WOODLAND
TRUST SCOTLAND

Blaeberry Woodland

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 Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations.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:	Blaeberry Woodland
Location:	East Whitburn
Grid reference:	NS958646, OS 1:50,000 Sheet No. 65
Area:	35.32 hectares (87.28 acres)
Designations:	

2.0 SITE DESCRIPTION

2.1 Summary Description

At the heart of the Central Scotland Forest, Blaeberry Woodland is a newly-created wood that is coming into its own. One of 16 Woodland Trust woods in West Lothian, it has lots of paths to explore and spectacular views to the Five Sisters Bings, giant spoil heaps that are a local landmark.

2.2 Extended Description

Blaeberry Wood is situated to the south of the M8 and lies between Whitburn and East Whitburn.

The undulating topography is influenced by glacial deposits, which produce a series of characteristic east-west gentle ridges, with the land gradually rising from 160m in the north to 200m a.s.l. to the south, with a generally northern aspect. The soil parent material is derived from sedimentary rocks, mainly sandstones and shale. These are grouped as the Rowanhill Association producing brown-forest soils with various degrees of gleying. These soils are characterised by slowly permeable clayey horizons at varying depths. Where these occur 40-80cm with overlying till, as at the north end of the site, soils are moderately draining, but to the south of the site, gleying occurs closer to the surface and soils are poorly drained. Pockets of richer alluvial soils occur along the White Burn which flows through the north of the site and the Bickerton Burn which forms the southern boundary, whilst the area to the south-east of Glenburn gardens contains areas of shallow podzol with a peaty surface layer over sandstone. This area is drained by several ditches, which collect in a deep drain running into the White Burn. Ground adjacent to this peaty area has been disturbed in the past and

topsoil covers a compacted layer of clayey subsoil. All areas, with the exception of the last two described are capable of supporting a range of tree species, but combined with exposure are unlikely to produce quality broadleaves or trees of great height, although growth should be better to the north of the area. The MLURI climate map identifies the area as fairly warm moist lowland (rainfall c1000mm per year) but as being exposed with moderate winters.

The woodland consists of a series of linked blocks of woodland and shelterbelts, with larger blocks of woodland directly to the north and south of the A705. The east west aligned belts are generally broad in width at 50-100m, with narrower strips of woodland aligned north-south. Areas of open space have been retained along the Bickerton Burn and White Burn with additional open glades within the planting. The areas of woodland are bordered by housing developments to the north and west and enclose a number of lowland crofts as well as grazing land associated with an equestrian centre. The A705, Hens Nest Road and a private access road to the Bickerton crofts all separate and fragment the woodland areas.

The belts and blocks consist of planting from 1994-96 that is now well established and only requiring the removal of vole guards. More recently, compartment 5b was planted in 2002. Overall about 25% of the site has been retained as open space. This is concentrated along path routes and watercourses with the central area of peaty acid grassland also left open. The woodland was planted as amenity woodland, with about 25% of the area occupied by non-native, but exposure tolerant species, including beech, sycamore and larch to the north and Scots pine to the south. Other species include oak, birch, aspen, with small proportions of rowan, whitebeam, goat willow and hazel as under storey, and relatively large groups of woody shrubs, including blackthorn, hawthorn and some guelder rose, generally located between open ground and woodland areas. The planting was intended to produce high forest of mixed broadleaves to the north of the site and pine, birch, aspen and mixed broadleaves to the more exposed south. Older mature, but often stunted beech trees are found along old field boundaries and roadsides.

The ground flora within planted areas is grass-dominated and reflects previous use. Diversity is limited, with the northern area consisting of mainly of Holcus/Agrostis grassland with frequent creeping buttercup and docks. The southern areas are of ranker, tussocky Dactylis-dominated grassland, but also containing bents, fescues, meadow grass and with herbs including spear thistle, creeping buttercup, and docks

As part of a ground flora trial, foxglove, bluebells, primrose, tufted vetch, red campion, self-heal, and wood avens of Scottish provenance were introduced to the planted area in the south-east of the site (6a), although not all of these species are still evident.

Woodland habitats are now well established but still young and developing. Non-woodland habitats are represented by the two burns and associated wet valley floors, with occasional hawthorn and dog-rose; areas retained as open grassland within and beside planted woodland areas, and the peaty area, to the south-east of Glenburn Gardens. The west of this area contains unimproved acid grassland and includes patches that are more heath like in composition, with heather, heath bedstraw and blaeberry, whilst the east (now part planted) is classed as a mosaic of dry heath/acidic grassland. Goat willow and scattered rowan occur in places, with willow concentrated around three small seasonal ponds. A second area of dry heathland/acid grassland includes tormentil, heath bedstraw and heather occurs on the south-facing slope above the Bickerton Burn, to the south-west of the site.

The burns and dry heathland/acid grassland areas add natural biodiversity interest, being longer established. In 2002 a vegetation survey was carried out over cpts 2c and 2d, highlighting the local conservation requirement - although much of this area suffered fire damage in spring 2003. In terms of mammals, voles are common on the site, but there have been no sightings or evidence of rabbits, hare or deer to date, although most of these are expected to be present at times. Water vole have also been seen (2010) along the White burn with holes in the banks indicating a permanent presence.

The remnant rectangular field pattern of the area probably dates from the early 19th century when drainage systems were installed to improve the land, which has been much fragmented and modified by recent development. Some of the old hedgerows and lines of beech still remain but much of the field structure and the shelterbelts that would have been planted on the higher ground have disappeared. The south-west of the site, still contains an area of the previous rig and furrow drainage system and was planted (as were other similar areas) as a shelterbelt in the past, rather than drained. Tree cover, lost relatively recently from this area as current maps still show it as mixed woodland, was re-established in 2002. The area of peaty soil in the centre of the site, contains a number of shallow pits, now seasonally water-filled, which may have been small sandstone quarries at some time. There is also evidence that Scots pine were present on this area in the past, with bark scales found in the peaty surface horizon. More recently the entire site was grazed as part of East Whitburn Mains Farm. The site was gifted to the Woodland Trust in 1994 when the area was developed as a lowland crofting scheme. This allowed low density housing to be built within a planned wooded landscape, designed to improve the general landscape, screen the new housing and to provide recreational opportunities to the local community.

The woodland was designed prior to the Woodland Trust’s ownership to create a new landscape structure to the south of East Whitburn. The design reflects the layout of narrow shelterbelt complexes planted in the mid 18th century found elsewhere in West Lothian, and to a certain extent also the species in them, beech, sycamore and Scots pine. The tree belts now form boundaries and screening to lowland crofts and new housing developments built along Hens Nest Road that runs south from East Whitburn. Links between this site and adjacent woodland planting with public access, on Whiterigg bing to the east of the railway line and to the south of Blaeberry Wood, increase the overall value of the site. Amenity value is at times reduced by accumulation of litter and fly-tipping which tends to occur at the north of the site, along housing and roadside boundaries and also along the White Burn and drains. Although there is currently relatively little deliberate vandalism, except to entrance points, illegal access by motorbikes and quad bikes continues.

The site was planted as community woodland and initial involvement with planting and naming of the site was high. Since then there have been few opportunities for direct practical works and less interest expressed, except in attendance at organised activities. The community continues to be involved through consultation in the management plan process, posters informing of works and direct contacts with site users and local residents over specific issues such as litter and access.

Sited between the busy communities of East Whitburn and Whitburn within the Central Scotland Forest, Blaeberry Wood offers excellent opportunities for recreation either on foot or by bike. There are approximately 5km of paths throughout the site, just under half of which are whindust-surfaced paths of 1.2m wide, whilst the remainder are mown grass paths. Due to the woodland layout and fragmentation by roads and watercourses, most paths are effectively through-routes, with no

opportunities as such for circular routes within the site boundary. The site however provides good public access for both short and longer routes as part of the local footpath network. This includes adjacent land at Whiterigg Bing, Fairbairn Wood and the Trust's nearest site Foulshiels to the south. The recently upgraded paths on the old railway line to the east and other paths and minor public roads.

Access routes are designated through planning conditions as multi-use for walkers, horses and cyclists, however the fragmented layout requires gates at frequent intervals. Management gates are padlocked to prevent access by motor cycles, which damage paths and cause nuisance to local residents. Local horse owners have been provided padlock keys which allow access to most of the southern section of the wood although the need to exclude motorbikes restricts the attractiveness of the area for riding. Squeeze entrances and kissing gates allow access to pedestrians.

The paths within compartment 1 were upgraded in summer 2003 to facilitate wheelchair/pushchair use with suitable kissing gates being installed at all four entrances. A bridge was installed over the white burn to provide a link from north to south.

There is no Woodland Trust car park at the site; parking is limited to roadside parking within local housing schemes.

Management access to the site is good and can be obtained from a number of gates around the site, leading off Hen's Nest Road and the A705. Within the site access is generally along or adjacent to the footpath network, which effectively limits vehicle access during very wet conditions.

3.0 PUBLIC ACCESS INFORMATION

3.1 Getting there

The wood is located on either side of the A705 between East Whitburn and Whitburn. There are entrances from both sides of the A705 as well as from Hens Nest Road and Glenburn Garden.

By bus
The nearest bus stop (701, Livingston) is about 300m (330 yards) away on Main Street, East Whitburn. For details of buses and timetables visit traveline.org.uk; or telephone 0871 200 22 33.

By train
The nearest train stations are West Calder, which is 2.4 miles (4km) from Blaeberry Woodland, and Addiewell, which is 5.8km (3.6 miles) away. For up-to-date information on public transport, visit traveline.org.uk or phone 0871 200 22 33.

By car
From Edinburgh, head west along the A71 and join the M8 at Junction 1. Leave the M8 at Junction 4 and take the A801 slip road towards Falkirk/Bathgate/Whitburn. At the roundabout, take the first exit on to the A801. Turn right onto the A705 (Main Street). There is no public car park at Blaeberry Woodland, but parking is permitted on surrounding roads, including Hens Nest Road.

3.2 Access / Walks

Most of Blaeberry Woodland is open and is easy to access. It has lots of open, grassy areas between the more recent tree planting. Access to the wood is mostly through all-ability kissing gates, though there are some narrow squeeze-gap entrances at the southern end of the site.

Blaeberry Woodland has 5km (three miles) of footpaths, many of them wide and surfaced and suitable for pushchairs and wheelchairs. They link to the wider path network through surrounding housing. The main section of the wood connects up with a footpath that links Foulshiels Wood and Stoneyburn.

4.0 LONG TERM POLICY

The long-term aim is to develop a diverse native broadleaved woodland that will further increase in diversity as it matures. The woodland will contain paths that provide a link for people between the urban environment to the north and the countryside to the south.

The woodland will consist of predominently native mixed broadleaves with a more open structure and the retention of shrub species where planting adjoins residential properties in the northern half of the site, and to the south a more mixed woodland with a canopy of Scots pine, oak and birch. Beside the White burn, alder, aspen and willows will be encouraged but prevented from shading the length of the burn due to the presence of water voles. Understorey species will be important within narrow belts to maintain screening, but there may be a need to coppice or introduce shrub species along edges in the future, to maintain depth of canopy and the screening value of these areas.

Non-native trees such as sycamore, beech and Larch will be accepted as a small percentage of the species mix. Thinning, other than for tree safety purposes is expected to be minimal although will be undertaken if necessary to remove some non-natives and create the open structure adjacent to paths and housing. Small areas of open ground habitat will also be retained.

The path network and access facilities will be maintained and upgraded to suit local demand (WT Grade A - high usage) with consideration to the development of West Lothian’s Core Path network and further development around East Whitburn and Whitburn that is likely to impact on levels of use on all paths throughout the site. Many of the surfaced paths laid in 1996 will be improved as required.

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

Blaeberry is a very well used woodland linking the populations of East Whitburn and Whitburn (pop. Approx.11,500 combined). Internally the 5km of paths range in type from the very heavily used paths to the north of the site including the all abilities paths in cpt 1, through the whin dust surfaced paths heading south through cpts 2, 3,4 and 6 to the mown grass paths of cpt 3 and 5 reflecting the differing uses and expectations of users. Although the paths are designated under planning as multi use, many of the entrances have been designed to prevent illegal access by motorbikes and quad bikes. To the east the site links onto the pavements of East Whitburn and out onto the Whitrigg Bing, to the south there are links with Fairbairn Wood and out towards Longridge and to the west there are links into the Whitburn network of paths. The Old railway path linking East Whitburn and Stoneyburn (including the Trust's Foulshiels Bing) is now the Stoneyburn to Whitburn Core Path and linking onto this crossing within Blaeberry is the Whitburn Town Core Path. There is no car park and no interpretation due to likely vandalism at entrances. The level of public use is defined as WT Access Category A (High usage)

Significance

The woodland is <1km from the centres of both East Whitburn and Whitburn and forms part of the longer distance route west through Whitburn and south to Stoneyburn. The path network incorporates a Core Path. The site provides a chance to access a safe, semi-natural environment, close to a growing centre of population. It forms an essential part of the local access network, providing varied and alternative routes and is well used by local residents. A natural play area was created in 2008 as part of the BOWL project.

Access is predominantly by walkers and the present path network is adequate for the level of activity with soft paths usually able to recover after wet periods. However with the introduction of the Core Paths network, local horse riders may increasingly seek access and will need to be accommodated within the limits imposed by the site - which include the narrow width of existing paths and the lack of land to provide separate access for different users.

Opportunities & Constraints

To further develop access facilities within the site - signage, benches, perch seats, etc.

The narrow shelterbelt nature of much of the site limits opportunities to have separate routes for horse riders and pedestrians.

Factors Causing Change

vandalism
Illegal motorised access,
Damage to signs, posts, benches and other site infrastructure and paths becoming overgrown.

Long term Objective (50 years+)

The site should be well used and appreciated by the local population. It should be known for its wildlife interest, varied landscape, history and habitats. The site should be accessible and safe with management of infrastructure and signage. To maintain and enhance public access for informal recreation.

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

During this plan period, the short term objective is to continue to provide public access at Blaeberry wood which is safe and enjoyable. This will be achieved by:
- Entrance upgrades along the A705 and 18 other entrances (2016-2017)- removal of all old signs and replacement of new signs
- Tree safety survey Zone A (annually)and Zone B (every 3 years)
-assess the path surfaces (2017)
- Annual inspection of fences/paths and internal structures
-Two paths a year (June and August)
- Three routine litter picks annually (Feb, June and October) and lift any fly tipping as and when reported/found
- Regular contact with Whitburn Community Council on local issues and ways of working together- Event on promoting entrance upgrades (April 2017)
- Minor entrances upgraded 2018 and 2019

5.2 Mixed Habitat Mosaic

Description

The woodland was planted prior to the Woodland Trust's ownership to allow low density housing to be built within a planned wooded landscape. The design reflects the layout of narrow shelterbelt complexes planted in the mid 18th century found elsewhere in West Lothian. Species include approximately 25% non native species - beech, sycamore and larch, with the remaining area planted with sessile oak, ash, birch, aspen, with small proportions of rowan, cherry, whitebeam, goat willow and hazel with relatively large groups of woody shrubs, including blackthorn, hawthorn and some guelder rose. Older mature beech trees are found along old field boundaries and roadsides. Overall about 25% of the site has been retained as open space that is concentrated along path routes and watercourses and the central area of heath (cpt 2c). The woodland consists of a series of linked blocks and shelterbelts, with larger blocks of woodland directly to the north and south of the A705. The east west aligned belts are generally broad in width at 50-100m, with narrower strips of woodland aligned north-south. Areas of open space have been retained along the Bickerton Burn and White Burn with open glades also created within the planting.

1 -The banksides and surrounding grassland along the White burn are important grassland grazing habitat for water voles that were noted as having a permanent population at Blaeberry in 2010 with some holes in the river banks still present in 2013.

2- A vegetation survey carried out in 2002 suggests much of cpt 2c is H12a Calluna vulgaris - Vaccinium myrtillus heath and is of some local importance. Unfortunately this habitat is also prone to damage by fire raising which in turn leads to opportunities for invasive species such as rosebay willowherb to colonise. In 2004, small patches of crack willow and blackthorn were planted over areas of existing rosebay willow herb within previous fire-damaged areas. Both these tree species will help attract a wide range of bird species to the area while helping to prevent the further spread of the invasive weed and to help protect the more important habitats (H12a).

Significance

The wood is important locally as an integral component of the surrounding landscape. There is also increasing habitat value as the site forms part of a wider landscape scheme for the area to provide a setting for new housing as local settlements expand.

1- Water voles are present along the white burn. They are a rare protected species in the UK.

2- Heathland habitat is of local importance due to farmland improvement and development.

Opportunities & Constraints

Opportunities
To thin out non-native species and improve native woodland development and redesign woodland edges to improve edge habitat and maintain grassland for water voles along the White burn.

Constraints
Small core area of woodland and narrowness of woodland strips

Factors Causing Change

1 -Young woodland is starting to mature and trees may increase shading conditions and change the grassland composition. Coppicing of trees close to riverbank may be required in the future.

2- Fire in the heathland may increase willow herb occurrence once again, but has not done so during 2008-2015.

Long term Objective (50 years+)

To manage developing woodland to achieve mixed broadleaf high forest (native mixed broadleaves with some beech and sycamore) to the north of the site and birch, aspen, oak and Scots pine to south of site. To retain depth of canopy in narrow strips of trees. To maintain good external and internal views. Overall open ground will not expand or contracts by greater than 5% from the 2005 baseline of 25%

1 Suitable grassland habitat along riparian zones will be maintained for water vole population.

2 The heath will be maintained while allowing some scrub areas to establish on around 20% of the area.

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

1- Monitor riverbank every five years at management review to confirm presence of water voles. Monitor grassland habitat at end of plan period to establish if shade is having a detrimental impact on water vole habitat (principally grassland) along the edges of the White burn.
Add coppicing regime to work programme if trees look like they will start to have detrimental impact on water vole habitat through shading.

2- The heathland area will be monitored at the end of the plan period to ensure scrub does not establish on more than 20% of the area every five years at the time of management plan review. No management of the heathland area is planned during the period of this plan.

3.- Remove redundant tree tubes 1a/2a

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	5.61	Mixed broadleaves	1995	High forest	No/poor vehicular access to the site	Informal Public Access, Mixed Habitat Mosaic	
Mixed broadleaves and woody shrubs planted in 1995; sycamore, beech, sessile oak, rowan, silver birch, whitebeam, blackthorn, buckthorn, hawthorn, guelder rose and holly. Mature trees to west of compartment boundary, mainly beech and sycamore, with some loss through old age. Small area of 50 mixed native broadleaves planted in 2004 behind beech avenue in 1.2m tubes. Ground flora dominated by Holcus & Agrostis with frequent creeping buttercup and docks.							
2a	6.61	Mixed broadleaves	1996	High forest		Informal Public Access, Mixed Habitat Mosaic	
Area of young mixed broadleaves planted in 1996; sessile oak, beech, whitebeam, willow, sycamore, ash, horse chestnut, rowan, alder, blackthorn, buckthorn, hawthorn, guelder rose, holly and elder. Approximately 1.1ha to the northeast of the sub cpt. was burnt in May 2003 and restocked in November 2003. The south western leg adjacent to 2b contains a mixture of larch and broadleaves to provide year round screeing to Glenburn Gardens. Ground flora domnated by Holcus & Agrostis with frequent creeping buttercup and docks. Occasional garden escapes also present.							
2b	0.43	Beech	1900	High forest		Informal Public Access, Mixed Habitat Mosaic	
Area of predominantly open ground with scattered mature broadleaves, mainly beech and sycamore, many showing signs of senescence. Occasional beech regenerating in more open areas. Ground flora dominated by Holcus & Agrostis with frequent creeping buttercup and docks. Occasional garden escapes also present.							
2c	3.89	Open ground	2004	Non-wood habitat	No/poor vehicular access within the site	Informal Public Access, Mixed Habitat Mosaic	
Patches of dry heathland/acidic grassland with an area of H12a Calluna vulgaris - Vaccinium myrtillus heath with patches of heath bedstraw, Juncus and soft grasses. Occasional willow, especially around the ponds, with small patches of willow and blackthorn. Lupins and other garden escapes present. A 1ha patch to the south of the footpath was damaged by fire in April 2003.							

2d	0.74	Grey willow	1996	High forest		Informal Public Access, Mixed Habitat Mosaic	
Area of young willow with hawthorn, blackthorn, elder and guelder rose, planted in sleeves in 1996. Ground flora dominated by Holcus & Agrostis with frequent creeping buttercup and docks.							
3a	4.91	Mixed native broadleaves	1996	High forest		Informal Public Access, Mixed Habitat Mosaic	
Area planted with mixed broadleaves in sleeves in 1996; silver birch, aspen, sessile oak, beech, whitebeam, hazel, hawthorn and blackthorn, with occasional Scots pine. Now well established. Ground flora dominated by Holcus & Agrostis with frequent creeping buttercup and docks.							
4a	2.86	Birch (downy/silver)	1996	High forest		Informal Public Access, Mixed Habitat Mosaic	
Area planted in 1994 with mixed broadleaves with some Scots pine, in sleeves. Sessile oak, aspen, beech, silver birch, hazel, whitebeam and woody shrubs. Ground flora consists of bents and fescues with creeping buttercup and docks. Trees now well established.							
5a	4.61	Birch (downy/silver)	1995	High forest		Informal Public Access, Mixed Habitat Mosaic	
Area of young mixed broadleaves and Scots pine, planted in sleeves in 1995. Mixed broadleaves consist of silver birch, sessile oak, beech, ash, whitebeam, hazel, hawthorn and blackthorn. Some sleeves have caused minor damage. Ground flora of Dactylis-dominated grassland, but also containing bents, fescues, meadow grass and with herbs including spear thistle, creeping buttercup, and docks.							
5b	3.41	Birch (downy/silver)	2002	High forest		Informal Public Access, Mixed Habitat Mosaic	
Area of mixed broadleaves in 0.6m tubes, with some Scots pine planted in 2002. The mixed broadleaves consist of ash, oak, alder, birch, rowan, willow, blackthorn, hawthorn, and bird cherry. Ground flora of Dactylis-dominated grassland, but also containing bents, fescues, meadow grass and with herbs including spear thistle, creeping buttercup, and docks. Also small patches of heather, blaeberry and heath bedstraw.							
6a	2.70	Birch (downy/silver)	1996	High forest		Informal Public Access, Mixed Habitat Mosaic	

Area of mixed broadleaves and Scots pine, planted in sleeves in 1996. The mixed broadleaves comprise of Hawthorn, blackthorn, silver birch, sessile oak and hazel. Ground flora of Dactylis-dominated grassland, but also containing bents, fescues, meadow grass and with herbs including spear thistle, creeping buttercup, and docks. A Ground flora project introduced foxglove, bluebells, primrose, tufted vetch, red campion, selfheal, and wood avens of Scottish provenance in trial plots.

Appendix 2: Harvesting operations (20 years)

Forecast Year	Cpt	Operation Type	Work Area (ha)	Estimated vol/ha	Estimated total vol.
2015	1a	Thin	5.00	1	3
2020	5b	Thin	3.00	1	2
2025	2a	Thin	3.00	1	2
2025	4a	Thin	1.00	1	0.5
2028	6a	Thin	2.70	0	1
2030	5a	Thin	4.00	1	3

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.