



# Glen Finglas

## Management Plan 2018-2023

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## THE WOODLAND TRUST

### INTRODUCTION

The Trust's corporate aims and management approach guide the management of all the Trust's properties, and are described on Page 4. These determine basic management policies and methods, which apply to all sites unless specifically stated otherwise. Such policies include free public access; keeping local people informed of major proposed work; the retention of old trees and dead wood; and a desire for management to be as unobtrusive as possible. The Trust also has available Policy Statements covering a variety of woodland management issues.

The Trust's management plans are based on the identification of Key Features for the site and setting objectives for their management. A monitoring programme (not included in this plan) ensures that these objectives are met and any necessary management works are carried out.

Any legally confidential or sensitive species information about this site is not included in this version of the plan.

### PLAN REVIEW AND UPDATING

The information presented in this Management plan is held in a database which is continuously being amended and updated on our website. Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations. Please either consult The Woodland Trust website [www.woodlandtrust.org.uk](http://www.woodlandtrust.org.uk) or contact the Woodland Trust ([wopsmail@woodlandtrust.org.uk](mailto:wopsmail@woodlandtrust.org.uk)) to confirm details of the current management programme.

There is a formal review of this plan every 5 years and a summary of monitoring results can be obtained on request.

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## WOODLAND MANAGEMENT APPROACH

The management of our woods is based on our charitable purposes, and is therefore focused on improving woodland biodiversity and increasing peoples' understanding and enjoyment of woodland. Our strategic aims are to:

- Protect native woods, trees and their wildlife for the future
- Work with others to create more native woodlands and places rich in trees
- Inspire everyone to enjoy and value woods and trees

All our sites have a management plan which is freely accessible via our website [www.woodlandtrust.org.uk](http://www.woodlandtrust.org.uk). Our woods are managed to the UK Woodland Assurance Standard (UKWAS) and are certified with the Forest Stewardship Council® (FSC®) under licence FSC-C009406 and through independent audit.

In addition to the guidelines below we have specific guidance and policies on issues of woodland management which we review and update from time to time.

We recognise that all woods are different and that the management of our sites should also reflect their local landscape and where appropriate support local projects and initiatives. Guidelines like these provide a necessary overarching framework to guide the management of our sites but such management also requires decisions based on local circumstances and our Site Manager's intimate knowledge of each site.

The following guidelines help to direct our woodland management:

1. Our woods are managed to maintain their intrinsic key features of value and to reflect those of the surrounding landscape. We intervene when there is evidence that it is necessary to maintain or improve biodiversity and to further the development of more resilient woods and landscapes.
2. We establish new native woodland using both natural regeneration and tree planting, but largely the latter, particularly when there are opportunities for involving people.
3. We provide free public access to woods for quiet, informal recreation and our woods are managed to make them accessible, welcoming and safe.
4. The long term vision for our non-native plantations on ancient woodland sites is to restore them to predominantly native species composition and semi-natural structure, a vision that equally applies to our secondary woods.
5. Existing semi-natural open-ground and freshwater habitats are restored and maintained wherever their management can be sustained and new open ground habitats created where appropriate.
6. The heritage and cultural value of sites is taken into account in our management and, in particular, our ancient trees are retained for as long as possible.
7. Woods can offer the potential to generate income both from the sustainable harvesting of wood products and the delivery of other services. We will therefore consider the potential to generate income from our estate to help support our aims.
8. We work with neighbours, local people, organisations and other stakeholders in developing the management of our woods. We recognise the benefits of local community woodland ownership and management. Where appropriate we allow our woods to be used to support local woodland, conservation, education and access initiatives.
9. We use and offer the estate where appropriate, for the purpose of demonstration, evidence gathering and research associated with the conservation, recreational and sustainable management of woodlands. In particular we will develop and maintain a network of long-term monitoring sites across the estate.
10. Any activities we undertake will conform to sustainable forest management principles, be appropriate for the site and will be balanced with our primary objectives of enhancing the biodiversity and recreational value of our woods and the wider landscapes.

## SUMMARY

This public management plan briefly describes the site, specifically mentions information on public access, sets out the long term policy and lists the Key Features which drive management actions. The Key Features are specific to this site - their significance is outlined together with their long (50 year+) and short (5 year) term objectives. The short term objectives are complemented by a detailed Work Programme for the period of this management plan. Detailed compartment descriptions are listed in the appendices which include any major management constraints and designations. A short glossary of technical terms is at the end. The Key Features and general woodland condition of this site are subject to a formal monitoring programme which is maintained in a central database. A summary of monitoring results is available on request.

## 1.0 SITE DETAILS

<b>Site name:</b>	Glen Finglas
<b>Location:</b>	Brig o'Turk
<b>Grid reference:</b>	NN521108, OS 1:50,000 Sheet No. 57
<b>Area:</b>	4874.22 hectares (12044.46 acres)
<b>Designations:</b>	Ancient Semi Natural Woodland, Ancient Woodland Site, Archeological Site, National Park, Site of Local Nature Conservation Importance, Site of Special Scientific Interest, Special Area of Conservation

## 2.0 SITE DESCRIPTION

### 2.1 Summary Description

With its sweeping vistas of rolling hills mirrored in glassy lochs, heather-covered uplands, hidden glens and ancient woodlands, Glen Finglas epitomises the Scottish Highlands. The Woodland Trust's largest site, it lies at the heart of Loch Lomond and The Trossachs National Park and is part of the Great Trossachs Forest National Nature Reserve. It has something for everyone: a wealth of wildlife, intriguing history, and walks to suit all abilities.

### 2.2 Extended Description

The Glen Finglas Estate (including Milton, on a 51yr lease and Bochastle, purchased in 2006) is a 4,875 ha upland property comprising extensive areas of new native woodland, grazed heath, wetland and upland grassland, with areas of semi-natural woodland and scattered veteran trees, as well as lower lying fields of improved and semi-improved grassland. It includes the glens of Finglas, Meann and Casaig, Milton, the southern slopes of Stuc Odhar (Lendrick Hill) and land around the village of Brig o' Turk and along the shore of Loch Venachar.

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The estate is situated in the Trossachs, a popular tourist area, within the Loch Lomond and the Trossachs National Park, on the southern edge of the Highlands and renowned for its mountain, loch and woodland scenery. It lies approximately 5 miles west of Callander, which in turn is about 14 miles north-west of Stirling. In 2015 the Great Trossachs Forest area, a collaborative project with Forestry Commission Scotland and RSPB, gained National Nature Reserve status to become the largest NNR in the UK.

The property extends from the northern shore of Loch Venachar, at 80m, up to the watersheds of the upper glens of Finglas, Meann, Milton and Casaig, with the highest point at 850m just below the summit of Ben Ledi. The lower part of the estate surrounds the small village of Brig o' Turk (population c160) and is bisected by the A821.

Buildings on the estate include five cottages, two of which are occupied by estate staff, various agricultural buildings and Lendrick Steading, where an old byre has been converted into an estate office and facility for visitors. In 2012 a deer larder chill unit was installed within the Venachar farm buildings. In 2014 a new Visitor Gateway building was constructed in the Lendrick Hill car park. In 2017 a 500MW hydro scheme with turbine building was completed in Glen Casaig. Luing cattle and blackface sheep are reared and managed under a contract farming agreement. These, as well as the wild red and roe deer are used as to manage the vegetation on the property by grazing.

The land use is at present as follows:-

**GLEN FINGLAS (4096.0ha):**

Total Ground Over 400m=2177ha (53%)

1987ha (48.5%) Open ground habitats

190ha (4.5%) Planted new native woodland

Total Ground Below 400m = 1919ha (47%)

671ha (16%) Currently predominantly open ground including the Brig o' Turk Mires SSSI (22.66 ha) and 14ha of improved or semi-improved grassland..

1076ha (26%) Planted or naturally regenerating new native woodland

205ha (5%) Established woodland, including 120ha of ancient origin (derived from 1866 OS map)

**MILTON (755.5ha):**

Total Ground Over 400m = 367.2ha (48.6%)

348.2ha (46.1%) Open ground habitats

19ha (2.5%) Newly planted native woodland

Total Ground Under 400m = 388.3ha (51.4%)

131.9ha (17.4%) Currently predominantly open ground

240ha (32%) Newly planted or regenerating native woodland.

16.4ha (2%) Established woodland

BOCHASTLE (23.2ha):  
(100%) Planted or regenerating native woodland (planted 2010/2011)

WHOLE ESTATE (Glen Finglas, Milton & Bochastle): 4874.5ha  
Total Ground Over 400m = 2544.2 (52%)  
206ha (4%) Planting over 400m  
2338.2ha (48%) Open ground habitats over 400m

Total Ground Under 400m = 2330.3 (48%)

769.7ha (16%) Currently predominantly open ground under 400m  
Including the Brig o'Turk Mires SSSI (22.66 ha) and  
14ha of improved or semi-improved grassland (in the past cut for  
silage).

1339.2ha (27%) Planted or regenerating native woodland, including scattered open ground

221.4ha (5%) Established woodland, including 120ha of ancient origin  
(derived from 1866 OS map)

The open ground areas are currently grazed by approximately 200-300 wild red deer and 150 Luing or Sim-Luing cattle. A small flock of approximately 200-250 adult sheep are grazed within the enclosed hill parks (Casaig and Meall Parks), on the low ground improved grassland and in the research plots.. Details of the current grazing by domestic livestock and wild deer are given in the Grazing Management Plan.

#### Public Access

There are three Woodland Trust car parks on the site with a total provision for around 55 cars. There is an extensive network of paths centring on the Visitor Gateway building in the main Lendrick Hill car park. , providing a large choice of walks from short lowland woodland walks to long distance upland routes. In 2014 the Great Trossachs path was completed which runs from Callander to Inversnaid on Loch Lomond, and connects with the low ground access network.

It is estimated that there are currently at least 35,000 visits to the property per annum.

#### Summary Description of Access Provision

The Glen Finglas Estate lies mainly to the north of and surrounding the small village of Brig o'Turk on the A821, 5 miles from Callander and 8miles from Aberfoyle at the heart of the Loch Lomond and Trossachs National Park.

There is great scope for the public to enjoy this large property, from those who wish 1 to 2 hour

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woodland walks on partially surfaced paths connecting with the local pub and tearoom in Brig o' Turk. to hill-walkers climbing the two Corbetts (Ben Vane and Ben Ledi) or walkers and mountain bikers cycling the 15 mile Meall Trail. Families with young children can explore a shorter walk along the sculpture and play trail around Little Druim Wood. In addition the 30 mile Great Trossachs Path from Callander to Inversnaid on Loch Lomond passes through the estate, connecting at the west end with the West Highland Way. Private vehicles, other than for access to Duart & Ben Ledi Cottages or by prior arrangement, are not permitted up the Glen Road beyond the gate at the bottom, which is sometimes locked. Similar arrangements apply to the section of road between the Dam Road Car Park and the Glen Finglas Reservoir dam.

Free leaflets of the various walks and cycle routes are available at the site car parks and at other local outlets. The location is hilly and all the paths except the path along the River Turk and around the village have steep inclines. The Visitor Gateway in the Lendrick Hill car park has maps and leaflets for the area, and also an interactive AV screen giving information about the estate and the work of the Trust. For any specific enquiries regarding access routes or the work the Trust is doing at Glen Finglas volunteers may be in the Visitor Gateway, or staff are usually present at the estate office at Lendrick Steading on weekdays and will try to assist. Lendrick Steading is located between the main car park and the Lendrick Lodge Holistic Centre.

The car parks from which to access the many tracks are: the main Lendrick Hill Car Park (35 to 40 car parking spaces) 1/2mile east of the village; Little Druim car park (12 car spaces) 1mile east of the village; the Dam Road Car Park (6 spaces) on the Dam Road just before the Finglas Reservoir Dam; Bochastle Forestry Commission Car Park (15 cars) at the eastern end of the site, about 5miles from Brig o'Turk and just outside Kilmahog. Other access points include Brig o'Turk itself taking in a visit to the tearoom or the pub. It is possible to cycle to Brig o'Turk along the National cycle path extension along the south side of Loch Venachar, or taking the more hilly and challenging Great Trossachs Path on lower hill slopes above the north side . Cycling or walking along the A821 can be treacherous.

Public transport to the area is limited to a heavily subsidised on-demand taxi service which operates all year round, also known as demand response transport (DRT). Information on times can be found on [www.traveline.org.uk](http://www.traveline.org.uk), [www.stirling.gov.uk/drt](http://www.stirling.gov.uk/drt) or telephone 001786 404040.

Local information regarding transport, accommodation and places to eat may be obtained from the Visit Scotland Callander Information Centre, Tel 01877-330342, the Trossachs Discovery Centre (Visit Scotland Information Centre), Aberfoyle Tel 01877-382352 or the following websites [www.visitscottishheartlands.org](http://www.visitscottishheartlands.org) and [www.incallander.co.uk](http://www.incallander.co.uk). Refreshments on the Brig o'Turk Loop walk may be obtained at the Byre Inn (01877 376 292), or the Tea Room (01877 376 283), both in Brig o'Turk, but it is advisable to check their opening times/seasons.

There is a single all abilities toilet in the Visitor Gateway building which is open from 1st April to 30th October. The nearest public toilets are in Callander or Aberfoyle and there are also toilets at the Loch Katrine Pier Complex and the David Marshall Lodge Visitor Centre when these are open. Opening times can be found from the Tourist Information Centres.

#### Claimed Public Rights of Way:

Type of Claimed ROW	Description of route
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Path	A path follows the access drive along the reservoir
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and thence up Gleann nam Meann, and from there into Balquhidder.

Path A path follows the River Turk at the edge of the Brig Field, in Brig o'Turk.

Path An access track runs from the A821, north through Coilantogle Steading and becomes a path before continuing north towards the summit of Ben Ledi.

**Core Paths in Loch Lomond & Trossachs National Park Core Path Network:**

Lendrick Path: Path running up the hill and then west, from the Lendrick Hill Car Park (lying west of Lendrick Steading) towards the Glen Road.

Little Druim Wood: A small section of the path running from the Little Drum Wood Car Park into the heart of the wood.

Brig o'Turk Path: Path running parallel to the A821 from the Lendrick Hill Car Park to the village, Brig o'Turk. It crosses the road at the entrance to the Mires.

Glen Road: Tarmac Road running from the village, Brig o'Turk, up the hill to meet with the Meall track.

Meall Track: Track going up Glen Finglas, round the back of Meall and back down through Glen Mean.

Mires Path: Path running through the Brig o'Turk Mires SSSI

Brig Field: Path running around the outside of the Brig Field, in Brig o'Turk.

**Facilities available:**

Facility	Yes/No
Woodland Trust car park at site	Yes
Parking nearby	Yes
Local parking difficult	No
Good views	Yes
Waymarked walk	Yes
Information board	Yes
Free leaflet available	Yes
Well worth a visit	Yes

## 3.0 PUBLIC ACCESS INFORMATION

### 3.1 Getting there

**Public transport:** There are no buses or trains to Glen Finglas. However, there is a subsidised Demand Responsive Transport (DRT) service which operates all year round (tel: 01877 330 496 for information and bookings).

**By car:** From Glasgow, take the A81 to Aberfoyle, then the A821 over the Duke's Pass, and through Brig o' Turk to the car park. For the Meall Trail, park at the Lendrick Hill car park, which is 0.8km/½ mile past the village on the left (more than 20 car spaces and one coach space - email Scotland@woodland-trust.org.uk to reserve this). The Little Druim car park is a similar distance further along on the right (12 car spaces).

From Edinburgh, head west to Junction 10 at Stirling and then take the A84 to Callander. Continue for 1.6km/1 mile north to Kilmahog, then turn left on to the A821 to Little Druim car park, 7.6km/4.7 miles on left. Lendrick Hill car park is another 0.8km/½ mile on right.

There is another Woodland Trust car park at Dam Road just before the Finglas Reservoir Dam (six spaces), and Bochastle Forestry Commission Car Park (15 cars) at the eastern end of the site just outside Kilmahog. Other access points include Brig o' Turk village and the Gartchonzie layby, just opposite the Invertrossachs turn off.

Private vehicles are not allowed beyond the gate on the Glen Road, or on the section of road between the Dam Road Car Park and the dam.

**Walking and cycling:** Walkers and cyclists can access the area via The Great Trossachs Path (48km/30 miles), which spans the Great Trossachs Forest from east to west. You can cycle to Brig o' Turk on the National Cycle Path 7 extension along the south side of Loch Venachar.

### 3.2 Access / Walks

Glen Finglas has an extensive and varied network of walking routes to suit all abilities. The most popular of these are summarised below. You can find more details in leaflets and maps, and via the interactive screen at the Visitor Gateway in the Lendrick Hill car park (opening hours: April to October, 10am - 4pm). Information is also available at Visit Scotland's Aberfoyle iCentre (tel: 01877 381221) and the Callandar iCentre (tel: 01877 330342). You can also download an app from the Great Trossachs Forest website.

Grade classifications for the trails are as follows:

**Easy:** Low level routes on surfaced paths over undulating terrain.

**Medium:** Partially surfaced paths which may have short, steep sections. Sturdy footwear is advisable.

**Hard:** Challenging routes with steep sections through remote areas. Suitable outdoor clothing, strong footwear, map, compass, food and drink are needed.

**Brig o' Turk Loop (easy; 3km/2 miles; 1½ hours):** This walk follows a level path and boardwalks. It can be extended by 30 minutes by including the Ruskin viewpoint overlooking the waterfalls on the River Turk.

Little Druim Wood Play and Sculpture Trail (easy; 1.5km/¾ mile; 30 minutes): Discover surprising sculptures and exciting play features in this ancient woodland.

Drippan (medium; 900m/½ mile; 30 minutes): This walk through ancient semi-natural woodland offers views over Loch Venachar. There are some steep sections.

The Druim (medium; 2.5km/1¼ miles; 45 minutes): This route through woodland and open grazing land has spectacular views towards Brig o' Turk, Lendrick Hill, Achray Forest and Ben Venue. This path is not recommended between November and April as it can be very muddy.

Lendrick Hill and Dam walk (medium; 6km/3½ miles; 2 hours): This route heads west to Glen Finglas Reservoir before returning through Brig o' Turk. There are excellent views over Glen Finglas estate, Achray Forest and Ben Venue.

Samson's Stone (medium; 2km/1 mile; 50 minutes): This walk begins at the Forestry Commission car park at Bochastle, close to Kilmahog, and takes you to the large boulder known as Samson's Putting Stone. You can also combine it with a visit to a nearby Iron Age fort.

Lower Lendrick (medium; 2.5km/1¼ miles; 1 hour): This route takes in the ancient woodland of Little Druim Wood and the ruins of Drippan Farm; and offers views of the wider Trossachs.

The Great Trossachs Path (medium; 9km/5½ miles to Kilmahog; 4 hours): This path forms the spine of a wide network of trails throughout the Great Trossachs Forest and links the West Highland Way to the Rob Roy Way.

The Meall (hard; 24km/15 miles; 7 hours): This hill track climbs to an altitude of 600 metres before returning through ancient woodland pasture. This route is also used as a mountain bike trail.

Stuc Odhar (hard; 10km/6 miles; 4 hours): This challenging circular route starts with a steep climb up Lendrick Hill, before turning towards Glen Finglas Reservoir and taking in remote upland areas of the estate.

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## 4.0 LONG TERM POLICY

### Wood Pasture

The long term vision for the Glen Finglas estate is to provide a dynamic ecosystem of woodland and open ground managed as a wood pasture system. This will have a wide variety of habitats, including important open ground habitats such as mires and calcareous grassland, within a mosaic of semi-natural native woodland and scattered open-grown trees. The system will be dynamic with woodland cover and open ground being allowed to expand and contract over time in response to natural processes, providing that the overall value of Key Features is maintained.

The habitats within the estate, particularly the woodland habitats, will link with the wider landscape making an important contribution to the forest habitat network for the Loch Lomond and the Trossachs National Park. It will also be a substantial component of the Great Trossachs Forest National Nature Reserve, which covers 16,600 ha and includes Glen Finglas, Katrine (FES) and Inversnaid (RSPB).

A spatially explicit or species centred approach to the management of the site will not be taken but instead broad 'limits of acceptable change' have been identified. Those for the medium to long term (2050+) are summarised below:-

- 50%-70% (i.e. more than 1,100 ha) of the land below 400m altitude is to be established with trees and shrubs. This will comprise varying densities from 5trees/ha to 100% canopy cover, with at least 30% of the total wooded area being fairly open i.e. <20% canopy cover and a montane scrub at the tree line. This will ensure that the landscape and visual qualities of the upper glens is maintained and enhanced as a mosaic of open ground, woodland and scattered trees.
- SSSIs will be maintained in favourable condition
- The condition of the domestic livestock will be allowed to vary with the season but their welfare will be maintained at an acceptable level. Breeding female and non-breeding male cattle will have minimum hip scores of 2.5 and 1.5 respectively.
- Key viewpoints from paths have been identified and will be maintained
- The 'intimate' mosaic landscape of open ground and woodland on the lower ground, particularly on both sides of the A821 will be maintained.
- A number of archaeological sites will be maintained free of any tree growth.

A table of the limits of acceptable change at stages until 2050+ is given in Appendix III.

These limits of acceptable change will be achieved primarily by the management of grazing by wild deer and domestic livestock along with planting where necessary. Grazing will be managed entirely to achieve conservation objectives (whilst producing agricultural outputs as by-products of this process). Ultimately it is anticipated that this will involve all year round grazing with livestock being allowed to roam at will over most of the estate.

Priorities for grazing will be, 1st deer (as the natural, wild grazer) and 2nd cattle (as the grazing animal most appropriate to encourage a diverse sward and recruitment of regeneration).

Within the last plan period 525 hectares of land was protected from all grazing, with new deer

fencing in Glens Finglas, Meann, Casaig and on Milton. These areas had significant areas of sparse tree cover, and the aim is to establish new native woodland by a combination of new planting and natural regeneration. Most of the areas deer fenced had previously been fenced to exclude livestock with intention of achieving some level of tree establishment in combination with deer culling. This approach has not proven successful despite deer densities having been reduced to approximately 6 deer per km<sup>2</sup> (0.06 deer per hectare) across the estate. Current results from the tree monitoring vindicate this approach and suggest that whilst the long term vision is that fencing should become redundant, in the short term the focus needs to be on establishing new woodland cover within deer fences. This will in time expand and increase the woodland regeneration potential and provide a wider range of suitable habitats that can support a balanced deer population. Deer culling outwith fences will take place at a level appropriate for the amount of unenclosed ground to achieve levels of acceptable change and to reduce the pressure on fenced young woodlands, wherever possible in co-operation with neighbours.

For the next five year period domestic livestock grazing will be only occasional in Glen Casaig but will be retained over the rest of the estate i.e. around 90 breeding cows and 30 steers (castrated male cattle) between Glens Meann, Finglas and at Milton. Glen Meann will only be grazed in the summer by cattle, whilst Glen Finglas shall continue to receive year round cattle grazing. A monitoring program will be continue to assess the effect of livestock grazing alongside deer, and the effectiveness of year round cattle grazing versus summer only. A small flock of approximately 200 to 250 adult sheep will be grazed within the enclosed hill parks (Casaig and Meall Parks) and on the low ground improved grassland as a grazing tool as and when needed to maintain open areas.

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## 5.0 KEY FEATURES

The Key Features of the site are identified and described below. They encapsulate what is important about the site. The short and long-term objectives are stated and any management necessary to maintain and improve the Key Feature.

### 5.1 Wood Pasture

#### Description

Wood pasture is a system of managing a mosaic of woodland and open ground habitats by grazing.

Extensive parts of Glen Finglas, mainly on the middle slopes of the upper glens, comprise an intimate mosaic of woodland, open grown trees and a variety of open ground habitats which have been grazed over many centuries. This has allowed many ancient and veteran trees to develop. The higher ground (over 400m) has been grazed contiguously with the woodland but here only scattered trees and shrubs have survived in cliff areas mainly due to the exposure but also grazing. The lower ground comprises mainly birch or oak woodland, on formerly cultivated ground, grazed together with areas of unimproved and semi-improved grassland.

The Wood Pasture key feature should be considered to encompass most of the land on the estate, including open ground, closed canopy woodland, new native woodlands and scattered individual trees.

#### Significance

Glen Finglas has been identified as one of the most important and extensive upland wood pasture sites in Scotland. It is estimated that there is a total of between 8,000 and 17,000ha lowland and upland woodland pasture in Scotland, of which about 600ha are at Glen Finglas

Ancient wood pasture and its associated veteran trees, is of international importance for its biodiversity importance and due to this and its vulnerability is the subject of a UK priority habitat action plan and the Loch Lomond and Troassachs National Park Biodiversity Action Plan (NPBAP).

In addition to its biodiversity value, wood pasture is also of enormous cultural importance.

#### Woodland Component

Wet woodland and Upland oak woodland are priority UK BAP habitats and both these and Upland Birch woodland are considered to be important habitats in the NPBAP. Species associated with wood pasture and present on the site such as juniper, European otter, Pipistrelle bat, Spotted flycatcher and Black grouse are priority UK Biodiversity Action Plan (UKBAP) species.

#### Open ground component

Acid grassland is ubiquitous in Scotland. This habitat within Glen Finglas and some other parts of Stirling, have base rich flushes and tend to be floristically richer than many other parts of the uplands of Scotland.

Calcareous grassland is protected under the European Commission habitats directive and is both a UK BAP priority habitat, supporting a diverse flora and a priority habitat under the NPBAP. The small patches of this habitat have not been surveyed in detail but are thought to be significant particularly on the south west facing, sunnier Meall in Glen Finglas. The larger areas of calcareous grassland on the upper slopes of Meall Cala have been mapped.

The Marshy grassland and Upland heath are priority UK BAP habitats, with Upland heath being included as a priority habitat in the NPBAP.

Areas of ancient pasture, as indicated by the presence of waxcap fungi, are of conservation importance. These areas appear to be more prevalent within the lower parts of the wood pasture. The grazed upland open ground is an important habitat for upland moorland birds, which are in decline in Britain. It is in turn important for the raptors, which prey on them. A number of Schedule One bird species are known to either breed or use the upper parts of the estate.

The mosaic of rush pasture or marshy grassland and drier acid grassland is an important habitat for wading birds, which are in decline throughout Scotland.

### Opportunities & Constraints

### Opportunities

There is the potential to restore and expand the ancient wood pasture habitat on this large property, enabling a semi-natural grazing system to be introduced on a landscape scale. It is an opportunity to continue to develop our own and others' understanding of this system.

Given its location there are opportunities to link the semi-natural woodland and open ground habitats on Glen Finglas those on adjacent properties as part of the Great Trossachs Forest.

There is the opportunity to manage the large mosaic of upland open ground habitats to maintain or improve their biodiversity. The domestic livestock and to a certain extent the red deer are hefted to particular areas. This and the different grazing preferences of the animals allow this to happen with the minimum of fencing.

### Constraints

Unpredictable deer grazing pressure determined to a significant extent by management by neighbours

Knowledge and experience of managing such a grazing regime in this particular environment and at this scale is limited.

Encroachment of dense stands of bracken.

New woodland has struggled to become established at exposed elevation above 350m.

The open views from many of the trails of the varied landscape are of great importance to visitors to the estate.

### Factors Causing Change

Uncontrolled grazing, Fire, Natural succession to bracken, Deer damage, Erosion

### Long term Objective (50 years+)



The long term vision for the Glen Finglas estate is to provide a dynamic ecosystem of woodland and open ground managed as a wood pasture system. This will have a wide variety of habitats, including important open ground habitats such as mires and calcareous grassland, within a mosaic of semi-natural native woodland and scattered open-grown trees. The system will be dynamic with woodland cover and open ground being allowed to expand and contract over time in response to natural processes, providing that the overall value of Key Features is maintained.

A spatially explicit or species centred approach to the management of the site will not be taken but instead broad 'limits of acceptable change' have been identified. Those for the medium to long term (2050+) are summarised below:-

- 50%-70% of the land below 400m asl is to be established with trees and shrubs. This will comprise varying densities from 5trees/ha to 100% canopy cover, with at least 30% of the total wooded area being fairly open i.e. <20% canopy cover and a montane scrub at the tree line.
- SSSIs will be maintained in favourable condition
- The 'intimate' mosaic landscape of open ground and woodland on the lower ground, particularly on both sides of the A821 will be maintained.
- A number of archaeological sites in the upper glens (including possible funeral cairn on Meall Park) will be maintained free of any tree growth and interpretation improved.

### Short term management Objectives for the plan period (5 years)

See the Limits of Acceptable Change Table in Appendix IV for the current situation and the short, medium and long term objectives.

The short term limits of acceptable change at 2023 are summarised below:-

At least 50% (but <70%) of the land area below 400m will be wooded with established trees i.e. >50cm in height. At 2017 the area of deer fenced land and existing woodland is 67% of the land below 400m. All these deer fenced areas are or have been in Forestry Commission grant aided schemes for a combination of planting, natural regeneration, existing woodland protection as well as grant aided integral and other open ground. The 50% target represents a goal of in broad terms of achieving establishment of all previously or currently grant aided woodland planting or regeneration (as well as protecting and maintaining the existing woodland within these fences). This target area of 50% includes the integral open ground that typically comprises 20% of planting and would have been included as grant aidable land. In some cases this open ground is likely to develop some sparse woodland cover, as will other open land within the fences that comprises the remaining 17% of land protected from deer browsing.

Less than 50% of the land area below 400m shall be open ground, or have <20% canopy cover.

5-15% of the land area, outwith areas of mature woodland, will be covered with dense bracken. In 2017, <10% was covered in bracken and most of this was scattered, not dense.

Cattle and sheep welfare will be maintained. A minimum hip score of 2.5 in female cattle and 1.5 in castrated males will be permitted. See Grazing Management Plan.

## 5.2 Connecting People with woods & trees

### Description

#### Access/infrastructure:

The site has well maintained car parks, welcome signs, a Visitor Gateway and is the biggest UK site managed by the Woodland Trust.

The main car parks, with information panels and picnic tables, from which to access most of our path network are the following: Lendrick Hill (20 cars) to the east of brig o' Turk village with an extension (20 cars) built in 2016 that allows temporarily/seasonal closure and Little Druim Wood (12 cars). Bochastle (15 cars) is managed by the Forestry Commission at the eastern end of the site. Other access points are Brig o' Turk village and Gartchonzie layby.

There is great scope for the public to enjoy this large property with a path network of circa. 20km on the lower slopes and 25km in the upper glen. The site has several waymarked trails that range from the surfaced path around the Play Trail to challenging tracks for hill walkers, walkers and mountain bikers with limited all-ability opportunities (e.g. Ruskin viewpoint, part of Brig o' Turk loop).

The Visitor Gateway, opened in 2014, is unmanned with seasonal opening hours (March till October). It provides the only (disabled) public toilet between Aberfoyle and Callander. Within the building there is access to free Wi-Fi, interactive information and interpretation. It can hold a comfortable max. 50 people.

The site signage consists of brown tourist signs from adjacent villages to direct visitors to the different car parks with welcoming signage and ladder boards. There are a variety of local places to eat and drink such as the Byre Inn and Tea Room in Brig o' Turk, as well as the Loch Venachar and Loch Katrine cafés.

#### Communication:

Glen Finglas Estate is situated in the Trossachs, a popular tourist area, within the Loch Lomond and Trossachs national Park (LLTNP), on the southern edge of the Highlands and is part of the Great Trossachs Forest National Nature Reserve. It is centred on Brig o' Turk village (160 population) is central to the estate. Other local settlements are Aberfoyle (population 740, approximately 5 miles north-east of Aberfoyle), Callander (population 3,090, 7 miles west of Callander) and Stirling (population 93,750, 22 miles north-west).

The natural features associated with Glen Finglas are the following: native bluebells, ancient woodland and wood pasture, water courses and the Corbets (Ben Ledi & Ben Vane) which creates a quiet wild country sense of place. The significant cultural landmarks are the remnants of the Royal Hunting Forest in the upper glens, Samson stone, Dunmore Iron age fort, Ruskin viewpoint and the old farmsteads and shielings across the whole estate.

There are several walking opportunities, most notably The Great Trossachs Path (TGTP), a 30 mile/48km long distance path (one of Scotland's Great Trails). TGTP runs east to west and links to popular long distance routes, the West Highland Way at Loch Lomond and the Rob Roy Way or Route 7 of the National Cycle Network in Callander. The Old Drover's Road (Balquhidder hill path) and the Three Bridges Walk from Callander are also promoted to visitors and cross parts of the estate.

The nearest Woodland Trust owned sites are Glen Devon Woodlands (Perthshire) and Whinny Hill (West Dumbartonshire).

The interpretation on Glen Finglas estate consists of on-site orientation maps as part of the information panels at the car parks and a range of free leaflets promoting various walks, cycle routes and the play trail. The Visitor Gateway holds information panels, a range of leaflets, an interactive audio-visual screen (with photos and a 360 degree photo tour) and Wi-Fi that allows visitors to download The Great Trossachs Forest interpretation app.

Nearby sites with people engaging opportunities and activities is most and foremost the Loch Lomond and Trossachs National Park with 4 million visitors annual. The Forestry Commission's Lodge Forest visitor centre and Queen Elisabeth Forest Park provide MTB opportunities, similar play trail, bird hide, water features, a "Go Ape" experience, walks, etc. Loch Katrine Steamship offers cycle hire, walks, steamship and lochside lodges (eco camp). Inversnaid Reserve, managed by RSPB, has a small Visitor Gateway and delivers walks and events. Flanders Moss National Nature Reserve, owned by Scottish Wildlife Trust, delivers occasional activities.

The demonstration purpose of Glen Finglas estate is wood pasture and deer management.

The profile of the immediate surrounding community consists for the majority of households that are predominantly retirees living comfortably in rural locations, enjoying the local amenities to benefit their social and practical needs. The other households are rural families who live and work locally or pensioners living in out of the way locations.

The surrounding population, up to 20 minutes' drive radius from Glen Finglas, consist of approx. 5,500 people from more than 2,000 households. Around 80% of Scotland's population (incl. Glasgow & Edinburgh) lie within 60-90 minute drive of the Estate. And as mentioned above, there are around 4 million visitors to the LLTNP annually.

Events:

The Estate Ranger produces and promotes a site-specific and seasonal event program for visitors. This varies from year to year depending on capacity and includes a range of large-scale, family-orientated activities (e.g. Lantern event) as well as small-scale, specialist events (e.g. wildlife watching). The oakwoods at Little Druim and Lendrick Hill are popular locations to admire native bluebells in May. Glen Finglas is frequently featured as part of the Trust's UK bluebell marketing activity.

Regular private events are organised to support woodland learning amongst local primary schools and teachers; corporate volunteering for Woodland Trust partner organisations; and the sharing of skills & networking amongst Woodland Trust and National Park volunteers. A number of third party event organisers are also licensed to host events at Glen Finglas e.g. non-profit enterprise Skidaddle who deliver adventure sport services.

Welcoming site:

Based upon the calibrated visitor counters we have (in 2016) at least 35,000 visits per annum on the estate. The Visitor Gateway, opened in late 2014, has up to 15,000 visits per annum. Some of the later visits will only be to the Gateway and hence a small proportion will be additional to the 35,000 visits.

The majority of those visits, based upon 2016 survey in the Gateway, are adults (84%) with a high proportion of tourist from outside the UK (40%), mostly from mainland Europe staying in local accommodation. Also a significant number of visitor's is made up of Scottish visitors from around Stirlingshire with fewer from Glasgow and Edinburgh (day trip visitors - approx. 30%) and visitors from the UK who stay in local holiday accommodation (UK tourists - approx. 30%).

Visitors to Glen Finglas largely come to enjoy the scenery and landscape. The most popular activity is walking followed by cycling (either on the estate or as part of a long distance route).

In simple terms based on current information we can segment our visits into 2 types:

- i) People who might be termed "committed explorers" who walk the Meall trail and the Great Trossachs Path. These visits peak in the "shoulder seasons" of spring (April to May) and autumn (October). Included in these visits are also some younger active people including mountain bikers on the Meall trail which is promoted for this use.
- ii) Other visitors exploring the lower trails nearer the Visitor Gateway and Brig o' Turk, which will include families, who visit Lendrick Hill or the Play/Sculpture Trail, with major peak in the middle of the holiday season (August), and lesser peaks in the spring and autumn.

Most visits take place on the lower parts of the estate, or at least people mainly spend time not far from the Visitor Gateway, including the play/sculpture trail i.e. people described in ii) above. The lower numbers of visits (up to 50% less) are those keen walkers/MTBs described in i) above. There is, as well as the expected November to March dip in visits, a dip in all visits in July, and to a lesser extent in September, being the times before and after the main school holiday period, but outwith the peak shoulder months.

The majority of visitors to the Visitor Gateway use the toilet, browse both TGTF & Glen Finglas estate map on the walls & interact with the “Spotted” whiteboard. The low interaction features are the interactive audio-visual screen, the estate history timeline, and other interpretation panels. The two leaflet display areas in the Gateway are well used.

Beyond the Visitor Gateway there are opportunities to geocache and enjoy seasonally available ‘feely boxes’ on one family friendly walk.

Possible barriers to accessing the Estate include:

- The limited offer of public transport to the area. It relies on heavily subsidised on-demand taxi service which operates all year round, also known as Demand Respond Transport (DRT).
- Lack of awareness of the estate in the area (publicity deficiency) which is already cluttered with outdoor recreation opportunities.
- Undulating topography which restricts all-ability access to the estate
- Lack of visibility of the Visitor Gateway from the main road to passing traffic currently restricted due to young trees (they will have their crowns lifted as they develop)
- Limited on-line information about the Estate. The current Woodland Trust website does not offer much flexibility for promoting individual sites e.g. by adding or linking information.

In terms of Woodland Trust categorised visitor segments, Glen Finglas caters for:

- Young Family Outings (play trail, events, colour table, whiteboard, feely boxes, bluebell trail, toilet),
- Retirees’ Outings (Meall viewpoint, toilet, waymarked trails, tailored events, wildlife),
- Young & Mature/Independent Outings (extreme sport, tailored events, Meall walk/cycle, walking TGTF path, socialising, geocaches)

Volunteering:

Volunteers currently fulfil the following roles at Glen Finglas:

- Woodland Trust Visitor Gateway rangers - approx. 10 volunteers advise and orient visitors from the Visitor Gateway
- Loch Lomond & Trossachs National Park (LLTNP) Volunteers - assist the Estate Ranger with practical conservation tasks and site-based events
- Woodland Trust Path Inspection volunteers - carry out regular path surveys to help maintain the path network

Volunteering opportunities are made available to Woodland Trust corporate partners as and when arise.

Schools:

The proximity of local schools to Glen Finglas is as follows: Doune Nursery (15 miles), Killin Nursery (26 miles), Callander nursery (5 miles). The primary schools are: Callander, Aberfoyle (8 miles), Balfron (19 miles), Dunblane (18 miles), Doune, Strathyre (14 miles), Port of Menteith (13 miles). There are also 4 high schools in a radius of 20 miles: Callander, Aberfoyle, Balfron & Dunblane. The ranger service within LLTNP delivers Curriculum for Excellence activities, making use of Glen Finglas and a range of schools contact the office for Duke of Edinburgh orientating & camping locations. There is also long-standing partnership working with local high schools (Callander, Balfron).

The Estate promotes the John Muir Award & WT organised Woodland Discovery Days, however the lack of transport limits their use. There is also the availability of the Teachers Resource Chest in the Visitor Gateway for use by local schools/groups. This free resource is promoted to local primary schools.

Wider community engagement:

The following local businesses help promote the estate and associated activities: non-profit event organisation Skidaddle, Holiday Property Bond Tigh Mor advertises our events and utilises the estate for walks, Venachar Lochside eating establishment advertises TGTF, Wheels Cycle Hire which advertises our path network and outdoor pursuits.

A range of B&Bs also promote Glen Finglas via The Great Trossachs Forest NNR B&B pack.

## Significance

The scale of Glen Finglas is striking; at 4,875ha it is the largest site owned by Woodland Trust and sits within Loch Lomond and The Trossachs National Park and The Great Trossachs Forest National Nature Reserve. It boasts a vast expanse of hills, woodland, water and open heathland and is unique within the Trust's landholdings. Its location means it offers huge opportunities for increasing the enjoyment and understanding of woodland, both for visitors and those unable to physically visit the site (via a variety of online experiences). Although perceived to be 'wild', Glen Finglas can be reached in less than 90 minutes, from Scotland's Central Belt.

The estate offers one of finest examples of upland wood pasture in the country - this appeals to specialist audiences but it is also an attractive landscape of interest to the general public. There is spectacular wildlife and interesting cultural heritage to enjoy including ancient woodland, with ancient woodland, veteran trees, native bluebells, golden eagles, black grouse, otter and much more. A long history of farming ; royal hunting forest between 1300s and 1700s; various art & literary connections e.g. The Ruskin viewpoint on the River Turk is the location of a famous painting of John Ruskin by Sir John Everett Millais.

## Opportunities & Constraints

Access/infrastructure:

Opportunities:

- To maintain existing infrastructure to ensure visitor's a quality visitor experience
- Increase visitor numbers (locally and beyond Stirlingshire)
- Promote all-ability routes (currently 2 on the estate)
- Promote informal camping at Lendrick Hill car park or in the Bull field
- Create new mountain bike route in Glen Casaig
- Promote Visitor Gateway as a flexible space for education groups, local community meetings, consider trailing vending machine

Constraints:

- Need to protect natural heritage especially ancient woods
- Potential conflict between new routes and livestock requirements
- Topography (steep inclines) reduces the opportunity for all-abilities routes
- Poor public transport links limit visitor access
- There is local congestion in Brig o' Turk at weekends and bank holidays, need to manage impact of this as visitor numbers increase
- Local residents have reservations about increased visitor numbers, good communication required
- Including vending machines could negatively impact local businesses, therefore unlikely to go

## ahead

### Communication:

#### Opportunities:

- Increase awareness of Glen Finglas by promoting to local audiences in particular. (update website content, advertise on social media, Trip Advisor, and in local business advertising, develop relationship with local B&Bs and visitor information distributors)
- Estate could be used for specialist education of invited visitors to learn about conservation and management of wood pasture.

#### Constraints:

- Time constraint and work load of Estate Ranger (e.g. estate maintenance, ecological monitoring, etc.).

### Events:

#### Opportunities:

- Deliver seasonal programme of activities and events to engage with local residents & tourists
- Development a suite of charged special interest activities (eg. black grouse safari)
- Engage with external organisations (e.g. local festivals, outdoor-related businesses to promote Glen Finglas visitor opportunities and events)
- Attend local festivals to promote the Estate, events programme and WT membership
- Produce annual event flyer and distribute to local businesses

#### Constraints:

- The estate is relatively remote and challenging to attract great number of people
- Workload of Estate Ranger
- Time availability of staff as most events take place during the weekend

### Welcome site:

#### Opportunities:

- Potential to open Visitor Gateway outside of the normal season when weather is good and large numbers of visitors may be using the Estate
- Increase publicity and awareness
- Upgrade/maintain path conditions (e.g. Druim, Mires, Samson's stone & Dunmore Fort);

#### Constraints:

- Unreliable weather means opening the Visitor Gateway in the low season can't be planned (it must be opportunistic)
- Sustainability of opening Visitor Gateway as currently relies on a local part-time employee
- Not all resident's support the drive to increase visitor numbers

### Volunteers:

#### Opportunities:

- Increase numbers and roles - develop & extend volunteering roles to support our conservation and engagement ambitions e.g. Volunteer Walk Leader, Volunteer Ecological Researchers.

#### Constraints:

- Travel distance for volunteers can be up to 50 miles, a big commitment which requires access to a car.

### Schools:

#### Opportunities:

- Promote Glen Finglas as a destination for outdoor and woodland learning
- Lead outreach work with local schools to encourage them to utilise local green space for learning
- Promote existing WT school products: Green Tree Schools Award, Free Tree Packs and Outdoor Learning Pack for Primary School Teachers.

**Constraints:**

- staff time
- Travel distance to Glen Finglas and cost of transport

**Wider community:**

**Opportunities:**

- Setting up social enterprise (e.g. wood fuel)
- Creation of woodland allotments
- Formation of community woods
- Establish partnership with local enterprises and business for cross promotion

**Constraints:**

- Tested interest in woodland allotments in the past with little to no uptake;
- Limited local active interest/involvement in woods
- Existing community wood in Brig o’ Turk already

### **Factors Causing Change**

**Factors causing change**

The increase in footfall changes the conditions of the path network e.g. erosion and/or mud. This may especially become an issue around Samson’s stone and the Druim.

The availability of future capital funding for infrastructure projects is currently unknown.

As we have an aging population, the number of older visitors is likely to increase which may affect provision of suitable infrastructure.

LLTNP implemented new camping byelaws in March 2017. It’s impact may change the area’s visitor profile and behaviour.

Planned local infrastructure development changes, these include: planned extension of social housing in Brig o’ Turk, Callander South Development (housing and mixed use), Callander Landscape Partnership project and new campsite (ecocamp) at Loch Katrine.

### **Long term Objective (50 years+)**

**Long-term objective**

The estate will continue to provide a welcoming yet diverse landscape, home to an extensive variety of habitats as a result of a dynamic wood pasture ecosystem. Visitors both local and from across the UK and Europe, will have access to a range of informal recreation opportunities suitable for families and adventurers, including walking, mountain biking and fishing.

We want to attract at least 40,000 visits per annum by 2022 and provide high quality infrastructure and resources including self-led play facilities, a seasonal event programme and volunteer engagement with the visiting public.

### **Short term management Objectives for the plan period (5 years)**

**Short term Objective**

**Access/infrastructure:**

- Increase number of visits to 40,000 by 2022 per annum evidenced by maintained and calibrated people counters
- Investigate potential of path network improvements (e.g. perch posts, promote two all-ability routes, improve Druim path & design mountain bike Casaig loop)
- Conduct bi-annual review of the Visitor Gateway and associated information and interpretation
- Scope options to upgrade or replace the interactive audio-visual equipment in the Visitor Gateway

- Monitor impacts of LLTNP by-laws on camping and motorhomes and consider options to work with neighbours and the National Park to improve the visitor experience to the area.

Communication:

- Share best practice of wood pasture management with key audiences by communicating key messages ( three times over a time span of 5 years)
- Investigate opportunities for increasing the Estate's web and social media profile

Events:

- Plan and deliver a series of seasonal events , according to the Estate Ranger's work program, which promote key Woodland Trust seasonal moments and include large-scale family orientated events and high quality special interest events. Volunteers and facilitators will assist with the planning, promotion and delivery of these events.
- Promote the Estate and the Woodland Trust to use by third party event organisers
- Produce an annual events calendar that can be distributed to local businesses and outlets at the start of the season

Welcoming site:

- Give visitors a sensory experience that increases their understanding of woodland related matters and deepens their relationship with the Woodland Trust
- Deliver positive visitor experiences by offering quality, well-maintained services, evaluated through:

- o distributing comment cards, collecting and responding to feedback
- o Carrying out visitor surveys (near end of this timespan to inform next management plan)
- o Evaluating event quality through WT event evaluation survey
- o Reviewing Trip Advisor comments and feedback

Volunteers:

- Investigate the potential for a tasked ecological monitoring role & encourage existing volunteers to sign up for additional roles
- Maintain working relationship with LLTNP volunteers with regards to practical conservation days (e.g. annually)
- Maintain current volunteer relationships
- Hold annual induction and evaluation with Visitor Gateway volunteers to keep them up to date with policy and Estate activities

Schools:

- Investigate potential for outreach to local schools utilising their local greenspace and promoting self-led opportunities including use of Teachers' Resource Chest
- Continue working in partnership with local schools to deliver John Muir Award opportunities ( approximately 4 days per year)
- Encourage local schools to use the site more regularly for outdoor learning, by making regular contact sharing Woodland Trust Outdoor Learning Pack for Primary Teachers, free trees for schools and Green Tree School Awards, Nature Detectives and other resources annually.
- Advertise/promote the site for Forest School use - to local practitioners and teachers

Community:

- Continue to consider and sound out the potential for local community groups' to be involved in the Estate. Communicate any opportunities and/or site activities that may impact them.



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## 6.0 WORK PROGRAMME

Year	Type of Work	Description	Due By
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## APPENDIX 1: COMPARTMENT DESCRIPTIONS

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Key Features Present	Designations
1a	18.66	NULL		Non-wood habitat		Connecting People with woods & trees, Wood Pasture	Ancient Semi Natural Woodland, Archeological Site, Site of Local Nature Conservation Importance, Special Area of Conservation

Compartment 1 comprises a number of fields on the lower ground between the A821 and the north shore of Loch Venachar and also includes Venachar Cottage and farmstead, the main focus of livestock management activities on the estate. Loch Venachar forms part of the River Teith SAC, so designated for its lamprey and Atlantic salmon populations. The semi-natural woodland and unimproved open ground habitats in Compartments 1 and 2 were designated as a local wildlife site, Lendrick Woods, by the Scottish Wildlife Trust, in 1998. It is a diverse area comprising flat fields of improved grassland sometimes cut for silage or grazed by calving cattle or sheep. The Lochshore field behind the steading is semi-improved old pasture. The remainder of the land is rough marshy grassland with small knolls of unimproved acid grassland and scattered woodland. This woodland is all semi-natural, although one knoll of oak was probably enclosed and managed for tanbark in the past. There are distinct stands of mature trees including alder, oak, willow carr and also lines of trees confined to the edges of improved grassland. There are a few mature sycamore forming field boundary trees at the western edge of the compartment. For a more detailed description of the condition of the mature woodland see the Woodland Condition Survey 2017. The numbers of livestock have been reduced over the past 15 years and during this time there has been a noticeable increase in the regeneration of shrubby tree cover in the marshy grassland areas. Rushes are also beginning to spread into the improved grassland. A watermill (18th - 19th century), mill dam and a possible clamp immediately east of the building, have been recorded at the top of Venachar Field (the field at the side of the track leading down to the farm yard). Since spring 2017 the entire compartment is included within the Management Zone as part of the LLTNP "Camping in the Park" initiative, which means that camping is prohibited from 1st March to 30th September and other byelaws apply. The bull field at the extreme east end of the compartment is within a permit zone for camping intended to be available to those arriving by non motorised means (as there is no formal car parking.) Permits are available from LLTNP on line. Anglers periodically light fires and fish along Loch Venachar shore and some leave litter. A path has been constructed on Stirling Council Highways land immediately to the north of the Roadend Field to link the car park in Little Druim Wood with the land to the north of the A821. This path also links Little Druim Car Park to the start of a path up Lendrick Hill. A tarmac management road leads down to Venachar Steading which is the focus of agricultural activity on the lower ground. Venachar Cottage is occupied by the farming contractor. There are two older medium sized sheds and a larger newer general purpose shed. These are used for a workshop, storage of straw, hay and silage and housing some animals, as well as farm vehicle storage. A deer larder was installed in one of these sheds in October 2012. The general purpose shed is used for fodder and machine storage, but could also have potential for additional winter animal housing.

**MANAGEMENT REGIME:** The narrow strips of mainly W7 riparian woodland are to be maintained as high forest. Most of the woods will be managed as grazed high forest. Some of the riparian woods have been fenced to exclude livestock from them and prevent cattle escaping via Loch Venachar. It is anticipated that in the medium term (10-20 years) stock will continue to graze most of the wooded areas. The improved fields are to be managed for grazing by small numbers of sheep, the bulls, young and for short periods sick or calving cattle. The old semi improved pasture is to be maintained by grazing. The only areas on which sheep-dip may be spread are within this compartment, well away from the watercourses. The buildings and equipment are to be well maintained to support the livestock operation.

2a	46.59	Mixed native broadleaves		Wood pasture		Connecting People with woods & trees, Wood Pasture	Ancient Semi Natural Woodland, Archeological Site, National Park, Site of Local Nature Conservation Importance, Site of Special Scientific Interest, Special Area of Conservation
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This compartment comprises mainly Little Druim Wood and The Druim and lies to the south of the A821 and north of Loch Venachar between Venachar Steading and the village of Brig o’ Turk. Little Druim Wood is dominated by a large knoll, with shallow soils on steep slopes. There are also flat, wet, flushed areas, the largest being to the north of the knoll. Drier ground is dominated by dense stands of healthy, young maturing birch with oak regenerating from stumps. Wetter ground is dominated by a mix of birch and grey willow or by stunted open stands of downy birch. There are a number of old oak trees which are thought to have been planted, or their growth favoured, when part of the area was enclosed around 1800. In more recent times the area was grazed by sheep and cattle until 1998 when a stock fence was erected as part of the Woodland Grant Scheme. Roe deer and occasionally red deer frequent the wood. Regeneration is limited, however this is not considered a threat as the woodland is relatively young and healthy. A shrub layer has begun to develop in the years since sheep and cattle have been excluded. The Druim (An Druim - the ridge) comprises the formerly agricultural land of the Offrans township, open heathland and marshy grassland with a smaller area of previously enclosed oak woodland, contiguous with Little Druim Wood. A large swathe of what was once open ground has been colonised by woodland over the past 100 years. This woodland is dominated by healthy, maturing even-aged stands of dense birch, becoming more variable and open towards the western end. Scattered oak is occasional and juniper rare. Birch and/or grey willow occur on wetter/boggy ground, mainly to the north. Bracken is very dense in places both within the woodland and also on the edges. Except for very occasional rowan seedlings, the only regeneration is found within the wet areas to the north-west.. Some rhododendron has been recorded in the woodland and there is also rhododendron along the roadside at the edge of the village. The varied mosaic of woodland and unimproved open ground habitats is of local importance and the area has been designated as a local wildlife site (See Compartment 1) A car park for approx 12 cars was constructed in the north eastern corner in 1999 and from this a surfaced, loop path known as the “Little Druim Wood Walk” has been created within the wood including two viewpoints overlooking the new native woodland on Lendrick Hill to the north. The section of this path, from the car park to the start of the loop, is part of the Core Path network.. A sculpture and play trail was incorporated into the path loop in 2014, starting from the Visitor Gateway in the Lendrick Hill car park, and is popular with families in particular. An extension to the path continues to a seat overlooking Loch Venachar. This follows the route of one of the old tracks to Brig o’ Turk. Another branch of the path following the route of an old, partly stone pitched path from Lendrick Lodge onto The Druim has been repaired to form part of the "Brig o’ Turk Loop Walk". This cross-country footpath crosses the area and sections of boardwalk or stone pitched path were constructed in 2002-03 to help very wet areas to be crossed. To the west of the Druim

the path continues through a narrow strip of woodland owned by the Trust. In order to create a safe link into the village of Brig o' Turk, the Trust has entered into access agreements with several private landowners and created a gravel surfaced path along the top of the roadside field. A tarmac path was constructed immediately adjacent to the A821, to the Stirling Council Highways Department specification, and it is intended that they will adopt this section in due course. These last sections of path form part of the "Brig o'Turk" Core Path. Several old tracks between Brig o' Turk and Lendrick, including the main Strathgartney Road, can be seen and the new path partly follows two of these. There is a stone and turf dyke former enclosure in the middle of the Druim, which was part of the Offrans township. In the car park there is an orientation map and information board. Walks leaflets are also available. There are two picnic tables adjacent to the car park and four log or oak plank seats at viewpoints within the wood. A number of bird boxes have been put up in the wood and are managed by a British Trust for Ornithologists' volunteer as part of the BTO recording scheme. Some of the boxes are designed for spotted flycatchers. The shore of Loch Venachar is included in the Black Water Marshes SSSI and a variety of wildfowl and wetland birds use this area. Otter have also occasionally been seen. The SNH citation for the Blackwater Marshes SSSI states: "Black Water Marshes SSSI lies at the confluence of the Black Water and the west end of Loch Venachar reservoir to the west of Callander. The site comprises an extensive, complex mosaic of wetland habitats. The open water habitat is fringed by a broad zone of open water transition fen with a rich sedge flora. Behind this lies a large almost flat area of floodplain fen. This area is seasonally inundated by water and is dominated by purple moor grassland and soft rush - marsh bedstraw rush pasture overlying nutrient rich peats. The extensive area and largely undisturbed nature of the fen habitats are of particular importance and rare within the Stirling District. The nationally rare bog sedge occurs, together with a number of locally rare plants including small-fruited yellow sedge, melancholy thistle, globe flower, marsh orchid, juniper and aspen. These are not features for which the site is notified but are important components of the fen habitats." Loch Venachar is also part of the River Teith SAC. Important open ground habitats adjacent to the woodland include mires (with the rare sedge *Carex magellanica* found occasionally), swamp vegetation and neutral grassland. Since spring 2017 the entire compartment is included within the Management Zone as part of the LLTNP "Camping in the Park" initiative, which means that camping is prohibited from 1st March to 30th September and other byelaws apply. There are no permit zones.

MANAGEMENT REGIME: The long-term aim is to maintain as high forest with minimum intervention. Domestic livestock will continue to be excluded from Little Druim Wood in order that this remains one of the few areas of the estate in which the public can walk on easy paths without the presence of livestock and where a woodland under-storey can develop. The partially stone pitched paths on the Druim will require ongoing monitoring and maintenance, and some additional wetter sections of path may need to be upgraded. Important open ground habitats and historical features are to be maintained within the Limits of Acceptable Change.

3a	7.18	NULL		Non-wood habitat		Connecting People with woods & trees, Wood Pasture	Archeological Site, National Park
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This area is known as the Brig Field, situated north of the A821 adjacent to the village of Brig o' Turk. It is one of the few large areas of improved grassland on the estate and is used for grazing by small numbers of sheep, the bulls, young and for short periods calving cattle .. There is also a very wet area of marshy grassland dominated by rushes and a smaller area of bracken. A narrow band of riparian woodland runs along the River Turk comprising mainly alder and occasional ash. The woodland has been fenced off to exclude domestic livestock grazing, thereby protecting the river bank and the path. The rest of the area is periodically grazed by sheep, especially at lambing time, and occasionally cattle. The old Strathgartney Road passed through the area crossing the River Turk via the old bridge 230m north of the present one and there is evidence of a building adjacent to the river. There is also evidence of a "probable clamp" (survey by Headland Archaeology Ltd, 15/1/1997). A public right of way runs down the side of the River Turk and is also part of the Core Path network. This has been fenced, in order to separate the public and their dogs from sheep grazing, and to create a grass path between Glen Finglas Road and Brig o' Turk. This has been extended along the A821, with a stone surfaced path, as far as the Byre Inn where walkers can join the tarmac roadside path back to the village. Since spring 2017 the entire compartment is included within the Management Zone as part of the LLTNP "Camping in the Park" initiative, which means that camping is prohibited from 1st March to 30th September and other byelaws apply. There are no permit zones.

MANAGEMENT REGIME: The long-term aim is to continue to manage the field along with the surrounding unimproved grassland for grazing periodically by mainly sheep and occasionally by young cattle. The riparian woodland is to be maintained along at least a third of the River Turk.

4a	20.21	Mixed native broadleaves		Wood pasture		Connecting People with woods & trees, Wood Pasture	Ancient Semi Natural Woodland, Archeological Site, National Park, Special Area of Conservation
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This area, known as Wester, lies in the south-western corner of the estate bounded by Forestry Commission land on three sides. Two privately owned houses "Wester" and "Ben More" are situated in the middle of the Wester field with a right of access over the Trust's track. The land comprises a mosaic of woodland and marshy grassland/mire with a strip of improved grassland on drier ground to the east, previously cut for silage. The woodland comprises large areas of uniform semi-mature birch plus scattered birch trees on wetter ground and some remnant oak woodland. Much of the area is shown as partially enclosed woodland on the 1866 OS map but the woodland appears to have extended into the formerly open ground to the east since then. The cattle graze throughout the area, although are somewhat restricted by the presence of dense bracken, which covers much of the woodland area. The River Turk is included in the Teith SAC. The old Strathgartney Road passed through the area and the remains of the settlement and field system of North Bridge of Turk are still evident. The road and the settlement remains are of local archaeological importance. Since spring 2017 the entire compartment is included within the Management Zone as part of the LLTNP "Camping in the Park" initiative, which means that camping is prohibited from 1st March to 30th September and other byelaws apply. There are no permit zones.

**MANAGEMENT REGIME:** The long-term aim is to manage this woodland / open ground mosaic with periodic grazing of cattle. The woodland is to be gradually regenerated as W11/17 predominantly birch woodland in which the proportion of oak may increase. The river is to be kept free from a build up of large logs, which may damage the old stone road bridge, the scheduled bridge downstream.

5a	7.90	Mixed native broadleaves		Wood pasture	Services & wayleaves	Connecting People with woods & trees, Wood Pasture	Archeological Site, National Park, Site of Special Scientific Interest
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This compartment includes a number of small fields "Lendrick Parks" to the north of the A821, east of Lendrick Lodge. It comprises small areas of semi-improved, old pasture in an intimate mosaic with unimproved acid grassland and bracken on rougher ground and also small patches of scattered woodland. At present small numbers of cattle graze within the fields when the main over wintering areas become poached or when individual cows require special attention. Temporary feed stances are accessed via a stone surfaced track from the A821. Sheep also occasionally graze throughout the area. There is an old stone dyke sheep fank, which is no longer used. A number of locally important archaeological sites lie within this area including part of the townships of Drepan (Drippen) and Lendrick, the Strathgartney Road and a watermill and dam. A gravel surfaced path has been constructed from a gate on the A821, passing the old sheep fank then steeply upwards along the route of an old pony path from Lendrick Lodge (a former shooting lodge) and through the deer fence into the Lendrick Hill woodland creation area. An informal path following the old pony path uses a bridge, built by the proprietor of Lendrick Lodge, a holistic therapy and yoga centre, to cross the Lendrick Burn and then joining the surfaced path.

**MANAGEMENT REGIME:** Long-term the aim is to manage the open ground habitats and scattered woodland through grazing within the "Limits of Acceptable Change". Significant expansion of woodland is constrained by the overhead cables. The path and other public access facilities are to be maintained in good order, as per the Access Management Plan.

6a	3.63	NULL		Non-wood habitat	Services & wayleaves	Connecting People with woods & trees, Wood Pasture	National Park
<p>This is a small compartment situated to the north of the A821 is the focal point for welcoming the general public and visiting groups to the estate. It includes Lendrick Steading, the estate office converted from an old byre in 2003 and Lendrick Farm, the attached cottage, currently occupied by a member of staff. These are accessed via a stone surfaced track and a tarmac road from the A821. A car park has been constructed (2005) 400m to the west of Lendrick Steading, immediately north of the A821 and linked via a stone surfaced footpath to the steading. In 2014 the Visitor Gateway was constructed adjacent to the car park, and in 2016 a new “green car park” was constructed to double the capacity for car parking. The 2 car parks provide parking for approximately 40 cars and this is the main public access point for the estate including into the upper glens, avoiding congestion in the village. The entire estate path network including the Play and Sculpture Trail can be accessed from here and is on the route of the Great Trossachs Path which was completed in 2014. In the car parks there is an interpretation/information panel, picnic tables and signage. The surrounding land comprises small areas of woodland surrounded by mainly marshy grassland and a small field of semi-improved pasture. These are periodically grazed by sheep and cattle. Occasionally the area is flooded by the Lendrick Burn. The woods include a narrow band of riparian woodland, mainly alder, along the Lendrick Burn and a knoll to the east of the car park clad in almost pure oak, which was formerly enclosed and probably managed for tanbark. The riparian woodland is currently unfenced but half of the oak wood has been stock fenced to protect the woodland and the new path. Naturally regenerated birch has established to thicket stage on the west side of the knoll as a result of this fencing. There is also a narrow strip of wet woodland and drier young birch wood running adjacent to the road. Since spring 2017 the entire compartment is included within the Management Zone as part of the LLTNP “Camping in the Park” initiative, which means that camping is prohibited from 1st March to 30th September and other byelaws apply. There are no permit zones.</p> <p>MANAGEMENT REGIME: This area will be managed as the focal point for interface between the Trust and visitors on organised events and the general public. It will also continue to provide a meeting place for the many professional visitors who come to the property. The Visitor Gateway will welcome, orientate and inform visitors and assist with the Trust objective of increasing visitor numbers. The areas through which the paths run will remain fenced off from livestock. The scattered small woods will be managed as high forest and will be gradually regenerated as W11/7 woodland. The green car park will be closed to the public at quiet times to allow for grazing with sheep.</p>							
7a	50.02	Mixed native broadleaves		Wood pasture	Services & wayleaves	Connecting People with woods & trees, Wood Pasture	Ancient Semi Natural Woodland, Archeological Site, National Park, Site of Special Scientific Interest
<p>This compartment is situated to the east of the Glen Finglas Road and north of the A821,</p>							



neighbouring the village of Brig o' Turk. It includes the Heifers' Park, Brian's Park and the School Park. Most of this land was formerly cultivated and the archaeological remains of the field systems and buildings of the former townships of Coshambie and Duncraggan are still evident. Now it is covered in an intimate mosaic of semi-natural open ground habitats and semi-natural woodland of mainly birch. The Brig o' Turk Mires SSSI, is 22.66ha and located by the road adjacent to Brig of Turk, is considered to be one of the best valley mires in Central Scotland. The SNH SSI citation states: "The SSSI is comprised of a relatively undisturbed and extensive valley mire system with adjacent fens and groundwater flushes, and drier slopes dominated by grassland communities and open birchwood. Valley mires are a rare habitat within the Stirling Council area, and this site represents one of the best examples of this habitat type in this area. The mire surface is dominated by species of bog-moss *Sphagnum* spp. which form lawns and carpets throughout the system. Notable species include the locally rare marsh orchid *Dactylorhiza incarnata*, and the bog-sedge *Carex magellanica* which is nationally restricted in its distribution. The groundwater flushes and grasslands include both species-rich and species-poor communities reflecting the variety of soil types. This variation of communities is unusual and notable species include the fairy flax *Linum catharticum* and dioecious sedge *Carex dioica*, both of which are restricted to nutrient-rich soil conditions." The SSSI includes the birch woodland and pasture above the actual mire, as this forms part of its catchment and any alteration to the hydrology is potentially damaging. Historically the mire was dammed and used as the village curling pond. Much of the woodland comprises large uniform areas of maturing birch, together with occasional areas of even-aged, mature oak and a narrow strip of gorge woodland along the Lendrick Burn. The open ground includes semi-improved grassland, with a variety of species, mire vegetation particularly to the west of the area and bracken is common throughout. Sycamore is very rare but occurs by the housing to the west. There is also one mature sycamore near the old dyke in the centre of the site. A stone surfaced track leads to a newly constructed concrete feed stance on the edge of the SSSI. Part of the School Park has been fenced and cattle are excluded to protect the stone surfaced path, which has been constructed through this area. A path has been constructed around the northern margin of the Brig o' Turk Mires, forming part of the "Brig o' Turk Loop" path and is also the "Mires" Core Path. This has been built using a robust boardwalk and stone pitching in order to enable people to walk across the mire and to withstand the cattle. A wide variety of interesting flora can be viewed from the path including large horsetails (*Equisetum fluvatile*) and orchids. The area is also a good habitat for damselflies and dragonflies. The path continues as a partly unsurfaced and, in wetter areas, gravel surfaced path through the School Park to exit at Glen Finglas Road. A path connecting the Mires to the Lendrick Hill Car Park was constructed in 2010 along the north side of the A821. This forms part of the "Brig o'Turk" Core Path. Shepherd's Cottage, a Trust owned and tenanted property is located to the south of the area and is accessed via a stone surfaced track. Part of the School Park has been leased to Stirling Council for a peppercorn rent and on this a small football pitch has been constructed for use by the (currently mothballed) primary school. In 2016 at the east end of the compartment a small area was fenced to allow for the construction of the green car park, which will continue to be grazed periodically by sheep. As part of this work a feed stance was relocated from near the lower burn to a knoll on higher ground to the west with the construction of an associated gravel access track.

**MANAGEMENT REGIME:** Long-term the aim is to manage the area as part of one large unit above the A821 once Lendrick Hill has been opened up to deer and livestock. It will be managed by grazing within the "Limits of Acceptable Change". The mires are to be kept free of significant tree and shrub growth (in consultation with SNH). The public access facilities are to be maintained in good order.

8a	620.9 9	Mixed native broadleaves	2006	Wood establishment	No/poor vehicular access to the site, No/poor vehicular access within the site, Sensitive habitats/species on or adjacent to site, Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Connecting People with woods & trees, Wood Pasture	Ancient Semi Natural Woodland, Ancient Woodland Site, Archeological Site, National Park
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Lendrick Hill is the upland area immediately north of the Woodland Trust office, the main car park and Visitor Gateway. It comprises areas of semi-natural woodland along its southern and western edges. Some of these are of ancient origin and others are more recent. The latter are mainly birch and alder woods growing on former agricultural land, which in the past formed part of the townships of Drepan, Lendrick and Duart. Some of these existing woods were enclosed with a two part deer fence erected in 1998, as part of the Woodland Grant Scheme to establish a large area of new native woodland by natural regeneration and planting within a 558.2ha enclosure. This deer fence is moderately deer proof, but has a working life that is unlikely to extend to the end of this plan period. Small red and roe deer populations are becoming established within the fence. At least 20 ha of bracken, some quite dense, is found in the south east of Lendrick Hill, within the deer fence. The woods to the east of Lendrick Plantation are very scattered, mainly following the burns, with predominantly alder lower down and birch further up the hill. There are also some larger areas of even aged oak, some of which are shown on the 1866 OS map. The broadleaved woodland remaining in the former Lendrick Plantation is predominantly even-aged, mature oak at the foot of the hill. This and the birch woodland following the Lendrick Burn up the hill is ancient woodland. The woodland flora beneath the oak is mainly acid grassland and wild hyacinth (bluebells). The wooded gorge of the Lendrick Burn has a rich bryophyte flora. To the west of Lendrick Plantation the mature / semi-mature woodland stretches from the steep gorge of the Finglas Water to form almost 22.8ha continuous woodland cover up to the deer fence and then tends to follow the burns up onto the hill. Most of this is birch and alder woodland over acid and marshy grassland. The area is shown as a "Roy" site on the ASNW inventory. From the 1866 OS map some of the area appears as very open wood pasture and scattered open grown, veteran trees of alder, oak and birch have survived within the more recent woodland. This area was within the former Glenfinlas Forest, a royal hunting forest in medieval times. There are dense stands of bracken within this area but also areas of wild hyacinth and flushed banks supporting primroses and other wild flowers. The deer fence also encloses a large new native woodland creation area being established under a Woodland Grant Scheme. All open ground within 50m of any seed trees has been left to regenerate naturally. Areas further than 50m from a seed source were planted in 1998-99 with native broadleaves and some areas of Scots pine of local Caledonian pinewood origin. Many thousands of these trees have been dedicated under various Woodland Trust commemorative schemes. Unfortunately, a large fire swept through the young woodland in Spring 2003 and destroyed much of it. The planting design has been amended and 427ha (including associated open ground) was replanted in 2005 and 2006. See the amendment to WGS 033001332 for further details. The areas to be planted and those to be

left as open ground habitats were determined from an NVC survey of the existing vegetation and this was also used to predict the appropriate woodland type. In 2011 supplementary mounding and planting was undertaken to increase tree stocking densities in planted areas on the upper slopes. This work has not been entirely successful, and whilst the WGS has now been signed off by the Forestry Commission, large areas of planted woodland on the upper slopes are establishing slowly or have failed. The lower slopes show much better development of both planted and naturally regenerated new native woodland. There is one main black grouse lek on Lendrick Hill, with approximately five displaying males. Lendrick Plantation, a former conifer plantation is included in the heart of this compartment. This was clear-felled of all the conifers except small stands of Scots pine in 2003-04. This area is now regenerating well and merging with the new woodland on the open hill. There is naturally regenerating Sitka spruce also. The clumps of Scots pine have been affected by windblow but will be left to form deadwood habitats, both standing and fallen, within the new woodland. Large areas of important heathland and bog have been left unplanted within the new woodland. The upper ridge leading up to Stuc Odhar has also been left open maintaining the heathland, bog and acid grassland habitats and this landscape feature. On the eastern side of the hill the Lendrick Hill path goes from Little Druim car park up to a viewpoint next to the "Royal Mail Grove" within the deer fence on Lendrick Hill. From here there is a good view of Loch Venachar. This path extends further up the hill and links with the new paths constructed through Lendrick Plantation. An unsurfaced, partially indistinct, but waymarked hill route has been created through the mounded woodland creation area to allow access for hillwalkers to reach the summit of Stuc Odhar or to traverse and drop down to the hogg shed by Duart. A gravel-surfaced multi purpose path has been constructed through Lendrick Plantation partly following the routes of old paths and this then contours around the hill to link the Lendrick Hill Car Park (Compartment 6) and the main access road into the property, thereby by-passing the village. There is a small car parking area (Dam Road Car Park) for 6 cars at the foot of the tarmac main Glen Finglas access road, which on busy weekends can overflow onto the verges. At this point there is a "Welcome" sign, an information panel and leaflet dispensers with walks leaflets. About half way up the tarmac access road there is a small dry-stone dyke seating area at a viewpoint overlooking Glen Finglas reservoir. At the Dam Road, an orientation panel points the way to the Ruskin view point. A footpath has been built from the tarmac road down to the site where the 19th century painter, Millais, painted the portrait of John Ruskin, author and social thinker. A viewing platform and interpretation panel are located just above this site. The path, platform and panel are part of the Great Trossachs Forest Art & Literary Trail. The area of woodland adjacent to the main access track is included in the bird box project described in Compartment 2

Lendrick Hill is the upland area immediately north of the Woodland Trust office, the main car park and Visitor Gateway. It comprises areas of semi-natural woodland along its southern and western edges. Some of these are of ancient origin and others are more recent. The latter are mainly birch and alder woods growing on former agricultural land, which in the past formed part of the townships of Drepan, Lendrick and Duart. Some of these existing woods were enclosed with a two part deer fence erected in 1998, as part of the Woodland Grant Scheme to establish a large area of new native woodland by natural regeneration and planting within a 558.2ha enclosure. This deer fence is moderately deer proof, but has a working life that is unlikely to extend to the end of this plan period. Small red and roe deer populations are becoming established within the fence. At least 20 ha of bracken, some quite dense, is found in the south east of Lendrick Hill, within the deer fence. The woods to the east of Lendrick Plantation are very scattered, mainly following the burns, with predominantly alder lower down and birch further up the hill. There are also some larger areas of even aged oak, some of which are shown on the 1866 OS map. The broadleaved woodland

remaining in the former Lendrick Plantation is predominantly even-aged, mature oak at the foot of the hill. This and the birch woodland following the Lendrick Burn up the hill is ancient woodland. The woodland flora beneath the oak is mainly acid grassland and wild hyacinth (bluebells). The wooded gorge of the Lendrick Burn has a rich bryophyte flora. To the west of Lendrick Plantation the mature / semi-mature woodland stretches from the steep gorge of the Finglas Water to form almost 22.8ha continuous woodland cover up to the deer fence and then tends to follow the burns up onto the hill. Most of this is birch and alder woodland over acid and marshy grassland. The area is shown as a "Roy" site on the ASNW inventory. From the 1866 OS map some of the area appears as very open wood pasture and scattered open grown, veteran trees of alder, oak and birch have survived within the more recent woodland. This area was within the former Glenfinlas Forest, a royal hunting forest in medieval times. There are dense stands of bracken within this area but also areas of wild hyacinth and flushed banks supporting primroses and other wild flowers. The deer fence also encloses a large new native woodland creation area being established under a Woodland Grant Scheme. All open ground within 50m of any seed trees has been left to regenerate naturally. Areas further than 50m from a seed source were planted in 1998-99 with native broadleaves and some areas of Scots pine of local Caledonian pinewood origin. Many thousands of these trees have been dedicated under various Woodland Trust commemorative schemes. Unfortunately, a large fire swept through the young woodland in Spring 2003 and destroyed much of it. The planting design has been amended and 427ha (including associated open ground) was replanted in 2005 and 2006. See the amendment to WGS 033001332 for further details. The areas to be planted and those to be left as open ground habitats were determined from an NVC survey of the existing vegetation and this was also used to predict the appropriate woodland type. In 2011 supplementary mounding and planting was undertaken to increase tree stocking densities in planted areas on the upper slopes. This work has not been entirely successful, and whilst the WGS has now been signed off by the Forestry Commission, large areas of planted woodland on the upper slopes are establishing slowly or have failed. The lower slopes show much better development of both planted and naturally regenerated new native woodland. There is one main black grouse lek on Lendrick Hill, with approximately five displaying males. Lendrick Plantation, a former conifer plantation is included in the heart of this compartment. This was clear-felled of all the conifers except small stands of Scots pine in 2003-04. This area is now regenerating well and merging with the new woodland on the open hill. There is naturally regenerating Sitka spruce also. The clumps of Scots pine have been affected by windblow but will be left to form deadwood habitats, both standing and fallen, within the new woodland. Large areas of important heathland and bog have been left unplanted within the new woodland. The upper ridge leading up to Stuc Odhar has also been left open maintaining the heathland, bog and acid grassland habitats and this landscape feature. On the eastern side of the hill the Lendrick Hill path goes from Little Druim car park up to a viewpoint next to the "Royal Mail Grove" within the deer fence on Lendrick Hill. From here there is a good view of Loch Venachar. This path extends further up the hill and links with the new paths constructed through Lendrick Plantation. An unsurfaced, partially indistinct, but waymarked hill route has been created through the mounded woodland creation area to allow access for hillwalkers to reach the summit of Stuc Odhar or to traverse and drop down to the hogg shed by Duart. A gravel-surfaced multi purpose path has been constructed through Lendrick Plantation partly following the routes of old paths and this then contours around the hill to link the Lendrick Hill Car Park (Compartment 6) and the main access road into the property, thereby by-passing the village. There is a small car parking area (Dam Road Car Park) for 6 cars at the foot of the tarmac main Glen Finglas access road, which on busy weekends can overflow onto the verges. At this point there is a "Welcome" sign, an information panel and leaflet dispensers with walks leaflets. About half way up the tarmac access road there is a small dry-stone dyke seating area at a viewpoint overlooking Glen Finglas reservoir.

At the Dam Road, an orientation panel points the way to the Ruskin view point. A footpath has been built from the tarmac road down to the site where the 19th century painter, Millais, painted the portrait of John Ruskin, author and social thinker. A viewing platform and interpretation panel are located just above this site. The path, platform and panel are part of the Great Trossachs Forest Art & Literary Trail. The area of woodland adjacent to the main access track is included in the bird box project described in Compartment 2.

MANAGEMENT REGIME: The aim is to maintain the existing predominantly oak and birch (W11) and alder (W7) woodland with small areas of W4 woodland and to extend it up onto Lendrick Hill. In the long-term the semi-natural woodland and open ground habitats, including important heathland will be managed by extensive, all year round grazing along with most of the land to the north of the A821. The new semi-natural woodland, created by both natural regeneration and planting, extends from the existing, in some cases ancient woodland. It is expected that woodland flora and fauna as well as trees will establish within the new woodland on the lower slopes fairly quickly as there are still the vestiges of woodland vegetation on the open hill. The upper slopes at this stage appear to be unlikely to form a dense woodland cover and development may also be restricted as the deer population builds within the fence. Due to the exposure woodland is unlikely to thrive over 450m, except where small clumps of trees and shrubs may establish in sheltered spots on the high level cliffs, so the Stuc Odhar ridge will remain visible. In the short-term deer and livestock will be excluded from the deer fenced area of Lendrick Hill, and the deer fence maintained as long as possible. Further work to establish those areas of planted woodland on the upper slopes that are not establishing is not justifiable other than the reduction of browsing pressure from deer through culling outwith and within the fence. Important viewpoints from the public access routes are to be kept open, as are deer glades, to allow safe deer control within the woodland. The Stuc Odhar route will have waymarking maintained. Cattle such as young heifers will be grazed within the fence from time to time to aid with bracken control and reduction in fire risk.

9a	72.30	NULL		Non-wood habitat	Management factors (eg grazing etc), Sensitive habitats/species on or adjacent to site	Connecting People with woods & trees, Wood Pasture	Archeological Site, National Park
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This compartment lies immediately to the east of Scottish Water’s Glen Finglas reservoir. It includes the Upper Farm Parks and is the focal point for livestock handling in the upper part of the estate. There are small areas of mature semi-natural birch and alder woodland forming narrow bands along the burn-sides. The lower part of the Casaig Burn is covered with ancient woodland, which has now been fenced from grazing domestic livestock. The steeper part of this woodland had been protected from grazing naturally due to the steepness of slope prior to the fencing and supports a wide variety of herbs and is rich in fern species. This is particularly so of the richer, ash dominated, W9 woodland, which lies at the south-west end of the gorge on Scottish Water land. Currently the adjacent fields are subjected to fairly short periods of slightly higher levels of grazing as they are used as holding areas for sheep being treated at the main fank. . Most of the area is acid grassland with some heathland, marshy grassland and bracken. Extensive archaeological remains of the field systems of the former settlement of Duart are visible and are considered to be of local importance. There are a number of buildings within the area accessed via the tarmac access road through Compartment 8. These are "Duart" (let), "Ben Ledi Cottage" (occupied by staff), the hogg shed, the main sheep fank (including dipping facilities and storage) and the Ben Ledi shed used for storage. All these buildings were repaired or upgraded in 1998-2003. There are two tracks through the area - a tarmac track leading out to glens Finglas and Meann and a stone surfaced track heading up Glen Casaig. In 2016 the turbine house for the Glen Casaig hydro scheme was constructed on the west side of the Casaig burn adjacent to the main access track. A population of Canada geese is resident in the fields adjacent to the reservoir. Public access through this area is mainly on the estate tracks but some people do venture across the fields down to the reservoir and across Ach-na-hard to gain access to the Ben Vane ridge. A viewpoint with sandblasted stone orientation feature has been created on a knoll beside the track.

MANAGEMENT REGIME: Long-term the aim is to manage this as part of an extensive grazing regime across the whole of the estate, above the A821, in order to allow open wood pasture to develop. In this area some fences will be retained even in the long-term, with the gates being left open for the majority of the time but leaving the ability to shut livestock in for short periods when they required. The current open ground habitats support a reasonable population of wetland and other birds despite the periodic heavier grazing and trampling pressure and provided sufficient open ground is maintained this should continue.

10a	764.6 2	Mixed native broadleaves		Wood pasture	Gullies/Deep Valleys/Uneven/Rocky ground	Connecting People with woods & trees, Wood Pasture	Ancient Semi Natural Woodland, Archeological Site, National Park
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The whole of the upper Casaig Glen is included in this compartment, extending from the Casaig Burn at 210m above sea level up to the highest point on the property at 850m, just below the summit of Ben Ledi. The Casaig Burn cuts through a steep sided gorge covered in semi-natural woodland of mainly alder. This glen is generally more V shaped than the highly glaciated U shaped glens Finglas and Meann. Most of the hillsides are covered with acid grassland, marshy grassland heathland and bog. The wooded area comprises a large area of relatively healthy woodland dominated by alder with occasional patches of more mixed woodland of birch and the occasional ash; hazel occurs as an under-storey in the southern section. There are scattered veteran trees, which have been high

cut/pollarded and the area appears as wood pasture on the 1866 OS map.. Significant landslides down the steep slopes and also erosion along the burn-side are serious threats to the woodland and also results in large amounts of silt being deposited in the reservoir. In 2001, most of the woodland and surrounding open ground (48.7ha) was fenced with a stock fence with deer fence height strainers, as detailed in WGS 033001332. This did not result in significant regeneration establishing due to deer browsing pressure. In 2014 under an SRDP scheme the deer fence stock fence was upgraded to deer height and approximately 11 hectares of planting was carried out on the west side of the glen and the upper slopes on the east side in spring 2015. The planted trees and regeneration is not yet established, but should become so within the period of this plan. Most of the open ground on the west side of the glen is upland acid grassland with small areas of mire and heather towards the top of the ridge. On the east, in addition to mainly acid grassland, there are large areas of heather moorland, which is an LBAP priority habitat and is protected under Annex 1 of the EC Habitats Directive (92/43/EEC). This is an important habitat for birds such as blackgrouse, hen harrier and peregrine all of which have been recorded on the estate. A black grouse lek exists at the southeast of this woodland, with up to 12 displaying males. Red deer frequent the whole of the area and roe deer have been seen infrequently on the lower part of the glen. Although the average deer density across the whole estate is low, periodically there are incursions of relatively high numbers of red deer into this glen, particularly over-wintering stags. There are 5 main groups of archaeological remains situated between the Glen Casaig Burn and the hill track running roughly parallel with it to the east. They are thought to be clusters of sheiling huts. One of the groups (46 in the Headland Archaeological Report) is particularly well preserved and as such, shall be actively kept clear of woody vegetation. To the north of the bottom end of the Casaig Burn is a large area showing the remains of field systems and a building which were once part of the settlement of Achnahard. Some hillwalkers walk cross country up to Ben Ledi and Ben Vane approaching via the Glen Finglas access road or in greater numbers from outwith the estate, from Balquhiddy for Ben Vane and from south of Strathyre for Ben Ledi. All the routes are described in the Scottish Mountaineering Council guidebook. There is a stone surfaced access track suitable for vehicles up to the main ford and hydro scheme intake at the top of the glen. From here a poorly designed track cuts diagonally across the slope up onto the ridge. This had become severely eroded and repairs have been carried out to help prevent further erosion. In 2016 a run of river 500kW hydro scheme was constructed taking with a 2km pipe from the intake weir to the turbine house at the bottom of the glen with an outfall to the reservoir. A new walkers' path was constructed over the top of the pipe. This path is not yet promoted and is currently not in an ideal state for use having variable surface quality and some steep slopes.

**MANAGEMENT REGIME:** The long-term aim is to manage the whole glen in a wood pasture system, as part of an extensive grazing regime across the whole of the estate above the A821. In the shorter term it is intended to establish woodland by a combination of natural regeneration and planting within the 49 ha enclosure under the current approved SRDP scheme.. Most of the domestic livestock will be removed from the glen, with only occasional grazing by cattle outwith the deer fence. A monitoring program will be instigated to compare the reduced levels of grazing by domestic livestock in this glen, to the summer only cattle grazing in Glen Mean (compartment 11) and the year-round cattle grazing in Glen Finglas (compartment 12). Once regeneration and planting is established, the deer fencing will be removed and consideration given as to whether domestic livestock should be fully re-introduced. The woodland component will vary in extent and density as per the "Limits of Acceptable Change". The scope will be investigated to upgrade the walkers' path over the hydro pipe to create a promoted circular path within the glen.

11a	1,236 .77	Mixed native broadleaves	2000	Wood establishment	Mostly wet ground/exposed site, Sensitive habitats/species on or adjacent to site, Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Connecting People with woods & trees, Wood Pasture	Ancient Semi Natural Woodland, Archeological Site, National Park
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This compartment includes the whole of Glen Meann (Gleann nam Meann - glen of the young roes) which extends from the shore of Glen Finglas Reservoir at 160m altitude, up to the estate march at 810m, almost at the summit of Ben Vane. This glen is U shaped by glaciation with a wide glen base and fairly smooth, steep glen sides. Most of the land comprises upland open ground habitats but there are very scattered fragments of ancient woodland. Much of this glen formed part of Glenfinlas Forest - a royal hunting forest in medieval times. There is a narrow band of riparian woodland, mainly mature / semi mature alder running intermittently up the Glen Meann Burn, with more mixed woodland to the south. At the northern end there is a small gorge of mixed woodland including birch, alder, willow and hazel with elm and guelder rose and a varied field layer of woodland species. On another northern tributary there is the only group of aspen on the property. The rest of the woodland tends to be in small, scattered patches often closely associated with the minor watercourses running up the hillsides. A large number of the trees are veteran or ancient, high cut/pollarded alder with some notable ash and hazel specimens. There are an estimated 2,300 existing trees in Glen Meann (excluding the new planting). Of these it is estimated that 1,380 can be classified as "veteran" and 19 as "ancient". Most of the land is acid grassland with extensive areas of marshy grassland and some scattered bracken (approx 10ha). There is also heathland and bog on the northern plateau and along the march. There is a significant area of upland calcareous grassland just below the rocky upper ridge of Meall Cala (The Meall) and numerous flushed areas showing neutral vegetation. 229.7ha on the west side of the glen was deer fenced in 2000 and in this enclosure areas within 50m of existing trees have been left to regenerate naturally. Beyond the 50m zone, most of the hillside has been planted (147ha, including 86ha over 400m) as new native broadleaved woodland with some juniper. The planting is mainly on the drier ridges leaving the wet flushes open, although these may become in-filled with natural regeneration in due course. The planting goes up to 500m but above 350m there is a noticeable reduction in tree growth and survival. See WGS 033001332. A somewhat mobile black grouse lek (approx. 2 to 4 males) has established at the northern end of the area within and outwith the deer fence. The Glen Meann (West) enclosure now has extensive areas of planting and natural regeneration well established, and the WGS establishment obligations have been closed off by the Forestry Commission. Cattle were introduced into the Glen Meann (West) new native woodland area in May 2014 for the first time and approximately 30 to 35 steers were grazed in the area over the summers of 2014 to 2016. In 2017 this practice was temporarily discontinued as after 2 deer break ins, it was judged that browsing levels were excessive. In 2014 under an SRDP scheme the east side of Glen Meann was deer fenced over 120 hectares to enclose the majority of the remnant woodland on this side of the glen. Within this approximately 32 hectares of ground was planted, with natural regeneration to be accepted elsewhere. The James Hutton Institute RSPB, and the University of Stirling have been using Glen Finglas Estate for biodiversity and grazing research work, funded by SGRPID. Two of the survey areas lie within Glen Meann. Periodically high numbers of red deer are counted on Meall



Cala and to date little tree regeneration has emerged out with the Glen Meann West deer fence. There are numerous archaeological remains of buildings and field systems still visible within the lower part of the glen. At Tom a Phearsan within the Meall Park there is a site, thought to be funerary cairns, which, although undesignated, is considered to be of national importance. A large area on the western slope of the Ben Vane ridge is of great interest to quaternary geologists being a text-book example of a rock slope fault. It is designated as the Ben Vane Geological Conservation Review site. There is a Landrover track running up the entire length of the glen and this then continues up onto the plateau above the Meall, returning through Glen Finglas. In historical times there was a drovers' route through Glen Meann which continued over the Beallach and down into Balquhiddy to the north. This is a public right of way and is still well used, by walkers, as is the "Meall Trail" around the hill track, which is used by both walkers and mountain bikers. Two bridges suitable for ATVs and pedestrians and a large culvert have been constructed across the Glen Meann Burn to allow this to be crossed when in spate.

MANAGEMENT REGIME: The long-term aim is to manage this glen as wood pasture, as part of one single unit, including most of the estate above the A821. The extent and density of the woodland will be within the "Limits of Acceptable Change". In the short term it is proposed that the Glen Meann (West) and Glen Meann (East) enclosures are maintained as far as possible deer-proof to allow these new native woodland areas to establish. Cattle can still be seasonally grazed within Glen Meann (West) for fire suppression and biodiversity benefits depending on deer browsing impacts. Once planting and natural regeneration have been established, the deer fencing will be removed. Around 30 breeding female cattle and 30 steers will be grazed in the summer only. A monitoring program will be instigated to compare the summer only cattle grazing in this glen, to the year-round cattle grazing in Glen Finglas (compartment 12) and the reduced level of domestic livestock grazing in Glen Casaig (compartment 10). The adjacent Meall track is to be maintained as the management access to the glen and also as a main public access route for mountain bikers and walkers. It could also be used by horses. The funeral cairns in the Meall Park shall be maintained free of woody vegetation and mechanical damage.

12a	1,236 .14	Mixed native broadleaves		Wood pasture	Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Connecting People with woods & trees, Wood Pasture	Ancient Semi Natural Woodland, Archeological Site, National Park
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This compartment covers the whole of the upper Finglas Glen from the reservoir, at 160m asl, to the top of the Groddach, on the western march, at a height of 565m and 670m at the summit of the Meall (Meall Cala) on the east. The Gaelic translation of Glen Finglas or Gleann Fionnghlais is either glen of the white water or fair and green glen - both apt descriptions of this attractive upland glen. The glen has the distinct U shape formed by glaciation, with numerous moraines and erratics scattered on the wide floor of the glen and steep, fairly smooth slopes either side. The vegetation is mainly acid and marshy grassland with scattered patches of bracken (approx 34ha). Unusually for such an upland Scottish glen it is still relatively well covered with semi-natural woodland. The whole glen once was part of Glenfinlas Forest, a medieval, royal hunting forest. The main species are birch and alder with frequent rowan on both sides of the glen but within the Meall Wood on the eastern side there are areas dominated by hazel and the occasional ash and bird cherry are present. On the slopes the woodland varies from closed canopy to very scattered open grown trees. It is estimated that there is a population of about 7,700 established trees within this glen, of which

over 50 are "ancient" and a further 1,900 can be classified as "veterans". Occasional specimens are enormous and many exhibit old growth features such as the presence of "bird trees", particularly rowan, established when the tree seed becomes lodged in crevices in the host tree and then grows to form a new tree growing out of the old one. There are also many layered trees, produced when an old tree falls over and its branches grow up to form one or more "new" trees. Within the Meall Wood there are two areas, of 1-2ha, with a very high proportion of hazel. These have an unusual single stemmed form and appear to have been high cut/pollarded at approximately 1-1.5m. Many of the other trees of alder, ash and birch also appear to have been pollarded at this height. It is thought that this area has been wood pasture for many centuries and this land use and the age of the trees has given rise to a varied flora and fauna, in particular lichens, which are a good indicator of biodiversity in such habitats. There are also some areas of younger trees. These are most commonly alder on areas covered by gravel brought down in flash floods, which occur from time to time. Also some other species including hazel have established to above normal deer browsing height. On the upper slopes and above the denser woodland a scatter of individual hawthorns are establishing, some of these sheltering young ash, alder and rowan. The glen floor is more open rush pasture but has ribbons of woodland, mainly alder, along the Finglas Water and its tributaries linking each side of the glen. There are archaeological remains of old settlements, including 14 stone buildings and associated cultivation remains. Large areas of the open woodland and scattered trees on both the south west [the Groddach (265.2ha)] and north east [the Hazel Grove (296.7ha)] sides of the glen were stock fenced in 2000-2001, with deer height strainers. However, the Hazel Grove has had a year-round open-gate policy from 2006 until 2015. In 2016 and 2017 the cattle were excluded for a short period in the spring as part of the current SRDP Agri-Environment Scheme.. Over 2012 to 2014 the Groddach enclosure had winter seasonal grazing by cattle and ground preparation through application of asulox to control bracken. In 2015 the Groddach stock fence was upgraded to deer height and the enclosure enlarged under an SRDP for new native woodland by natural regeneration. New deer fencing was erected to link with existing Forestry Commission deer fences above Loch Katrine to enclose Primrose Hill and an area of 525 hectares, 305 hectares of which is on Glen Finglas Estate. In the winter of 2016/17 areas of montane woodland were planted across both ownerships over the tops above Lochan nan Ni. The remaining unenclosed land in the glen is mainly acid and marshy grassland and bogs is grazed throughout the year by up to 35 cattle. The third survey area used by the James Hutton Institute for the Glen Finglas Grazing Experiment lies within this compartment. (See compartment 11). The Meall Landrover track which is well used by walkers and mountain bikers passes through the glen.

This compartment covers the whole of the upper Finglas Glen from the reservoir, at 160m asl, to the top of the Groddach, on the western march, at a height of 565m and 670m at the summit of the Meall (Meall Cala) on the east. The Gaelic translation of Glen Finglas or Gleann Fionnghlais is either glen of the white water or fair and green glen - both apt descriptions of this attractive upland glen. The glen has the distinct U shape formed by glaciation, with numerous moraines and erratics scattered on the wide floor of the glen and steep, fairly smooth slopes either side. The vegetation is mainly acid and marshy grassland with scattered patches of bracken (approx 34ha). Unusually for such an upland Scottish glen it is still relatively well covered with semi-natural woodland. The whole glen once was part of Glenfinlas Forest, a medieval, royal hunting forest. The main species are birch and alder with frequent rowan on both sides of the glen but within the Meall Wood on the eastern side there are areas dominated by hazel and the occasional ash and bird cherry are present. On the slopes the woodland varies from closed canopy to very scattered open grown trees.

It is estimated that there is a population of about 7,700 established trees within this glen, of which over 50 are "ancient" and a further 1,900 can be classified as "veterans". Occasional specimens are

enormous and many exhibit old growth features such as the presence of "bird trees", particularly rowan, established when the tree seed becomes lodged in crevices in the host tree and then grows to form a new tree growing out of the old one. There are also many layered trees, produced when an old tree falls over and its branches grow up to form one or more "new" trees. Within the Meall Wood there are two areas, of 1-2ha, with a very high proportion of hazel. These have an unusual single stemmed form and appear to have been high cut/pollarded at approximately 1-1.5m. Many of the other trees of alder, ash and birch also appear to have been pollarded at this height. It is thought that this area has been wood pasture for many centuries and this land use and the age of the trees has given rise to a varied flora and fauna, in particular lichens, which are a good indicator of biodiversity in such habitats. There are also some areas of younger trees. These are most commonly alder on areas covered by gravel brought down in flash floods, which occur from time to time. Also some other species including hazel have established to above normal deer browsing height. On the upper slopes and above the denser woodland a scatter of individual hawthorns are establishing, some of these sheltering young ash, alder and rowan. The glen floor is more open rush pasture but has ribbons of woodland, mainly alder, along the Finglas Water and its tributaries linking each side of the glen. There are archaeological remains of old settlements, including 14 stone buildings and associated cultivation remains. Large areas of the open woodland and scattered trees on both the south west [the Groddach (265.2ha)] and north east [the Hazel Grove (296.7ha)] sides of the glen were stock fenced in 2000-2001, with deer height strainers. However, the Hazel Grove has had a year-round open-gate policy from 2006 until 2015. In 2016 and 2017 the cattle were excluded for a short period in the spring as part of the current SRDP Agri-Environment Scheme.. Over 2012 to 2014 the Groddach enclosure had winter seasonal grazing by cattle and ground preparation through application of asulox to control bracken. In 2015 the Groddach stock fence was upgraded to deer height and the enclosure enlarged under an SRDP for new native woodland by natural regeneration. New deer fencing was erected to link with existing Forestry Commission deer fences above Loch Katrine to enclose Primrose Hill and an area of 525 hectares, 305 hectares of which is on Glen Finglas Estate. In the winter of 2016/17 areas of montane woodland were planted across both ownerships over the tops above Lochan nan Ni. The remaining unenclosed land in the glen is mainly acid and marshy grassland and bogs is grazed throughout the year by up to 35 cattle. The third survey area used by the James Hutton Institute for the Glen Finglas Grazing Experiment lies within this compartment. (See compartment 11).The Meall Landrover track which is well used by walkers and mountain bikers passes through the glen.

**MANAGEMENT REGIME:** In the long-term this glen, along with the majority of the estate above the A821, will be managed as one unit as a wood pasture system through extensive year round grazing. The extent and density of the woodland and other characteristics will be kept within the "Limits of Acceptable Change". In the shorter term once regeneration within the enclosure has been established, the deer fencing will be removed in consultation with Forestry Commission Scotland. Domestic livestock will be grazed year round, outwith deer-fenced areas, with around 35 breeding cows in the summer and 35steers in the winter. A monitoring program will be instigated to compare the summer only cattle grazing in Glen Mean (compartment 11), to the year-round cattle grazing in this glen and the reduced level of grazing by domestic livestock in Glen Casaig (compartment 10). Any existing stock fences, not converted to deer fence, shall be retained, but gates left open to allow animals' free access around the glen. In the long term the intention is that all the internal fences will be removed. Once adjustments have been made to livestock numbers in Glen Meann and Glen Casaig the livestock from the different glens will be allowed to roam at will between them. See the Grazing Management Plan. Bracken shall be monitored and controlled if necessary. There is scope

to undertake restoration of the Moine nan Each blanket peat, and the potential for this will be explored within the management plan period.

13a	50.00	Mixed native broadleaves		Wood pasture		Connecting People with woods & trees, Wood Pasture	
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Milton lowland area: This compartment, together with compartment 14, is on a 51yr lease from Moray Estates, commencing on 1st January 2004. Subcompartment 13a is largely boggy with large patches of rushes. Patches of gorse are growing well, particularly along the many burns running down the site towards Loch Venachar. The area is an important potential habitat for breeding waders, although only snipe are currently present, with curlew on grazing land to the south of the main road. It is grazed year round with 30 to 35 cattle. The cattle are free to roam between subcompartments a and b. A survey by CFA Ecology published in January 2004, identified 15 archaeological sites, details of which can be found in the survey report, contained within the Milton Environmental Statement (January 2005). Two overhead power cables run through the subcompartment (EW), with two branches off the more southerly one.

MANAGEMENT REGIME: The potential wader habitat, forming subcompartment a, shall be managed by continued grazing at low intensity, with Luing cattle.

13b	152.00	Mixed native broadleaves	2017	Wood establishment		Connecting People with woods & trees, Wood Pasture	
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Subcompartment b is largely drier pasture and grazed by Luing cattle allowed to roam freely, year round, between subcompartments a and b. Bracken and gorse cover increase towards the east of the subcompartment. In 2014 the Great Trossachs Path was constructed passing through this area linking into path sections in Compartments 15 and through Forestry Commission land to Compartment 8. In 2016 an area of 50 hectares was deer fenced under a Forestry Grant Scheme, linking with the existing deer fence on the southern boundary of Compartment 14. Within this approximately 35 hectares was planted with new native woodland, with early signs of good natural regeneration across the area. Existing tree cover in this sub-compartment is sparse, but as well as scattered trees, small wooded patches do occur, totalling to approximately 8ha. Oak dominates at the western edge of the subcompartment, with some evidence of past coppice management. The remaining area is dominated by birch, with willow in the wetter areas and occasional oak. A limited area of ash woodland is associated with wet flushes on and below the crag, south of Dunmore Fort, an ancient scheduled monument. A survey by CFA Ecology published in January 2004, identified 34 archaeological sites (one of these is shared with compartment 14), details of which can be found in the survey report, contained within the Milton Environmental Statement (January 2005). An iron age fort, known as Dunmore Fort, is located on the eastern edge of the subcompartment. A desire footpath leads up to it and around the back, back to the main footpath. The eastern end of the Great Trossachs Path herewas built in 2008, linking to the Bochastle Forestry Commission car park, to the east of compartment 15, through Bochastle (comp 15) and down to the layby at Gartchonzie, opposite the Invertrossachs turnoff. The fort is a Scheduled Ancient Monument. A right of Way runs NS from Coilantogle Steading. Beginning as an old access track, it becomes a footpath just before exiting the compartment and heading up to the summit of Ben Ledi (through comp 14)... Two overhead power cables run through the subcompartment (EW). In 2016 Moray Estates constructed a hydro scheme at the western end of the sub-compartment, and the pipe between the intake on FCS land and the turbine house on Moray Estate land passes through the area, visible where it crosses the Milton burn.

MANAGEMENT REGIME: The woodland area will be established and ultimately the deer fence removed. Luing cattle will continue to graze the site extensively, at low intensity The fort shall be maintained free of mechanical damage and excessive encroachment of trees and scrub.

14a	555.0 0	Mixed native broadleaves	2008	Wood establishment		Connecting People with woods & trees, Wood Pasture	
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Milton upland Area: This compartment is made up of a matrix of rough upland grazing, formerly grazed intensively with sheep, and native trees, mostly birch and willow, with the occasional oak. Three sections of deer fence have been erected.: 147ha at the southern end of the compartment; 31ha towards the north and a further 20ha in the south west. Each have been planted with a mixture of native broad leaves and some Scots pine, leaving 20% open ground in each fenced section. A survey by CFA Ecology published in January 2004, identified 3 archaeological sites (one of these is shared with compartment 13B), details of which can be found in the survey report, contained within the Milton Environmental Statement (January 2005). A management track runs along the western edge north, from Milton Farmhouse. An ATV bridge is positioned across Milton Glen Burn, towards the northern end of the track. A second track branches west, crossing a ford with a vehicular bridge to the side. A right of Way runs NS from Coilintogle Steading, through compartment 13b and then north towards the summit of Ben Ledi. One power cable runs through a small part of the compartment at the southern end.

MANAGEMENT REGIME: In the long-term this glen, along with the majority of the estate above the A821, will be managed as a single unit wood pasture system through extensive low intensity grazing, all year round. The extent and density of the woodland and other characteristics will be kept within the "Limits of Acceptable Change". Once regeneration and planted trees have established, the deer fencing will be removed.

15a	23.00	Mixed native broadleaves	2010	Wood establishment		Connecting People with woods & trees, Wood Pasture	
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Bochastle Field: This is a hill of formerly rough grazing with a good display of bluebells (wild hyacinth) in the spring. The whole 23ha has been enclosed with a temporary deer fence. And planted with 13ha of native broadleaves, now largely established. The glacial erratic known locally as Samson's Stone is on the summit of the hill and has been left clear of new planting. The remains of a stone and earth field boundary bank (not fully intact) lie at the west of the site, as found by CFA Ecology, in a survey published in January 2004. A multipurpose track was built in 2008 from the Forestry Commission car park to the east of the site, along the southern edge to the Gartchonzie Layby (comp 13b), and this is now incorporated as part of the Great Trossachs Path. Two overhead power cables run through the compartment (S to NW).

MANAGEMENT REGIME: In the long-term this glen, along with the majority of the estate above the A821, will be managed as a single unit wood pasture system through extensive low intensity grazing, all year round. The extent and density of the woodland and other characteristics will be kept within the "Limits of Acceptable Change". Once regeneration and tree planting has established, the deer fencing will be removed.

## GLOSSARY

### **Ancient Woodland**

Ancient woods are defined as those where there has been continuous woodland cover since at least 1600 AD. In Scotland ancient woods are defined strictly as sites shown as semi-natural woodland on the 'Roy' maps (a military survey carried out in 1750 AD, which is the best source of historical map evidence) and as woodland all subsequent maps. However, they have been combined with long-established woods of semi-natural origin (originating from between 1750 and 1860) into a single category of Ancient Semi-Natural Woodland to take account of uncertainties in their identification. Ancient woods include Ancient Semi-Natural Woodland and plantations on Ancient Woodland Sites (see below). May support many species that are only found in ancient woodland.

### **Ancient Semi - Natural Woodland**

Stands in ancient woods defined as those consisting predominantly of native trees and shrubs that have not obviously been planted, which have arisen from natural regeneration or coppice regrowth.

### **Ancient Woodland Site**

Stands in ancient woods that have been converted to plantations, of coniferous, broadleaved or mixed species, usually for timber production, including plantations of native species planted so closely together that any semi-natural elements of the understorey have been suppressed.

### **Beating Up**

Replacing any newly planted trees that have died in the first few years after planting.

### **Broadleaf**

A tree having broad leaves (such as oak) rather than needles found on conifers (such as Scots pine).

### **Canopy**

The uppermost layer of vegetation in a woodland, or the upper foliage and branches of an individual tree.

### **Clearfell**

Felling of all trees within a defined area.

### **Compartment**

Permanent management division of a woodland, usually defined on site by permanent features such as roads. See Sub-compartments.

### **Conifer**

A tree having needles, rather than broadleaves, and typically bearing cones.

### **Continuous Cover forestry**

A term used for managing woods to ensure that there are groups or individual trees of different ages scattered over the whole wood and that some mature tree cover is always maintained. Management is by repeated thinning and no large areas are ever completely felled all at once.

### **Coppice**

Trees which are cut back to ground levels at regular intervals (3-25 years).

### **Exotic (non-native) Species**

Species originating from other countries (or other parts of the UK) that have been introduced by humans, deliberately or accidentally.

### **Field Layer**

Layer of small, non-woody herbaceous plants such as bluebells.

### **Group Fell**

The felling of a small group of trees, often to promote natural regeneration or allow planting.

### **Long Term Retention**

Discrete groups of trees (or in some cases single trees) that are retained significantly past their economic felling age. Operations may still be carried out within them and thinning is often necessary to maintain stability.

### **Minimum Intervention**

Areas where no operations (such as thinning) will take place other than to protect public safety or possibly to control invasive exotic species.

### **Mixed Woodland**

Woodland made up of broadleaved and coniferous trees.

### **National vegetation classification (NVC)**

A classification scheme that allows an area of vegetation to be assigned to the standardised type that best matches the combination of plant species that it contains. All woodlands in the UK can be described as being one of 18 main woodland types (W1 - W18), which principally reflect soil and climatic conditions. For example, Upland Oakwoods are type W11, and normally occur on well drained infertile soils in the cooler and wetter north and west of Britain. Each main type can be subdivided into numerous subtypes. Most real woods contain more than one type or sub-type and inevitably some woods are intermediate in character and can't be properly described by any sub type.

### **Native Species**

Species that arrived in Britain without human assistance.

### **Natural Regeneration**

Naturally grown trees from seeds falling from mature trees. Also regeneration from coppicing and suckering.



## **Origin & Provenance**

The provenance of a tree or seed is the place where seed was collected to grow the tree or plant. The origin is the geographical location within the natural range of a species from where seeds/tree originally derives. Thus an acorn collected from a Turkey oak in Edinburgh would have an Edinburgh provenance and a southern European origin.

## **Re-Stocking**

Re-planting an area of woodland, after it has been felled.

## **Shrub Layer**

Formed by woody plants 1-10m tall.

## **Silviculture**

The growing and care of trees in woodlands.

## **Stand**

Trees of one type or species, grouped together within a woodland.

## **Sub-Compartment**

Temporary management division of a compartment, which may change between management plan periods.

## **Thinning**

The felling of a proportion of individual trees within a given area. The remaining trees grow to fill in the space created.

## **Tubex or Grow or Tuley Tubes**

Tubes placed over newly planted trees or natural regeneration that promote growth and provide protection from animals such as rabbits and deer.

## **Weeding**

The control of vegetation immediately around newly planted trees or natural regeneration to promote tree growth until they become established. Either by hand cutting or with carefully selected weed killers such as glyphosate.

## **Windblow/Windthrow**

Trees or groups of trees blown over (usually uprooted) by strong winds and gales.