

# Wragby

# Management Plan 2019-2024

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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 Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations.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 <a href="www.woodlandtrust.org.uk">www.woodlandtrust.org.uk</a> 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 <a href="www.woodlandtrust.org.uk">www.woodlandtrust.org.uk</a>. 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.
- 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: Wragby Location: Wragby

**Grid reference:** TF126756, OS 1:50,000 Sheet No. 121

**Area:** 81.55 hectares (201.51 acres)

**Designations:** 

# 2.0 SITE DESCRIPTION

# 2.1 Summary Description

In Wragby Woods (Goltho Wood and Kingthorpe Wood) there are well-used footpaths and cycle routes. Passing from woodland to wetland through shady limewoods to an expansive, flat landscape containing medieval and monastic sites, the area is attractive to both nature-lovers and historians. Un-surfaced paths in the generally flat terrain can be muddy and uneven in wet weather but there are plans to plant more trees and establish new paths, including a circular route through new and ancient woodland.

# 2.2 Extended Description

few miles close to the town of Wragby. Both sites abut SSSI ancient woodland and PAWS and it is the intention through woodland planting and other habitat creation to buffer and extend these ancient woodlands and create a holistic habitat network linking into the wider environment. Goltho Wood (62.6 ha) and Kingthorpe Holt (19.39 ha) both sit on deep clay seasonally wet soils. Kingthorpe Holt buffers College Wood whilst Goltho Wood will similarly extend Great West Wood. Both sites have come out of intensive agricultural production upon acquisition in 2006 and their size is large enough to have a significant effect on local biodiversity and landscape. Goltho Wood is underlain along its eastern fringes with remains of the extensive Goltho village which was occupied from the Iron Age through to the late Middle Ages, when it became a victim of the widespread abandoment of settlements following the Black Death in the 14th century. The existing ancient woods and hedgerows surrounding both sites are part of a relic medieval landscape surviving from the time when the immediate area was dominated by the monastic economy. In addition and closely interlinked with the ecological diversity, the area contains an almost unique concentration of six medieval abbey and monastic sites, complemented by a range of other

The Wragby Woods comprise two areas - Goltho Wood and Kingthorpe Holt both seperated by a

and silt close to the river Witham of European importance.

Riparian habitats have been created alongside the existing canalised streams, incorporating new wetland areas, ponds and wet woodland together with a species rich meadowland, which buffers the existing pastureland and areas of high archaeological interest. This diversity of connected habitats will deliver high quality biodiversity outputs by supporting a wider range of species than woodland alone and will reflect the unique character of the wider landscape. The meadowland areas are managed on a sustainable basis by appropriate grazing and hay cutting.

medieval and earlier, landscape features (including barrows, ritual causeways and moated sites). Although not currently visible, it is likely that an intact Bronze Age landscape survives under peat

In 2014 ash dieback was found on 2 or 3 trees within the site. In response to the disease and due to the availability of lime trees grown locally 2,500 small leaved limes were planted in 2014/15 throughout Goltho Wood and Kingsthorpe. The lime trees were propagated locally using stem propagation and were planted in open areas, mainly within groups of ash trees. For further details see 'Management History' in the reference information of this management plan.

# 3.0 PUBLIC ACCESS INFORMATION

# 3.1 Getting there

Goltho Wood site lies directly on the main Lincoln to Skegness road (A158) just 8 miles east of Lincoln and 1 mile west of Wragby. There are bus stops in both directions on the main road just off site, that serve Rand Farm Park but no footpath links to site.t. The minor country road that runs down the east boundary of the wood has 5 access points with parking for 1 or 2 cars at each access point.

Kingthorpe Holt lies adjacent to a small lane of the B1202 approximately 1mile south of Wragby. Heading south from Wragby on the B1202 turn right in the hamlet of Kingsthorpe on a narrow lane which goes to Apley. After about one third of a mile the wood can be found on the right-hand side of the road where parking is available for 1 o2 cars.



# 3.2 Access / Walks

# 4.0 LONG TERM POLICY

To establish a significant area of new predominantly native woodland high forest in the Lincolnshire Limewoods areas which buffers an existing ancient woodland sites.

To provide and maintain open informal public access to a large woodland area, linked with the adjacent mature woodlands outside Woodland Trust ownership

# 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 New Native Woodland

# Description

61.29 ha of new native woodland established in 2010 with 10.71 ha achieved through natural regeneration from existing ancient woodland that lies adjacent. The woodland will extend and buffer the existing ancient SSSI and PAWS woodland that form part of the Bardney Limewoods NNR. The site forms part of the large landscape scale project in the Lincolnshire Limewoods that aims to link, buffer and expand the area of the Limewoods and improve habitat networks. The species to be used mimic that of the existing Limewoods, consisting of: ash, oak, field maple, hazel, aspen and willows with a range of minority species and shrubs that grow locally.

# Significance

The Linclonshire Limewoods are an area of high ecological and historical significance of at least national importance, which is taken into account in the Lincolnshire Limewoods landscape scale project that has been running since 2005. Extending the existing Limewoods (which all form part of the Bardney Limewoods National Nature Reserve) with buffering areas, reducing the impact of intensive agriculture, and recreating associated habitats and linkages form an important part of the project.

# **Opportunities & Constraints**

The key site constraint is underlying archaeology to the east of the Goltho Wood site, which, while limiting tree planting area, has allowed a greater provision of the associated habitats within the Limewoods area, notably meadow and wet grassland, than would otherwise been the case. The other main constraint are the seasonally very wet site conditions which make site works very difficult at times.

In addition to making an impact on a landscape scale with these two new areas of woodland, the project has enabled the Trust to engage with local people through an extensive HLF funded people engagement programme which raised the profile of the Trust in the County.

# **Factors Causing Change**

Natural succession to woodland in the natural regeneration area.

Deer and hare damage.

Poor ground resulting in poor establishement and plant deaths.

# Long term Objective (50 years+)

Establish new native woodland which has been created with new planting and natural regeneration and will buffer the existing ancient woodland.

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

The key objective during the next plan period 2019 - 2024 is to ensure the successful establishment of woodland through weed control, protection from or control of animal pests and replacement planting if required. Tree growth has been exceptionally slow no doubt due to the difficult heavy land which was previously arable. The site to be assessed twice per year to assess management works required to aid establishment. The two assessments per year will be undertaken throughout the plan period.

An assessment to be made of the natural regeneration area to assess stocking levels at least once during the plan period.

Deer and hare damage will be assessed annually to monitor damage levels and action taken subject to the results of the impact assessments.

# 5.2 Open Ground Habitat

# Description

Alongside the new native woodland planting, 23.35 ha of associated habits that were once common in the Lincolnshire Limewoods area but are now scarce: notably traditional species rich meadow and wet grassland have been created. The opportunity to include large areas of other habitat was afforded partly by underlying archaeology down the eastern boundary of the Goltho Wood site. The eastern fringe of the Goltho Wood site is underlain with the remnants of Goltho Village, which also extend under the existing minor road and into the adjacent field. The site was occupied from iron age times through to the middle ages, when it was abandoned after the Black Death. The only visible signs now are the old chapel overlooking the field opposite and some rig and furrow in the small surviving area of permanent pasture to the south east. To protect what remains, the eastern part of the Goltho Wood site is species rich permanent grassland.

These areas were created by re-establish meadow areas through cultivation, seeding and modifying the recent field drainage to re-wet areas destined to be wet pasture. A neutral species rich grass sward similar to NVC MG5 has been created. The areas of new meadow are to be managed traditionally by hay cutting and extensive grazing.

New hedgerows have been planted to create the meadows and pasture, and minor improvements took place on the canalised stream sections to increase diversity

The open ground contains the majority of areas of archaeological interest. These area are also let on a Farm Tenancy agreement for grazing so no cultivation or disturbance to the archaeological areas.

# Significance

Natural open ground habitat is exceedingly scarce in Lincolnshire and what remains is mostly internal grassland areas within the Limewoods themselves.

# Opportunities & Constraints

Underlying archaeology on site limits the extent of cultivation and ground works that can be undertaken in re-establishing vanished habitats, however it gave the rationale for inclusion of a large element of open habitat in the planning process. With the new hedgerows and streamside works the new habitats will make a significant contribution to biodiversity in the Limewoods.

# **Factors Causing Change**

Unseasonal wet weather, noxious weeds.

# Long term Objective (50 years+)

Maintain a sustainable suite of open ground habitats including wet species rich grassland, species rich meadow, riparian habitats including ponds and new hedgerows. The meadow areas are to be managed sustainably through grazing, preferably by traditional breeds, and hay cutting.

Maintain the hidden archaeology free from disturbance.

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

Maintain open ground habitats in suitable condition through mowing and control of invasive weeds. Mowing to be undertaken once annually outside the grazing areas. Within the grazed areas topping may be undertaken once annually to control thistles and other noixious weeds. Within the grazed fields it is the responsibility of the tenant to control any noxious weeds.

Areas to be inspected annually, ideally in mid summer to check for noxious weeds but a second visit may also be need towards the end of the growing season.

# 5.3 Connecting People with woods & trees

# Description

The majority of the site is open to free and informal public access, with a network of paths around the site. The meadow areas with stock and the presence of breeding wetland birds, some parts of the site will have public access limited at certain times of the year. The paths within the site link to the footpath in the Forestry Commission woodland and the public footpath network generally.

# Significance

The current public footpath network in the area is fragmented and apart from several of the larger Limewoods available for public access, there is a relatively limited area of publicly accessible countryside in this intensively farmed area. The footpaths within the wood add to that resource.

# **Opportunities & Constraints**

Whilst the wood is large and has good links to the surrounding countryside the site is in rural location well away from areas of high population. Visitor numbers will therefore be limited. However, the opportunity for increased informal public use of the site will no doubt arise in future years as the wood becomes more established. A re-appraisal of the site at the end of the plan period would be advisable to assess potential opportunities bearing in mind the sites locational constraints.

# **Factors Causing Change**

Increase in visitor pressures as site develops.

# Long term Objective (50 years+)

Maintain existing network of permissive and public footpaths. Paths maintained through annual mowing to ensure easy and welcoming public access to the site, although it is likely that open areas will eventually start to regenerate with native broadleaved species. The existing entrances (x5 stiles and open gate), welcome signs (x5 at entrances) to be maintained at the current standards given that only a small increase in visitor numbers is expected with the development of the woodland.

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

To maintain approximately 3.5km of footpaths with 2 footbridges, 7 entrance points, a small adventure play area and picnic site with table. Paths to be cut twice per year and open space which forms a glade once per year.

Opportunities for further public engagement will be sought when possible. Achieved by: Encouraging schools to use the site more for educational purposes, by contacting very local schools to promote the area for outdoor learning - sharing WT outdoor learning pack, free trees for schools and communities, nature detectives and other outdoor learning resources. Our partnership working with neighbouring Rand Farm will ensure regular learning and use of the site by schoolchildren. Holding public events (at least one community / school event every 2 years).

Ensuring the site is visited regularly by local volunteers or local projects (eg Rand Farm) who act as our eyes and ears, reporting back anything that needs attention, and carrying out minor tasks.

# 6.0 WORK PROGRAMME

Year Type of Work Description Due By

# APPENDIX 1: COMPARTMENT DESCRIPTIONS

| Cpt<br>No. | Area<br>(ha) | Main<br>Species                    | Year | Management<br>Regime  | Major<br>Management<br>Constraints                                  | Key Features<br>Present   | Designations |
|------------|--------------|------------------------------------|------|-----------------------|---|---|--------------|
| 1a         | 20.13        | Mixed<br>native<br>broadlea<br>ves | 2008 | Wood<br>establishment | Management factors (eg grazing etc), Mostly wet ground/exposed site | Connecting<br>People with<br>woods & trees,<br>New Native<br>Woodland |              |

Area of set aside planted with trees in season 2007/8 under ewgs and fwp. All planted at an average of 1800 stems/ha and comprising ash 33%, aspen 2%, common alder 2%, field maple 14%, goat willow 4%, hazel 4%, pedunculate oak 24%, mixed native broadleaves 7% and shrubs 3%. The remainder is open ground mostly in the form of a one acre deer glade in the north west corner of the compartment. The trees were planted protected in spiral guards and subsequently mulched with mulch mats or straw. This was to prevent excessive losses due to ground shrinkage and cracking due to moisture loss, on what is an extremely challenging clay soil site.

| 1 | b | Mixed<br>native<br>broadlea | Wood<br>establishment | Mostly wet ground/exposed site | Connecting People with woods & trees, |  |
|---|---|-----------------------------|-----------------------|--------------------------------|---------------------------------------|--|
|   |   | ves                         |                       |                                | New Native<br>Woodland                |  |

A conservation grass sward was established in spring 2008 comprising slower growing grass species of a site native type. The roadside strip of 5m has been left unmanaged to allow regeneration of trees and shrubs from the old hedgeline.

All planted at an average of 1800 stems/ha and comprising ash 33%, aspen 2%, common alder 2%, field maple 14%, goat willow 4%, hazel 4%, pendunculate oak 24%, mixed native broadleaves 7% and shrubs 3%. The trees were planted protected in spiral guards and subsequently mulched with mulch mats or straw. This was to prevent excessive losses due to ground shrinkage and cracking due to moisture loss, on what is an extremely challenging clay soil site.

|   | 1c | Mixed<br>native<br>broadlea | Wood<br>establishment | , · | Connecting People with woods & trees, |  |
|---|----|-----------------------------|-----------------------|-----|---------------------------------------|--|
|   |    | ves                         |                       |     | New Native                            |  |
| ı |    |                             |                       |     | Woodland                              |  |

A conservation grass sward was established in spring 2008 comprising slower growing grass species of a site native type. The eastern boundary down the old hedgerow has a 5m buffer strip that is unmanaged to allow for natural regeneration from the existing trees and shrubs.

All planted at an average of 1800 stems/ha and comprising ash 33%, aspen 2%, common alder 2%, field maple 14%, goat willow 4%, hazel 4%, pendunculate oak 24%, mixed native broadleaves 7% and shrubs 3%. The remainder is open ground mostly in the form of a one acre deer glade in the north west corner of the cpt. Thetrees were planted protected in spiral guards and subsequently mulched with mulch mats or straw. This was to prevent excessive losses due to ground shrinkage and cracking due to moisture loss, on what is an extremely challenging clay soil site.

| ľ | 1d | 2.10 | Mixed native | 1 | Wood establishment | Mostly wet ground/exposed | Connecting<br>People with |  |
|---|----|------|--------------|---|--------------------|---------------------------|---------------------------|--|
| 1 |    |      | broadlea     |   |                    | site                      | woods & trees,            |  |
|   |    |      | ves          |   |                    |                           | New Native                |  |
|   |    |      |              |   |                    |                           | Woodland                  |  |

A 30m regeneration strip to allow natural regeneration to spread from the SSSI ancient woodland of Great West Wood, under ewgs/fwp. Much advance regeneration of ash, field maple, willows and occaisional oak is already in existence.

| 1e | 0.99 | Mixed<br>native<br>broadlea | 2008 | Wood<br>establishment | ground/exposed site | Connecting People with woods & trees, |  |
|----|------|-----------------------------|------|-----------------------|---------------------|---------------------------------------|--|
|    |      | ves                         |      |                       |                     | New Native                            |  |
|    |      |                             |      |                       |                     | Woodland                              |  |

The compartment was sown with a slow growing conservation grass mix of native type and the existing field drainage system was broken across the northern boundary of the compartment to disrupte the drainga and create a wet woodland area. Species such as alder, aspen and willows to make a contribution to county HAP targets.

All planted at an average of 1800 stems/ha and comprising ash 33%, aspen 2%, common alder 2%, field maple 14%, goat willow 4%, hazel 4%, pendunculate oak 24%, mixed native broadleaves 7% and shrubs 3%. The trees were planted protected in spiral guards and subsequently mulched with mulch mats or straw. This was to prevent excessive losses due to ground shrinkage and cracking due to moisture loss, on what is an extremely challenging clay soil site.

| 1f | 23.35 | Other | 2008 | ground/exposed site | Connecting<br>People with<br>woods & trees, |  |
|----|-------|-------|------|---------------------|---|--|
|    |       |       |      |                     | New Native                                  |  |
|    |       |       |      |                     | Woodland                                    |  |

Areas of open ground to be left unplanted as archaeological protection areas and to allow the creation of new meadow and riparian wetland zones along the two stream courses under an HLS scheme. These areas have been sown in 2008 with a conservation grassland meadow mix to replicate NVC MG5 grassland. The aim being to establish a neutral species rich grassland that will be managed by hay cutting and extensive grazing. The riparian areas along the two stream areas will be made wetter by disrupting the existing field drainage to create wet grassland areas suitable for waders such as snipe and lapwing which are already sometimes present on site. Two small dams have been created in 2008 along the southern stream to raise water levels and create two new ponds to add to the diversity of wetland habitat.

Also included in the HLS area is 3ha of natural regeneration zone adjacent to the SSSI boundary where management will be limited to control of noxious weeds as appropriate

| 1g | 0.35 | Mixed<br>broadlea<br>ves | 1980 | High forest | site | Connecting People with woods & trees, New Native |  |
|----|------|--------------------------|------|-------------|------|--|--|
|    |      |                          |      |             |      | Woodland   |  |

A small copse of existing wet woodland comprising willows and woodland amentiy planting around several small ponds that are believed to result from clay digging. This small area has many natural features including Ipenty of fallen and deadwood, and it is proposed to remove the scatter of non native species and revert back to a wet native woodland type. It is proposed to develop the ponds into an educational resource for school parties.

| 2a | 13.78 | Mixed    | 2010 | Wood          | Mostly wet     | Connecting     |  |
|----|-------|----------|------|---------------|----------------|----------------|--|
|    |       | native   |      | establishment | ground/exposed | People with    |  |
|    |       | broadlea |      |               | site           | woods & trees, |  |
|    |       | ves      |      |               |                | New Native     |  |
|    |       |          |      |               |                | Woodland       |  |

All planted at an average of 1800 stems/ha and comprising ash 33%, aspen 2%, common alder 2%, field maple 14%, goat willow 4%, hazel 4%, pendunculate oak 24%, mixed native broadleaves 7% and shrubs 3%. The trees were planted protected in spiral guards and subsequently mulched with mulch mats or straw. This was to prevent excessive losses due to ground shrinkage and cracking due to moisture loss, on what is an extremely challenging clay soil site.

| 2b | 5.61 | Mixed<br>native<br>broadlea | 2010 | Wood<br>establishment | site | Connecting People with woods & trees, |  |
|----|------|-----------------------------|------|-----------------------|------|---------------------------------------|--|
|    |      | ves                         |      |                       |      | New Native                            |  |
|    |      |                             |      |                       |      | Woodland                              |  |

Natural regeneration buffer zone down the length of the boundary with College Wood, the adjacent NNR ancient woodland. Management is to be constrained to control of noxious weeds as required. Advance regeneration of willows, ash and field maple is already present.

# **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.