



Twisleton Glen

Management Plan 2015-2020

MANAGEMENT PLAN - CONTENTS PAGE

ITEM	Page No.
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 Connecting People with woods & trees	
5.2 Ancient Semi Natural Woodland	
6.0 Work Programme	
Appendix 1: Compartment descriptions	
Glossary	
MAPS	
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 Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations.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 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:	Twisleton Glen
Location:	Ingleton
Grid reference:	SD701743, OS 1:50,000 Sheet No. 98
Area:	4.03 hectares (9.96 acres)
Designations:	Ancient Semi Natural Woodland, National Park, Site of Special Scientific Interest

2.0 SITE DESCRIPTION

2.1 Summary Description

This small area of ancient woodland sits on the west bank of the River Doe along a fabulous rocky narrow gorge with waterfalls. It is a designated Site of Special Scientific Interest and consists mainly of ancient twisted oak trees. Access to Twisleton Glen is via The Waterfalls Walk, an extremely popular circular route for which there is an entry charge.

2.2 Extended Description

Situated on the south western edge of the Yorkshire Dales National Park, to the north of Ingleton (0.5 miles), this small wood sits on the west bank of the River Doe. The rock step, into which the Glen has cut, has formed because of the different resistance to erosion of the rocks laying each side of the Craven Faults. The notable geology includes hard carboniferous limestone along the course of the River Doe along with Ordovician slate, sandstones, and shale, exposed as the river has cut through the softer underlying rocks.

These stepped outcrops along the course of the stream, have created cascades and waterfalls, in particular Snow Falls, which are immediately adjacent to the woodland, providing further habitats for bryophytes and mosses which thrive in this very deep dark gully. This is the only known world location for a sub-species of Yorkshire Feather Moss, discovered in 2008. The whole site is included within The Yorkshire Dales National Park, and has also been designated as Ancient Semi-Natural

Woodland as part of the NCC Draft Inventory of Ancient Woodland 1987 and a Site of Special Scientific Interest, due to the geology and associated flora. Ancient woodland in this part of the county is a scarce resource; however Twisleton Glen does form part of a longer broken chain of ancient woodland along the course of the Rivers Doe and Twiss, much of it remaining due to the inaccessible terrain, and its development as a tourist attraction in Victorian times. The tree species are dominated by oak, due to the acidic slate, as opposed to the expected ash dominated limestone. There is little under storey, but occasional holly, hazel and rowan occur throughout. The ground flora is dominated by grasses due to the pressure of grazing prior to Woodland Trust ownership, However the more inaccessible slopes and rock outcrops where grazing pressure was minimal, much of the indicative of ANSW, dominated by wood rush, dog's mercury and wild garlic. The woodlands are also of particular bryological importance, with a large number of Atlantic species, several at the limits of their British distribution (e.g. species of Lejeuneaceae liverworts), and is the only known location for a species of Yorkshire Feather Moss. Little is know about the site history, although there are the remains of small scale slate quarrying activity within the Woodland Trust boundary to the south west of the site.

Two hectares of open land to the west of the mature woodland, bounded by drystone walls, were, up until 1995 used for sheep grazing. This was stopped and the site replanted and made stock proof as part of a Woodland Grant Scheme and English Nature Wildlife Enhancement Scheme (within the Craven Limestone Wildlife Enhancement Area). Planted in 1995 with 30-45cm bare rooted transplants of oak and birch, protected in 1.2 metre shelters. Due to the very shallow soils and outcropping limestone, the tree spacing is variable across the site, and many were lost due to sheep access, deer and rabbits over the initial maintenance period. Follow up planting and control of bracken occurred in 2012, with native broadleaves planted around the site perimeter concentrating on the areas formerly dominated by bracken. Ground flora in this area is typical of moorland/ heathland, being composed predominantly of heather, bilberry, grasses, ferns and bracken, with occasional wet flushes dominated by rushes.

Access to Twisleton Glen is via The Waterfalls Walk, an extremely popular circular route which starts at the Waterfalls Walk car park 5 minutes walk from Ingleton village centre and finishes virtually in the centre of the village. The permissive path and parking are owned and maintained by the Ingleton Scenery Company, which does make a charge for the walk and parking. (The parking fee does also allow for a full days parking, the alternative is to use one of the 2 Local Authority car parks on the edge of the village, which also charge a parking fee). The path is part surfaced and well maintained. Leaflets (produced by the Ingleton Scenery Company) are available at the car park kiosk and from the Tourist Information Centre in the Council car park. Information boards provide some information at the start of the walk. From the car park it is approximately 5km to Twisleton Glen, and the whole Waterfalls Walk is approximately 8km (4.5 miles) in length taking in another Woodland Trust site - Thornton Glen after approximately 1.75km. Parts of the route can be very strenuous, with the majority of the first half of the walk uphill with extensive flights of steps following some of the gorge sections. The second half of the walk (taking in Twisleton Glen) is mostly downhill but with more extensive flights of steps, which can make the walk quite strenuous in the upper gorge section. Welcoming signs denote the ownership of the Woodland Trust sections of woodland, and no other promoted paths exist within the woodland.

3.0 PUBLIC ACCESS INFORMATION

3.1 Getting there

Access to Twisleton Glen is via The Waterfalls Walk, a circular route which starts at the Waterfalls Walk car park, approximately 5 minutes walk from Ingleton village centre and finishes virtually in the centre of the village. The permissive path and parking are owned and maintained by the Ingleton Scenery Company, which does make a charge for the walk and parking. (The parking fee does also allow for a full days parking, the alternative is to use one of the 2 Local Authority car parks on the edge of the village - pay and display). The path is part surfaced and well maintained. Leaflets (produced by the Ingleton Scenery Company) are available at the car park kiosk and from the Tourist Information Centre in the Council car park. Information boards provide some information at the start of the walk. From the Waterfalls Walk car park it is approximately 1.75km to Thornton Glen, and the whole Waterfalls Walk is approximately 8km (4.5 miles) in length taking in another Woodland Trust site - Twisleton Glen after approximately 5km. Parts of the route can be very strenuous, with the majority of the first half of the walk uphill with extensive flights of steps following some of the gorge sections. The second half of the walk is mostly downhill but with more extensive flights of steps in the upper gorge section.

Bus stops are available in Ingleton village, only 500m from the entrance to the Waterfalls Walk. Public toilets are available in the council run car park on the edge of the village. Refreshments and facilities are available at the Waterfalls Walk café . Information from the traveline website as of April 2010, Further information about public transport is available from Traveline- www.traveline.org.uk or phone 0870 608 2608

3.2 Access / Walks

4.0 LONG TERM POLICY

Twisleton Glen is an Ancient Semi Natural Woodland (ASNW) that lies within the Yorkshire Dales National Park. It is also designated as a Site of Special Scientific Interest (SSSI) It sits within part of the country with little remaining ancient woodland. It is therefore our intention to maintain and conserve this important site as predominantly native broadleaved woodland. This will be achieved through the monitoring (and control if necessary) of non-native broadleaved tree species where it is practical to do so, and where current guidelines encourage such activity. Our intention is to ensure that the percentage of non-native broadleaved cover does not rise above current levels (less than 1%) A similar approach will be maintained for non-native conifers where a remnant scattering (less than 1%) will be retained to reflect the sites management history. Any associated non-native regeneration will be controlled at periods not more than 10 years to ensure that there is a reversion through to predominantly native broadleaved woodland. Access will be maintained at the present levels via the single permissive footpath managed by The Ingleton Scenery Company, along with Woodland Trust welcoming signs to denote ownership of 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 Connecting People with woods & trees

Description

This site is part of the Welcoming Sites Programme, which aims to improve the visitor experience to this site. The Welcoming Site Programme will lead to a series of lasting upgrades that will improve the visitor experience and will likely increase the number and range of visitors to the wood. An attractive and serviceable network of tracks and paths will further encourage the appreciation of the woodland both on the site and in the locality. The site will be managed to meet the required high standards of the Welcoming Site Programme and will provide a clear welcome: well-maintained car park, entrances, furniture, signs and other infrastructure as well as sustainable path and track surfaces across the variable ground conditions. Access will better facilitate use by a wider range of visitors. An engagement plan will set out a developed programme of engagement activities and events further enhancing public visits to the site. The site will be a truly valued resource in the local community and well respected.

‘Its position in the landscape’

Nature’s power hidden amongst trees - Thornton and Twisleton Glens are on the banks of the Rivers Twiss and Doe in the Yorkshire Dales National Park, both these woods are accessed via a strikingly beautiful 4.5 mile circular waterfall walk (charges apply). Enjoy a picnic at the viewing area, which overlooks the magnificent 14 metre waterfall that was formed in limestone 330 million years ago. Ancient woodland is something of a rarity in North Yorkshire, making these woodland glens all the more valuable. Twisleton Glen includes areas of open ground - mostly limestone outcrops and areas of shallow soils, with a ground flora of rough grasses, patches of heather, bilberry and quite extensive bracken cover. Ferns are common - especially on and around the limestone outcrops.

‘General description of the access’

Public access on foot is available along a single permissive footpath (generally well surfaced) along the south western boundary of the woodland. This footpath is bounded to the west by the River Twiss. The path is owned and maintained by the Ingleton Scenery Company who do charge for entry to the valley, known as The Waterfalls Walk website: www.ingletonwaterfallstrail.co.uk There is a café and seasonal refreshment stop en-route.

The waterfalls walk is well sign posted from the main A65 Skipton to Kendal road and is easily accessible from Leeds and the M6. Unfortunately the main trail is not accessible to wheelchairs and pushchair. The Ingleton Scenery Company have a car park for the Waterfalls Walk (fee applies) and Ingleton village centre with ample car parking (2 local authority car parks - fee applies) are both 30 minutes away by foot.

‘The visitor profile’

There are 5623 households in the immediate LA6 postcode area. The Ingleton Waterfalls trail is also a major tourist destination attracting large numbers of visitors to the Yorkshire dales, with easy

access by road to Skipton, Kendal, Leeds and the M6.

‘Events and activities’

There are currently no immediate plans for events on site, however there are occasional specialist Woodland Trust members events held at the site. A trail challenge is available (not Woodland Trust) from the ticket office to keep children motivated. Non Woodland Trust events / school visits can be arranged via the Ingleton Scenic Company: www.ingletonwaterfallstrail.co.uk

‘Nearby Woodland Trust sites’

There are several woodland Trust Woods within 1hrs drive, including: Skipton Castle Woods, Lower Grass Wood - Grassington, Scaleber Wood -Settle, Preston Spring Wood -Leyburn in Wensleydale. Details on the website www.woodlandtrust.org.uk , or more details in the ‘Discover Yorkshire’s incredible woods’ leaflet available at some tourist information points.

‘Volunteering’

There are volunteer opportunities available via the woodland Trust and these are advertised on the Trust’s website.

‘specific furniture/ access point description’

Access is limited to the permissive footpath, however some welcome signage and interpretation boards, are in place and there is potential for benches and other interpretation, working with the Ingleton Scenery Company.

Significance

The woodland although small and with limited access apart from the permissive (charge) footpath provides an incredible backdrop for some of the waterfalls walk. It has a quiet setting and undisturbed feel, It also forms part of a longer chain of SSSI Ancient Semi Natural Woodland, along the river valleys of the Twiss and Doe. Ancient woodland is very limited in area within the Yorkshire Dales National Park. Whilst increasing the access provision is not feasible, access into the wood on at least one route is important as one of the objectives of the Woodland Trust and to allow people to enjoy this woodland experience. Increasing enjoyment of woodland is one of the Woodland Trust’s key outcomes. Improving interpretation along key points on the trails and engagement opportunities is particularly important.

Opportunities & Constraints

Opportunities:

To improve and develop interpretation, orientation and information provision to attract visitors to enjoy the site (both physically and virtually), improve the visitor experience and help them to understand the value of the natural heritage. There is scope to improve the site signage (ownership) and WT recognition at either the site level or the entrance to the Waterfalls Walk, which could include the visitor 'hubs' at the halfway point, the main café and the information kiosk.

Tourism - The Ingleton Waterfalls trail is a major tourist attraction and there are opportunities through on site interpretation to promote the value of the unique natural history of the falls and ancient woodland, plus the importance of trees and wood in the wider dales landscape. There are a number of other woodland trust sites in the area and information about these is available in the 'Discover Yorkshire incredible woods' leaflet, or via the Woodland Trust Website:
www.woodlandtrust.org.uk

Arts - Yorkshire Turner Trail links: Turner visited Ingleton at least twice: when making a brief tour of the Craven Dales in 1808 and then again in 1816 during his grand tour. Thornton Force is one of the most famous waterfalls in the area, where the river falls 14 metres over limestone rocks in an impressive cascade of water, and was of particular interest to Turner. The subject was not only picturesque but also of geological interest.

Constraints:

Topography of site - Constraints include very steep slopes/ river cliff, disused quarry site and potentially unstable slate tips, all in association with deep and often fast flowing rivers.

Sensitive nature of site in terms of designations -Generally undisturbed and very rich ASNW and ground flora, SSSI designation and the ownership of the paths by The Ingleton Scenery Company, which would cause serious conflict if The Woodland Trust were to create access without charge.

Factors Causing Change

Increased numbers of visitors will require significantly improved infrastructure on the site and greater engagement with visitors, volunteers, businesses and community engagement. It will also require a greater level of annual maintenance. A key opportunity is increased publicity / engagement with visitors to the site, especially given the very high number of tourist visitors.

Long term Objective (50 years+)

Maintain the existing quality of path network along the route of the permissive footpath, under the management of the Ingleton Scenery Company. No future path creation to be undertaken due to the inaccessible terrain and the disturbance to the exceptional ground flora. Look to further improve the onsite interpretation and profile of the Trust, Woodland Trust sites in area, and awareness of trees woodland in the wider dales landscape

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

Maintain the current permissive route under the management of the Ingleton Scenery Company, ensuring the Woodland Trust areas of ownership are marked with welcoming signs to either end of the public footpath.

Paths and routes are to be inspected annually for tree safety, vegetation clearance and litter, although this work is also carried out as part of the Ingleton Scenery Company management operations. Access provision will be in keeping with WT access guidelines.

Upgrade the onsite interpretation, furniture and online / onsite resources for woodland trust visitors in partnership with the Ingleton Scenery Company during the current plan period.

5.2 Ancient Semi Natural Woodland

Description

Current designation from NCC Inventory of Ancient Woodland 1987. Predominantly oak with areas of birch and rowan regeneration on the disturbed ground around the quarry and slate tips . Understorey of occasional hazel with a very rich and diverse ground associated with Ancient Semi-Natural Woodland. To be managed as minimum intervention high forest.

Significance

Ancient Semi Natural Woodland in this part of the county is very limited in area, much of the woodlands, as in this case restricted to inaccessible terrain and along riversides. This wood also forms part of a much larger chain of SSSI ASNW woodland along the Rivers Twiss and Doe.

Opportunities & Constraints

Incredibly difficult topography - there are large sections of steep to near vertical cliff face above the river in the southern half of the compartment as well as disused slate mining areas, difficult access within the compartment - both management and pedestrian would prevent most work in this woodland. Added to that, the disturbance to the SSSI woodland and rich ground flora and associated ASNW fauna in an area untouched for many years would be inappropriate. Periodic (10 year) monitoring of the regeneration should highlight the need for control, should any non-native regeneration be classed as invasive to the detriment of the woodland. However, regeneration in this woodland is predominantly ash. There may be the opportunity for further extension/ buffering to the woodland should additional improved grassland become available to the east. Ash dieback will be a significant issue over the coming plan period.

Factors Causing Change

Invasive sycamore, Invasive beech, Deer Damage, Rabbit Damage, ash dieback

Long term Objective (50 years+)

The woodland will be managed as high forest. Maintaining predominantly native broadleaved woodland, with a non native element of no more than the 2005 levels of less than 1%, on this SSSI ASNW site.

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

This will be achieved through the monitoring and removal if necessary (depending on the effects of ash dieback), of non-native broadleaved tree species, where the practicalities or working allow, ensuring that the percentage of non-native broadleaved cover does not rise above current 2005 levels (less than 1%). Any associated non-native regeneration will be controlled at periods not more than 10 years to ensure that there is a reversion through to wholly native broadleaved woodland. Regeneration of native broadleaved species will be monitored throughout the plan period, to evaluate any requirement for measures in future plans to encourage regeneration.

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	2.00	Mixed native broadleaves	1995	High forest	No/poor vehicular access within the site	Ancient Semi Natural Woodland, Connecting People with woods & trees	National Park, Site of Special Scientific Interest
<p>Area of open ground - mostly limestone outcrops and areas of shallow soils, with a ground flora of rough grasses, patches of heather, bilberry and quite extensive bracken cover. Ferns are common - especially on and around the limestone outcrops. Some planting was undertaken in 1995 to restock the area with native broadleaved species including oak, downy birch, rowan, bird cherry, hawthorn, hazel and holly. These were planted in a random pattern across the site where deeper soils allowed, protected in 1.2m shelters which were removed in 2004, this was followed up by additional restocking in 2012 around the site perimeter with native broadleaves along with control of the significant bracken encroachment.</p>							
1b	2.01	Mixed native broadleaves	1900	High forest	No/poor vehicular access within the site, Very steep slope/cliff/quarry/mine shafts/sink holes etc	Ancient Semi Natural Woodland, Connecting People with woods & trees	Ancient Semi Natural Woodland, National Park, Site of Special Scientific Interest
<p>Broadleaved high forest, predominantly oak on an extremely steep slope falling to the River Doe which forms the eastern boundary. Designated as Ancient Semi-Natural Woodland and a Site of Special Scientific Interest. Public access limited to a permissive footpath (The Waterfalls Walk - fee payable) running alongside the River Twiss which forms the north eastern boundary. Bounded to the north, east and south by woodland and semi-improved pasture land to the west. Much of the compartment has a ground flora of grasses - indicative of the long term grazing previous to Woodland Trust ownership, as well as a range of species indicative of ancient woodland in areas away from grazing pressure. Contains the remains of an old slate quarry.</p>							

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.