



# Brothybeck

## Management Plan 2018-2023

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## 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 Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations.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>	Brothybeck
<b>Location:</b>	Welton, Allerdale
<b>Grid reference:</b>	NY334433, OS 1:50,000 Sheet No. 85
<b>Area:</b>	5.65 hectares (13.96 acres)
<b>Designations:</b>	Ancient Woodland Site, Planted Ancient Woodland Site

## 2.0 SITE DESCRIPTION

### 2.1 Summary Description

Astounding in their variety, the magnificent ancient trees alongside Brothy Beck's trickling tributary create an enchanting woodland backdrop for walking and provide a haven for birds, hares and roe deer. In an elevated position surrounded by farmland and with outstanding scenery it has no car park. Best reached from the B5305 via the public footpath at the Brothy Beck ford, where there is a footbridge, the terrain is generally flat and accessible along footpaths which meander through the wood.

## 2.2 Extended Description

Brothybeck was acquired by the Trust in 1987. It is located across a field, 110m south of the B5305 in the parish of Sebergham, near Wigton, Cumbria. The wood at an altitude of 150 to 170m, on a gentle north facing slope, and lies immediately south of Brothy Beck in a rural area. The wood fits into the regular rectangular field patterns and in shape consists of 3 interlocked rectangles itself. A small deeply incised stream crosses the middle of the wood from south west to north to meet Brothy Beck. The wood is surrounded by farmland, predominantly grazing fields for sheep and cattle, and is highly visible in the landscape.

The wood is 5.66ha (14 acres) in size and although mainly flat it varies in structure and species composition. The northern fringe of the woodland immediately next to Brothy Beck is ancient woodland and recorded in the Inventory of Ancient Woodland and here there are remnant ancient woodland species of ash, alder, oak & birch. Whilst much of rest of the wood appears semi-natural it is in fact secondary and some of it is replanted. The largest trees in the middle section of the wood are Scots pine, Norway spruce and Douglas fir, mainly non-native species planted in the mid-20th century. The rest of the wood is made up of native broadleaved species of ash, alder, birch, oak, wild cherry, rowan, bird cherry, willow, whitebeam, hawthorn and holly, and then beech and sycamore have regenerated naturally. However, some of these have also been planted, so it is very difficult to determine the natural composition of the wood at all.

The soil is of clay and parts of the wood are poorly drained with surface water after rain. The wet ground has a typical native ground flora including soft rush, pendulous sedge, creeping buttercup, honeysuckle, wild gooseberry, mosses, broad buckler fern and common polypody, and in drier areas bramble, grasses and foxglove are present.

The woodland fauna includes roe deer, hare and a variety of bird life.

The woodland is relatively flat, accessible and well-used. Access is gained only from a public footpath (number 251015), which crosses the field to the north from the B5305 and enters the wood at the ford across Brothy Beck. It then follows an eastern boundary of the wood for 150m and crosses the deep ditch by a footbridge and follows a western boundary for a further 160m.

## 3.0 PUBLIC ACCESS INFORMATION

### 3.1 Getting there

A public footpath (number 251015) leaves the B5305 over a wooden stile, with a public footpath sign indicating Priests Brow. It heads south west across a pasture field, and enters the wood at the ford across Brothy Beck. It then follows the eastern boundary of the wood for 150m and crosses the deep ditch by steps and a footbridge. It then follows the western boundary for a further 160m. The footpath is comparatively well-used and links to a permissive footpath which meanders through the wood. The woodland is relatively flat and accessible, but it and the surrounding land can be wet. The wood is in a rural location and is popular with locals. Parking is limited at the roadside.

### 3.2 Access / Walks



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## 4.0 LONG TERM POLICY

It is the Trust's aim to conserve and enhance the typical ancient characteristics of this partly ancient woodland within the landscape and to maintain and improve the overall biodiversity of the wood, as well as increase people's awareness and enjoyment of the habitat.

The aim is to maintain the high forest continuous-cover structure of this predominantly native mixed broadleaved woodland, diversifying the age-range and promoting the development of older mature and veteran trees of all species. The woodland has the character of ash-alder woodland with transitions to oak-birch woodland where drier (NVC W7 to W11). Whilst the character of the woodland has a semi-natural feel much has been replanted or regenerated. Native species of ash and birch account for an estimated 55% of the woodland canopy; other mixed broadleaves represent approximately 25%. There is a relatively young age structure to the woodland to the northern and southern sections of the wood. However, the middle of the wood has the oldest trees which are large, mature conifers, planted in the mid-20th century and accounting for approximately 15% of the total canopy. The aim to maintain continuous cover will be achieved by either minimal intervention or limited thinning promote a gradually evolving uneven age structure, allow veteran trees to develop, and natural succession to occur through regeneration of native species. There is only a single path through the wood and it is completely surrounded by farmland, so unusually the tree safety requirements are not high, and it is possible to leave over mature trees to age and develop veterans and standing deadwood.

The Trust aims to enhance the biodiversity of the woodland which will include protecting and conserving the watercourses and riparian zone, conserving standing and fallen deadwood communities and mosses and lichens, controlling invasive species if they occur and by adopting working practices that do not impact adversely on the integral environment. All boundaries will be maintained to prevent stock grazing, and several are the Trust's responsibility.

The Trust will maintain the informal access to and around the woodland in line with the current low level of use. Public access will be encouraged with signs from the road side along the public footpath, welcome signs at the entrances and maintaining paths and other structures such as bridges and steps. This will ensure that local people and visitors can access the wood and use its links into the wider countryside, enabling them to continue to share in the beauty of this landscape and gain an understanding of the wood's importance and its rich wildlife habitat, which is irreplaceable. The wood will be promoted and information provided to the public more widely mainly through the Woodland Trust website.

It is anticipated that this approach will safeguard and enhance biodiversity value of the wood and maintain the level of public access.



## 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

Public footpath number 251015 crosses a wet field from the road (B5305) and heads south-west to enter the wood at the north eastern corner, via a ford across Brothy Beck. It then runs inside the wood following an eastern boundary and ditch for 150m and crosses the deep ditch by a footbridge. It then continues south-west along a western boundary for a further 160m (the changes in boundary are due to the shape of the wood, not the path, which is virtually straight). The footpath is comparatively well-used and popular with locals. The woodland is relatively flat and in a rural location. Parking is possible on the verge by the roadside but limited as this is a busy rural road. Signage directing visitors to the wood starts from the roadside with a sign indicated to Priests Brow, on the public footpath.

#### Significance

Brothybeck provides informal recreation for the local community and visitors in a quiet, rural setting and links well with the wider countryside. This is supported by the Cumbria Biodiversity Action Plan which incorporates the action for landowners to give the public the opportunity to experience and appreciate wildlife and that this is synonymous with improving biodiversity.

#### Opportunities & Constraints

Although limited by size and locality in a rural area the woodland attracts local users. The footpath network at Brothybeck is improved by connections to more extensive routes on adjoining public rights of way. Some visitors may be deterred from visiting due to limited parking availability and due to the nature of the main entrance being not visible and some distance from the road, as well as crossing a boggy field. Access to the wood is only gained once both the field and a ford have been crossed, and in winter the Brothy Beck may well be in spate and require wellingtons to cross the ford. Clear way-marking provided from the roadside along the public footpath helps to encourage visitors find the wood and overcome the fact that the wood is not obvious from the road. There is an opportunity to inform the public of management practices, the history and botanical interest in the wood through the Woodland Trust website and for continued liaison with local people.

#### Factors Causing Change

None identified

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

The Trust will maintain the informal access to and around the woodland in line with the current low level of use. Public access will be encouraged with signs from the road side, welcome signs at the entrances and maintaining paths and other structures such as bridges and steps. This will ensure that local people and visitors can access the wood and use its links into the wider countryside, enabling them to continue to share in the beauty of this landscape and gain an understanding of the wood's importance and its rich wildlife habitat, which is irreplaceable. The wood will be promoted and information provided to the public more widely mainly through the Woodland Trust website.

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

Cut back encroaching vegetation and trim/mow the paths through the woodland to pedestrian width; as identified on the management map. Maintain the path network with entrance stiles (x2), pedestrian gate (x1), field gates (x2), welcome signs, steps and footbridge as necessary (with Cumbria County Council responsible for some aspects of the main path such as bridges on the public footpath) annually. Undertake regular safety inspections at defined intervals. Clear litter as necessary.

## 5.2 Ancient Woodland Site

### Description

The wood is 5.65ha in size and varies in structure and species composition. The northern fringe of the woodland immediately next to Brothy Beck stream is ancient woodland as recorded in the Nature Conservancy Council (NCC) Inventory of Ancient Woodland. Here wood has the character of ash-alder woodland with transitions to oak-birch woodland where drier (NVC W7 to W11). Whilst much of rest of the wood has a semi-natural it is in fact secondary and some of it replanted. The oldest trees within the middle section of the wood are Scots pine (*Pinus sylvestris*), Norway spruce (*Picea abies*) and Douglas fir (*Pseudotsuga menziesii*) which were planted in the mid-20th century and are now well-grown specimens. Throughout the rest of the wood the broadleaved species are predominantly ash (*Fraxinus excelsior*), alder (*Alnus glutinosa*) with birch (*Betula pubescens*), oak (*Quercus petraea*), hawthorn (*Crataegus monogyna*) and holly (*Ilex aquifolium*). The drier areas have more oak and birch with rowan (*Sorbus aucuparia*). A planted section in the north west corner also has bird cherry (*Prunus padus*), willow (*Salix caprea*), whitebeam (*Sorbus aria*) and cherry (*Prunus avium*). Beech (*Fagus sylvatica*) and sycamore (*Acer pseudoplatanus*) have naturally regenerated into the woodland, along with vigorous regeneration of ash and birch and some oak. The soil is of clay and parts of the wood are poorly drained with surface water after rain. The wet ground has a typical ground flora including soft rush (*Juncus effusus*), pendulous sedge (*Carix pendula*), creeping buttercup (*Ranunculus repens*), honeysuckle (*Lonicera periclymenum*), wild gooseberry (*Ribes uva-crispa*), mosses, broad buckler fern and common polypody (*Polypodium vulgare*), and in drier areas bramble (*Rubus fruticosus* agg.), grasses and foxglove (*Digitalis purpurea*) are present. The woodland fauna includes roe deer, hare and a variety of bird life, which has not yet been studied in detail.

### Significance

Part of the woodland area is designated as ancient on the NCC register. Wet woodlands and oak woodlands have been identified as part of the Cumbria Biodiversity Action Plan as in decline or under threat and necessary for conservation and restoration, although Brothybeck has only a small area of wet woodland this is worth noting.

### Opportunities & Constraints

In the past (1968) the southern section of the woodland was been felled and left to regenerate, and even earlier the central area was replanted with conifers (~1940). These drastic and potentially detrimental changes to the woodland have ceased with Trust ownership, and by creating a continuous cover with only gradual changes, the biodiversity of the wood will have stabilised. This can be further increased, by allowing the continued development of a wider age range, including large old trees and old growth, and much greater amounts of deadwood (both standing and fallen) as tree safety requirements are relatively low due to the limited path network and fact that the wood is surrounded by farmland. The management of the whole woodland to high forest buffers the area of ancient woodland along the beck; this will provide opportunities to conserve the existing ancient woodland communities and along them to extend into the rest of the woodland. Non-native tree species regeneration at present is minimal and doesn't appear to threaten native regeneration and progression. There is an opportunity to conserve the water quality and riparian features of Brothy Beck and the tributary streams. Bank erosion along the northern bank of the Beck will alter adjacent land and habitats but is a natural phenomenon which is often constrained, so should be allowed to continue.

### Factors Causing Change

Wind blow. Non-native conifer regeneration. Deer browsing. Ash dieback, which appeared in the area in 2017, and will disproportionately affect Cpt 3 regeneration where it is significant.

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

The Trust aims to maintain the high forest continuous-cover structure of this predominantly native mixed broadleaved and the existing conifer woodland, allowing a more diverse age structure to develop with older mature and veteran trees of all species and natural succession to occur through regeneration of native species. Species present will be observed will be monitored to ensure non-native regeneration does not pose any threats to biodiversity, following Woodland Trust native species guidelines. Boundaries will be kept stock proof. The water features of Brothy Beck, and various streams and ditches will be protected and managed in as natural condition as possible, whilst allowing access, achieving stockproof boundaries, and within legal constraints.

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

The steps to achieving the vision include: retention of older mature trees of all species to develop veterans as long as tree safety allows. Regular monitoring at least once during each plan period to ensure: that continuous canopy is maintained, regeneration is sufficient for restocking with non-native regeneration within acceptable limits, any threats such as deer browsing are within acceptable limits and non-native regeneration is monitored and controlled as required. Any threats to the quality of water courses and bank stability are noted and dealt with. Annual monitoring will take place (usually through the EMC contract) to ensure: all boundaries continue to remain stock proof and emergency repairs are undertaken, and the Woodland Trust will work with neighbouring landowners to maintain this. Legal constraints (largely relating to boundaries and ditches, in covenants) will be checked and complied with once every plan period.

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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	0.62	Oak (sessile)	1989	High forest	Gullies/Deep Valleys/Uneven/Rocky ground	Ancient Woodland Site, Informal Public Access	Ancient Woodland Site
<p>Compartment 1a (0.62ha) is a small rectangular block approximately 100m x 60m immediately south of Brothy Beck stream in the north-west of the whole site. The southern half is relatively flat whilst the northern section slopes steeply to the beck. To the south and west of the wood is farmland, managed usually as improved grassland for grazing. To the north is the Beck and to the east is Cpt 2a. The boundaries to the south and west are post and sheep netting. The Woodland Trust has shared ownership of the western boundary. The area alongside the Beck has remnant ancient woodland flora and this compartment is at least part ancient woodland. This western section of woodland is the smallest (0.62ha) and was planted in 1989 with oak (<i>Quercus petraea</i>) 45%, cherry (<i>Prunus avium</i>) 15%, birch (<i>Betula pubescens</i>) 10%, alder (<i>Alnus glutinosa</i>) 10%, white willow (<i>Salix alba</i>) 10%, rowan (<i>Sorbus aucuparia</i>) 5% and bird cherry (<i>Prunus padus</i>) 5%. This has been further supplemented by natural regeneration of ash (<i>Fraxinus excelsior</i>), birch (<i>Betula pubescens</i>), hawthorn (<i>Crataegus monogyna</i>) and holly (<i>Ilex aquifolium</i>). The shrub layer also contains thickets of gorse (<i>Ulex europaeus</i>) and bramble (<i>Rubus fruticosus</i> agg.) with the ground flora dominated by sedges, rush and ferns. Vehicular access through the wood to Cpt 1a is not possible due to the deeply incised stream in Cpt 2a.</p>							
2a	1.53	Mixed conifers	1940	High forest	Gullies/Deep Valleys/Uneven/Rocky ground, Mostly wet ground/exposed site	Ancient Woodland Site, Informal Public Access	Ancient Woodland Site

Cpt 2a (1.53ha) is the middle section of the wood and approximately 90m x 180m in size and the area close to the beck at least is ancient woodland. Brothy Beck stream forms the north east boundary. The ford and main entrance is in the north east corner of this compartment. To the east, south and west is improved grassland and these boundaries are defined by post and sheep netting fences. A small stream runs through this compartment heading south-west to north-east in a steep-sided little valley, to join the Brothy Beck stream. A stream also runs southwest to north east in a ditch along the eastern boundary, and has water gates at either end of Woodland Trust ownership. The Trust has responsibility for keeping this clear. This compartment was planted around 1940 with Scots pine (*Pinus sylvestris*), Norway spruce (*Picea abies*), Douglas fir (*Pseudotsuga menziesii*) and ash (*Fraxinus excelsior*). There is a well-developed under storey of sycamore (*Acer pseudoplatanus*), alder (*Alnus glutinosa*) with cherry (*Prunus avium*) and at a lower level birch (*Betula pubescens*), holly (*Ilex aquifolium*) and common whitebeam (*Sorbus aria*). Additional planting was carried out 1991 of 220 trees, with oak (*Quercus petraea*), ash (*Fraxinus excelsior*) and cherry (*Prunus avium*). The ground flora is of bramble (*Rubus fruticosus* agg.), soft rush (*Juncus effusus*), pendulous sedge (*Carix pendula*), creeping buttercup (*Ranunculus repens*), broad buckler fern (*Dryopteris dilatata*) and foxglove (*Digitalis purpurea*).

3a	3.60	Ash	1968	High forest	Mostly wet ground/exposed site	Ancient Woodland Site, Informal Public Access	
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Cpt 3a is at the eastern part of the wood (3.6ha) and is the largest compartment, again in a rectangular shape. It is surrounded by improved grassland with post and sheep netting around the boundaries to all but the north east which abuts Cpt 2a. The eastern boundaries are the responsibility of the Woodland Trust. An old wide ride runs west-east and divides the compartment into two sections linking to the visitor and management access through a field gate on the western boundary. The ride is currently (2018) rather overgrown but could be cleared to gain access if required. A ditch runs along the eastern boundary to the field gate and a deeply incised stream runs north along the western boundary from the public right footpath entrance to the wood. The compartment is composed mainly of birch and ash. The northern section of the compartment slopes gently down to the north and is wet. In 1968 the area was clear-felled and regenerated naturally afterwards, especially with birch. This was followed later by thinning of the regeneration in 1999. Regeneration since that operation has mainly been ash (*Fraxinus excelsior*) with beech (*Fagus sylvatica*), oak, hawthorn (*Crataegus monogyna*), willow, whitebeam (*Sorbus aria*) and holly (*Ilex aquifolium*). The soil is of clay and parts of the wood are poorly drained with surface water after rain. The wet ground has a typical ground flora, including soft rush (*Juncus effusus*), sedges (*Carix* spp.), honeysuckle (*Lonicera periclymenum*), wild gooseberry (*Ribes uva-crispa*), mosses, broad buckler fern and common polypody (*Polypodium vulgare*). The public footpath comes from Cpt 2a and enters 3a in the north west, then runs south west inside the western boundary exiting the woodland halfway along the western boundary.

## 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.