

Woodland Trust Management Plan

# Whinny Hill Wood (2024 – 2029)



WOODLAND  
TRUST

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## Introduction to the Woodland Trust Estate

The Woodland Trust owns and cares for well over 1,250 sites covering almost 30,000 hectares (ha) across the UK. This includes more than 4,000ha of ancient semi-natural woodland and almost 4,000ha of non-native plantations on ancient woodland sites and we have created over 5,000ha of new native woodland. We also manage other valuable habitats such as flower-rich grasslands, heaths, ponds/lakes and moorland.

Our Vision is:

“A UK rich in native woods and trees for people and wildlife.”

To realise all the environmental, social and economic benefits woods and trees bring to society, we:

- **Create Woodland** – championing the need to hugely increase the UK’s native woodland and trees.
- **Protect Woodland** – fighting to defend native woodland, especially irreplaceable ancient woodland and veteran trees; there should be no loss of ancient woodland
- **Restore Woodland** – ensuring the sensitive restoration of all damaged ancient woodland and the re-creation of native wooded landscapes.

# Management of the Woodland Trust Estate

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.

The following principles provide an overarching framework to guide the management of all our sites but we recognise that all woods are different and that their management also needs to reflect their local landscape, history and where appropriate support local projects and initiatives.

1. Our woods are managed to maintain their intrinsic key features of value and to reflect those of the surrounding landscape. We intervene in our woods when there is evidence that it is necessary to maintain or improve biodiversity, safety and to further the development of more resilient woods and landscapes.
2. We establish new native woodland for all the positive reasons set out in our Conservation Principles, preferably using natural regeneration but often by planting trees, 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. Where possible, we pro-actively engage with people to help them appreciate the value of woods and trees.
4. The long term vision for all our 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 natural and cultural heritage value of sites is taken into account in our management and in particular, our ancient trees are retained for as long as possible.
7. Land and woods can generate income both from the sustainable harvesting of wood products and the delivery of other services. We therefore consider the appropriateness of opportunities 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 encourage our woods to be used for 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. We maintain a network of sites for long-term monitoring and trials leading to reductions in plastics and pesticides.
10. Any activities we undertake are in line with our wider Conservation Principles, conform to sustainable forest management practices, are appropriate for the site and balanced with our primary objectives of enhancing the biodiversity and recreational value of our woods and the wider landscapes.

## The Public Management Plan

This public management plan describes the site and sets out the long term aims for our management and lists the Key Features which drive our management actions. The Key Features are specific to this site – their significance is outlined together with our long, 50 years and beyond, and our short, the next 5 years, term objectives for the management and enhancement of these features. The short term objectives are complemented by an outline Work Programme for the period of this management plan aimed at delivering our management aims.

Detailed compartment descriptions are listed in the appendices which include any major management constraints and designations. Any legally confidential or sensitive species information about this site is not included in this version of the plan.

There is a formal review of this plan every 5 years and we continually monitor our sites to assess the success of our management, therefore this printed version may quickly become out of date, particularly in relation to the planned work programme.

Please either consult The Woodland Trust website

[www.woodlandtrust.org.uk](http://www.woodlandtrust.org.uk)

or contact the Woodland Trust

[operations@woodlandtrust.org.uk](mailto:operations@woodlandtrust.org.uk)

to confirm details of the current management programme.

A short glossary of technical terms can be found at the end of the plan.

## Location and Access

Location maps and directions for how to find and access our woods, including this site, can be found by using the following link to the Woodland Trust web-site which contains information on accessible woodlands across the UK

<https://www.woodlandtrust.org.uk/visiting-woods/find-woods/>

In Scotland access to our sites is in accordance with the Land Reform Act (of Scotland) 2003 and the Scottish Outdoor Access Code.

In England, Wales and NI, with the exception of designated Public Rights of Ways, all routes across our sites are permissive in nature and where we have specific access provision for horse riders and/or cyclists this will be noted in the management plan.

# The Management Plan

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GLOSSARY

## 1. SITE DETAILS

### Whinny Hill Wood

Location:	Boturich	Grid	reference:	NS397848	OS	1:50,000	Sheet	No.	56
Area:	102.91 hectares (254.30 acres)								
External Designations:	National Park, National Scenic Area								
Internal Designations:	N/A								

## 2. SITE DESCRIPTION

Whinny Hill Wood is situated to the south of Loch Lomond, 2 km to the north of Balloch. The wood occupies two hilltops, covering both slopes of the northern Knockour Hill and the north-west slopes and summit of the southern Whinny Hill. Between the hills, valleys run to the south-west and the north-east. Altitude ranges from 80m above sea level at the public road in the south-west corner to 175m above sea level on the eastern summit of Knockour Hill.

The site is surrounded by a mixture of open fields and mature woodland. Balloch Castle Country Park lies adjacent to the site on its south-western boundary.

The geology of the area is Lower Devonian old red sandstones. These give rise to brown forest soils, with gleying especially in less freely draining areas such as level ground and hollows. There are occasional areas of humus-iron podzols on Knockour Hill. The Macaulay Land Use Research Institute climate map identifies this area as, warm rather wet lowland with moderate exposure and fairly mild to moderate winters. There is one major burn running through the site towards the north-east, into the Tulloch Burn and then into Loch Lomond. To the north of this burn there lies a pond. The hill slopes can be steep in places, especially to the north of Knockour Hill.

The woodland is quite diverse in its structure and consists largely of: (i) mixed native broadleaves planted c. 2004 to replace mature conifer stands, (ii) planting and natural regeneration of birch and other broadleaves dating from felling and restocking in the late 1990s, (iii) mixed conifers consisting of hybrid larch, western hemlock and Scots pine, most of which were planted in the 1950s and 60s. There are smaller stands of semi-mature broadleaves including ash, beech, sycamore, birch and willow, along with smaller groups of more mature, veteran trees, mainly sycamore and the occasional ash. Several areas of conifer stands still remain and there is abundant natural regeneration of both conifers and broadleaves across the site. An area of semi-improved grassland in the middle of the site within a deer fence was also partly planted in 2000 and is now well established, and interlinked with areas of open grassland.

Wind damage in the remaining conifer stands continues to be an issue, although the identification of larch trees infected by *Phytophthora ramorum* in 2022 and the associated Statutory Plant Health Notice will determine the majority of management work required in this plan period.

The ground flora is diverse across the site and varies with moisture and nutrient regimes and tree cover. There are several parts of the site where there are bluebells and other species indicative of long established and ancient woodland, although only small pockets of the area are included in the Ancient Woodland Inventory. There are also areas of more peaty soils on the hilltops. The grassland area in the middle of the site includes a good range of meadow flora and a large number of greater butterfly orchids and other common orchids. The other significant habitats are wetlands and watercourses. There are several small flushes and areas of marsh and bog dominated by sedges and rushes.

The site was formerly part of the Boturich Estate. Most of the area, except compartment 7 and the north-east field (compartment 11) had been planted with conifers and belts of beech and sycamore in the 1960s. It had been designed to produce a useful timber crop and, along with the duck pond, was at that time suitable for shooting. Several areas on the southern, wetter part of the site had suffered from windblow in the early 1990s and were felled

and replanted (or naturally regenerated) with native broadleaves. The Trust acquired the wood firstly as a lease (1997) and latterly as a freehold, continuing the process of felling and replanting the more wind-vulnerable conifer stands. There are a number of areas which form part of water catchments feeding into private supplies to properties on the Boturich Estate.

A breeding bird survey (2023) found 29 species on the site over three separate visits and a bio-acoustic survey identified 37 species over 22hr/day recording over a four-week period. Although not directly observed during the surveys, there is historic evidence of capercaillie visiting the site - in the form of bark scratched from pine logs (and a confirmed sighting of a female on another occasion). Other birds observed on the site, which are included on the red list of birds of conservation concern are: mistle thrush, woodcock and redpoll. A large number of rooks are present but their rookery is not on the property. Buzzards and kestrel are frequently seen and may be breeding on site. There is an abundant presence of amphibians within the wet areas. Other fauna includes roe deer, rabbits, red squirrels, weasel, moles and voles. It is likely that other common fauna are also present on site.

The site is increasing well used by both local people and visitors to the Loch Lomond area. Access is promoted via Balloch Castle Country Park. There is a loop footpath route of around 3km from the car park in Balloch Castle Country Park to a viewpoint over Loch Lomond on Knockour Hill. The path was constructed in 2005 and parts were extended and upgraded in 2011, 2015 and 2022. It is surfaced for most of its length except for two sections of mown grass where it crosses open ground. There is also a management access track which link to the path network from the east side of the site which is used as an informal path link for local people parking at the Blairlinnan Waterworks.

### 3. LONG TERM POLICY

The long-term objective for the site is to move towards a mixed but predominately native broadleaved woodland, with associated wetland and open ground habitats to enhance the site's value for biodiversity and to provide access to the site for informal recreation on a network of maintained paths.

#### Woodlands

The approach for Whinny Hill Wood has necessarily been amended due to the presence of *Phytophthora ramorum* in larch on the site in 2022. Previous plans to gradually replace the majority of the conifer blocks with a mosaic of native broadleaves species, have been significantly altered due to a Statutory Plant Health Notice for the site requiring the felling of all larch on the site. Larch is interspersed throughout the site with other exotic conifers, which means it is difficult to remove the larch without destabilising the other conifers to wind damage. A felling permission gained in 2023 will allow felling of much of the remaining exotic conifer, reducing the impacts from windblow after larch have been felled. Accelerating the removal of almost all exotic conifers on the site will allow the site to rapidly move towards a mixed, predominantly native, broadleaved woodland through a mix of re-planting and natural regeneration after felling. A mix of oak and birch and small amounts of Scots pine will be planted in the drier areas, with willows and alder in the wetter areas, as well as a range of minor species and shrubs for diversity such as hawthorn, hazel, rowan and cherry.

Deer fencing will be used in the extensive replanting required after felling of conifers. In discrete areas where natural regeneration does not occur and fencing is not practical, individual tree protection may be required using plastic-free tree guards. Where deer fences are used, any vulnerable stretches are to be marked to help prevent bird strikes. Where deer fences are serving no other purpose than the protection of trees, they will be removed once the trees have become established.

In addition, the general approach throughout the wood will adhere to the following management principles:

1. Ensuring that existing young planting is properly maintained, in particular by removal of tree shelters and deer fencing where it is no longer needed.
2. Restructuring to native woodland where opportunities exist.
3. Accepting natural regeneration of broadleaved species and Scots pine. It is expected that this will mainly be birch and willow. Beech and sycamore regeneration will inevitably occur and this will be accepted unless they begin to compromise the biodiversity potential of the site.
4. In areas where conifers have previously been removed any exotic conifer regeneration will also be removed.
5. Managing roe deer to a level which maintains and enhances the biodiversity value of the site. This will be monitored through regular surveys of browsing levels.
6. Managing open areas to retain them as grassland or heathland. Wet and inaccessible areas will be left as minimum intervention unless they are threatened.



## Connecting People With Woods and Trees

Both local people and visitors to the area will be encouraged to visit Whinny Hill Woods for quiet informal recreation. Access will continue to be promoted from Balloch Castle Country Park, following the loop over Knockour Hill. This will be achieved by:

1. Continued maintenance of the path surface and drainage to cope with changing visitor numbers and weather conditions.
2. Promotion via WT website and social media.
4. Management of all entrances and paths used by the public to ensure that they are safe and welcoming.
5. Protecting areas critical to private water supplies by retaining sections of internal fencing.

## 4. KEY FEATURES

### 4.1 f1 Secondary Woodland

#### Description

The main part of the site consists of secondary woodland and is very varied in its composition. Much of this dates from the original planting of the woodlands in the 1960s, and some is more recent following cycles of felling (following wind damage) and either replanting or natural regeneration. There is a narrow strip of woodland classed as LEPO (Long Established of Plantation Origin) in the north part of the site (compartments 10b, d, g, h and j) although this shows little difference in character to the secondary areas, so is included within this Key Feature. There is a good network of rides that gives access to many areas, although many of these are currently overgrown with gorse.

#### Mature conifers

The bulk of the site was originally planted (1960s) with productive conifers. The layout and species of the remaining blocks are very varied. In the southern part of the site (Whinny Hill) there are mixes and pure stands of larch and Scots pine. There are also some small stands and mixes of Norway spruce and Sitka spruce (although most of the spruce in this part of the site was felled in 2004 as it was not windfirm). There is sporadic windblow throughout these compartments, with particular problems in a few places (e.g. the spruce in 5a and 8b). In the northern part of the site (Knockour Hill) the ground is better drained and most of the conifer blocks are intact (compartment 10). Here there are some open woodlands of mature larch and some very dense woodland of Norway spruce and Douglas fir, sometimes on steep ground. Along the northern boundary are some complex line mixes of Scots pine, grand fir, noble fir, Douglas fir, Sitka spruce, Japanese larch and beech. Access to this area is quite difficult and the ground is steep. Amongst the mature larch on the southern slope of Knockour Hill (compartment 10f) some group felling and restocking with native broadleaves was carried out in 2000.

Phytophthora ramorum was discovered in the larch trees on Knockour Hill in 2022 and as a result, the Trust have been served with a Statutory Plant Health Notice (SPHN) to remove all larch trees across the entire site. Due to the interspersed nature of the larch trees within the other conifer blocks, the Trust have applied for and received a felling permission to remove exotic conifers and Scots pine across the site to reduce the likelihood of future windblow as felled larch will leave the remaining conifers vulnerable (the approximate area in which felling is taking place is c. 20ha of which c. 15ha of woodland is planned to be felled).

#### Mature broadleaves

There are some small stands of beech, sycamore and ash throughout the site, assumed to have been planted at the same time as the original conifers (1960s). These are sometimes found in small groups (e.g. 2c, 1f) or in mixtures with conifers, or more often in strips or avenues (e.g. 4b, 10a, 9a). In particular many of the original conifer blocks have an edge fringe of beech. These mature broadleaves have a diversity value of their own and will be retained as long as they are stable. In places there are small groups of ash - most of which are showing signs of ash dieback and will be retained as standing decaying wood unless posing a threat to public safety.

#### Young broadleaves

There are significant areas of mainly native broadleaves dating from previous cycles of felling and restocking in the 1990s. Some appear to have regenerated naturally and are dominated almost exclusively by downy birch (e.g. 4h). Other were replanted c.1999 in tree shelters (e.g. west parts of 4a and 5c) and therefore have a greater species diversity (including oak, birch, rowan, alder and shrubs. However, even in the replanted areas natural regeneration of birch often forms a strong component of the woodland. Although birch regeneration seems prolific enough to establish despite the presence of deer, other species such as holly get severally browsed and cannot establish. In the planted areas some tree shelters are still in place. In some areas there is sporadic established regeneration from the previous spruce crop that was felled.

Several new native woodland areas were planted in 2000 on land previously pasture in compartments 7b and 7g, totaling 15.8ha. These areas were planted in a deer-fenced enclosure and with vole guards, they are now well established and a closed canopy is forming an attractive thicket stage woodland with much birdlife. Low light levels in these areas are negatively affecting understory vegetation from establishing, and regeneration is exclusively limited to the woodland edge. These areas are generally well-drained, and species are varied, including oak (30%) downy and silver birch (45%), plus ash, rowan, cherry, hazel and others. Most of the deer fence was removed in 2017, where it served no other purpose. The majority of vole guards have been removed from the trees. The planting of the former fields left substantial areas of open ground, between the woodland blocks, which are covered in the semi-natural open ground key feature.

#### Invasive species

There are two small areas (c. 0.4ha) of rhododendron on the boundary in the power line wayleave in the NW corner of the site and the northern corner of the site along the old forest ride (compartment 7i and 10g). Access to this location for management is difficult but will be improved post-felling where removal will form part of the habitat restoration plans.

#### Significance

The Whinny Hill woodlands are a significant woodland feature in what is a fairly open landscape. It is a key component in the open woodland network formed by the Loch Lomond-side Woods of Knockour to the north and Balloch Castle Country Park to the west. It also lies close to the Ross Priory Forest to the east. Being situated on two hills, it is also very visible in the landscape, being part of the Loch Lomond and Trossachs National Park and designated as a National Scenic Area.

#### Opportunities & Constraints

##### Opportunities

- SPHN felling will allow for restructuring as native woodland across Knockour Hill.
- SPHN felling will open up the north-west corner of the site (which is currently largely inaccessible due to a large area of windblow) allowing for the removal of two areas of rhododendron.
- The age structure will be diversified and move towards a more diverse and native species mix.
- Overgrown rides may be opened up to enable management access.
- Increase ground flora, understory diversity and regeneration potential by reducing deer numbers.

##### Constraints

- SPHN requires the removal of all larch trees from the site.
- Removing all larch trees will make remaining mature conifers extremely susceptible to windblow.

- Poor access and steep ground make working some parts of the site difficult.
- The presence of roe deer means that any areas for restocking or natural regeneration must be protected from browsing. However, deer control is increasingly difficult as woodland cover develops, and control is dependent on control levels on surrounding land.

#### **Factors Causing Change**

- Discovery of Phytophthora ramorum on larch trees and associated SPHN.
- Wind damage is increasingly affecting some of the conifer stands, especially Sitka and Norway spruce where the ground is wetter.
- Self-seeded spruce are becoming established in some of the compartment previously felled and converted to native woodland.
- Ash dieback has affected most of the ash trees on site and is likely to result in the eventual death of almost all the ash. Some have already been felled, where posing a threat to public safety but others will be retained to increase standing deadwood in the site.

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

The woodlands will continue to deliver significant regional landscape and biodiversity benefits. Replanting felled conifer areas with native broadleaves and Scots pine will return the woodland area to a predominantly native woodland. Whilst the age structure will unavoidably be skewed by required replanting, over time new regeneration will help to diversify this.

Existing non-natives will also be retained where they do not threaten the biodiversity of the site, including beech and sycamore. The woodland will be a home for a diverse range of wildlife and flora, and an attractive destination for visitors.

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

Restructuring of conifer areas to native woodland:

- Fell all larch on the site (by the end of 2024) in accordance with SPHN. In addition it will be necessary to fell any exotic conifers and Scots pine which will be susceptible to windblow after larch have been felled or are approaching the age at which they are likely to become unstable. The felling will take place over an approximate area of 20ha, the majority of which is in compartment 10 (Knockour Hill) and compartment 8 where felling will likely be a mix of hand felling and machine harvesting. The more isolated groups of larch and conifers (in compartments 2a, 2d, 3a, 3b, 3f, 4a, 4c, 4h, 5a, 5c and 9) will likely be felled by hand, where in some of the more inaccessible areas timber will not be extracted to reduce impacts. Broadleaved species and Scots pine (where not susceptible to windblow) will be retained wherever possible. The total area of woodland to be felled is approximately 15ha. A detailed harvesting methodology will be drawn up to ensure compliance with protected species legislation and protection of private water supplies on the site.

- Felled areas of compartment 10 will be restocked with native tree and shrub species at a density of 1600 stems/ha in 2025. These will be a mix of oak and birch and smaller amounts of Scots pine in the drier areas, with willows and alder in the wetter areas, as well as a range of minor species and shrubs for diversity such as hawthorn, hazel, rowan and cherry. There will be a small amount of designed open ground incorporated into the planting plan. The remaining areas of selective felling will be allowed to naturally regenerate. Compartment 10 will be deer fenced (the exact location of which will be reviewed after harvesting works are complete) and planting monitored yearly until established.

Control invasive species by:

- Initial clearance of rhododendron in compartments 10h, 10g and 5d after felling allows for easier access into this area. Initial removal will likely be through a combination of stem injection with herbicide and cut/stump treat with herbicide. Plan a programme of walk-over and re-spray for residual plants into the next management plan, to allow for eradication by the end of the next management plan cycle. There is approximately 0.4ha of rhododendron identified on the site, the majority of which is in compartment 10.
- Remove scattered spruce regeneration in broadleaved areas (1b, 4a, 4c, 4h, 5b, 5c). Consists of scattered saplings and some semi-mature trees with age and density very variable. Complete by end of management plan period.

Manage establishment of younger planting:

- Remove all remaining tree shelters and vole guards from trees planted between 1990 – 2006 (compartments 4a, 5c, 6a, 7b, 7g, 8c, 8d, 10b, 10d, 10e and 11c). Shelters will be recycled or re-used on other sites where practical.

#### 4.2 f2 New Native Woodland

##### Description

A smaller strip of new native woodland (11c, 0.75 ha) was planted in 2006 to provide a replacement for the adjacent Scots pine shelterbelt (11a) which is becoming senescent and very open in this exposed location. Trees were planted in 1.2m shelters (which remain on) and main species are sessile oak, Scots pine, ash, silver and downy birch with lesser quantities of rowan, hazel, hawthorn, goat willow and alder.

Compartment 11b was planted under a Forestry Grant Scheme in 2019, having previously been grazed. The area was deer fenced and 2.8ha was planted in vole guards. Species planted were predominantly sessile oak, downy and silver birch, alder and rowan. Minor species planted were: hazel, goat and grey willow, bird cherry, hawthorn and holly. The trees are now well established and stocking densities were surveyed in 2023, which were well above the required 1600 stems / ha. Minimal maintenance is required this management plan cycle, apart from continuing to exclude deer from the area. There is an informal loop path which is cut every year through the woodland creation area and which is popular with walkers due to the views across Loch Lomond and towards Ben Lomond.

##### Significance

The new native woodlands link, buffer and extend the existing mature woodlands, while integrating with open-ground habitats. They also introduce an element of species and structural diversity to the site.

##### Opportunities & Constraints

###### Constraints

- Presence of roe deer means young trees need protection during establishment.
- To achieve species diversity planting is needed rather than natural regeneration.

##### Factors Causing Change

- Self-seeded spruce are become established in some of the compartments previously felled and converted to native woodland.
- Ash dieback has affected almost all the planted ash trees. Planting densities are high enough that this is not an issue.

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

The new native woodlands will develop into attractive native woodlands supporting a variety of birdlife and other fauna. They will contribute to a mosaic of varied age classes, species and structures across the site.

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

In this plan period, ensure that the new native woodlands continue to establish free from threat by:

- Ensuring the fenced area remains deer-free. Assess establishment of 11b towards end of management plan period to see if vole guards can be removed.

**4.3 f3 Connecting People with woods & trees**

**Description**

Whinny Hill Wood is an attractive location, with a variety of landscapes to offer visitors, including mature and young woodland, high forest and open ground, and some interesting ground flora.

Access is promoted through Balloch Castle Country Park. From the car park at Balloch Castle (off Mollanbowie Road) the park's woodland trails lead north, passing through an attractive wooded glen on a mixture of surfaced and unsurfaced paths, which are narrow in places (c. 1km). After crossing an estate road via pedestrian gates, the path enters the Trust's land at Whinny Hill Wood. Once within Whinny Hill, a surfaced gravel path (steep in places) leads visitors uphill to the heart of the woodland (c. 1.3km). From this point a loop route takes visitors on a 1.6km loop, passing the top of Knockour Hill, where a viewpoint and bench gives views of Loch Lomond. Parts of this route were surfaced in 2022, increasing the accessibility of the site. Parts of this loop remains mown grass path which can become muddy in places after rain. There is no parking where the route crosses the western arm of the Boturich estate road, where there is a turning circle (with a 'No Parking' sign) that must be kept clear at all times.

Orientation boards (installed 2022) are located in Balloch Castle Country Park at the entrance to the Fairy Glen where the Country Park paths lead to Whinny Hill, and at the T-junction where the loop section starts in Whinny Hill.

Local walkers also access the woodland by parking at the end of the minor road next to Blairlinnans Water Treatment Works and accessing the woodland via the eastern arm of the Boturich estate road and a stone-surfaced track that leads south-east through the woodland to meet the path loop. The internal paths are maintained annually by strimming of paths and verges and cutting back encroaching vegetation. Other desire lines exist within the wood, although these are not maintained.

The nearest community to Whinny Hill is Balloch (2km, population c. 6000) which runs seamlessly into the other Vale of Leven towns of Jamestown, Alexandria, Bonhill and Renton (totalling c. 20,000 people of West Dunbartonshire's total of c. 90,000). Drive-time analysis shows that there is a population of 126,000 within 20 minutes drive, and 1.3 million within 40 minutes drive (which would include most of Greater Glasgow). Approximately 2.5km to the east is the village

of Gartocharn. It is thought that most of the people who use Whinny Hill are local people. However, the Loch Lomond area and Lomond Shores/Balloch Castle are also very popular with tourists, and these also make up a proportion of visitors to the wood in the summer months. The Loch Lomond and Trossachs National Park is estimated to attract over 4 million visitors annually.

Most visitors are walkers, but the site is also used by runners and mountain bikers. There are three well-used geocaches on site. There are currently no links to other path networks (other than Balloch Castle Country Park) so most walkers follow a circular route.

Other countryside sites nearby are Garadhban Forest (lying immediately east of Whinny Hill) managed by the Forestry and Land Scotland and the RSPB Loch Lomond Reserve (c. 4km to the east), which has a small visitor centre. National Cycle Route 7, and the John Muir Way pass 1km to the south of Whinny Hill, the latter giving access into the Kilpatrick Hills. The nearest Woodland Trust site is Lang Craigs in the foothills of the Kilpatrick Hills, accessed from Milton, Dumbarton.

Some guided walks and volunteer work days have been held at Whinny Hill over recent years. However, larger scale events have not been held due to the distance of nearby parking. There is a large car park at Balloch Castle Country Park, but this is a relatively long, uphill walk to the Knockour Hill part of the site. Future volunteer events could look to work in partnership with West Dunbartonshire Council rangers to utilise Balloch Castle Country Park and Whinny Hill. Four volunteer wardens were recruited for the site in early 2024.

There is a primary school at Gartocharn and a number of primary schools in the Vale of Leven. There is also a High School (Vale of Leven) in Alexandria.

### **Significance**

Whinny Hill provides a significant area of public access to an attractive mixed woodland and lies within the Loch Lomond and Trossachs National Park and Loch Lomond National Scenic Area. As a mixed woodland, it complements the more highly managed landscape of Balloch Castle Country Park to which it is linked. It is well-used by mainly local visitors, but also those visiting the area from further afield. It offers great views north-west over the southern end of Loch Lomond. As such it has potential for form part of the visitor offer around Loch Lomond.

### **Opportunities & Constraints**

Opportunities:

There are opportunities to improve the visitor experience by:

- Working in partnership with West Dunbartonshire Council rangers.
- Promoting the site's path network from Balloch.
- Providing opportunities for volunteer engagement through corporate volunteering, working with local schools and public volunteering events.
- Working closely with WT volunteer wardens for the site.
- Proposals to install new mountain biking facilities at Balloch Castle Country Park could lead to opportunities to engage with mountain bikers who use Whinny Hill.
- Opportunities to engage volunteers with replanting and removing tree tubes on established woodland creation.
- Improving drainage on unsurfaced parts of the loop path, where they become wet and muddy after periods of rain.

- Opportunities to create new linking paths after SPHN felling within the restocking area.

Constraints:

- There is no scope for on-site parking, making access difficult for less mobile visitors due to the steep hill access from parking at Balloch Castle Country Park.

**Factors Causing Change**

SPHN felling will have a short-term damaging effect on path network and will unavoidably limit visitor access to areas where felling is happening. Increasing visitor numbers will put more pressure on the path networks.

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

Whinny Hill will provide an extensive area of quiet informal recreation to a wide range of users both from the local community and from further afield. The use of the site by visitors to the area will be promoted through a positive relationship with the neighbouring tourist sites, with good signage and orientation. WT will work in partnership with Balloch Castle Country Park (West Dunbartonshire Council).

Entrances and signage will have a welcoming appearance and there will be well maintained paths providing routes through a variety of landscapes, with viewpoints towards Loch Lomond, and linking to Balloch Castle Country Park.

There will be occasional small-scale events, appropriate to the nature of the site.

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

The site will be kept in a safe and welcoming condition by:

- Maintaining paths and viewpoints as well-drained and free of encroaching vegetation (annually).
- Carrying out litter picks where necessary (twice annually by contractors and informally by volunteer wardens).
- Carrying out regular safety inspections (timing and locations as per site risk assessment).
- Continuing to liaise with West Dunbartonshire Council ranger staff to ensure linking footpaths are maintained and assessing need for temporary signage for visitors to Whinny Hill via Balloch Castle Country Park during SPHN felling. Liaise with WDC re the re-development of orientation in BCCP to ensure the Whinny Hill walks are included on boards or leaflets where appropriate.
- Carrying out repairs to the estate road resulting from any damage caused by forestry or maintenance operations (ongoing).
- Continuing to liaise with individual owners of private water supplies before and during operations which have the potential to affect their supplies.

The visitor experience will be improved, and the path network will become more accessible by:

- Reinstating any damage to the loop footpath after SPHN felling works.

Develop volunteering opportunities by:

- Developing small-scale corporate volunteering where there are appropriate management tasks (on-going).
- Working with new volunteer warden(s) who have an 'eyes and ears' role and can report site issues to the Site Manager and help communicate felling works to visitors (2024).
- Engaging with new groups and volunteers through tree planting opportunities after felling.



#### 4.4 f4 Semi Natural Open Ground Habitat

<b>Description</b>
<p>Grassland forms an important component of the central part of the site (7c, 7e, 7i, 7h, 9.4ha total) forming a mosaic with the woodland planting in compartment 7. These areas consist mainly of grasses and rushes. Within the sward can be found greater butterfly orchid, whorled caraway, common spotted orchid, soft rush, jointed rush, bird's foot trefoil, sneezewort, yellow rattle and other meadow flora.</p> <p>An NVC study (Averis) classified areas of compartment 7c and 7e as being herb-rich M23a rush mire and herb-rich MG5 grassland, which are of considerable ecological interest, indicating that these habitats are botanically rich and have been little affected by agricultural treatments. Continuing to allow some amount of grazing in this area through roe deer will be beneficial to the habitat.</p> <p>Since compartment 7 was removed from grazing for planting gorse has become established, with some particularly dense thickets in the northern ends of 7e and 7c. Further south there are only scattered bushes. Although the gorse adds diversity and habitat value, if left unchecked it will continue to spread and reduce the value of this interesting grassland area.</p> <p>Compartment 11d is currently leased to a local shepherd, as it forms an important link between their fields. There are small areas of herb-rich MG5 grassland and M23 rush mire, and moderately rich U4b grassland which were specifically excluded from planting and require a low level of grazing.</p>
<b>Significance</b>
<p>This sheltered species rich grassland provides some of the only open ground habitat in the Woodlands and so adds greatly to the diversity. It is also unusual in the locality where most of the surrounding fields are relatively heavily grazed and/or improved.</p>
<b>Opportunities &amp; Constraints</b>
<p>Opportunities:</p> <ul style="list-style-type: none"><li>- Maintain these areas as open ground within the woodland matrix.</li></ul> <p>Constraints:</p> <ul style="list-style-type: none"><li>- Wet ground in places may make mechanical management difficult.</li></ul>
<b>Factors Causing Change</b>
<p>Spread of gorse.</p>
<b>Long term Objective (50 years+)</b>
<p>In the long term, this area will continue to be managed as an attractive open meadow, providing habitat and structural within the woodland. Gorse will be present, but will be managed at a sustainable level that does not threaten the ground flora interest of the area.</p>
<b>Short term management Objectives for the plan period (5 years)</b>

In this plan period, prevent the spread of gorse into the MG5 grassland by:

- Re-mapping the gorse areas in compartments 7c and 7e (2025) and comparing with the grassland survey of 2018 (Averis) as a baseline. Consider gorse control if there is significant spread beyond these boundaries, particularly into the more sensitive MG5 grassland.

## APPENDIX 1 : COMPARTMENT DESCRIPTIONS

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
1a	1.11	Mixed broadleaves	1960	High forest		National Park, National Scenic Area
Semi-mature beech with occasional silver birch. Small group of Sitka spruce and larch with some windblow. Thick downy birch regeneration in part of open ground. Damp ground flora includes bugle and other ancient woodland (AW) indicators. Beech regeneration to 2m under the spruce.						
1b	4.36	Mixed native broadleaves	2006	High forest		National Park, National Scenic Area
Mixed broadleaves planted 1999-2006. All in 0.6/1.2m tubes on mounds, following felling of previous Sitka spruce plantation. Strong downy birch regeneration and locally some Sitka spruce regeneration. Some designed open ground. A belt of semi-mature beech on southern boundary which was thinned in 2005. Gorse is dominant with bramble. AW indicators present inc. bluebells, three nerved sandwort, pignut, wood horsetail and others.						
1f	0.97	Mixed broadleaves	1960	High forest		National Park, National Scenic Area
Stand of semi-mature broadleaves, mainly sycamore with ash, beech and silver birch scattered throughout. Approximately 40 young trees in 1.2m shelters at 1600/ha, planted 2006 following clearance of windblown conifers. There is regeneration of holly and beech. Ground flora (bluebells) and topography indicates this is a likely area of ancient woodland from which plants will colonise 1b.						
2a	0.13	Sycamore	1980	High forest		National Park, National Scenic Area
Semi-mature group of sycamore, ash previously found here was felled due to ash dieback and proximity to path.						
2b	3.96	Mixed native broadleaves	2006	High forest	No/poor vehicular access within the site, Services & wayleaves	National Park, National Scenic Area
Thick gorse with scattered mature trees: Scots pine, downy birch and occasional sycamore, ash and silver birch. Young planting (2006) 1.43 ha in south, native broadleaves in 1.2m shelters at 1600/ha following felling of conifers in						

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
2005. Thin strip of oak and beech on southern boundary, thinned 2005. In new planting area of compartment, ground flora is blanket of bracken over tormentil, with bluebells.						
2c	0.69	Mixed native broadleaves	2006	High forest		National Park, National Scenic Area
Semi-mature dense sycamore with scattered ash, birch and larch. Gorse dominant in open ground. Southern part planted with native broadleaves in 1.2m shelters at 1600/ha, planted 2006.						
2d	0.53	Sycamore	1960	High forest	No/poor vehicular access within the site	National Park, National Scenic Area
Thin strip of sycamore with occasional silver birch and ash along boundary.						
2e	0.23	Sycamore	1960	High forest	No/poor vehicular access within the site	National Park, National Scenic Area
Stand of mature Scots pine surrounded by gorse. Reasonably stable at present.						
2f	0.62	Downy birch	1995	High forest	Services & wayleaves	National Park, National Scenic Area
Boggy ground conditions with birch and occasional rowan to late sapling stage, and significant gorse. Ground flora of jointed rush, sphagnum mosses, molinia caerulea, angelica, and marsh violet with bilberry, heather and hard fern in drier areas.						
3a	3.31	Mixed conifers	1960	High forest	Services & wayleaves	National Park, National Scenic Area
Mature Scots pine in mix with larch, silver birch, downy birch, rowan and beech. Significant wind damage to the pine and larch in southern part, only the northern steeper and better drained slope being really wind firm. One small stand of Norway spruce. Grasses dominant with abundant ferns and mosses. Blaeberry and heath rush also noted.						
3b	1.74	Birch (downy/silver)	1995	High forest		National Park, National Scenic Area

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
Dominated by thick pole stage birch with established sycamore, alder, ash and occasional Sitka spruce and Japanese larch regeneration. Mature silver birch, downy birch, sycamore, Sitka spruce, Japanese larch and beech around edges. Includes some very wet areas of ground.						
3f	0.96	Mixed conifers	1960	High forest		National Park, National Scenic Area
Mixture of Japanese larch, Scots pine and beech with scattered silver birch and occasional Norway spruce. Windblow near top of hill but less on slopes to north-west. Patches of regeneration of birch, rowan, gorse and Sitka spruce. Very similar in character to cpt 3c.						
4a	1.17	Mixed native broadleaves	2006	High forest	Services & wayleaves	National Park, National Scenic Area
Planted with native broadleaves (birch, alder, oak, rowan, hawthorn, willow in 2006 in 1.2/0.6m tubes @ 2.5m spacing. Occasional Sitka spruce, Japanese larch and mixed broadleaf regeneration. Abundant gorse makes access difficult.						
4b	0.89	Beech	1960	High forest	Services & wayleaves	National Park, National Scenic Area
A strip of semi-mature broadleaves; beech, sycamore and silver birch.						
4c	6.56	Mixed native broadleaves	1999	High forest		
Planted in 1999 with mixed broadleaves (birch, oak, alder and others) and is now at pole stage, with tubes still in place. Strip of semi-mature trees along southern edge and in several strips through the western part of the plantation: beech, sycamore and Norway spruce.						
4h	3.39	Birch (downy/silver)	1999	High forest		National Park, National Scenic Area
Stand of late sapling stage mainly downy and silver birch, with scattered beech and occasional sycamore and Japanese larch. At west end frequent pole stage and a few mature Sitka spruce.						
5a	1.07	Japanese larch	1960	High forest	Services & wayleaves	National Park, National Scenic Area

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
Mature stand of dominant Japanese larch with semi-mature beech. Occasional Norway spruce, Sitka spruce and sycamore. Frequent windblow in centre of compartment.						
5b	0.28	Downy birch	2010	High forest	Services & wayleaves	National Park, National Scenic Area
Clearfell site left to naturally regenerate. Remains (rubble) of old building by track. Frequent regeneration to pole stage of spruce and downy birch.						
5c	6.18	Birch (downy/silver)	1999	High forest	Services & wayleaves	National Park, National Scenic Area
Restock area with patchy downy birch and spruce regeneration. 60% has been restocked with native broadleaves (Willow, birch, alder, ash, oak, rowan) in 1.2m tubes @ 2.5m spacing (1999). Trees are now established. Narrow 0.05 ha ribbon of Norway spruce from previous stand in NE corner. Wet ground conditions have led to patchy establishment, giving a natural wet-woodland habitat. Becomes particularly wet in the north near the old pond. Soft rushes, mosses, marsh pennywort abundant.						
5d	0.78	Norway spruce	1960	High forest	Services & wayleaves	National Park, National Scenic Area
Stand of mature Norway spruce, with a small stand of Japanese larch and occasional Sitka spruce either side of management track and powerline wayleave. Windblow severe in this block. Stone conduit containing burn flows under this compartment. There is some broadleaved regeneration in blown areas.						
6a	1.34	Mixed native broadleaves	1999	High forest	Services & wayleaves	National Park, National Scenic Area
Restock site planted with native broadleaves in 1.2m tubes @ 2.5m spacing, in between mature mixed broadleaves, sycamore, oak and birch (remains of a shelterbelt). Bluebell and other AW indicators present in ground flora. Patchy establishment has resulted in an open feel.						
7a	0.19	Mixed broadleaves	1960	High forest	No/poor vehicular access within the site	National Park, National Scenic Area

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
Small group of semi-mature/mature Norway spruce with occasional Sitka spruce, mixed with broadleaves (mainly willow) on marshy ground. Some windblow, which may be allowed to continue as small number of trees and access difficult.						
7b	12.41	Mixed native broadleaves	2000	High forest		National Park, National Scenic Area
Planted with native mixed broadleaves (mainly oak, birch, hazel) in 2000, at 2.5m spacing with vole guards. Originally in deer fence (removed 2016). Trees now established with closed canopy. Abundant Greater Butterfly orchid, common spotted orchid, soft rush, jointed rush, bird's foot trefoil, sneezewort, yellow rattle and other meadow flora under trees in area adjacent to comp 7C.						
7c	2.9	Open ground		Non-wood habitat		National Park, National Scenic Area
Area of open grassland with scattered gorse, particularly at the north end. Frequent Greater Butterfly orchid, common spotted orchid, soft rush, jointed rush, bird's foot trefoil, sneezewort, yellow rattle and other meadow flora. An NVC survey (Averis 2018) is on file, which identifies botanically rich areas (in particular MG5c and to a lesser extent M23a) where there is an opportunity to restrict gorse encroachment.						
7d	0.45	Open ground		Non-wood habitat		
An area of open grassland.						
7e	3.96	Open ground		Non-wood habitat	Services & wayleaves	National Park, National Scenic Area
Area of open grassland with scattered gorse, particularly at the north end. Frequent Greater Butterfly orchid, common spotted orchid, soft rush, jointed rush, bird's foot trefoil, sneezewort, yellow rattle and other meadow flora. An NVC survey (Averis 2018) is on file, which identifies botanically rich areas (in particular MG5c and to a lesser extent M23a) where there is an opportunity to restrict gorse encroachment.						
7g	2.12	Mixed native broadleaves	2000	High forest	Services & wayleaves	National Park, National Scenic Area
Planted with native mixed broadleaves (mainly oak, ash, downy birch, hazel) in 2000, at 2.5m spacing with vole guards (similar to 7b). Trees are established with closed canopy.						

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
7h	1.82	Open ground	2000	Non-wood habitat	Services & wayleaves	National Park, National Scenic Area
Area of open grassland. To remain as open ground.						
7i	1.71	Open ground	2000	Non-wood habitat	Services & wayleaves	National Park, National Scenic Area
Open grassland. Electricity wayleave.						
8a	0.89	Beech	1960	High forest		National Park, National Scenic Area
Densely planted beech wood with frequent mature birch and groups of larch, ash and sessile oak. Some patches of regeneration of mixed broadleaves.						
8b	1.22	Mixed native broadleaves	2006	High forest	Services & wayleaves	National Park, National Scenic Area
Well established thicket-stage planting of native broadleaves (downy birch, alder, oak) in 1.2m tubes at 1600/ha, planted in 2006 following felling of conifers. There is also regeneration of birch, rowan, holly and willow, showing signs of regular browsing. Ground vegetation a mix of grasses, ferns, mosses and heather, with rare Sitka spruce regen. A boundary strip to the west consists of beech, birch and sycamore, sapling to early mature.						
8c	0.54	Alder species	1999	High forest	Mostly wet ground/exposed site, Services & wayleaves	National Park, National Scenic Area
Wet restocked hollow (1999) with alder in 1.2m tubes @ 2.5m spacing, with birch natural regeneration.						
8d	2.54	Mixed native broadleaves	2006	High forest	Services & wayleaves	National Park, National Scenic Area
Scots pine and Norway spruce (part thinned 2005). The western part of this is unthinned early mature Norway spruce with a group of mature larch in the centre. The eastern part is (thinned) mature Sitka spruce with severe						



Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
windblow, although with birch and rowan natural regeneration establishing. The eastern edge has a belt of pole stage Norway spruce, oak and mature Japanese larch, and the western edge has a narrow strip of broadleaves.						
8e	0.95	Mixed native broadleaves	1999	High forest	Services & wayleaves	
North of the power line is the remains of Norway spruce and larch, 90% blown, with a more windfirm group on drier ground in the NW. Good regeneration of downy birch and willow to sapling stage. Also some scattered tubes from a 1999 restock along the southern fringe.						
9a	0.88	Beech	1960	High forest		National Park, National Scenic Area
Beech plantation with occasional Japanese larch, birch and a group of noble fir. Ground flora generally shaded out except mosses, and no established regen. Occasional windblow in fir.						
9b	1.03	Mixed native broadleaves	1960	High forest		National Park, National Scenic Area
Damp woodland dominated by mature and pole stage downy birch and willow, occasional mature Norway spruce and early mature beech. Ground flora dominated by mosses - sphagnum sp., polytricum sp., thuidium tamariscinum, rhytidiadelphus loreus, plagiotehium undulatum. Some wood sorrel, bugle, foxglove and bramble in drier areas. Stream flows along eastern edge by old dyke.						
9c	0.16	Ash	1960	High forest		National Park, National Scenic Area
Sapling to pole stage downy birch with mature birch, Norway spruce and beech.						
9d	0.43	Open ground		Non-wood habitat		National Park, National Scenic Area
Electricity wayleave - open ground with grasses and rushes						
9e	0.36	Japanese larch	1960	High forest		
Japanese larch with occasional Scots pine. No windblow. Split into blocks of trees by powerline wayleave.						

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
10a	1.84	Mixed broadleaves	1950	High forest	Sensitive habitats/species on or adjacent to site	National Park, National Scenic Area
Neglected beech avenue opening into bracken glade with scattered groups of mature birch and some regeneration of mixed conifers and broadleaves.						
10b	3	Mixed native broadleaves	2006	High forest	Sensitive habitats/species on or adjacent to site	National Park, National Scenic Area
Scattered birch, occasional grand and noble fir. In south, 0.45ha, young planting of native broadleaves in 1.2m tubes at 1600/ha. Planted 2006 following felling of conifers.						
10c	1.55	Japanese larch	1960	High forest	Sensitive habitats/species on or adjacent to site	National Park, National Scenic Area
Open stand of mature Japanese larch. Occasional sitka spruce regeneration and windblow.						
10d	0.99	Japanese larch	1950	High forest	Sensitive habitats/species on or adjacent to site	National Park, National Scenic Area
Restock area on ridge top, planted with native broadleaves and Scots pine . Good percentage of planted stock successful with patches of dense birch natural regen and occasional spruce and larch regeneration. Ground flora is dominated by bracken over heathland/acid grassland flora.						
10e	0.38	Mixed broadleaves	2000	High forest	Sensitive habitats/species on or adjacent to site	National Park, National Scenic Area
Restocked with native broadleaves (2000), planted bare on mounds inside deer fenced enclosure.						
10f	4.13	Hybrid larch	1960	High forest	Sensitive habitats/species on or adjacent to site	National Park, National Scenic Area

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
Stand of mature scattered Japanese larch, selectively felled and restocked with Scots pine and native broadleaves (with vole guards) inside deer fence enclosure (2000). Dense grassy sward is inhibiting any significant natural regeneration. Blaeberry on hilltops.						
10g	4.5	Norway spruce	1960	High forest	Legal issues, Sensitive habitats/species on or adjacent to site	National Park, National Scenic Area
Strips of various line mixtures of mature trees: beech, birch, Scots pine, grand fir, noble fir, Douglas fir, Sitka spruce and Japanese larch. Two areas have been felled giving views out to the loch. These are to be retained. Some natural regeneration birch/willow. Rhododendron at west end. Blaeberry on hilltops. At east end, 0.45ha young planting of native broadleaves in 1.2m tubes at 1600/ha, planted 2006 following felling of conifers.						
10h	0.43	Mixed native broadleaves	1960	High forest	Legal issues, Sensitive habitats/species on or adjacent to site	National Park, National Scenic Area
Coppiced birch, rowan and oak on hilltop surrounding trig point. Oxalis and other AW indicators abundant. Mol caer, Des flex and Dry dili frequent.						
10i	2.26	Norway spruce	1960	High forest	Sensitive habitats/species on or adjacent to site	National Park, National Scenic Area
Norway spruce plantation, with Douglas fir. Has been thinned. Small group of Japanese larch. Occasional windblow. Ground flora dominated by mosses/liverworts and oxalis with foxglove, ferns and brambles frequent.						
10j	0.83	Scots pine	1960	High forest		National Park, National Scenic Area
Strip of mature Scots pine running along contour just below ridge top.						
11a	0.92	Scots pine	1960	High forest		National Park, National Scenic Area
Strip of Scots pine on ridge. With scattered mature mixed broadleaves, 2 veteran ash. Occasional windblow with timber rotting in situ.						

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
11b	4.14	Oak (sessile)	2020	Non-wood habitat		National Park, National Scenic Area
<p>Young mix broadleaved woodland, planted winter 2019/2020. In total 4500 trees were planted at 1600/h, on shallow mounds, protected in vole guards and the cpt deer fenced. Three mixes were planted: Oak mix on drier ground 1.98ha 3165 trees being sessile oak 50%, down birch 15%, silver birch 15%, rowan 4%, hazel 10%, bird cherry 2%, holly 1%; Birch mix 0.83ha = 1335 on wetter ground being downy birch 40%, alder 40%, goat willow 5%, grey willow 15%. Hawthorn mix 0.02ha = 30 trees small group on ridge, hawthorn 50%, rowan 50%. Some open areas where NVC survey (Averis 2018) identified grassland/rush meadow of botanical interest which may also be GWDTEs (S19, M23a/b, M5c and U4). The whole was grazed until 2019.</p>						
11c	1.18	Mixed native broadleaves	2006	High forest		
<p>NP 2006 Mixed broadleaves now well established in 1.2m shelters at 1600/ha (0.75ha planted, 0.15ha OG).</p>						
11d	1.87	NULL	2019	Non-wood habitat		
<p>Area of grassland and rushes currently let for grazing. Generally not suitable for woodland creation due to wet ground and some wild flower interest. There is also a requirement in the Title for a cattle pass to allow stock to move between the fields to the east and west.</p>						

# APPENDIX 2 : SITE MAP

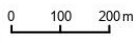


- Estate Path Network - Scotland
- ..... Path
- Estate Access Points
- Access points
  - Estate SubComp Labels
  - EstateManagementUnitsPolygonsGB
  - Estate SubCompartments



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## Whinny Hill Management Plan



Scale: 1:12,500 @A4

Date: 02 February 2024

Author: Woodland Trust

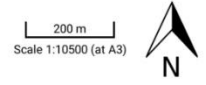




# APPENDIX 3 :SPHN FELLING LICENCE MAP



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### **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.

### **Windblow/Windthrow**

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

### **Registered Office:**

**The Woodland Trust, Kempton Way, Grantham, Lincolnshire NG31 6LL.**

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