



Central Mull

Land Management Plan

2024-2034

West Region

Plan Reference No:

Plan Approval Date: 2024

Plan Expiry Date: 2034

We manage Scotland's national forests and land 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



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1 Regulatory Requirements

1.1 Summary of Proposals

Central Mull Land Management Plan (LMP) area comprises four forests, Salen, Aintuim, Crannich and Lettermore at a landscape scale unit of 4805 ha (see Location Map – Appendix III). Central Mull is centered around the central Loch Frisa and stretches to the east coast of the island. Three of the forests are contiguous, but Salen forest sits to the south of its eponymous village. The forest of Lettermore adjoins the forests of North Mull LMP (Aros, Ardmore and Quinish – 3089 ha total) bringing the total FLS land holding here on Mull to 8110 ha. However, these have been separated into the Central and North Mull LMPs due to the large areas involved.

Whilst there are no National Scenic Area landscape designations on FLS land, the Loch na Keal NSA site lies just to the south along with the Central, South and West Mull local authority landscape designation. This latter site covers the western half of Salen forest, although it is not a statutory designation. Within this landscape lies a mixture of productive non-native conifers and native woodland as well as large areas of open land especially on higher ground. There are a variety of priority open habitats including Blanket Bog and Upland Heathland.

The area is also home to a large number of raptors, including the island's iconic eagle populations of both white tailed sea eagles and golden eagles which hunt and nest amongst the forests and open land. Some areas of Ancient Woodland Sites exist predominantly up the burnsides and gullies, especially in Salen Forest which has an extensive area of Atlantic rainforest woodland on the western flanks of Cruach Tòrr an Lochan.

Central Mull has a variety of heritage features across the land which include two scheduled monuments: a fairground at Cnoc nan Dubh Leitre (Aintuim) and a chapel at Cill an Ailean (Lettermore). Whilst there is only one formal recreation facility within the land holding at Lettermore, Mull is a popular destination for nature lovers and a variety of wild trails are well used across the area. An informal recreation facility at Salen is well used by the local population and primary school to access the woods for educational and recreational purposes. Well attended 'drop-in' public consultations at the start of the Land Management Process (2021) and again towards the end (2023) demonstrate the interest that islanders have in their local forests. Argyll and the Isles is an increasingly important tourist destination for both domestic and international visitors, and the prominence of Mull as a prime wildlife destination has led to higher numbers especially post -Covid restrictions.

There are a wide variety of private water supplies fed from the land within Central Mull and in addition, the water catchments for the Public Water supplies at the Mishnish Lochs (providing water to the majority of the whole island) is at the northern end of the Lettermore forest, and at Dervaig

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(supplying the village) is at the northern end of Aintuim. Flooding is not considered an issue and there are no Potentially vulnerable areas in the vicinity.

The forest areas vary in the degree of forest roading: Lettermore has a nearly complete roading structure whilst Salen has a large area of first rotation forest and thus an initial road structure still to be constructed. Aintuim has very poor access in the northern section and Crannich currently has three roads under construction which will add greatly to its road network. Some areas with poor access have not yet reached economic maturity so there is a minimal programme of new road building, some of which has been approved prior to the development of this plan. A glossary of all acronyms used within this plan can be found in Appendix VIII and Map 9 shows the context of the forests.

A programme of felling (778ha) and restocking (353ha conifer and 255ha broadleaf) has been developed across the two phases of the plan, primarily based on areas of mature larch and peatland restoration.

Objectives

- Develop a strategy for the future management of existing poor quality crops in current rotation and increase rotation length where appropriate.
- Improve the long term sustainability of timber production by exploring opportunities for crops of varying quality into the next rotation and increasing resilience to future threats of climate change and disease; this will work towards future smoothing of the production forecast whilst incorporating the impact of peat restoration work on age restructuring.
- Work towards removing all larch from Mull within the next ten years by managed removal of prioritised larch areas, especially in Crannich, minimising the impact of future SPHNs on the sustainable management of the forest (Mull sits in Scottish Forestry's 'Risk Reduction Zone')
- Review and improve both the choice of species and their provenance (in conjunction with ground condition suitability) and also diversification of species (within the constraints of high wind hazard classes impacting on the thinning potential of species other than SS/LP), to ensure sustainable timber production as the forests move into their next rotation.
- Ensure both forest road network and provision of quarries is suitable for future management via an achievable road programme, especially in Aintuim and Salen.
- Develop a strategy to reduce herbivore impact across the FLS estate.
- Develop large scale Peat Restoration projects in Aintuim and also Salen and Crannich; additionally enhance existing Open Habitats, especially in Lettermore.
- Develop PAWS restoration in Salen and Aintuim forests to enhance temperate Atlantic Rainforest areas; also develop habitat networks within FLS land and our neighbours where identified via woodland expansion (including control of Exotic Invasive species at Salen). This will increase the percentage of broadleaves and subsequent biodiversity.

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- Management and protection of key species including the considerable raptor interests across Mull (“Eagle Island” draws in high tourist numbers), and in addition the archaeological heritage of the area.
- Ensure water quality maintained in River Bellart water catchment (Aintuim) for highly protected endangered priority species and public water supply.
- Maintain & enhance both views and existing recreation provision for the benefit of locals and increasingly large visitor numbers to Mull; this is mostly focussed around Lettermore.
- Work with local communities and Mull and Iona Community Trust (MICT), especially around Salen, supporting the large-scale tourism now dominating the local economy with subsequent high nature visitor numbers.

Summaries of Management Proposals

The felling proposals in the first twenty years of the plan are summarised below:

Felling	Phase 1	Phase 2	Phase 3	Phase 4
Area in ha	353	425	271	304
% of area (not including other land)	15	20	12	14
Volume (m ³)	167,851	193,844	154,890	178,841

The species composition over the first twenty years is as follows:

	Current – 2024		Year 10 – 2034		Year 20 – 2044	
	Area (ha)	%	Area (ha)	%	Area (ha)	%
Sitka Spruce	1608	57	1328	47	1141	40
Norway Spruce	28	1	34	1	31	1
Larches	114	4	19	1	8	0.5
Mixed Conifers	307	11	259	9	280	10
Mixed Broadleaves	70	2	n/a	n/a	n/a	n/a
Native Broadleaves	131	5	390	14	444	16
Internal Open Space*	556	20	521	19	679	23.5
Restored Peatlands	n/a	0	263	9	263	9
Forested Area Total	2814	100	2814	100	2846**	100
Open Hill	1800	90	1800	90	1800	92
Agriculture	178	9	178	9	146	7
Open Water	13	1	13	1	13	1
Open Habitat Total	1991	100	1991	100	1959	100
LMP area Total	4805	100	4805	100	4805	100

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- * Included unplanted land & streamsides, archaeology, deer glades, linear features, recreational areas & quarries
- ** Forested area increases after woodland creation at Aintuim (see Woodland Creation)

The age class composition over the first twenty years is as follows:

Age Class	Current – 2024		Year 10 – 2034		Year 20 – 2044	
	Area (ha)	%	Area (ha)	%	Area (ha)	%
0 – 10 yrs	158	8	596	33	566	32
11 – 20 yrs	37	2	139	8	586	33
21 – 40 yrs	475	23	117	7	185	11
41 – 60 yrs	1267	62	630	35	99	6
60+ yrs	121	5	303	17	316	18
Total	2056	100	1785	100	1751	100

Productive Forest Area Statement

PHASE 1

FELLING AREA	ha	ESTABLISHMENT AREA	ha
Conifer	353	Conifer	188
Open Space	78	Open Space (including Peatland)	146
Broadleaves		Broadleaves – NR	0
		Broadleaves – native planting	34
		Broadleaves – non-native planting	0
Existing Broadleaves	13	Existing Broadleaves	13
TOTAL	444	TOTAL	381

PHASE 2

FELLING AREA	ha	ESTABLISHMENT AREA	ha
Conifer	425	Conifer	165
Open Space	184	Open Space (including Peatland)	178
Broadleaves		Broadleaves – NR	6
		Broadleaves – native planting	221
		Broadleaves – non-native planting	0
Existing Broadleaves	13	Existing Broadleaves	13
TOTAL	622	TOTAL	583

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UKWAS Summary for year 50

Description	% of LMP Area ¹
Total current woodland area	54
Natural reserves – Plantation	0.5
Natural reserves – Semi natural	0
Long Term Retention, LISS, Minimum Intervention	8
Area of Conservation value: designations, AW	10
Planned Open/Other	48

Notes

1. The % will total more than 100% as the species and management categories overlap.

Planned Roading Operations

Planned operations, 2024-2034 10 year plan period	
Road Construction Phase 1	
SA1	0.20km (phase 1)
CR13	1.00km
<i>CR21</i>	<i>0.69km</i>
CR22	1.41km
<i>AN3</i>	<i>2.30km (phase 1)</i>
AN4	0.58km
<i>LT101</i>	<i>1.46km</i>
Road Construction Phase 2	
SA1	0.87km (phase2)
SA11	0.46km
<i>AN3</i>	<i>0.85km (phase 2)</i>
<i>AN3</i>	<i>0.60km (phase 3)</i>

The roads to be constructed, as detailed on Map 1 will require local authority Prior Notification (PN) approval. This will be submitted prior to construction following EIA determination approval by Conservancy as included in this plan – see Map 2.

The forwarder/ATV tracks to be constructed will also require local authority Prior Notification (PN) approval and will likewise be submitted to the local authority. At this time, tracks are indicative and not finalized on the ground; this will be undertaken at time of PN submission.

Any unexpired PN's and EIAs are listed in Appendix IX and Approval documents are in Appendix X; roads shown in blue above already have EIA screening opinion approval.

1.2 Activity Summary

Items in italics are planned for Phase 2

1.1 Table of Clearfelling (Phase 1 & 2)											
Coupe No.	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 (MC)	Spp by Ha (BL)	Open Land by Ha	Restock Year (if not 2yrs post fell)	Monitoring Comments
65010	8.4	4.8	/	/	/	1.6	/	/	2.0		
65013	10.2	3.2	/	/	/	2.5	0.5	/	4.0		
65012	43.9	23.3	/	/	/	3.4	/	1.9	15.3		<i>larch</i>
65014	35.2	30.4	/	/	/	1.6	/	/	3.2		
65002	67.4	42.3	/	/	/	/	/	2.0	23.1		<i>Peatland restoration, Feith Bhàin</i>
65003	39.1	17.2	/	2.5	/	/	/	/	19.4		<i>Peatland restoration, Allt nan Leòthdean</i>
65007	14.0	9.8	/	/	/	1.0	/	/	3.2		
66741	23.1	7.5	/	3.1	/	8.9	/	/	3.6		Continued working
66024	32.2	9.9	/	8.9	/	10.5	/	/	2.9		Continued working
66005	60.5	32.0	/	8.1	/	9.8	/	/	10.6		<i>larch</i>
66003	31.0	20.6	/	4.1	/	3.7	/	/	2.6		<i>larch</i>
66014	8.9	2.1	/	3.5	/	2.7	/	/	0.6		
66013	6.6	1.7	/	0.4	/	0.7	/	0.8	3.0		
66030	164.4	37.9	/	44.4	/	4.5	/	/	77.6		<i>Peatland restoration: Sùil Bò</i>
66037	51.8	25.7	/	10.9	/	1.3	/	/	13.9		
66025	18.9	8.6	/	3.9	/	3.5	/	1.4	1.5		
67010	125.5	92.4	/	24.7	/	/	/	/	8.4		<i>Peatland restoration: Cnoc nan Dubh Leitre</i>
67522	91.4	41.1	/	0.6	/	15.4	/	12.8	21.5		<i>Larch face: approved</i>

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1.1 Table of Clearfelling (Phase 1 & 2)											
67542	43.6	30.9	/	/	/	/	/	/	12.7		AN3 first coupe
67014	22.8	20.5	/	/	/	/	/	/	2.3		<i>AN3 second coupe</i>
38944	5.6	0.5	/	/	0.5	1.1	/	/	3.5		Continued working
38013	22.3	7.1	/	1.4	/	9.3	0.2	0.6	3.7		<i>larch</i>
38707	20.9	17.2	/	/	/	/	/	/	3.7		<i>Cill an Ailean</i>
38003	43.3	30.9	/	5.1	/	/	/	/	7.3		
38010	23.6	14.6	/	/	/	4.7	2.0	/	2.3		<i>larch</i>
38030	8.8	8.2	/	/	/	/	/	/	0.6		
38006	5.3	2.2	/	/	/	1.1	/	/	2.0		
38019	21.8	13.1	/	0.5	/	1.6	0.5	3.2	2.9		<i>Larch (ex 38524)</i>
38027	13.2	4.7	/	/	/	3.7	/	1.4	3.4		<i>lochside</i>
38034	1.8	/	/	/	/	0.5	/	1.1	0.2		<i>larch</i>
38046	0.7	/	/	/	/	0.3	/	/	0.4		<i>larch</i>

1.3 Table of CCF Felling (Phase 1)											
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 (MC)	Spp by Ha (MBL)	Open Land by Ha	Silv.Method	Monitoring Comments
Totals											

1.5 Table of Thinning (Phase 1 & 2) – estimated whole areas for potential amenity thinning given at start (see p.33)											
Coupe No.	Total Area (Ha)	Species	Thin-able Area (Ha)	Prescription for Thinning				Final Thinned Area (Ha)	Final Vol/Ha Removed		Monitoring Comments

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1.6 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 (MC)	Spp by Ha (MBL)	Open Land by Ha	Comments
Clearfell	1083.5		564	0	130	0.5	97	3	25	264	
Thinning											amenity thinning only (see p.33)
CCF											
	1083.5		Grand Total of Felled Timber Proposed for Plan Period								

1.7 Table of Restocking – including incomplete RS from previous plan												
Coupe No.	Total Area (Ha)	SS (Ha)	LP (Ha)	SP (Ha)	NS (Ha)	Other Con. (Ha)	Native Mixed B/Leaf	Other B/Leaf	Open (Ha)	Year	Restock Method & Density (Restock/Nat Rege/Open)	Monitoring Comments (FE felled, legacy coupe; FP programmed coupe)
65778	13.0					12.1			0.9		All conifers Planted at 2500	(FE) hill above Salen
65042	7.6						6.2		1.5		Natural Regeneration	(NR) ex 65929
65010	8.4			0.3		0.3	6.1		1.7		Planted – 1600 BL	(FP) face behind Salen
65003	49.3	1.8 (NR)					20.4 6.2		20.9		Planted – 800 BL Planted – 1280 BL	(FP) Remainder of 65003 is peatland restoration.
66174	71.8	40.8					9.3	3.6	18.1		Planted – 640 BL	(FE) end of road
66520	19.3	17.0					0.5		1.8		Planted – 1120 BL	(FE) Need replant: LA
66561	22.3	5.5				4.5	/		12.3		Planted - 2500	(FE) west SPHN. Peaty soils, not full restoration.
66005	60.7	39.2				1.3	6.5		13.7		Planted – 800 BL	(FP) LA

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1.7 Table of Restocking – including incomplete RS from previous plan											
66741	23.1					16.1	3.2		3.8		Planted – 1440 BL
66024	32.2	18.0		2.6			3.9		7.7		Planted – 1120 BL
66143	17.4	10.8					/		6.6		Planted - 2500
67515	24.3	/				23.3	/		1.0		Open Peat & MC
67549	54.5	/					5.0	(8.0 EXBL)	41.5		Planted – 1600 BL
67010	125.5	/					39.4		86.1		Planted – 1120 BL
67522	121	/					100.1		20.9		Planted – 960 BL
67542	45.4	/			3.8	23.7	12.9		5.0		Planted – 1600 BL
38135	67.8	37.1					/		30.7		Planted - 2500
38542	15.6	4.9				3.4	2.4		4.9		Planted – 960 BL
38044	7.5	3.4				0.8	2.6		0.7		Planted – 960 BL
38033 / 38029	12.0	6.0 3.0 BU					0.5		2.5		Planted – 960 BL
38038	17.4	10.1					2.5		4.8		Planted – 1600 BL
38026	2.1	1.2				0.9		/			Planted – 1008 BL
38730 / 38022 / 38023	18.7	15.2				1.5			2.0		Planted – 1600 BL
											(FE) ex 38147/38730 / 38874 (4.3ha beatup)

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1.7 Table of Restocking – including incomplete RS from previous plan												
38944 / 38025	12.8	5.3					5.5 (NR)		2.0		Planted – 1120 BL	(FE) mound 24/25 + ex-38167, PART planting SS
38880	10.3						9.8		0.5		Planted – 1280 BL	(FE) behind office
38707	21.8					14.7	4.0		3.1		Planted – 1280 BL	(FP) Ph1 felling
38013	22.3	15.0					3.9		3.4		Planted – 1008 BL	(FP) Ph1 felling
38018	21.5	14.5				0.6	1.5		3.4		Planted – 1008 BL	(FP) ex 38494 beat up

Areas highlighted in blue/bold were felled more than 5 years ago

1.8 Table of New Planting												
Coupe No.	Total Area (Ha)	SS (Ha)	LP (Ha)	SP (Ha)	NS (Ha)	Other Con. (Ha)	Native Mixed B/Leaf	Other MBL	Open (Ha)	Year	Planting Method & Density (Planting/Nat Regen)	Monitoring Comments
67100	21.6						15.1		6.5		EIA: to submit separately	Head of Loch Frisa woodland (Carbon)

1.9 Table of Civil Engineering				
Proposed Activity (Road/Quarry)	OS Grid Reference	Forest/Coupe	Description (Length/Area/Construction)	Monitoring Comments
Phase 1 of plan				
LT101		Lettermore	1.5km	
SA1		Salen	0.2km – phase 1 of build	Larch coupe
CR13		Crannich	1.0km	

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1.9 Table of Civil Engineering				
CR21		Crannich	0.7km	Larch coupe
CR22		Crannich	1.4km	Larch coupe, includes spur
AN3		Aintuim	2.3km – phase 1 of build	
AN1		Aintuim	0.2km	Road junction and upgrade
AN4		Aintuim	0.3km - THF	Road junction and THF
Phase 2 of plan				
SA1		Salen	0.9km - phase 2 of build	Larch coupe
SA11		Salen	0.5km	
AN3		Aintuim	1.5km – phase 2 of build	

1.10 Table of Other Projects				
Proposed Activity	OS Grid Reference	Forest/Coupe	Description (Length/Area/Construction)	Monitoring Comments
Forwarder Tracks				
Phase 1				
AN4F1			0.9km	to access larch face west
AN40F1			0.6km	to access larch face west
AN1F1			0.6km	to access larch face east
AN1F2			0.1km	to access larch face east
AN1F3			0.8km	to access larch face east
SA1F1			0.4km	to access larch in gully
Phase 2				

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1.10 Table of Other Projects				
SA3F1			0.3km	to access peatland restoration
Environment: peat forest to bog Aintuim – 67010 Cnoc nan Dubh Leitre <i>Crannich</i> – 66030 <i>Sùil Bò</i> <i>Salen</i> – 65002 <i>Feith Bhàn</i> <i>Salen</i> – 65003 <i>Allt nan Leòthdean</i>		112 ha 103 ha 27 ha 21 ha		See Map 3 for EIA SOR areas
Environment: Peat open to bog Aintuim 67575 Loch Frisa		32 ha		
Environment: Rainforest Salen 65009 Salen 66044		23 ha 12 ha		Remove <i>R.ponticum</i> from ASNW Remove <i>R.ponticum</i> from ASNW

1.3 EIA Screening Determination



Scottish
Forestry
Coilltearachd
na h-Alba

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	Area in hectares	% Conifer	% Broad-leaves	Proposed work	select	Area in hectares
Afforestation	<input type="checkbox"/>				Forest roads	<input type="checkbox"/>	
Deforestation	<input checked="" type="checkbox"/>	263	100	0	Forest quarry	<input type="checkbox"/>	
Location of work	Central Mull LMP						

Description of Forestry Project and Location							
<p>Provide details of the forestry project (size, design, use of natural resources such as soil, and the cumulative effect if relevant).</p> <p>Please attach map(s) showing the boundary of the proposed work and other known details.</p> <p>Use this form in consultation with the "Peatland Appendices" within the LMP, which include the types of restoration methods, maps and sites details.</p> <p>Aintuim: Cnoc nan Dubh Leitre Coupe 67010 - total peatland restoration area is 112ha Soils comprise peat types: 9b, 9b, 9d, 8c (all Assessed peatland soil types) Of this, 86ha will not achieve YC8 at restocking A further 27ha may achieve more than YC8 but is hydrologically connected and requires to be restored to allow a successful project overall. Areas of Peatland Edge woodland will be established in the south of the area on non-deep peat soils adjacent to and within the Restoration area.</p> <p>Crannich: Sùil Bò Coupe 66030 - total peatland restoration area is 103ha Soils comprise peat types: 9d, 9e, 11b, 14w (all Assessed Peatland soil types apart from the latter which comprises two areas of 0.8ha Potential to Restore soil type) Of this, 1.6ha is Potential to restore and 72.4ha are Assessed as not achieving YC8 at restocking A further 29ha are not on deep peat soils, but are very poor crops which will not achieve more than YC8 and are hydrologically connected to the peatland restoration area, so these will not be restocked. Crannich does not lend itself towards Peatland Edge woodland; instead areas of broadleaves will be concentrated in riparian areas up burnsides. There is not considered to be a threat of SS establishment within the restoration areas as the rewetted soil would not allow for successful tree growth.</p>							

Salen: Feith Bhàin

Coupe 65002 - total peatland restoration area is 27ha

Soils comprise peat types: 8c (at 1:250,000 scale only)

Of this, 21ha will not achieve YC8 at restocking

A further 6ha may achieve more than YC8 but is hydrologically connected and requires to be restored to allow a successful project overall.

Peatland Edge woodland will be established between the peatland areas and the existing native broadleaves, where YC show an estimate around 16 and therefore returning to woodland cover is considered the most suitable Carbon option.

Salen: Allt nan Leòthdean

Coupe 65003 - total peatland restoration area is 21ha, all Assessed Peatland soil types

Soils comprise peat types: 11b (at a:250,000 scale only)

Of this, 18ha will not achieve YC8 at restocking.

A further 3ha is hydrologically connected to surrounding Blanket Bog habitat and as such will also be restored.

Peatland Edge woodland will be established between the two Peatland restoration areas.

Much of the hill ground in Salen is shallow peats (10-50cm) over rock, with occasional pockets of deep peat in between. As there is currently no 1:10,000 soil polygon dataset for this area, the area derived for peatland restoration was a combination of a field survey with extensive peat probing and a delineation of hydrological units.

All the above peatland restoration areas link with adjacent peatland habitats.

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



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.

Population and Human Health - No impact.

A right of way runs along the northern boundary of the Aintuim peatland area, this will be managed by the Community and Visitor Services team during the period of restoration but the final area will be unaffected.

Private water supplies are located within Salen forest downstream of peatland restoration areas (Callachally, Killbeg, Craigmore) and all guidelines will be carefully followed throughout the restoration process. One water supply at Crannich Farm is more than 800m from the nearest peatland restoration but will be protected accordingly during restoration.

Restoration will not significantly change net volume of runoff (catchment area will be unaltered and any effects of evapotranspiration changes due to deforestation negligible in context of Scottish West coast). No impact on PWS. Howson et al 2021 reported substantial increases in the annual runoff to rainfall coefficient resulting from forest-to-bog restoration at a blanket bog in the Flow Country (Forsinair), implying an increase in the volume of water available annually from any affected public water supplies. This can be



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beneficial in maintaining supplies during the summer, especially during any prolonged dry weather spells but maybe those are so rare on our hyperoceanic west coast that the beneficial impact is negligible.

Restoration will reduce likelihood of extreme low flow events and extreme high flow events due to improved capacity for retention and slower release of water by restored peatland. Beneficial for PWS. Howson et al 2021 reported that for the blanket bog, storm peak discharge (i.e. high flow events) were similar after forest-to-bog restoration to that of sites still under high forest. Further rewetting by additional drain blocking at one of the sites reduced peak discharge compared to that from a sub-catchment under high forest. The baseflow index is a measure of the proportion of the runoff that derives from stored sources; the higher the baseflow, the more sustained the flow during periods of dry weather. At Howson's blanket bog site, the baseflow index was higher from forest-to-bog restored areas than from high forest.

Biodiversity (habitats, species) - Positive.

Restoration of a degraded peatland will restore a priority open habitat, benefitting both habitat and its associated species. Pre-operational surveys will identify any protected or breeding species to ensure suitable mitigation is in place to avoid any disturbance.

Land - No impact.

Where the restoration project is adjacent to agricultural land, boundary drains will not be blocked to ensure neighbouring land is not compromised by re-wetting and increased potential to flooding.

Soil and geology, geomorphology - Positive.

Re-wetting the site will benefit the peat soils as forestry modifications will be reversed to stop oxidisation and further degradation and erosion of the peat. Water Positive. Re-wetting techniques have shown to have no significant adverse effect on water quality. Ultimately, the water quality of the local area will be improved by reducing run-off from the exposed peat and degraded peatland.

Air - No impact.

Climate - Positive.

Afforested peatlands have the potential to emit more GHG emissions than can be absorbed by a growing woodland. Restoration of afforested peatlands, especially Presumption to restore peatlands, will prevent the significant net release of greenhouse gases, ultimately benefitting the local climate.

Material Assets - No impact.

Cultural Heritage - No impact.

Pre-operational surveys will identify any cultural heritage features to ensure suitable mitigation is in place to avoid any disturbance.

Landscape - Positive.

Peatland restoration will create more open space within the LMP forest blocks and their local area. This will add more diversity to the forest structure by creating open and associated native woodland habitats.

Water - Positive & Negative:

Reduced risk of flooding downstream through the creation of waer holding areas. Improved water quality resulting in added resilience for the salmonid habitat and drinking water quality by reducing the run-off from the exposed peat and degraded peatland. But organic material and machine pollution potentially entering watercourses affecting salmonid and FWPM habitat and drinking water quality during restoration.

Priority Species - Positive & Negative

Improved habitats for hunting eagles. But noise and physical disturbance to hunting eagles during restoration.

Priority Habitats - Positive:

Reinstating the peatland priority habitat and increasing carbon in soils in the forest. Improved water quality resulting in added resilience for the salmonid habitat and drinking water quality by reducing the run-off from the exposed peat and degraded peatland. Improved biodiversity connectivity between native/natural habitats, and improved riparian habitats within the forest area.

The removal of forestry plantations in catchments with valuable FPM populations to restore functional open peatland is a proven and effective management measure to enhance long-term FPM resilience through the restoration of a more 'natural' hydrological regime. The evidence for this was reported in Kuemmerlen, M., Moorkens, E.A. and Piggott, J.J. (2021) Assessing remote sensing as a tool to monitor hydrological stress in Irish catchments with Freshwater Pearl Mussel populations. *Science of the Total Environment*.

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.

Consultees:

FLS National Peatland team

FLS Peatland team (West region) - site visits and peat probing where required, working together with

FLS Environment team

NatureScot and Argyll & Bute Council as part of LMP process

RSPB - consultation in person of draft plans (Sept. 2023)

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.

Likely Significant Effects identified as having a negative impact are discussed below:

Water & Priority Species:

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Silt management will be carefully controlled as per Forest Water Guidelines which will be strictly adhered to, minimising any significant effects on Private Water Supplies (Salen), Public Water Supply (Dervaig from Aintuim) FWPM (Aintuim) or Deep peat soils (Salen).

Priority Species

Noise and physical disturbance to hunting eagles during restoration will be minimised by adhering to all timing constraints for raptors and where necessary liaising with RSPB regarding any specific sites.

The restoration of the peatland is in line with Scottish Government objectives and FLS objectives. The peatland restoration operations will comply with the UK Forestry Standard 2017, in particular Sections: 6.6 - Forests and Soils, and 6.7 - Forests and Water. This includes SEPA General Binding Rules.

Prior to operations commencing the FLS Environment team will assess the sites for protected or breeding species (such as FWPM, otter, eagles, other raptors etc), and for heritage features. They will provide guidance which must be followed by FLS staff and contractors. These measures can include: restricting the timing of operations and stipulating protective buffer zones.

Careful site prescriptions will continue to be observed as per Guidelines for any works within FWPM catchments as per previous peatland restoration works in these areas and also for the Private Water Supplies potentially affected by restoration works. FLS confirm their commitment to liaise closely with the owners of these water supplies at the initial stages of any works being planned, as per UKFS and water guidelines.

Noise and disturbance to any protected raptor species will be mitigated by following Guidelines in respect to timing of operations and continued close liaison with RSPB in relevant areas.

Sensitive Areas

Please indicate if any of the proposed forestry project is within a sensitive area. Choose the sensitive area from the drop down below and give the area of the proposal within it.

Sensitive Area	Area
Deep peat soil	100
Select...	
Select...	
Select...	
Select...	

Property Details

Property Name:	Central Mull LMP		
Business Reference Number:		Main Location Code:	
Grid Reference: (e.g. NH 234 567)	NM	Nearest town or locality:	Salen

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Local Authority:	Argyll & Bute		
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Owner's Details			
Title:	Mr	Forename:	Andrew
Surname:	Hunt		
Organisation:	Forestry and Land Scotland	Position:	Regional Manager - West Region
Primary Contact Number:	07881 490694	Alternative Contact Number:	0300 067 6650
Email:	Andrew.Hunt@forestryandland.gov.scot		
Address:	FLS West Region, Oban Outstation, Millpark Road, Oban.		
Postcode:	PA34 4NH	Country:	Scotland
Is this the correspondence address?	Yes		

Agent's Details			
Title:	Mrs	Forename:	Susannah
Surname:	Hughes		
Organisation:	Forestry and Land Scotland	Position:	Planning Forester
Primary Contact Number:	07827 239056	Alternative Contact Number:	
Email:	susannah.hughes@forestryandland.gov.scot		
Address:	Forestry and Land Scotland, West Region Oban Office, Millpark Road, Oban		
Postcode:	PA34 4NH	Country:	Scotland
Is this the correspondence address?	Yes		

Office Use Only			
GLS Ref number:			



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	Area in hectares	% Conifer	% Broad-leaves	Proposed work	select	Area in hectares
Afforestation	<input type="checkbox"/>				Forest roads	<input checked="" type="checkbox"/>	3.6
Deforestation	<input type="checkbox"/>				Forest quarry	<input type="checkbox"/>	
Location of work	Central Mull						

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.		
A total of 4130m of forest road are proposed as the Central Mull road project within the plan period (see map). The construction of these roads will enable suitable access into block areas.		
The total road footprint of the project area is 3.6 ha and comprises the following roads:		
Forest block	Road Name	Road Length (m)
Salen	SA1	1090
Salen	SA11	460
Aintuim	AN1/AN4	580
Crannich	CR13	1000
Crannich	CR22	1400
	Totals	4530
The road footprint hectareage of 3.6 ha has been calculated assuming an 8m wide permanent area of which 3.5m is the running surface, the remainder comprising ditches and verges.		
In addition, a felling corridor of 30m width, totalling 13.5 ha will be required for road construction. The proposed roadlines also include a 50 metre buffer, which will allow for movement of the exact line of the road depending on ground conditions after felling and during construction.		
Felling Corridor comprises - 41%SS %6BL %38Open; 15%Larch		
All road construction will be UK Forest Standard compliant and follow the Forest and Water Guidelines (5th Edition). The roads will be constructed in compliance with SEPA CAR regulations in advance of operational activity. the design of the roads will conform to both		

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the Timber Transport Forum document "The design and use of the structural pavement of unsealed roads 2020" and SNHs "Constructured tracks in the Scottish uplands - Revised Sept 2015". Soil will be excavated down to a base layer and stone used to construct the base and complete the road surface. All water crossings will be of bottomless or arched culverts (or bridges) sized to accommodate the 1 in 200 year flood event. Prior Notification approval through Argyll & Bute Council will be required following EIA determination by Perth and Argyll Conservancy, following the approval of this Land Management Plan submission, although all road applications within the NSA designation will be via Planning Permission rather than Prior Notification.

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

The proposed roads fall within the forests of Central Mull. All the blocks contain commercial crop as well as large areas of ancient woodland, priority habitats and open hill. There are no particular environmental sensitivities identified for the Salen roads although the presence of the FWPM in the catchment for the Aintuim road has been registered in line with previous works undertaken in the same area.

The two roads in Crannich, CR13 and CR22 have already had their roadlines felled under a previous EIA determination but road construction has not yet started so they are being reapplied for here.

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.

Private water supplies identified downstream of SA1 road proposal. Where road proposals have to cross deep peat soils, civil engineering guidance 'New forest road on peat' will be followed. It is anticipated that although there may be localised impacts affecting the water table, there will be no change to the net runoff into water supplies. As works will not be taking place within a buffer zone of the water supply, any localised impacts will not be felt at the water supply itself. Careful examination of soil types and topography in the vicinity of the proposed roadline within the catchment showed one length of 80m may have the potential to feed into the burn from which the private water supply is taken. At this point the roadline passes through mixed peat soil types (from NM 5890 4146 to NM 5890 4153). This is 1000m above the water intake. In addition a further section of 60m (NM 5923 4140 to NM 5930 4138) is also felt to have the potential to feed into the burn during construction and is a similar soil type.

Confirmation of the use of the continued use of the private water supply was obtained on 17/04 (Glen Forsa); intake is 1km below proposed road and is a further 1km from the storage tanks in Glen Forsa.

It is not felt the road construction will have a negative impact on the supply; there is very low potential for the supply to be cut off by the construction of this roadline due to the clearly incised burns on site, rather than the supply being fed by flushes or springs.

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Careful liaison at workplan stage especially in these two more sensitive sections, and careful adherence to the Forests and Water Guidelines will minimise any impact on the water supply which is not felt to be a Significant Effect. Standard best practice will be followed including where appropriate, any drains or flushes linking into the main burn will be maintained and kept clear throughout the duration of the operation. Main crossings will be of either log bridges or pipes as deemed appropriate at operational work planning stage. If a bigger building solution is required, the road building would be phased and constructed upto the burn allowing the appropriate engineering solution to be implemented. Appropriate time of year for construction will also be considered at this stage to minimise any detrimental impact on the water supply.

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.

Consultees:

FLS Environment team - site visits to check no environmental constraints of proposed roadlines. No issues on location for construction, some timing contraints due to priority species. Liaison over soil types and water supply to determine any potential significant effects.

FLS Civils team - site visits to mark location of proposed roadlines.

FLS Delivery team - confirmation of requirements for road access into coupes, with proposals deemed appropriate.

NatureScot and Argyll & Bute Council as part of LMP process

RSPB - consultation in person of draft plans (Sept 2023)

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.

FLS has a proven good track record of both civil and forestry operations within FWPM catchments and will build on this during the construction proposed.

Prior to operations commencing the FLS Environment team will assess the sites for protected or breeding species (such as FWPM, otter, eagles, other raptors etc), and for heritage features. They will provide guidance which must be followed by FLS staff and contractors. These measures can include: restricting the timing of operations and stipulating protective buffer zones.

Careful site prescriptions will continue to be observed as per Guidelines for any works within FWPM catchments as per previous peatland restoration works in these areas and also for the Private Water Supplies potentially affected by restoration works. FLS confirm their commitment to liaise closely with the owners of these water supplies at the initial stages of any works being planned, as per UKFS and water guidelines. Providing the short length of road connecting the area north of the public road to the existing constructed track and road will minimise any impact of necessary within the FWPM catchment.

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Noise and disturbance to any protected raptor species will be mitigated by following Guidelines in respect to timing of operations and continued close liaison with RSPB in relevant areas.

The best roadline has been taken to balance the varying requirements of peat and water quality, minimising any adverse impact on water flows. Choice of road type is determined as per the Civil Engineers specifications on "New forest road on Peat" (see Appendix V Peatland).

Silt management will be carefully controlled as per Forest Water Guidelines which will be strictly adhered to, minimising any significant effects on Private Water Supplies (Salen), Public Water Supply (Dervaig from Aintuim) FWPM (Aintuim) or Deep peat soils (Salen).

Sensitive Areas

Please indicate if any of the proposed forestry project is within a sensitive area. Choose the sensitive area from the drop down below and give the area of the proposal within it.

Sensitive Area	Area
Select...	

Property Details

Property Name:	Central Mull, Argyll		
Business Reference Number:	-	Main Location Code:	-
Grid Reference: (e.g. NH 234 567)	NM 520 450	Nearest town or locality:	Salen
Local Authority:	Argyll & Bute Council		

Owner's Details

Title:	Mr	Forename:	Andrew
Surname:	Hunt		
Organisation:	Forestry and Land Scotland	Position:	Regional Manager
Primary Contact Number:		Alternative Contact Number:	07881 490694
Email:	andrew.hunt@forestryandland.gov.scot		
Address:	West Region, Millpark Road, Oban		
Postcode:	PA34 4NH	Country:	Scotland
Is this the correspondence address?	No		

Agent's Details

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Title:	Mrs		Forename:	Susannah
Surname:	Hughes			
Organisation:	FLS		Position:	Planning Forester
Primary Contact Number:	07827 239056		Alternative Contact Number:	
Email:	susannah.hughes@forestryandland.gov.scot			
Address:	Millpark Road, Oban, Argyll			
Postcode:	PA34 4NH		Country:	UK
Is this the correspondence address? Yes				
Office Use Only				
GLS Ref number:				

1.4 Other Regulations

Standards and guidance

This land management plan has been produced in accordance with a range of government and industry standards and guidance as well as recent research outputs including those below:

“Securing a green recovery on a path to net zero: climate change plan 2018–2032” (Scottish Government)

“Protecting private water supplies during forestry activities” (Confor); this includes observing the UKFS 50m buffer around abstraction points.

“River Basin Management Plan for Scotland 2021 – 2027” (SEPA)

“Deadwood Management Guidance” (FLS) - supplement to Scottish Forestry Practice Guide: “Managing deadwood in forest and woodlands”.

“Managing forest operations to protect the water environment” (Forest Research Practice Guide)

“Building wildfire resilience into forest management planning” (FC Practice Guide).

“Strategic guide for the conservation management of open habitats on Scotland’s national forest estate.” (FLS)

“The state of Scotland’s rainforest – research report 2019.”

“Deciding Future Management Options for Afforested Deep Peatland” (FCS Practice Guide 2015)

“Planting and restocking on peat soils” (Standard Operating Procedure, FLS 2021)

“PAWS Guidance” (FLS)

“An approach to prioritising control of rhododendron” (FLS)

“Managing and controlling invasive rhododendron” (FC Practice Guide 017)

“Managing invasive and non-native forestry species” (FCS)

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“Priorities for rhododendron control” (FLS)

“Deadwood Guidance” (FLS)

“Forest operations and wildlife in Scottish Forests” (FCS Guidance Notes 31)

“Forest operations and birds in Scottish Forests” (FCS Guidance Notes 32)

“Forest operations and European protected species in Scottish Forests” (FCS Guidance Note34)

“Forest operations and bats in Scotland” (FCS Guidance Notes 35a)

“Forest operations and otters in Scotland” (FCS Guidance Notes 35c)

“Managing forests for white-tailed eagles” (FCS Practice Notes 101)

“Forest operations and badger setts” (FCS Practice Guide 9)

UK Forestry Standard: including Section 6.7 – Forests and Water Guidelines and section: 6.2 – Forests and Climate Change (mitigation and adaptation to improve forest resilience, including risks from wildfire.)

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 in 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.

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

The maximum volume of felling in exceptional circumstances covered by this approval is 75 cubic meters per Land Management Plan per calendar year. A record of the volume felled in this way is detailed below and will be considered during the five year Land Management Plan review.

1.5 Tolerance Table

	Adjustment to felling coupe boundaries	Timing of restocking	Changes to species	Changes to road lines	Designed Open Ground	Wind blow clearance
Scottish Forestry Approval not normally required (record and notify SF)	10% of coupe size	Up to 5 planting seasons after felling (allowing for fallow periods for <i>Hylobius</i>)	Change within species group e.g. Native broadleaves Non-native conifers e.g. Sitka spruce to Douglas fir Non-native to native species (allowing for changes to facilitate Ancient Woodland policy) For Caledonian pine woodland – SP to native BL to allow for disease issues	Departures of up to 60m from the centre of the roadline	Increase by up to 5% of coupe area	
Approval by exchange of emails and maps	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	Departures of greater than 60m from the centre of the roadline	Increase between 5-10% coupe area. Any reduction in open ground within coupe area	Up to 5 ha
Approval by formal plan amendment may be required	> 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	As above, depending on sensitivity	Increase >10% of coupe area	More than 5 ha

2 LMP ANALYSIS

2.1 Introduction

Central Mull LMP covers four forests; three contiguous areas surrounding the central Loch Frisa (Lettermore; Aintuim; Crannich) and an isolated forest, at Salen. The areas in the vicinity of the village of Salen can be seen both on land by road and also by sea when travelling by ferry to and around the island. The internal areas of forest are less visible, except when driving between Salen and the village of Dervaig in the north-west. The area abounds the North Mull LMP at An Speinne and whilst there is only one formal recreation provision by FLS, there is a network of informal routes across the area, including a popular path at Salen enjoyed by locals and visitors alike.

We help deliver the Scottish Government's National Island Plan focusing on areas such as: the Mull pier (enabling timber and freight operations off the island); Community Benefits such as Community Asset Transfer(CATS) opportunities and enabling partnerships for different projects; investigating future operations for partnership working to further any aspirations communities have to grow or expand; and also significant contract opportunities across our various workstreams, many of which are now delivered by an island resource. A plan brief was drawn up (Appendix I) on analysing the previous plan (Appendix II).

Landscape

In general, Central Mull forests are not highly visible in the landscape, which is reflected in the relatively low number of viewpoints (see Section 3.5 and map 16). A Landscape Analysis was undertaken which highlighted areas of steep ground in Lettermore on Loch Frisa side, the larch face in Aintuim adjacent to the public road and the eastern section of Salen. Adjacency is not anticipated to be an issue in Central Mull; any areas with large felling coupes are either being restored to peatland or converted to broadleaves with no adjacent felling awaiting restock.

2.2 Plan Objectives

- Develop a strategy for the future management of existing poor quality crops in current rotation and increase rotation length where appropriate.
- Improve the long term sustainability of timber production by exploring opportunities for crops of varying quality into the next rotation; this will work towards future smoothing of the production forecast whilst incorporating the impact of peat restoration work on age restructuring.

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- Work towards removing all larch from Mull within the next ten years by managed removal of prioritised larch areas, especially in Crannich, minimising the impact of future SPHNS on the sustainable management of the forest.
- Review and improve both the choice of species and their provenance (in conjunction with ground condition suitability) and also diversification of species (within the constraints of high wind hazard classes impacting on the thinning potential of species other than SS/LP), to ensure sustainable timber production as the forests move into their next rotation.
- Ensure both forest road network and provision of quarries is suitable for future management via an achievable road programme, especially in Aintuim and Salen.
- Develop a strategy to reduce herbivore impact across the FLS estate.
- Develop large scale Peat Restoration project in Aintuim and enhance Open Habitats, especially in Lettermore & Crannich.
- Develop PAWS restoration in Salen and Aintuim blocks, and develop habitat networks via woodland expansion to increase the percentage of broadleaves and subsequent biodiversity (including control of Exotic Invasive species at Salen).
- Management and protection of key species including considerable raptor interests across Mull (“Eagle Island” draws in high tourist numbers), and in addition the archaeological heritage of the area.
- Ensure water quality maintained in River Bellart water catchment (Aintuim).
- Maintain & enhance both views and existing recreation provision for the benefit of locals and increasingly large visitor numbers to Mull; focussed in Lettermore.
- Work with local communities and MICT, especially around Salen, supporting the large-scale tourism now dominating the local economy with subsequent high nature visitor numbers.

Key challenges

- Elevated operating costs, increased logistical constraints and reduced contractor resources associated with island operations: operating within the restrictions of an ageing ferry fleet has presented additional challenges as the unreliability of access to the island increases.
- Browsing Pressures: the high number of deer across Central and Northern Mull creates problematic conditions for re-establishing woodland across areas of the forests. Whilst culls continue to be met on FLS land, until changes can be effected at a landscape scale with neighbouring land owners, it is very challenging to effectively establish both broadleaf and mixed conifer woodlands.
- Coupe size/structure and road infrastructure need further assessment and consideration in order to improve the economics; some areas are with no access due to limitations of road infrastructure.
- Infectious diseases: SPHNS continue to be served in Crannich forest; larch will be prioritised for removal as soon as possible, based on the FLS Larch Strategy.
- Climate: DAMS scores range from 14 within the majority of Lettermore and Crannich to the higher areas of Salen and Aintuim being over 16. Thus there are few areas which fit the

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following conditions suitable for thinning: high forest, crops between 18 and 25 years old, Yield Class ≥ 12 , DAMS score ≤ 17 , forest road within 200 metres and slope $< 33\%$.

- Steep Slopes: due to the underlying volcanic geology resulting in an unusual topography, there are some very steep areas with limited access e.g. the larch face above the Salen-Dervaig road at Aintuim and above the loch side along Lettermore forest.
- Power lines: ranging from local power to villages to regional lines supplying the islands (Coll), resilience of powerlines is an important consideration across the plan area due to the difficulties of obtaining power shutdowns for any felling work.
- Atlantic Rainforests & PAWS: Rainforest and PAWS restoration is hampered in places with exotic regeneration, primarily Rhododendron ponticum, in the west of Salen.
- Peatland restoration: large areas previously afforested on Mull are now considered unsuitable for tree growth and should be restored back to peatland which provides a greater carbon sink than allowing trees to remain; this reduces the land bank available for tree growth but forms a central part of the Scottish Government's peatland strategy towards combating climate change.
- Priority species: Mull's reputation as 'Eagle Island' can add logistical complexity to delivering operations across the island with multiple nesting sites for raptors including Golden Eagles, White Tailed Sea Eagles and Hen Harriers. The presence of Fresh Water Pearl Mussels also highlights the need to strictly comply with all relevant guidance at all times.
- Resilience in the face of climate change: poor species choice in the past, especially in respect to Lodgepole Pine, has left a challenging situation of poor quality crops. Consideration must be given to allowing species choice to change towards those crops recommended by Environment Site Classification (ESC) 2080 although this will not necessarily take effect immediately as nursery supplies start to provide more alternative species with better provenance.

2.3 Analysis and concept

See Map 9 and Appendix IV for tables and maps showing how concepts were derived, through analysing Objectives, Opportunities and Constraints for each area.

3 LMP Proposals

3.1 Management

(See Map 5 for Management Proposals)

Clear Felling

There is a considerable amount of felling proposed within this Land Management Plan. This is primarily driven by the two major policies affecting our forests on Mull at the moment:

- the need to remove mature larch under FLS' Larch Policy. This is due to the ongoing threat of larch infection by Phytophthora ramorum. The forests have already been subject to a number of Statutory Plant Health Notices and we must carefully plan for the removal of the remaining larch.
- The need to restore peatland areas, also as part of Scottish Government policy.

There are large quantities of both mature larch and areas identified as deep peatland for restoration found within this plan area which have been a driving force in the phasing of felling.

SALEN

There is a peatland restoration area in the second phase of the plan, Allt nan Leòthdean at the end of the current forest road which will also allow access to a currently inaccessible area of mature larch above Callachally. A second peatland restoration project, also for the second phase of the plan, Fèith Bhàin lies alongside the public road to Gruline. A soil survey has been commissioned this year to complement the peat depth surveys delineating the boundaries of the restoration area. In addition there are three more standard felling coupes throughout the life of the plan.

AINTUIM:

Two standard felling coupes have been identified adjacent to Loch Frisa once construction of the approved road AN3 allows access. In addition, this forest has two large coupes identified for the first phase of the plan, firstly a large peatland restoration area at Cnoc nan Dubh Leitre which was one of the last sites planted up by the Forestry Commission on Mull in the mid to late 1980s following significant drainage works across very flat land. The second area is the steep larch face below Tom nam Fitheach, already approved for felling, 67522. This coupe may have to be worked in two halves, with existing workplan approval on track AN1F3 allowing work to progress with the eastern felling while an access solution is developed in the west with its OHPL complications. Similarly when restocking, once the eastern portion is felled, this will allow deer management to reduce the neighbouring migratory population before the broadleaf restocking proceeds on both portions of the larch face.

CRANNICH:

Crannich has a large volume of larch spread throughout the forest and again this is one of the major drivers for felling. Two areas, one in the west above an existing SPHN and the second south of Crannich Farm, have a two phased approach to removing the larch. Two smaller coupes have been included adjacent to a current SPHN in the process of being felled. In addition to these larch priorities, another large area of mixed peatland restoration has been identified at Suil Bò. The final coupe shown in Phase 2 is a standard felling operation bordering with a new rewilding project on the neighbouring Glen Aros Estate to the east.

LETTERMORE:

Larch is found throughout the forest and a number of standard felling coupes incorporate an element of larch – the first felling of this first rotation forest began last year and the coupes are phased accordingly. A higher forest road is being extended to aid felling the area of larch above Ledmore. Other small coupes are proposed along the lochside and within the main amenity area near Glen Aros.

FIREWOOD:

FLS are working to get through the backlog on our waiting lists for firewood but are hampered by lack of staff resource and also the restrictions placed on us in selling on infected wood from larch felling. Unfortunately FLS were unable to successfully negotiate a change in policy for Mull to allow infected wood to be sold on the island. However, improvements are being made working with Standing Sales merchants who undertake all our felling on the island.

Thinning

There are not many opportunities for successful thinning interventions on Mull due to the access issues, Mull's unusual island setting and the challenges of wind impacts on the crop (see DAMS maps in Appendices). Amenity thinning may take place as required around thoroughfares in the forest (forest roads/tracks/recreational trails both formal and informal); see Map 6. These selective fellings are focused on the removal of essentially problem trees that are impacting adversely on site infrastructure, recreation areas, ecologically sensitive open ground and native woodland areas. This would allow for example halo thinning of veteran broadleaved trees, removal of conifers along watercourses to protect ASNW remnants and veteran trees. Thinning can also be used to create an attractive environment to trails and car parks and to open up viewpoints. There is usually no measurable volume removed and fellings may target small, scattered and individual trees in order to achieve the thinning objective. The scale of the operations makes representation of these areas on maps difficult. In general, the approach would be to remove minimum number of trees to achieve the objective of minimising adverse impacts within these targeted areas. The areas that may be involved have been estimated at 60% conifers and 40% broadleaves (see initial table).

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Thinning would 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, or as part of a LISS prescription. Work plans will define the detailed thinning prescription of any identified areas before work is carried out and operations will be monitored by checking pre and post thinning basal areas for the key crop components.

Low Impact Silvicultural Systems (LISS)

As with thinning above, the majority of the forests in Central Mull do not lend themselves towards early interventions and Continuous Cover Forestry (CCF). In some areas around southern Lettermore where there is sufficient access and lower DAMS scores (<16) this approach can be considered. This can be described using Forest Development Type (FDT) prescriptions suggested for adoption in these areas showing a longer term vision over the next rotations of the forest.

Natural Reserves (NR)

Aintuim SS: an area of slowly growing conifers with poor growth rate on steep ground which it is anticipated will not be subject to windblow; these may provide an alternative nesting site for WTEs in the future, replacing the nest removed as part of peatland restoration adjacent to the watercourse. Artificial nesting sites have been constructed within this NR area in collaboration with RSPB to aid any WTE looking to nest in the area as the surrounding area is converted to predominantly broadleaf post larch felling.

Lettermore SS: A an area of mature conifers alongside the river Aros previously identified and continued into this LMP.

Long Term Retentions (LTR)

Unfortunately several previous areas of LTR were in mature larch that has since had to be coupaged up to be felled.

However, one area of SS is a raptor retention in Aintuim and there are two similar retentions across the lochside in Lettermore which have been continued from the previous plan. These areas were chosen as an appropriate additional buffer to individual nest trees to provide shelter and minimize disturbance whilst being taken to a windfirm edge to minimize the risk of windblow within these nest retentions. In addition, larger areas in Lettermore closer to the river Aros are also left as Long Term Retentions, one of which is a research area with two subsequent areas of mature amenity conifers.

Resilience

RESTRUCTURING:

The main purpose of restructuring is to create truly multi-purpose forests meeting a wide range of objectives. These include enhancing landscape, biodiversity, productivity, community/recreational opportunities whilst protecting and improving the setting of heritage features and restoring priority habitats. Increased species and age class diversity also increases the resilience of the forest.

SLOPE STABILITY AREAS:

There are no slope instability areas identified in Crannich or Aintuim forests. However in the other forests where the gradient increases up the steeper slopes, the following areas are shown:

Salen: 17ha Low to Moderate risk score, above the forest road near the main forest entrance. Part of this area is currently felled but will be restocked with mixed conifer species.

Lettermore: 141ha Low to Moderate risk score, above the forest road along Loch Frisa side. This includes two areas of small landslides surveyed within the area. Where these areas are felled, they will be restocked with Sitka Spruce but with broadleaves up the burnsides onto the open hill.

CLIMATE CHANGE:

Climate change models suggest that the general trend will be towards a significantly warmer climate with higher winter rainfall and lower rainfall in the summer leading to a partial soil moisture deficit during the summer months. In terms of the next rotation these figures have limited impact on species choice according to ESC models and the short rotation of SS across many of the sites further reduces the risk of climatic impacts. However, there are also threats to the suitability of SS as a timber species if significant summer droughts become normal. This needs to be reviewed and our response agreed to climate change locally. The predicted climatic change is likely to interact in the longer term with soil characteristics and this may have a positive impact on soil structure and widen the range of species potentially suitable for the site. As such, the ESC 2080 model has been applied where possible when determining species choice and soil surveys are being carried out on the remaining forests to give complete coverage by 2024/2025.

TREE DISEASES AND PESTS

An increase in the type and scale of tree diseases and pests is increasingly impacting on species choice and forest management.

The most serious disease currently in the region is *Phytophthora ramorum* in Larch and the only one subject to statutory plant health notices (SPHN). Larch is no longer a viable tree species for forestry on the west coast. An accelerated programme to remove the existing stands of uninfected larch is underway and it is no longer being planted, as per FLS' Larch Strategy. A number of SPHNs have been served on the forests especially Crannich and any remaining larch is considered to be at high risk.

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Central Mull LMP lies wholly within the RISK REDUCTION ZONE.

Dothistroma needle blight (DNB) affects pine species. Pine stands are being monitored and the worst affected brought forward for harvesting. This has less potential impact on these forests although there is a high percentage of LP planted; this has often failed due to the poor provenance availability at time of planting. Only the Alaskan lodgepole pine has resistance and Scots pine can only be planted away from the Caledonian pinewood inventory sites.

Ash Dieback is working its way through the Region with the expectation that at least 90% of the ash will be lost. Pre-emptive felling of ash is not being undertaken in the hope of being able to identify some resistant trees, unless they potentially pose a threat to safety alongside roads or recreational areas.

FIRE RESILIENCE

Due to climate change there is an increasing risk of fires across the National Forest Estate (NFE). The proposals within this plan aim to limit the risk through species diversity and age diversity, as well as having open rides. The road network will also provide a barrier for fires and enable access to areas if a fire would occur. See Map 7.

FLOOD RISK

SEPA's Flood Maps do not show any areas within the forest that have a particular likelihood of surface water or coastal flooding. Loch Frisa and both the River Aros and River Bellart are shown with areas as a 10% chance of River flooding, and some with a 0.5% chance of flooding; however the perceived risk is low.

Operational Access

Timber Haulage within the forest area is set out in the following protocols:

[The-design-and-use-of-the-structural-pavement-of-unsealed-roads-Revised-2020.pdf](https://timbertransportforum.org.uk/)
(timbertransportforum.org.uk)

TIMBER TRANSPORT ROUTES: The primary “in forest” routes run from Lettermore in the north down to rejoin the public road network north of Salen and thence the Fishnish Timber Pier. This route is also used by adjacent commercial forest neighbours in addition to a constructed timber haul route to the west of Loch Frisa which joins the FLS forest network at the edge of Crannich, then connects into the Lettermore network. This forest road network ensures there is minimal impact on the fragile single track roads of Mull from timber lorries (see Map 10).

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The public roads from Dervaig to the east and south are Excluded routes whilst the section linking to the two in-forest Haul Roads is a 2km Agreed Route. For timber coming out of the west of Salen forest, the B8035 road is available for use under the terms described i.e. an exemption order would be made to allow three CTI lorry and trailer configuration vehicles to run on a load-and-return basis to Fishnish pier. This capacity would be shared between users e.g. neighbouring Killiechronan Estate. The exemption would involve named drivers and specified vehicles, and include terms and conditions for use modelled on the TTMP protocol.

The design of any new roads being built will conform to both the Timber Transport Forum document “The design and use of the structural pavement of unsealed roads 2020” [The design and use of the structural pavement of unsealed roads](#) and SNH’s “Constructed tracks in the Scottish uplands – revised Sept 2015” [Constructed Tracks in the Scottish Uplands](#).

3.2 Establishment

See Map 11 for Future Habitats and Species; current species are shown on Map 8 and a provenance chart is in Appendix VII.

Restocking

In the better soils the nutrient and moisture regimes become more favourable for a wider range of alternative conifer species which could include: Western Hemlock (WH), Norway Spruce (NS), Grand Fir (GF), Douglas Fir (DF), Noble Fir (NF), Scots Pine (SP), European Silver Fir (ESF) and a range of other minor conifers: (Western Red Cedar (WRC) Serbian Spruce (OMS) Japanese Cedar (JCR)) as small elements. Some of these species are already present on the site although the softer, diverse conifers are vulnerable to deer damage which has prevented successful establishment of these species in various locations throughout the forests especially along Lettermore lochside. Where Mixed Conifers have been chosen for an area’s establishment, the ESC 2080 Climate Change tool was used to suggest suitable species in line with changes to current conditions. As nursery supplies are currently highly variable, a more general prescription of diverse mixed conifers was chosen to allow more flexibility at the time of restocking depending on availability. Where possible, more mature trees would be chosen in preference to smaller stock to reduce the impact of deer browsing and ensure a higher survival rate.

In addition, exposure, poor nutrient status and impeded drainage are factors limiting the choice of productive species at higher elevations, with Sitka Spruce (SS) being the only commercially viable species. On more challenging sites SS & Lodgepole Pine (Alaskan) mixtures can facilitate the establishment and growth of a productive SS crop, although pure LP stands have not been successful within the forests on Mull. This has been in part due to trees being planted inappropriately on land now considered a priority open habitat as well as poor provenance choice or availability. In other places soils have been too thin to successfully achieve tree growth.

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Conifers will be restocked to a minimum density of 2500/ha net plantable area. Broadleaves will be established either by planting or through natural regeneration to achieve a minimum stocking density of 1800/ha over a 5 to 10 year period.

Cultivation methods in future rotations will be selected to aid the establishment of the trees whilst seeking to balance minimising the amount of the soil disturbance and the need for herbicide treatment. The focus should be on incorporating low risk intrusive techniques to minimise soil and carbon losses to air and water such as inverted mounding and screefing or flat planting as appropriate.

The fallow period for restocking will generally be two years unless otherwise stated, for example the initial Lettermore felling coupe (38135) in even aged first rotation Sitka above the River Aros will require a longer fallow period to reduce the initially high impact of deer browsing. As the forest has been opened up post felling, this will provide much higher deer ingress from neighbouring land to the north.

There are legacy coupes (Lettermore) that were not established under the previous plan due to a variety of reasons including: extra felling due to Statutory Plant Health Notices; Covid restrictions affecting contractor resource and availability of plants and excess deer browsing leading to failure of restocking with beat up now required. These areas have been identified (see Table 1.7), assessed and included in the establishment programme and will be monitored as the plan progresses. These legacy coupes are included within the currently felled land figures below:

Currently Felled Land: **307 ha in 2024;** **259 ha in 2034;** **186 ha in 2044.**

CHEMICAL USAGE ON MULL

Due to logistical and storage challenges, on the Island of Mull we will aim not to use treated stock or top up spraying options as part of any standard prescription of our establishment programme. However, FLS have the option of reconsidering this standard approach in line with appropriate legislation and approval. This does not affect our treatment of invasive species which may in cases require chemical treatment (Section 3.8).

Woodland Creation

Areas in the north of Aintuim and Lettermore have been identified as suitable for woodland expansion (approx.. 20ha in Aintuim; 30ha in Lettermore). These have not been put forward for the EIA screening opinion request as further surveying and detail will be required meaning planting will likely commence beyond the expiry of any determination. However at such time as planting plans progress, EIA screening will be sought with appropriate surveys undertaken as required.

Natural Regeneration

Permanent native woodland habitats have been identified for expansion and/or establishment following felling operations. Typically these areas will include open space as well as native broadleaved woodland. An assessment will be made post felling to confirm the viability of regeneration, but areas that tend to be within 75m of a viable seed source (usually of at least two different species) may be identified as suitable for Natural Regeneration. This is dependent on browsing pressure being reduced to ensure the successful regeneration of trees which is addressed in the Deer Management Plan (see Appendix VI).

Natural Regeneration is a priority theme promoted in the Scottish Forestry Strategy and where feasible is seen as preferable to planting for several reasons: it offers greater biological and genetic diversity to planting; landscape scale natural regeneration provides less segregated landscapes; less GHG emissions without the requirement for ground preparation; and there is no plastic pollution compared to the use of tree guards with planting.

Monitoring of Natural Regeneration – a monitoring programme will survey regenerating areas to gain evidence of their success usually by means of a Herbivore Impact Assessment. This will be undertaken at year 5. If Natural regeneration is not going to succeed it will go into the planting programme. If it is felt it can succeed it will be reassessed at Year 7 to decide whether to plant or whether full stocking is anticipated by natural regeneration at year 10.

PAWS restoration

LETTERMORE: Ancient woodland sites will continue to be restored and expanded up riparian areas connecting down to the River Aros.

AINTUIM: the lochside area will be restored to Native Woodland although due to the reduced seed source, this will be predominantly through planting of native species rather than regeneration.

CRANNICH: discrete broadleaf areas in the vicinity of the public road will be connected up and additionally a link will be made with neighbouring Glen Aros who are establishing a woodland creation area.

SALEN: the western side of the forest will be restored to native woodland and priority open habitats building on the existing Atlantic Rainforest and linking with priority oak habitat closer to the central quarry.

GWDTE (ground water dependent terrestrial ecosystems)

There are few areas on Mull which are fed by groundwater supplies, but a small number of GWDTE habitat areas (M10 / M15 / M32) have been identified in Aintuim with a few additional areas in Lettermore (see Map 12, Priority Habitats).

The majority of these sites lie within existing open land which will be maintained as such, but where this is not the case, replanting areas have been pulled back to ensure these habitat types are not afforested e.g. along Loch Frisa side. A further area is at the edge of the Natural Reserve but no disturbance will be taking place in this area. Before any works are carried out in the vicinity of these areas a site visit will establish any groundwater dependencies.

Riparian Management

2021-2030 is the UN Decade of Ecosystem Restoration and FLS is a partner in the Riverwoods Initiative led by the Scottish Wildlife Trust to support restoration of riparian ecosystems. Riparian management is crucial to the health of both individual species and the habitats they rely on, none more so than the catchment area for the River Bellart with its population of FWPM. Close liaison with NatureScot and careful adherence to Forest and Water guidelines will be strictly adhered to for all these sites and detailed site prescriptions will continue to be successfully implemented when working in these areas (also see Map 12, Priority Habitats).

Natural regeneration of native woodland along the riparian corridors will help to alleviate flood risk by reducing the speed of run-off. There is the potential for natural regeneration of conifer species within the riparian corridor; ideally this would all be removed but practically up to 15% conifer regeneration will be accepted in the corridor before intervention to remove it.

Where burns are less than 2m width, a buffer of 10m will be applied from the bank of the stream. Where the burn is greater than 2m, a 20m buffer will be applied. This may be wider where features such as Scottish Rainforest areas have been identified.

Deadwood

The higher ecological potential for deadwood is generally found within the LMP forested area. A proportion of woodland will be managed to provide deadwood habitat where it provides the greatest environmental benefit. The highest ecological potential for deadwood is found in the established woodland within PAWS and riparian areas and also within Long Term Retentions and minimum intervention areas. Areas of lower potential for deadwood will be found in the higher, more exposed areas of conifer crop.

3.3 Open Land

There is a high proportion of existing open land on hilltops, especially around An Speinne (Lettermore) and Cruach Tòrr an Lochan (Salen). Often these mainly consist of identified priority open habitats such as Upland Heath and Blanket Bog.

In addition, integral open ground within the forest area delivers a significant part of the forest's ecological value; this includes areas around riparian and archaeological sites. Where appropriate some of this open land, particularly adjacent to peatland restoration areas, may be allowed to develop naturally; this will be reviewed at the next LMP revision.

Agricultural land

There are four agricultural areas within the plan area within Lettermore and Aintuim forests around Loch Frisa under three Limited Duration Tenancy and Grazing Lets. Three of these areas are smaller, less than 15ha, and the fourth is a larger area due for renewal within the timescale of this plan. This tenancy will be reviewed at this point and various options explored. There may be an opportunity of native woodland creation on a small portion of this land with the majority of the area remaining as grazed land.

Peatland Restoration

Areas identified here form the application for a deforestation EIA screening (see Map 3), together with a justification for the removal of trees and the potential for restoration. An overview of the areas is shown in Map 4 whilst Map 17 accompanies the Peatland Appendix V.

SALEN: There are two sites for peatland restoration, Feith Bhàin in the west which is part of extremely flat, peaty landscape either side of the public road. Also, Allt nan Leòthdean which is higher up the hillside. This comprises a mixture of deep peat areas combined with shallower peat rankers on rock within this matrix. As these are hydrologically linked with shallow areas combined with deeper ones shown in the peat depth data, restoration may involve drain blocking where stump flipping is unfeasible. Decision making regarding restoration at a site specific level will be undertaken at the work planning stage.

AINTUIM: A large peatland site at Cnoc nan Dubh Leitre; this is majority deep peat soils which following assessment have shown a large area for restoration. Some crop near the edge of this area showed improved Yield Class, greater than 8, but these are included in the restoration area as they are an intimate part of the hydrological units. If the trees are not removed this will have a detrimental effect on the hydrology of the area. This is less pronounced in the eastern hydrological unit of Salen but the crop here is poorer and often falls below the YC8 threshold and so these trees are also included in the restoration area.

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CRANNICH: A complex site at Sùil Bò with a mixture of deep peat soil types. This site is not one large deep peat soil type but rather is an intimate mix of deep peats amongst other poor soils, some of which are hydrologically connected. Careful decisions were made as to areas to be restored based on soil depths, soil types and hydrological units.

An area of 'Open to Bog' restoration has been identified in the open land to the north of Aintuim. This has been included in FLS' scheme to deliver Carbon Capture units. This is achieved by a series of Open peatland restoration and Woodland creation projects being validated with and verified against the Peatland Code and the Woodland Carbon code respectively. This provides independent assurance and registration of the carbon sequestration.

3.4 Deer Management

(see Appendix VI, Deer Management Plan)

3.5 Visitor Zones and Public Access

There is one formal recreation facility provided by Forestry and Land Scotland (FLS) within Central Mull LMP at Lettermore, comprising a short trail to Cill an Ailean scheduled monument (SM) and a car park, although a series of informal car parks and trails are also well used at Lettermore and Salen forests.

The forest road network provides cyclists and walkers with opportunities to enjoy and explore the wider area offering spectacular views as you climb the hillside. This informal access is managed under the Scottish Outdoor Access Code (SOAC) and there are a lot of both visitors and locals who experience a variety of wild trails throughout the forests. In addition, local residents access the forest road network to reach their residencies along Loch Frisa-side. A right of way through parts of Aintuim forest will link up to the new forest road, AN3 at the head of Loch Frisa increasing opportunities for informal circular routes. Popular informal routes are also well used around Salen and Lettermore both by the local community and primary school and visitors to the island.

A number of viewpoints were chosen demonstrating a view of the forest from major publicly accessed routes; predominantly public roads but also from popular or well known vantage points. Visualisations were then created for these views comparing a current photograph to a 3D version of the forest in 10 and then 20 years time, both as felling coupes and as the proposed restocking (see Map 16). The viewpoints for Central Mull were from Salen Pier (North towards Lettermore and South towards Salen), the public road between Salen and Dervaig (views of Aintuim and Crannich forests as well as across Loch Frisa a the southern end to Lettermore). The final viewpoint was from the forest road in Lettermore looking across to Aintuim which is a popular informal recreation route towards a previously inaccessible area of forest which will be restored in part back to Ancient Woodland.

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 mapped on Map 13.

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 may also be thinned, or trees re-spaced for safety reasons (including to increase visibility to ensure that sites are welcoming and feel safe). See Map 6 Amenity Thinning. Also where it is necessary to enhance the experience of the forest setting, through the development of large trees, or preferential removal of trees to favour a particular species.

3.6 Heritage Features

There are a number of Monuments listed by the Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS) of which two are Scheduled Monuments: Cill an Ailean chapel in Lettermore and Cnoc nan Dubh Leitre in Aintuim (a fairground site). In addition there are many sites within the forests of local importance, predominantly dykes, farmsteads and settlements, as well as regionally important sites of shielings in Crannich and a township and farmstead in Lettermore.

These sites will be managed in accordance with the Forests & the historic environment Guidelines and will be protected during operations in line with the UKFS. If new sites are found these will be mapped and recorded and protected from operations. Detailed operational workplans will be drawn up nearer the period of felling and will include a full range of mitigation measures to safeguard archaeological features.

West Region's Regional Historical Asset Management Plan works to ensure the historic assets' stable condition or to slow their gradual decay and details the following:

“All scrub vegetation and regenerating trees within the relevant area will be cut off at ground level using appropriate hand or power tools and removed. Bracken encroachment shall be controlled within appropriate areas as necessary through strimming, bashing and / or chemical spraying, as appropriate. Any tree felling, harvesting or thinning work within the relevant area (and including a buffer zone of 20m around it) will be planned and organized to avoid any damage to the historic asset in the course of felling and timber extraction. Scheduled Monument Clearance will be necessary in advance of any forestry works, conservation management, consolidation or repair and development that may cause damage or disturbance within the scheduled area. No replanting will take place within the scheduled area (nor usually within a buffer zone of 20m around it).”

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Additionally the restocking proposals (open space) are sympathetic to both the features and its immediate environs. Only the larger sites are reflected in the Restocking Areas shown – smaller sites will be included at the work plan mapping scale only with an appropriate buffer in place (these areas are often too small to map at a strategic scale) – see Map 14. Further advice will be obtained from the FLS Archaeologist if required.

3.7 Habitats & Species

The forests of Central Mull contain a number of priority species and habitats (see Appendix III for full list), and there are areas of the forest that are known habitat for raptors, bats and otters which are covered by the European Protected Species regulations. In addition, one forest is in an important catchment for a highly endangered bivalve, the fresh water pearl mussel. Work has been successfully undertaken by FLS and neighbours in conjunction with NatureScot to try and improve the conditions for recruitments in these areas, and will continue throughout the life of the plan.

Retentions for raptor nests have been carefully identified in line with guidance ‘Managing Forests for White Tailed Eagles’ (currently under review but discussions with FLS’ Wildlife Ecologist Sept. 2023 suggested there will not be significant changes to this guidance). They are between 1 and 3 ha in size even when isolated from other woodland and priority is given to choosing a windfirm edge to prevent a nest inadvertently blowing down.

Prior to any harvesting operations, FLS will undertake a pre commencement survey in the coupe to check for the presence of any protected species; this may include the creation of a nest management plan where appropriate. The relevant FCS guidance notes: Wildlife and Forest Operations 31- 35d will be adhered to if protected species are found to be present.

3.8 Invasive Species

The following invasive species are been identified as being present within the plan area:

- Rhododendron ponticum: this is prevalent across the island with Salen forest having large areas present, both in the Atlantic rainforest areas to the west and in and around the central oakwoods.
- Himalayan knotweed: an area has been identified together with neighbours at Achnadris in the north of Aintuim and mapped with plans drawn up for treatment to follow (NM 452 519) dependent on contractor resource.

Following the identification of Invasive Species, a plan for their initial removal will be drawn up. This should be followed up after removal to ensure there is no recurrence.

Any further areas identified will be mapped as reports are received by FLS.

3.9 Water Supplies

Public Water Supplies

The majority of Mull's public water supply comes from the Tobermory Water Treatment Works (WTW) at the Mishnish lochs, supplying Tobermory and the rest of the east of Mull. Of the water supply's 540ha catchment area, 75ha falls within existing open land at the top of Lettermore forest in Central Mull LMP. (A further 146ha in Aros and 116ha in Ardmore forests fall within North Mull LMP.) Under the establishment proposals in this LMP, 20ha of this has been identified to be planted with native broadleaves at a low density, allowing 30% of open space within this area. This will allow the creation of a continual broadleaf corridor to link up areas of ancient woodland along the lochside, without having a detrimental effect on the water quality of the loch.

However, a separate water supply for Dervaig is drawn from a catchment to the south of the village and this covers a substantial portion of Aintuim forest and the north-west tip of Crannich. As this is also part of the sensitive priority species catchment, all guidelines for good practice such as the Forestry & Water Scotland initiative (Confor) will be followed ensuring good water management helps reduce diffuse pollution risks from forestry operations. This plays a key part in managing our forests sustainably in complying with water regulations and the UK Forestry Standard.

Scottish Water abstractions are designated as Drinking Water Protected Areas (DWPA) in 2014 under Article 7 of the Water Framework Directive and it is essential that water quality and water quantity in the area is protected. However, in some places these are not concurrent with areas more recently identified by Scottish Water as Drinking Water Catchments; the latter received in 2023 are shown on Map 15. In addition to meeting the UK Forestry Standard (UKFS) and Forests and Water Guidelines, "Guidance on Forestry Activities Near SW Assets" will also be taken into account; site specific risks and mitigation measures will be assessed and implemented where appropriate.

All forestry operations will meet relevant General Binding Rules applicable to forestry under the Water Environment (Controlled Activities) (Scotland) Regulations 2011 and any divergence will be licensed or registered with the Scottish Environment Protection Agency (SEPA).

The careful timing of any works will be imperative in minimising any risk to water catchments and good practice will be followed to ensure this. If required, a pollution prevention plan will be drawn up with Scottish Water but at the current time this has not been requested by them.

Private Water Supplies

Private water supplies can be abstracted from a stream, spring, well or borehole, and usually consist of a series of pipes and tanks feeding one or more properties. All known supplies within FLS land are mapped (see Map 15) and this information is fed into all worksite planning well in advance of any

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operations to ensure there is no detrimental impact on the water supply. In addition to the individual supplies, the water catchments feeding into these abstraction points have been identified and mapped for use at an operational level where best practice Forestry and Water Guidance will be rigorously followed. A project to ground truth all individual supplies is underway across the forests (commenced autumn 2023) and the FLS GIS database will be updated following any alterations to given abstractions points or catchments. This will ensure high quality data is live across our systems. In addition, any subsequent supplies found will be added into the database to give comprehensive coverage.

Some of these private water supply catchments supply individual properties with low abstraction rates; however, some supply a collection of properties or businesses heavily reliant on good water quality e.g. distilleries. All private catchments will be shown on operational site maps to ensure that operational activities such as harvesting are aware there is a private water supply downstream. The Water supplies map in this plan shows all private catchments for sensitive/larger supplies and also catchments of smaller supplies where they are within 2km of the abstraction point.

As part of the operational lead-in prior to any works, site visits will ensure any changes to these supplies are discussed with the relevant properties and a plan drawn up to carefully manage the site. This may end up in operational delays but allows a full understanding especially of complex supplies such as those surface fed from a diffuse source e.g. Crannich Farm site visits in autumn 2023.

3.10 Critical Success Factors

Effective deer management strategy	This is key to the successful establishment of broadleaf and mixed conifer species especially around PAWS areas and their protective native woodland buffer. Continued sustained population control is necessary combined with a landscape scale approach to deer control across neighbouring land owners.
Sufficient stability in mature conifer crops to allow the continued restructuring of the forests	Managing the felling of crops as close to MMAI as possible to avoid over mature crops becoming vulnerable to windthrow. This has been challenging given the requirement to remove mature larch timeously.
Successful restocking of both previously and planned felled areas.	Previously planned felled areas have been disrupted by the requirements of Statutory Plant Health Notices resulting in a larger area to be established. This, coupled with the challenges of a highly migratory neighbouring deer population and a lack of fencing, has resulted in a large establishment programme. This is also challenging due to the additional pressures of contractor resource in an island setting. Focussed resources to ensure successful restocking amid deer pressure and resourcing constraints.
Resources to manage the natural regeneration to achieve the required species and stocking	The inconsistency of desirable seed sources and the abundance of undesirable seed sources means that intensive work is required during the first decade of natural regeneration sites to ensure the desired woodland habitat is established.
Road construction to reach the Larch stands	The construction of forest roads is required to reach Larch fell coupes and felling coupes in general.
Successful restoration of peatland areas	There is a considerable area of peat restoration to be undertaken within the plan area and much of this requires felling of uneconomic timber. This is dependent on continued external funding.

4 List of Maps

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