



# Swan & Cygnet Woods

## Management Plan 2015-2020

## MANAGEMENT PLAN - CONTENTS PAGE

<b>ITEM</b>	<b>Page No.</b>
Introduction	
Plan review and updating	
Woodland Management Approach	
Summary	
1.0 Site details	
2.0 Site description	
2.1 Summary Description	
2.2 Extended Description	
3.0 Public access information	
3.1 Getting there	
3.2 Access / Walks	
4.0 Long term policy	
5.0 Key Features	
5.1 Informal Public Access	
5.2 New Native Woodland	
5.3 Ancient Semi Natural Woodland	
6.0 Work Programme	
Appendix 1: Compartment descriptions	
Appendix 2: Harvesting operations (20 years)	
Glossary	
<b>MAPS</b>	
Access	
Conservation Features	
Management	

## THE WOODLAND TRUST

### INTRODUCTION

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

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

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

### PLAN REVIEW AND UPDATING

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 Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations.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

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

---

## WOODLAND MANAGEMENT APPROACH

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

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

All our sites have a management plan which is freely accessible via our website

[www.woodlandtrust.org.uk](http://www.woodlandtrust.org.uk). Our woods are managed to the UK Woodland Assurance Standard (UKWAS) and are certified with the Forest Stewardship Council® (FSC®) under licence FSC-C009406 and through independent audit.

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

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

The following guidelines help to direct our woodland management:

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

## SUMMARY

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

## 1.0 SITE DETAILS

<b>Site name:</b>	Swan & Cygnet Woods
<b>Location:</b>	Stock
<b>Grid reference:</b>	TQ689995, OS 1:50,000 Sheet No. 167
<b>Area:</b>	20.99 hectares (51.87 acres)
<b>Designations:</b>	Ancient Semi Natural Woodland, Green Belt, Special Landscape Area, Tree Preservation Order

## 2.0 SITE DESCRIPTION

### 2.1 Summary Description

Old blends nicely with new at Swan Wood and its appropriately named smaller recently planted neighbour, Cygnet Wood. Swan Wood is an ancient site with both a distinctive and delightful character. Look out for the restored old pond, home to all three species of newts. Dormice, badgers and bats are also residents of the site. Children of all ages particularly enjoy the bamboo grove that has established itself in the southern part of the site and has, through time and the pressure of trampling, developed into something of a fun maze.

## 2.2 Extended Description

Swan and Cygnet Woods is principally an area of attractive Ancient Semi-Natural Woodland (ASNW) lying near the village of Stock, a semi-rural environment a few miles south of Chelmsford. The 13ha of ASNW, long known as Swan Wood, was purchased by the Trust after a fundraising appeal in 1989. A further 8ha were purchased in several parcels in 2000 to help buffer the core ancient woodland. These consisted of: a grassland area to the south which is continually grazed (currently has no public access), an ex-arable field to the north which was left to naturally regenerate and is continuing to develop well and a small field along the western boundary was planted in 2000 as part of the Trust's Woods on Your Doorstep campaign and aptly named Cygnet Wood, which is also successfully developing into a rich wooded habitat. For management purposes the entire woodland is managed as one unit.

The existing woodland is an excellent example of ancient woodland with hornbeam/chestnut coppice with oak standards. Both pedunculate and sessile oak are present along with alder, ash, rowan, birch, holly, field maple, beech, willow, aspen and hawthorn. In addition, along the southern section of the eastern boundary, three Wild Service Trees can be found (an ancient woodland indicator species). An attractive pond makes an interesting feature and the site is bisected by a small stream, surrounded by an area of alder carr. Ground flora consists of patches of bluebells in the spring, along with pignut, yellow pimpernel, wood sorrel, wood anemone, primrose and yellow archangel.

The surrounding landscape is characterised by a mosaic of undulating arable expanse, dotted with small blocks of woodland. The wood is typical of the area with oak standards and hornbeam coppice, a reminder that its timber was used to fuel much of London in past years.

A public footpath runs along the northern boundary and the wood is regularly used by visitors enjoying quiet recreation. Management access is available on three sides (E, W & N) but is mainly focused through the entrance which is directly off the highway running along the western edge.

Key features:

Informal public access

New native woodland

Ancient semi natural woodland

## 3.0 PUBLIC ACCESS INFORMATION

### 3.1 Getting there

Swan and Cygnet Woods are located a few miles south of Chelmsford in an area characterised by numerous small towns and villages. Access is available primarily at two points off Swan Lane directly into the wood or on the eastern side via the adjacent public footpath. There are no public footpaths through the site but a diverse network of paths weave through the wood with wide open gaps or kissing gate entrances off the highway and surrounding farmland. The undulating site contains some steep sections with occasional steps and footbridges. Ground conditions are normally good but can be seasonally wet and muddy in places.

Nearest car park: Opposite the SW entrance to the wood, 20m away over a busy country road.

Nearest toilet: Approximately 4 miles away at Tesco supermarket - Princes Road, Chelmsford. Baby changing facilities and toilet for disabled people are available in the main block. Open Mon- Sat 24 hours, Sun 10am - 4pm, as checked Jan 2015.

Nearest railway station: Billericay - 3.5 miles away along busy country / town roads.

Nearest bus stop: Opposite Cubby Cottage on Swan Lane,- at the western entrance to the wood.

Information from National Rail and Traveline websites as at Jan 2015.

Further information about public transport is available from [www.nationalrail.co.uk](http://www.nationalrail.co.uk) or [www.traveline.org.uk](http://www.traveline.org.uk) or phone 0870 608 2 608.

### 3.2 Access / Walks

## 4.0 LONG TERM POLICY

Over the next 20 - 50 years there are no significant alterations currently planned for the site. The long-term intentions are to maintain and enhance this superb area of diverse woodland for the benefit of wildlife and visitors. The ancient semi-natural Swan Wood should remain as native broadleaf uneven-aged woodland with a varied stand structure and a diverse range of additional habitats (mature hornbeam/sweet chestnut coppice with a variety of standards, wet woodland, a pond and associated wetlands, recently planted woodland and hornbeam coppice with oak standards).

The natural decay and collapse of old trees in the wood will create holes in the canopy, encouraging natural regeneration and coppice regrowth - a totally sustainable and continuous management system. Oak, hornbeam and sweet chestnut regeneration will be encouraged where possible; sycamore regeneration and the spread of rhododendron/bamboo should not be allowed or permitted to dominate the understorey.

Part of the ancient hornbeam and chestnut coppice will be allowed to collapse and re-coppice/regenerate naturally whilst the historically successful and recently successful hornbeam coppicing pilot area will continue to be expanded and monitored annually. This work will increase structural diversity, encourage natural regeneration and hopefully increase both ground flora and in time improve and extend the habitat for the monitored Dormouse population.

The aging oak and chestnut scattered throughout the wood will be left to senescence and beyond resulting in a large number of ancient trees. The newly established trees in Cygnet Wood (cpt 4a) and the scrubby regeneration in 2a and along the wood edge of 3a will merge discretely into the surrounding woodland as they mature, and will indeed complement the existing woodland structure and provide a superb buffer to the ASNW.

The alder carr alongside the stream will be left to regenerate naturally with minimal intervention. The pond will be kept open and well maintained to provide an aesthetically pleasing natural area and a diverse wildlife habitat. The undulating grassland on the southern side of the wood should be managed to improve its conservation value, principally by grazing. Groups of broadleaves should remain dotted throughout the grassland. Over time those in the vicinity of the regenerating buffer, will be absorbed by its steady expansion from the wood edge.

The Trust's corporate objective of increasing people's awareness and enjoyment of woodland will be achieved by continuing to provide and maintain appropriate access paths and facilities throughout the wood.



## 5.0 KEY FEATURES

The Key Features of the site are identified and described below. They encapsulate what is important about the site. The short and long-term objectives are stated and any management necessary to maintain and improve the Key Feature.

### 5.1 Informal Public Access

#### Description

Swan and Cygnet Woods are a well used natural resource, easily accessible from the village of Stock.

There are seven entrances around the site - the most popular being directly off Swan Lane, opposite the local authority car park. A public footpath runs along the northern boundary, providing an added link into the extensive network of well walked paths throughout the wood.

The open glade and attractive pond in the NE corner provides added interest and an ideal resting place.

Access facilities include: small wooden bridges, kissing gates, stiles, benches and an information board in Cygnet Wood.

#### Significance

Informal Public Access raises people's awareness and enjoyment of woodland, fulfilling one of the Trust's corporate objectives.

It also:

Provides suitable areas for villagers and other visitors to walk and also to exercise dogs.

Provides opportunities for nature study and the appreciation of the countryside; in particular by an enthusiastic local voluntary group who carry out invaluable small-scale woodland operations.

Adds interest to the village of Stock and is the largest piece of woodland within easy walking distance of the village.

Adds to the local rights of way network.

#### Opportunities & Constraints

Opportunity to retain the involvement and interest of the local community by making the site interesting, attractive and easy to visit for a wide range of people. As well as continuing the excellent volunteer involvement.

Illegal motorbike use can affect the woodland experience for visitors and can damage ground flora.

#### Factors Causing Change

Antisocial behaviour (motorbike usage, fly tipping) have been a problem in the past but currently are not on a scale that warrants huge concern.

Hankins Wood, a small semi natural ancient woodland, on the other side of Swan Lane has been purchased by the local authority and passed to the parish council for management. This will now hopefully become a more accessible and increase the area of publically accessible land in the area

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

To remain a welcoming woodland with well-maintained entrances and attractive paths that connect to a wider network of rights of way. Easily accessible, well used and respected by locals from the surrounding area. The wood will remain open for the public to visit and enjoy its natural beauty and conservation interest.

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

Operational Objective:

Easily accessible, attractive, well maintained and safe woodland regularly used by the public. Path network, entrances, bridges, benches and pond area remain in good condition and are appropriate for level and type of use and in accordance with access category B.

Work Programme:

Mow path through Cygnet Wood twice a year to a minimum width of 2m.

Paths through Swan Wood maintained by local volunteer group.

Annual inspection of bridges, boardwalks and benches.

Annual tree safety inspection of Zones A & biennially for zone B.

Install new roadside entrance signs.

## 5.2 New Native Woodland

### Description

New native broadleaved woodland established around 2000. Approx 80% of compartment 4 (Cygnet Wood) was planted under the Woods on your Doorstep project. Compartment 2 is developing into fantastic natural young woodland with prolific regeneration of oak, birch, hawthorn and willow from surrounding trees. The thin strip of land in compartment 3, fenced off in 2004, is also scrubbing over nicely with clear evidence of oak, hornbeam and chestnut regeneration. These areas of new native woodland add structure, diversity and provide a tremendous variety of existing and potential woodland habitats.

### Significance

One of the Trust's corporate objectives is to see an increase in the area of new native woodland - this objective is adequately fulfilled in Cygnet Wood becoming well established. The areas of natural regeneration also fulfil this objective as well as buffering the ASNW and increasing biodiversity potential.

### Opportunities & Constraints

The establishment of young woodland in these areas provides an ideal opportunity to increase the physical size of woodland in the area. Their location adjacent to ancient semi-natural woodland means there is a great chance of establishing woodland that will be colonised by associated ancient woodland flora and fauna. Compartment 2 will hopefully be established purely by natural regeneration. These new wooded areas will also act as vital 'buffers' to the sensitive habitat of the ASNW. There may be additional opportunity in the future to extend the area of regeneration further into the southern field.

### Factors Causing Change

Antisocial behaviour (motorbike usage, fly tipping) have been a problem in the past but currently are not on a scale that warrants huge concern.

Hankins Wood, a small semi natural ancient woodland, on the other side of Swan Lane has been purchased by the local authority and passed to the parish council for management. This will hopefully provide greater protection for the wood and continue to be a wider ancient woodland habitat for wildlife.

### Long term Objective (50 years+)

To develop into a healthy, mature and attractive native broadleaf woodland of varying structure and habitats. A mixture of trees, woody shrubs, open space and ground flora developed through planting and natural colonisation of native broadleaves from the surrounding ancient woodland.

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

**Operational Objective:**

Ensure Cygnet Wood is healthy, maturing well and is successfully integrating into the existing habitats and landscape. Ensure areas of natural regeneration are primarily colonised by native species and successfully integrating into the surrounding woodland.

**Work Programme:**

Volunteers to continue to coppice along ride edge to maintain view and create scalloped areas thereby increasing the woodland edge habitat and structural diversity. Other appropriate areas to be maintained are the key Dormouse habitat and particularly those providing aerial connectivity as routeways.

## 5.3 Ancient Semi Natural Woodland

### Description

Typically oak woodland with a strong sweet chestnut / hornbeam coppice element. The oak woodland would have a National Vegetation Classification (NVC) W10 (type b). It is characteristically *Quercus robur* - *Pteridium aquilinum* - *Rubus fruticosus* woodland which is described as having hornbeam and sweet chestnut locally abundant and bluebells and wood anemones being the spring dominant ground flora. Birch, rowan, ash and sycamore are also noticeable but the alder wet woodland would be more typical of W6 - *Alnus glutinosa* - *Urtica dioica* woodland. The eastern roadside boundary also contains three wild service trees along the southern section.

Huge oak and chestnut stands are scattered throughout the wood, and collapsing old hornbeam and chestnut coppice help promote young broadleaf regeneration and enhance the ever-changing woodland structure. Historically, near the northern boundary, open glades and prolific sycamore and birch regeneration was evident following the clear up of windblown trees after the 1987 storms. Also in this area is a tranquil woodland pond which is known to contain all three species of Newts. This northern area has also been the focus of a pilot coppicing reestablishment programme, where a small number of coppice stools within an area have been coppiced and brash protection added. Coppice regeneration has been highly successful and an additional area was recruited into the pilot programme in 2014 (closer to Swan Lane) and is again showing good coppice regeneration growth.

A patch of invasive rhododendron is obvious in the centre of the wood and a small characterful outcrop of bamboo can also be found. Hornbeam regeneration is common in the understorey, along with holly, birch, hawthorn and chestnut.

### Significance

ASNW's have been in existence for many hundreds of years and unfortunately are a declining resource. As well as being a traditional feature in the landscape they support an abundance of plants, mammals, birds, insects and fungi. It is one of the Trust's main objectives to ensure no further loss of ASNW. They take centuries to evolve and are irreplaceable.

### Opportunities & Constraints

Opportunity to maintain and enhance this ancient semi-natural woodland and its associated habitats by buffering it from the surrounding open land and encouraging native broadleaf regeneration and coppice regrowth.

Sycamore regenerates freely and adds little to the composition of ancient woodland; however it does not appear to be a large constraint. Invasive rhododendron can smother ground flora and the dense shade restricts regeneration.

### Factors Causing Change

Antisocial behaviour (motorbike usage, fly tipping) have been a problem in the past but currently are not on a scale that warrants huge concern.

Hankins Wood, a small semi natural ancient woodland, on the other side of Swan Lane has been purchased by the local authority and passed to the parish council for management. This will hopefully provide greater protection for the wood and continue to be a wider ancient woodland habitat for wildlife.

A number of large mature Oak trees have died over the last couple of years and although preliminary investigations have not established the cause, additional research and monitoring will be implemented.

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

To maintain a mixed broadleaf uneven aged woodland of varying stand structure, including areas of open and dense high forest and a mixed, multi-aged understorey. Attractive maturing woodland continuing to develop its ancient woodland characteristics and components.

Leaf litter, rotting wood and natural clearings will influence natural regeneration. Thriving communities of specialist woodland flora will occur throughout the wood, much of it concentrated around the pond, along the stream edge and within the wet woodland habitat.

The mature hornbeam / sweet chestnut coppice will be allowed to collapse and naturally regenerate / re-coppice in most areas. The pilot coppicing in the northern section will be monitored and if successful will add significant structural diversity to this area. Many of the large oak and chestnut will reach senescence and beyond providing numerous veteran trees and valuable dead wood habitats.

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

Operational Objective:

Conserve and enhance the ancient woodland characteristics of Swan Wood. This will involve allowing invasive species (Rhododendron & Bamboo) to remain at a existing level where they are currently not impinge on the ancient woodland characteristics and are indeed highly popular with visitors. Monitor pilot coppicing programme and with continued signs of success extend to recruit additional areas in liaison with Dormouse specialists

Work Programme:

Continue annual clearance of scrub and coppice regrowth from around the pond by volunteers and maintain the dead hedge along the southern edge of the pond to reduce disturbance by dogs. Maintain Rhododendron and Bamboo clumps at existing low densities, removal of spreading plants if required, in middle of cpt 1a by volunteers.

Extend the 2014 pilot coppice area in the northern part of compartment 1a (4/5 additional stools) to encourage increased light levels for coppice regeneration, monitor results and if successful thereafter expand recruitment of coppice area in liaison with dormouse specialists

---

## 6.0 WORK PROGRAMME

Year	Type of Work	Description	Due By
------	--------------	-------------	--------

## APPENDIX 1: COMPARTMENT DESCRIPTIONS

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Key Features Present	Designations
1a	13.00	other oak spp	1880	High forest		Informal Public Access	Ancient Semi Natural Woodland, Green Belt, Special Landscape Area, Tree Preservation Order

Compartment 1a accounts for the entire area of ASNW. It mainly comprises mature sweet chestnut / hornbeam coppice with oak standards. Other species include rowan, birch, beech, field maple, ash, sycamore, wild service and hawthorn. A splendid strip of alder wet woodland surrounds the stream cutting through the compartment. Historically, near the northern boundary, open glades and prolific sycamore and birch regeneration was evident following the clear up of windblown trees after the 1987 storms. Also in this area is a tranquil pond which is known to contain all three species of Newts. This northern area has also been the focus of a pilot coppicing reestablishment programme, where a small number of coppice stools have been within an area have been coppiced and brash protection added. Coppice regeneration has been highly successful and an additional area was recruited into the pilot programme in 2014 (closer to Swan Lane) and is again showing good coppice regeneration growth.

A patch of invasive rhododendron is obvious in the centre of the wood and a small characterful outcrop of bamboo can also be found. Hornbeam regeneration is common in the understorey, along with holly, birch, hawthorn and chestnut.

Ground flora includes bracken and bramble in the more open areas and ferns near the damp soils. A swathe of blue is provided in the spring by a stunning display of bluebells complemented by wood anemones and primroses.

An ancient wood bank surrounds much of this compartment, particularly to the west and east. In the south east corner stands a fenced off mobile phone mast, surrounded Trust property but not in Trust ownership. A couple of obvious badger setts are also scattered across the site.

The compartment mainly borders young woodland to the west (Cygnet Wood), the area of natural regeneration to the north, a golf course to the northeast, agricultural land to the east and horse grazing fields to the south.



2a	1.10	Mixed native broadleaves	2001	High forest		Informal Public Access	Green Belt, Special Landscape Area
<p>An ex-arable field purchased by the Trust in 2000, this compartment is naturally regenerating very well with native broadleaves such as oak, ash, birch, willow and hornbeam. Surrounded by mature trees it will gradually infill and become an excellent addition to the adjacent ancient woodland. The area is currently contains dense growth and no paths have been established.</p>							
3a	3.64	Open ground		Non-wood habitat		Informal Public Access	Green Belt, Special Landscape Area
<p>Undulating grassland acquired by the Trust in 2000. Historically possibly two fields with the remnants of a hedge following the stream/ditch line. Groups of mature oak add variety and character to the field which is continually grazed by horses. A 10 - 15m strip adjacent to the mature woodland was fenced off in 2004. This exclusion of grazing has resulted in natural regeneration such as oak, hornbeam and sweet chestnut emerging, which will provide an excellent buffer to the ancient woodland.</p>							
4a	2.04	Mixed native broadleaves	2001	High forest		Informal Public Access	Green Belt, Special Landscape Area
<p>An ex-arable field purchased in 2000 squeezed between Swan Lane and the ancient woodland. It formed part of the Trust's WOYD campaign and was named Cygnet Wood. It was planted in 2000 / 2001 in sinuous lines at 3m x 3m spacing giving 1100 trees / ha. Main species planted included oak, ash, alder, hornbeam and willow with a splash of rowan, hawthorn and hazel. The trees have established very well and the tree shelters have now all been removed by local volunteers. Natural regeneration of birch, oak, hawthorn, hornbeam and willow is spreading in from the surrounding woodland. A path runs through the compartment which has a northwesterly aspect and offers fine views over the surrounding countryside.</p> <p>The compartment has a dormouse population and both monitoring and management with appropriately licenced individuals and a local group is taking place to maintain and hopefully expand this valuable population.</p>							

## Appendix 2: Harvesting operations (20 years)

Forecast Year	Cpt	Operation Type	Work Area (ha)	Estimated vol/ha	Estimated total vol.
2015	1a	Coppice	0.25	8	2

## 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.