



Forestry and  
Land Scotland  
Coilltearachd agus  
Fearann Alba

# Appendix II: Analysis of previous plan

The previous Forest Design Plans (FDP) covering the LMP area ran for the following periods:

Clunes Forest: 02/02/2011 to 31/03/2023

Loch Arkaig Forest: 10/12/2009 to 31/03/2023

## Clunes Forest:

FDP Objectives	Achievements/Changes	Relevance to the LMP revision
<p>Clearfelling: 48,309m<sup>3</sup></p> <p>Retain well landscaped management coupe shapes from previous plan.</p> <p>Phase 1 Felling: Coupe 61119 – 12.3ha</p> <p>Coupe 61112 – 16.5ha</p> <p>Coupe 61106 – 25.8ha</p>	<p>Some changes occurred. The section of LTR (Coupe 61120 (6.1ha) and part of 61113 (1.5ha)) blew down due to a combination of adjacent harvesting and Storm Arwen. The LTR P'34 SS &amp; NS crop boundaries had no windfirm edge.</p> <p>Coupe 61119: 10.7ha felled Areas of SP retained mainly due to new NR designations. A small portion of felling occurred out with this coupe boundary to remove otherwise difficult to remove crops.</p> <p>Coupe 61112: Achieved. Also had to remove 6.1ha of adjacent LTR (Coupe 61120) which blew down blocking forest road.</p> <p>Coupe 61106: Achieved.</p>	<p>Management coupe shapes and timescales will be reconsidered during the LMP process with consideration given to PAWS regeneration and minimising seeding of non-native species. Phytophthora ramorum management will likely impact on coupe shapes and timings.</p> <p>Coupe 61119: Area within the Natural Reserve will have limited intervention: health and safety, PAWS protection, INNS removal.</p> <p>Coupe 61112: Restocking proposals will be reconsidered and the management of WH regeneration will be essential.</p> <p>Coupe 61106: Impacted slightly by the Great Glen Way (GGW) diversion.</p>

FDP Objectives	Achievements/Changes	Relevance to the LMP revision
Coupe 61385 – 1.8ha	Coupe 61385: Sub-compartments state open.	Unlikely to require interventions or adjustments.  Coupe 61385: Previous plans tried to lower the treeline. The new LMP will investigate the widescale expansion of native woodland above the plantation forest and PAWS woodland. Emphasis will be on integrating plantation with native woodland uphill, or consider replacing plantation woodland with native.
Phase 2 Felling: Coupe 61118 – 12.6ha	Coupe 61118: Not achieved.	Coupe 61118: This will likely require felling in the new LMP period as part of reduction of non-native seeding PAWS management and Phytophthora ramorum management. The section above the forest road lies within a Natural Reserve designation. Fell SS, retain NS & SP to protect adjacent PAWS restoration areas.
Coupe 61185 – 7.6ha	Coupe 61185: Achieved, although 0.9ha of windblown/dead SS & NS left on site as deadwood habitat.	Coupe 61185: The restock species will be reconsidered in light of PAWS protection, steep ground management and uneconomic small hanging commercial conifer areas.
Coupe 61114 – 13.1ha	Coupe 61114: Achieved.	Coupe 61114:

FDP Objectives	Achievements/Changes	Relevance to the LMP revision
		Management of non-native regeneration and INNS, in particular WH.
Thinning: 120ha of P'1980's conifer crop if resources allow.	About 10ha of thinning was achieved.	Thinning will likely be confined to environmental and amenity thinnings: halo thinning veteran or desirable trees, non-native removal, safety management, respacing. Steep topography dictates skyline winch thinning which is prohibitively expensive.
<p>LISS/CCF Management:</p> <p>Coupe 61173: Long Term Retention (LTR) 9.2ha of SS P'1928 NN 247 936 (Cam Bealach)</p> <p>Coupe 61117: Single tree selection 4.5ha of JL surrounding the forest car cark NN 2050 8860</p>	<p>Coupe 61173: No change.</p> <p>Coupe 61117: This coupe received one thin.</p>	<p>Coupe 61173: Consideration will be given to the retention of this coupe in terms of the stand structure of the forest and the proximity of this crop to the adjacent ASNW and PAWS designations. This area will not be identified as LISS in the new LMP.</p> <p>Coupe 61117: This LISS/CCF area is dominated by Larch, which is susceptible to Phytophthora ramorum. Consideration will be given to the health of the Larch crop. Ideally it will be retained and thinned, but there will be a contingency that it will be removed in the event of an outbreak of Phytophthora ramorum.</p>
Restructuring:		

FDP Objectives	Achievements/Changes	Relevance to the LMP revision
<p>LTR: Coupes 61183 &amp; 61113 Retained for visual impact and red squirrel habitat. Contains WH which is causing seeding issues. Selective thin the LTR targeting WH for removal</p> <p>Fell-to-recycle (FTR): Upper forest margin Targeted at regeneration on areas where the previous plan identified the need to fell to break up the straight unnatural appearance of the forest edge.</p> <p>Removal of Beech from the PAWS in the south of the forest</p>	<p>Coupes 61183 &amp; 61113: Lost 7.6ha of LTR during Storm Arwen. The issue was compounded by a total lack of windfirm edge thus making it highly susceptible to windblow as adjacent crop was being felled.</p> <p>Unknown</p> <p>Not achieved</p>	<p>Coupes 61183 &amp; 61113: These LTRs have reduced by 7.6ha due to windblow caused by Storm Arwen. The remaining section of the LTR's is the portion which contains the WH. It is important that the WH component is removed to reduce the seeding threat to the PAWS and ASNW areas.</p> <p>Upper forest margin: The LMP will assess the upper forest margin with a long term aim to create mountain forest and montane scrub habitats on much of the open hill. The ASNW, restored PAWS and future riparian woodland in the forested areas should link with these new habitats in a naturalistic way. Deer management is crucial to its success.</p> <p>Removal of Beech: Beech will be identified for removal in ASNW and PAWS areas, especially in south Clunes.</p>
<p>Future Habitats and Species:  Total planned restoration of 219ha of PAWS with 50.45ha during this FDP.</p>	<p>PAWS restoration: There is 53.6ha of conifer area cleared for PAWS restoration. 10.7ha is established and 42.9ha is</p>	<p>PAWS restoration: The LMP will programme operations to secure native regeneration. The established area will be programmed for</p>

FDP Objectives	Achievements/Changes	Relevance to the LMP revision
<p>Continued commitment to produce high quality timber and maximise return from a reduced productive area. Continuation of previous plan's restocking proposals for non-PAWS areas. Main emphasis on planting NS to ensure continuity of habitat for red squirrels. Planting of premium conifers DF and EL on suitable soils and DAMS.</p> <p>Allow trees to regenerate up into crags above forest to create a transitional zone between plantation forest and montane scrub</p>	<p>awaiting natural regeneration.</p> <p>High quality productive conifers: 19ha of SS, NS, SP, DF and EL were established.</p> <p>Unknown</p>	<p>urgent non-native removal and INNS operations.</p> <p>The new LMP will consider options for restocking taking account of extent of PAWS, the need for protective buffers and the location of viable conifer productive areas in relation to public roading.</p> <p>Future native woodland habitats on the open hill will be put into the LMP. The main operation in the LMP to achieve this long term goal is deer control to levels where these habitats can establish and thrive.</p>
<p>Eradication of <i>Rhododendron ponticum</i> in Lochaber forests. Draw up a programme of work for rhododendron removal</p>	<p>One treatment of rhododendron control in Coupe 62999.</p>	<p>This is ongoing. Consideration will be given to repeat operations over the ten year plan period. Removal of gaultheria and buddleia will also be added to the INNS programme.</p>
<p>Management of open land:  Manage deer to allow the expansion of the montane scrub habitat and isolated Birch woodland habitats without the need to fence.</p>	<p>Not achieved.</p>	<p>The main operation in the LMP to achieve this long term goal is deer control to levels where these habitats can establish and thrive.  Consideration will be given to cuttings been grown on in the</p>

FDP Objectives	Achievements/Changes	Relevance to the LMP revision
		local Arkaig Community Forest nursery at Clunes.
Deer Management: Manage deer at a level that is compatible with their environment and our other management objectives, such as conifer production and biodiversity maintenance and enhancement.	Mixed success. Some areas of forest and woodland have established, but the mountain and montane habitats are being negatively impacted by deer.	Build into the deer management plan where the vulnerable habitats exist and how this will change over the 10 year period of the plan. Statement of deer density by habitat will direct deer management to where the need is greatest.

## Loch Arkaig Forest:

FDP Objectives	Achievements/Changes	Relevance to the LMP revision
Constraints to harvesting timber from the Glen Mallie and South Arkaig blocks due to lack of useable infrastructure will be addressed and solutions implemented	Glen Mallie and South Arkaig blocks were sold to the Woodland Trust and Arkaig Community Forest in 2016. The Woodland Trust has constructed a bridge and upgraded roading to facilitate harvesting of non-native species in Glen Mallie. Barging points and designated stacking area in FLS ground facilitate harvesting in South Arkaig. They are carrying out full scale pinewood restoration in both blocks.	Consideration to mutual wider landscape pinewood & PAWS restoration, deer management and INNS management.
A restoration programme of all PAWS within the Plan area will be initiated over the period of the FDP.  South Arkaig blocks sold.	South Arkaig blocks sold with pinewood restoration planned and implemented.	A review of all remaining felling with protection of PAWS and ASNW prioritised regarding non-native seeding issues. Review of felling re-plant health issues:

FDP Objectives	Achievements/Changes	Relevance to the LMP revision
<p>Phase 1 fell: Coupe 62198 – 34ha</p> <p>Coupe 62197 – 21.5ha</p> <p>Coupe 62268 – 50ha</p> <p>Coupe 62548 – 32.1ha</p> <p>Coupe 62155 – 12.2ha</p> <p>Coupe 62124 – 16.7ha</p> <p>Coupe 62122 – 11.4ha</p> <p>Coupe 62120 – 14.8ha</p>	<p>FLS Loch Arkaig: Coupe 62198: Felling underway. FPA sought when plan expired.</p> <p>Coupe 62197: Felled 2018. Awaiting restock.</p> <p>Coupe 62268: Felled and planted with conifers in 2014.</p> <p>Coupe 62548: Felled 2010. 17.8ha awaiting native woodland establishment. Remainder of coupe planted in 2013 with SS, NS, EL, SP.</p> <p>Coupe 62155: Not achieved. Road construction is underway to prepare for felling.</p> <p>Coupe 62124: Felled 2012 – 3.1ha Felled 2020 – 8.8ha Upland Heathland – 3.6ha 1.2ha retained SS P’1935.</p> <p>Coupe 62122: Felled – 10.85ha in 2012 0.5ha P’1935 SS retained in difficult to access areas.</p> <p>Coupe 62120: Not achieved. On Harvesting programme layer.</p>	<p>Larches – Phytophthora ramorum</p> <p>LP – Dothistroma (threat to Caledonian pines)</p> <p>Also consideration will be given to management of dying/diseased Ash within falling distance of the public roads.</p>



FDP Objectives	Achievements/Changes	Relevance to the LMP revision
<p>Phase 2 fell: Coupe 62219 – 13ha</p> <p>Coupe 62609 – 28.1ha</p> <p>Coupe 62356 – 27.4ha</p> <p>Coupe 62160 – 25.6ha</p> <p>Coupe 62154 – 41.3ha</p> <p>Coupe 62182 – 11ha</p>	<p>Coupe 62219: Felled 2018 – 2.6ha Felled 2021 – 9.7ha 0.5ha NMB retained 0.2ha P’1959 SP retained</p> <p>Coupe 62609: Felled 2018 – 23.6ha Retained P’1959 SP – 4.5ha</p> <p>Coupe 62356: Felled 2018 – 31.3ha Additional felled area from Coupe 62820.</p> <p>Coupe 62160: Not achieved. On harvesting programme.</p> <p>Coupe 62154: Not achieved. On harvesting programme. Planned currently being constructed.</p> <p>Coupe 62182: Not achieved. On harvesting programme.</p> <p>Coupe 62145 : Additional felling of 30.2ha took place to facilitate the construction of the Caig Hydro</p>	
<p>Planned restocking: Native woodland restoration on PAWS areas.</p>	<p>PAWS Restoration:</p>	<p>PAWS awaiting establishment:</p>

FDP Objectives	Achievements/Changes	Relevance to the LMP revision
<p>Maximise conifer production on non-PAWS areas, with EL &amp; DF located on sheltered fertile lower areas where possible.</p>	<p>Felled awaiting establishment: 59.2ha  Established PAWS: 30.2ha  Coupe 62197 – 6.3ha  Coupe 62548 – 17.8ha  Coupe 62124 – 11.9ha  Coupe 62122 – 10.9ha  Coupe 62219 – 12.3ha  Coupe 62145 – 30.2ha  This was not planned. Area felled to construct Caig Hydro. Reinstated the NMB in 2017.</p> <p>Commercial conifer restocking using EL &amp; DF where possible:  Felled awaiting restock:  Coupe 62197 – 14.8ha  Coupe 62609 – 23.6ha (Retained SP-4.5ha)  Coupe 62356 – 31.3ha (extra 3.9ha felled in Coupe 62820)</p>	<ul style="list-style-type: none"> <li>• Remove non-native regeneration</li> <li>• Remove rhododendron</li> <li>• Carry out SDAs and HIAs.</li> <li>• Supplementary plant with desirable species if required.</li> <li>• Sign off as established.</li> <li>• Review the future restock of surrounding non-PAWS areas to build in protective buffers.</li> </ul> <p>Planted PAWS:</p> <ul style="list-style-type: none"> <li>• Remove non-native regeneration.</li> <li>• Remove rhododendron</li> <li>• Beat-up gaps</li> </ul> <p>Non-PAWS:  Felled awaiting restock:</p> <ul style="list-style-type: none"> <li>• Reassess the future restock proposals to ensure neighbouring PAWS and ASNW areas are protected from non-native seeding.</li> <li>• Reassess the shape of the upper margin taking into account proposed native woodland creation in neighbouring ground.</li> </ul>

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	<p>Restocked:  Coupe 62268 – 41ha P’2014 (SS &amp; MC)  Coupe 62548 – 8.3ha P’2013 (SP-1.7ha, SS/NS/EL/SP – 5.3ha, DF – 1.3ha)</p>	<ul style="list-style-type: none"> <li>• Manage rhododendron.</li> </ul> <p>Restocked areas:</p> <ul style="list-style-type: none"> <li>• Assess these areas for SS growing next to PAWS and ASNW. Consider removing some SS in respacing or thinnings.</li> <li>• Plan the management of the planted Larch as part of the FLS Larch Strategy to manage Phytophthora ramorum.</li> <li>• Manage rhododendron</li> </ul>
<p>The Mhuic Butterfly Reserve will continue to be managed as a habitat for Pearl-bordered Fritillary and Chequered skipper using Highland cattle to maintain a mosaic of native woodland and open ground.</p> <p>Target habitat is one of suitable native ground flora with up to 30% native woodland.</p>	<p>Mostly achieved. Covid restrictions has some impact.</p> <p>Also, the construction of the Allt Mhuic Hydro scheme impacted the grazing regime. The water pipeline and associated construction impact affected the heart of the Butterfly Reserve in the area of mature Oaks.</p>	<p>Management of the Butterfly Reserve will be reviewed in the LMP, with clarification on the management roles of FLS, Butterfly Conservation and Forest Research.</p>
<p>With reference to the previous plan’s proposal to considerably lower the upper planting line, there needs to be a compromise between landscaping and productive to be sought.</p>	<p>Achieved.</p>	<p>This LMP will reconsider the upper planting line with the knowledge of proposed native woodland adjacent to the eastern boundary of Allt Mhuic and the western boundary of Caig. More</p>

FDP Objectives	Achievements/Changes	Relevance to the LMP revision
		<p>consideration will be given to the creation of permanent edges of native woodland/open crowned woodland to visually soften edges and create permanent boundaries. Also consideration will be given to entire native woodland restoration.</p>