WOODLAND
TRUST SCOTLAND

Wood Hill Wood

Management Plan
2016-2021

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MAPS

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 Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations.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 or contact the Woodland Trust (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.

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. 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

Site name:	Wood Hill Wood
Location:	Alva
Grid reference:	NS898978, OS 1:50,000 Sheet No. 58
Area:	79.29 hectares (195.93 acres)
Designations:	Ancient Woodland Site, Area of Landscape Value

2.0 SITE DESCRIPTION

2.1 Summary Description

Wood Hill Wood is a predominately broadleaved woodland situated on the steep southern facing slopes of the Ochil Hills and is home to a wide variety of wildlife. A circular path, steep in places, winds up through the wood, and provides commanding views south across the Firth of Forth. To the west a short path takes visitors to a viewing platform overlooking the Silver Burn and one of the old silver mines. This path links up with the path to Alva Glen.

2.2 Extended Description

Location, Altitude and Aspect
Wood Hill Wood is located on the southern slope of the Ochil Hills, between the villages of Alva and Tillicoultry, to the north of the A91. The OS grid reference for the main entrance is NS 896 977. The lower boundary of the main body of the wood is at an altitude of approximately 90m, whilst the upper boundary is at approximately 390m above sea level.

The site is extremely steep, both from the north to south boundary, but also into the east and west boundaries where fast flowing burns have carved narrow, steep glens.

The woodland is very visible in the landscape, being the only woodland on the southern slopes of the Ochils in the immediate area. Neighbouring land use to the east, north and west is hill farming

with sheep grazing. To the south, there are houses, a horse paddock, golf course, and a woodland park.

Physical Description
The underlying rock of the Ochil Hills is igneous rock of the Devonian period, of an intermediate (between acidic and basic) nature. This gives rise to soils of the Sourhope soil association. These are drifts, derived from old red sandstone, intermediate lavas. The soils are generally brown forest soils. However, at Wood Hill Wood, the soil layer is extremely thin and totally absent in certain areas where bare rock or scree forms the ground surface.

The woodland at Wood Hill grades from mature high forest, of closely spaced trees and a dense canopy cover, on the lower slopes, through pole-stage regeneration, to scattered mature trees and open grassland on the hill tops. The predominant species are sycamore (mostly on the lower slopes - P1940s), ash (mostly on mid slopes - P1970s), and Scots pine, larch, oak and beech (mostly on upper slopes - P1880s). Other species scattered over the site in small numbers include birch, wild cherry, rowan, yew and elm (both un-diseased and dead), and there are also small distinct blocks of Sitka spruce and western hemlock (P1960s). There are groups of western hemlock in the south western block, a small area of Sitka spruce in the south eastern woodland block, and a plantation of Sitka spruce in the north western corner. Larch is found mainly in the Silver Glen on the west and in patches on the top of the treeline right across the site.

The under storey generally consists of dense patches of ash regeneration, elder, blackthorn and hawthorn scrub, and occasional rowan regeneration. The under storey is most abundant and varied in Silver Glen, but throughout much of the mature woodland an under storey is absent. In the past Rhododendron ponticum was a problem in parts of the wood and formed much of the under storey. Following a programme of continuous control it is now restricted to a few scattered individuals- all of which are systematically being removed.

Ground flora in the woodland varies from none, in areas where the soil cover is of stony scree and the canopy very dense, to dense bracken and brambles on some parts of the lower slopes. There are large areas in the mature woodland where the ground flora is dominated by dog's mercury along with occasional scattered groups of bluebells. Higher up the slope, the ground flora consists of soft grasses, that become coarse and acid tolerant at even greater altitudes. There are substantial areas of bracken, small patches under the tree canopy in the south west and large areas beyond the treeline, particularly in the west of the woodland. Mosses are frequent over the mid and upper slopes, particularly amongst the rocky outcrops.

At the upper elevations of Wood Hill, the woodland begins to thin out, with groups of scattered trees amongst grassland. Along much of the northern boundary, which is the point of greatest altitude, the site is devoid of trees. The grassland in this area is predominantly composed of acid tolerant species and blaeberry is prolific. It is evident that grazing animals, deer and occasional hares, feed in this area, maintaining a closely cropped sward. The steep, almost cliff-like slopes below the grass plateau are covered with either soft grasses or bracken and scattered trees.

There is abundant aerial and fallen deadwood throughout the wood.

Site History
There are a number of old mine shafts and adits in the western part of the woodland near Silver

Burn. First opened in 1714 the mines were finally abandoned in 1770. The principal metals recovered from these mines were silver, cobalt and arsenic.

Whilst silver mining at Alva has romantic connections with the Jacobite rebellions, the cobalt mining has important associations with the production of the blue glaze (Littler's Blue). The shafts and adits pose a potential safety hazard and are thus fenced off and signed as dangerous.

There are three sites of archaeological interest in the wood. These are not scheduled ancient monuments, but remain of historical interest. All three sites are located in the west of the site, in the vicinity of Silver Burn. The first is on the west side of the burn, and is a circular enclosure. The structure is of unknown date and function. The other two structures are both on the east side of the burn, north of the tributary, but south of the Sitka spruce plantation. These are both formed from a series of turf enclosures of unknown date, although they are suggested to be from the late/post-medieval period rather than prehistoric. Both of these sites are thought to have served some kind of agricultural function. All three of the structures occur in areas of ground that are currently un-wooded.

The wood is described in the Ancient Woodland Inventory as being Ancient Semi-Natural Woodland; Long Established of Plantation Origin (LEPO). The site is believed to be one of the oldest plantations in Scotland, having been planted in the middle of the 18th century. The funding for this planting project is thought to have been derived from the silver extracted from Silver Glen, under the direction of the then owner, Sir John Erskine.

Little is known about woodland management between the 18th century and the 1940s, although timber extraction obviously occurred. In the 1940s the Forestry Commission planted much of the lower slopes with sycamore. Further Forestry Commission planting was in the shape of blocks of conifers planted in the 1960s. The wood was purchased by the Woodland Trust in 1990, with grant aid from the then Countryside Commission for Scotland. A small extension was gifted by Clackmannanshire Council in 1994. Works since acquisition include erecting safety grills over mine entrances, rhododendron clearance, path construction, felling a larch block and replanting, thinning sycamore, opening up view points, halo thinning veteran trees and fence renewals.

Access
Most visitors to Wood Hill Wood use either the main track leading from the council car park heading north west through the wood to gain access to the Ochil Hills beyond, or use a section of the track to the east as part of the long distance multi-use route towards Tillicoultry. Less frequently, walkers use the circular path (approximately 2km long) which starts from the car park, heads north west up a vehicular track, then climbs steeply uphill on a narrow path (before Silver Burn). This path then runs fairly levelly across the middle slopes, before dropping steeply down again to join the Council path and heading west back to the car park. There are 3 viewpoints on this path with superb views to the south.

The paths and vehicular tracks have a rough stoned surface, over most of their route.

Levels of public pedestrian use could be described as medium (WT access code B), with occasional use of the paths by horse riders and mountain bikers. The wood is regularly used by local interest groups including orienteering and silver panning.

Just south of the wood, there is a car park (owned by Clackmannanshire Council) with a joint information board, a play park and picnic benches.

3.0 PUBLIC ACCESS INFORMATION

3.1 Getting there

Wood Hill Wood is located on the south-facing slopes of the Ochil Hills between the villages of Alva and Tillicoultry, Clackmannanshire. It is a mainly broadleaved woodland and from the upper parts of the path loop affords superb views south over the Devon and Forth valleys.

There are 4 entrances to the wood. The two southern entrances to the wood are adjacent to the Clackmannanshire Council car park at the Woodland Park, an adjoining piece of woodland managed by the council. To reach this, follow the A91 to the eastern end of Alva and take the minor road-signposted 'Woodland Park'. The car park is reached after 1km (0.6 mile). Access to the wood is located opposite the car park. Another access point can be reached by following the access road east for a further 250m.

The eastern entrance can be reached from a path starting just above Tillicoultry Golf Club and running along above the course (570m). The western entrance can be accessed via a kissing gate from the farm track leading up the Silver Glen. This route also provides access from the wood to Alva Glen and the Ochil Hills.

Within the wood there are just over 2km of paths most of which form a circular route. The paths link into the wider core path network via paths 56 and 57 within the Clackmannanshire Core Path Plan.

The nearest public toilets (with disabled access) are at Speirs Centre, 29 Primrose St, Alloa, Clackmannanshire FK10 1JJ. Tel 01259 213131).
Nearest bus stop – Alva Stirling street (2km) Service 23 runs regularly from Stirling to St Andrews. Further information about public transport is available from Traveline - www.travelinescotland.com or phone 0871 2002233. (August 2016).

3.2 Access / Walks

There is good vehicular access, to the circular walk, with free parking at the Clackmannanshire Council car park at Woodland Park, an adjoining piece of woodland managed by the council. Within the wood there are just over 2km of paths, most of which form the circular route. The sections leading to the upper path are steep. Although the lower paths are stone-surfaced forest tracks, the upper paths are unsurfaced and some sections can be slippery in wet weather.
The western entrance can be accessed via a kissing gate from the farm track leading up the Silver Glen. This route also provides access from the wood to Alva Glen and the Ochil Hills.

4.0 LONG TERM POLICY

Woodland
The long term intention is to maintain the site as a predominantly wooded area, graduating from dense woodland cover on the lower slopes, to scattered trees and open grassland on the upper slopes. This graduation will provide a soft landscape edge between the main body of the woodland and the open grazing land on the hill top. It is anticipated that the site will remain as mixed broadleaved woodland, with a large proportion of even aged non-native species (particularly sycamore) present. Over time it is expected that the woodland will become less even-aged and become more diverse in age and structural composition. This will be achieved by natural regeneration as gaps occur in the canopy as a result of senescence or windblow of older trees, targeted selective thinning of the conifers and some of the broadleaves (especially in and around pulses of advanced regeneration) and halo thinning around the veteran trees . Throughout the woodland there will be a secure, healthy & diverse ground flora characteristic of long term woodland cover and open ground upland habitat.

Surviving ancient woodland remnants will continue to be secured and enhanced by gradually reducing shade in two ways -veteran trees will gradually be released by selective removal of any adjacent trees which are shading out or overtopping them, and conifer blocks (western hemlock and spruce stands) will be selectively thinned to recycle to reduce the threat of over shading to the field layer, encourage ground flora and increase deadwood habitat.

The plantation of Sitka spruce in the north-west corner does not fit in with the landscape of scattered trees on the upper slopes, and the long term intention is for this block to gradually convert back to open ground with scattered trees. There is no evidence of woodland before this plantation (no stumps, no woodland flora, and no woodland on old maps). The area of spruce is small and very inaccessible and therefore management intervention would be prohibitively expensive. Therefore intention is to allow the trees to grow old and gradually blow over with little or no management input.

The upper tree line will be allowed to develop naturally over time. It is envisaged that this will be very gradual and that on-going deer and hare browsing will maintain the upper limits of the site as open acid grassland.

Invasive Rhododendron ponticum will continue to be controlled. Any surviving large bushes and regrowth from old stumps will be chemically controlled and any new growth seeding in from adjacent land will be pulled out.

Public Access
The long term intention is to continue to offer the opportunity for low-key informal public access and small scale organised events through on-going maintenance of the existing path network. There are no plans to actively try to increase public use of the site, however, any opportunities to join in any joint access network projects will be considered.
Regular inspections will be undertaken with regard to tree safety and other access features. Remedial work will be carried out as needed.

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 Informal Public Access

Description

Most visitors to Wood Hill Wood use either the main track leading from the council car park to gain access to the Ochil Hills beyond, or use a section of the track to the east as part of the long distance multi-use route towards Tillicoultry. Less frequently, walkers use the circular path (approximately 2km long) which starts from the car park, heads NW up a vehicular track, then climbs steeply uphill on a narrow path (before reaching Silver Burn). This path then runs fairly levelly across the middle slopes, before dropping steeply down again to join the Council path and heading west back to the car park. There are 3 viewpoints on this path with superb views to the south.
The paths and vehicular tracks have a rough stoned surface, over most of their route.

Levels of public pedestrian use could be described as medium (WT access code B), with occasional use of the paths by horse riders and mountain bikers.
There is a joint information board in the council car park, adjacent to a play park and picnic benches.

Significance

Providing informal public access to our woods is an important part of the Woodland Trust's ethos and is encapsulated in its corporate objective of increasing people's enjoyment.

Opportunities & Constraints

Constraints: Much of the wood is growing on extremely steep slopes, with a number of rocky outcrops and loose scree slopes.
Opportunities: To increase public enjoyment through small-scale improvements near the paths. To encourage greater understanding of the old silver mines if the opportunity allows. To link in with wider access development plans.

Factors Causing Change

Long term Objective (50 years+)

To continue to offer the opportunity for low-key informal public access and small scale organised events.

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

To ensure access provision is in keeping with WT access guidelines and site access coding (B) and according to the Scottish Outdoor Access Code. Paths are kept free of obstructions and encroaching vegetation on an annual basis.

5.2 Long Established Woodland of Plantation Origin

Description

The wood is shown on the Ancient Woodland Inventory as being of Long Established of Plantation Origin (LEPO), and is believed to have been planted in the middle of the 18th century.
The woodland is located on the steep slopes of the Ochil Hills and is extremely visible from the Forth Valley, being designated as an Area of Great Landscape Value.
The site is split approximately into thirds: mature high forest with a dense canopy cover on the lower slopes, grading through to pole-stage regeneration on the middle slopes, to scattered mature trees and open grassland on the upper slopes.
The predominant species are: sycamore (mostly on the lower slopes); ash (mostly on the mid slopes); and Scots pine, larch, oak, and beech with large areas of grassland (mostly on the upper slopes). Other species include birch, rowan, wild cherry, elm, occasional yew, Sitka spruce and western hemlock (the latter 2 species planted in distinct blocks). Trees are predominantly split into 2 age classes: 60 - 70 years old and 30 - 40 years old. There are also a few veteran trees.
The understory is mainly hawthorn, blackthorn, elder and ash regeneration. Rhododendron also used to be large part of the understory in places, but is now sparse after years controlling this invasive shrub.
Ground flora varies from being absent or is limited to: predominately dog's mercury under the dense canopy and on scree slopes, to mainly grass and patches of bracken in more open areas.
Vegetation is more varied and abundant in Silver Glen and on the upper slopes blaeberry also grows prolifically.

Significance

Broadleaved woodland cover is limited in the area, and Wood Hill Wood provides a valuable local wildlife habitat. As this is a long established woodland, the biodiversity value is significant.

Opportunities & Constraints

Constraints:
Ash dieback
Woodland management will be carried out in a manner which is sensitive to the landscape. Access for timber extraction is limited throughout much of the wood due to the steep gradient and a lack of suitable vehicle access.
Rhododendron is present on neighbouring land and is likely to invade into the woodland, and also occasional regrowth from cut stumps may occur over the next few years. Control is necessary to stop it re-establishing.
Deer browsing levels are acceptable at present. However, deer may become a problem as steps are taken to encourage natural regeneration and improve structural and species diversity.

Opportunities:
To gradually remove heavy shade casting conifers by selective thinning to recycle on lower slopes and allowing spruce to gradually succumb to wind over time on upper margin.
To improve age structure and species diversity by targeted light selective thinning in areas of advanced regeneration of broadleaved species.
Liaise with neighbours to encourage a reduction in Rhododendron ponticum cover on their land.

Factors Causing Change

Ash Dieback-as of August 2016 ash dieback has not been recorded at Wood Hill Wood. However, ash dieback is on the increase and gradually spreading throughout much of the UK (2016).
Invasive Rhododendron
Potential for increased deer damage to natural regeneration following targeted selective thinning to release advanced regeneration.

Long term Objective (50 years+)

To ensure the site remains as a predominantly wooded area with scattered trees and open grassland on the upper slopes.
More specifically:
To diversify the age and where possible the species structure of the woodland.
To ensure surviving remnants of ancient woodland (veteran trees and specialist flora) are retained, protected and restored.
To ensure no invading Rhododendron ponticum reaches flowering stage, and encourage reduction of Rhododendron on neighbours land.

It is likely that the effects of ash dieback will, in time, have an impact in parts of the woodland, especially in areas where ash is predominant, and that this will lead to an opening up of the tree canopy in these areas. It is expected that these newly opened up areas will be colonised by sycamore, in the main, along with several other minor species. Hence, in order to mitigate the effects of ash dieback and the resulting loss of species biodiversity, and make the woodland more resilient in the long term sycamore will be an accepted component of the site.

To retain the landscape characteristic of open ground and scattered trees on the upper slopes.

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

Rhododendron monitored every 2 years, and all bushes and seedlings controlled.
Western hemlock and Sitka spruce in cpts 1a and 2a to be selectively thinned to recycle, as required, to open up the canopy and increase light to the ground, improve ground flora and add to deadwood habitat in 2018.
At same time (2018) carry out halo thinning around veteran trees in cpt 3c.
Survey site by end of 2019 for pulses of advanced regeneration of broadleaved species. Carry out targeted light selective thinning to recycle in cpt 3e (2019) & in cpt 3f (2021) to favour and release the young regen' (by 2021).
All veteran trees to be re-surveyed by end of 2018 for side shading and overtopping and carry out selective thinning to recycle of adjacent trees as required to protect veteran trees in cpt 3e (2019) & in cpt 3f (2021).
Due to the anticipated impact of ash dieback sycamore will be an accepted component of the wood. Native species will be encouraged where possible.
The site to be annually monitored for the effects of ash dieback.
Following selective thinning to encourage advanced natural regen', the areas thinned will be monitored annually for growth and deer browsing.

6.0 WORK PROGRAMME

Year	Type of Work	Description	Due By

APPENDIX 1: COMPARTMENT DESCRIPTIONS

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Key Features Present	Designations
1a	3.20	Sycamore	1940	High forest	Very steep slope/cliff/quarry/mine shafts/sink holes etc	Informal Public Access, Long Established Woodland of Plantation Origin	Ancient Woodland Site, Area of Landscape Value
The majority of the compartment slopes relatively steeply from north to south. The tree cover in the area is very diverse in both age structure and species composition, although it becomes more uniform with sycamore to the east. Main species present are sycamore, birch, ash, larch, elm and western hemlock. A proportion of the hemlock is standing dead following successful ring-barking. Understorey comprises of some regeneration of ash and hawthorn in glades (created by death of elms) and occasional elder. There is also a occasional large Portuguese laurel. Ground flora is mainly grasses with bracken, although absent under the denser western hemlock blocks.							
2a	1.80	Sycamore	1940	High forest	Gullies/Deep Valleys/Uneven/Rocky ground, No/poor vehicular access within the site, Very steep slope/cliff/quarry/mine shafts/sink holes etc	Informal Public Access, Long Established Woodland of Plantation Origin	Ancient Woodland Site, Area of Landscape Value
The compartment slopes relatively steeply into the burn and less steeply towards the southern boundary. The trees are a wide variety of ages and species, including sycamore, ash, birch, a small block of Sitka spruce, Douglas fir, with occasional beech, larch and holly. Understorey is patchy and limited to elder, hawthorn, stunted western hemlock and occasional rhododendron. Ground flora is patchy with ramsons, dogs mercury, and grass. On the south western boundary there is a profusion of scrubby undergrowth of brambles and nettles.							

3a	8.80	Mixed broadleaves		High forest	Gullies/Deep Valleys/Uneven/Rocky ground, Housing/infrastructure, structures & water features on or adjacent to site, No/poor vehicular access to the site, Very steep slope/cliff/quarry/mine shafts/sink holes etc	Informal Public Access, Long Established Woodland of Plantation Origin	Ancient Woodland Site, Area of Landscape Value
The majority of this sub-compartment is composed of the steep sides of the gully into Silver Burn and its tributary. The understorey and plants in this sub-compartment are the most abundant and diverse out of the whole wood. At the southern end, the woodland is composed of predominantly larch and ash, with oak, birch, willow, rowan, sycamore and cherry, with an understorey of hawthorn, blackthorn, dog rose and elder. North of the footbridge, larch is confined to the boundary and below the tributary, with scrubby ash, sycamore, birch, oak and rowan – most prolific in the valley bottom. The understorey is a mix of gorse, broom, bracken and brambles. There are also patches of wood sorrel, dog violet, blaeberry and fox glove. In the far north, is an area (0.5ha) of semi-mature Sitka spruce with occasional blown stems, with no understorey. The rest of the compartment is open-ground covered with bracken and grasses. Very limited evidence of tree regeneration on upper slopes There are a number of mine shafts and adits throughout, now disused and fenced off or their entrances covered with grills for public safety reasons.							
3b	20.80	Open ground		Non-wood habitat	No/poor vehicular access to the site, Very steep slope/cliff/quarry/mine shafts/sink holes etc	Informal Public Access, Long Established Woodland of Plantation Origin	Ancient Woodland Site, Area of Landscape Value
This area is composed of steep slopes with a number of rocky outcrops and cliffs at the upper edge of the woodland boundary. A sparse tree canopy, with a scattering of mature Scots pine, oak and larch, with occasional beech, ash, and sycamore. Understorey is limited to occasional blackthorn. Much of the sub-compartment is covered with soft grass on the lower slopes and acid, coarse grass on the top of the hill with areas of bracken and blaeberry. There is occasional regeneration of rowan and larch.							

3c	1.50	Sycamore	1970	High forest	No/poor vehicular access to the site, Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Informal Public Access, Long Established Woodland of Plantation Origin	Ancient Woodland Site, Area of Landscape Value
Pole stage sycamore on steep slopes with no understorey and sparse ground cover of mainly soft grasses.							
3d	8.60	Oak (pedunculate)	1880	High forest	No/poor vehicular access to the site, Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Informal Public Access, Long Established Woodland of Plantation Origin	Ancient Woodland Site, Area of Landscape Value
A relatively steeply sloping area of ground, sloping towards the south and into the Wood Burn on the east. The woodland is composed predominantly of widely spaced mature oak and Scots pine, with occasional sycamore, larch and beech. There is also an area of predominantly mature beech on the knoll of the hill. There is very limited regeneration of rowan. Understorey is sparse and ground flora is predominately: soft grasses, blueberry, bracken and small amounts of heather. An old fence line marks the western boundary.							
3e	14.80	Ash	1970	High forest	No/poor vehicular access to the site, Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Informal Public Access, Long Established Woodland of Plantation Origin	Ancient Woodland Site, Area of Landscape Value
The trees in the area are predominantly pole-stage ash, relatively closely spaced and interspersed with occasional sycamore, oak and birch. Compartment contains a number of veteran trees. The slope of much of the sub-compartment is severe, with a number of rocky outcrops and cliffs being present. Understorey is made up of areas of ash regeneration and occasional hawthorn. Ground flora is predominately: grasses, bracken and brambles, in some areas ground flora is sparse.							
3f	17.30	Sycamore	1940	High forest	Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Informal Public Access, Long Established Woodland of Plantation Origin	Ancient Woodland Site, Area of Landscape Value

This sub-compartment comprises a strip of woodland covering the lower third of the slope, almost all across the site. The slopes are slightly less severe than in much of the rest of the site. The woodland is composed of predominantly mature sycamore which is closely spaced, with long straight boles and provides dense canopy cover. Compartment contains a number of veteran trees. Understorey is limited to ash regeneration, which is common but with evidence of some deer browsing and suffering from lack of light. Ground cover is sparse in some places. There is an abundance of dog's mercury, with the occasional clumps of bluebells. There is also a small area to the east of the Farriers which was planted in 1993 with mixed broadleaves and shrubs. The planted trees have grown well and there is an abundance of vigorous coppice regen' of ash and sycamore. Brambles are prolific.
Rhododendron has been successfully controlled over a number of years.

4a	2.50	Sycamore	1940	High forest	Gullies/Deep Valleys/Uneven/ Rocky ground, Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Informal Public Access, Long Established Woodland of Plantation Origin	Ancient Woodland Site, Area of Landscape Value

An area of woodland separated from the main body of Wood Hill Wood by a vehicle track, which is not in WT ownership. The area slopes towards the main A91, steeply in the northern end. Wood Burn runs through the wood, dividing it in half longitudinally. The woodland is composed of a wide variety of species and ages including sycamore, larch, ash, oak, rowan, Norway spruce, Douglas fir, yew, beech, birch, holly and cherry. Shrubs present are hawthorn and elder. Ground flora is sparse with patches of ramsons and grass. The area is evidently occasionally used for casual mountain biking with informal routes. Rhododendron has been successfully controlled over a number of years.

Appendix 2: Harvesting operations (20 years)

Forecast Year	Cpt	Operation Type	Work Area (ha)	Estimated vol/ha	Estimated total vol.
2020	1a	Thin	0.50	0	0
2020	2a	Thin	0.80	0	0
2020	3c	Thin	0.20	0	0
2020	3e	Thin	1.00	0	0
2020	3f	Thin	1.00	0	0

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.