July 2017

BROADFORD & STRATH COMMUNITY COMPANY

BROADFORD COMMUNITY WOODLAND

Forest Plan 2017-2026

Table of Contents

BACKGROUND

This Forest Plan outlines the long term vision, management objectives and schedule of forest operations for Broadford Community Woodland. The plan is based on the aspirations of the Broadford and Strath Community and provides management guidance over a 10 year period from September 2017. Once endorsed by the Forestry Commission it is envisaged that this plan will supersede the current felling and restocking license granted during 2012.

PART A Woodland Description

Location

Broadford community woodland lies to the west of Broadford, grid reference NG 639 246. The area extends to 23 hectares and is shown on Plan 1.

Designations

There are no designations for conservation or landscape within the forest boundary. The Cuillin Hills Special Protection Area (SPA) is designated for golden eagle and lies 1.5 kilometres to the south.

Management History

The woodland was previously owned and managed by Forestry Commission Scotland (FCS) as a commercial coniferous plantation mainly of Sitka spruce. Much of the site was drained and ploughed before the plantation was established. Mature timber was felled and extracted by FCS at the beginning of the Millennium and the site was left unplanted.

Following many years of fundraising and site investigation the woodland was purchased by Broadford and Strath Community Company during 2011.

Above *Local children open the new woodland path during 2014, which they named Rathad nan Cloine (the Children's Path)*

A series of successful funding bids allowed the employment of two part time project officers and partial clearance of brash and stumps by mulching in-situ during 2012. Collaboration with Forestry Commission Scotland (FCS), Highland Council and Highlands and Islands Enterprise (HIE) has seen the creation of a 6.5 km of circular paths linked to the village centre.

Full planning permission was granted during 2014 for a woodland camp site and events centre as a sustainable source of income for community projects. An award of 1.2 million was received from the Big Lottery during December 2015 which will support the development of this facility.

Full planning permission was granted during 2014 for a community growing, recycling and educational facility, funded by the Climate Challenge fund over a three year period. Following the employment of two part time project officers this project is now well developed.

Geology and soils

Sedimentary rock mainly of the Jurassic age lies beneath the woodland site. This consists of a complex mixture of limestone, shale and sandstone often rich in fossils such as the ammonite. This parent rock has weathered to give equally complex soils which range from acidic deep peats through to neutral and base rich soils all within a relatively small area.

Ploughing prior to afforestation and drainage has eroded areas of deep peat whilst soil compaction is evident as a result of machine tracking during timber extraction.

Ecology

A rotation of commercial conifers has impoverished most of the ground flora whilst clearfelling has created a flush of nutrients and raised the water table of the site.

Despite this the complex geology and soil types have the potential to support a diverse assemblage of woodland and open habitats. Deep, acidic peats with the specialised flora of blanket bogs can be found close to developing rush pasture and neutral grassland where brash and stumps have been mulched. In places wet meadow plants are well established such as ragged robin, marsh thistle and wild angelica.

Above A youngster preparing for the moth and butterfly day amongst species-rich meadow plants and left, a *Sphagnum* pool on acidic bog provides valuable habitats for dragonflies

A few remnants of semi-natural riparian woodland with alder and eared willow have survived beneath which bright yellow splashes of marsh marigold and lesser celandine can be found in spring and summer. A species-rich corridor of tall herbs lines the long established footpath and is a haven to bumblebees and other invertebrates in search of nectar.

Wet woodland is starting to regenerate naturally along the southern margins of the site where a seed source is present and dense brash has discouraged deer. Here birch and eared willow scrub hosts a number of migrant birds during summer months, including the amber-listed reed bunting and sedge warbler.

Landscape

The community woodland is at present conspicuous only from the south, although it may become prominent in the landscape once the plantations to the east and west are felled.

Archaeology

There are no Scheduled Ancient Monuments within the site boundary. A ruined croft lies close to the western boundary.

Current Forest Structure

The current forest structure is shown on Plan 2 with areas shown below in Table 1

Table 1

Current Land Use	**Area (ha)**	**Species**	**Planting year (estimated)**	**Volume (m³)**
Mature plantation	2.57	Sitka spruce	1970	436
Thicket stage conifers	2.02	Sitka spruce & hybrid larch	2002	Not known
Clearfelled 2002 & not restocked	7.62	n/a	n/a	n/a
Clearfelled 2002 with some natural regeneration	2.70	Downy birch & eared willow	n/a	n/a
Failed plantation	0.59	Sitka spruce	1970	n/a
Clearfelled 2002 and mulched 2012	7.47	n/a	n/a	n/a
TOTAL	**22.97**			

Left Clearfelling leaves challenging conditions to establish a new woodland whilst (below) volunteers work on the new path

Access

Existing paths run along the southern and western boundary, and form a 5km loop from Broadford with views across Scalpay and the Crowlin Islands. The surface of these paths requires upgrading to accommodate pushchairs and all terrain mobility scooters.

PART B Community Aspirations

Long term vision

Together the people of Broadford and Strath will create a woodland resource which brings social, environmental and economic benefits now and for future generations.

Management Objectives

1. Transform the existing coniferous clearfell site and remnant conifers to natural woodland and open spaces capable of providing sustainable social, environmental and economic benefits.

2. Restore peatland and wetland habitats.

3. Improve and add to the network of forest trails and other recreational facilities.

4. Encourage environmental learning and the development of good physical and mental health within all sectors of the community.

Proposed Forest Structure

Plan 3 Shows the long term vision for Broadford Community Woodland

Table 2, below, outlines the area which land use or habitat will occupy

Proposed land use	Area (ha)	Species/habitat	Planting year	Description
Native woodland on drier soils	2.33 ha	Silver birch, rowan, aspen Scots pine, oak, hazel, holly	2017 onwards	Includes planting started by local school children & aspen propagated from Skye collection. May be inter-planted with a conifer nurse crop to be extracted for Christmas trees at year 5.
Native riparian woodland	3.24	Alder, eared willow, downy birch, bird cherry	2017 onwards	Will improve habitat linkages of existing remnants and include natural regeneration as well as planting
Native riparian woodland	3.20	As above, may include non native species to supply local crafts	2017 onwards	
Open native woodland on exposed soils	2.40	Juniper, birch (downy & silver), rowan, Scots pine		Open woodland will facilitate wild camping and recreation
Restore coniferous plantation to wetland and peatland	2.69	Low value plantation / rush pasture	n/a	Leave areas of deep peat and wet flushes unplanted after felling. Create artificial pools. Accept partial colonisation by wet woodland
Maintain grazing/mowing to develop species rich meadow flora	1.80	Tall herb communities and emerging neutral grassland	n/a	Species-rich corridor along footpath maintained by grazing and/or mowing
Accessible woodland managed as coppice for firewood and crafts	1.57	To be designed	2017 onwards	Integrate with native woodland and wetland habitats
Oak planted by local school children	0.23	To be designed	2012	Integrate with native woodland and wetland habitats
Thinning/brashing of larch and Sitka spruce to encourage gradual development of riparian woodland.	2.06	Thin to favour larch and native species	NA	
Forest campsite & events area (removed from woodland management)	2.21	NA	NA	Integrate with native woodland and wetland habitats
Community polytunnels and forest classroom (removed from woodland management)	0.98	NA	NA	Integrate with native woodland and wetland habitats
TOTAL	**22.71**			

Guiding Principles

A source of income is essential to ensure the economic sustainability of existing and future community projects

The design of both the new woodland and adjacent community facilities will enhance biological diversity and have a minimal carbon footprint.

Involvement and participation from all sectors of the community will be paramount to the success and long term sustainability of the project.

Collaboration with other organisations and neighbouring landowners will be sought wherever possible.

Where do these aspirations come from?

Us! The Broadford and Strath Community.

A groundswell of interest for owning and managing a community woodland started around 1995 following a Planning for Real exercise organised by the Forestry Commission and attended by over a hundred people. As a result the Broadford Environmental Group was formed (2000) followed by the Broadford and Strath Community Company (2003) to support sustainable regeneration of the area.

Years of information gathering and fund raising followed, until finally the Broadford Community Woodland was purchased in November 2011. A sub group of BSCC – The Woodland Steering Group – have been delegated with the responsibility for collating community opinion and directing woodland management.

Two part time project officers were employed during 2012 who have developed further funding bids, coordinated site surveys and planning. Links have been established with Broadford Primary School, the West Highland College, Broadford Youth Club and Elgol Primary. A network of volunteers is growing whilst a number of training events have been held.

Full planning permission was granted during 2014 for a woodland camp site and events centre as a sustainable source of income for community projects. An award of 1.2 million was received from the Big Lottery during December 2015 which will support the development of this facility.

As part of the same planning consent permission was granted for a community growing, recycling and educational facility, funded by the Climate Challenge fund over a three year period. Following the employment of two part time project officers this project is now well developed, with

Left Moth trapping day summer 2012 and **below**, planting the first trees.

Left Celebrations in 2011; the woodland is purchased after a long haul!

Below Volunteers start work building raised beds and polytunnels as part of the successful Broadford Green Growers project

PART C Can we achieve these aspirations? Analysis of site constraints, opportunities and proposed action.

Objective 1. Transform the existing coniferous clearfell site and plantation to a natural woodland capable of providing sustainable social, environmental and economic benefits.

Constraints

The current “even-aged clearfell” silvicultural system delivers few social and environmental benefits whilst there are limited opportunities for utilisation of the forest and its products by local people.

Most of the existing site has been clearfelled and ground conditions are unsuitable for planting without ground preparation. Dense brash makes much of the site inaccessible to people.

The remaining mature plantation consists of low quality Sitka spruce on exposed, wet ground which will need to be felled in one operation and cannot be thinned; trees left standing will blow over.

Felling the coniferous plantation will remove all existing woodland from the site.

There are no roads to the remaining stands of timber. A forwarder will not be able to extract the timber to the bottom of the site as there will not be sufficient brash to create an extraction track across deep peats. Even if extraction could be physically achieved the cost would be prohibitive.

Red deer numbers are currently too high to allow the establishment of young trees

Some of the site consists of deep peat unsuitable for woodland

Soils have been degraded by ploughing, erosion, and compaction by machinery.

The adjacent seed source of commercial conifers means Sitka spruce and other exotic species will continue to regenerate naturally.

Opportunities

Change to a silvicultural system which will allow small parcels of timber and forest products to be harvested for community use. Coppicing is an example of such a system which was once widely practiced on Skye.

Establish native woodland appropriate to the site. Many native tree species have evolved to cope with acidic, wet soils and high winds. Broadleaves will improve soil aeration, structure and fertility over a long period whilst enhancing biological diversity.

Investigate the possibility of utilising timber from the remaining coniferous plantation on-site. Examples of on-site utilisation could be biomass heating of a campsite and events area or use of a mobile mill to produce timber cladding.

Restore areas of wetland and deep peat to enhance biological diversity and improve habitat linkage.

Create new dragonfly ponds linked with wetland habitats

Integrate the creation of new woodland and wetland habitats with the design of an eco-friendly camp site and events area.

Choose species of trees which will be useful to future generations for firewood and small scale forest products.

Planting Christmas trees amongst native trees as a “nurse” species may be a source of future income.

Mulching brash and low value timber in-situ has proven to create ground conditions suitable for planting whilst improving accessibility to people.

Mulch may be used to prevent weed competition and reduce chemical usage

Action Proposed

- Clearfell mature conifers and utilise on site if possible before the onset of windblow.
- If utilisation of mature conifers is not possible mulch in-situ
- Retain young conifers until native woodland is established – thin to favour larch and brash (remove lower branches) to improve aesthetics and allow light to the forest floor.
- Mulch clearfelled areas to improve accessibility, smooth old plough lines and furrows and create ground conditions suitable for planting.
- Leave areas of deep peat and riparian flushes as open habitats and take opportunities to link and enhance wetland habitats
- Erect a deer fence which can be removed if necessary once trees are established above browsing height.
- Choose native species appropriate to the site which will enhance biological diversity.
- Retain existing natural regeneration of broadleaved species.
- Establish trees by hand mounding and planting.
- Avoid the use of herbicides by utilising mulch
- Manage natural regeneration by removing Sitka spruce and thinning dense broadleaved regeneration if necessary .
- Work closely with the design team to integrate the camp site and events area with native woodland and important open habitats
- Investigate opportunities for utilising timber in-situ during the design of the camp site and events area.
- Investigate the feasibility of planting Christmas trees as a nurse crop and future source of revenue.

Objective 2. Restore Peatland and Wetland Habitats

Constraints

Financial outlay

Extraction or felling of poor quality timber on deep peats

Opportunities

Will create improved habitats for invertebrates, birds and mammals.

Opportunities for volunteer engagement and environmental learning

Extraction of low value timber for firewood where possible.

Harvesting residues may be used to block drains.

Action Proposed

- Create access track to allow the extraction of low value timber for firewood
- Target unstable stands for felling
- Mulch harvesting residues and block drains.

Objective 3. Improve and add to the network of forest trails and recreational facilities

Constraints

Time and expense of maintenance

Time and money required to manage public safety and liability

Managing potential conflict between users, eg mountain bikes and horse trails.

Lack of waymarking and interpretation

Opportunities

New and upgraded paths used regularly

Skye and Lochalsh disabled ramblers group are based in Broadford who provide access to all terrain mobility scooters.

An active youth club based in Broadford are keen to be involved in planning new facilities

Potential to establish links with the hospital and cater for “health walks”

Employment opportunities for local contractors

Action Proposed

- Survey existing paths and carry out inspections and maintenance at 6 month intervals.
- Develop an interpretation plan for the site in collaboration with the camp site/events area design team and user groups

Objective 4. Continue to support environmental learning and sustainability.

Constraints

Continued funding for Community Allotments and Forest School

Few facilities to support forest school activities within the existing woodland

Opportunities

Build on success of Green Growers project in order to develop new skills within the community which will improve the understanding and guardianship of wildlife and habitats.

Infrastructure now developed, including basic cabin for forest school

A chance for people to develop life-enriching skills which will complement future woodland management eg green woodworking, willow weaving, charcoal production, path maintenance

Strong links with the West Highland College will facilitate the running of courses and events

Action Proposed

- Seek funding to allow the continuity of growing, recycling and educational facilities within the Green Growers and Greener Broadford projects.
- Work closely with the camp site/events space design team to ensure community facilities complement the “gateway” to the camp site/events space.
- Plan an annual programme of events to support environmental learning in collaboration with the West Highland College.
- Construction of artificial features to enhance biological diversity as educational projects eg bat and bird boxes
- Construct a fire pit and rustic shelter for use by the Forest School and volunteers.

PART D 5 Year Management Schedule and specifications

Operation	Quantity	Timing	Specification
Construct deer ring fence	2314 metres	2018	FC best practice
Planting on mulched soils	2.1 ha		
Native species (2500/ha)	5375 trees	2018-9	Plugs, local provenance, refer also to restocking plan.
Christmas trees nurse crop (7500/ha)	15750 trees	2018-9	Plugs, non invasive species
Construct multipurpose ATV track / path	500 metres	2018-9	
Remove non native conifers on wet soils and deep peats	2.69 ha	2018 onwards	Extract where possible for firewood, mulch residues. Block drains / remove plough furrows
Thin thicket-stage larch and Sitka spruce	1.3 ha	2018 onwards	Thin to favour larch and riparian species.
Construct fire pit and shelter		2018	Rustic within woodland setting
Develop interpretation plan and implement	1300 metres of path	2018 - 2022	To be designed
Path maintenance	1300 metres of path with species-rich verges	Four times annually during summer months	Collect litter Continued owing of verges to encourage development of wildflowers

Annex I PLANS

Plan 1: Location Plan

Plan 2: Opportunities and constraints

Plan 3: Long Term Concept

Plan 4: Felling and thinning

Plan 5: Restocking and natural regeneration