



Low Wood

Management Plan 2017-2022

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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 Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations.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 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:	Low Wood
Location:	Ulpha
Grid reference:	SD203943, OS 1:50,000 Sheet No. 96
Area:	11.28 hectares (27.87 acres)
Designations:	Ancient Semi Natural Woodland, Environmentally Sensitive Area, National Park, Planted Ancient Woodland Site, Site of Special Scientific Interest

2.0 SITE DESCRIPTION

2.1 Summary Description

Ancient woodland previously supplying wood for local bobbin mills and charcoal for a forge and blast furnace at Duddon Bridge. Wildflowers add a mass of colour in spring. Spot the wood ant colonies. The site is steep and rocky with no formal paths.

2.2 Extended Description

Low Wood is an 11.26ha ancient woodland on the steep western slope of the Duddon Valley in the south-west of the Lake District National Park, in the Parish of Ulpha. The wood is 7.45ha ancient semi-natural woodland and 3.7ha Planted Ancient Woodland Site (PAWS) which is in the process of restoration. The Duddon Valley Woodlands (of which Low Wood is part) are one of the largest series of woodlands in the Lake District National Park. This large complex of woodland is designated as a Site of Special Scientific Interest (SSSI) and exhibits a wide range of differing woodland communities and species.

At Low Wood the woodland soils are mainly free draining and acid with some poorly drained patches. Different woodland communities are associated with these soil conditions, the most widespread being upland oak-birch woodland on the lower slopes of Low Wood. Sycamore has also colonised and is naturalised in the lower slopes and generally in the wider landscape. There are relatively few ash trees on site mainly on the lower slopes, streamsides and wet areas. Ash dieback appeared in the area in 2017 and is in the early stages in 2018.

The under-storey consists predominantly of hazel with the rare holly and rowan. The higher slope is the PAWS area and was previously mixed conifers (spruce, western hemlock, larch and Scot's pine) and was clearfelled in 1998/99 then replanted in 2000 with oak, ash, alder, hazel, rowan and holly. Ferns are abundant in the field layer, including royal fern an uncommon species. Additionally, other prominent species are bluebell, common violet, wood sorrel and wild daffodil. Wood ant colonies occur frequently throughout the woodland.

Previously the whole wood was oak-coppice woodland, managed to provide wood for the local bobbin mills and charcoal for a forge and blast furnace at Duddon Bridge. The last time any coppice was worked in Low Wood is estimated at around 1950. Charcoal pitsteads can be found throughout the woodland and there are the remains of a drystone building deep in the wood probably once used by coppice workers. In the 1950s 3.7ha of the upper slopes were clear felled and replanted with the mix of non-native conifers as an intended timber crop. This area has been felled under the PAWS programme and replanted.

Many of the small streams that run down the wood provide drinking water to the houses in the valley bottom. Collecting tanks and pipes can be seen in the woodland to facilitate this.

Access to Low Wood is by two entrances off the adjacent minor road which runs from Ulpha post office to Seathwaite. However the woodland is very steep and rocky with no formal paths and is visited only infrequently by the adventurous.

3.0 PUBLIC ACCESS INFORMATION

3.1 Getting there

Low Wood is in the Duddon Valley, Cumbria, near Ulpha and can be accessed by turning right off the A595 at Duddon Bridge following the road to Seathwaite. The wood abuts the road opposite the homesteads The Low and High Hurst about 1km north east of the post office/shop at Ulpha. Access to the wood can be gained from two entrances on the roadside. The wood however is very steep and there are no formal footpaths. A public footpath goes round the outside of the northern boundary of Low Wood and over the fell to Crosbythwaite. For local information visit <http://www.duddonvalley.co.uk/>.

There are no toilets near to the wood. The nearest pub is at Broughton Mills about 6km and the nearest town is Broughton-in-Furness. Buses to and through Broughton include 511 Millom - Broughton - Ulverston; the 523 Broughton - Duddon Valley and the X7 Barrow - Broughton - Millom - Haverigg. The nearest train station is over 10km from the wood at Foxfield on the A595; a branch line served from Barrow-in-Furness. Traveline Cumbria provides comprehensive timetable and fare information for all bus, coach, rail and Lakeland ferry journeys to/from and within Cumbria & the Lake District. A journey planner will help you plan your journey regardless of who operates the services Tel: 0870-608-2608.

3.2 Access / Walks

4.0 LONG TERM POLICY

The long term vision for Low Wood is to attain uneven aged predominantly native, mixed high forest broadleaved woodland across the whole area and increase the core area of broadleaved woodland through establishment of the restoration of Planted Ancient Woodland site (PAWs) in cpt1; thereby retaining and enhancing the botanical and faunal interest, of the wood and improving the quality of this Site of Special Scientific Interest (SSSI). This is in line with the Trust corporate objectives to protect ancient woodland and improve biodiversity, especially by the restoration of PAWS.

Low Wood resembles the character and structure of upland oak-birch woodland with bluebell (NVC W11) and in the base-rich flushing along stream sides and at the base of slopes the woodland predominantly resembles dog's mercury woodland (NVC W9). Sycamore has been a naturalised part of this woodland and the wider landscape for many years and is likely to remain a frequent component of the woodland. Semi-natural stands of this nature, as with compartment 2, tend to have little diversity among the trees and shrubs due to the widespread use of the woodland as oak-coppice resulting in a more even age structure often with contributory grazing. However, with time, natural changes and the new planting in compartment 1 more diverse mixture is being established with rowan, birch and holly, and in the wetter areas alder and ash woodland (NVC W7) developing to compliment the upland oakwood.

The intention is to retain the special features of this woodland as outlined in English Nature's SSSI statement for the Duddon Valley, "the site exhibits a wide range of differing woodland communities and number of species present. The woodland is a mosaic with other habitats such as flushes and mires, running water and grassland." Special characteristics of Low Wood include abundant ferns in the field layer including the locally uncommon Royal fern (*Osmunda regalis*) and its associated habitat of small peat-filled hollows in which Sphagnum-rich birch woodland is found and a rich bryophyte community particularly on boulders, cliff ledges and tree boles. Low Wood and the Duddon Valley complex support a good range of bird species and important populations of invertebrates. Low Wood particularly has wood ant colonies (*Formica lugubris*) occurring frequently throughout. These features are to be enhanced through minimum intervention in targeted areas of the woodland, increasing the level of dead wood both standing and fallen and the natural progression of mature trees to veteran.

The Trust will continue to promote the woodland amongst people in the region and members nationally, so that local users and visitors to the area can continue to share in its beauty, gain an understanding of the woodlands importance in the landscape and its rich wildlife habitat, which is irreplaceable. This is in line with the outcomes in the Trust's Action Plan 'Keeping Woodland Alive'.

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 Ancient Semi Natural Woodland

Description

The lower area of oak-birch woodland (cpt2 7.45ha) is SSSI Ancient Semi-Natural Woodland and the upper (cpt1) locally native re-planted area is a recovering Planted Ancient Woodland Site. Different woodland communities are associated with the different soil conditions present, and the different history. The most widespread is upland oak-birch woodland in the ASNW. The most frequent trees in the canopy are sessile oak and birch with varying amounts of sycamore. The understorey consists of frequent hazel with occasional holly and rowan and is sometimes somewhat sparse. The structure is typical of a oak-coppice woodland with little diversity and a limited age range among trees and shrubs accentuated by its coppice history and also likely by grazing in the past. It is very steep in places with rocky outcrops, boulders and ledges, particularly important habitat for bryophytes. Ferns are abundant in the field layer with grasses, bluebell, common violet, wood sage and wood sorrel. The historical management of Low Wood has visible relics on site with charcoal pitsteads and the tumbled-down dry-stone buildings. The AWS (cpt1 - 3.7ha) was partially clear felled in 1998/99 and replanted in 2000 with locally native species (oak 30%, ash 20%, alder 20%, hazel 10%, rowan 10%, holly 2% and goat willow 8%) in order to create a more diverse ancient woodland structure emulating the lower half of the woodland and the neighbouring Duddon Valley Woodland complex. Regeneration of birch in particular has added to this mix, and is very prolific and dense in the southern section of this compartment which was formerly spruce and is developing as planned. However, the northern section (which was larch and Scot's pine) has remained more open and heathy. Here there is less tree regeneration and the vegetation includes bracken, bell and common heathers, heath bedstraw, St John's wort, bilberry and tormentil. There are still remnants of the conifer plantation, larch and Scots pine in the northern corner and Western Hemlock on the large rocky knoll in the south. Additionally there is Western hemlock regeneration at various stages of growth in the central section of sub-compartment 1a and the upper slopes of sub-compartment 2a. These will be removed during this plan period.

Significance

The Duddon Valley Woodlands (of which Low Wood is a part) are one of the largest series of woodlands in the Lake District National Park. This large continuous complex of SSSI woodland exhibits a wide range of differing woodland communities and number of species present. The woodland with other habitats such as flushes and mires, running water and acid grassland is essential for those birds and invertebrates, which require a number of habitat features to complete their life cycle. Other species of particular note are two nationally scarce bryophytes, the moss *Grimmia retracta* and the liverwort *Jamesoniella autumnalis* within the SSSI. Low Wood supports an area of Sphagnum-rich birch woodland and the locally uncommon Royal fern (*Osmunda regalis*) grows there. This community is nationally scarce and only occurs as ancient woodland within a few woods in the Lake District. The Duddon Valley woods are one of the most important sites for dormice in Cumbria (although no populations are recorded in Low Wood) and wood ant colonies frequently occur throughout. Low Wood is within an Environmentally Sensitive Area (ESA) and very visible on the steep western slope of the Duddon Valley. For all these reasons and more, active conservation management of Low Wood is vitally important: as a place for people to experience direct contact with nature, as a place where a range of specialised plants and animals can thrive, as a link to our natural and cultural heritage and as valuable part of the landscape of the British countryside and the wider environment.

Opportunities & Constraints

Because of its role within the Duddon Valley SSSI Woodland complex, of 360ha of semi-natural ancient woodland, Low Wood has great biodiversity value together with excellent potential for education, research and demonstration of good management practice. There are opportunities to increase the level of standing and fallen deadwood and through natural processes promote mature and veteran trees. The Trust in the past has taken the opportunity to control sycamore in the past where the work would release the neighbouring native canopy trees. Further work could be done but would not necessarily achieve a lower proportion of sycamore in the canopy as a whole. There does exist an opportunity to observe the impact of past work and the current structure of the woodland and in line with Trust guidelines on species control establish whether sycamore is causing significant ongoing habitat change or loss of other species. The use of chemicals to treat sycamore regrowth from stumps or for any work is constrained due to the water supplies providing drinking water. Cpt 1a is a PAWS area and provided the opportunity to restore it to ancient woodland species. This was carried out by methods believed to be best at the time, with a clear fell of the conifer crop and replanting with mixed native broadleaved trees and shrubs. The work was reasonably successful in the southern part of the compartment (where vegetation had been wiped out by densely shading spruce), but the northern half has remained rather open and become heathy (it formally had a crop of larch and Scot's pine). A small pocket of conifers remain (larch and Scots pine) on a rocky slope in the NW corner. However no regeneration of those species were identified on inspection and the removal of the mature trees can be regarded as a low priority particularly as vehicular access to and within the site is enormously difficult and increases management costs of such work. However throughout the central section of the wood both in the former plantation and the predominantly broad-leafed wood there are a significant number of Western hemlock seedlings at various stages of development from a few centimetres to almost 20 metres. These need to be removed or else the threat they represent will be perpetuated.

Factors Causing Change

Deer damage, Invasive Sycamore and Western hemlock. Ash dieback appeared in the area in 2017.

Long term Objective (50 years+)

The vision for this key feature is to maintain the existing ancient woodland as high forest through minimum intervention (extending the previous minimum intervention area) through cpt2 and cpt1. It is hoped that these areas will develop into a self-sustaining systems, shaped by natural processes. The PAWS area will continue to develop as naturally as possible to achieve a restored ancient woodland site with a mixed, predominantly native broadleaved high forest structure. Any remaining PAWS areas will also be restored following best practise.

It is hoped that once these areas are established the woodland as a whole will require little intervention and will managed as for cpt2.

Observation of the successional characteristics of the woodland (cpt2) will be undertaken over time to assess the impact of changes if any in the species mix which is currently estimated at 90% native on the habitat and species in general in line with Woodland Trust guidelines.

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

Fell to waste all the remaining Western hemlock stems and pull any remaining seedlings on the upper slopes of sub-compartments 1a and 2a. Light thin to waste the Western hemlock on the rocky knoll in the southern section of sub-compartment 2a. Care must be taken here is this feature is observable from the slopes on the other side of the valley.

Consider the removal of the remaining larch and Scots pine in the NW corner as circumstances allow. As there appears to be no regeneration of these species their removal can be judged as a low priority.

Retain standing and fallen deadwood where safe to do so throughout the wood.

Ensure the woodland remains stockproof through annual maintenance of boundaries and liaison with neighbouring landowners where required.

5.2 Informal Public Access

Description

Low Wood does not have any formal paths within the woodland. There are two entrances off the road, with Woodland Trust welcome signs present, however once in the woodland the terrain is steep in places and difficult to negotiate. Neighbours to the woodland do go into the lower slopes and the more adventurous visitor may get higher up and then through the gates in the deer fence to the newly planted area. A public footpath skirts around the outside of the northern boundary of the wood and goes across the fells.

Significance

The Trust's Corporate objectives are to increase visitor enjoyment. Whilst within Low Wood there are limited opportunities for direct access it is essential to appreciate the importance of the woodland in the landscape for visitors and locals, particularly in this Environmentally Sensitive Area (ESA).

Opportunities & Constraints

The difficult terrain makes it very difficult to create any formal routes through the woodland and there is little demand for access in this quiet valley, especially when public access is provided elsewhere. There is an opportunity to promote the ecological importance of this SSSI woodland to the local community and wider.

Factors Causing Change

None

Long term Objective (50 years+)

The Trust will continue to maintain access to the woodland in line with access category D (no formal paths maintained) and to promote the woodland amongst people in the region and members nationally, so that visitors to the area can continue to share in its beauty, gain an understanding of the woodlands importance in the landscape of the Duddon Valley and its rich wildlife habitat. This is in line with the outcomes in the Trust's Action Plan 'Keeping Woodland Alive'.

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

Maintain Woodland Trust welcome signs at the two entrances and cut back vegetation from these entrances annually following Woodland Trust access specifications.

Maintain communications regarding management works & the woodlands key features with neighbours and visitors using on-site posters and posters in the local village shop and informally.

Complete safety inspections regularly and maintain the roadside boundary in a safe condition.

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	3.72	Oak (sessile)	2000	PAWS restoration	Mostly wet ground/exposed site, No/poor vehicular access to the site, People issues (+tve & -tve), Very steep slope/cliff/quarry/mine shafts/sink holes etc	Ancient Semi Natural Woodland, Informal Public Access	Environmentally Sensitive Area, National Park, Planted Ancient Woodland Site
<p>Compartment 1 is bounded on the south east by compartment 2, to the south by improved grassland and to the west and north by broadleaf woodland (part ASNW). The compartment is steep rising to the west and north. The area of previously mixed conifers (spruce, larch and Scot's pine) was clear felled in 1997/98 and replanted with oak 30%, ash 20%, alder 20%, hazel 10%, rowan 10%, holly 2% and goat willow 8% (P2000). The planting is mixed, with ash, alder and willow in the flat boggy area along the streams to the mid-south of the compartment. There are some semi-mature oaks along the rocky outcrops to the south west and along the western boundary, sycamore is rare. There are still remnants of the conifer plantation, larch and Scots pine in the north and Western Hemlock on the large rocky knoll in the south. Additionally there is Western hemlock regeneration at various stages of growth in the central section of the sub-compartment. Scattered oak and birch throughout the compartment are rare. The ground flora includes rushes, grasses, bracken and bramble with some oak and abundant birch and rowan regeneration. An old collapsed drystone wall running from NW to SE splits the compartment in the middle. The southern section had been predominantly spruce with some larch (see old maps) whereas the northern section was larch and Scot's pine. Regeneration, especially birch, has been much more prolific and successful in the southern zone, where vegetation had been wiped out. The density of planted trees and regeneration in the northern section is adequate but slow and the vegetation is very heathy (see species list elsewhere). Wood ant nests can be seen throughout the compartment.</p>							
2a	7.53	Oak (sessile)	1950	High forest	No/poor vehicular access within the site, People issues (+tve & -tve), Very steep slope/cliff/quarry/mine shafts/sink holes etc	Ancient Semi Natural Woodland, Informal Public Access	Ancient Semi Natural Woodland, Environmentally Sensitive Area, National Park, Site of Special Scientific Interest

Compartment 2 is the lower compartment bounded to the south east by the road, to the north by the public footpath/track and ancient semi-natural woodland, to the west by compartment 1 and to the south-west by adjacent mixed wood. Several small holiday cottages abut the compartment to the east and water from three streams is collected in tanks situated in the wood to supply these cottages. An old collapsed drystone wall splits the compartment from NW to SE and on the western boundary with compartment 1 there are some derelict stone buildings. The compartment also has many charcoal pitsteads through it, all relics of past management. The compartment is very steep rising to the north and west and with many surface boulders and shale, covered with mosses and the soil is very peaty. Wood ant nests can be found throughout the compartment.

This compartment is predominantly oak (P1950 - last coppice date) with ash, birch and sycamore frequent in the canopy, rowan - rare to the western boundary. Sycamore is more frequent along the road side boundary and locally dominant to the north of the compartment at the main entrance to the wood. Beech is rare in the canopy. To the south west a small area of Scots pine, western hemlock and spruce remain on the top of a rocky outcrop. The understorey is mostly multi-stemmed hazel from old coppice stools with the occasional ash, sycamore, discrete patches of holly and rare alder along the issue to the south east. The ground flora includes bracken, the grasses common bent (*Agrostis capillaris*), sweet vernal (*Anthoxanthum odoratum*) and creeping soft grass (*Holcus mollis*) and ferns are particularly dominant in the field layer. Ferns identified include beech fern (*Phegopteris connectilis*), royal fern (*Osmunda regalis*) typified by their brown sporangia, male fern (*Dryopteris aemula*), broad buckler-fern (*Dryopteris dilatata*) and hard fern (*Blechnum spicant*). Solomon's seal, wild daffodils and bluebell can also be found. Bryophytes include *Rhytidiadelphus squarrosus*, *Mnium hornum* and *Thuidium tamariscinum*.

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.