

South Region

Glenscorrodale

Land Management Plan



Approval date: 2020 - 2030

Plan Reference No: FDP 47

Plan Approval Date: 01 June 2020

Plan Expiry Date: 31 May 2030

Glenscorrodale Land Management Plan 2020 - 30

EIA Determination form if required

Contents

Summary of Proposals

1.0 Introduction:

- 1.1 Setting and context
- 1.2 History of plan

2.0 Analysis of previous plan

- 2.1 Analysis from previous plan

3.0 Background information

- 3.1 Physical site factors
 - 3.1.1 Geology, Soils and landform
 - 3.1.2 Water
 - 3.1.3 Climate
- 3.2 Biodiversity and environmental designations
- 3.3 The existing forest
 - 3.3.1 Age structure, species and yield class
 - 3.3.2 Access
 - 3.3.3 LISS potential
- 3.4 Landscape and landuse
 - 3.4.1 Landscape character and value
 - 3.4.2 Visibility
 - 3.4.3 Neighbouring landuse
- 3.5 Social factors
 - 3.5.1 Recreation
 - 3.5.2 Community / Education
 - 3.5.3 Heritage
- 3.6 Invasive non-native species
- 3.7 Statutory requirements and key external policies

4.0 Analysis and Concept

- 4.1 Analysis of constraints and opportunities
- 4.2 Concept of the plan

5.0 Management Proposals

- 5.1 Forest Stand Management
 - 5.1.1 Clear Felling
 - 5.1.2 Thinning
 - 5.1.3 LISS

Glenscorrodale Land Management Plan 2020 - 30

- 5.1.4 Natural reserves
- 5.2 Future habitats and species
 - 5.2.1 Conifer timber production restocking
 - 5.2.2 Broadleaf woodland establishment
 - 5.2.3 Woodland fringe
 - 5.2.4 Species composition
 - 5.2.5 Open space
- 5.3 Restructuring
- 5.4 Future management
- 5.5 Age Structure
- 5.6 Biodiversity
 - 5.6.1 Deadwood
 - 5.6.2 Arran Moors SPA
 - 5.6.3 Landscape
 - 5.6.4 Invasive non-native species
 - 5.6.5 Species improvements
- 5.7 Deer Management
- 5.8 Forest Roads & Timber Haulage
- 5.9 Heritage
- 5.10 Recreation
- 5.11 Water
- 5.12 Flooding
- 5.13 Critical success factors
- 5.14 Tolerances

Support documents: Maps

- Location map
- Features map
- Analysis and concept map
- Management map
- Future habitats and species

Appendices:

- i) Forest Design Plan Consultation record
- ii) Tolerance table
- iii) Ground Truthed SAM Heritage Sites
- iv) Coupe details for Thinning, Clearfell and Establishment
- v) Appropriate Assessment
- vi) Land Management Plan brief
- vii) The UK Forestry Standard, Forestry Commission Guidelines and the UK Woodland Assurance Scheme (UKWAS)

Summary of Proposals:

Description and Main Objectives

Glenscorrodale is a conifer plantation in the centre of the south of Isle of Arran. The main objectives are timber production and landscape.

1.0 Introduction:

1.1 Setting and context

Glenscorrodale is located in the centre of the south of the island on the slopes rising either side of the Ross road and at the headwaters of Slidderly Water.

The land area is 907.8ha and is managed as part of South Region.

1.2 History of plan

The plan was approved initially in 2006.

The area was planted in 1983 with a small area in 1984.

2.0 Analysis of previous plans

2.1 Analysis from previous plans

The five key objectives identified in the previous plans were as follows:

Objectives	Assessment of Objectives during plan period
Timber production	Nothing achieved.
Conservation	Nothing achieved.
Recreation	Nothing achieved.
Archaeology	Nothing achieved.
Landscape	Nothing achieved.

3.0 Background Description

3.1 Physical site factors

3.1.1 Geology, Soils and landform

The underlying geology is complicated. North of Slidery Water is mainly sedimentary Permian sandstone but to the south of it there is a complex of igneous intrusions, Permian sandstone and even Coal measures.

Deep peats and peaty gleys predominate on the higher slopes with surface water gleys on the lower slopes.

3.1.2 Water

There are a number of minor watercourses, the largest being Allt Mor, all tributaries of Slidery Water which bisects the plan area.

3.1.3 Climate

The Isle of Arran has a predominantly mild windy oceanic climate heavily influenced by the Gulf Stream. The area, at an elevation between 150 and 400m, is exposed to the prevailing southwest wind. Annual rainfall is around 1500mm fairly evenly distributed throughout the year.

3.2 Biodiversity and environmental designations

All the open land is designated under the Arran Moors SPA which was notified for breeding hen harriers and is managed under a specific Management Plan prepared with the involvement and agreement of SNH. The SPA is underpinned by Arran Moors SSSI which is designated not only for the harriers, but also for wider moorland breeding bird assemblage and upland habitats. The woodland is almost surrounded by the moors which are recognised as a Site of Importance for Nature Conservation in the 'Isle of Arran Local Plan'.

Arran has been designated a stronghold for Red Squirrels by FLS and is the only Scottish island with this species. Vigilance against Grey Squirrels coming to the island will be the primary means to safeguard them.

Otter, a European Protected Species, is found on the watercourses.

Isle of Arran has been designated a Red Deer refugia by SNH to protect against hybridisation with Sika deer.

3.3 The existing forest

3.3.1 Age structure and, species

Age structure

The age structure in the block is all pole stage.

Glenscorrodale Land Management Plan 2020 - 30

Age of trees	Growth stage	2020	
		Area (ha)	Area %*
0 - 10	Establishment	-	-
11 - 20	Thicket	-	-
21 - 40	Pole stage	419.9	100.0
41 - 60	Maturing high forest	-	-
61 +	Old high forest	-	-
	Open space	487.9	
Total		907.8	

* - due to almost 54% of LMP area being open space, percentages are based on woodland area. This will make comparison with Management Proposals simpler.

Species

The original planting strongly favoured Sitka spruce with a very small proportion of other species.

Species	2020	
	Area (ha)	Area %*
Sitka spruce	397.4	94.6
Larch	17.3	4.1
Other conifers	-	-
Mixed broadleaves	5.2	1.2
Open space	487.9	
Total	907.8	

* - due to almost 54% of LMP area being open space, percentages are based on woodland area. This will make comparison with Management Proposals simpler.

3.3.2 Access

Access into the forest is from the minor Ross road.

3.3.3 LISS potential (Low Impact Silvicultural Systems)

Poor soil fertility and high Dams scores in general have given no opportunity for thinning-based Low Impact forestry.

3.4 Landscape and landuse

Glenscorrodale Land Management Plan 2020 - 30

3.4.1 Landscape character and value

In the 'Ayrshire Landscape Assessment. Scottish Natural Heritage Review No 111', the landscape is classified as Rugged Moorland Hills and Valleys with Forest.

3.4.2 Visibility

The forest is very visible from the Ross road.

3.4.3 Neighbouring landuse

The forest is surrounded by unimproved grassland and heather moorland.

3.5 Social factors

3.5.1 Recreation

There are no paths.

3.5.2 Community / Education

An Isle of Arran Community Council representative who attends the Arran Environment Panel has been involved in the consultation process during preparation of this plan.

3.5.3 Heritage

There are a number of unscheduled sites which are marked on the Features Map and are recorded in the Forester GIS Heritage Module geodatabase and are detailed in Appendix III.

3.6 Invasive non-native species

Currently Glenscorrodale contains no known invasive non-native species.

3.7 Statutory requirements and key external policies

The legal status of the land is purchased.

4.0 Analysis and Concept

4.1 Analysis of constraints and opportunities

The following table sets out site factors that are deemed significant in influencing the long-term management of the block.

Factor	Opportunity	Constraint	Design development
Arran Moors SPA	Integrate woodland with SPA habitat.	Proximity to hen harrier nest sites.	Diversify woodland edge.

Landscape	Enhance by planning replanting in keeping with landform.	Natural conifer regeneration in planned open space may be detrimental.	Replanting to be sympathetic with topography.
Timber	Large area of wet, low fertility soil is conducive to extensive clearfell conifer timber production.	Windblow & adjacency will cause issues.	Plan coupes with landscape & adjacency in mind.
Forest Habitat Network	Create major corridor linking Sliderry Water & Monamore Burn	Conifer natural regeneration may be detrimental.	Replant with low density native broadleaves.

4.2 Concepts of the plan

The design concept forms the broad framework for the detailed design and is presented graphically in Map 4: Concept.

Arran Moors SSSI and SPA

The open moorland will be managed through the SPA management plan. The effect of the forest on this important habitat is a key consideration. Woodland fringe planting and management will enhance the habitat and species diversity with the follow-on effect of improving hunting opportunities for raptors, in particular hen harriers for which the SPA is notified.

View from the road

The view that people get of this woodland is from the public road and the hill of Cnoc na Dail is very prominent particularly when coming from the south. Shape and pattern of future restock coupes will be used to create transition between areas of different landscape character.

Forest age and need for roading

This forest was planted in the mid 1980s and so is at the stage when harvesting is due to begin. A major forest roads programme is necessary to carry this out. The age structure of the second rotation will be diversified in order to work towards sustainable management.

Storm and wind damage

The whole woodland has suffered from serious snow snap in the past and a significant area of the lower slopes has been affected by windblow. Severely damaged areas need to be cleared as a priority.

Larch and Phytophthora ramorum

Phytophthora ramorum is a disease affecting larch trees throughout the west of Scotland. It is expected that larch in this woodland will suffer from the disease and need to be felled so the priority is to clear larch areas in the early years of the 10 year plan.

Expansion of broadleaves

There is an opportunity to substantially expand the broadleaf cover from the very low proportion in the 1st rotation targeted on watercourses & riparian zones. This will create a major habitat corridor linking Lamlash Bay with the southwest coast by planting low density native broadleaves to connect the mixed broadleaves in lower Monamore Burn with alder woods in Slidery Water. They will also improve seasonal colour variation with the loss of larch as a future species.

5.0 Management Proposals

5.1 Forest stand management

The Glenscorrodale plan has been designed in accordance with sound silvicultural and environmental principles within the framework outlined by the UK Forestry Standard, the UK Woodland Assurance Standard, the former Galloway FD Strategic Plan and the Islands Strategy.

The lower slopes of the glen have suffered significant windblow and as a result, are being harvested over a short period of time. Restocking will take place as quickly after clearfell as possible to mitigate against detrimental landscape issues and the adjacency difficulties in these areas will be tackled in the next rotation.

The accompanying Management map provides details of the harvesting coupe proposals and details of harvesting volume (m³obs) over the approval period and coupe species composition are found in Appendix IV: Coupe details for Clearfell and Establishment

5.1.1 Clear felling

Clearfelling with forwarder / harvester is the system most suited for the plan area.

Glenscorrodale Land Management Plan 2020 - 30

5.1.2 Thinning

Opportunities will be taken to thin in line with Regional thinning policy.

5.1.3 LISS

There are no plans to manage any coupes by LISS during this plan period.

5.1.4 Natural reserves

Currently no part of this woodland is designated as Natural Reserve.

5.2 Future habitats and species

The accompanying Future Habitats and Species map provides detail of the proposed restock species and habitats for the plan.

5.2.1 Conifer timber production restocking

Conifer restocking will generally be by replanting although any areas of natural regeneration will be utilised where appropriate. Replanting stocking target at year 5 is 2500trees/net ha. The policy is to restock as quickly as possible after felling but being guided by the Hylobius Management Support System and site conditions. Larch will not be used in the next rotation due to Phytophthora.

5.2.2 Native woodland establishment

There will be an eightfold increase in native woodland from 5.2ha to 41.9ha which represents 10% of the 1st rotation woodland area. Due to the very limited extent of native broadleaves and therefore seed source, native species will be replanted but for willow, natural regeneration will be sufficient. **The target stocking will be 1600trees/net ha within mixed broadleaf areas of 10-50% woodland cover.designbed open ground** Aspen, juniper and rowan will be of Arran origin only. It is expected that there will be some natural regeneration of other species including conifers on the majority of sites. **Mimic valley bottom**

5.2.3 Woodland fringe

There are no specific areas of woodland fringe in this LMP. The 6.2ha of open space predominately for landscape will be subject to some natural regeneration of Sitka spruce and willow over the period of this plan.

5.2.4 Species composition

The following table presents details of the proposed species:

Species in 2050	Area (ha)	Area %*
Sitka spruce	260.7	62.1
Larch	-	-
Other conifers	42.2	10.0

Glenscorrodale Land Management Plan 2020 - 30

Mixed broadleaves	41.9	10.0
Additional open space	75.1	17.9
Original open space	487.9	
Total	907.8	

* - due to almost 54% of LMP area being open space, percentages are based on original woodland area.

5.2.5 Open space

There will be an increase in open space of 75.1ha; 6.2ha is mainly targeted to improving landscape on the upper fringes of the prominent hill of Cnoc na Dail, the remainder is associated with the major increase in native broadleaf expansion along watercourses and the Forest Habitat Network. 80% of the habitat network and 50-90% of watercourses will be open space. The proportion of open space will increase the closer to the SPA. As well as improving the landscape of the forest, This gradation of open space will help improve the landscape, diversify the woodland/moorland edge and integrate the woodland with the moorland thus benefitting the SPA by increasing hunting opportunities for hen harriers. **Increase in os due to watercourses, why less bl %s**

Problem -

Need to restock, justify open space/lowdensity mb, map os

5.3 Restructuring

No restructuring has taken place.

5.4 Future management

Future management will be primarily by sustainable clearfell of conifers.

5.5 Age Structure

The following table presents details of the proposed age structure:

Age of trees	Growth stage in 2050	Area (ha)	Area %
0 - 10	Establishment	52.5	15.2
11 - 20	Thicket	164.0	47.6
21 - 40	Pole stage	123.1	35.7
41 - 60	Maturing high forest	-	-
61 +	Old high forest	5.2	1.5
	Open space	563.0	
Total		907.8	

5.6 Biodiversity

5.6.1 Deadwood

Opportunities to create standing deadwood will be taken by retaining pockets of windblow adjacent to watercourses and broadleaves.

5.6.2 Arran Moors SPA

The open moorland which is part of the SPA will be managed in accordance with the management plan agreed with SNH. The introduction of woodland fringe will benefit harriers in terms of hunting habitat.

A section of 80m of forest road is planned to be built on the SPA on Cnoc na Dail to access the eastern part of coupe 47009. Although this coupe is being felled as one, the plan is to divide it into 2 coupes for the 2nd rotation thus necessitating the need for road access at both ends. The split into 2 coupes will lessen the visual impact of future felling.

5.6.3 Landscape

The forest is primarily experienced by people as they drive the public road. Key aspects are the view south down the glen, integration of the field at Glenscorrodale & the forest, the hill of Cnoc na Dail and the forest edge south from the Retreat Centre.

5.6.4 Invasive non-native species

Currently there are no invasive non-native species within Glenscorrodale. Removal will take place if any should colonise.

5.6.5 Species improvements

The expansion of broadleaves, particularly hazel, and the large area of conifers providing a substantial food supply will be very beneficial to Red squirrels. The use of locally-sourced aspen will be greatly expand the range of this species on the island.

5.7 Deer Management

Red deer are present at acceptable density levels.

The population will be managed through South Region's Deer Management Strategy to facilitate the long-term establishment of broadleaves without recourse to physical protection. An annual cull, set using a variety of data including population counts, fecundity and mortality rates and damage levels, will allow the objectives of the Strategy to be met.

Current control is through a lease by the British Association of Shooting & Conservation.

5.8 Forest Roads & Timber Haulage

6.7km of forest roads, the total road network, are required during the plan period. The main access points for this network will be at NR98672937 and NR98372910. There will also be a timber transfer facility on the edge of the public road at NR98272893 approximately 680m south of the cattle grid. All road construction will comply with UK Forestry Standard and [Water Environment \(Controlled Activities\) \(Scotland\) Regulations 2011 \(as amended\) \(CAR\)](#).

Timber haulage from the plan area is by The Ross, currently a consultation route, and A841 to Brodick, an approved route, under the Ayrshire Timber Transport Forum.

A potential quarry site to provide stone for these roads has been identified at NR977297.

5.9 Heritage

All sites of heritage interest are recorded in the Forester GIS Heritage Module geodatabase and are marked on the Future Habitats and Species Map. They will be conserved using the principles in the Forestry and Archaeology Guidelines and most sites will be included within open space or low density broadleaved woodland. Each site has been categorised by significance based on Scottish Government planning policy and each has an impact zone ranging from 5 to 20m. This zone will be the buffer within which replanting of trees will not occur.

5.10 Recreation

There are no proposals for trails within this woodland.

The guidance of the Scottish Outdoor Access Code will be followed during operations.

5.11 Water

All operations will comply with Forests & Water Guidelines 5th edition and the requirements of [Water Environment \(Controlled Activities\) \(Scotland\) Regulations 2011 \(as amended\) \(CAR\)](#).

Existing forest drainage does not meet current best practice and a new compliant drainage system will be planned and implemented during ground preparation for replanting.

5.12 Flooding

Glenscorrodale is within a water catchment not prone to flooding downstream.

5.13 Critical Success Factors

- Establishment of woodland fringe, major habitat networks and landscape changes will have a major positive impact on landscape and biodiversity, particularly Hen harriers.

Glenscorrodale Land Management Plan 2020 - 30

- Management of substantial proportion of conifer woodland will impact on sustainability of island's forest industry.
- Management of conifer and broadleaved woodland will be positive for Red squirrels.

5.14 Tolerances

Tolerance thresholds for Land Management Plan alterations are as per thresholds detailed in Appendix II.

Appendix I: Land Management Plan Consultation Record

Statutory Consultee	Date contacted	Date Response received	Issues raised	Region's Response
North Ayrshire Council - Roads	29/07/19	30/07/19	Seeking clarification on volumes & timescales. We believe there to be challenges to your proposals and would prefer if you explored fully the possibility of accessing the site from NR98372910 & not from NR97272866.	Clarification given. Access will be from NR98372910.
North Ayrshire Council - Planning	20/03/20			
SNH	20/03/20	20/04/20	We support proposals to enhance general biodiversity value of the forest (through increasing cover of native broadleaves & creating a native woodland corridor) & to benefit the Arran Moors SSSI/SPA through increased open space and fringing broadleaves. Good to mention in the plan (e.g. section 3.2) that Arran Moors SSSI is designated not only for breeding hen harriers, but also for wider moorland breeding bird assemblage and upland habitats.	Included in the plan.
Historic Environment Scotland	20/03/20	23/03/20	We have no comments to make on the proposals	
SEPA	20/03/20	09/04/20	The LMP should state that proposals will comply with UK Forestry Standard & requirements of Water Environment (Controlled Activities) (Scotland) Regulations 2011 (as amended) (CAR) & be designed accordingly. Information should be provided on whether existing forest drainage meets current best practice. We understand that Glenscorrodale contains no known invasive non native species. Should this change we would expect the plan to briefly outline proposals for control or removal.	All these points are included in the LMP
RSPB	20/03/20			
Arran Estates	20/03/20			

Glenscorrodale Land Management Plan 2020 - 30

Scottish Forestry	20/03/20			
Glenscorrodale Retreat Centre	20/03/20			

Glenscorrodale Land Management Plan 2020 - 30

Appendix II: Tolerance Table

	Adjustment to felling period	Adjustment to felling coupe boundaries	Timing of restocking	Change to species	Changes to roadlines	Designed open space
FC Approval not normally required	Fell date can be moved within 5yr period where separation or other constraints are met.	1.0ha or 10% of coupe area - whichever is less.	Restock at year 5 after felling if natural regeneration fails to appear	Change within species group e.g. evergreen conifers; broadleaf.		Location of temporary open space e.g. Deer glades if still within overall Open space design. Increase by 0.5ha or 5% of area - whichever is less
Approval by exchange of letters and map		1.0ha to 5ha or 10% of coupe area - whichever is less			Additional felling of trees not agreed in plan. Departures of >60m in either direction from centre line of road.	Increase of 0.5 to 2ha or 10% - whichever is less. Any reduction in open space.
Approval by formal plan amendment may be required	Felling delayed into second or later 5yr period. Advance felling into current or 2 nd 5yr period.	>5ha or 10% of coupe area	If timing of restocking is outwith the period above.	Change from specified native species. Change between species groups.	As above depending on sensitivity.	More than 2ha or 10%. Any reduction in open space in sensitive areas. Colonisation of open space agreed as critical.

Glenscorrodale Land Management Plan 2020 - 30

Notes

- Felling sequence must not compromise UKFS e.g. Adjacency. At mid term review detail of felling progress and impact will be reviewed against UKFS.

Glenscorrodale Land Management Plan 2020 - 30

Appendix III: Ground Truthed Heritage sites

SITE	GRID	VISIT	COMMENT
Rig & Furrow	Centred on NR966284	11/12/19	Ungrazed unimproved grassland
Relict area -Post-medieval Settlement and Agriculture	Centred on NR966284	11/12/19	Ungrazed unimproved grassland
Relict area - 18th Century-Present Rectilinear Fields and Farms	Centred on NR967285	11/12/19	Ungrazed unimproved grassland
Dry-stone dyke	NR969286	11/12/19	Ungrazed unimproved grassland
2 small sections of dyke	NR964281	11/12/19	Ungrazed unimproved grassland
Sheepfold	NR972285	11/12/19	Ungrazed unimproved grassland
Sheiling hut	NR973282	11/12/19	On edge of mature conifers
Sheiling hut	NR981286	11/12/19	Under mature conifers
Small building	NR982228	11/12/19	Ungrazed unimproved grassland
3 Sheiling huts	NR984287	11/12/19	Under mature conifers
3 Sheiling huts	NR984289	11/12/19	Ungrazed unimproved grassland
2 Sheiling huts	NR987290	11/12/19	Ungrazed unimproved grassland

Appendix IV: Coupe details for Thinning, Clearfell and Establishment

1.1 Table of Clearfelling (Phase 1)											
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 (X con)	Spp by Ha (BLeaf)	Open Land by Ha	Restock Year	
47004	0.8	0.8								2024	
47005	38.1	32.4				5.3			0.4	2025	
47006	35.0	31.3				1.8			1.9	2024	
47016	1.2	1.2								2023	
47018	3.6	3.6								2023	
47019	20.8	15.2				5.1			0.5	2023	
47020	16.7	12.0				4.2			0.5	2025	
47021	9.7	9.3				0.4				2024	
Totals	125.9	105.8				16.8			3.3		
1.2 Table of Clearfelling (Phase 2)											
47008	45.7	45.3							0.4	2032	
47010	11.7	10.9				0.5			0.3	2031	
47011	12.0	10.8				0.4			0.8	2032	
47012	59.3	56.9				2.1			0.3	2032	
47013	13.7	13.0				0.5			0.2	2031	
47025	24.1	24.1								2028	
Totals	166.5	161.0				3.5			2.0		
1.3 Table of CCF Felling (Phase 1)											
Coupe No.	Total Area	Volume (M ³)	Spp by Ha	Spp by Ha	Spp by Ha	Spp by Ha	Spp by Ha	Spp by Ha	Spp by Ha	Open Land by	Silv.Method

Glenscorrodale Land Management Plan 2020 - 30

	(Ha)		(SS)	(SP)	(LP)	(NS)	(Larch)	(X con)	(BLeaf)	Ha		
Totals												
1.4 Table of CCF Felling (Phase 2)												
Totals												

1.5 Table of Thinning (Phase 1 & 2)								
Coupe No.	Total Area (Ha)	Species	Thin-able Area (Ha)	Prescription for Thinning				Final Thinned Area (Ha)

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 (X con)	Spp by Ha (BLeaf)	Open Land by Ha	
Clearfell	292.4	116960	266.8				20.3			5.3	
Thinning											
CCF											
Grand Total of Felled Timber Proposed for Plan Period											

1.7 Table of Restocking												
Coupe No.	Total Area (Ha)	SS (Ha)	LP (Ha)	SP (Ha)	NS (Ha)	Larch (Ha)	Other Con. (Ha)	Native Mixed B/Leaf	Other B/Leaf	Open (Ha)	Year	Restock Method & Density (Restock/Nat Regen/Alt Area/Coppice/Ope
47004	0.8							0.2		0.6	2024	Restock
47005	38.1	8.7					20.0	1.0		8.4	2025	Restock
47006	35.0						21.6	3.2		10.2	2024	Restock
47008	45.7	39.2						2.7		3.8	2032	Restock
47010	11.7	8.8						0.6		2.3	2031	Restock

Glenscorrodale Land Management Plan 2020 - 30

47011	12.0	10.3						0.4		1.3	2032	Restock
47012	59.3	45.1						4.6		9.6	2032	Restock
47013	13.7	10.8						0.5		2.4	2031	Restock
47016	1.2							0.2		1.0	2023	Restock
47018	3.6	2.8						0.2		0.6	2023	Restock
47019	20.8	9.7						4.7		6.4	2023	Restock
47020	16.7	8.7						3.4		4.6	2025	Restock
47021	9.7	3.1						2.2		4.4	2024	Restock
47025	24.1	16.8						2.1		5.2	2028	Restock

1.8 Table of New Planting

Coupe No.	Total Area (Ha)	SS (Ha)	LP (Ha)	SP (Ha)	NS (Ha)	Larch (Ha)	Other Con. (Ha)	Native Mixed B/Leaf	Other B/Leaf	Open (Ha)	Year	Planting Method & Density (Planting/Nat Regen)

1.9 Table of Civil Engineering

Proposed Activity (Road/Quarry)	OS Grid Reference	Forest/Coupe	Description (Length/Area/Construction)
Road	NR98372910- NR96552882		4.5km
Road	NR98672937- NR97212819		2.2km
Transfer facility	NR98272893	47025	
Quarry	NR97712968	47017	0.5ha

Other Tree Felling in Exceptional Circumstances

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

Glenscorrodale Land Management Plan 2020 - 30

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

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

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

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

The maximum volume of felling in exceptional circumstances covered by this approval is 40 cubic metres per Land Management Plan per calendar year.

A record of the volume felled in this way is detailed below will be considered during the five year Land Management Plan review:

1.10 Table of Other Felling				
Date	Forest/Coupe	OS NGR	Volume	

Appendix V: Appropriate Assessment for Glenscorrodale

Appropriate assessment in relation to Natura 2000 sites.

Names of Natura Sites within, partly within or in vicinity of FDP: Arran Moors SPA

Features of European qualifying interest	Potential impacts in plan	Control of impacts	Long term	Conclusions
Arran Moors SAC				
<p><i>Priority qualifying species:</i> Hen harrier (Circus cyaneus)</p>	<ul style="list-style-type: none"> • Forest operations such as clearfelling or ground preparation for restocking may impact on breeding birds • New open space on upper margins & within forest may increase extent of habitats supporting the harrier 	<ul style="list-style-type: none"> • There will be no forest operations carried out on the SPA site • Phased felling will not take place in the breeding season within 1000m of occupied nest sites unless adequate controls are in place eg monitoring of nest site, substantial high forest buffer, consultation with Scottish Raptor Study Group 	<ul style="list-style-type: none"> • The substantial increase in open space on upper margins & within forest will increase harrier habitat 	<ul style="list-style-type: none"> • The impact on the SPA site will be positive

Appendix VI: Forest Design Plan Brief

BRIEF FOR Glenscorrodale Land Management Plan

Main management objective: Timber production & Landscape

Key National Themes from Scottish Forestry Strategy	District Strategic Plan Objectives	Islands Strategy Objectives	Local Prescription
Timber	<ul style="list-style-type: none"> Promote predictable & stable timber supplies Develop the hardwood sector 	<ul style="list-style-type: none"> Ensure sustainable long-term production of 70,000m³ obs/yr Produce hardwood timber suitable for subsequent local processing 	<ul style="list-style-type: none"> Contribute towards Arran's sustainable long-term timber production by harvesting Some areas suitable for commercial broadleaf species where appropriate.
Business Development	<ul style="list-style-type: none"> Realising economic potential of the national forest estate Contributing to rural development Tourism 	<ul style="list-style-type: none"> Renewable energy (see Climate Change) Staff & contractor issues Green forest tourism Timber products 	<ul style="list-style-type: none"> See Climate Change Smooth timber production and subsequent operations to help maintain viability of contractors and hauliers Assess the recreation needs Visual impact very important for tourism Create hardwood resource for future on-island processing of higher value products.
Climate Change	<ul style="list-style-type: none"> Mitigating climate change 	<ul style="list-style-type: none"> Renewable energy 	<ul style="list-style-type: none"> Support increasing demand for domestic & business woodfuel Consider the potential to maximise timber production in calorific value terms
Environmental Quality	<ul style="list-style-type: none"> Protecting water, soil and air resources Contribute to Scotland's landscape Managing the historic environment 	<ul style="list-style-type: none"> Increase in broadleaf woodland through the forest design plan process to ~20% by 2025 Continuous cover forestry and native woodland plans 	<ul style="list-style-type: none"> Manage FDP in keeping with UKWAS standards and Forest and Water guidelines to maintain and improve water quality Integrate woodland into Arran Moors SPA Increase broadleaf area to 10%
Biodiversity	<ul style="list-style-type: none"> Reverse biodiversity decline by targeted action Designated sites Reverse biodiversity decline by broader actions Moorland fringe Deadwood Invasive plants Priority species 	<ul style="list-style-type: none"> Increase in broadleaf woodland through the forest design plan process to ~20% by 2025 Areas with poor potential for commercial species - return to open ground or consider other options such as replanting to maintain carbon sequestering value A prioritised strategy to target alien species 	<ul style="list-style-type: none"> Increase significantly broadleaf woodland area Integrate woodland into Arran Moors SPA Target alien invasive species Manage for priority species ie hen harrier, barn owl & red squirrel
Access and Health	<ul style="list-style-type: none"> Make access easier Helping to improve the nation's health Enabling people to 	<ul style="list-style-type: none"> Develop recreation facilities and opportunities within forest tourism and business development remits. 	<ul style="list-style-type: none"> Draft development plan within FD tourism strategy.

Glenscorrodale Land Management Plan 2020 - 30

Community Development	<p style="text-align: center;">enjoy woodlands</p> <ul style="list-style-type: none"> • Contribute to quality of life • Enhancing engagement with communities 	<ul style="list-style-type: none"> • Stakeholder consultation on Island Strategy and FDPs 	<ul style="list-style-type: none"> • Provide a varied recreation experience for range of users • Continue community engagement in DP through Environment Panel consultation
-----------------------	---	--	---

Appendix VII: The UK Forestry Standard, Forestry Commission Guidelines and the UK Woodland Assurance Scheme (UKWAS)

All of the operations in Glenscorrodale will be carried out in accordance with the UK Forestry Standard and its supporting publications. In particular the following documents are relevant:

- Forests and Water Guidelines (5th edition)
- Forest and Nature Conservation Guidelines
- Forest and Archaeology Guidelines
- Forest and Soil Guidelines
- Forest Practice Guide - Forest Design Planning

In line with Forestry and Land Scotland policy, South Region regularly undergoes management audits that are part of the membership process of UKWAS. Membership of the scheme indicates that the Region's forests and management practices have been found to be sustainable both in terms of silviculture and environmental impact. Membership of the scheme is conditional on periodic audit and consistent attainment of audit standards.

Glenscorrodale Land Management Plan will be included in this audit process.