WOODLAND
TRUST SCOTLAND

Moncreiffe Hill

Management Plan
2015-2020

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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 Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations.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:	Moncreiffe Hill
Location:	Perth
Grid reference:	NO138197, OS 1:50,000 Sheet No. 58
Area:	132.03 hectares (326.25 acres)
Designations:	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site, Scheduled Ancient Monument

2.0 SITE DESCRIPTION

2.1 Summary Description

This mixed conifer and broadleaf woodland cloaks the majestic Moncreiffe Hill, offering panoramic views stretching to Fife and the Lomond Hills. The wood is home to red squirrel and its diverse habitats support a fascinating range of plant life. And with two iron age hill forts to explore, there's plenty of historic interest too.

2.2 Extended Description

Moncreiffe Hill lies between Perth and Bridge of Earn, and to the east of the M90. It lies on an escarpment and is extremely prominent in the landscape, especially from the south.

The 132ha mixed woodland is classified as Long Established Woodland of Plantation Origin on the Ancient Woodland Inventory. The wood has surviving ancient woodland components and evidence (ground flora, veteran trees and some map evidence) which suggests it may be Planted Ancient Woodland, at least in some parts.

It contains a wide range of species: Douglas fir / ash / sycamore mainly on the lower slopes; larch on the mid-slopes; Scots pine on the upper slopes; with Sitka spruce / Norway spruce and recently planted or regenerated broadleaves occupying flatter benches on the North West plateau. A number of veteran trees cling on to the tops of crags. The contrast in colour and the natural shape of stands adds greatly to the landscape value of the site, as do the adjacent policy woodlands of Moncreiffe Estate on the lowermost slopes.

Ground flora varies with species canopy cover, altitude, and geology. There are some important non-woodland habitats of great interest for botanical and invertebrate biodiversity, including south facing crags and associated scree slopes below them.
Roe deer, red and grey squirrels, along with other smaller mammals and birds typical in woodland are present within the wood. There is a colony of yellow meadow ants, thought to be one of the most northerly colonies.

3.0 PUBLIC ACCESS INFORMATION

3.1 Getting there

By bus: There is a regular service between Perth and Bridge of Earn. The southern entrance to Moncreiffe Hill is just 1.6km (one mile) north of Bridge of Earn.

By train: The nearest station is Perth.

For up-to-date information on public transport, visit traveline.org.uk (0871 200 22 33).

By car:

From Perth, head south along the A989 (Tay Street). At the roundabout take the first exit onto Shore Road, then at the second roundabout take the second exit onto Friaton Road. Turn left onto the A912 (Edinburgh Road). Then take the third left onto Rhynd Road. Continue for roughly 1.6km (one mile) to the car park on the right, where there is space for around 25 cars.

From the A912 just north of Bridge of Earn, take the minor road (Rhynd Road) that runs east near the bridge over the River Earn. Follow this for roughly 1.8km (one mile), then turn up a track to the left, signposted for Moncreiffe Hill. The 10-space car park is about 750 metres (half a mile) along the track.

3.2 Access / Walks

There are two main entrances with information boards. The northern Tay car park entrance, which has the most spaces, is best for access to the sculpture trail and hill forts. The southern entrance is near Bridge of Earn. From both entrances, there is a steep climb to the top of the hill (steeper from the south).

The site has over 14km (8.7 miles) of path, mainly on wide, stone-surfaced forest tracks, with loops of different lengths and grades. Many of the routes are part of the Core Path Network. Some unsurfaced paths can be muddy and steep in places, especially the path to Moredun Fort.

There are five waymarked trails, ranging from the green 3km (1.9 miles) walk to the more challenging red 8.4km (5.2 miles) route. If you follow the white or green trails, you will discover a variety of wooden sculptures, including musical dragonflies, swinging bees, a bench in the shape of a slug and deer made of metal. The trail was made possible by the Gannochy Trust, Perth and Kinross Countryside Trust, and Scottish Rural Development Programme funding through Forestry Commission Scotland.

The minor road that encircles much of the wood is quiet and suitable for careful cycling and walking, but has no pavement and no bus service. Horse riders can also enjoy the site.

4.0 LONG TERM POLICY

Woodland
The long term vision is for Moncreiffe Hill to continue to be a woodland of diverse species and age composition, with a mixture of broadleaves and conifers, although with a much greater native component than at present.

A significant element of conifers, both native and non-native, will be retained as long as possible to maintain the diversity of colours and textures in the landscape. The conifers will be thinned gradually for long-term retention, which will also let more light in to encourage natural regeneration and more diverse woodland flora. Non-native regeneration will be accepted as part of this mixed woodland, unless it becomes dominant. Broadleaved areas will be left to develop naturally, with tubes and fencing removed from planted areas once established. Any significant wind blown areas will be cleared and either replanted or encouraged to naturally regenerate. Scattered wind blown trees will be left for a deadwood habitat. Open areas will be left to develop naturally.
Restoration of the surviving ancient woodland components will be gradual, creating conditions in which they can recover.

Public Access
This stunning site will be promoted to attract more visitors, especially families, with interpretation maintained and improved to inspire everyone to enjoy and value woods, trees and the historic interest. Existing on-site access facilities and paths will be maintained and enhanced to suit demand, which is classed as Grade A - high usage.

Archaeological features
The two scheduled ancient monuments will be protected from any potential threats (e.g. root disturbance from trees and shrubs, rabbit burrowing, and erosion caused by high levels of access on steep slopes).

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

Extensive path network with a range of routes over 14km long and impressive views. Facilities include two car parks, interpretation boards, leaflets, benches, waymarking and a sculpture trail. Many of the paths in this woodland are part of the Core Path Network, and this along with choice of routes of varying lengths, help to make this a site a destination for both local dog walkers and visitors from further afield. Cyclists and horses also enjoy using this site and with most paths surfaced there is minimal potential for damage. The sculpture trail encourages families to visit and the views of the surrounding landscape is a significant draw.

Significance

The wood is important for access because of its proximity to populations of Bridge of Earn and Perth, its relatively large size, and its panoramic views. The Woodland Trust has classed this wood as access category A, and has over 40,000 annual visitors (from 2012 survey).

Opportunities & Constraints

Opportunities to encourage more visitors to the wood through promotion and in partnership with Big Tree Country, and the Tay Landscape Partnership Project.
Constraints include steep slopes.

Factors Causing Change

Long term Objective (50 years+)

Moncreiffe Hill will be continue to be a popular place to walk, with numbers of visitors greater than at present (currently 40,000). Existing on-site access facilities, paths and viewpoints will be maintained and enhanced to suit the existing demand, which is classed as Access Grade A – high usage. It is not currently anticipated that the existing path network will be extended unless there is significant change in demand or opportunities to link to other path networks in the area.

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

1. A popular place to walk.
Achieved by: continuing promotion to inspire people to visit and make return visits - promote on website and through press releases and leaflets, and in partnership with the Big Tree Country and Tayside Landscape Partnership Project (ongoing); further sculptures will be added to the sculpture trail in partnership with Duncan Jordanstone College of Art and Design by students annually (2015 -20), and new pictish carving of large boulders in compartment 5a (in 2015); a new leaflet will be produced to replace current one (in 2015); and holding at least two public events (by 2020).

2. Existing on-site access facilities, paths and viewpoints will be maintained and enhanced to be welcoming and to suit the existing demand.
Achieved by: Paths and current access facilities will be inspected and maintained (2015 - 2020); the muddy path on green route will be upgraded to give a well-drained route (2016/17); the access track to Earn Car Park will be upgraded (2015); new leaflet dispensers installed at entrances in 2015.

5.2 Archaeological Feature

Description

There are two iron aged forts which are scheduled ancient monuments - Moncreiffe Hill Fort with a trig point, and Moredun Top Fort annex (with main fort area outwith Trust ownership).
Moncreiffe Hill Fort (SAM 9438 Moncreiffe Hill, fort 800m NW of Moncreiffe House) sits on a small plateau with cliffs and a steep slope to the south. The ramparts are well preserved on the east edge with a clearly defined entrance, but are largely denuded elsewhere, although the break of slope at the edge of the plateau can be assumed to define the edge of the fort.
Moredun Top Fort (SAM 9440 Moredun Top, fort) is situated on the highest part of Moncreiffe Hill with steep southern and western edges and more shallow northern and eastern flanks. The line of several ramparts can be traced around the outcrop, with indications that an annex is situated on a terrace on the northern flank. Only this annex is within the ownership of Woodland Trust Scotland.

Significance

Both hill forts sites are Scheduled Ancient Monuments. There are several other forts within the wider area - thought to be a strategic location between Rivers Tay and Earn.

Opportunities & Constraints

Scheduled Ancient Monuments are protected and there are forestry constraints - no new planting within 20m of scheduled ancient monument boundary, no machinery inside scheduled areas, and control of any regeneration or coppicing.

There is an opportunity to find out more about these hill forts in partnership with the Tay Landscape Project through archaeological digs and improved interpretation.
There is also the potential to open up a direct visual link between the two hillforts, by heavily thinning or felling parts of compartments between them in the future.

Factors Causing Change

Scrub encroachment and tree regeneration / coppicing on monuments.
Potential for rabbit burrowing and erosion from access on steep slopes.

Long term Objective (50 years+)

Protect the two scheduled ancient monuments from any potential threats (e.g. root disturbance from trees and shrubs, rabbit burrowing, and erosion caused by high levels of access on steep slopes) to maintain in current condition. To learn more about the monuments from Tay Landscape Project.

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

1. Protect both the ancient monuments (within Trust ownership) from potential threats (as per advice from Historic Scotland).
Achieved by: controlling any regeneration and coppicing from trees and scrub felled in 2011 from ancient monuments, where it is safe to do so, (Compartments 3j and part of 1e 2015 – 2020); and monitoring every 5 years for root disturbance, rabbit burrowing and erosion caused by high levels of access on steep slopes. (Compartments 3j & part of 1e in 2020).

2. To improve our knowledge of the monuments.
Achieved by: working with the Tayside Landscape Partnership, who will hold archaeological digs and surveys (with permission from Historic Scotland and led by Perth & Kinross Heritage Trust) in 2015; and to consider improving the interpretation on the hill forts depending on findings (by 2020).

5.3 Ancient Woodland Site

Description

Moncreiffe Hill is classed as a Long Established Woodland of Plantation Origin on the Ancient Woodland Inventory, (it is not apparent on the Roy maps of 1750 but is shown on the first edition OS maps of around 1860), with scattered remnants of ancient woodland ecological communities, such as surviving veteran trees and ground flora typical of ancient woodland. The age structure of the woodland is unbalanced with more than 50% of the wood consisting of mixed conifers planted in 1955/56, although recent restocking with native broadleaves has started to spread the age range. There are a few notable older trees, most notably Douglas firs (P1860) and individual oaks clinging onto cliff tops.
Moncreiffe Hill is a long established woodland of plantation origin (planted after 1750 but before 1860), with scattered remnants of ancient woodland, such as surviving veteran trees and ground flora typical of ancient woodland. The age structure of the woodland is unbalanced with more than 50% of the wood consisting of mixed conifers planted in 1955/56, although recent restocking with native broadleaves has started to spread the age range. There are a few notable older trees, most notably Douglas firs (P1860) and individual oaks clinging onto cliff tops.

Moncreiffe Hill is an igneous escarpment, largely composed of andesite lava, which outcrops as cliffs along the steeper southern edge of the ridge. The northern dip slopes are relatively gently sloping. Soils tend to be richer and deeper on the lower slopes, with thin acidic soils on the upper slopes. Erosion of the base rock has produced areas of more basic soils. A small water course runs from the Tarsappie Hill northwards to drains on adjacent farmland.

There is lots of deadwood, mainly from previous thinning and felling operations, but also from fallen and standing dead trees.
Invasive plants are encroaching over our southern boundary, namely Himalayan Balsam and a couple of rhododendron bushes.

Non-woodland habitat
There are some non-woodland habitats, consisting of open, south facing crags and associated scree slopes below them as well as other scattered areas with thin soils over rock that support short acid grassland and patches of heathland. Tracks edges within the wood also provide some interest. Whilst the cliffs are not of the same extent and quality as the nearby Kinnoull Hill SSSI, they do contain a large number of locally rare species, many dependants on open, dry or disturbed ground. Some of these are more southern species near their northern limit and others are more often found in coastal locations. Their presence is due to the calcareous geology of the bedrock and also the warm southerly aspect.
Locally rare species include: crow garlic (Allium vineale); hairy violet (Viola hirta); scarlet pimpernel (Anagallis arvensis); common century (Centurium erythraea) [found above the car park]; Helleborus foetidus (an introduction, found above the western turning area); hairy and spring vetches (Vicia hirsuta and V. lathyroides); and cornsalad (Valariana locusta).
There are also two small ponds: one along the upper track in sub-compartment 4t and the other in sub-compartment 3w, which is seasonal.
These non woodland habitats will be left to develop naturally with minimum intervention.

Significance

The woodland is on the SNH Ancient Woodland Inventory as Long Established Plantation Origin, which suggests there is the possibility of a relatively high biodiversity potential. There are other secondary woodlands adjacent to this wood, both coniferous and broadleaved within a surrounding agricultural setting, which provides a habitat network for movement of species.

Opportunities & Constraints

Opportunities are to remove the threat (shade) to Ancient Woodland components, securing all veteran trees and hotspots of plants typical of ancient woodland; to gradually convert the non-native conifer plantation to native woodland; and to increase the biodiversity value.
Constraints are the steep slopes, further wind blow of conifers, deer browsing, invasion of rhododendron and Himalayan balsam.

Factors Causing Change

Wind blow, Deer & rabbit damage, Invasive rhododendron, Invasive Himalayan balsam, chalara (ash die back disease), phytophera (larch disease).

Long term Objective (50 years+)

Moncreiffe Hill will continue to be a woodland of diverse species and age composition, with a mixture of broadleaves and conifers, although with a much greater native component than at present through gradual conversion, giving greater biodiversity levels. A significant element of conifers, both native and non-native, will be retained as long as possible to maintain the diversity of colours and textures in the landscape.
The surviving ancient woodland components will be secured and enhanced.

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

1. Ancient woodland components being restored by reducing threats.
Achieved by: thinning to reduce shade (cpts 1b, 2c, part 1c & part 1f in 2016), and reviewing the PAWS assessment to check progress (in 2020).

2. Gradual conversion of non-native plantation to a greater native component
Achieved by:
(a) The large areas of wind blow and remaining unstable conifers in most of cpt 1f will be clear felled and deer fenced to encourage regeneration, with some enrichment planting. (Cpt 1f (part) in 2016/17).
(b) The areas of wind blow in cpt 2e will be cleared where accessible and replanted with native trees and shrubs in tubes. (Cpt 2e (part) in 2016/17).
(c) A strip of larch in cpt 2e next to the path will be clear felled and replanted with native shrubs in tubes, to reduce regular clearing fallen trees from the path after strong winds. (Cpt 2e strip in 2016/17).
Other large areas of accessible wind blow will be cleared where practical.

3. Young planted areas will be maintained until established (cpt 4e & corner of 1f in 2015-20).

4. Biodiversity will be improved through: deer assessment and control to increase floristic diversity and regeneration; control of individual rhododendron bushes and pulling of invasive Himalayan balsam (all annually).

5.4 Secondary Woodland

Description

An area of new native woodland, planted in 2011 in the field extension to the north. Trees were planted inside a deer fence with vole guards for protection. The lower slopes were ploughed and seeded with wild flowers to add interest for visitors and increase biodiversity for wildlife. Trees were mostly planted by school children and the local community. Some fruit trees have also been planted.

Significance

Planting new areas of woodland is part of a national target to increase woodland

Opportunities & Constraints

Factors Causing Change

Long term Objective (50 years+)

To establish an area of native woodland.

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

The young woodland will be maintained until established, with weeding and beating up as required (compartment 5a 2015-16). The deer fence will be removed when trees have established (next plan period).

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	1.67	Mixed broadleaves	1986	High forest		Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
Area of planted broadleaves (p1986) amongst natural birch regeneration of various ages on fertile soil with some mature trees in over storey. Site quite open with occasional glades/open ground. No regeneration. Rare deadwood.							
1b	0.84	Scots pine	1990	High forest		Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
Plantation of p90 Scots pine and birch on fertile ground. Growing well and starting to close canopy. Broom invading gaps in the canopy. Grassy understorey with fern patches. No regeneration. Rare deadwood.							
1c	3.44	Mixed native broadleaves	1990	High forest		Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
Groups of p90 mixed broadleaves, predominantly ash and birch, on fertile brambly ground with glades. Pre 1902 quarry site by entrance. Grassy understorey with no regeneration. Rare deadwood.							
1d	3.67	Mixed native broadleaves	1991	High forest		Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
Groups of pole stage p1975 birch interplanted with thicket stage p1991 oak on fertile ground with heavy gorse & broom growth, especially along ride and edges. Grassy understorey with fern clumps and no regeneration. Rare deadwood.							

1e	3.97	Mixed native broadleaves	1991	High forest	Archaeological features	Ancient Woodland Site, Informal Public Access	Planted Ancient Woodland Site, Scheduled Ancient Monument
Plantation of p1988 birch and alder on higher ground with p1990 oak & ash on lower slopes. Scheduled Ancient Monument fort site on southern part, with trees removed in 2011. Grass and fern understorey with broom at north end. No regeneration. Rare deadwood.							
1f	6.77	Sitka spruce	1977	PAWS restoration		Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
P1974 - 77 crop of Sitka spruce and Grand fir with larch and birch. Larch mainly in one area on the eastern edge of the subcompartment. Birch growing near stream, in wide rides and pockets. Extensive windblow in GF area. No regeneration. Occasional deadwood. SE corner of larch felled and planted with hazel to open up view from bench.							
2a	1.89	Norway spruce	1956	PAWS restoration		Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
Even aged stand comprising blocks of mature p1956 well thinned larch, Norway spruce, Sitka spruce, Scots pine and birch with recent windblow affecting around 15% of the stand (at east end). Ground flora dominated by grasses with foxgloves. Occasional lying deadwood. No regeneration.							
2b	1.28	Birch (downy/silver)	1970	High forest		Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
P1970 silver birch with some P 1990 sycamore planted into gaps. Grass and fern understorey. No regeneration. Rare deadwood.							
2c	7.25	Birch (downy/silver)	1993	PAWS restoration		Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
Restock site with larch, Scots pine and mixed broadleaves (p1988) with low survival rates but successful birch regeneration from scattered seed trees. Varied ground flora of grasses, ferns, mosses and bracken clumps. No regeneration. Occasional deadwood.							

2d	4.31	Scots pine	1956	PAWS restoration		Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
Plantation of p1956 Scots pine on a knoll on the plateau with some areas of Sitka spruce, birch and larch. Birch regenerated in more open area on the southern side and a little Scots pine regeneration. Windblow starting to occur in some wetter spots in the northern part. Ground flora dominated by grasses. Occasional deadwood. Site of pre 1905 reed-thatched cottages present near track on SW side.							
2e	3.03	Hybrid larch	1977	PAWS restoration		Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
Plantation crop of P1977 larch, Sitka and Norway spruce on moderate slopes with much windblow. Discreet areas of larch on west side and Sitka spruce on east side. No regeneration. Occasional deadwood.							
2f	3.74	Mixed broadleaves	1996	High forest		Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
An area of mixed native broadleaves (oak, rowan and woody shrubs) and Scots pine planted in 1996. Over much of the compartment there is grass understorey and rare regeneration of birch. Some wet areas with juncus and willowherb. Rare deadwood.							
2g	0.89	Birch (downy/silver)	1989	Min-intervention		Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
Open knoll with birch and alder on the eastern fringe. Knoll flattens at western side. Also broom and heather and grassy understorey. Some Scots pine regeneration. Rare deadwood. There is a bench with views to the north east and north west.							
2h	4.26	Hybrid larch	1955	PAWS restoration		Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site

P1955 Scots pine and larch plantation with pine generally on knolls. Some minor windblow and some areas of open ground from previously cleared windblow. Ground flora predominantly grassy. Rare regeneration (near path). Occasional deadwood.							
3a	0.52	Sycamore	1950	High forest		Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
P1950 sycamore with ash regeneration and a small area of planted mixed broadleaves. Couple of prominent veteran Douglas firs. Ground flora bracken and a vigorous herb layer with foxgloves. Rare deadwood.							
3b	1.55	Douglas fir	1956	PAWS restoration	Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
Stand of p1956 Douglas fir with occasional sycamore coppice regrowth. Ground flora dominated by brambles and ferns. Occasional lying deadwood.							
3c	0.57	Hybrid larch	1956	High forest	Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
P1956 larch and sycamore on steep slope. Well thinned mature high forest with sycamore stumps recoppicing. Larch of variable form. Ground flora grass dominated. Occasional deadwood. No regeneration.							
3d	0.44	Douglas fir	1900	High forest	Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
Grove of mature Douglas fir and a few beech which pre-dates most of the trees at Moncreiffe (p1880 - 1900). Spectacular veteran trees well worthy of long term retention. Ground flora of holcus & ferns. Rare deadwood. No regeneration.							
3e	2.83	Sycamore	1940	PAWS restoration	Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site

P1950 sycamore plantation with occasional older sycamore present. Rack cut for thinning access now recoppicing. Herb layer of bracken, fern, dogs mercury and grass with little natural regeneration (heavily grazed). Rare deadwood.							
3f	4.06	Hybrid larch	1956	PAWS restoration	Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
P1956 larch plantation on steep rocky slopes with sycamore. The exposed position has resulted in slow growth so still fairly stable. Occasional deadwood. No regeneration.							
3g	1.73	Douglas fir	1956	PAWS restoration	Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
Stand of 1956 Douglas fir, larch and mixed broadleaves (ash, sycamore and elm) on steep slope above road. There is a rich herb layer and good ash regeneration. Rare deadwood.							
3h	0.32	Mixed native broadleaves	1991	High forest		Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
Small corner of p1990 mixed native broadleaves.							
3i	1.73	Hybrid larch	1956	PAWS restoration	Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
P1956 larch plantation on very steep bank below crags, with pockets of Douglas fir and sycamore. No windblow as yet. Occasional dogs mercury on top half. Deadwood rare.							
3j	0.97	Open ground		Non-wood habitat	Archaeological features	Ancient Woodland Site, Informal Public Access	
Open ground on hill top with trig point on site of scheduled hill fort. Panoramic views to south and west. Currently grassy except for some gorse on southern slopes which helps to restrict access to the crags below.							

3k	1.66	Hybrid larch	1955	PAWS restoration	Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
Plantation of p1955 Scots pine and hybrid larch of variable density on SW facing slope near top of hill. Some windblow above cpt 3u. Ground flora comprises soft grasses and ferns. Frequent deadwood.							
3l	0.82	Hybrid larch	1940	High forest	Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
Narrow strip of p1940 larch & sycamore in a gulley leading up from the crags to the plateau. Much self thinning and dead wood. Small crowns. Ground flora mainly grasses.							
3m	1.10	Ash	1940	High forest	Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
p1940 ash and sycamore woodland lying on very steep gravely ground below crags. Bracken clumps. Stinking helllibore along path. Very rare deadwood.							
3n	0.44	Hybrid larch	1956	PAWS restoration	Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
Plantation of p1956 larch on very steep slopes below the crags with blocks of sycamore. Rare deadwood.							
3o	2.51	Hybrid larch	1956	PAWS restoration	Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
P1956 larch plantation on steep upper slopes and edge of plateau with small area of Scots pine. No windblow at present. Pre 1866 quarry site near track. Grassy understorey and no regeneration. Deadwood scattered.							

3p	1.44	Sycamore	1940	High forest	Very steep slope/cliff/quarry/mine shafts/sink holes etc	Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
P1940 sycamore plantation on steep ground, with an understorey of coppice regeneration over most of the compartment, giving an appearance of coppice with standards. Rare deadwood. Rhododendron on adjacent land next to motorway.							
3q	1.44	Norway spruce	1956	PAWS restoration		Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
Stands of Norway spruce with open grassy glades of mature downy birch. Also small stands of p1956 western red cedar and sycamore. Few blown trees and occasional deadwood. No regeneration.							
3r	1.28	Scots pine	1956	PAWS restoration		Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
Strip of Scots pine along the crest of the ridge and on knolls. No windblow as yet. Grassy understorey and no regeneration. Rare deadwood.							
3s	2.36	Sycamore	1940	High forest	Very steep slope/cliff/quarry/mine shafts/sink holes etc	Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
Ash and sycamore on steep ground and a bench below the crags. Ground flora dominated by grasses, with occasional broom and gorse and rare stinking hellebore. No regeneration evident. Couple of walnut trees. Rare deadwood.							
3u	0.53	Mixed native broadleaves	2003	High forest		Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
P2003 mixed broadleaves in tubes along the top of the crag. Previously p1955 Sitka spruce. Occasional deadwood.							

3v	1.59	Hybrid larch	1955	PAWS restoration		Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
Stand of p1955 larch with Scots pine, sycamore, ash and birch. Herb layer of grass and bracken with foxglove, brambles, honeysuckle, and woodsage. Rare regeneration. Some minor windblow and snap evident (<5%).							
3w	0.81	Ash	1950	High forest		Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
Widely spaced stand of p1950 ash and sycamore with an open glade with seasonal pond. Occasional larch and birch regeneration. Herb layer grass, woodsage, thistles, nettles, and scattered gorse. Occasional deadwood.							
3x	2.90	Mixed broadleaves	1995	High forest		Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
Restock site with p1993 birch, oak, ash, alder and rowan. Row of larch on west side. Open ground comprised mostly of grass and bracken glades with occasional gorse. Rare deadwood.							
4a	0.39	Douglas fir	1955	PAWS restoration	Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
Stand of p1955 Douglas fir on steep slopes. Rare deadwood. No regeneration.							
4b	4.12	Ash	1940	High forest	Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
P1955 ash with some sycamore on lower slopes. Approx. 30 degree slope lower down but flatter benches higher up. Tree size reduces with altitude. Steep slope above car park has dog rose, hazel, and lots of brambles. Ash and sycamore regeneration plus some elm along path. Occasional deadwood.							

4c	1.52	Ash	1940	High forest	Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
P1955 ash of reasonable form. The southern end of the compartment has been heavily thinned to leave sycamore stumps which are now coppicing. Ash and broom regeneration along the path and broom and gorse. Oak regeneration heavily browsed. Rare standing deadwood. Herb layer includes woodsage, raspberry and figwort.							
4d	3.23	Scots pine	1956	High forest	Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
Fairly slow growing p1956 Scots pine plantation which has been variably thinned in the past to leave open glades of bracken with ferns and brambles. Underplanted in 2003 with native broadleaves & Scots pine in tubes, which are struggling. Rocky knolls and peaty hollows. Rare deadwood. No regeneration.							
4e	1.41	Mixed native broadleaves	2011	Wood establishment		Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
Mixed broadleaves planted in 2011 after clearfelling stand of p1956 Sitka spruce with wind blow. Also an area of Scots pine, ash and birch on rocky knolls. Wet open Juncus dominated glades which are slowly being recolonised by downy birch. Heather and Scots pine regeneration near the bench. Fern understorey. Occasional deadwood from felling arisings.							
4f	1.72	Japanese larch	1956	PAWS restoration	Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
P1956 larch plantation with cut sycamore coppicing vigorously. Ash and sycamore at west end. Ground flora dominated by grass and fern at west end. One mature beech tree.							
4g	1.08	Mixed native broadleaves	1991	High forest	Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
P1991 plantation of native broadleaves - mostly ash, oak and gean. Plus some sycamore. Herb layer figwort, foxglove, wood avens, and lots of nettles. No regeneration. Rare lying deadwood.							

4h	2.05	Mixed native broadleaves	2003	High forest		Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
P2003 planting of native broadleaves and Scots pine in tubes. Previously Scots pine plantation with windblow and snap. Grassy herb layer with no natural regeneration.							
4i	1.22	Sitka spruce	1956	PAWS restoration		Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
P1956 Sitka spruce on slopes, with strip of Scots pine on northern edge. Frequent windblow. Occasional deadwood and no regeneration.							
4j	0.88	Hybrid larch	1956	PAWS restoration	Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
P1956 larch plantation with sycamore coppice from previous thinning and minor mixed broadleaved component. Few windblown trees. Occasional lying deadwood. Regeneration (mostly ash) is heavily browsed. Herb flora dominated by dogs mercury.							
4l	0.92	Douglas fir	1956	PAWS restoration	Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
Plantation of p1956 Douglas fir, sycamore and larch on a fertile, moderate slope. Heavily-thinned in groups with sycamore coppice in the understorey. No windblow as yet. Occasional deadwood. No regeneration. Private water supply taken from burn to east, through sub-compartment in a black overground pipe, and underground below track.							
4n	1.41	Sycamore	1956	PAWS restoration	Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
Mixed age plantation of p1940 sycamore and occasional p1956 hybrid larch with sycamore regeneration on moderate slopes. Occasional lying deadwood. No regeneration.							

4o	1.45	Sycamore	1940	High forest	Very steep slope/cliff/quarry/mine shafts/sink holes etc	Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
Stand of p1940 mature sycamore, ash, Douglas fir and a small block of western hemlock at eastern end. Also occasional larch. Rare deadwood. No regeneration.							
4q	0.80	Birch (downy/silver)	1920	Non-wood habitat		Ancient Woodland Site, Informal Public Access	
Access track leading from minor public road to wood. Few trees and shrubs growing along edge. Hawthorn, birch, willow, sycamore and broom growing along track, with grasses.							
4r	9.65	Hybrid larch	1956	PAWS restoration	Very steep slope/cliff/quarry/mine shafts/sink holes etc	Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
Large belt of p1956 larch running across the hill below Scots pine. 80% of cpt well thinned and fairly stable. Around 20% unthinned on steeper slopes. Some sycamore and ash. Good herb layer but little natural regeneration. Lots of foxgloves along the path and some gorse. Rare deadwood.							
4s	3.18	Douglas fir	1956	PAWS restoration	Very steep slope/cliff/quarry/mine shafts/sink holes etc	Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
P1956 Douglas fir plantation. Vigorous herb layer of bramble and foxgloves along path but little natural regeneration. Occasional deadwood. Two big old beech trees. Himalayan balsam present along boundary and in neighbouring land to south. Private water supply tank just north of track, with underground blue pipe crossing to south of track.							
4t	6.95	Scots pine	1956	PAWS restoration		Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
P1956 Scots pine plantation with recent heavy thinning leaving clumps between large racks. Some windblow / snap. Occasional larch and 5 - 10% mixed broadleaves. Heather, gorse and foxgloves along the path. Several older oak and other species along top of outcrops.							

4u	2.93	Sycamore	1950	Wood establishment	Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
Sycamore (p1940) with occasional clumps of Douglas fir and ash regeneration. Rare regeneration.							
4v	1.42	Mixed broadleaves	1990	High forest	Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Ancient Woodland Site, Informal Public Access	Long Established Woodland of Plantation Origin, Planted Ancient Woodland Site
Matrix of sycamore (p1940) and larch (p1956) with clumps of Douglas fir and mixed broadleaves (p1990). Occasional deadwood and no regeneration.							
5a	4.40	Mixed native broadleaves	2011	Wood establishment	Site structure, location, natural features & vegetation	Ancient Woodland Site, Informal Public Access	
Improved pasture field planted with mixed broadleaves in 2011. Most of area deep ploughed for wild flower meadow, and rest inversion mounded.							

Appendix 2: Harvesting operations (20 years)

Forecast Year	Cpt	Operation Type	Work Area (ha)	Estimated vol/ha	Estimated total vol.
2016	1f	Clear Fell	3.97	368	1460
2016	1f	Thin	1.07	82	88
2016	2c	Thin	7.27	11	80
2016	2e	Clear Fell	0.52	308	160
2025	2c	Thin	1.89	26	50
2025	2d	Thin	4.30	58	250
2025	2h	Thin	4.20	67	280
2025	3b	Thin	1.50	267	400
2025	3f	Thin	4.60	65	300
2025	3g	Thin	1.70	118	200
2025	3i	Thin	2.20	68	150
2025	3n	Thin	0.40	125	50
2025	3o	Thin	1.20	67	80
2025	4a	Thin	0.30	100	30
2025	4f	Thin	1.70	59	100
2025	4j	Thin	0.80	63	50
2025	4l	Thin	0.90	111	100
2025	4o	Thin	1.45	138	200
2025	4r	Thin	9.65	93	900
2025	4s	Thin	3.10	290	900
2025	4t	Thin	3.90	231	900

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.