

Strathspey Land Management Plan 2021 - 2031

Forestry and Land Scotland Mission

“To look after Scotland’s forests and land, for the benefit of all, now and for the future.”



North Region

Strathspey Land Management Plan

Plan Reference No: 030/517/430

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Plan Expiry Date: 28 June 2032.

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



Promoting Sustainable Forest Management
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Strathspey Land Management Plan 2021 - 2031

Contents

1.0 Summary of Proposals	4
1.1 Vision	4
1.2 Strategic Context	4
1.3 Background.....	6
1.4 Land Management Plan Objectives	6
1.5 Recreation.....	6
1.6 Stakeholders.....	7
1.7 Deer Management	7
2.0 FCS Regulatory Requirements.....	8
2.1 Activity Summary and Monitoring Table.....	8
2.2 Tolerance Table	16
3.0 EIA scoping form	17
4.0 Introduction.....	20
4.1 The existing landholding	20
4.2 Setting and Context	20
5.0 Whole Plan Objectives	21
5.1 Management.....	21
5.2 Vulnerable Habitats.....	21
5.3 Water Management and Flooding.....	21
5.4 Private water supplies.....	23
5.5 Recreation.....	23
5.6 Landscape	25
6.0 Analysis and Concept- See Map 12- Management Zones	32
6.1 Mature Non-native Conifers (671ha).....	32
6.2 Scots pine plantation (2879ha)	34
6.3 Sitka spruce less than 30 years old (83ha).....	35
6.4 Mature Caledonian Pinewood (2500ha).....	36
6.5 Open Ground (2497ha).....	37
6.6 Felled land awaiting restocking (418ha).....	38
6.7 Young non-native conifer plantations (less than 30 years old) (59ha)	39
6.8 Riparian Zone	40
6.8.4 Management Prescriptions	41
6.9 Peatland Restoration on forested ground (13ha)	41
6.10 Vulnerable Habitats (4087ha) see map 4.....	42
7.0 Land Management Plan Proposals.....	44
7.1 Species Composition of plan area	44
7.2 Species composition of forest	44
7.3 Age Composition.....	46
7.4 Land Use.....	47
7.5 Scale of Proposed Felling Areas.....	47
7.6 Production Forecast for previous LMP and this LMP	48

Strathspey Land Management Plan 2021 - 2031

Strathspey Land Management Plan 2021 - 2031

1.0 Summary of Proposals

1.1 Vision

A thriving, diverse habitat of forest, open land and wetlands providing high quality recreation with a sustainable tourist and forest economy

HM Stephen and A Carlisle wrote "The Native Pinewoods of Scotland" a study of the Caledonian Pinewood remnants first published in 1959. It was one of the first books that provided a summary of all Caledonian Pinewood in Scotland and mapped the extent and type of woodland. It provided an account of the history and ecology of Caledonian Pinewood and details on each area. Stephen and Carlisle summarised what the vision should be for a Caledonian Pinewood below:

"The aim should be say over a century , to build up gradually a reasonable balance of age-classes, old and young, so that there will always be a succession of trees of different ages. The structure should be semi-irregular as it is today in some of the larger and better preserved woodlands, a mosaic of groups and stands of varying extent up to a few acres, each consisting of trees of about the same age and together providing a range in age from the youngest to the oldest, but not necessarily a continuous range of age or any mathematical balance in age or size class, which is unusual in natural pinewoods as a whole. [...] Such a forest would also preserve its associated natural non-tree flora and fauna, and come closer to what the natural pinewoods were like some two to three centuries ago before heavy exploitation took place."

Stephen and Carlisle 1959

50 Year Vision (2070)

All non-native conifers have been felled and extracted from within the Caledonian Pinewood. The pinewood tree species include Scot's pine, birch, juniper, rowan, alder, oak, aspen and other native broadleaves. Scot's pine plantations are continuing to be thinned to provide timber under low impact silvicultural systems which are regenerating well. Non-native conifers exist in strategic areas outwith the Caledonian Pinewood such as Norway spruce for improved squirrel habitat. The diverse tree species provide a forest that is resilient to climate change and pests and diseases. A wide variety of ground flora are flourishing and peatland areas are actively accumulating sphagnum moss, supporting a wide variety of wetland plants and all restoration operations are complete. Both forest and peatland habitats are growing and storing carbon. A diverse population of animals and birds are using the habitats including black grouse, capercaillie, golden eagle, Scottish crossbill, osprey, goshawk, red squirrel and pine marten. Red and roe deer are at a density that allows trees to regenerate and deer to maintain good, healthy condition and fecundity. Additional areas of forest have colonised above the treeline from 2020 creating a gradual progression from forest to montane scrub to open hill. The forest has been restructured creating stands of various ages and designed to fit with the landscape scale

and topography. Recreation is managed to protect areas for nature conservation, especially ground nesting birds. The forest is an internationally recognised site for high quality, "wildness" visitor experiences for a wide variety of outdoor recreation. Tourism businesses allow continued employment of local communities and boost the local economy. Riparian woodland is developing alongside all main water courses which has improved the flora and fauna within and around the water courses. Natural flood plain woodland has established to reduce flood risk on the River Spey. FLS is maintaining partnership working with surrounding land owners to coordinate management and habitat restoration on a landscape scale.

200 Year Vision (2220)

The pinewood is in a near natural state with diverse tree species and age class. Gaps in the canopy are created naturally through wind, snow, wildfire and landslides which will regenerate with a mixture of Scot's pine and native broadleaves. Forest has extended to its natural altitudinal limit with montane scrub woodland at the highest elevation. Management interventions are minimal to maintain browsing pressure at a level that allows tree regeneration to occur. The water table in peatlands is at a natural level which now supports the full wetland ecosystem of plants and animals and is actively laying down sphagnum and storing carbon. Recreation is at a level that continues to allow habitats to be restored and wildlife to flourish and maintains the local tourism economy.

1.2 Strategic Context

The [FLS Corporate Plan](#) states how, as part of Scottish Government, FLS will contribute to the [National Performance Framework](#). It also states how FLS will deliver [Scotland's Forestry Strategy](#) and sets out the following corporate outcomes:

1. Supporting a sustainable rural economy
2. Looking after Scotland's national forests and land
3. National forests and lands for visitors and communities
4. A supportive, safe and inclusive organisation
5. A high performing organisation

Actions relevant to the Strathspey Plan are:

- Managing the national forests and land to further the conservation and enhancement of biodiversity

Strathspey Land Management Plan 2021 - 2031

- Maintaining and enhancing our work on peatland restoration
- Collaborating with partners on integrated landscape-scale approaches to habitat management and restoration
- Taking specific conservation action for vulnerable priority species (e.g. red squirrel, capercaillie, black grouse)
- Continuing to engage communities in decisions relating to the management of the national forests and land
- Supporting Scottish tourism and the visitor economy through the provision of visitor attractions
- Maintaining walking and biking trails to promote fun in the outdoors, focussing on improving entry level experiences for everyone to enjoy and gain health benefits
- Developing our forest planning processes to ensure long-term sustainable productivity of the national forests and land
- Support the venison processing sector through our deer management

The [Scottish Government Climate Change Adaptation Programme](#) states the Scottish Government policies and proposals for 2019-2024 to increase the capacity of Scotland's people, communities, businesses and public sector to adapt to climate change. It states, under outcome 5, "our natural environment is valued, enjoyed, protected and enhanced and has increased resilience to climate change" and gives the following principles:

1. Reduce other pressures on ecosystems, habitats and species – e.g. pollution, unsustainable use, grazing, habitat fragmentation and invasive non-native species.
2. Make space for natural processes including geomorphological, water and soil processes, and species interactions.
3. Enhance opportunities for species to disperse by reducing fragmentation and increasing the amount of habitat available.
4. Improve habitat management where activities such as grazing, burning or drainage cause declines in diversity or size of species populations, or where modifying management or increasing habitat diversity could improve resilience to climate change.
5. Enhance habitat diversity, e.g. by varying grazing or plant cutting management on grassland or moorland, or creating new habitats on farms.
6. Take an adaptive approach to land and conservation management e.g. by changing objectives and management measures in response to new information.
7. Plan for habitat change where assessments indicate losses of habitats or species are inevitable, for example as a result of sea-level rise.

8. Consider translocation of species in circumstances where assessments indicate the likely loss of a species despite new management measures, and where there are suitable areas for nature to adapt.

The Strathspey Land Management Plan will follow these principles to inform our management of the forest in the following ways:

- Increasing species diversity by planting under represented native tree species
- Increasing structural diversity through CCF systems
- Considering flooding on FLS ground and downstream
- Woodland expansion on to open hill ground
- Peatland and open habitat restoration
- Riparian zone management
- Use of natural processes
- Deer population management to encourage natural regeneration of native tree species
- Minimising ground disturbance during ground preparation operations to encourage natural regeneration such as scarification and hand screefing.

The Strathspey forest sits within the Cairngorms National Park. The Cairngorm National Park Authority are therefore an important stakeholder. The Cairngorm National Park Forest Strategy 2018 states the following 10 strategic objectives that are key to the formulation of this plan.

- Promote the creation of new woodlands that complement other land use
- Enhance the condition of existing forests
- Restore lost or vulnerable forest ecosystems
- Encourage natural regeneration of native forests
- Promote the creation and enhancement of productive forests
- Protect forests from disease and invasive species
- Increase employment in the forestry sector
- Encourage innovation in the use and marketing of native forest products
- Promote access and active enjoyment of forests
- Promote community involvement in forest management

Strathspey Land Management Plan 2021 - 2031

1.3 Background

Glenmore (approx. 3500 ha in size) was acquired by the Forestry Commission in 1923. In 2013 the MacAlpine plantation (308 ha in size) was acquired by Forest Enterprise Scotland (now FLS) on a 99 year lease. Upper Rothiemurchus was bought from Rothiemurchus estate in 2014, adding a further 2500 ha to the Strathspey Forest. At the same time the 99 year lease was converted to a freehold ownership. Inshriach forest covers an area of 3308 ha. The northern part was purchased by the Forestry Commission in 1937, the southern part in the late 1950s. The total land ownership for Strathspey LMP is now 9208ha.

1.4 Land Management Plan Objectives

Overall Plan Objectives

- Restoring native habitats and protecting species on a landscape scale
- Managing visitor access to provide high quality experiences whilst protecting vulnerable species and habitats and maintaining the scenic and wild qualities of the area
- Working with communities, partners and neighbours

Environmental Objectives

- Identify vulnerable habitats and apply principles within them
- Remove invasive non-natives and restore these areas to site appropriate native species
- Expand forest cover to the natural treeline through natural regeneration and small scale planting to establish a seed source.
- Restore wetland and peatland habitats where conditions are suitable
- Allow water courses to follow natural processes
- Maintain high water quality to private water supplies
- Ensure designated sites under FLS management remain at or develop towards favourable status
- Work with partners in Cairngorms Connect to deliver large scale ecological restoration
- Remove non-native conifers from the Caledonian Pinewood
- Increase structural diversity of Scots pine plantations using Continuous Cover Forestry Techniques to transform plantations to a more natural forest structure
- Increase and improve species diversity through diverse broadleaf establishment including aspen, oak, willow and alder
- Use of scarification, deer control, direct seeding and transplanting regeneration to assist with regeneration of the Caledonian Pinewoods with Scots pine and broadleaves
- Manage restructuring of the forest to minimise negative landscape impacts in the short term, recognising the special qualities of the landscape will be improved in the long term.

Recreation Management Objectives

- Provide a safe and welcoming destination to all visitors.
- Maximise the capacity of existing facilities to handle increasing visitor pressure.
- Prioritise investment in FLS recreation facilities in the main visitor welcome area.
- Work with partner organisations to ensure public safety.
- Provide facilities that encourage active travel such as walking or cycling.
- Manage recreation to minimise disturbance to vulnerable habitats and species.
- Encourage appropriate, SOAC-complaint visitor behaviour

1.5 Recreation

Access to Scotland's National Forest Estate offers many opportunities to enjoy the great outdoors, with many benefits to physical and mental wellbeing. In the Strathspey area, visitor facilities will be concentrated in Glenmore Forest Park, maximising the use of the existing capacity and seeking to minimise disturbance to vulnerable habitats and species. The Strathspey woods have a long history of recreational use, shown by the establishment of a Forest Park at Glenmore in 1948.

COVID-19 has changed the profile of visitors to the forest and created both new challenges and better engagement with partners and communities across Strathspey. At times, facilities at Glenmore (especially parking) have been increasingly overwhelmed by the number of visitors and FLS continue to work with partners to manage visitor demands in an appropriate way.

Glenmore:

Glenmore Forest Park receives an estimated 500 000+ visits per annum. Recreational use includes walking, hillwalking, mountain biking, orienteering, winter sports and water sports on Loch Morlich. Many visitors prefer a more relaxed day out; picnics on the beach are very popular. There are eight official car parks and five waymarked trails. There are seasonal public toilets at Loch Morlich and year-round toilet and café facilities within the visitor centre. FLS own the large campsite in Glenmore, currently leased out. There is considerable recreational use of other tracks and trails; over 50 km of tracks, trails and forest roads are present within the LMP area. Throughout the year a number of specialist sporting events are held in the area. The presence of other attractions such as Scotland's National Outdoor Training Centre at Glenmore Lodge, The Cairngorm Lodge Youth Hostel, Loch Morlich Watersports, Glenmore campsite and other businesses are also important in attracting and serving visitors' needs.

The Glenmore Forest Park Visitor Centre is the focal point for much of the activity in the area. From here visitors can find out more about the forest and its environment and management, and recreation opportunities in the area. As well as displays in the visitor centre, FLS promotes the recreation opportunities and special qualities of the area via dedicated web pages, a Glenmore Facebook account, a Glenmore Forest Park leaflet and onsite interpretation panels in each car park. FLS and CNPA rangers actively engage with visitors throughout the area.

Strathspey Land Management Plan 2021 - 2031

Inshriach:

Visitor numbers are much lower than Glenmore and facilities are less developed, offering a quieter (though increasingly popular) experience. There are car parks and waymarked trails at Uath Lochans and Feshiebridge. Forests roads and informal paths are used for walking, mountain biking, Munro access and cross-country skiing.

1.6 Stakeholders

Strathspey forest has many stakeholders because of its high recreation and conservation appeal and many businesses and organisations use the forest. There are many organised recreation events that occur in the forest. A full list of the stakeholders can be found in Appendix 13 Consultation Summary.

Cairngorms Connect is a partnership of neighbouring land owners/ managers (including FLS). They have common objectives to enhance habitats, species and ecological process across a vast area within the Cairngorms National Park. Cairngorms Connect are a major stakeholder in the process of this plan. More details can be found at <http://cairngormsconnect.org.uk/>.

Strathspey forest sits within the Cairngorms National Park. The Cairngorm National Park Authority are therefore an important stakeholder. [The Cairngorm National Park Forest Strategy 2018](#) was used in the production of this plan.

1.7 Deer Management

2019 surveys suggest the following deer densities for the 3 forest blocks:

- Glenmore 7.1 deer/km²
- Rothiemurchus 3.8 deer/km²
- Inshriach 3 deer/km²

Cull targets for 2020 are:

- Glenmore 120
- Rothiemurchus 100
- Inshriach 100

Further information on deer management can be found in Appendix 12

Strathspey Land Management Plan 2021 - 2031

2.0 FCS Regulatory Requirements

2.1 Activity Summary and Monitoring Table

1.1 Table of Clearfelling (Phase 1 2022-2026)												
Coupe No.	Fell Year	Total Area (Ha)	Spp by Ha (SS)	Spp by Ha (SP)	Spp by Ha (LP)	Spp by Ha (NS)	Spp by Ha (Larch)	Spp by Ha (X con)	Spp by Ha (BLeaf)	Open Land by Ha	Restock Year	Monitoring Comments
31061	2022	71.46	0.1	5.31	61.61		2.19	0		2.25	2032	
31906	2022	60.71		14.04	42.65		0	0		4.02	2032	
41073	2022	1.47		1.41			0	0		0.06	2032	
41087	2022	3.83		3.81			0	0		0.02	2032	
41089	2022	1.54		1.53			0	0		0.01	2032	
31001	2023	18.53	2.71	0.05	8.24		2.29	2.28		2.96	2033	
31009	2023	5.12	5.11				0	0		0.01	2033	
31010	2023	16.07	1.13	4.22	10.17		0	0		0.55	2033	
31013	2023	1.33	1.33				0	0		0	2033	
31016	2023	7.18	0.71				0.23	0.73		5.51	2033	
31119	2023	1.98	1.19				0	0		0.79	2033	
31120	2023	36.06	15.71	4.81	13.6		0.01	0.81		1.12	2033	
31136	2023	7.06	6.51				0	0		0.55	2033	
31808	2023	11.53	0	2.89	8.64		0	0		0	2033	
41042	2023	15.01		13.13		0.69	1.19	0		0	2033	strip felling
41074	2023	8.76		8.59			0	0		0.17	2033	
41106	2023	5.19		5.19			0	0		0	2033	
41120	2023	4.2		0.16	3.69	0.24	0	0		0.11	2033	
41150	2023	7.02	0.44	3.58		0.87	0.77	1.35		0.01	2033	
41165	2023	18.91	4.16	0.19	3.1	5.62	3.77	2.07		0	2033	
41167	2023	1.5					0	1.5		0	2033	
41200	2023	1.04		0.26	0.78		0	0		0	2033	
31025	2024	0.44	0.44				0	0		0	2034	
31123	2024	1		0.06			0	0		0.94	2034	
31509	2024	0.68			0.3	0.38	0	0		0	2034	
31668	2024	12.09	6.8	1.78		1.13	0.02	0		2.36	2034	
41020	2024	1.38	0.93		0.08		0	0.37		0	2034	
41080	2024	3.48		0.06	2.71		0	0		0.71	2034	
41184	2024	4.85	0.44	3.22	0.52		0.38	0.29		0	2034	
41188	2024	0.66		0.66			0	0		0	2034	
41127	2025	0.63		0	0.63		0	0		0	2035	

Strathspey Land Management Plan 2021 - 2031

1.1 Table of Clearfelling (Phase 1 2022-2026)

41151	2025	24.96	0.97	0.47	20.02		3.5	0		0	2035	
41179	2025	22.19	0.28	1.37	16.53		1.92	1		1.09	2035	
41195	2025	10.2	5.19	4.74			0.27	0		0	2035	
41384	2025	0.54		0.32			0	0.21		0.01	2035	
41895	2025	8.06	3.07	0.36		3.51	0.24	0.86		0.02	2035	
41051	2026	1.3		1.12			0	0		0.18	2036	
41173	2026	1.84		1.38	0.46		0	0		0	2036	
41176	2026	4.78	0.79	1	2.99		0	0		0	2036	
41191	2026	16.84		3.26	0.28		0	0		13.3	2036	
Totals		421.42	58.01	88.97	197	12.44	16.78	11.47	0	36.75		

1.2 Table of Clearfelling (Phase 2 2027- 2031)

31853	2027	7.78	2.86	2.9		0.67	0	0		1.35	2037	
41108	2027	11.16		10.93			0.01	0		0.22	2037	strip felling
41123	2027	8.26	3.38	1.13	0.44	1.41	0.51	0.6		0.79	2037	
31412	2028	24.19	2.26	10.35	0.47	1.5	6.53	0.43		2.65	2038	
41641	2028	14.98	2.24	0.01		5.36	0.22	7.13		0.02	2038	
31121	2029	44.58	16.1	6.16	19.04		0	0		3.28	2039	
31854	2029	30.25	9.26	1.65	16.45		0	0		2.89	2039	
41010	2029	1.69				1.69	0	0		0	2039	
41049	2029	5.08		0.29			3.28	1.51		0	2039	
41090	2029	1.84	1.65	0.18			0	0		0.01	2039	
31021	2030	39.59	9.38	5.75	21.29		0	0.47		2.7	2040	
31107	2030	20.13	0.88	0.6	3.21	0.15	0	14.53		0.76	2040	
41009	2030	3.06				1.22	0	0		1.84	2040	
41086	2030	14.75	1.3	0.38	3.08		0	0		9.99	2040	
41185	2030	19.61		8.81	2.95		3.61	3.99		0.25	2040	
41075	2031	5.9		5.82			0	0		0.08	2041	
Totals		252.85	49.31	54.96	66.93	12	14.16	28.66	0	26.83		

Strathspey Land Management Plan 2021 - 2031

1.3 Table of CCF Felling (Phase 1 - 2022-2026)												
Coupe No.	Total Area (Ha)	Volume (M ³)	Spp by Ha (SS)	Spp by Ha (SP)	Spp by Ha (LP)	Spp by Ha (NS)	Spp by Ha (Larch)	Spp by Ha (X con)	Spp by Ha (BLeaf)	Open Land by Ha	Silv.Method	Monitoring Comments
12	124.06	9052	0.00	114.40	1.01	0.00	7.67	0.00	0.07	0.91		
14	82.20	5986	0.00	81.78	0.42	0.00	0.00	0.00	0.00	0.00		
10	143.13	13013	0.00	142.72	0.42	0.00	0.00	0.00	0.00	0.00		
25	67.33	2420	0.00	66.89	0.00	0.00	0.00	0.00	0.00	0.44		
29	26.72	385	0.00	26.72	0.00	0.00	0.00	0.00	0.00	0.00		
2	21.46	1155	0.00	21.26	0.12	0.00	0.09	0.00	0.00	0.00		
3	72.84	4015	0.80	63.99	0.00	0.00	0.00	0.00	1.97	6.08		
15	92.80	8463	0.00	86.46	1.10	0.00	2.58	0.45	0.00	2.21		
1	22.46	1210	0.00	21.72	0.00	0.45	0.29	0.00	0.00	0.00		
16	56.56	7239	0.00	56.49	0.07	0.00	0.00	0.00	0.00	0.00		
28	68.34	6188	0.00	66.13	0.00	0.00	0.00	0.00	0.00	2.21		
4	65.92	3630	0.00	64.74	0.00	0.00	0.00	0.00	0.00	1.18		
19	133.51	12194	0.00	133.51	0.00	0.00	0.00	0.00	0.00	0.00		
Totals	977.32	74950	0.80	946.80	3.14	0.45	10.63	0.45	2.04	13.02		

1.4 Table of CCF Felling (Phase 2 - 2027-2031)												
5	47.95	2640.00	0.00	46.16	1.79	0.00	0.00	0.00	0.00	0.00		
17	94.95	8645.00	1.52	77.65	12.31	0.00	2.93	0.00	0.00	0.54		
7	52.37	4732.00	0.00	51.91	0.00	0.00	0.00	0.00	0.00	0.46		
8	75.95	6916.00	1.16	65.50	0.00	3.55	2.70	0.33	0.46	2.26		
9	108.27	5060.00	0.00	106.30	1.05	0.00	0.12	0.00	0.00	0.81		
24	8.21	1016.00	0.00	8.21	0.00	0.00	0.00	0.00	0.00	0.00		
26	36.67	1540.00	0.00	35.27	1.40	0.00	0.00	0.00	0.00	0.00		
11	93.62	5170.00	0.00	91.77	0.00	0.00	1.41	0.00	0.00	0.44		
34	25.59	0.00	0.00	25.59	0.00	0.00	0.00	0.00	0.00	0.00		
13	77.15	8393.00	0.50	60.61	0.00	1.33	12.92	1.62	0.18	0.00		
23	19.89	2180.00	0.00	5.95	0.00	4.62	0.82	3.53	4.09	0.87		
27	80.25	6734.00	0.00	79.58	0.10	0.00	0.57	0.00	0.00	0.00		
30	10.30	546.00	0.00	10.30	0.00	0.00	0.00	0.00	0.00	0.00		
31	4.78	455.00	0.00	4.78	0.00	0.00	0.00	0.00	0.00	0.00		
32	21.03	2667.00	0.00	0.23	0.00	8.82	5.12	2.62	2.96	1.28		
33	48.32	2200.00	0.00	46.23	0.00	0.00	0.05	1.52	0.00	0.52		
Totals	805.30	58894	3.17	716.02	16.67	18.31	26.62	9.62	7.69	7.18		

Strathspey Land Management Plan 2021 - 2031

1.5 Table of Total Felling for Approved Plan Period											
Method	Total Area (Ha)	Total Volume (M ³)	Spp by Ha (SS)	Spp by Ha (SP)	Spp by Ha (LP)	Spp by Ha (NS)	Spp by Ha (Larch)	Spp by Ha (X Con)	Spp by Ha (BLeaf)	Open Land by Ha	Comments
Clearfell	674.27	268240	107.32	143.93	263.93	24.44	30.94	40.13	0	63.58	
Thinning	0										
CCF	1782.62	133844	3.98	1662.82	19.81	18.77	37.25	10.07	9.73	20.20	
	2457	402084	Grand Total of Felled Timber Proposed for Plan Period								

1.6.1 Table of Restocking – carried forward from felling during previous LMP													
Coupe No.	Total Area (Ha)	SS (Ha)	LP (Ha)	SP (Ha)	NS (Ha)	Larch (Ha)	Other Con. (Ha)	Native Mixed B/Leaf	Other B/Leaf	Open (Ha)	Year	Restock Method & Density (Restock/Nat Regen/Alt Area/Coppice/Open)	Monitoring Comments (Including any reason not to restock)
31004A	9.75			5.85				1.95		1.95	2030	Natural Regeneration	
31007A	1.02			0.51				0.51		0.00	2024	Natural Regeneration	
31008A	2.39			1.20				1.20		0.00	2024	Natural Regeneration	
31014A	3.74							0.00		3.74	2024	Natural Regeneration	
31014B	0.44			0.22				0.22		0.00	2024	Natural Regeneration	
31017A	3.93			1.97				1.97		0.00	2024	Natural Regeneration	
31017B	1.60							0.80		0.80	2024	Natural Regeneration	
31026A	8.06							0.00		8.06	2030	Natural Regeneration	
31026B	0.44			0.26				0.09		0.09	2030	Natural Regeneration	
31027A	1.13			0.57				0.57		0.00	2024	Natural Regeneration	
31027B	0.48							0.24		0.24	2024	Natural Regeneration	
31062A	20.30			12.18				4.06		4.06	2030	Natural Regeneration	
31452A	8.39			5.03				3.36		0.00	2024	Natural Regeneration	
31505A	4.74			2.37				2.37		0.00	2024	Natural Regeneration	
31505B	0.91							0.46		0.46	2024	Natural Regeneration	
31595A	9.92			4.96				4.96		0.00	2024	Natural Regeneration	
31610A	3.51			1.76				1.76		0.00	2023	Natural Regeneration	
31610B	0.70							0.35		0.35	2023	Natural Regeneration	
31745A	46.84			14.05				18.74		14.05	2030	Natural Regeneration	
31891A	27.52			19.26				5.50		2.75	2019	Natural Regeneration	
31891B	13.85			6.93				6.93		0.00	2019	Natural Regeneration	
31891C	5.07							2.54		2.54	2019	Natural Regeneration	
31901A	13.99			7.00				7.00		0.00	2024	Natural Regeneration	
31901B	0.35							0.18		0.18	2024	Natural Regeneration	
41032A	2.44			1.22				1.22		0.00	2029	Natural Regeneration	
41032B	1.47							1.47		0.00	2029	Natural Regeneration	
41050A	3.20			1.60				1.60		0.00	2030	Natural Regeneration	

Strathspey Land Management Plan 2021 - 2031

1.6.1 Table of Restocking – carried forward from felling during previous LMP													
Coupe No.	Total Area (Ha)	SS (Ha)	LP (Ha)	SP (Ha)	NS (Ha)	Larch (Ha)	Other Con. (Ha)	Native Mixed B/Leaf	Other B/Leaf	Open (Ha)	Year	Restock Method & Density (Restock/Nat Regen/Alt Area/Coppice/Open)	Monitoring Comments (Including any reason not to restock)
41069A	12.18			6.09				6.09		0.00	2024	Natural Regeneration	
41069B	3.78							3.78		0.00	2024	Natural Regeneration	
41069C	3.36							0.00		3.36	2024	Natural Regeneration	
41069D	0.52							0.26		0.26	2024	Natural Regeneration	
41111A	5.79			2.90				2.90		0.00	2025	Natural Regeneration	
41115A	19.19							19.19		0.00	2021	Natural Regeneration	
41115B	0.36			0.18				0.18		0.00	2021	Natural Regeneration	
41117A	7.14							0.00		7.14	2026	Natural Regeneration	
41119A	10.48			5.24				5.24		0.00	2025	Natural Regeneration	
41126A	44.60			22.30				22.30		0.00	2021	Natural Regeneration	
41126B	5.42							5.42		0.00	2021	Natural Regeneration	
41130A	3.26			1.63				1.63		0.00	2026	Natural Regeneration	
41134A	7.30			3.65				3.65		0.00	2021	Natural Regeneration	
41137A	3.28			1.64				1.64		0.00	2027	Natural Regeneration	
41140A	3.93			1.97				1.97		0.00	2019	Natural Regeneration	
41145A	57.26			28.63				28.63		0.00	2021	Natural Regeneration	
41145B	2.42							1.21		1.21	2021	Natural Regeneration	
41149A	10.01			5.01				5.01		0.00	2021	Natural Regeneration	
41161A	3.88			1.94				1.94		0.00	2025	Natural Regeneration	
41182A	32.92			16.46				16.46		0.00	2022	Natural Regeneration	
41182B	10.58							0.00		10.58	2022	Natural Regeneration	
41182C	7.25							3.63		3.63	2022	Natural Regeneration	
41183A	13.63			6.82				6.82		0.00	2029	Natural Regeneration	
41183B	7.02			3.51				3.51		0.00	2029	Natural Regeneration	
41183C	3.60							1.80		1.80	2029	Natural Regeneration	
41394A	8.71			4.36				4.36		0.00	2027	Natural Regeneration	
41394B	4.80			2.40				2.40		0.00	2027	Natural Regeneration	
41708A	5.85			2.93				2.93		0.00	2027	Natural Regeneration	
41915A	4.63			2.32				2.32		0.00	2025	Natural Regeneration	
Total	499.33	0.00	0.00	206.87	0.00	0.00	0.00	225.23	0.00	67.23			

Strathspey Land Management Plan 2021 - 2031

1.6.2 Table of Restocking - for coupes felled during this LMP													
Coupe No.	Total Area (Ha)	SS (Ha)	LP (Ha)	SP (Ha)	NS (Ha)	Larch (Ha)	Other Con. (Ha)	Native Mixed B/Leaf	Other B/Leaf	Open (Ha)	Year	Restock Method & Density (Restock/Nat Regen/Alt Area/Coppice/Open)	Monitoring Comments (Including any reason not to restock)
31061A	59.51			17.85				23.80		17.85	2032	Natural Regeneration	
31061B	11.95			7.17				2.39		2.39	2032	Planted	
31906A	60.71			18.21				24.28		18.21	2032	Natural Regeneration	
41073A	1.47			0.74				0.74		0.00	2032	Natural Regeneration	
41086B	2.83			1.42				1.42		0.00	2032	Planted	
41087A	3.83			1.92				1.92		0.00	2032	Natural Regeneration	
41089A	1.54			0.62				0.92		0.00	2032	Natural Regeneration	
31001A	10			5.00				5.00		0.00	2033	Natural Regeneration	
31001B	7.23			0.00				0.00		7.23	2028	Natural Regeneration	Peatland restoration
31001C	1.3			0.00				0.65		0.65	2033	Planted	
31009A	5.12			2.56				2.56		0.00	2033	Natural Regeneration	
31010A	8.36			4.18				4.18		0.00	2033	Natural Regeneration	
31010B	7.71			0.00				3.86		3.86	2023	Natural Regeneration	No planting on deep peat
31013A	0.93			0.00				0.00		0.93	2028	natural Regeneration	Montane habitats
31013B	0.4			0.20				0.20		0.00	2033	Natural Regeneration	
31016B	2.28			0.00				1.14		1.14	2028	Planted	
31016A	4.9			2.45				2.45		0.00	2033	Natural Regeneration	
31119A	1.18			0.59				0.59		0.00	2033	Natural Regeneration	
31119B	0.8			0.00				0.40		0.40	2023	Natural Regeneration	No planting on deep peat
31120A	33.85			16.93				16.93		0.00	2033	Natural Regeneration	
31120B	2.21			0.00				1.11		1.11	2032	Natural Regeneration	
31136A	5.15			0.00				0.00		5.15	2028	Natural Regeneration	Archaeological site - keep open
31136B	1.91			0.00				0.96		0.96	2033	Natural Regeneration	
31808A	11.53			5.77				5.77		0.00	2033	Natural Regeneration	
41042A	13.92			0.00				13.92		0.00	2033	Natural Regeneration	Alder carr/ wet woodland
41042B	1.09			0.55				0.55		0.00	2033	Natural Regeneration	
41074A	8.5			4.25				4.25		0.00	2033	Natural Regeneration	
41074B	0.26			0.00				0.00		0.26	2028	Natural Regeneration	Open ground
41106A	4.88			2.44				2.44		0.00	2033	Natural Regeneration	
41106B	0.31			0.00				0.31		0.00	2033	Planted	
41120A	3.84			0.00				0.38		3.46	2028	Natural Regeneration	Peatland/ wetland restoration
41120B	0.36			0.00				0.36		0.00	2033	Planted	
41150A	3.71			0.00				3.71		0.00	2033	Planted	
41150B	3.31			1.66				1.66		0.00	2033	Natural Regeneration	
41165A	17.7			8.85				8.85		0.00	2033	Natural Regeneration	
41165B	1.21			0.00				1.21		0.00	2033	Planted	
41167A	1.5			0.75				0.75		0.00	2033	Natural Regeneration	
41200A	1.04			0.52				0.52		0.00	2033	Natural Regeneration	
31025A	0.44			0.22				0.22		0.00	2034	Natural Regeneration	

Strathspey Land Management Plan 2021 - 2031

1.6.2 Table of Restocking - for coupes felled during this LMP													
31509A	0.39			0.00				0.39		0.00	2034	Planted	
31509B	0.18			0.09				0.09		0.00	2034	Natural Regeneration	
31509C	0.11			0.00				0.06		0.06	2034	Planted	
31123A	1			0.00				0.50		0.50	2034	Natural Regeneration	Low density in front of houses
31668A	10.11			5.06				5.06		0.00	2034	Natural Regeneration	
31668B	1.98			0.00				0.99		0.99	2034	Natural Regeneration	
41020A	1.38			0.69				0.69		0.00	2034	Natural Regeneration	
41049B	2.31			1.16				1.16		0.00	2034	Planted	
41080A	2.55			1.28				1.28		0.00	2034	Natural Regeneration	
41080B	0.93			0.00				0.47		0.47	2026	Planted	
41184A	4.85			2.43				2.43		0.00	2034	Natural Regeneration	
41188A	0.66			0.33				0.33		0.00	2034	Natural Regeneration	
41127A	0.63			0.32				0.32		0.00	2035	Natural Regeneration	
41151A	20.48			10.24				10.24		0.00	2035	Natural Regeneration	
41151B	4.48			2.24				2.24		0.00	2035	Planted	
41179A	18.19			9.10				9.10		0.00	2035	Natural Regeneration	
41179B	2.02			0.00				2.02		0.00	2027	Planted	
41179C	1.98			0.99				0.99		0.00	2027	Planted	Aspen to be planted
41195A	9.96			4.98				4.98		0.00	2035	Natural Regeneration	
41195B	0.24			0.12				0.12		0.00	2030	Planted	Aspen to be planted
41384A	0.54			0.27				0.27		0.00	2035	Planted	
41895A	8.06			4.03				4.03		0.00	2035	Planted	
41051A	1.3			0.00				1.30		0.00	2036	Natural Regeneration	
41173A	1.84			0.92				0.92		0.00	2036	Natural Regeneration	
41176A	4.78			2.39				2.39		0.00	2036	Natural Regeneration	
41191A	16.84			8.42				8.42		0.00	2036	Natural Regeneration	
31853A	6.8			3.40				3.40		0.00	2037	Natural Regeneration	
31853B	0.98			0.00				0.49		0.49	2037	Planted	
41108A	11.16			5.58				5.58		0.00	2037	Natural Regeneration	
41123A	7.94			3.97				3.97		0.00	2037	Natural Regeneration	
41123B	0.32			0.16				0.16		0.00	2029	Planted	Aspen to be planted
31412A	15.63			7.82				7.82		0.00	2038	Natural Regeneration	
31412B	8.56			0.00				4.28		4.28	2030	Planted	
41641A	7.42			3.71				3.71		0.00	2038	Natural Regeneration	
41641B	5.19			0.00				5.19		0.00	2038	Planted	
41641C	2.37			0.00				1.19		1.19	2038	Planted	
31121A	39.8			19.90				19.90		0.00	2039	Natural Regeneration	
31121B	4.78			0.00				2.39		2.39	2029	Natural Regeneration	
31854A	29.37			14.69				14.69		0.00	2039	Natural Regeneration	
31854B	0.88			0.00				0.44		0.44	2029	Natural Regeneration	
41010A	1.69			0.85				0.85		0.00	2039	Natural Regeneration	
41049A	2.77			1.39				1.39		0.00	2039	Natural Regeneration	
41090A	1.64			0.82				0.82		0.00	2039	Natural Regeneration	

Strathspey Land Management Plan 2021 - 2031

1.6.2 Table of Restocking - for coupes felled during this LMP												
41090B	0.2			0.00				0.10		0.10	2039	Planted
31021A	39.59			19.80				19.80		0.00	2040	Natural Regeneration
31107A	14			7.00				7.00		0.00	2040	Natural Regeneration
31107B	6.13			0.00				3.07		3.07	2040	Planted
41009A	3.06			1.53				1.53		0.00	2040	Natural Regeneration
41086A	11.92			5.96				5.96		0.00	2040	Natural Regeneration
41185A	19.61			9.81				9.81		0.00	2040	Natural Regeneration
41075A	5.9			2.95				2.95		0.00	2041	Natural Regeneration
Total	674.27			269.16				327.57		77.55		

1.7 Table of Civil Engineering						
Proposed Activity (Road/Quarry)	OS Grid Reference	Forest/Coupe	Length (m)	Area (ha)	Description (Length/Area/Construction)	Monitoring Comments
new road/ facility	NH992097	A See map 23	142	0.213	Turning point to allow access and stacking space for thinning, within the SAC and SSSI	
new road/ facility	NH966106	B See map 23	208	0.312	Turning point to allow access and stacking space for thinning, within the SAC and SSSI	
new road/ facility	NH942130	C See map 23	24	0.036	Turning point to allow timber wagons to turn for clearfell operations.	
new road/ facility	NH949120	D See map 23	174	0.261	widening a forest road corner to allow timber wagons to turn the corner	
new road/ facility	NH948119	E See map 23	186	0.279	widening a forest road corner to allow timber wagons to turn the corner	
Quarry	NH862052	1 See map 23	n/a	<1	new quarry to provide road stone for North Inshriach and Glenmore	
Quarry	NH825004	2 See map 23	n/a	<1	new quarry to provide road stone for South Inshriach	

Strathspey Land Management Plan 2021 - 2031

2.2 Tolerance Table

	Adjustment to felling coupe boundaries	Timing of restocking	Change to species	Wind throw or environmental response	Adjustment to road lines
Scottish Forestry Approval not normally required (record and notify FC)	<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).		Departures of up to 60m from the centre of the roadline
Approval by exchange of letters and map	10-15% of coupe size	5 years +	Change of coupe objective likely to be consistent with current policy (e.g. from productive to open, open to native species).	Up to 5 ha	Departures of greater than 60m from the centre of the roadline
Approval by formal plan amendment	>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,	More than 5 ha	As above, depending on sensitivity

Other Tree Felling in Exceptional Circumstances

FLS will normally seek to map and identify all planned tree felling in advance, through the LMP process.

However there are some circumstances requiring small scale tree felling where this may not be possible and where it may be impractical to apply for a separate felling permission due to the risks or impacts of delaying the felling.

Felling permission is therefore sought for the LMP approval period to cover the following circumstances:

Individual tree, rows of trees or small groups of trees that are impacting on important infrastructure (as defined below*), either because they are encroaching on or have been destabilised or made unsafe by wind, physical damage, or impeded drainage.

* Infrastructure includes forest roads, footpaths, access (vehicle, cycle, horse, walking) routes, buildings, utilities and services and drains.

The maximum volume of felling in exceptional circumstances covered by this approval is 75 cubic metres per Land Management Plan per calendar year.

A record of the volume felled in this way will be maintained and will be considered during the five year Land Management Plan review.

Strathspey Land Management Plan 2021 - 2031

3.0 EIA scoping form



Environmental Impact Assessment Screening Opinion Request Form

Please complete this form to find out if you need consent from Scottish Forestry, under the **Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017**, to carry out your proposed forestry project. Please refer to Schedule 2 Selection Criteria for Screening Forestry Projects under [Applying for an opinion](#). If you are not sure about what information to include on this form please contact your [local Conservancy office](#).

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	Select (x)	Area in hectares	% Conifer	% Broad-leaves	Proposed work	Select (x)	Area in hectares
Afforestation	X	470ha	100		Forest roads	x	1.1ha
Deforestation	x	12.8ha	100		Forest quarry	x	2ha
Location of work		Strathspey Forest - see map 23 for location					

Description of Forestry Project and Location				
Provide details of the forestry project (size, design, use of natural resources such as soil, and the cumulative effect if relevant). Please attach map(s) showing the boundary of the proposed work and other known details.				
New Roads Map 23 shows the 5 new roads that will be required during the plan period. The table below gives the details of each. The total length of new roads is 734m and assuming a corridor of 15m would be a total area of 1.1 ha as shown in the table and on map 23.				
New Road	length (m)	width (m)	Area (ha)	Description
A	142	15	0.21	Turning point to allow access and stacking space for thinning, within the SAC, SPA and SSSI
B	208	15	0.31	Turning point to allow access and stacking space for thinning, within the SAC, SPA and SSSI
C	24	15	0.04	Turning point to allow timber wagons to turn for clearfell operations.
D	174	15	0.26	widening a forest road corner to allow timber wagons to turn the corner
E	186	15	0.28	widening a forest road corner to allow timber wagons to turn the corner
Total	734		1.1	
Afforestation Map 23 shows the areas where afforestation through natural regeneration is expected within the plan period. These areas are currently open with scattered Scots pine and juniper regeneration on high ground above the existing tree line. Natural regeneration is being encouraged and managed through deer control and will over time, allow the whole of the land management plan area, where suitable, to be forested. The areas identified have the potential through slow regeneration of existing Scots pine and juniper to regenerate at low stocking densities of around 400 stems/ha within the plan period. The total area is 470Ha.				
Deforestation Map 23 shows 2 areas that are non-native conifers that will be felled during the plan period. They are on				



Environmental Impact Assessment Screening Opinion Request Form

deep peat and will be restored to peatland rather than being restocked. This may involve stump flipping, ground smoothing and drain blocking. It is expected that these sites will wet up and tree regeneration is unlikely, however non-native regeneration will be cut out. Total area is 12.8Ha.

New Quarries

Map 23 shows the location of 2 new planned quarries. Both will be a maximum of 1ha.

1 at NH 824004 will provide road stone for North Inshriach, Glenmore and Rothiemurchus.

2 at NH 862051 will provide road stone for South Inshriach. This is necessary to avoid use of the road bridge at Feshiebridge.

Provide details on the existing land use and the environmental sensitivity of the area that is likely to be affected by the forestry project.

Roads

All new roads are within the National Scenic Area. Roads A and B are within the SAC/SPA/SSSI (0.52ha).

Afforestation

Natural regeneration will occur on open ground above the existing tree line, which is around 500m. The existing habitats are made up of wet and dry heaths with scattered low level Scots pine and juniper regeneration which has started to establish close to existing seed sources as a result of increased deer management. All of the natural regeneration is within the NSA.

Natural regeneration above Glenmore around the Ryvoan Pass is within Cairngorms SAC, SPA and Glenmore Forest SSSI. Regeneration below the Ski centre on Cairngorm is also within Cairngorms SAC, SPA and Northern Corries, Cairngorms SSSI. The total area of designated ground where natural regeneration is anticipated is around 270Ha within the plan period.

Deforestation

Both of the forest to bog restoration sites are within the NSA (12.8ha). The restoration site in Inshriach is also within the SAC (3.2ha).

Both restoration areas are currently stocked with mature non-native conifers, mostly Lodgepole pine with some areas of windblow.

New Quarries

These are both within the NSA but not the SAC/SPA/SSSI. Most of the area for quarry 1 is within felled ground awaiting restock, the rest is Scots pine plantation planted in 1972. Quarry 2 is located on felled ground awaiting restock.



Environmental Impact Assessment Screening Opinion Request Form

Description of Likely Significant Effects
Provide details on any likely significant effects that the project will have on the environment (resulting from the project itself or the use of natural resources) and the extent of the information available to assist you with this assessment.
<p>Roads The new roads will be visible so will have a small effect in the national scenic area, however they are only small extensions of existing roads so the visual affect will be minimal. The new roads A and B will be within the SAC/SPA/SSSI and so there will be some environmental disturbance. Road B is within an approved felling coupe so will only require felling of non-native conifers to build it. Road A will be sited to cause minimal environmental disturbance to the habitat, for example avoiding "Granny pines".</p> <p>Afforestation Low density, scattered natural regeneration of Scot pine and juniper scrub on the hill ground above the existing tree line will return open ground to a more natural, transitional habitat where environmental conditions determine its spread. Due to the unplanned nature in establishing a natural treeline and the slow rate at which this will occur, it will have minimal impacts on the special qualities of the NSA.</p> <p>Both Juniper scrub and Caledonian forest and features of the SAC (and SSSI), with the Cairngorms currently supporting the 3rd largest extent of <i>Juniper Communis</i> formation in the UK. Extending these habitats in areas where they would naturally occur, beyond 500m altitude, is in line with the objectives of the SAC. It will also benefit the features of the SPA by providing additional habitat for nesting, hunting/feeding and breeding.</p> <p>Deforestation Both deforestation sites will be clear-felling non-native conifers to return the site to peatland. This will benefit the environment by restoring an important habitat.</p> <p>New Quarries Both sites are set back from the forest road. They will be visible from the forest road but will have minimal impact from more distant views.</p>
Include details of any consultees or stakeholders that you have contacted in order to make this assessment. Please include any relevant correspondence you have received from them.
As part of the Land Management Plan initial consultation SEPA and Nature Scot have been consulted but they have not received specifics on new roads and quarry locations.



Environmental Impact Assessment Screening Opinion Request Form

Mitigation of Likely Significant Effects
If you believe there are likely significant effects that the project will have on the environment, provide information on the opportunities you have taken to mitigate these effects.
<p>Roads All the new roads have been kept to a minimum size to reduce visual and environmental impact. The maximum size is 208m for each individual road. See the table on map 23 for a description of each road. Where these roads are not required for future operations they will be allowed to re-vegetate over time. The micro siting of each road will minimise the number of trees felled and reduce any impacts on designated features or sites. Proposed mitigation includes</p> <ol style="list-style-type: none"> 1) Consultation with NatureScot over major projects to ensure that these are taken forward with full consultation and agreement. 2) Pre-operational checks - all operations will be subject to site surveys and other pre-operational checks to ensure species and habitats are monitored and protected. 3) Timing Restrictions and buffer zones - Any operations likely to impact protected species will be subject to timing restrictions and buffer zones to ensure they are protected as per best practice guidance. 4) Licencing and consents will be sought for activities on designated sites or where disturbance is a possibility. <p>Afforestation Expansion of the native pinewood and juniper scrub will benefit all of the features of the designated sites and NSA. Non-native tree regeneration will continue to be monitored and removed to prevent expansion of non-native trees onto the open hill.</p> <p>Deforestation Although the initial impact of tree felling will be high, the removal of non-native trees and the restoration of peatland habitat will in time be beneficial to the environment and the landscape. Some native tree regeneration will be allowed which will soften the visual impact and increase the biodiversity of the habitat. To minimise environmental impact all works will be subject to site surveys and other pre-operational checks to ensure species and habitats are monitored and protected. Any operations likely to impact protected species will be subject to timing restrictions and buffer zones to ensure they are protected as per best practice guidance. Licencing and consents will be sought for activities on designated sites or where disturbance of protected species is a possibility.</p> <p>New Quarries Both quarries are on relatively flat ground and set back from the forest road. Quarry 1 is hidden from the forest road by a small knoll so immediate visual impact will be low. The quarries will be hardly visible from other viewpoints around Inshriach. To minimise environmental impact all works will be subject to site surveys and other pre-operational checks to ensure species and habitats are monitored and protected. Any operations likely to impact protected species will be subject to timing restrictions and buffer zones to ensure they are protected as per best practice guidance. Licencing and consents will be sought for activities on designated sites or where disturbance of protected species is a possibility.</p>

Strathspey Land Management Plan 2021 - 2031



Environmental Impact Assessment Screening Opinion Request Form

Sensitive Areas	
Please indicate if any of the forestry project is within a sensitive area (see list below). Write in the sensitive area and give the area of the proposal within it.	
Sensitive Area	Area
Sites of Special Scientific Interest	250.7 ha
National Scenic Area	486.6 ha
Special Protection Area	250.7 ha
Special Area of Conservation	253.9 ha
Deep peat soil	12.8 ha

Sensitive areas:

- Site of Special Scientific Interest or National Nature Reserve
- Special Protection Area or Special Area of Conservation
- World Heritage Site
- Scheduled Ancient Monuments
- National Scenic Area
- National Park
- Deep peat soil

Property Details			
Property Name:	Strathspey Forest		
Business Reference Number:		Main Location Code:	
Grid Reference: (e.g. NH 234 567)	NH873049	Nearest town or locality:	Aviemore
Local Authority:			

Owner's Details			
Title:	Miss	Forename:	Nicola
Surname:	Tallach		
Organisation:	Forest and Land Scotland	Position:	Forest Planner
Primary Contact Number:	0131 370 5982	Alternative Contact Number:	07785695837
Email:	nicola.tallach@forestryandland.gov.scot		
Address:	Forest and Land Scotland, Tower Road, Smithton, Inverness		
Postcode:	IV2 7NL	Country:	Scotland
Is this the correspondence address?	Yes		

Agent's Details			
Title:		Forename:	
Surname:			
Organisation:		Position:	
Primary Contact Number:		Alternative Contact Number:	
Email:			
Address:			
Postcode:		Country:	
Is this the correspondence address?			

Office Use Only	
GLS Ref number:	

Strathspey Land Management Plan 2021 - 2031

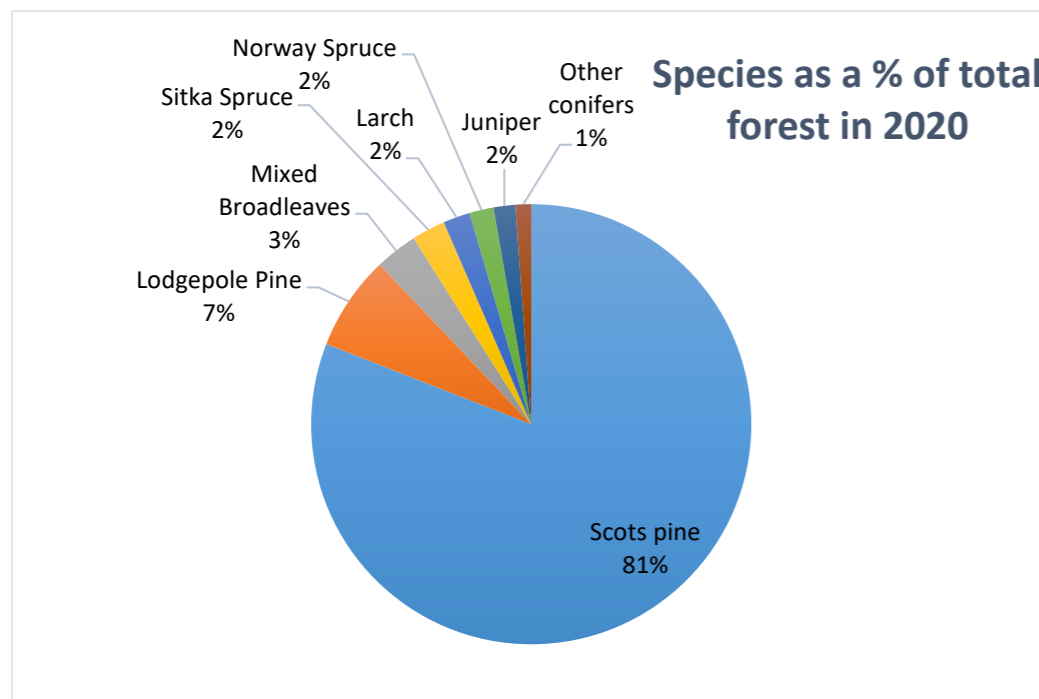
4.0 Introduction

Map 1 shows the location of the Strathspey LMP. It includes Glenmore, Upper Rothiemurchus and Inshriach forests. The communities within and nearby the forest are Glenmore, Coylumbridge and Inverdurie, Feshiebridge, Aviemore, Kinraig and Insh. There is a considerable area of the LMP that is open hill above the current tree line.

4.1 The existing landholding

The LMP covers an area of approx. 9208 ha, of which 4174ha is open ground and 5034ha is forest, of which the majority (81%) is native Scot's pine. The open ground is made up of wet and dry heath with some blanket bog areas. The open habitats are detailed in Appendix 5 Habitat Regulations Appraisal (HRA). The table and pie chart below show the current species, area and percentage of the forest.

Species	Area	%
Scots pine	4074.57	81%
Lodgepole Pine	351.14	7%
Mixed Broadleaves	156.52	3%
Sitka Spruce	124.33	2%
Larch	99.97	2%
Norway Spruce	89.19	2%
Juniper	80.46	2%
Other conifers	58.02	1%
Total	5034.2	



4.2 Setting and Context

The Glenmore area includes Loch Morlich which is a periglacial feature created during the last ice age when a large block of ice melted creating a "kettle hole" that subsequently filled with water. This created a bowl like topography with mountains surrounding the loch. Forest generally occupies the ground roughly below 450m. Inshriach is generally much flatter and occupies land around the confluence of the river Feshie and Spey. Timber haulage in the forest is good, with an extensive forest road network in generally good condition. Timber haulage on public roads is mostly on consultation routes with an excluded section at Feshiebridge due to weight restrictions on the bridge.

The LMP area is surrounded by land owners that include sporting estates, public bodies and NGOs. A number of these owners and managers have collaborated to form Cairngorms Connect, a partnership organisation that helps all partners work towards a shared goal of habitat restoration on a landscape scale.

The forest is highly designated with a number of overlapping designated sites. The designations are:

Special Area of Conservation (SAC) (map 8)

Site of Special Scientific Interest (SSSI) (map 8)

Special Protection Area (SPA) (map 8)

[National Scenic Area](#)

[Wildland Area](#)

[National Nature Reserve](#)

Caledonian Pinewood Inventory (map 4)

Cairngorms National Park

The implications of all these designations are discussed in Appendix 5

Strathspey Land Management Plan 2021 - 2031

4.2.1 Geology (map 7)

The majority of the forest is sitting on Psammite bedrock which is a medium grain metamorphosed sandstone, this is a hard, impermeable rock that can lead to gleyed soils, peats and sometimes brown earth. The open hill south of Glenmore and Rothiemurchus is granite associated with the Cairngorm Mountains, this is an acid rock that is quite impermeable so can lead to peat formation and acid tolerant vegetation. The open hill ground along Meall a Bhuacaille and the Slugan pass is quartzite, a metamorphosed sandstone with a high content of quartz, when weathered this rock will often produce well drained soil that often leads to podzolisation.

4.2.2 Soils (map 5)

The soil survey for the LMP is from varied sources as can be seen from the map there is detailed 1:10,000 data for north Glenmore and west Inshriach. The rest of the site has James Hutton Institute (JHI) 1:250,000 soil data. It can be seen that the soil types are influenced greatly by the glacial deposits of Glenmore and Inshriach with mostly podzolic soils on the valley floors with gleys and peat on the hill sides running up to podzolic soils on the open ground. There are some deep peats in the valley floor that will be the focus for peatland restoration.

4.2.3 Climate (map 6)

It can be seen from map 6 that the majority of the forested land is Cool, wet and sheltered varying to moderately exposed. The open ground varies from Sub-alpine, wet, moderately exposed at lower elevation to severely exposed at the higher elevation.

5.0 Whole Plan Objectives

5.1 Management

The whole plan objectives will be met by:

- Prioritising felling mature non-native conifers to remove seed source and prevent natural regeneration of these species
- Felling non-native natural regeneration within the Caledonian pinewoods
- Continuing deer culling with the targets set out in section 1.6 to encourage Scots pine and native broadleaf regeneration
- Restoring peatland where recommended according to [guidance "Deciding future management options for afforested deep peatland"](#)
- Felling Lodgepole pine that is infected with Dothistroma Needle Blight to prevent spread of the disease
- Mapping vulnerable habitats to reduce recreation impact on important habitats and species

5.2 Vulnerable Habitats

Strathspey forests are highly used for recreation, this is mostly concentrated around Glenmore visitor centre and Loch Morlich with extremely high numbers of visitors during the summer. There is also high recreation use throughout the rest of the forest with Glenmore and Rothiemurchus seeing greater use than Inshriach.

With increasing visitor numbers in the Strathspey area there has been a growing concern about the possible disturbance and damage to rare and protected species throughout the Strathspey LMP area. Recent research has shown that for example Capercaillie avoid areas adjacent to heavily used tracks. We have also seen issues with raptors being disturbed by unofficial mountain bike track construction and deadwood supporting *Buxbaumia viridis* being used by campers as firewood.

With recognition and support for the responsible access rights that are within the Scottish Outdoor Access Code it is hoped that by highlighting key sites as vulnerable habitats it will be possible to focus behavioural messaging and future facility and event planning to reduce potentially damaging behaviours.

The vulnerable habitats will contain the majority of Capercaillie lek and brood sites, Schedule 1 bird nesting locations and other areas with rare and protected flora and fauna interest. Outwith the vulnerable habitats there will be scope to develop and improve visitor facilities to meet the increasing demands but within the vulnerable habitats there will be an increased focus on low impact/zero trace use.

Within the vulnerable habitats there will be a presumption against new recreational development, restrictions on permission for large events (especially around vulnerable periods) and increased ranger presence to deliver important behavioural messaging (e.g. no fires, dogs under close control etc). FLS will develop and implement appropriate ways to protect vulnerable habitats and continue to mitigate and manage the effects of visitor pressures

It is hoped that by utilising the concept of vulnerable habitats, visitor needs can be met but in a way that reduces negative impacts on protected species and habitats, all within the overarching spirit of SOAC guidance.

5.3 Water Management and Flooding

Aviemore is in SEPA's flood risk management strategy and in the [Highland Councils Local Flood Risk Management](#) Plan and is an Objective Target Area (see map 13). There are localised and high risks of flooding that threatens 39 homes and 17 businesses. The most significant flood was in December 2015 when storm Desmond caused the river Spey to break its banks and flood a pub and 10 homes.

The river catchment upstream of Aviemore has 17% forest cover (of which 5% is owned by FLS). Research shows that forest can reduce the ground water run off by up to 60 times more than grazed grassland therefore maintaining forested land is an important way to reduce the volume and speed of surface run off. By phasing the felling within Strathspey forests the clearfelled area will remain small, these areas will regenerate within 5 years and therefore maintain forest cover. Forest and water guidelines will be followed during operations, for example disconnecting drains from water courses and creating

Strathspey Land Management Plan 2021 - 2031

buffer zones. These actions will slow the surface water flow and reduce peak flows at Aviemore and Kincaig.

Consider natural flood management where possible and there is an agreed benefit in reducing peak flow, in partnership with local land owners and based on joint agencies and local authority advice. We will work in partnership where there are benefits of catchment scale management and working with natural flood management processes.

There are a number of projects that FLS will undertake that will reduce flood risk, these are:

5.3.1 Feshie Fan

The confluence of the river Feshie and the Spey is prone to flooding. Gravel is carried down the Feshie and often deposited in or near the confluence. The SEPA report in Appendix 11 estimates 20,000 tonnes is transported along the river Feshie at its lower end per year. This can cause blockages and subsequent flooding in this area. Flow levels have shown that the sum of monthly maximum flow levels in the last 10 years is 60% higher than the previous 14 years indicating an increase in peak flood levels.

Cameras have been set up on the agricultural land which shows it regularly floods- see photo below. It can also be seen that there are channels created when this happens. There is currently a flood wall that has contributed to straightening the river channel in the past. The cross section shown in the report shows the old river channel to be lower than the current channel. The flood wall shown on the map is already breached in places and the photo below shows the agricultural ground floods periodically.



Photo 1-Feshie Fan flooding

To reduce the risk of flooding and the deposition of gravel and sediment in the Spey we are planning to allow the river to follow natural processes. We will remove grazing from the current area (see map 14) and fell the adjacent Scots pine stand. We will not maintain the flood wall and allow the river to follow its natural channels. These can be clearly seen on map 14 showing the elevation of the site, which indicates where the river will flow during flood events.

It is expected that this flood plain will naturally regenerate with native trees as shown in the background of the photo above. This will slow down the flow of the river which will:

- a) allow sediment to be deposited here rather than in the Spey confluence
- b) reduce peak flow levels to reduce impacts of flooding downstream

5.3.2 Allt Mharcaidh burn

The Allt Mharcaidh is a tributary of the Feshie- see map 13, point 5 and Appendix 10. It has been canalised in the past to allow timber to be transported down to the Spey. In the last 10 years logs have been laid in the river bed to encourage the river to become more mobile and start meandering again. This has had some effect but has not created much change in the river channel. Following a report by enviro-centre (see Appendix 10) it has been recommended that the river is returned to its original location. The existing channels can be clearly seen on Appendix 10 indicating the likely flow of the river. This will have a number of effects:

- a) re-wet the existing wetland
- b) improve open habitats around the Allt Mharcaidh including restored peatland
- c) slow down the peak flows of the river and therefore reduce high peak flows downstream

5.3.3 Under cut Scot's pine plantation

Above Feshie bridge there is a high bank of glacial deposits that is being eroded by the river Feshie - see Map 13, point 1. At the top of the bank is Scot's pine planted in the 1950s. The bank is being undercut by the river and will continue to do so. If the trees were to fall in the river they may be washed down, create a blockage, cause flooding or damage the Feshie bridge. To prevent this happening a strip of trees at the edge of this stand will be felled and extracted.

5.3.4 Allt Ruaidh flood plain

The Allt Ruaidh is a tributary of the Feshie- see map 13, point 2. Non-native conifers have been cleared on the flood plain in the past 10 years. It was expected that this area would regenerate with native trees. This has not happened and as such it will be planted with a

Strathspey Land Management Plan 2021 - 2031

mixture of willows, alder and aspen. Re-establishing floodplain woodland will increase surface roughness, reduce the flow of water at peak flood times and increase filtration of surface water in to the ground water flow.

5.3.5 Investigate flooding in Glenmore village

At times of high rainfall occasionally there is flooding in Glenmore village (see map 13, point 6). Investigations have shown that this may be due to a concentration of water from a number of small catchments to a single culvert. To reduce the risk of flooding culverts under the forest roads will be cleared. A camera was used in the single culvert under the public road and the findings were inconclusive.

5.3.6 Peatland restoration

Map 13 shows the areas of peatland that will be restored, some of these are forest to bog (shown on Map 12- Management Zones) and some are open ground that will require some form of restoration work such as drain blocking, ground smoothing or re-profiling. As these areas are restored they will hold more water at times of peak flow and reduce flooding downstream.

5.4 Private water supplies

All private drinking water supply points (and pipes) are recorded as a layer in our Forester Web GIS (included in **Map 24**). This is consulted during the work plan process for all forest operations to ensure their protection. Affected neighbours will be consulted prior to any works commencing and features will be clearly marked on all contract maps, as well as on the ground.

As a rule no ground preparation or pesticide spraying will take place within 50m upstream of the intake. The same buffer is applied when felling trees and no urea will be applied to stumps. Within the buffer, hand felling and winching will remove the need for harvesting machinery to work within the catchment of intakes.

Ground preparation might take place close to the watercourse upstream of the 50m buffer however, the watercourse will still be buffered from ground preparation by the standard 5m buffer for streams less than 1m wide. These operational constraints are in accordance with "Forests & Water - UKFS Guidelines" (FC, 2017; Sixth Edition).

A number of private water supplies have been identified within the plan area. These are made up of bore holes, springs and surface water intakes. Of the supply points located with or adjacent to coupes identified for management, most of these are within minimum intervention or low impact silviculture coupes. Harvesting machinery will therefore be able to avoid working within the buffer zones and thinning of trees can be undertaken out with the buffer.

Where clearfelling is required to remove non-native trees the future forest will include a buffer of native broadleaves and Scots pine of at least 50m around these supply points to minimise future disturbance.

5.5 Recreation

The Strathspey Land Management Plan supports the implementation of the [Cairngorm and Glenmore Strategy](#). With involvement of the five public bodies that make up the Cairngorm & Glenmore Partnership the strategy was subject to [wide consultation and a strategic Environmental Impact Assessment](#). This partnership strategy guides the collaborative strategic long term management of the area with the overarching goals of:

- An exceptionally high quality natural environment
- A world-class visitor experience
- An economic asset contributing to the economy of the National Park and Scotland
- Engaged business and community stakeholders
- Efficient and effective public service delivery

As part of working towards these strategic goals FLS looks forward to welcoming visitors to the area through balanced management of the environmental, economic and visitor interests in the area.

The special habitats that exist throughout the Strathspey area will be protected through the identification of vulnerable habitats which will guide Visitor Services decision-making, without impacting rights under the Land Reform (Scotland) Act 2003 and the Scottish Outdoor Access Code.

In practical terms (and subject to partnership working, funding, planning and environmental assessment processes), Visitor Services are currently planning the following work in the Strathspey area with a particular focus on improvements in Glenmore Forest Park:

- Improved signage and way-marking so visitors feel safe
- Trail management and visitor zone thinning to improve accessibility and safety
- Trail & car park management to reduce flood risk, erosion and improve parking capacity
- Thinning around the Loch Morlich trail to improve views and encourage visitors to follow the trail
- Glenmore Beach Car Park improvements to improve safety and capacity (including bicycle capacity)
- Car park surface management including pothole repairs and resurfacing when appropriate.
- Increased ranger presence to encourage responsible visitor behaviour
- Improved signage and information to encourage responsible visitor behaviour

Strathspey Land Management Plan 2021 - 2031

- Increased working with partners to manage recreation pressures

Whilst some measures focus on the provision of facilities, much of the visitor management is 'light touch' and can be achieved through improved signage, public or community engagement and targeted staff intervention. These measures have been successful in the years preceding the Strathspey Land Management Plan and will continue throughout the plan period.

The popularity of this area will continue to bring challenges, and we will continue to work with partners and stakeholders to manage recreation in a positive way.

Strathspey Land Management Plan 2021 - 2031

5.6 Landscape

The LMP area covers an extensive area of ground within the heart of the Cairngorm National Park and NSA. All landscapes within the Cairngorms National Park have a baseline sensitivity which is high to reflect the National Park designation as an IUCN Category 5 Protected Landscape. The special qualities of the NSA are not distinguished from those of the NP. Also the LMP skirts and is partly within a small section of the Cairngorms Wild Land Area (WLA). Consequently, the enhancement and maintenance of the special qualities of the landscape and the improvement of the appearance of the forest within the wider landscape is a high priority for the plan and recognised within its key objectives. All long term outputs are seeking to deliver robust and long term protection and enhancement to landscape qualities in keeping with the landscape special qualities. The management interventions within this plan are designed to deliver this in the most appropriate manner, given the existing constraints of the forest and land, over as short a time period as possible .

Visibility of the forests of the Strathspey LMP depends on where it is viewed from, seen as part of grand panoramas or framed views. Due to the scale of the plan and variability across the area visibility is considered by area alongside landscape character below.

5.6.1 Landscape Character

The plan area covers a range of landscape character areas (LCAs) mapped and described by Nature Scot and refined by CNPA. Their spatial distribution is shown on landscape map 17.

The special qualities of the landscape types are described on Nature Scot's and Cairngorm National Park's websites. Full details are available [Scottish Landscape Character Types Map and Descriptions | NatureScot](#) and [Landscape Areas - Cairngorms National Park Authority](#). Descriptions of landscape character areas below are taken largely from these.

The LMP area spans a range of LCAs which skirt Strathspey- Rothiemurchus, Glenmore and Inshriach cover most, with small sections of the adjacent areas (Insh marshes, Kincaig to Loch Alvie, Loch Alvie to Inverdrue and the Cairngorm Massif). Each of these areas are considered separately, the key characteristics of each described, and consideration given to how the plan aims to retain and enhance their special qualities.

Annotation on map 17 explains how elements of the forest are integrated into the landscape so they contribute to the supporting special qualities of the LCAs.

Key views used to assess the visual impact of the proposals are identified on Map 10 – viewpoints. The visualisations of these are located in **Appendix 15**

Rothiemurchus and Glenmore

The Rothiemurchus and Glenmore forests are located on an open bowl-shaped landform in the east of the plan area, elevated above Strathspey. This landscape forms a transition between the more managed and settled Aviemore/Strathspey area and the mountainous

core of the National Park. It is divided into two landscape character types described below.

The **Rothiemurchus LCA** has a mosaic of naturalistic native pine woodland, open heather moorland, bog woodland and juniper scrub. Where the forest is open there are striking views of the dramatic northern corries of the Cairngorms and the Lairig Ghu.

The western side of the Rothiemurchus Forest has a pronounced natural character derived from its extensive and diverse native woodland of varying ages and density as well as the moorland. Large areas of planted and regenerating native Scots pine of varying age and density extend over this area, colonising up the steep slopes of the surrounding hills and into adjacent glens along the southern edge. There are occasional stands or individual 'specimen' trees of mature pine.

The eastern part of the forest in Rothiemurchus LCA has a more commercial forest character, in part due to stands of more even-aged woodland, though much of this has been felled in recent years and is currently open awaiting regeneration of native mixed woodland.

The area is very popular for recreation and while this reduces the feeling of seclusion experienced, it retains a sense of isolation due to the ability of woodland areas to absorb people.

Implications of LMP proposals on landscape in Rothiemurchus LCA are tabulated in the section below.

Visibility: Views of Rothiemurchus forests covered by this plan are mostly internal. They are seen from Inverdrue, across the meadows and beyond the Rothiemurchus estate forests -mature open pine forest on the dramatic rounded slopes below Creag Fhiaclach, Cadha Mor and Carn Eilrig on the edge of the Cairngorm Plateau. Views from these peaks look across the forests to the north as illustrated in the visualisation from Castle Hill in **appendix 15**

Glenmore LCA, to the east of the Rothiemurchus LCA, covers much of the gently dished lower ground of the glen. The area includes the slopes of the Kincardine Hills north of and enclosing Glenmore and Loch Morlich, including the popular summit of Meall a' Bhuachaille and ridge to Craiggowrie. These are relatively low, with rounded summits, gentle slopes and long smooth interlocking spurs. Small burns incise the hillsides draining into rivers in the glen below.

This is an afforested landscape which is currently becoming more fragmented and diverse as it is restructured from a purely commercial plantation to a more naturalistic woodland. (see photos of 1990s and current below). Larger granny native pine fringe Loch Morlich. There is young native pine regeneration evident on the upper slopes of the Kincardine Hills which assists in breaking up the formerly straight upper forest margin. To the north of Loch Morlich large areas of dense mature spruce, Lodgepole pine and Douglas fir plantation remain.

Strathspey Land Management Plan 2021 - 2031



Photo: Recent view to north from Loch Morlich beach showing the large stands of conifer forest that cover this hillside.

A significant proportion of the forests covered by this LMP are located within this LCA. Largely of planted origin, it is evenly spaced and managed commercially. With altitude they become more irregularly spaced, though even-aged. On the upper slopes is a matrix of naturally seeded pine, open meadow, juniper and birch scrub and heath which integrates the managed forest below with the open massif LCA above. Depending on grazing pressure, by deer and reindeer, depth of vegetation layer on open hills varies (where grazing pressure is reduced a thicker vegetation layer exists with more colour and diversity).

The woodland around Glenmore hides some of the large moraines and melt water channels that exist on slopes. These become visible when the forest is clear felled.

The hills above the current woodland edge are covered with heather and generally have an open character. Naturally regenerating Caledonian Pinewood habitat is expanding up the hillsides to higher altitude gradually altering the character of these hillslopes.

The straight margins which were once a common character of the forests around Glenmore have been largely removed through felling and restructuring of the forest. The photos below show how the landscape has changed over the past 30 years.



Photo from Cairngorm ski area from 1990 looking over Glenmore forest and Loch Morlich: The straight upper margin of the even aged plantation is clearly visible on the side slopes of the Kincardine hills.

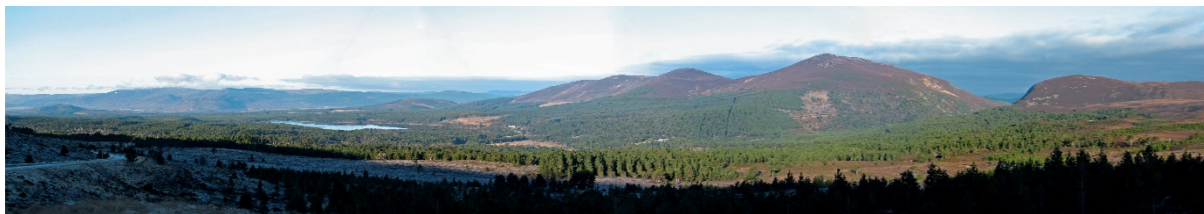


Photo from Coire na Ciste from 2006 showing limited restructuring of plantation had begun with clear fells breaking up the forest area.



Recreation and tourism facilities are very evident within the glen, centred around Loch Morlich, Glenmore and the main road between Aviemore and Cairngorm Ski area. The forest accommodates a network of well-used tracks and footpaths popular with cyclists and walkers. The ski access road, other visitor developments, car parks and the infrastructure at Cairngorm Mountain are prominent features within the area. Demand has increased significantly over the past five years. Although partially screened by the forests, car parking, camp site and other facilities are visible from the high ground surrounding Glenmore. These all reduce the degree of remoteness evident elsewhere in this LCA and as demand grows and facilities develop there could be a further erosion of this special quality.



Photos of visitors around Loch Morlich.

Strathspey Land Management Plan 2021 - 2031

The aim of the plan is to deliver long term landscape-scale enhancement as the plantations are converted into more naturalised forests and to continue to seek to concentrate recreation within the base of the glen thus limiting disturbance and spread in other areas. Identifying 'vulnerable habitats' provides principles for managing recreation within these more sensitive environmental areas as shown in Map 4- Concept and Analysis. It has the potential to limit visual intrusion within them and preserve the feelings of remoteness. But equally, facilities around Glenmore are likely to become larger whilst remaining integrated into the surrounding woodland. The softening and screening effect of existing and future trees minimise adverse effects of development on the landscape character.

To achieve the plan's core objective of naturalisation of the forest the plan proposes to remove large areas of non-native conifers over a short period in this LCA. This is required to limit the spread of seed to halt the regeneration of non-native trees. Large areas of plantation to the north of Loch Morlich will be felled over the next ten years. This rapid opening up of the hillside will cause short term significant changes to the landscape and the special qualities of the immediate area. It is viewed as an unavoidable, though temporary, compromise to assist in the long term benefits of establishing a more natural Caledonian Pinewood Forest and deliver the outcomes of the Cairngorm Connect project. (See table below for more details). The alternative- a slower transition- would be less affordable and risk never achieving the end goal. There should be no further requirement for large clear-felling and restructuring in the future. Over the long term the amount of active management will reduce.

Shape of clearfells and straight edges of former plantation areas within the glen will be mitigated through the retention of stable groups of native pine and birch where they exist, reducing the impact on the landscape. In some areas, where standing trees are stable, they may be thinned to break up straight woodland edges. Also planting of groups of trees to coalesce with the retained forest will mitigate the edge, lessening its unnatural form.

Visibility: Extensive views from elevated locations above Glenmore- Cairngorm ski area and from the peaks of the Kincardine hills to the north east. Within the glen most views are short range within the forest. Around Loch Morlich and within some clearings there are longer distance views to the surrounding hillsides – the Northern corries of the Cairngorms being the most dramatic, creating a distinct sense of place.

Views and visualisations of Glenmore area are provided in appendix 15 taken from the following locations:

- Coire an Ciste car park
- Meall a Bhuachaille
- Creag a Ghreusaiche
- Loch Morlich South
- Loch Morlich West

Inshriach Forest:

Inshriach forest is located below the Cairngorm plateau on the gently dipping terrain above the Spey to the south of Rothiemurchus. The forest spreads over three Landscape character areas. Each are described below.

Inshriach LCA: This landscape character area covers the raised, undulating platform of ground around the River Feshie. It is gently dipping terrain largely covered by extensive commercially managed conifer forest, sandwiched between sheer scree hill slopes to the east and the broad expanse of Strathspey to the west. The forest lies on the low intermediate ridge between the Spey and the Feshie. Although forest cover is extensive it opens up with clearings around the River Feshie. The river's dynamic character is striking with extensive braids of gravel, which give a real sense of naturalness and unpredictability to the area. Uath Lochan, a cluster of interlocking peat-black lochans in bog woodland below Creag Far-Leitire, is the focus for recreation in the forest.

The extensive forests of mixed conifers in Inshriach, largely of plantation origin dominate this landscape. Native woodlands of birch are natural in character and include significant areas of dense tall juniper. These become irregular towards upper reaches of woodland, giving way to heather dominated moorland integrate with and complementing the mountains above. Kettle holes with small rounded lochens, exist, associated with bog wetlands and stunted woodland.



Photo from Creag Far-leitire looking east towards the Cairngorm Massif overlooking Uath Lochans illustrating the landscape character of Inshriach.

Kincraig to Loch Alvie LCA is dominated by extensive commercially managed pine forest which conceal hummocky post glacial dips and knolls present in the strath. Development, including industrial and chalet sites and various transport routes, is of a fragmented pattern though they are generally hidden either by the terrain or the trees. The future forest structure will retain these special qualities.

Loch Alvie to Inverdrue LCA has an intimate scale comprising a mix of farmland and dense wood with outcrop hills which constrict the strath. There is a diverse vegetation

Strathspey Land Management Plan 2021 - 2031

cover of juniper and birch scrub, broadleaves, pine forest, deep plantation and open meadows which create an attractive intimate landscape with policy woodlands adding grandeur and further diversity of species.

Visibility of Inshriach Forest:

Views across Inshriach Forest from Strathspey are foreshortened due to the gently undulating nature of the terrain. This means that large scale felling within the forest has less visual impact from nearby viewpoints.

It is most visible from the high ground along the edge of the Cairngorm massif. Future felling interventions are designed to avoid geometric or unnatural shapes where possible, though a few areas with wind stability issues remain where straight edges are unavoidable. Artificially straight edges and geometric shapes that exist are reducing in prominence as the forest is restructured and native woodlands in neighbouring ground mature. The plan has been designed to further reduce the prominence of these.

Views and visualisations of Inshriach area are provided in **Appendix 15** taken from the following locations:

- Creag Follais
- Creag Mhigeachaidh
- Creag na Srione
- Uath Lochans
- Allt Chomhraig
- Railway line near Kincaig

The Cairngorm Massif LCA is located adjacent to the south and east of the plan area. Only the upper margins of the forest area skirt this LCA.

The vast expanse of the plateau, with its massive corries and deep troughs creates a landscape of great scale which is only truly experienced from within the mountain area. The massive, bulky mountains rise to over 1300m, their open and exposed, often boulder strewn summits, with cliffs, corries and elevated lochans. The resulting combination of landforms creates a diverse and spectacular landscape of international importance.

The area has a strong sense of remoteness reinforced by the exposure and unpredictability of the climate, the relative inaccessibility and the dominance of natural processes. These combine to create a landscape where human intervention is minimal and readily overcome by natural forces. Low growing vegetation of heather moorland and bog are present on the lower slopes as is some scattered naturally regenerating trees and scrub. The natural treeline would be within this area if it were allowed to establish. Changes in management brought about by this plan, by delivering policies of Cairngorm Connect will alter the landscape cover around the margins of the Cairngorm Massif. These are described in detail in the table below. The most significant changes will be:

- Increased numbers of naturally regenerating native trees on the steep slopes rising from the strath and glen below.
- Further softening and reshaping of upper forest margins to appear more natural, removing or reducing visibility of artificial straight upper edges.
- Overtime a natural treeline will become established. Its location and appearance determined by the natural processes and continued deer management. It is likely this will alter the appearance of the landscape however it will complement the special qualities of the central massif and Wild Land Area.
- An increasingly uneven arrangement of woodland on slopes determined by natural process rather than artificial boundaries. Dense patches of young trees might

establish next to bare areas. Active management interventions (such as thinning) would be inappropriate even where these may appear unnatural, so, despite their location within the NSA, natural processes will be left to shape the future forest margin in line with the Wild Land principles.

- Only regeneration of non-native species will be actively removed.
- A gradual shift to a more maturing Caledonian forest character as the Scots pines age and develop their classic rounded form with open gaps between, as seen around Green Lochan.

5.6.2 LMP proposals' effect on the Special Qualities of the Landscape Character Areas

The special qualities combine to define the landscape character areas. Some qualities are more robust (such as the underlying landform and topography) some more easily changed (land use, settlement pattern, vegetation). How the land is managed can significantly alter the character of the landscape and impact the special qualities of the area. It is the aim of FLS to strengthen the special qualities of the landscape within the Strathspey plan area over the long term. Its proposed land management interventions are designed to strengthen the core special qualities. However, some difficult decisions have been made regarding the speed of delivery and compromises required. To enable success of the long term improvements to the biodiversity and environment in particular, there will be a number of unavoidable short term impacts to some of the landscape's special qualities. Non-native plantations will be removed over a short period of time, to reduce the incidence of natural regeneration of these non-native species. This will alter some areas' character relatively significantly for a period of around 10-20 years until native woodland becomes established.

The table below sets out the key sensitivities of each LCA and how we plan to mitigate and minimise the impact on the landscape's special qualities

Strathspey Land Management Plan 2021 - 2031

Landscape Area	Landscape change	Key sensitivity	Sensitivity	Mitigation
Inshriach / Kinncraig to Loch Alvie to Inverdrue	Woodland expansion	Rivers /water bodies / glacial and alluvial features	Medium	None expected during this plan period
	Riparian woodland	Rivers /water bodies / glacial and alluvial features	Medium	Limited amounts of woodland expansion in riparian location beside Spey- new edges will respect the underlying pattern of the location, designed alongside a landscape architect. Limited loss of open pasture and removal of unnatural stabilisation of riverside, to augment the natural special qualities of the landscape.
	Deer fencing	Rivers / Water bodies / pattern	Medium	No new deer fences are proposed- the aim is to remove deer fences where possible. Any new fences would be designed by landscape architect to an alignment which responds to landform and field pattern to best reflect the existing pattern and character of location.
	Woodland restructuring	Woodland cover / character	Medium	Appearance of plantation restructuring and ongoing management- strip and group felling / seed tree felling. 'Strips' designed to be asymmetric to fit with landform and surrounding features. Consideration of appearance of thinning from altitude as well as across glen and recreation routes. Thinning staggered to create a diversity of tree ages. Consideration of appearance of internal forest landscape from key roads and paths to ensure special qualities (diversity of open space, dappled shade, juniper/ birch and understory structure) of internal woodland character are retained during restructuring .
Rothiemurchus	Woodland Expansion	Water bodies / geological features / landmarks	Medium	There will be only minor woodland expansion as most is already well wooded. In the more open areas, views from walking routes will be managed to retain views to landmarks and features. Majority of expansion would be through natural regeneration of native species on the open hill to the south of this area (see montane woodland creation below).
	Woodland restructuring	Woodland cover Woodland shape	Medium	Removal of non-native conifers from former commercial plantations will take place over a short time span in MacAlpine Plantation This opening up will have a dramatic effect on views and internal woodland character. A sudden change which will slowly close in again. Shape and extent will be softened in part by the retention of Scots pine / birch, where they exist. Straight edges of retained stands of Scots pine will be thinned to reduce geometric edges where it can be done without affecting forest stability. Where natural regeneration fails to occur infill planting with native species will be carried out – linear rows of planting should be avoided to allow for a natural forest to establish.
	Riparian Woodland	Rivers / smooth landform / glacial and alluvial features		Little change to riparian woods is envisaged within this area. Rivers are dynamic and no active management to restrict it will be carried out.
	Deer fencing	Geological features / water bodies / smooth landform	Medium low	No deer fencing is being proposed. Deer numbers are controlled with no requirement for additional protection.
	Montane Woodland Creation	Geological features / water bodies and rivers/ sense of remoteness		Managing deer populations will encourage natural regen of native species on side slopes of the Cairngorms Massif. This will be left to natural processes. No active management or respacing will be included. There may be a gradual expansion in these areas, environmental conditions will determine its spread, minimising impact on sense of remoteness
Cairngorm Massif	Woodland Expansion	Geological features / sense of remoteness / water bodies and rivers	Medium high	Aim is to encourage natural regen of native species on side slopes of the Cairngorms Massif. This will be left to natural processes. No active management or respacing will be carried out. It would have minimal impact on special qualities due to unplanned nature of it. Aim is to establish the natural tree line. As trees grow it may have a dwarfing effect on scale and height of massif when seen from glen below. Non-native regen will be felled periodically and left insitu- should be before trees get over 10 cm dbh to minimise impact of left branches on views.
	Reindeer management	Fences	High	Fences surrounding paddocks create geometric patterns on smooth rounded slope. As natural regeneration of trees continues to expand on slopes the paddocks should become less visible. Nature Scot suggest reindeer do not hinder tree regeneration.
Glenmore	Deer fencing		Medium high	None envisaged

Strathspey Land Management Plan 2021 - 2031

Landscape Area	Landscape change	Key sensitivity	Sensitivity	Mitigation
	Woodland Expansion	Geological features Woodland cover Woodland shape	Medium high	Aim is to encourage natural regen of native species on slopes above existing forest area. This will be left to natural processes with the aim of establishing the natural tree line. Non-native regen will be felled periodically and left insitu. No active management or respacing of native species will be occur.
	Woodland restructuring	Geological features Woodland cover Woodland shape	High	Appearance of standing dead wood: good practice guidance regarding siting of standing deadwood will be adhered to prevent it detracting from the special qualities of the landscape. Appearance of felled edges- shapes of clearfells designed to avoid geometric shapes and straight edges where possible. Due to need for windfirm boundaries this is not always possible. To minimise visual impact of geometric shapes some respacing of retained groups / edges will be carried out where possible Native trees growing in a matrix with non-native trees will be retained, leaving some tree cover in clear fells, to reduce scale of fellings and help harmonise the shape with surrounds. The large scale removal of non-native trees proposed will significantly change the landscape character, most notable from recreation routes and public road north of Loch Morlich. The increased openness, change to landscape character, colour, feel will alter the special qualities with increased views to surrounding hills/ ease of orientation / a change to perceived scale / wilderness. Fellings will increase visibility of slope landform and geological features until forest regenerates. Thinning will be irregular and include small group felling to avoid rows and regular patterns

5.6.3 Effect of LMP proposals on Wild Land Area:

LMP skirts and is partly within a small section of the Cairngorms Wild Land Area, see **map 17**.

The Visibility of this part of this area is limited from within the Cairngorm Wild Land as it is located on slopes that face away from the WLA, to north and west, on the lower slopes below the Cairngorm massif.

The long term vision for the forests and land of this plan is to fully complement the naturalness of the Cairngorm Wild Land Area. Its proposals aim to develop a gradual progression between the forested glens and the open upland by natural regeneration of native tree species, minimising and removing elements indicative of human intervention and allowing the natural treeline to develop.

This will also assist in reducing the managed appearance of the existing forest plantations of Glenmore and Inshriach, adjacent to and seen from the WLA, as they are converted to native plantations and natural processes are allowed to configure them in the future.

The proposals of the plan are therefore considered to complement and strengthen the characteristics and qualities of the Cairngorms Wild Land Area.

Strathspey Land Management Plan 2021 - 2031

Strathspey Land Management Plan 2021 - 2031

6.0 Analysis and Concept- See Map 12- Management Zones

The Land Management Plan is broken down in to the following areas which are shown on Map 12.

1. Mature non-native conifer
2. Scots pine plantation
3. Sitka spruce planted and regenerated less than 30 years old
4. Caledonian Pinewood- mature and regenerating (including native broadleaves)
5. Non-forest:
 - 5a- Peatland to be restored
 - 5b- Open habitat (including wayleaves, buildings, car parks and quarries)
 - 5c- Woodland Colonisation / Natural Regeneration
 - 5d- Open water
6. Felled awaiting restocking
7. Larch/ Douglas fir/ Norway spruce plantations less than 30 years old
8. Riparian Zones
9. Peatland restoration- Forest to bog restoration and bog woodland

The following sections explain the key features and issues with each zone, the objectives, constraints, opportunities, concept and management prescription for each zone. There is also a section explaining the reason for establishing vulnerable habitats and the principles of these.

6.1 Mature Non-native Conifers (671ha)

6.1.1 Key Issues and Challenges

- Seed source for non-native natural regeneration in adjacent felled areas
- Pine often infected with Dothistroma Needle Blight (DNB)
- Larch has potential to become infected with Phytophthora ramorum
- Changes to landscape special qualities as a result of large scale felling

6.1.2 Management Objectives

- Restore Caledonian Pinewood Habitat

Strathspey Land Management Plan 2021 - 2031

6.1.3 Analysis and Concept (opportunities and constraints)

Objective	Opportunities	Constraints	Concept
Restore Caledonian Pinewood Habitat	Good timber quality and volume in the non-native mature conifer	<p>Access is poor in some locations with long haulage routes</p> <p>Access to road stone is limited and poor quality</p> <p>Clearfell volumes in Inshriach forest west of the River Feshie needs to be hauled through Insh village.</p> <p>Restriction on planting Scots pine due to risks associated with DNB</p> <p>Operations can only be undertaken outwith the Capercaillie breeding season which restricts the amount of felling that can be done each year.</p> <p>Removal of non-native conifers over a short period of time will affect the special qualities of the local and wider landscape in the short to medium time scale.</p>	<p>Clearfell stands prioritised by adjacency to existing felled areas and where DNB could threaten the Caledonian Pinewood.</p> <p>New quarries will be investigated outwith designated sites to access better road stone within the forest.</p> <p>Alternative timber haulage routes will be investigated</p> <p>Restocking will be mostly via natural regeneration which will be encouraged with scarification. Direct seeding of Scots pine and native broadleaves will be undertaken in trial sites. If successful, this will be applied on other clearfell sites. Planting of native broadleaves will be undertaken to introduce seed sources for under-represented species such as aspen, alder, holly, rowan, hazel, cherry and oak. Deer management will focus on these areas to protect saplings.</p> <p>Monitoring of natural regeneration and restocking will be undertaken at 5 years and new actions undertaken if required.</p> <p>Accept compromise to landscape over the short to medium term where non-native conifers are most problematic and mitigate impact through tailoring interventions locally to minimise impact.</p>

6.1.4 Management Prescriptions

Glenmore- Clearfelling of mature non-native conifers will be undertaken over 10 years. Although this will create large areas of clearfell over a short period, it is necessary in order to remove the seed source from existing clearfells and allow non-native regeneration to be removed. It will have a significant landscape impact as shown by the 3D visualisations in Appendix 15 however over time the nature of the regeneration will create a more diverse species and age structure with open space that will look more natural. Due to this approach adjacency isn't an issue.

Inshriach- Felling of mature (over 30 years old) non-native conifers will be spread over a longer period with some coupes being cut in 2034. This is because they are not causing regeneration problems in the same way as Glenmore. All timber volume cut on the west of the River Feshie currently has to be hauled through Insh village. This is not ideal because it is on small single track roads going through a small village. An alternative haulage route will be investigated.

Whole Plan- Restocking will be mostly by natural regeneration which will be encouraged through scarification. There will be trials of direct seeding in the MacAlpine plantation and transplanting of Scots pine regeneration in to clearfell sites. Seed source planting of native broadleaves will be undertaken where necessary and these areas will be targeted for deer control to ensure successful establishment. Deer culling targets will be informed using population modelling, habitat impact assessments and localised deer browsing data. There are no active quarries in the plan area but new quarry locations will be investigated. Regeneration will be monitored at 5 years to allow time for natural regeneration to take place and new actions will be put in place such as planting of broadleaves and enrichment planting if natural regeneration alone is not sufficient to achieve the restocking required.

Strathspey Land Management Plan 2021 - 2031

6.2 Scots pine plantation (2879ha)

6.2.1 Key Issues and Challenges

- Uniform age and structure
- Well thinned in mature stands (65-95 years old)
- Important Capercaillie habitat

6.2.2 Management Objectives

- Restore Caledonian Pinewood

6.2.3 Analysis and Concept (opportunities and constraints)

Objective	Opportunities	Constraints	Concept
Restore Caledonian Pinewood	<p>Good access</p> <p>Mostly well thinned previously</p>	<p>Late thinning may increase chance of wind damage.</p> <p>Some stands adjacent to mature non-native conifers so risk of non-native regeneration if group felling undertaken.</p> <p>Operations can only be undertaken outwith the Capercaillie breeding season.</p> <p>Some stands are on steep ground and therefore machine access is not possible and winch extraction is not economical.</p> <p>Felling interventions potentially intrusive within landscape designated areas</p>	<p>Will be managed as Continuous Cover Forestry using group selection, strip felling and seed tree thinning.</p> <p>Group felling, strip felling and seed tree thinning will not be undertaken near to mature non-native conifers.</p> <p>Thinning coupes will be designed to allow working outwith the Capercaillie breeding season.</p> <p>Funding will be applied for where thinning is uneconomic in the interests of habitat restoration.</p> <p>Strip felling designed to minimise visual impact</p> <p>Targeted deer management will continue to encourage natural regeneration and culling targets will be informed using population modelling, habitat impact assessments and localised deer browsing data.</p>

6.2.4 Management Prescriptions

All the Scots pine plantation will be managed under a continuous cover system (with the exception of the south end of Inshriach – see below) . This will allow the even aged plantation to be transformed to a more diverse age, size and species structure. This will mostly be done by felling small groups of approximately 0.5ha (roughly circular with an 80m diameter). Coupes highlighted on Map 15 Thinning will be uniformly thinned to favour future seed trees. Seed trees will be selected at the next thin operation. These will have a high diameter to height ratio with deep crowns and will be uniformly spread throughout the stand at approximately 25 trees per hectare. Strip felling will be used in the south of Inshriach- see Map 19. This will be small scale clearfells of approximately 5ha in a long strip of roughly 60-100m wide. This is in stands that have been well thinned in the past and have good stand stability. The strips will be felled at 10 year intervals in order to allow enough time for them to regenerate. If necessary the strips will be scarified to encourage natural regeneration of Scots pine and birch and monitored at 5 years to determine if further action is required Effective deer population management will also be critical to this. These operations will not be undertaken in close proximity to mature non-native conifers so that they do not seed in to any open areas that are created.

Strathspey Land Management Plan 2021 - 2031

6.3 Sitka spruce less than 30 years old (83ha)

6.3.1 Key Issues and Challenges

- Dense regeneration and planting of Sitka spruce in Caledonian Pinewood areas
- Older stands starting to seed in to adjacent areas
- Younger stands out competing native tree regeneration

6.3.2 Management Objectives

- Remove Sitka spruce
- Restore to Caledonian Pinewood

6.3.3 Analysis and Concept (opportunities and constraints)

Objective	Opportunities	Constraints	Concept
1. Remove Sitka spruce	<p>Most areas are less than 5 years old and therefore straightforward to cut out.</p> <p>Funding available for habitat restoration</p> <p>Stands over 20 years old will contain marketable biomass volume.</p>	Some areas have trees greater than 10cm dbh and will therefore require approval	<p>In designated sites adjacent to where mature non-native conifers have been removed the young Sitka spruce will be cut out.</p> <p>Outwith designated sites and where there is access for timber wagons and the stocking density is greater than 1600 stems per ha the Sitka spruce will be retained until it is 20 years old and harvested as a biomass crop. The trees will be monitored for condition and stocking and will be removed if volume increment is too low.</p>
2. Restore to Caledonian Pinewood	Some areas do have good birch and willow regeneration	The risks associated with replanting Scots pine are too high due to the risk of bringing in new strains of the Dothistroma fungus.	<p>Where ground vegetation and brash are preventing regeneration and the soil is podzolic in nature then scarification will be used to encourage natural regeneration of native trees.</p> <p>Planting of native broadleaves will be undertaken to increase species diversity and introduce seed source. Species will include aspen, hazel, bird cherry, rowan, holly, alder, oak and willows.</p> <p>Targeted deer management will continue to encourage natural regeneration and culling targets will be informed using population modelling, habitat impact assessments and localised deer browsing data.</p> <p>Depending upon the outcome of trials of direct seeding and transplanting natural regeneration these techniques may be used to restock these sites.</p>

Strathspey Land Management Plan 2021 - 2031

6.3.4 Management Prescriptions

On designated sites where adjacent mature non-native conifers are to be felled in the next 5 years, any non-native natural regeneration from these areas will continue to be removed as soon as possible.

These sites are surrounded by mature Sitka spruce that continues to drop seed in to these felled coupes. To start cutting out spruce regeneration whilst seed is still being produced from adjacent stands is not very effective. As such it is recommended that the spruce regeneration is left until it is 20-25 years old and harvested as a biomass crop. This will allow enough time to remove the surrounding mature spruce and once the young spruce is felled the site will have no spruce seed on it and will be more easily restocked with Scots pine (by natural regeneration) and native broadleaves (by planting).

On PAWS non-native conifer regeneration may be retained up to 20 years old and then removed for biomass crop. The long term intention is that all non-native conifers will be removed from PAWS and designated sites.

6.4 Mature Caledonian Pinewood (2500ha)

6.4.1 Key Issues and Challenges

Mature Scots pine with open space

Occasional non-native conifer regeneration

6.4.2 Management Objectives

Achieve a near-natural forest with open space and a range of age and size Scots pine, juniper and native broadleaves

6.4.3 Analysis and Concept (opportunities and constraints)

Objective	Opportunities	Constraints	Concept
Achieve a near-natural forest with open space and a range of age and size Scots pine, juniper and native broadleaves	Most areas have a good mix of varied ages of Scot's pine	Occasional non-native conifer Native broadleaves are scarce. Access to these areas is poor	These areas will be allocated as minimum intervention as shown on Map 19 Non-native conifers will be cut out. Planting of native broadleaves will be undertaken to establish seed source where the species is not present. Targeted deer control to establish a healthy field layer, understorey and natural regeneration

6.4.4 Management Prescriptions

These areas are classified as Minimum Intervention on the Management Map 19. As such they will have minimal management in order to restore to a near natural forest. Targeted deer management will be undertaken and monitored to ensure successful establishment of tress and field layer. There are occasional non-native conifers within this area that will be cut out over time. These individual trees will be felled to recycle as access is often limited in these stands. It is important to plant under-represented native broadleaves in areas where they are suited to establish a seed source for the future. Native broadleaves to be planted will include aspen, hazel, bird cherry, rowan, holly, alder, oak and willows.

Strathspey Land Management Plan 2021 - 2031

6.5 Open Ground (2497ha)

6.5.1 Key Issues and Challenges

Open habitats within forests (471ha) (5b on map 12)

Open ground being colonised or regenerating with native trees (1275ha) (5c on map 12)

Open/ felled peatland to remain open and be restored (619ha) (5a on map 12)

Open water (132ha) (5d on map 12)

6.5.2 Management Objectives

Open habitats to remain open in forests

Establish native tree species above the current tree line and encourage regeneration of trees in the forest where suitable

Restore deep peats where they are in poor condition

6.5.3 Analysis and Concept (opportunities and constraints)

Objective	Opportunities	Constraints	Concept
Open habitats to remain open in forests	Site type usually prevents tree establishment		Low density native tree regeneration will be tolerated
Establish native tree species above the existing woodland boundary to allow trees to establish at their natural altitudinal limit and encourage regeneration of trees within the forest where suitable.	Scots pine and birch are regenerating well above the tree line at Glenmore. Open areas within forest are showing signs of regeneration	Non-native tree regeneration is occurring Native broadleaves species are limited	Deer management above the treeline and in conjunction with adjacent land owners will encourage natural regeneration Non-native regeneration will continue to be cut out. Native broadleaves will be planted to establish seed sources, some areas with dense ground vegetation will require to be re-stocked where regeneration is not occurring. It is expected that trees will establish on the Feshie fan once grazing has ceased here.

Strathspey Land Management Plan 2021 - 2031

Objective	Opportunities	Constraints	Concept
Restore deep peats where they are in poor condition	Some deep peats are actively laying down sphagnum and storing carbon.	Some sites have been drained and some are eroded.	Where peats are in poor condition due to drainage the drains will be blocked to encourage re-wetting of the sites. Where peats are eroded they will be restored through ground smoothing and re-profiling to encourage re-vegetation.

6.5.4 Management Prescriptions

Where open ground is on deep peat then these areas will be restored. This may be due to previous management including ploughing and intensive drainage. In these areas drains will be blocked to hold back the water, re-wet the site and allow the natural bog ground vegetation to establish. Some peat is being eroded as highlighted north of the Coire Cas Car Park. This area will be restored by ground smoothing and re-profiling, this will reduce the speed of surface water runoff, reduce the erosion and allow ground vegetation to re-establish. Once this process is started the bog will re-wet and encourage bog ground vegetation to establish.

Open ground above the existing woodland edge will be managed to encourage natural regeneration of native tree species. This will involve continued deer management, non-native regeneration being cut out and establishing native broadleaves through planting where it is not occurring naturally. Some open ground in the forest is expected to naturally regenerate with native tree species, however where these areas are lacking the range of natural species planting will be undertaken of species such as alder, willow, downy birch, oak, aspen, holly and rowan. Some open ground habitats in the forest will remain open.

6.6 Felled land awaiting restocking (418ha)

6.6.1 Key Issues and Challenges

The risks associated with introducing DNB by planting Scots pine within the Caledonian pinewood are too high

Low density of non-native tree regeneration

Some sites developed dense ground vegetation

Some group felling within LISS coupes

6.6.2 Management Objectives

Establish Scots pine and native broadleaves

Strathspey Land Management Plan 2021 - 2031

6.6.3 Analysis and Concept (opportunities and constraints)

Objective	Opportunities	Constraints	Concept
Establish Scots pine and native broadleaves	Some group felling from 20 years ago are establishing well	Restriction on planting Scots pine Non-native regeneration Dense brash and ground vegetation preventing natural regeneration	Plant native broadleaves to establish seed source and restock with under-represented native species. Continue deer management and removing non-native regeneration Clearfell surrounding mature non-native stands Scarify felled sites to mix up organic and mineral soil and remove dense vegetation to encourage natural regeneration. Expand existing group felling where regeneration has now established. Explore the use of direct seeding and transplanting of existing regeneration to establish Scots pine.

6.6.4 Management Prescriptions

These areas include clearfells cut 10 years ago, recent strip clearfells and 0.5ha group clearfells from 20 years ago. The objective for all these sites is to establish Scot's pine and native broadleaves at a variable spacing through natural regeneration and planting. Native broadleaves will be planted to establish under represented species in Strathspey and establish seed sources in areas where they are not present. Scots pine regeneration will be encouraged through deer management, scarification and transplanting of regenerated trees. Deer numbers and habitat impact will be monitored to inform cull targets and monitoring of regeneration will be carried out at year 5 to establish if further intervention such as enrichment planting is requires to achieve the restocking levels required. Direct seeding will be trialled and used in suitable locations if monitoring of the technique is successful in the first 5 years of the plan.

6.7 Young non-native conifer plantations (less than 30 years old) (59ha)

6.7.1 Key Issues and Challenges

Stands of larch, Douglas fir and Norway spruce planted between 2002 and 2012 at 2500 stems per ha (establishment to thicket stage)

Spread throughout Strathspey forest

Seeding for larch starts at 20 years and 35 for Douglas fir and Norway spruce

6.7.2 Management Objectives

Manage for timber production for current rotation

Restock with Scots pine and native broadleaves

Strathspey Land Management Plan 2021 - 2031

6.7.3 Analysis and Concept (opportunities and constraints)

Objective	Opportunities	Constraints	Concept
Manage for timber production for current rotation	<p>Good stocking density , well established stands at thicket stage with a yield class 14 and above.</p> <p>Good access to all stands.</p> <p>Not seeding in to adjacent stands</p>	Non-native conifer, risk of seeding in to adjacent felled areas.	<p>Thin stands to maximise volume production and improve timber quality of final clearfell trees.</p> <p>Clearfell early, especially larch to prevent seeding in to adjacent stands.</p>
Restock with Scots pine and native broadleaves	Once surrounding mature non-native stands have been felled the seed source will have been removed.	Restriction on planting Scots pine	The felled sites will be part planted with under represented native broadleaf species and Scots pine regeneration will be encouraged.

6.7.4 Management Prescriptions

These stands have been established well and are now at thicket stage. They will be raked for first thinning and then subsequent thinnings will be at marginal thinning intensity. Larch will start seeding at age 20 so larch will be felled early in the rotation at age 24. Douglas fir and Norway spruce will be left longer as they will not seed until 35 years old. The sites will be restocked through natural regeneration of Scots pine and planting of native broadleaves.

6.8 Riparian Zone

6.8.1 Key Issues and Challenges

Riparian zones at various stages of regeneration

Species mix of aspen, Scots pine and birch

6.8.2 Management Objectives

Restore riparian zones to a mix of native tree species and 50% open space.

Strathspey Land Management Plan 2021 - 2031

6.8.3 Analysis and Concept (opportunities and constraints)

Objective	Opportunities	Constraints	Concept
Establish riparian zone with approximately 50% forest cover and a range of native species	Regeneration occurring well on some sites	Mostly Scots pine and birch regeneration Occasional non-native conifer regeneration	Planting will be undertaken where necessary to diversify tree species. Planted species will include aspen, willow and alder. Non-native conifer will be cut out as it occurs The Allt Mharcaidh will be re-directed to follow its initial path and re-wet the bog area.

6.8.4 Management Prescriptions

Most of these areas are regenerating well with Scots pine and birch with open space. There is some non-native regeneration which will be cut out as it occurs. Planting will be undertaken to establish seed sources of underrepresented species such as willow, aspen and alder. This will be done to create areas of dappled shade and create 50% open areas along water courses. The Allt Mharcaidh will be re-directed to remove the water course from its current canalised location and flow in its original location through an adjacent wetland. See Appendix 10 stating the recommended operations to return the Allt Mharcaidh to its original location.

6.9 Peatland Restoration on forested ground (13ha)

6.9.1 Key Issues and Challenges

Areas of deep peat within the forest have been planted in the past with non-native conifers and Scots pine

Deep peat was cultivated and drained to establish trees

Some deep peat is regenerating with Scots pine

6.9.2 Management Objectives

Restore deep peats when clearfelling

Retain and restore bog woodland where native trees exist

6.9.3 Analysis and Concept (opportunities and constraints)

Objective	Opportunities	Constraints	Concept
Restore deep peats when clearfelling	Non-native conifers being felled	Will require additional work to restore peatland	Following felling deep peat will not be restocked Where necessary stump flipping, ground smoothing and drain blocking will be used to re-wet peatland areas.

Strathspey Land Management Plan 2021 - 2031

Objective	Opportunities	Constraints	Concept
Retain and improve bog woodland where native trees exist	Native tree regeneration is occurring	Will require additional work to restore peatland	Tree cover will be retained to allow bog woodland to regenerate Where sites have been drained these will be blocked to re-wet the peatland.

6.9.4 Management Prescriptions

Forest to Bog Conversion

Where forest is felled and deep peat exists these areas will not be restocked. If the site was ploughed and drained then the ground will be smoothed and drains will be blocked to raise the water table and re-wet the soil. This will be a gradual process, there may be low density non-native tree regeneration. This will be tolerated on the site but will become less likely as the water table rises due to restoration operations and wetland ground vegetation establishes.

Bog woodland

There are areas of deep peat in Strathspey where Scots pine were planted or are naturally regenerating and are growing (albeit slowly). This is a rare habitat and as such will be retained. Where there has been drainage in the past these will be blocked to encourage re-wetting of the site.

6.10 Vulnerable Habitats (4087ha) see map 4

6.10.1 Key Issues and Challenges

Recreation use throughout Strathspey forests

Highest recreation use around Glenmore and Loch Morlich

Increasing visitor numbers with some changes in behaviour

Capercaillie and other wildlife sensitive to disturbance, especially during breeding and nesting season

6.10.2 Management Objectives

To manage recreation use around vulnerable habitats

Strathspey Land Management Plan 2021 - 2031

6.10.3 Analysis and Concept (opportunities and constraints)

Objective	Opportunities	Constraints	Concept
To manage recreation use around vulnerable habitats	Good habitats currently exist for a range of important species.	Species and habitats are vulnerable to human disturbance	<p>Create a number of Vulnerable Habitat zones around the forest where recreation is managed to reduce human disturbance to habitats and species.</p> <p>Develop and adopt working principles for how recreation is managed within these zones</p> <p>Adopt principles identified in Glenmore Recreation Site Plan to encourage most visitors to remain in limited area around Glenmore</p>

6.10.4 Management Prescriptions

The following principles will be applied within the Vulnerable Habitats:

- Used for quiet enjoyment where residents and visitors can experience the special qualities of the Strathspey Forests. Recreational development, management, promotion and marketing will be kept to a minimum to maintain safe enjoyment of the area, understand the needs of local communities and not negatively impact the Designated Features in the area.
- Presumption against large scale formal events/ filming
- Work with local small event organisers to reduce the number of evening and night time events
- Explore and improve public education about Vulnerable Habitats through staff, partnerships and existing resources.
- Work closely with partner organisations to understand, encourage and better define responsible access in all areas

The FLS visitor services team are currently working on a vulnerable habitat implementation plan that will specify features of interest and management prescriptions within each area.

Strathspey Land Management Plan 2021 - 2031

7.0 Land Management Plan Proposals

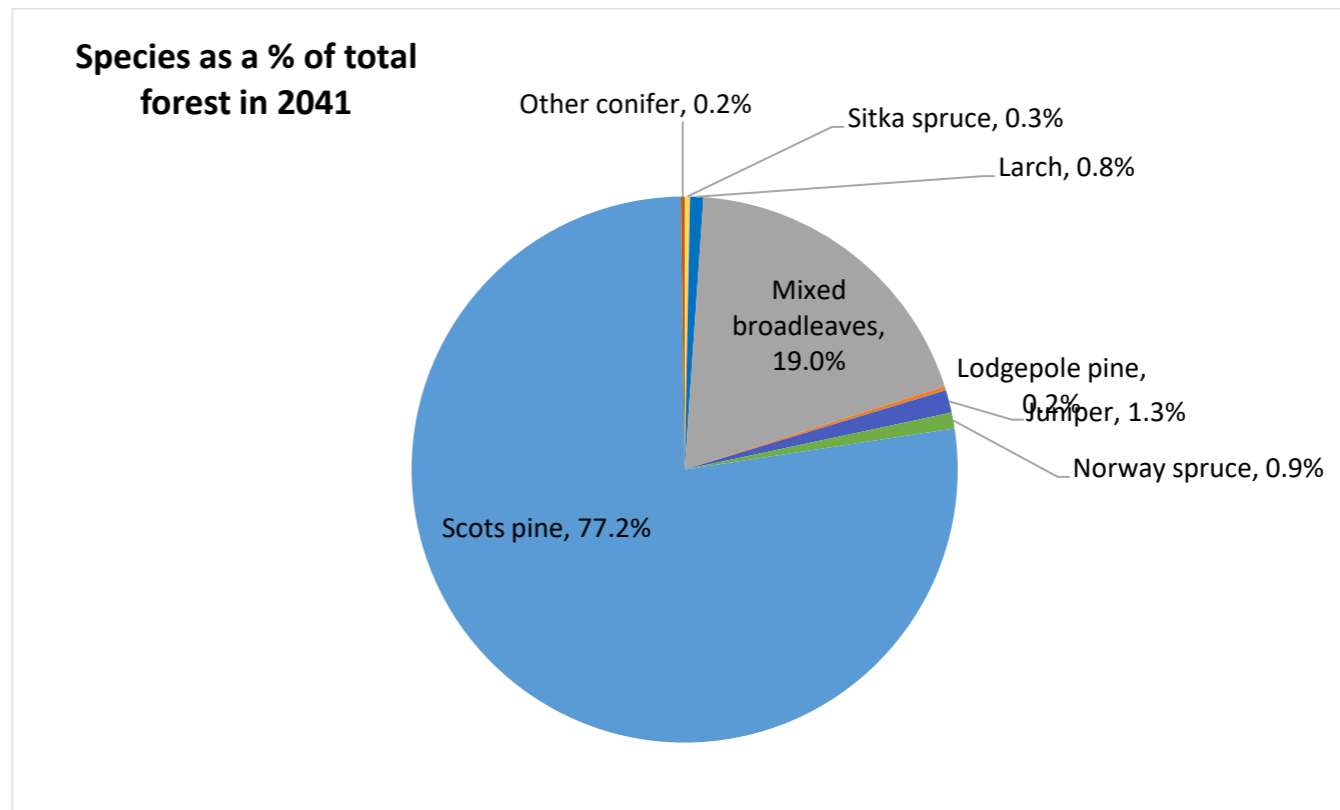
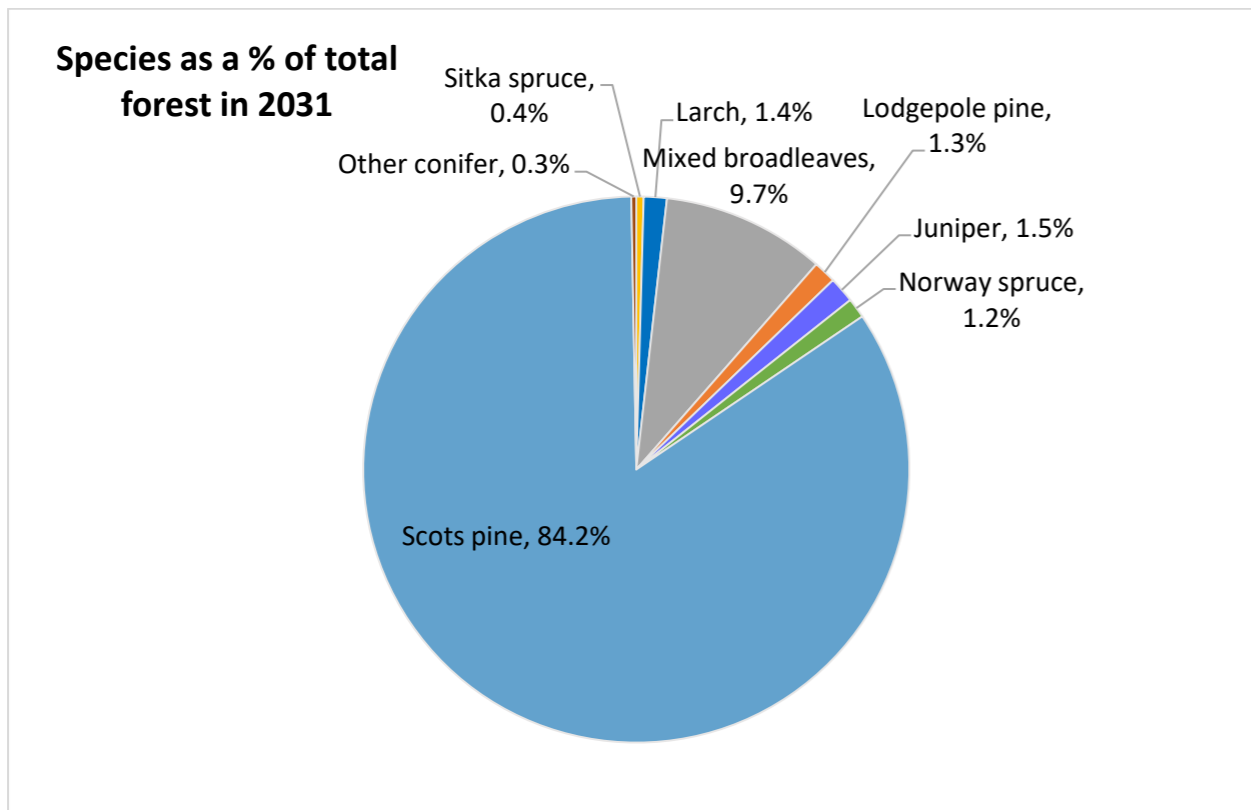
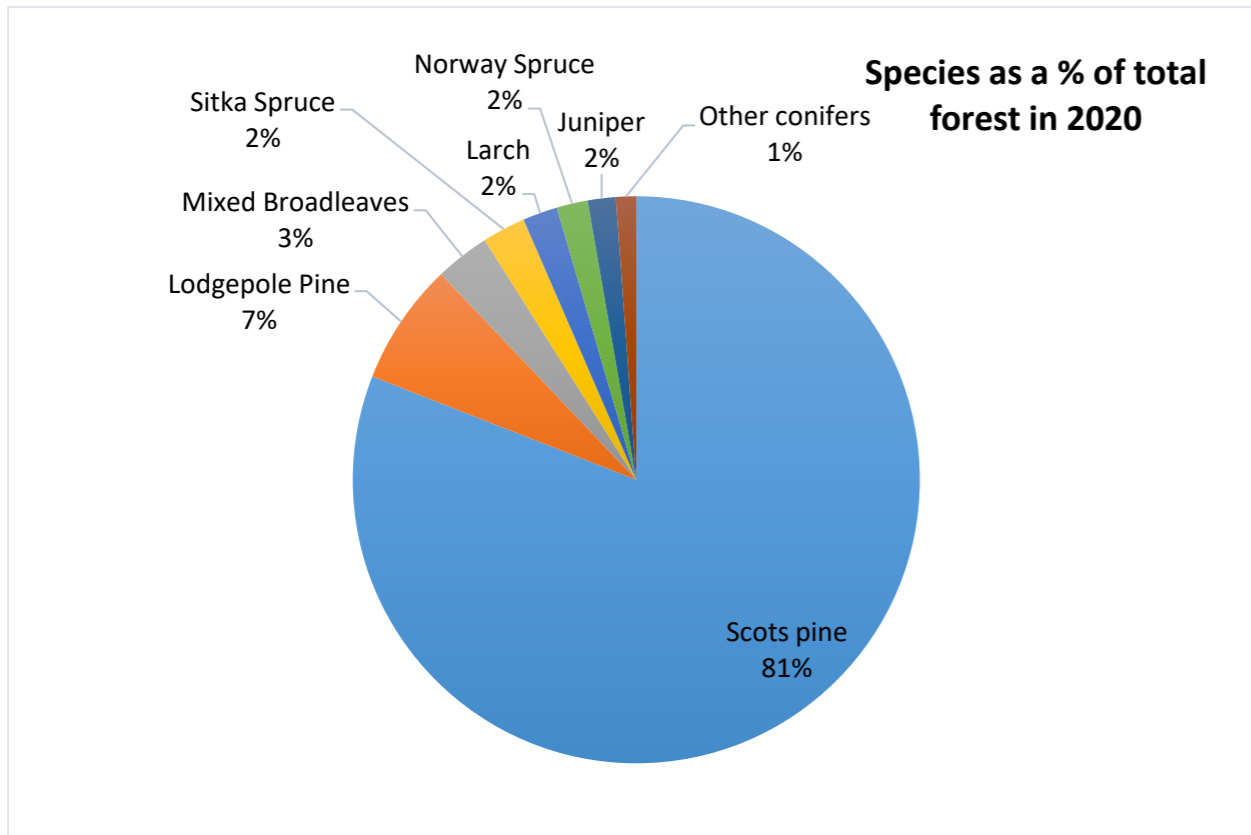
7.1 Species Composition of plan area

Species	Current		2031		2041	
	Area (Ha)	%	Area (Ha)	%	Area (Ha)	%
Sitka spruce	141.8	1.5%	21.0	0.2%	17.2	0.2%
Larch	99.8	1.1%	66.0	0.7%	42.9	0.5%
Mixed broadleaves	173.2	1.9%	468.7	5.1%	1037.8	11.3%
Lodgepole pine	306.5	3.3%	65.0	0.7%	13.6	0.1%
Juniper	97.5	1.1%	74.4	0.8%	73.3	0.8%
Norway spruce	86.4	0.9%	57.6	0.6%	51.5	0.6%
Scots pine	4217.4	45.8%	4081.8	44.3%	4223.4	45.9%
Other conifer	57.1	0.6%	14.2	0.2%	12.5	0.1%
Open/other	4029.2	43.8%	4360.3	47.3%	3736.1	40.6%
Total Area	9209	100.0%	9209	100.0%	9209	100.0%

7.2 Species composition of forest

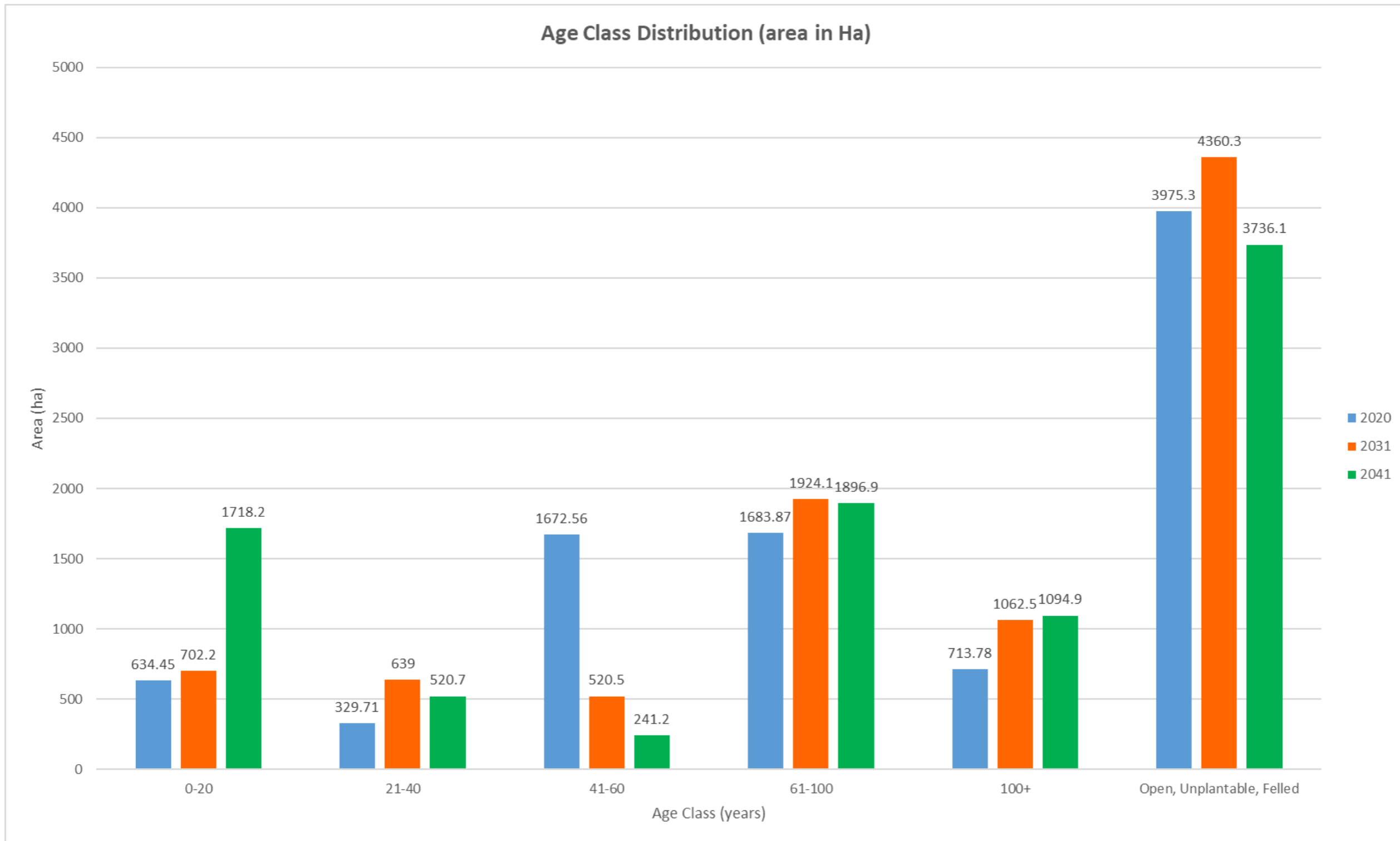
Species	Current		2031		2041	
	Area (Ha)	%	Area (Ha)	%	Area (Ha)	%
Sitka spruce	141.8	2.7%	21.0	0.4%	17.2	0.3%
Larch	99.8	1.9%	66.0	1.4%	42.9	0.8%
Mixed broadleaves	173.2	3.3%	468.7	9.7%	1037.8	19.0%
Lodgepole pine	306.5	5.9%	65.0	1.3%	13.6	0.2%
Juniper	97.5	1.9%	74.4	1.5%	73.3	1.3%
Norway spruce	86.4	1.7%	57.6	1.2%	51.5	0.9%
Scots pine	4217.4	81.4%	4081.8	84.2%	4223.4	77.2%
Other conifer	57.1	1.1%	14.2	0.3%	12.5	0.2%
Total Area	5180	100%	4849	100%	5472	100%

Strathspey Land Management Plan 2021 - 2031



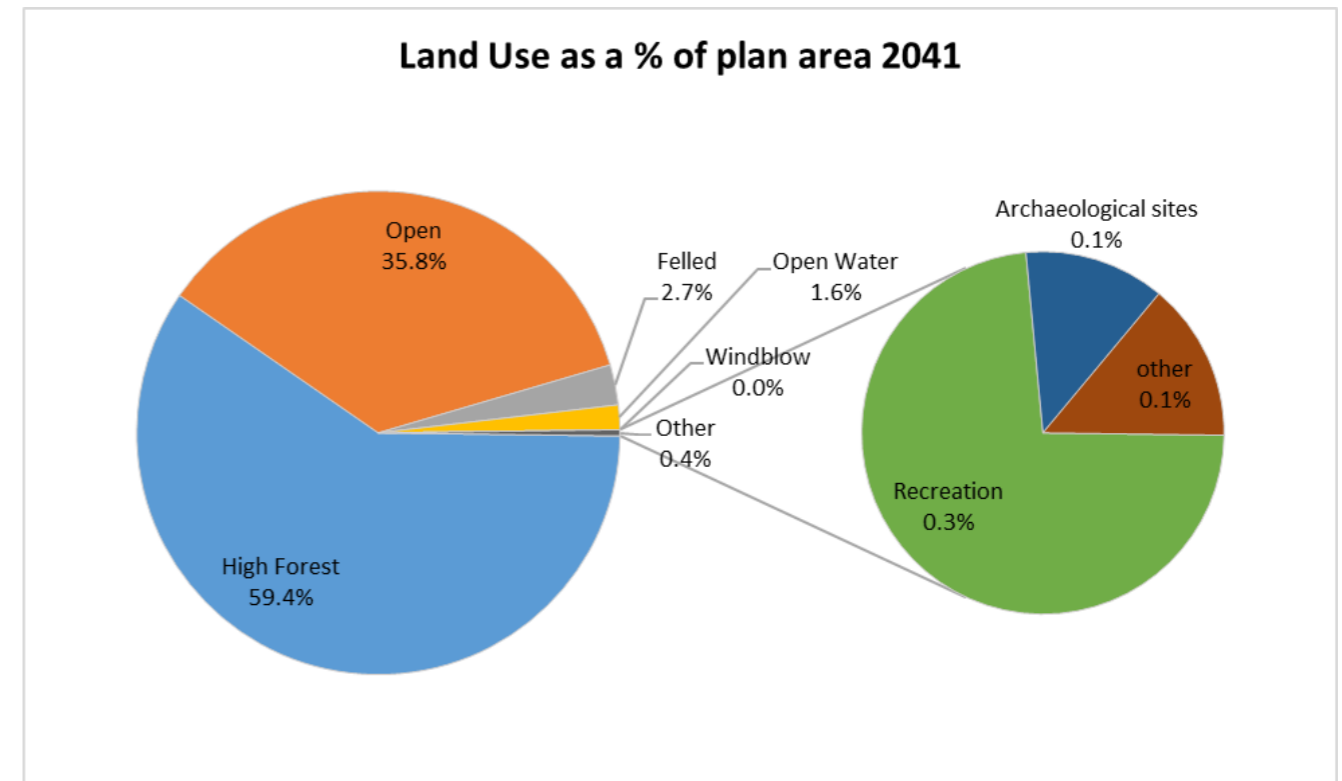
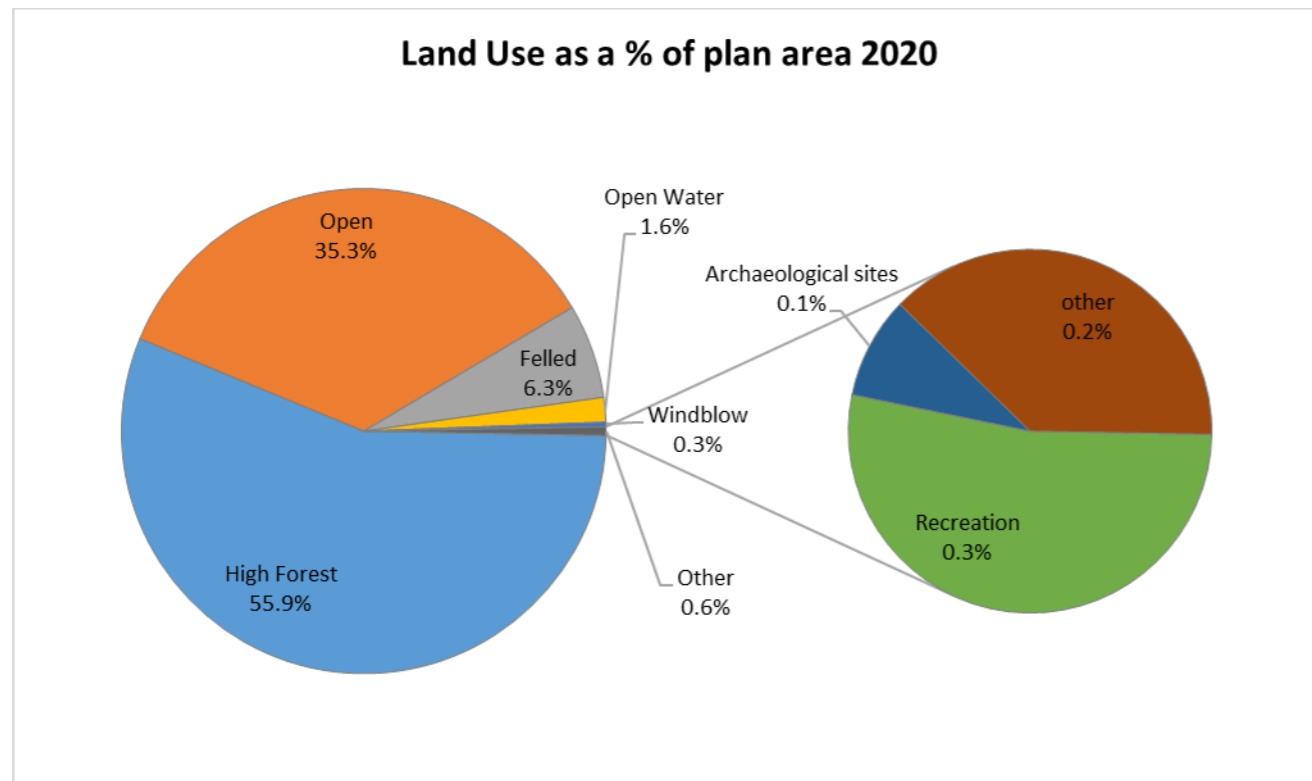
Strathspey Land Management Plan 2021 - 2031

7.3 Age Composition



Strathspey Land Management Plan 2021 - 2031

7.4 Land Use



7.5 Scale of Proposed Felling Areas

Total Forested Area: 5180ha

Felling	Phase 1	%	Phase 2	%	Phase 3	%	Phase 4	%	Long Term Retention/ Minimum Intervention/ Natural Reserve	%	Area outwith the 20yr fell phase	%
Area (ha)	421	8%	253	5%	102	2%	54	1%	2559	49%	1791	35%

Strathspey Land Management Plan 2021 - 2031

7.6 Production Forecast for previous LMP and this LMP

