



Forestry and  
Land Scotland  
Coilltearachd agus  
Fearann Alba

# Carron Valley

## Land Management Plan Concept 2025-2035



# Land Management Plan Vision and Objectives

## Long-term Vision

Our long-term vision is to maintain a productive working forest, contributing a significant volume of primarily softwood timber for a variety of end-use applications. Water quality within sensitive catchment areas will be maintained and riparian corridors will form part of a wider forest habitat network. Biodiversity within the forest will be improved with increased native tree cover, more deadwood, and an abundance of wildlife within the working forest. People will continue to enjoy the working forest as an environment for pursuing recreation, health and wellbeing activities.

## 10-year Land Management Plan Objectives

1. Continue to address major forest resilience threats such as *Phytophthora ramorum*, windblow, and other pests or diseases; including through compliance with the Carron Valley Forest SPHN.
2. Continue to protect the water environment, particularly in the context of drinking water supplies, and other sensitive catchments.
3. Ensure that long-term forest productivity is maintained and contributes a range of (primarily softwood) forest products.
4. Ensure the continuity of mature forest cover for key species such as red squirrel and osprey while limiting operational conflicts.
5. Increase the area of native woodland, primarily located within a wider habitat network.
6. Maintain recreational provisions within the working forest through appropriate forest design and management.

## Site Description

The following sections describe the main characteristics which have a bearing on the management of Carron Valley Forest. See maps *M1 Location* and *M2 Analysis*.

## Location and Background

Carron Valley Forest is located approximately 12km South West of Stirling, to the North West of the Campsie Fells and due north of the Kilsyth Hills. The Land Management Plan covers approximately 3114 hectares, comprising Carron Main Block to the south and west of the Reservoir, and Cairnoch to the north and east.

## Soils and Climate

The site is dominated by a cool, wet and moderately exposed climate, which in turn has led to the development of typically wet or very moist soils, including significant areas of gleyed and peaty soils. In many areas these conditions limit species choice and management options.

## The Existing Forest

The current forest was largely established on open ground in the 1930s and 1940s, around the same time as the development of Carron Valley Reservoir, with subsequent areas of forest establishment in the 1980s. Throughout its history, the forest has been managed primarily for timber production and is predominantly composed of coniferous species such as Sitka spruce which are highly suited to the prevailing soil and climatic conditions. Over the past five years the forest has been significantly impacted by the disease *Phytophthora ramorum*, which has required a shift in management approach towards the removal of all larch species from the Land Management Plan area within the next five years.

## Social and Environmental Factors

The forest entirely surrounds Carron Valley Reservoir, which is a key public water supply providing drinking water to 135,000 people in and around the Forth Valley. This, in addition to other important receptors such as the Endrick Water Special Area of Conservation, makes water quality the most significant social and environmental consideration for the Land Management Plan. In addition to the Endrick Water, the woodland, riparian and open habitats in and around Carron Valley Forest support a range of priority and protected species, including osprey and red squirrel. Managing the forest to support these species while maintaining and protecting water quality and meeting timber production objectives is an important challenge and consideration.

Carron Valley Forest attracts over 100,000 visitors each year, the majority of which utilise around 8km of mountain bike trails, the 4.5km Loch Shore Trail, or take a longer route to the summit of Meikle Bin (570m). Carron Valley Fishery and Duncarron Medieval Village (both operated by third parties) are other important visitor attractions located in and around the forest, while the Carron Valley Community Woodland is located just to the east of the main car park at Carron Main Block. For safety reasons, forest management operations can affect public access to some areas of the forest at specific times; however, disruption is typically short-term and temporary in nature, and where possible routes are kept open or suitable diversions provided.

In addition to numerous other heritage features, there are two significant historic sites present: Sir John De Graham's Castle in Cairnoch and the Waterhead Standing Stones in Carron Main Block. In line with FLS policy, all such significant historic environment features will be protected and managed following the UK Forestry Standard.

## Management Concept

Our management concept for Carron Valley has been developed both to achieve the long-term vision and management objectives, and to address the various considerations outlined above and depicted on map *M2 Analysis*. The below concept 'zones' are strategic, landscape-scale areas which outline a structure and direction of travel for achieving this, rather than specific management proposals. Within each of these areas there will be local variations and the exact boundaries may differ from the final LMP proposals. See map *M3 Carron Valley Concept*.

### **Upland Spruce Forest (Zone 1)**

This area covers the poorer soil types and more exposed areas of the site, which can impose significant constraints on species choice and management options. Sitka spruce will remain the predominant species here, with the use of self-thinning 'nurse' mixtures to aid establishment and improve stand structure. Management of the coniferous forest will be by patch clearfelling at an appropriate scale, typically with no thinning due to the high risk of windthrow.

### **Mixed Coniferous Forest (Zone 2)**

This zone encompasses a range of more favorable soil types and areas of moderate exposure. Sitka and Norway spruce will form major components here, but there will also be more diverse conifer species such as western red cedar and/or Douglas fir. Management of the coniferous forest will be predominantly by patch clearfelling due to soil and climatic constraints; with some thinning in less exposed areas with favorable soil types. There may also be some options for Lower Impact Silviculture (LISS) / Continuous Cover Forestry (CCF) on the most favorable sites.

### **Diverse Coniferous Woodland (Zone 3)**

Zone 3 combines the most favorable soil types and relatively more sheltered areas providing the best opportunities for diverse forestry within the LMP boundary. This area will be the focus of establishing diverse conifers such as Douglas fir and western red cedar and implementing LISS and CCF management practices over the long-term. In the short-term, some clearfelling may still be required as the current stands are transitioned towards CCF and Sitka spruce is likely to remain a component of the forest composition, primarily through natural regeneration.

### **Core Habitat Network**

In order to maintain and enhance biodiversity within the LMP area, an indicative habitat network has been developed. This network encompasses both existing habitats and areas with the potential to develop new habitats in the future. It includes open land, native broadleaved, mixed, and coniferous woodland; which will all be managed primarily for the conservation and enhancement of biodiversity values. The habitat network will by necessity be established over several decades as areas of the existing forest are felled and restocked, and management will be guided by the envisioned habitat type (i.e. open habitat, broadleaved, mixed, or coniferous woodland); environmental/ecological benefits, and operational practicality.

## **Mixed Conifer / Broadleaf Woodland**

In addition to the core habitat network, these are proposed areas of 'transitional' woodland habitats, which will be managed to achieve the combined objectives of timber production and enhanced biodiversity value by buffering and linking the adjoining areas of core habitat.

## **Indicative draft management proposals**

Map *M4 Management* shows our indicative proposals for felling and thinning at Carron Valley over the next 10 years, as well as areas with the potential for the establishment of new native woodland. These areas may change as our plans develop but provide a broad indication of the likely scale and geographic distribution of proposed management activities across the forest. The likely location of proposed new forest road construction within the next 10 years is also shown.

### **Felling, thinning and restocking**

As outlined above, patch clearfelling will remain the predominant management option for much of the forest, primarily due to soil and climatic factors increasing the risk of windthrow in thinned stands. Over the next 10 years, clearfelling will be focused primarily in areas containing larch and/or areas which are most vulnerable to windthrow within this timeframe. Thinning will also be carried out to remove larch and for general forest management (i.e. silvicultural) purposes. All felled stands will be suitably replanted following felling, with species broadly as indicated above and on map *M3*. The felling plan will also identify areas of Minimum Intervention and Long-Term Retention where woodland cover will be retained for a longer time period to benefit wildlife such as red squirrels. Timber haulage exits onto the B818 (an Agreed Timber Transport Route) at Carron Main Entrance, Cairnoch, Todholes and at Gartcarron.

### **Woodland Creation**

Subject to funding and site suitability there are several areas of open ground within the LMP boundary which may have the potential for small-scale native woodland creation, with the aim of enhancing biodiversity value. In addition, there are some areas of open land where transitional mixed woodland is currently establishing and may be allowed to develop over time. Any areas of woodland creation proposed within the next 10 years will be fully surveyed and specified in the final Land Management Plan proposals.

### **Water Quality Management**

Water quality within all catchments will continue to be protected through adherence to the appropriate regulations and best practice guidelines. In particular, the water environment will be protected through the application of appropriate non-productive buffer zones, and by minimizing the need to cross watercourses during operations where possible. Historic drainage infrastructure will typically be disconnected from natural watercourses where appropriate, or otherwise a suitable buffer area will be applied to the drainage network. Wherever possible, dense stands of conifers will be removed from riparian zones, usually in conjunction with adjacent operations.