



# Warriners Wood

## Management Plan 2017-2022

## MANAGEMENT PLAN - CONTENTS PAGE

<b>ITEM</b>	<b>Page No.</b>
Introduction	
Plan review and updating	
Woodland Management Approach	
Summary	
1.0 Site details	
2.0 Site description	
2.1 Summary Description	
2.2 Extended Description	
3.0 Public access information	
3.1 Getting there	
3.2 Access / Walks	
4.0 Long term policy	
5.0 Key Features	
5.1 Informal Public Access	
5.2 Ancient Semi Natural Woodland	
6.0 Work Programme	
Appendix 1: Compartment descriptions	
Glossary	
<b>MAPS</b>	
Access	
Conservation Features	
Management	

## THE WOODLAND TRUST

### INTRODUCTION

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

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

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

### PLAN REVIEW AND UPDATING

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 Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations.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

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

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## WOODLAND MANAGEMENT APPROACH

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

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

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

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

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

The following guidelines help to direct our woodland management:

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

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## SUMMARY

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

## 1.0 SITE DETAILS

<b>Site name:</b>	Warriners Wood
<b>Location:</b>	Kendal
<b>Grid reference:</b>	SD497903, OS 1:50,000 Sheet No. 97
<b>Area:</b>	3.59 hectares (8.87 acres)
<b>Designations:</b>	Ancient Semi Natural Woodland, County Wildlife Site (includes SNCI, SINC etc), Environmentally Sensitive Area, Planted Ancient Woodland Site

## 2.0 SITE DESCRIPTION

### 2.1 Summary Description

Warriners Wood was acquired by the Woodland Trust in 1995. This is mostly upland ash woodland on limestone with naturalised sycamore and hazel understorey in places.

## 2.2 Extended Description

Warriner's Wood, acquired by the Trust in 1995, is located some 2.5kms south west of Kendal on the Brigsteer Road, just outside the Lake District National Park. The Trust's property lies to the east of the road, which forms the western boundary. The wood has a maximum elevation of 130m and slopes eastwards to approximately 105m, with an average gradient of 1 in 4.4. The slope is stepped, typical of carboniferous limestone upland profiles. There are a small number of cliffed exposures of laminar limestone and the substrate is rocky throughout.

The wood forms a small but significant feature on the west side of the Kent Valley, particularly when viewed from the A591 Kendal By-pass. The woodland is basically rectangular with drystone walls defining the boundary on all sides. To the north, east and south of the wood is improved grassland. To the west on the other side of the road is Scout Scar and Helsington Barrows; mixed broadleaved wood-pasture owned by the National Trust designated SSSI and SAC; part of the Morecambe Bay limestone area.

The small 3.61ha ancient semi-natural woodland is predominantly upland mixed ash wood, which in the past has been partly replanted with beech and larch (subsequently removed) and sycamore. The woodland is split into two areas; the western larger area is essentially broadleaved high forest with hazel under storey, whilst the eastern area is immature broadleaved standards and coppice from which the larch has been removed (1999).

In general the canopy is dominated by ash (*Fraxinus excelsior*) at roughly 30% and in concentrated pockets, P1900 with beech (*Fagus sylvatica*), sycamore (*Acer pseudoplatanus*), elm (*Ulmus glabra*), oak (*Quercus petraea*) and yew (*Taxus baccata*). The under storey is abundant containing hazel (*Corylus avellana*), rowan (*Sorbus acuparia*), wild cherry (*Prunus avium*), holly (*Ilex aquifolium*), with hawthorn (*Crataegus monogyna*), blackthorn (*Prunus spinosa*), elder (*Sambucus nigra*), crab apple (*Malus sylvestris*), goat willow (*Salix caprea*) and guelder rose (*Viburnum opulus*) present. Ash dieback appeared in the area late 2016. The woodland flora is species rich. The abundant species are dog's mercury (*Mercurialis perennis*) and herb Paris (*Paris quadrifolia*) with ramsons (*Allium ursinum*) locally abundant. Bluebell (*Hyacinthoides non-scripta*), enchanter's nightshade (*Circaea lutetiana*), lords and ladies (*Arum maculatum*) and pignut (*Conopodium majus*) are all frequent. Woodruff (*Galium odoratum*) and betony (*Stachys officinalis*) are locally frequent. Grasses include false broom (*Brachypodium sylvaticum*) and smooth meadow-grass (*Poa pratensis*). Also present are bracken (*Pteridium aquilinum*), male fern (*Dryopteris filix-mas*), common spotted orchid (*Dactylorhiza fuschii*), early purple orchid (*Orchis mascula*), herb Robert (*Geranium robertianum*), wood anemone (*Anemone nemorosa*), cowslip (*Primula veris*) and common dog violet (*Viola riviniana*). Grey squirrels have taken over from the native red; and roe deer are regularly seen with red deer present in the area.

Access to the wood can be gained direct from the public highway Brigsteer Road, south west of Kendal, where there is limited roadside parking for two cars opposite the wood. There are three access points from the road and then a short pleasant walk through the wood. A public right of way exists parallel but outside of the northern boundary of the wood and to the west access can be gained to the National Trust woodland. The wood is in a rural location which is popular with visitors to the area; naturalists and locals alike and the 425m of permissive footpath offer a good alternative to walking on the main road.

## 3.0 PUBLIC ACCESS INFORMATION

### 3.1 Getting there

Access to the wood can be gained direct from the public highway Brigsteer Road, south west of Kendal. There are three squeeze stile access points from the road and then a short pleasant walk through the wood. The footpath surface is loose slate; parallel to the road is flat but heading east it drops down quite steeply. A public right of way exists parallel but outside of the northern boundary of the wood and there is open access to the west across the National Trust property Scout Scar and Helsington Barrows. There is a small lay-by opposite the wood sufficient for one to two cars. There are also a number of other lay-bys along Brigsteer Road. To the south east of the wood along the A591 there are vehicular services with all facilities.

For visitors wishing to reach the wood by public transport the wood is some 90 minutes walk from Kendal railway station initially on the A6 along Wildman Street, staying on Stramongate to Finkle Street. At the top of Finkle Street turn left and then right at the Town Hall onto All Hallows Lane, up Beast Banks to Brigsteer Road. The woodland is some 2km along this road on the left. From Kendal bus station the 552 to Arnside stops at the westbound services on Milnthorpe Road. Then there is a 2.5km walk along Whetstone Lane, a narrow lane with no footpath. Turn right at the T-junction onto Brigsteer Road; the wood is on the right. For up to date travel information contact Traveline on Tel: 0871 200 22 33 or go to <http://traveline.info/>

The nearest public conveniences are at Peppercorn Road car park - for more information contact South Lakeland District Council [www.southlakeland.gov.uk](http://www.southlakeland.gov.uk) or contact the Tourist Information Centre, Town Hall, Highgate, Kendal, LA9 4DL  
+44 (0)1539 725758.

### 3.2 Access / Walks

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## 4.0 LONG TERM POLICY

The wood although just outside the Lake District National Park is designated part of the Environmentally Sensitive Area (ESA) of the National Park. To the west divided from Warriner's Wood by a minor road is a large SSSI wood-pasture Helsington Barrows & Scout Scar, managed by the National Trust. This area also lies within the Morecambe Bay Limestone Special Area of Conservation.

Warriner's Wood is designated 'ancient semi natural woodland' and it is located in the South Cumbria ancient woodland concentration. Generally semi-natural stands consist of predominantly native trees and shrubs and have not obviously been planted but have arisen from natural regeneration or coppice regrowth. Within Warriner's Wood a larch crop was planted around 1970 making part of this wood planted ancient woodland PAWs. Warriner's Wood has the character of upland mixed ashwood NVC W8(e-g) on limestone and has been selected as an important Wildlife Site a non-statutory county designation denoting the areas county importance.

It is the Trust's objective through natural processes to maintain the typical ancient characteristics of this woodland within the landscape and to maintain and improve the biodiversity of the whole woodland; as well as providing free access for quiet enjoyment of this ancient habitat through the management of two key features:

### 1. Ancient Semi Natural Woodland

The Trust aims to allow this mixed ashwood to develop naturally; having restored the PAWs to predominantly semi natural composition and structure thereby enhancing the conditions in which the ancient woodland communities can flourish and become more robust. The Trust aims to enhance the biodiversity of the ancient woodland characteristics by conserving old growth where safe to do so; deadwood communities, mosses and lichens and archaeological features by adopting working practices that do not impact adversely on the integral environment; thereby protecting and promoting the ecology of the ancient woodland for all species.

### 2. Informal Access

The Trust will maintain the informal access to the woodland with welcome signs and paths and stiles maintained commensurate with usage. Promotion of the woodland nationally through the Trust's publications and directories and locally through posters will be undertaken to inform and involve visitors, interest groups and neighbours with the woodland.

It is anticipated that this approach will safeguard and enhance the existing environmental value of the wood and maintain and enhance the level of public access in the woodland.



## 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

Warriners Wood attracts relatively few visitors, however it is used by local people and naturalists and is well known locally for its varied collection of woodland plants. There are three public entrances to the wood, all from Brigsteer Road that runs into Kendal, the western boundary to the wood. There is a small lay-by opposite the wood just sufficient for two vehicles. Just north of the wood is a public footpath travelling approximately east west and nearby there is access to National Trust wood-pasture land Helsington Barrows leading to Scout Scar a popular view point into the Lyth Valley. Entrance signs welcome visitors to the wood and there are several short footpaths (425m) that traverse the wood past the charcoal pit and loop back up to the road and there is a well used path parallel to the road just inside the woodland.

#### Significance

Warriner's Wood provides informal recreation opportunities for the local community and visitors to the surrounding countryside. Increasing enjoyment of woodland is one of the Trust key outcomes and a cornerstone to the vitality of the woods. Encouraging access to Warriner's Wood can be particularly instructive given the rich and varied habitats and features within the ancient woodland and the importance of its habitat on both a local and national scale. The coppice history and the woods intrinsic qualities make it an additional local resource to the nearby conurbation of Kendal and an educational resource for visitors and organised groups. Public appreciation of ancient woodlands is good for the well being of those visiting the wood and ultimately, good for the wood itself through increased public understanding of the plight of ancient woodlands. Warriner's Wood is a small but significant feature on the west side of the Kent Valley, particularly when viewed from the A591 Kendal By-pass.

#### Opportunities & Constraints

The footpath network at Warriners Wood was extended in 2001 with additional entrances created to offer walkers an alternative route to walking along the busy winding road. However the route further into the wood remains little used. Links to more extensive routes can also be made on public rights of way and through the neighbouring National Trust property. The woodland is limited by size but can offer a haven for those interested in flora and the coppice history of the wood. The wood is easily accessible and of a fairly flat topography towards the road but then a steeper drop to the east. Kendal Naturalist History Society regularly visits the wood and have produced species list of the flora identified. There is an opportunity to inform the public within the of management practices and the history, geology and botanical interest in the wood through the Woodland Trust's website. The horse extraction employed to remove the felled larch stems during 1999 evoked much public interest and local media interest. The large beech along the roadside have suffered damage in the past from road traffic accidents and require regular tree safety monitoring.

#### Factors Causing Change

Fly Tipping, Footpaths overgrown with low usage. Ash dieback, which appeared in the area late 2016.

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

The Trust will maintain the informal access to the woodland commensurate with use by the provision of entrances with welcome signs and the management of paths where necessary. The Trusts will use their website and directory's and posters at the wood to inform and involve people with the woodland.

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

Maintain and repair access points (x3) and welcome signs to Woodland Trusts Maintenance Specifications annually. Cut back encroaching vegetation and trim to pedestrian width the footpath as identified on the management map, clearing any encroaching branches and fallen timber from the footpath. Undertake regular tree safety inspections at defined intervals (see Site Risk Assessment database) and clearance of roadside vegetation to Highways guidelines. Clear litter and tipping as necessary. Remove farm rubbish, tyres, plastic drums and metal of various types from southern boundary.

## 5.2 Ancient Semi Natural Woodland

### Description

Warriner's Wood has a maximum elevation of 130m and slopes eastwards to approximately 105m, with an average gradient of 1 in 4.4. The slope is stepped, typical of carboniferous limestone upland profiles. The woodland is basically an oblong with drystone walls defining the boundary on all sides. To the north, east and south of the wood is improved grassland. To the west is a mixed broadleaved wood-pasture (SSSI /SAC) woodland Helsington Barrows (National Trust). Warriners Wood is predominantly upland mixed ash wood, which in the past has been partly replanted with beech and larch and where sycamore is naturalised. The woodland is split into two areas, the western larger area is essentially broadleaved high forest with hazel understorey, whilst the eastern area now with the deer fence removed (2007) is immature broadleaved standards and coppice from which the larch has been removed (1999). In general the canopy is dominated by ash (*Fraxinus excelsior*) P1900 with oak (*Quercus petraea*), sycamore (*Acer pseudoplatanus*), elm (*Ulmus glabra*), larch (*Larix decidua*), beech (*Fagus sylvatica*) and yew (*Taxus baccata*). The understorey is abundant containing hazel (*Corylus avellana*), rowan (*Sorbus acuparia*), wild cherry (*Prunus avium*), holly (*Ilex aquifolium*), with hawthorn (*Crataegus monogyna*), blackthorn (*Prunus spinosa*), elder (*Sambucus nigra*), crab apple (*Malus sylvestris*), goat willow (*Salix caprea*) and guelder rose (*Viburnum opulus*) present. The woodland flora is species rich. The abundant species are dog's mercury (*Mercurialis perennis*) and herb Paris (*Paris quadrifolia*) with ramsons (*Allium ursinum*) locally abundant. Bluebell (*Hyacinthoides non-scripta*), enchanter's nightshade (*Circaea lutetiana*), lords and ladies (*Arum maculatum*) and pignut (*Conopodium majus*) are all frequent. Woodruff (*Galium odoratum*) and betony (*Stachys officinalis*) are locally frequent. Grasses include false broom (*Brachypodium sylvaticum*) and smooth meadow-grass (*Poa pratensis*). Also present are bracken (*Pteridium aquilinum*), male fern (*Dryopteris filix-mas*), common spotted orchid (*Dactylorhiza fuschii*), early purple orchid (*Orchis mascula*), herb Robert (*Geranium robertianum*), wood anemone (*Anemone nemorosa*), cowslip (*Primula veris*) and common dog violet (*Viola riviniana*). Grey squirrels have taken over from the native red and roe deer are regularly seen.

### Significance

The woodland is designated as ancient on the NCC ancient woodland register and it is located in an ancient woodland concentration within the Cumbria Fells and Dales Natural Area. It has been wooded for many, many years but more recently has been planted with conifers (PAWs). Sites of ancient woodland provide a continuous habitat for our native species. Many of these species can live nowhere else. Some plants and animals have very specialised requirements and spread very slowly, if at all, into new woods. It is therefore imperative that the planted non-native conifers where impacting negatively on the ground flora and woodland conditions are slowly removed until the threat is minimised or eradicated. Upland ashwood has been identified as part of the Cumbria Biodiversity Action Plan as in decline or under threat, from planted conifers, as has occurred at Warriners Wood and are in need of conservation and restoration. To protect the local resource of ashwood Cumbria Wildlife Trust as part of a county assessment have identified all upland mixed ashwood worthy of conservation and protection and Warriners Wood falls within this protective mechanism. Warriners Wood is an important semi-natural resource extending the core natural area of the semi-natural wood-pasture Scout Scar which is managed by the National Trust and is designated as a SSSI and SAC. There are two old growth trees within Warriners Wood on the Ancient tree Hunt register; a beech with a girth of 4.1m (tree number 165) and the coppiced oak tree number 166 with a girth of 5.8m. Warriners Wood is also notable for a well-developed uneven aged shrub layer and a diverse ground flora typical of the limestone substrate. It also lies with the protected Environmentally Sensitive Area; although lying just outside the Lake District National Park designation.

#### **Opportunities & Constraints**

Warriner's Wood is a notable wildlife site on a County basis and consultation on management must include interested bodies such as Cumbria Wildlife Trust, Kendal Natural History Society and South Lakeland District Council. Warriners Wood is a planted ancient woodland site (PAWS) under restoration to conserve the ancient woodland communities, which it contains. The woodland is browsed by deer (roe and red) which may impact on succession especially within such a small area. Non-native species regeneration will be monitored but only controlled if considered to be causing habitat change or threatening the loss of species commensurate with WT policy. There is an opportunity to retain the magnificent beech trees planted along the roadside by previous owners as a legacy and a living heritage and for their own ecological value as old trees. This opportunity may conflict with the management of safety adjacent to the highway and longevity and retention will only be feasible where safe. There is extensive drystone wall boundary to grazing fields and it is important to the continuation of the well-developed understorey and shrub layer that these boundaries are maintained in a stock proof condition. There is an opportunity to work closer with the National Trust and gain an understanding of their management objectives for the neighbouring wood-pasture.

#### **Factors Causing Change**

Squirrel Damage, Fly Tipping, Deer Damage

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

The Trust aims to allow this mixed ashwood to develop naturally; thereby enhancing the conditions in which the ancient woodland communities can flourish and become more robust. The Trust aims to enhance the biodiversity of the ancient woodland characteristics by conserving old growth where safe to do so; deadwood communities, mosses and lichens and archaeological features by adopting working practices that do not impact adversely on the integral environment.

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

The steps to achieving the vision include: -

1. Maintain all boundaries to stock proof condition to prevent grazing by domestic stock threatening the continuity of the well-developed shrub and ground flora. It is anticipated that some dry-stone wall repairs will be necessary on an annual basis;
2. Retention of old growth where safe to do so given the constraints of the proximity of the highway;
3. Woodland condition monitoring once every 5 years;
4. Deer/squirrel impact assessment and deer management in place.

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## 6.0 WORK PROGRAMME

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

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Key Features Present	Designations
1a	2.31	Ash	1900	High forest	Archaeological features, Housing/infrastructure, structures & water features on or adjacent to site, Sensitive habitats/species on or adjacent to site	Ancient Semi Natural Woodland, Informal Public Access	Ancient Semi Natural Woodland, County Wildlife Site (includes SNCI, SINC etc), Environmentally Sensitive Area, Planted Ancient Woodland Site
<p>Compartment 1a incorporates much of the west of Warriners Wood. It is L-shaped, with an easterly aspect to adjacent improved pasture to the north and south and sub-compartment 1b to the east. The edge trees of the western boundary with Brigsteer Road are the largest within the compartment and are principally beech. The bulk of the sub-compartment is made up of broadleaved standards (P1900) and canopy-forming coppice of ash, beech and sycamore with smaller numbers of yew, rowan, larch, cherry, downy birch and oak. Small-leaved lime is said to be present. Although regeneration is not found universally throughout the wood there are significant areas of predominantly ash but also some beech and hawthorn. The presence of charcoal platforms and the evidence of coppiced canopy trees suggest that the wood was probably an important local source of underwood and coppiced in the past. The understorey, which provides a distinct character to the wood is predominately hazel but also includes hawthorn, holly, crab apple and wych elm. The main ground species are dog's mercury, herb Paris, ramsons, bluebell, lords and ladies, woodruff and betony. Many other species are present including early purple orchid and common spotted-orchid. Mosses and liverworts are frequent and colonise the rocky substrate throughout. There is some grey squirrel damage to the beech and sycamore and there is evidence of badger activity. Fly tipping can be a problem. There are three public entrances off Brigsteer Road and one field gate with a pull-in for vehicles. The roadside boundary is predominantly drystone wall with post and rail fencing. Additionally there is a small lay-by opposite the main entrance. The permissive routes loop through the sub-compartment and extend to some 400m.</p>							
1b	1.30	Ash	1970	null	Sensitive habitats/species on or adjacent to site	Ancient Semi Natural Woodland, Informal Public Access	Ancient Semi Natural Woodland, County Wildlife Site (includes SNCI, SINC etc), Environmentally Sensitive Area, Planted Ancient Woodland Site

Sub-compartment 1b abuts sub-compartment 1a to the west south and the external drystone wall wood boundary to the north and east. Following removal of the larch crop in 1998 the sub-compartment was enclosed by a deer fence to ensure regeneration of broadleaves. This fence was removed in 2007. The canopy trees include sessile oak, ash, sycamore, beech and birch standards with coppiced ash, small-leaved lime and hazel. The ground flora includes herb Paris, bluebells, wild garlic, cuckoo pint and dog's mercury abundant; also an area of toothwort on ash. Some evidence of deer browsing but regen is good apart from the area densely shaded by beech.



## 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.