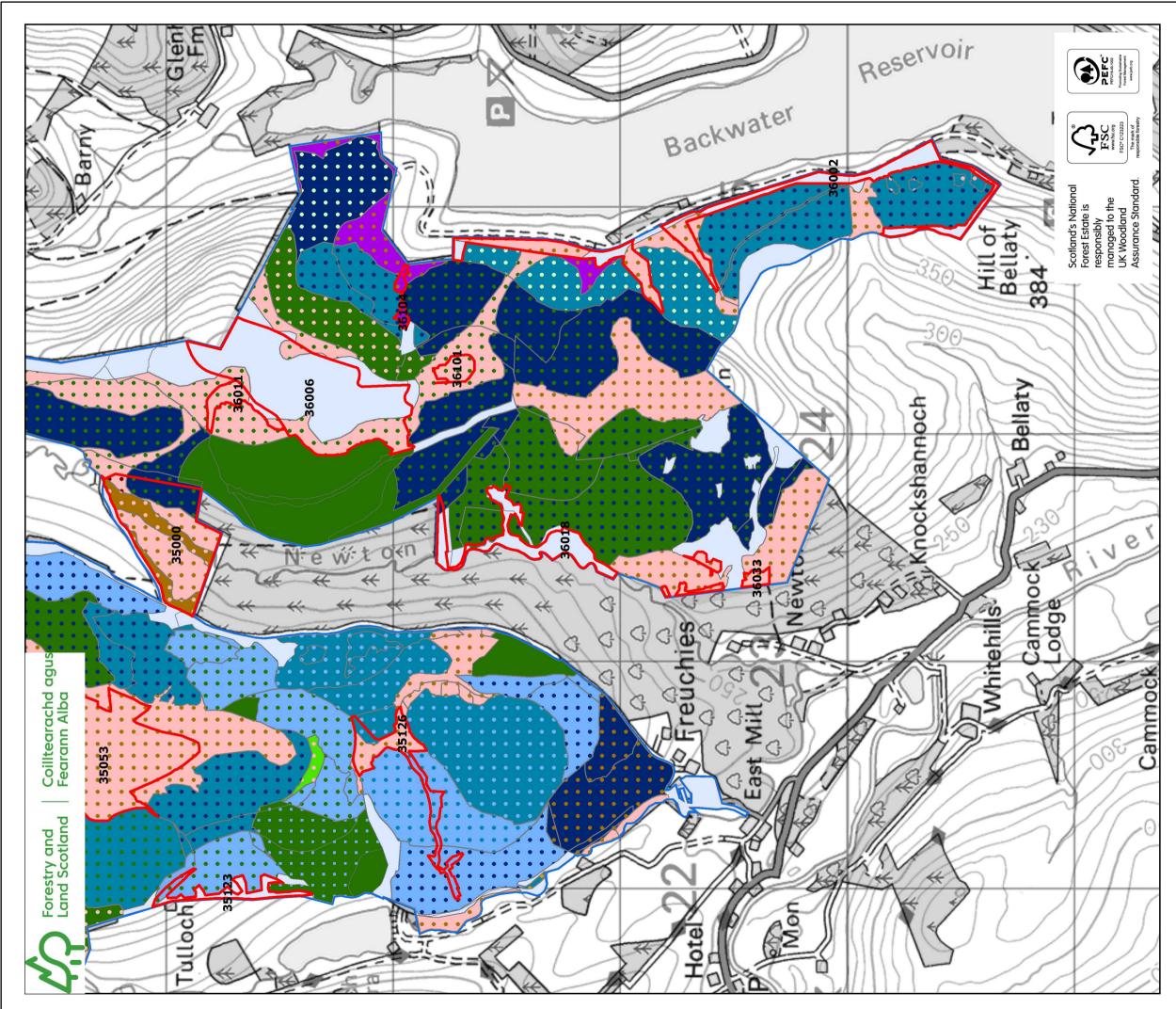
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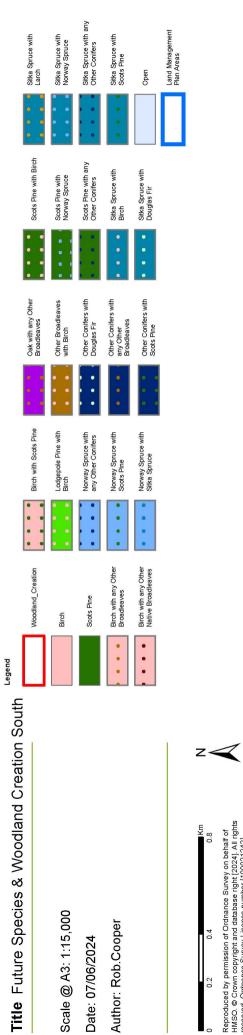
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