



Forestry and
Land Scotland
Coilltearachd agus
Fearann Alba

Loch Chon Land Management Plan

2026-2036

Scotland's national
forests and land
are responsibly
managed to the
UK Woodland
Assurance Standard.





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Version Number	Date	Comments
V0.1e	22/6/2026	Table Amendment



A. Description of Woodlands

A.1 Property Details

Property Name:	Loch Chon		
Business Reference Number:	NA	Main Location Code:	NA
Grid Reference: (e.g. NH 234 567)	NN 4296 0422	Nearest town or locality:	Kinlochard
Local Authority:	Stirling Council		
LMP Plan area (hectares):	1772.19		
Owner's Details			
Title:		Forename:	
Surname:			
Organisation:	Forestry And Land Scotland	Position:	(Central Region)
Primary Contact Number:		Alternative Contact Number:	
Email:	planning.central@forestryandland.gov.scot		
Address:	Aberfoyle Office, Aberfoyle, Stirling		
Postcode:	FK8 3UX	Country:	Scotland
Approval (Scottish Forestry to Complete)			
LMP Reference Number:			
Approval Date:			
Approval Period			
Signature			
Position			



Declaration					
<p>I hereby apply for a permission to fell the trees described in this application and I certify that:</p> <ul style="list-style-type: none"> • I am the landowner or an occupier of the land with written permission of the landowner; • Where the landowner is a business, I am authorised to sign legal contracts on behalf of that business; • If I am an acting on behalf of the landowner or occupier, I have been mandated to do so; • Any necessary consents from any other person(s) if required, have been obtained; • I have made the necessary checks with the local planning authorities regarding Tree Preservation Orders and Conservation Areas; • I have notified all stakeholders that may be affected by the felling in this application and sought their views prior to submitting this application; • I hereby acknowledge that Scottish Ministers may process any of my personal data contained in or relating to this application in accordance with the terms of Scottish Forestry's Privacy Notice, a copy of which is available at www.forestry.gov.scot; • Where applicable and appropriate I have submitted an EIA screening opinion form for operations contained within this application under the Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017; • I have read and understand this application fully and, to the best of my knowledge and belief, the information given in this application is complete, true, and accurate; • I accept that any false or misleading information provided in this application constitutes an offence and may result in any felling permission based on this application being revoked at any time, and • I have read and understand Scottish Forestry's Privacy Notice, a copy of which is available at https://forestry.gov.scot/privacy-complaints-freedom-of-information-and-requests-for-information. 					
Do you give consent for Scottish Forestry to access your land? Delete as appropriate.			YES		
<p>You are not obliged to give us consent to enter your land, however if we are denied access to your land, and cannot carry out an assessment because of this, we may reject your application.</p> <p>This consent is for access to assess this application as well as monitor compliance with any subsequent approval, where applicable</p>					
Signed:	CT Planning	Print:	Central Planning	Date:	25-2-26



A.2 Location and Background

The Loch Chon Land Management Plan (LMP) area covers 1772.19 hectares and forms part of a larger contiguous forest known as the Loch Ard Forest, which is part of Queen Elizabeth Forest Park. The Loch Chon block sits at the northern reaches of Loch Ard Forest, extending from near Kinlochard village to within a few kilometres of Loch Katrine. The B829 (Aberfoyle to Inversnaid road) passes through the area and is the only public road providing access. The Loch Chon block sits entirely within the Loch Lomond and Trossachs National Park and is within the boundaries of Stirling Council.

The land that covers the Loch Chon LMP area was acquired in three stages. Around half of the area was acquired in 1945 (the eastern and northern sections) with the rest acquired in 1975 and 1977. These areas were afforested shortly after acquisition. Although some woodland areas were present before the area came into Forestry Commission ownership, the majority of current woodland cover was due to extensive planting during the latter half of the 20th century.

This land management plan sets out a 20 year strategic vision for Loch Chon, and provides approval for the first 10 years of felling/thinning & associated restocking. This LMP builds on the work of the previous plans for this area, which sought to diversify species and age structure, enhance the network of native woodlands and produce a sustainable supply of quality timber.

See Map M1: Location

A.3 Existing Schemes & Permissions

Type (e.g. Felling Permission)	Ref. No.	Details
Land Management Plan	033/CT/L(4)	Loch Chon Land Management Plan 2011-2021
Extension	033/CT/L(4)	LMP extension to 31 st of October 2022
Felling Permission	FPA-9965	Standalone felling permission to account for an approved coupe outside of last plan extension.

A.4 Stakeholder Engagement

Scoping – Main Points	LMP Reference (section/page):
Protecting water tunnel infrastructure	B1
Managing <i>P.Ramorum</i> risk	B1 , C.2.1 , C.2.14
Protecting red-squirrel and wood ant habitat	B1 , C.2.4
Managing Sitka Regeneration	B1 , C.2.7



A.5 Long Term Vision and Management Objectives

Vision

The long-term vision for the Loch Chon LMP area is to maintain and enhance a diverse forested landscape, to restore ancient woodland (PAWS), increase habitat connectivity, and continue to sustainably produce timber. The landscape of the Loch Chon area is highly valued for its rugged character and the recreation opportunities it provides, and maintaining these characteristics is a key part of the vision. Our vision is that the area continues to be a productive and multifunctional forest into the future.

Management Objectives

No.	Objectives (including environmental, economic and social considerations)	Indicator of objective being met
1	Continue to improve the ecological value of the forest through PAWS restoration & increased habitat connectivity	The indicator of this objective being met will be the successful implementation of restoration measures laid out in this iteration of the Loch Chon land management plan. The area of restored PAWS/native woodland area will have increased over the plan period.
2	Continue to grow productive timber species	The indicator of this objective will be the implementation of the felling & restocking as detailed in this plan. More specifically this relates to harvesting commercial timber areas, and restocking with commercially productive species where appropriate.
3	Prioritise the removal of Larch to minimise the negative effects of <i>P. Ramorum</i> and reactive felling	The indicator of this objective being met is the implementation of the felling plan contained in this LMP. This can be measured by a reduction in the area of Larch by the end of the plan period.
4	Enhancement of the Landscape to maintain and improve the recreational value of the area	The indicator of this objective being met is the continued development of a diverse forested landscape. This is measurable through a varied age distribution of trees and a continued presence of diverse woodland habitats.



A.6 General Site Description

A.6.1 Topography

The topography of the LMP area is defined by Loch Chon sitting at bottom of a glen that heads north towards Loch Katrine. The land rises from a low of 90 metres above sea level at the shores of the Loch, to a high of around 600 metres at the eastern edge of the LMP area. The western and eastern sides of Loch Chon are generally steep and rugged.

Loch Lomond and the Trossachs National Park (LLTNP) Special Landscape Qualities:

The Special Landscape Qualities of the Loch Lomond and The Trossachs National Park Commissioned Report No. 376 highlights both the general landscape qualities of the national park, as well as special qualities that are defined within discrete geographical zones. The general qualities that are particularly relevant to this LMP are:

1. Water in its many forms: this quality describes how waterbodies interact with other landscape settings to create “a diverse and beautiful landscape”.
2. The rich variety of woodlands: this quality describes how “woodlands define the lower and mid-glen slopes” and how woods are visually important and “bring a tapestry of texture and colour” to the landscape

The LMP areas sits within the ‘Trossachs’ zone and the special qualities that are particularly relevant are:

1. A harmonious concentration of lochs, woods and hills: this quality describes how the character of the area is defined by “the tight concentration and harmonious blending of loch, woodland and open hill”. It also describes how broadleaf woodland can frame the lochs, as well as how the transition between water/woodland/hill is sometimes “transitional, broken and intricate” as well as “abrupt” in some cases.
2. A landscape of beautiful lochs: this quality describes how Loch Chon is “heavily afforested” with “dramatic views to the craggy hills above”. The remoteness of the area is also emphasised.

Landscape Character Types:



A.6.1 Topography

NatureScot has produced a national map-based series of Landscape Character Assessments (LCTs) for Scotland. LCT descriptions provide a list of key characteristics and typically include sections on physical, cultural and aesthetic elements of landscape. The LCT's that cover the Loch Chon LMP area are:

1.LCT 234 Strath and Glens with Lochs: this LCT describes how steep slopes are “usually densely wooded with coniferous forest” and how narrow loch shores “often feature mature oak, birch, and some exotic plantings”. The landscape is “strongly contained by steep slopes” but there are “long views” across open water as well as “subtle promontories and narrow beaches” along loch shores.

2.LCT 251 Highland Summits: key characteristics include highly visible peaks and ridges that form “a scenic rugged backdrop” to lower straths and glens. Broadleaf woodlands are generally “confined to steeper slopes with fragments of oak and birch tracking burns and gullies”. The presence of productive forestry is noted on both the lower slopes as well as “extending up into the glens”. The dramatic views and rugged character “provide a sense of wildness” to the area.

A.6.2 Geology and Soils

The underlying bedrock geology of the LMP area is mainly of the ‘Ben Ledi Grit Formation’, a metamorphic bedrock formed between 508-635 million years ago. This bedrock is formed of Psammite and Semipelite (essentially a sandstone/mudstone/siltstone mix). Overlying deposits are formed of glacial till, a mix of clay/sand/gravel/boulders deposited by glaciers.

The soils in the area are relatively varied at lower elevations (sub 300m), comprising of a complex of upland brown earths, ironpans, podzols, surface water gleys and molinia bogs. At the higher elevations on the western side of the Loch the soil type shifts to large areas of calluna blanket bog.

See Map M3: Soil

A.6.3 Climate

The climate for Loch Chon reflects the changes in elevation across the LMP area. At the lower elevations around Loch Chon the climate is warm, moist, and sheltered. Moving up the hill the climate shifts to cool and wet, with exposure increasing as elevation is gained. At the eastern fringe of the LMP area (towards Beinn Chochan which sits at 703m) the climate shifts to sub alpine and wet and is severely exposed.

Average annual rainfall is 2425 mm a year.



A.6.3 Climate

The future climate is likely to be defined by an overall increase in accumulated temperature, with dryer summers and wetter winters. The climate may become more variable, with a potential increase in extreme weather events.

See Map M5: Climate

A.6.4 Hydrology

The LMP area sits at the north western reaches of the Forth catchment area which covers an area of 1029 km². The Loch Chon LMP area is 1772.19 ha (17.72km²), which represents 1.7% of the Forth catchment area.

The Forth Catchment is split further into 46 'waterbody catchment areas', which provide a more localised assessment of hydrology. Four waterbody catchment areas cover the vast majority of the LMP area. These are listed below along with an overall quality status (SEPA rating):

1. Water of Chon (Source to Loch Chon), Good Status
2. Loch Chon, Moderate Status
3. Water of Chon (Loch Chon to Loch Ard), Good Status
4. Loch Ard, Moderate Status.

The hydrology of the LMP area is defined by topography, a network of burns come down the valley sides and run into Loch Chon. From the southern end of the Loch a watercourse (Waters of Chon) flows into Loch Dhu and then onto Loch Ard (which is outside the LMP area). From here the watercourse travels south and through the village of Aberfoyle where it becomes the 'River Forth'.

Two Scottish Water catchments intersect with the Loch Chon LMP area. The Loch Katrine Catchment encompasses areas of high open ground and forest cover to at the eastern boundary of the LMP area. The Loch Lomond catchment covers a limited section at the northern edge of the LMP area. There is water pipeline infrastructure that runs the length of the LMP area (carrying water from Loch Katrine to Glasgow).

Several Private Water Supplies (PWS) are located within the LMP boundary. As part of the LMP scoping process owners for all supplies have been contacted to confirm the location of abstraction points, type of supply, and location of associated infrastructure. To date FLS have been able to confirm the location of 10 known supplies within the block, with one location still awaiting confirmation from the user (multiple letter drops and site visits have been attempted).

See Map M7: Catchments & Watercourses

See Map M8: Key Features



A.6.5 Windthrow

The windthrow risk in the Loch Chon LMP area is relatively low around the loch and on the lower slopes of the glen. In general the soil types become wetter at higher elevations and windthrow risk increases. The upper slopes of the LMP area are very exposed, especially on the eastern boundary of the LMP area.

Windthrow risk can be assessed using a DAMS scores (Detailed Aspect Method of Scoring). This is a scoring method developed by Forest Research (Government Research Agency) that models wind-risk across the UK using data on a suite of relevant variables. The included DAMS score map clearly shows the increased windthrow risk as elevation rises from the loch shores.

See Map M4: DAMS

A.6.6 Adjacent Land Use

The adjacent land use consists of grazed open hill, some sections are privately owned and some are publicly owned. The other major adjacent land-use is Forestry, the LMP area is connected to more FLS managed forest (Beinn Bhan & East Loch Ard) as well as private commercial woodland at the southern boundary.

A.6.7 Access

The B829 (Aberfoyle to Inversnaid road) is the only public road that passes through the LMP area, it runs through the centre of plan area along the east side of the Loch. It provides access to several private properties, an FLS carpark, as well as the Loch Chon campsite (run by the national park). There is a voluntary timber transport management plan in place for the B829, through which Forestry and Land Scotland (FLS) works with the local authority and other stakeholders to co-ordinate timber haulage and minimise disruption to road users and nearby communities. Agreed measures include coordinating with the local school to avoid haulage traffic during drop-off and pick-up times, and liaising with Inversnaid Hotel to coordinate the movement of coaches and timber lorries to minimise the potential for disruption along the route. In addition FLS uses the internal forest road network for a significant proportion of timber movements which reduces pressure on the B829.

There are a network of Forest roads that serve the area and that allow for non-motorised public access to the forest. The eastern side of Loch Chon has more limited forest road access; FLS is investigating road options to facilitate access.

The forest road that runs along the western edge of the Loch is part of the 'Statute Labour Road' and is classified at a core path, the route links Aberfoyle to Loch Katrine and beyond. A core path also runs through a section of Ledard Glen on the eastern boundary of the LMP area.



A.6.8 Historic environment

There are no scheduled ancient monuments (SAMS) in the LMP area, however there are unscheduled heritage features present. The features are primarily related to the 'Glasgow Corporation Waterworks' infrastructure, comprising of features such as aqueduct access point, inspection hatches, and marker posts. Despite being part of the historical environment many of these features are still in use today.

See Map M6: Heritage

A.6.9 Biodiversity

There are red squirrel, beaver, water vole and wood-ants within the LMP area. Black grouse present in the wider the area but have not been sighted or confirmed within the LMP area. There is a significant area of PAWS (Plantation on Ancient Woodland Sites) in the LMP area totalling 278 hectares, as well as areas of existing ANSW. Loch Chon is adjacent to the Great Trossachs Forest National Nature Reserve.

A.6.10 Invasive Species

There have been issues with Rhododendron along the eastern and western sides of the Loch, there has been a Rhododendron removal program to manage these areas.

A.7 Woodland Description

The woodland within the Loch Chon LMP areas is 80% conifer and 20% broadleaf, reflecting its history of conifer afforestation after the various land acquisitions. This history of afforestation is reflected in the age classes, with a significant peak in age between 41-80 years. Work to restructure age classes is visible with younger tree cohorts present across lower age classes. There are approximately 40 hectares of woodland that are over 100 years in age, these are areas of mixed broadleaf wood tucked away along the shores of Loch Chon and along the southern most slopes of the LMP area.

Sitka Spruce is the dominant conifer, followed by Norway Spruce, Larch and Scots Pine. There are several other conifer species present in small proportions (Hemlock, Western Red Cedar, Noble Fir) but they form a small percentage of the productive capacity. Productive conifers have been planted extensively and cover some of the steepest ground on both the western and eastern slopes of Loch Chon.

Broadleaf woodland is primarily comprised of mixed Oak/Birch woodland types (with other minor species). Also of note are the wet alder woods on the Loch Shores and on the eastern slope of Loch Chon. There are significant areas of PAWS, some zones have been restored while others (especially on the steepest slopes) remain covered with commercial conifers.



A.7 Woodland Description

The Loch Chon woodlands have become more diverse over recent history as efforts have been made to restructure the extensive conifer plantations.



Table 1 - Area by species

This shows the current and future species composition within the entire Land Management Plan area.

Area by species						
Species <small>(Add relevant species groups, or OG/OL)</small>	Current*		Year 10*		Year 20*	
	Area (ha)	%	Area (ha)	%	Area (ha)	%
Sitka Spruce	566.1	55.2	449.9	44.6	406.9	39.8
Native Broadleaves	267.3	26.1	349.5	34.6	391	38.3
Norway Spruce	80.4	7.8	77.6	7.7	84.4	8.3
Larch	45	4.4	22.5	2.2	15.4	1.5
Scots Pine	37.5	3.7	65.5	6.5	72.6	7.1
Mixed Conifer	29.7	2.9	44.3	4.4	51.7	5.1
Open Hill	353.96	20.0	353.46	19.9	353.46	19.9
Open/Other	279.41	15.8	296.61	16.7	283.91	16.0
Open Water	112.83	6.4	112.83	6.4	112.83	6.4
Total	1772.2	100	1772.2	100	1772.2	100



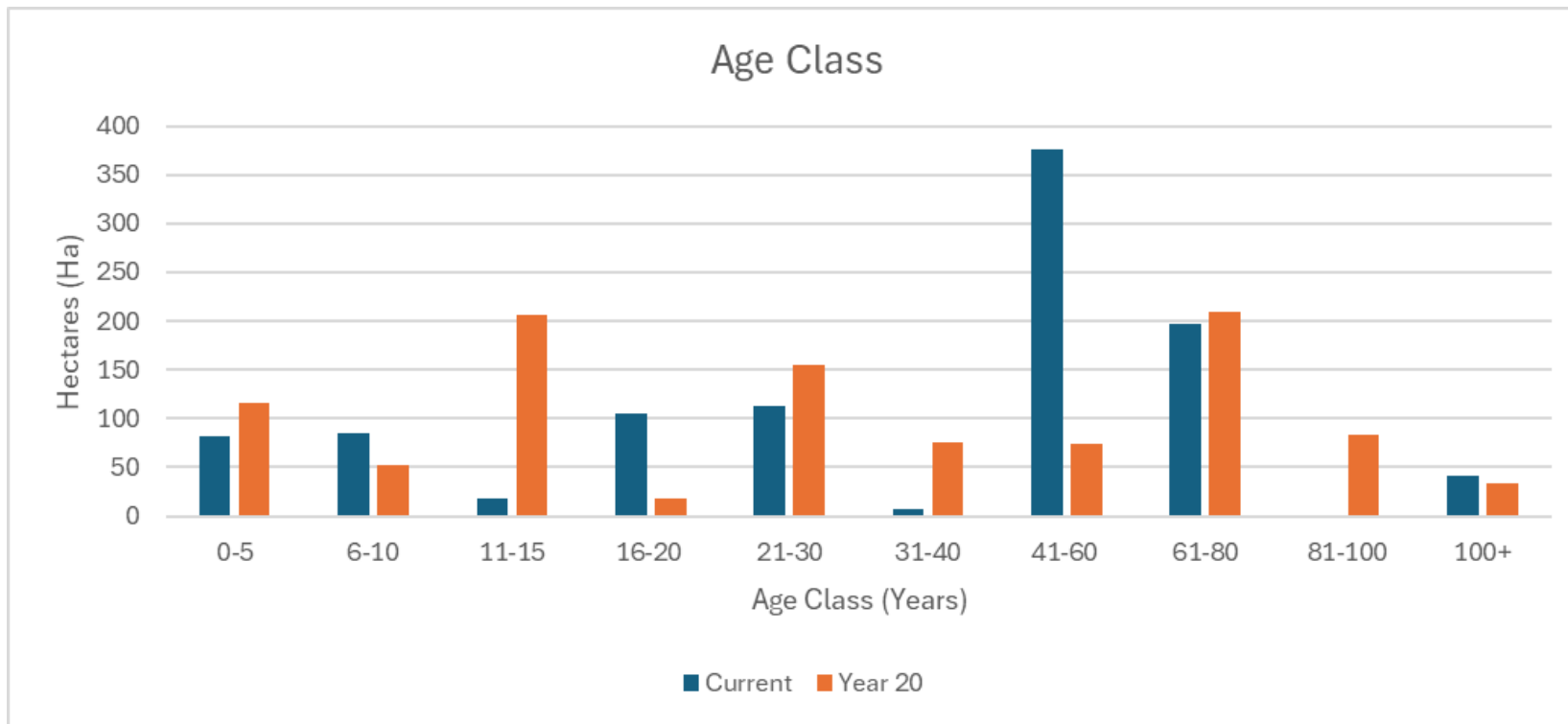
Table 2 – Area by age

This shows the woodland area broken down by age class and will show how well the woodland is distributed across the age classes.

Age class (years)	Current	Year 20
	Area (ha)	Area (ha)
0-5	82.1	115.7
6-10	85.5	53
11-15	18.3	206.6
16-20	105	18
21-30	112.8	154.6
31-40	7.9	75
41-60	376.3	73.8
61-80	197.3	209.2
81-100	0	82.8
100+	40.9	33.2
Open/Other	746.2	750.2
Total	1772.2	1772.2

Chart 1 – Area by age

This shows the woodland area broken down by age class and will show how well the woodland is distributed across the age classes





A.8 Plant Health

The primary plant health issue for this LMP is *Phytophthora Ramorum*, a fungal pathogen that causes mortality in Larch. If *P.Ramorum* is found the regulator (Scottish Forestry) issues a statutory plant health notice (SPHN) that requires the removal of the infected area. The mortality caused by the disease as well as the sanitary felling approach can have significant impacts on the landscape & environment.

To date there have been two SPHN's issued in the LMP area. Loch Chon is within the priority action zone (as detailed in Scottish Forestry's '*Phytophthora ramorum* on Larch Action Plan'); the purpose of the priority action zone is to "eradicate local infections by felling affected trees rapidly after detection".



B. Analysis of Information

B.1 Constraints and Opportunities

Factor	Constraint	Opportunity
Water Tunnel Infrastructure	Operational difficulties of working around highly sensitive infrastructure.	There is an opportunity to ensure that areas around water tunnels are restocked with species that require minimal future intervention (i.e. in key zones specifying native broadleaves over commercial conifers so that future working around/over tunnel infrastructure is greatly reduced). FLS will inform SW in advance of all planned works and work co-operatively to ensure assets are fully protected.
Private Water Supplies	Private Water Supplies must be protected.	PWS catchments will be protected by observing buffer zones and following all required guidance. Operational guidance as detailed in the 'UK Forestry Standard Practice Guide Managing forest operations to protect the water environment' and 'Scottish Forestry: Managing forestry operations to protect private water supplies' will be followed. Minimum buffer widths for forestry activities will be followed, and cultivation choices will follow best practice (with direct planting favoured). PWS owners will be contacted in advance of operations and FLS and work proactively to ensure all supplies are protected.
Sitka Spruce natural regeneration	Natural regeneration of SS can have negative effects on sensitive habitats.	There is an opportunity to focus resources on early intervention on the most sensitive zones to ensure that negative effects of unwanted SS regeneration are reduced.
<i>P.Ramorum</i> disease	<i>P.Ramorum</i> and the issuance of statutory plant health notices can	There is the opportunity to adapt coupe boundaries & phasing so that Larch removal can be increased. Well-designed coupes can reduce larch



B.1 Constraints and Opportunities

	create operational pressure. Larch is present across the LMP area.	within the plan-period, whilst also simplifying the amendment process if phase changes were required to address disease management.
Wood-ant and red squirrel habitat	There are important wood-ant habitats within the LMP area, these are located in areas of mature conifer. Areas of mature conifer woodland also provide valuable habitat and food source for red squirrels.	There is the opportunity to amend phasing so that habitat disturbance is minimised whilst also delivering against the need to reduce Larch and bring timber to market. Appropriate phasing and considered use of long-term retention coupes can protect habitat whilst maintaining flexibility and balancing multiple objectives.
<p>Couping and phasing will be focused on reducing Larch within the plan period as well as ensuring that later phase coupes (beyond phase 2) are designed to pick up Larch effectively. Restocking plans will ensure that there will be minimal future operational intervention needed around the water tunnels, with productive conifers focused on the least constrained areas. Long term retention (LTR) coupes will be used to ensure that there is a continuity of mature woodland habitat over the life of the plan, these retention coupes will be located in areas of the highest value to wood-ant and squirrel habitat. These LTR coupes will have boundaries that take into consideration the presence of Larch and the location of wind-firm edges, taking these factors into account will ensure that felling intervention will be a viable option if deemed necessary. There will be a focus on early control of unwanted Sitka Spruce regeneration, with an emphasis on protecting the Great Trossachs NNR and riparian zones.</p>		



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C. Management Proposals

C.1 Silvicultural Practice

Soil conditions, exposure and topography have been assessed against crop characteristics (i.e. species, age, previous interventions) to determine potential silvicultural actions. As a result clear-fell will remain the primary silvicultural practice during this plan approval period.

C.2 Prescriptions

C.2.1 Felling

There are four felling coupes in phase 1; in three of these coupes (31027,3014,31011) there are high proportions of Larch. The remaining phase 1 coupe (31055) is a windblow clearance coupe. There are three phase 2 coupes (31035, 31026, 31003).

Note: All PWS have been considered as part of the LMP design and will be suitably protected during operations. Where operations will be taking place within a PWS source catchment or in close proximity to an abstraction point the supply owners will also be contacted in advance of these operations.

See Map M10: Management

Selective Felling: Conifer removal within Forest Habitat Networks

A Forest Habitat Network (FHN) has been established to provide a connected framework for habitat management across the site. This network links key woodland and open habitat features, such as Plantations on Ancient Woodland Sites (PAWS), Natural Reserves, designated sites, priority open habitats, riparian zones, and areas of Ancient Semi-Natural Woodland (ASNW). The FHN has been created by the environment team by using desk and site based knowledge, and assists teams in planning environmental work and considering habitats

The FHN serves primarily as a planning and visualization tool to inform management decisions and target environmental improvement works. The FHN is aspirational in nature and should not be considered a formal designation or statutory classification; its purpose is to identify opportunities to enhance habitat connectivity, ecological function, and landscape-scale resilience.

Permission is sought to undertake limited, carefully targeted selective felling or thinning within the FHN where such interventions are required to deliver key environmental benefits. All works will be conducted exclusively to support biodiversity, restore habitats, and enhance the long-term resilience of priority species and habitats.



C.2.1 Felling

This permission specifically covers situations in which conifer regeneration has exceeded the 10 cm dbh felling threshold within a discrete area. For example, this may include removing Sitka spruce regeneration from a riparian zone where some individuals have grown beyond 10 cm dbh. The permissible volume for this environmental work is 75 cubic per calendar year.

See Map 17: Selecting Felling-Forest Habitat Network

C.2.2 Thinning

There is one thinning coupe within this approval window (Coupe 31501). This is a first thinning of Sitka Spruce (planted 2003: the objective is the long term provision of high quality timber as well as providing potential habitat expansion areas for adjacent wood-ant populations.

Thinning will normally be carried out at, or below, the level of marginal thinning intensity (i.e. removing no more than 70% of the maximum MAI, or YC, per year). Higher intensities (no more than 140 % of maximum MAI, or YC, per year) may be applied where thinning has been delayed, larger tree sizes are being sought or as part of a LISS prescription. Operational work plans will define the detailed thinning prescription before work is carried out and operations will be monitored by checking pre and post thinning basal areas for the key crop components.

See Map M11: Thinning

C.2.3 LISS

There are no LISS management coupes.

C.2.4 Long Term Retentions (LTR) / Minimum Intervention

Long-Term Retention (LTR) areas are defined as stands of mature forest that have reached or exceeded the typical rotation age. These include some of the oldest conifer stands within the LMP area and often exhibit greater structural diversity than younger stands.

LTR areas provide ecological value and maintain forest connectivity while neighbouring stands are still developing. They help ensure continuity of important habitats — including those supporting species such as red squirrel and wood ants — so that valuable structural habitat is not lost while replacement areas mature. LTR areas have been chosen on this basis.

LTR areas will be reviewed at plan renewal, as their relative importance depends on the wider woodland composition across the plan area. LTR is not a permanent designation, but a mechanism to maintain habitat continuity over the lifespan of a plan approval period. Current LTR coupes are intended to be felled in the future once suitable successor stands are fully established.

Minimum intervention: The areas of minimum intervention are located along the eastern shores of Loch Chon. These are primarily zones where mature native woodland is already present and is



C.2.4 Long Term Retentions (LTR) / Minium Intervention

intended to be retained indefinitely for biodiversity and/or amenity purposes. Silvicultural intervention for timber is not planned or expected in the future.

See Map M10: Management

C.2.5 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 trees, rows of trees or small groups of trees that are impacting on important infrastructure (as defined below*), either because they are now 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.

C.2.6 Woodland Management in Visitor Zones

Visitor Zones have been identified in areas where FLS encourage and manage access or where the woodland managed by FLS interacts with popular visitor sites or access routes. Visitor Zones are shown on Map M16 (Recreation).

In these areas single trees or small groups of trees will be removed when necessary to protect facilities, infrastructure and trails, or to enhance the setting of features, or to maintain existing views.

Woodland in these zones will also be thinned, or trees re-spaced, for safety reasons (including to increase visibility to ensure that sites are welcoming and feel safe), and where it is necessary to enhance the experience of the forest setting; such as through the development of large trees, or preferential removal of trees to favour a particular species.

See Map M16: Recreation



C.2.7 Restocking Proposals / Natural Regeneration

Productive Conifer: Coupes with commercial conifer species (31027, 31026, 31003) will be established at 2700 stems/ha. Norway spruce has been specified on more sheltered ground with Sitka Spruce being planted on more exposed ground, mixed conifer has been included as a minor component in all productive conifer areas with precise proportions and locations to be agreed post-harvesting as part of the work-planning process. Mixed conifer will be selected from the FLS restocking species list which sets out the palette of major and trial species that FLS has selected for diversification efforts.

Broadleaf Zones: Coupes 31035, 31055, 31003 and 31014 will be restocked with native broadleaves. Planting density will be variable and will reflect ground conditions and topography, at the higher elevations the restocking will be feathered to create a transitory zone between open and wooded habitat. These areas will be restocked at an overall average 1600 stems/ha with a minimum density of 500 stems/ha. At the lower elevations there will be a higher proportion of Oak (W11, W17) reflecting the mature woodland that already exists along the loch shores: this will transition to more Birch dominated woodland (W4) as elevation increases and soil condition change; Scots Pine will form a component of this mixture where suitable.

Natural Regeneration: Sitka spruce regeneration has been identified as a potential issue both within the boundaries of coupes and onto open ground. There will be an emphasis on early control of Sitka regeneration, timely intervention within the first ten years post restock ensures that the planned restock species can thrive and establish with minimum competition. Early intervention allows for limited financial resources to be applied across a wider area. Sitka regeneration will be monitored and resources will be triaged to ensure that they are focused on priority areas around the Great Trossachs NNR and riparian zones. In non-priority areas up to twenty percent Sitka regeneration will be accepted at year ten.

See Map M12: Future Species

See Map M13: Restock (Plan Period)



Table 3 – Felling

This shows the scale of felling within the felling phases in the context of the whole Forest Plan. This includes any areas of ‘LISS – Fell’ (i.e. removal of final overstorey).

SCALE OF PROPOSED FELLING AREAS (including LISS final fell areas)													
Total Forest Plan Area:		1772.18		hectares									
Felling	Phase 1	%	Phase 2	%	Phase 3	%	Phase 4	%	Long Term Retention	%	Area out-with 20yr plan period	%	
Area (Ha)	29.3	1.7	196	11.1	49.8	2.8	114	6.4	22.1	1.2	712.9	40.2	

Table 4 – Thinning

This shows the area of thinning over the first 10 years of the Forest Plan.

Species	Thinning (ha)
SS	9.28
Total	

Table 5 – Restocking

This table provides information on the restocking proposals for the first 10 years of your Forest Plan. Restocking should be listed on a coupe by coupe basis.

Felling Phase	Map Identifier(s)	Species to be planted	Area (ha) to be planted
1	31027	NS/MC/NBL (70/20/10)	16.1
1	31011	SP/NBL (90/10)	1
1	31014	NBL (100)	7.8
1	31055	NBL/SP (80/20)	4.5
1	31035	NBL/SP (80/20)	31.1
2	31003	SS/MC/SP/NBL (38/10/10/27) Open (15)	145.8
2	31026	NS/MC/SP/NBL (73/18/6/3)	19.2
Total Restocking Area			225.5



C.2.8 Protection

Deer management is a core activity underpinning the delivery of benefits from Scotland's National Forest Estate. The objective is to sustain healthy populations of wild deer, while controlling their impacts across the Estate in line with land-carrying capacity and the successful achievement of land-management goals. Deer densities are estimated to be 10 deer/km² with a target to reduce this to below 3 deer/km². Red and Roe are the species present and in the last 5 year 597 deer has been culled in the LMP area. The FLS Deer Management Strategy, together with the Central Region Deer Management Plan, set out the strategic priorities and regional approach to deer management.

FLS's approach to deer management can be seen here: [Deer management | Forestry and Land Scotland](#).

C.2.9 Fence erection / removal

Deer control is the preferred method of tree protection. Any proposal for new fence installation would go through the FLS work-planning process whereby internal consultation is required of all teams. If new fencing were agreed, any additional measures (for example: dropper posts to reduce bird collisions) required for conservation reasons this would be flagged by the appropriate teams and mitigation measures would be employed. Any installed fencing would be maintained for the period required to achieve successful establishment and subsequently removed.

C.2.10 Road Operations

During the lifetime of this LMP one new road will be required to facilitate operations in coupe 31003 (Phase 2). The total length and location of this road is still to be determined however an EIA SOR will be submitted once options have been finalised. In addition regular maintenance and upgrades will be undertaken on the existing forest road network as and when required. Existing and proposed roads are depicted on map M15.

See Map M10: Management

See Map M15: Timber Haulage

C.2.11 Public Access

There are no changes proposed within the LMP that will affect long term public access to the forest. Operations that may temporarily affect access (such as harvesting) will be managed with a focus on maintaining safety while minimising access disruptions, and FLS will seek to either facilitate safe access or provide practicable alternatives where possible. Liaison with the LLTNPA Local Access Officer will continue to be carried out as appropriate.



C.2.12 Historic Environment

There are no scheduled heritage features within the LMP area. Non Scheduled features will have appropriate buffers applied and enforced around them should there be operational activity. All operations will adhere to UKFS standards and best practice.

Our key priorities for archaeology and the historic environment are to undertake conservation management, condition monitoring and archaeological recording at our significant historic assets; and to seek opportunities to work in partnership to help to deliver *Our Place in Time: the Historic Environment Strategy for Scotland* and *Scotland’s Archaeology Strategy*. Significant historic environment features will be protected and managed following the UK Forestry Standard. Harvesting coupes, access roads and fence lines will be surveyed prior to any work being undertaken to ensure that upstanding historic environment features can be marked and avoided. At establishment and restocking, work prescriptions remove relevant historic environment features from ground disturbing operations and replanting. Where appropriate, significant historic assets are recorded by archaeological measured survey and may be presented to the public with interpretation panels and access paths. Opportunities to enhance the setting of important sites and landscapes will be considered on a case-by-case basis (such as the views to and from a significant designated site).

The *Regional Historic Asset Management Plan* includes conservation management intentions for those designated historic assets in Scotland’s national forests. Details of all known historic environment features are held within the *Forester Web Heritage Data* (built using national and regional historic environment records) and included within specific operational *Work Plans* to ensure damage is avoided. Significant historic environment features will be depicted on all relevant operational maps.

Objective	Opportunities	Constraints	Concept
Caring for the Historic Environment	We will ensure positive conservation management at significant historic assets, undertaking scrub control, condition monitoring and archaeological recording where necessary.	We will undertake suitable work practices on operational sites with known historic assets (and those discovered during operations).	We will ensure that historic assets (both designated and un-designated) are included within our land management and operational plans and are managed in line with <i>UK Forestry Standard</i> .

C.2.13 Biodiversity

FLS will continue to manage the LMP area in such a way as to protect and maintain or enhance the biodiversity value of the site. As a minimum all species and habitats will be suitably protected during operations and in line with the relevant and most up-to-date legislation and guidance such as Scottish Forestry’s ‘Forest operations and wildlife in Scottish forests’.



C.2.13 Biodiversity

Before undertaking any forest operations outlined in Land Management Plans, a detailed work plan is developed to ensure all environmental constraints are identified and addressed. These work plans are prepared in advance of operations to allow for surveys to be conducted at appropriate times. As part of this process, FLS environment staff carry out both desk-based assessments and site-based walkover surveys to identify protected species and any additional environmental considerations. The findings of these surveys then inform the timing of operations, the potential exclusion of sensitive areas, or modifications to the planned operations to avoid impacts on protected species.

Additional information relevant to managing biodiversity value within the LMP area is outlined below.

Deadwood

Areas of standing and fallen deadwood will be retained in line with FLS Policy, which incorporates the requirements and recommendations UKFS & UKWAS. Significant deadwood volumes will not be achieved in every felling coupe but instead averaged over the wider land management plan area. Opportunities for retaining or creating deadwood will be identified during the planning of all felling works, favouring areas with the highest deadwood ecological potential (i.e. riparian corridors, long term retention areas minimum intervention areas). FLS environment staff survey all coupes as part of the work planning process, ensuring that valuable deadwood habitat is marked on contract maps and protected during operations.

Wood-Ants

Wood ant habitat has been protected by ensuring that core valuable habitat areas is primarily contained within long-term retention coupes. Long term retention coupes will maintain core habitat and allow for gradual expansion of populations overtime. Management will follow guidance contained within FC Information note 'Forests and Wood Ants in Scotland' (2007), including the marking and retention of for tree groups around nests in clearfell situations.

Red Squirrel

The LMP proposals have been designed and harvesting programmes phased in such a way as to provide a continuity of habitats capable of supporting red squirrel; the inclusion of long term retention of mature conifer areas is key to ensuring a continued food sources whilst maintaining a felling program. FLS staff will continue to review the population carrying capacity of this block and assess potential impacts of any harvesting operations on squirrel populations, and FLS will proactively implement appropriate mitigation where necessary to ensure the continued success of this species.

PAWS/ANSW

PAWS areas that are due to be felled within the plan period will be restocked with native broadleaves and woodland condition will be monitored. ANSW is contained within minimum intervention areas, where the priority is allow natural processes to guide woodland development. Intervention will be taken if necessary to reduce invasive species or where is required for maintaining ecological function of the woodland.



C.2.13 Biodiversity

Black Grouse

Black grouse have not been recorded within the LMP area, however they are present in the wider landscape and therefore have been considered during the development of the plan due to the areas potential to provide future suitable habitat.

Restocking proposals include a shift to native broadleaf habitats in a significant part of the woodland/open interface, and these zones will be replanted in a way that provides habitat value to black grouse. Feathered and variable density planting will create a mosaic habitat that can be utilized in the future.

Water Voles

There are water vole populations within the LMP area, these will continue to be monitored by the FLS environment team. There is an active program of Mink control to help support the population.

Beaver:

There is beaver within the LMP area (south Loch Chon/Loch Dhu). There are no operations within the life of the plan that would adversely affect the beaver habitat.

Raptors:

FLS is a partner in the “Scottish Raptor Monitoring Scheme” and will continue to protect and support raptor populations within our land holdings. The LMP area contains a rich variety of woodland habitats that can support raptor populations, this includes significant areas of long term retention and minimum intervention. Through our work planning process (which includes desk based and field based operational checks) disturbance will be avoided and/or minimized in compliance with the law and best practice.

Conifer removal within Forest Habitat Networks

A Forest Habitat Network (FHN) has been established to provide a connected framework for habitat management across the site. This network links key woodland and open habitat features, such as Plantations on Ancient Woodland Sites (PAWS), Natural Reserves, designated sites, priority open habitats, riparian zones, and areas of Ancient Semi-Natural Woodland (ASNW). The FHN serves primarily as a planning and visualization tool to inform management decisions and target environmental improvement works. The FHN is aspirational in nature and should not be considered a formal designation or statutory classification; its purpose is to identify opportunities to enhance habitat connectivity, ecological function, and landscape-scale resilience.

Permission is sought to undertake limited, carefully targeted selective felling or thinning within the FHN where such interventions are required to deliver key environmental benefits. All works will be conducted exclusively to support biodiversity, restore habitats, and enhance the long-term resilience of priority species and habitats.



C.2.13 Biodiversity

This permission specifically covers situations in which conifer regeneration has exceeded the 10 cm dbh felling threshold within a discrete area. For example, this may include removing Sitka spruce regeneration from a riparian zone where some individuals have grown beyond 10 cm dbh.

See Map 17: Forest Habitat Network

C.2.14 Tree Health

The risk of *Phytophthora ramorum* infection is a concern due to the proportion and distribution of Larch in the plan area. A key objective is reducing the proportion of Larch within the plan approval window. Coupe design and phasing choices have been designed to support this objective, with early phases focusing on significant Larch reduction. In addition future coupes (non-phase 1 & 2 coupes) are designed to capture areas of Larch efficiently. This approach will reduce risk, balance objectives, and ensure that if infections are detected that they can be dealt with effectively.

C.2.15 Invasive species

Forestry and Land Scotland will continue to monitor and control invasive species within this land management plan area, taking a strategic and landscape scale approach to invasive non-native species control we will work in partnership with adjacent landowners and stakeholders to achieve common objectives.

Action to control invasive species will be prioritised in areas where the spread of these species threatens or directly impacts protected and priority habitats and species. Resources will be allocated to priority areas where the greatest overall benefit to these protected and priority species and habitats can be achieved.

Areas of *Rhododendron ponticum* are present within the LMP area, primarily along the shores of Loch Chon in areas of wet-woodland. There is currently an active programme of control in place and this will continue during the lifecycle of this plan.

C.2.16 Landscape

A series of landscape visualisations were carried out help consider how felling and restocking interacts with the landscape of Loch Chon area. A viewpoint along the B829 was selected, this corresponds with a viewpoint from the LLTNP landscape capacity study (Zone A: Viewpoint 9-Loch Chon). In addition a visualisation from Ben Lomond was assessed, as on a clear day some of the eastern slopes of Loch Chon can be seen.

Felling and restocking plans have been considered against the qualities detailed in Section A, and have been determined to be in keeping with the characteristics of the area. Coupe 31003 will entail some change, as the upper hill transitions from the current conifer to a more diffuse and naturalistic native woodland habitat. Additional coupes are of an appropriate scale to the landscape, and while



C.2.16 Landscape

there is some transitional landscape change associated with forestry management, restock proposals continue to maintain and enhance the character of the area. Areas of broadleaf continue to increase over time, but productive forestry continues to maintain its presence and contribution to the character of the area.

See appendices for visualisation documents

C.2.17 Wildfire

FLS work closely with the Scottish Fire and Rescue Service (SFRS) to ensure a safe and consistent approach to help tackle wildfires on FLS land.

The general approach to managing fire risk will be to maintain suitable access to key areas of the woodland for fire control purposes and to avoid management actions which would further exacerbate fire risk. Fire risk has been assessed in accordance with 'Forestry Commission Practice Guide 22: Building Wildfire Resilience into Forest Management Planning': including consideration of forest management and restocking proposals.

Overall the fire risk for this site is considered to be low based on the stand types, public use, proximity of assets and ignition sources, climate and topography, and the good access and presence of a water sources for fire control. FLS's wider approach to wildfire management can be viewed here: <https://forestryandland.gov.scot/what-we-do/health-safety-wellbeing/wildfire-prevention>

C.3 Environmental Impact Assessment and Permitted Development Notifications

Please indicate the total area (hectares) for each project type and provide details as requested by sensitive or non-sensitive area.

Type of Project	Sensitive Area		Non-sensitive Area		Total
	%Con	%BL	%Con	%BL	
Afforestation	%Con	%BL	%Con	%BL	ha



Deforestation	%Con	%BL	%Con	%BL	ha
Forest Roads		ha		ha	ha
Quarries		ha		ha	ha
Provide further details on your project if required.					
EIA Screening opinion requests for roading will be submitted at an appropriate time.					



C.4 Tolerance Table

	Map Required (Y/N)	Adjustment to felling period*	Adjustment to felling coupe boundaries**	Timing of Restocking	Changes to Restocking species	Changes to road lines	Designed open ground ***	Windblow Clearance****
FC Approval normally not required	N	Fell date can be moved within 5 year period where separation or other constraints are met	Up to 10% of coupe area	Up to 2 planting seasons after felling	Change within species group e.g. evergreen conifers or broadleaves		Increase by up to 5% of coupe area	
Approval by exchange of email and map	Y		Up to 15% of coupe area	Between 2 and 5 planting seasons after felling subject to the wider forest and habitat structure not being significantly compromised		Additional felling of trees not agreed in plan Departures of more than 60m in either direction from centre line of road	Increase by up to 10% Any reduction in open ground within coupe area	Up to 5 ha
Approval by formal plan amendment may be required	Y	Felling delayed into second or later 5 year period Advance felling into current or 2 nd 5 year period	More than 15% of coupe area	More than 5 planting seasons after felling subject to the wider forest and habitat structure not being significantly compromised	Change from specified native species Change between species group	As above, depending on sensitivity	More than 10% of coupe area Colonisation of open areas agreed as critical	More than 5 ha

Note

*Felling sequence must not compromise UKFS in particular felling coupe adjacency. Felling progress and impact will be reviewed against UKFS at 5 year review.

** No more than 1 ha, without consultation with Scottish Forestry, where the location is defined as 'sensitive' within the Forestry (Environmental Impact Assessment) (Scotland) Regulations 2017.

*** Tolerance subject to an overriding maximum of 20% designed open ground.

****Where windblow occurs, Scottish Forestry must be informed of extent prior to clearance and consulted on clearance of any standing trees.



D. Production Forecast

Not applicable: FLS provide this nationally to Forest Research as per agreement with Scottish Forestry.

Appendices

Provide a list of appendices:

Item number	Title
Map M1	Location
Map M2	Current Species
Map M3	Soil
Map M4	DAMS
Map M5	Climate
Map M6	Heritage
Map M7	Catchments and Watercourses
Map M8	Key Features
Map M9	Concept
Map M10	Management
Map M11	Thinning
Map M12	Future Species
Map M13	Restock (Plan Period)
Map M14	Viewpoint Locations
Map M15	Timber Haulage
Map M16	Recreation
Map M17	Selective Felling-Forest Habitat Network
Appendix 1	Visualisations