

# **Hyning Scout Wood**

# Management Plan 2015-2020

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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 Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations.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: Hyning Scout Wood

**Location:** Yealand Conyers, Warton

**Grid reference:** SD501735, OS 1:50,000 Sheet No. 97

**Area:** 20.86 hectares (51.55 acres)

**Designations:** Ancient Woodland Site, Area of Outstanding Natural Beauty,

Biological Heritage Site, Limestone Pavement Order, Planted Ancient

Woodland Site

#### 2.0 SITE DESCRIPTION

#### 2.1 Summary Description

Hyning Scout Wood lies between the villages of Yealand Conyers to the north and Warton to the south and is approximately 5 miles west of the M6 motorway (J35 Carnforth, Lancashire). This wood, of which much of the south is semi-natural ancient woodland, is large (21ha or 52 acres), rural, with some wonderful mature sweet chestnut and beech, ancient semi natural woodland is a key feature of the site.

The wood has formed on the clints and grikes of limestone pavement, whose evolution dates back to glacial times. Large boulders are scattered throughout the wood, remnants of the glacial passage of ice. Hyning Scout lies within the Arnside & Silverdale Area Of Outstanding Natural Beauty and is also designated as a Biological Heritage Site. Access to the wood is straight off Hyning Road and there is limited parking to the south at the entrance that leads to a track known as Donkey Lane.

#### 2.2 Extended Description

Hyning Scout Wood lies between the villages of Yealand Conyers to the north and Warton to the south and is approximately 5 miles west of the M6 motorway (J35 Carnforth, Lancashire). The woodland sits within the Arnside & Silverdale Area of Outstanding Natural Beauty and is also designated as a Biological Heritage Site. Hyning Scout is located within a cluster of other ancient woodlands in the North Lancashire and South Cumbria area.

The wood is relatively flat and dry, although it rises to the North West over the limestone pavements and is formed on freely draining slightly acid but base-rich soils.

This wood, of which much of the south is semi-natural ancient woodland, is large (21ha or 52 acres), rural, with some wonderful mature sweet chestnut and beech, ancient semi natural woodland is a key feature of the site. The wood has formed on the clints and grikes of limestone pavement, whose evolution dates back to glacial times. Large boulders are scattered throughout the wood, remnants of the glacial passage of ice. On such a site, upland mixed ashwood (NVC W9), ash, oak and birch with a hazel underwood would be typical. Additionally at Hyning Scout Wood beech and sweet chestnut are frequent components with some Scots pine along the roadside. Sycamore is a common colonist throughout the wood. A small part of the site around 0.78 hectares was planted with larch in the 1950's and planted ancient semi natural woodland is also a key feature of the site. The ground flora although sparse in places is quite varied with dog's mercury, bluebells, yellow pimpernel, wood sorrel and Solomon's seal being found. The limestone pavement plays host too many mosses and ferns, including Hart's tongue fern, male fern and polypody. Red squirrels are still seen in the area although greys are prevalent in Hyning Scout Wood.

Like other upland woods, Hyning Scout Wood has a history of coppicing. Charcoal was probably made for fuel for the neighbouring monastery. There is also a limestone kiln to the south of the wood, one of many in the local area and probably means that limestone was excavated on site. Today the limestone is protected from excavation and damage by a Limestone Pavement Order and it is also a key feature of the site.

Access to the wood is straight off Hyning Road and there is limited parking to the south at the entrance that leads to a track known as Donkey Lane. There are many well used footpaths through the woodland that offer good circular walks and link up with public footpath routes across neighbouring countryside; informal public access is a key feature of the site.

#### 3.0 PUBLIC ACCESS INFORMATION

#### 3.1 Getting there

Hyning Scout Wood lies between the villages of Yealand Conyers to the north and Warton to the south and is approximately 5 miles west of the M6 motorway (J35 Carnforth, Lancashire). The wood has a total of six pedestrian access points, four are located on the sites eastern boundary adjacent to Hyning Road and the other two are located on the western boundary bordering farmland. All the access points are pedestrian squeeze gaps. Hyning Scout Wood has an extensive network of paths that link with footpaths in the surrounding area. This network provides an excellent choice of circular walks and the relatively flat site is suitable for many types of users although in some parts the paths are quite rocky, less well defined and can be slippery when wet.

Parking is available in a lay-by adjacent to Donkey Lane on the south eastern tip of the site but may be limited.

Nearest public toilet: Located at Carnforth Railway station which is around 2 miles away from the wood. Toilets are suitable for disabled users and are open from 10.00am -4.00pm Tuesday too Sunday. Information from website. http://www.citycoastcountryside.co.uk/site/carnforth-station-and-heritage-centre-p11676

Nearest bus stop: Located at the Croftlands in Warton Village which is around 300 meters from the wood. Head north from Warton village along Hyning Road and the entrance to the wood is in the left. Hyning Road has no pavement and is a busy road. Information from Traveline website.

Further information about public transport is available from Traveline www.traveline.org.uk or phone 0870 608 2 608

#### 3.2 Access / Walks

#### 4.0 LONG TERM POLICY

The long term vision for Hyning Scout Wood is to maintain and improve the biodiversity of this upland mixed ancient ashwood set on limestone pavement, through minimal intervention through much of the wood and following the Woodland Trust's Management Principles.

Presently the woodland is high forest mixed species with sycamore and beech dominant plus oak, ash, sweet chestnut, larch and Scots/Corsican Pine and not typically ash-dominated due to past management and the naturalisation of sycamore and beech. In recent years the Trust has restored two densely coniferised sections of the woodland to improve the long term biodiversity. Further thinning may be needed in the PAWS area, this will be guided by regular PAWS assessments. Now the aim is to encourage and promote natural regeneration of broadleaves in these areas, ash, sycamore and birch are regenerating readily. The understorey is composed of hazel, beech, ash, sycamore and holly all present. Deer management will be needed to protect young naturally regenerated seedlings to maximise establishment given the likelihood of ash dieback.

The woodland has a varied structure and is multi aged with some key veteran trees. Through the wood both standing and fallen deadwood is abundant and will be retained to extend these key habitats and mimic the natural system of a 'wild wood'.

It is anticipated that the semi-natural prescription of upland ashwoods (FC Practice guide 4) will only be partially achieved as sycamore, beech and other non-natives/naturalised species are a key component of this woodland.

Protection of the limestone pavement is a key feature of the woodland and the Trusts ownership naturally ensures that this limestone pavement will be safe guarded. Additionally, the Trust will take care during all management work and estates maintenance work, including access work to ensure that the limestone pavement is not damaged. The importance of this dramatic feature will be highlighted to users through this management plan.

The Trust will maintain the extensive network of paths to allow quiet, informal recreation. Path work must not damage the limestone pavement; or any important populations of notable plant species that have been identified. The Trust will continue to promote the woodland amongst people in the region and members nationally, so that local users and visitors to the area can continue to share in its beauty, gain an understanding of the woodlands importance in the landscape and its rich wildlife habitat, which is irreplaceable

#### 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

Hyning Scout Wood has an extensive network of paths that link with footpaths in the surrounding area. This network is well used by local people and provides an excellent choice of circular walks and the relatively flat site is suitable for many types of users although in some parts the paths are quite rocky, less well defined and can be slippery when wet.

#### Significance

Increasing enjoyment of woodland is one of the Trust key outcomes. Encouraging access to Hyning Scout Wood is particularly important given the scarcity of ancient woodland sites open to the public in Lancashire. Public appreciation of ancient woodlands is good for the well being of those visiting the wood and ultimately, good for the wood itself through increased public understanding of the plight of ancient woodlands.

#### Opportunities & Constraints

It is well used by local people and groups, including the Warton Village Society and the Arnside and Silverdale AONB Project, who contribute their time to helping with the management of the wood. For public safety access to the limestone kiln is not encouraged, although the shaft has been grilled and therefore should pose no threat. In some places, particularly across the limestone scar to the north of the wood, the paths are less well defined and access is not encouraged as the limestone pavement is protected.

#### **Factors Causing Change**

Frequent wind blow across paths.

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

To maintain the entrances and path network to a good standard for informal pedestrian access. Drystone walls and entrances, along the roadside and along Donkey Lane to be kept in good repair.

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

The entrances will be upgraded in 2016 as a result of the welcoming sites project. The signs, entrances, and paths will be checked at least annually and litter will be cleared at least annually as part of the Estates Maintenance Contract. Tree safety inspections along paths and rides will be undertaken once during this plan period. Small scale coppicing work will also take place adjacent to path edges to ensure sight lines remain open.

#### 5.2 Ancient Semi Natural Woodland

#### Description

A semi-natural upland mixed ash wood (NVC W9) is typically dominated by ash with some oak and a hazel underwood. In the oceanic climate of the northwest, it increasingly takes the form of ash-hazel woods with birch. Hyning Scout is typical of this with ash and hazel regenerating readily in the base-rich limestone. The wood has had other non-native species planted into it including beech and sweet chestnut, with sycamore a well established naturalised species. There are also some specimen conifers. There is a fairly good uneven aged structure throughout the wood and some large diameter beech, oak and sweet chestnut (P1890). The wood suffers from stand instability due to the shallow rocky limestone base and a prevailing wind from the west. Since the Trust's ownership the level of deadwood has increased and is now quite substantial. The ground flora, though lacking in abundant populations has various ancient woodland indicators including dog's mercury, bluebells, yellow pimpernel and other woodland specialists. And with the more moist soils and higher humidity, there are pockets of ferns and covers of mosses and liverworts especially in the clints and grykes of the limestone pavement.

#### **Significance**

ASNW is very rare, locally, nationally and regionally. It is estimated that ASNW cover only 2% of the land surface of Great Britain and within Lancashire itself this figure drops to just 1%. Therefore this area of ASNW provides local people a unique opportunity to interact with a very rare environment, it also provides a uniquely ecologically rich habitat. The wood is an important landscape feature, part of Arnside and Silverdale Area of Outstanding Natural Beauty and is very visible from the surrounding countryside and from the M6 motorway, which passes approximately 10 miles to the east of Warton. The Trust aims to inspire others, by example to protect what is left of our ancient woodland.

#### **Opportunities & Constraints**

Because of its relatively large size and location Hyning Scout Wood has great biodiversity value together with excellent potential for demonstration of good management practice. The aim for the whole wood in the long term is to create an area of retention and minimum intervention and create a self-sustaining woodland system intervening only to achieve access and safety. There is the opportunity to retain some conifers as specimen trees and manage the older trees as veterans and to continue to promote standing and fallen deadwood. The woodland regularly suffers from windblow due to shallow rooting in thin soils. Also the level of deer browsing on young natural regeneration may cause a future problem if its left unchecked.

#### **Factors Causing Change**

Frequent wind damage. Deer Damage noted across the site, Roe known to be present on site. Large and expanding Red deer population at nearby Leighton Moss to the west of the site. Grey squirrel damage.

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

The aim is to manage Hyning Scout Wood to reflect the characteristics of semi-natural mixed upland ancient ashwood accepting the predominance of non-natives currently some 50-60% as natural and long established component of the species mix. Some 20ha of the wood will be managed under minimum intervention principles with intervention being required for tree safety purposes and the management of access. It is hoped that the woodland as a whole (excluding the PAWS area) will require little silvicultural management and will develop into self-sustaining systems, shaped by natural processes alone, thus promoting natural regeneration of the woodland and the retention of standing and fallen deadwood.

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

Tree safety inspections will be undertaken on a regular basis and work carried out if necessary for public safety. The site will be checked once during this plan period to assess whether there is sufficient regeneration to ensure the long term future of the canopy. Undertake regular deer impact assessment and undertake deer control as necessary working in partnership and following advice from The Deer Initiative. We will work collaboratively at a landscape scale with the Westmorland Squirrel Group, as part of the efforts to encourage red squirrels back into the area.

#### 5.3 Geological Feature

#### Description

At Hyning Scout the pavements drop in height from west to east (see the conservation map) and were left as smooth sheets of rock by the scouring action of the ice, which also transported many boulders, which can be seen lying across the woodland floor. In the thousands of years since the ice melted, water has dissolved and removed the limestone along cracks and joints (grikes). Now the limestone pavement, on which the woodland is growing, is predominantly three expanses of stone criss-crossed by deep fissures which divide the surface into irregularly shaped paving stones (clints). Wild flowers and ferns grow in the grikes, Solomon's seal recorded here, has low population in the wood.

#### **Significance**

There are only about 2150ha of limestone pavement in Britain of which Hyning Scout is 1% and lies within the most extensive development of pavement. In Lancashire they are found only in the Arnside and Silverdale AONB and around Over Kellet. Limestone pavements were formed over many thousands of years and once destroyed can never be replaced. In the early 70's the Institute of Terrestrial Ecology surveyed a sample of 537 pavements and found that most were damaged. This is often associated with the collection of decorative stone for use in gardens. With their loss goes the evidence of past geological activity, a wealth of rare and unusual plants and unique areas of beauty. Limestone pavements are one of the least known habitats for invertebrates. They provide homes for a wide variety of snails and a rich insect fauna habit wooded pavements, such as Hyning Scout.

#### **Opportunities & Constraints**

There is a limestone pavement order across the whole of the wood. This is a legal means of preventing the removal or damage of limestone in specially designated areas, such as the Morecambe Bay Limestone Area. This irreplaceable landscape feature of Hyning Scout offers great opportunities for educational uses and interpretation, leading to a better understanding of this exceptional feature. It would however pose management constraints for timber extraction should that be necessary. Some features are remarkably delicate and susceptible to damage by trampling, so access needs to be directed away from these areas. Equally access is difficult and precarious on some areas of the pavement.

#### **Factors Causing Change**

Damage from misuse/theft

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

To retain the limestone pavement in it's current condition in perpetuity by protection through ownership and prevention of mis-management. Do not cause any adverse impacts to the limestone pavement through management work or by public use.

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

The limestone pavement will be assessed once during this plan period for any signs of damage, misuse or theft.

#### 5.4 Planted Ancient Woodland Site

#### Description

Compartment 2a contains a 0.5ha block of Japanese Larch planted circa 1955. The understorey in this compartment is poor and there is little ground flora.

#### Significance

The PAWS restoration process is important as it will extend the area of properly functioning ancient woodland on this site.

#### **Opportunities & Constraints**

This area of PAWS have the potential to be restored to achieve RAWS (restored Ancient Woodland Site) which may well retain an element of conifer canopy, but with a broadleaved element similar in character to the ancient woodland seen in the rest of the site. Currently the compartment is dominated by Japanese Larch and more thinning will be required to ensure that oak is promoted in the final canopy composition. However the work will need to be sympathetic and the process may take some time, too heavy a thinning may result in an increase in bramble levels, so stand treatment needs to be handled carefully to maintain a balance between promoting broadleaved regeneration and reducing bramble cover.

#### **Factors Causing Change**

Over shading by Japanese larch if left unmonitored, deer browsing, ash dieback disease.

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

Restoration of PAWS areas through continued and gradual small scale thinning works, to achieve RAWS (restored Ancient Woodland Site) which may well retain an element of conifer canopy.

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

In 2017 re survey PAWS compartment 2a. This will guide the requirement for follow up work in the PAWS areas, taking into account ash dieback disease. Deer will be managed through landscape scale work with the Deer Initiative.

### 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	0.30	Ash	1995	High forest		Ancient Semi Natural Woodland, Geological Feature, Informal Public Access, Planted Ancient Woodland Site	Area of Outstanding Natural Beauty, Other

This compartment (cpt.) lies at the northern end of Hyning Scout Wood and was clear felled and replanted in 1992. It is bounded by open area to the north, cpt. 2a to the south, cpt.3a on the east and non-Woodland Trust woodland to the west. Cpt. 1a is stock fenced to the north and west, open to the rest of the woodland and there is a traditional stone wall along the southern edge of the compartment. The ground is relatively flat although stumps and brash from the clear fell operation remain.

The cpt. was planted with a mixture of predominantly ash and oak plus cherry, hazel and rowan. In between the planting is some regeneration of ash and elder, along with holly close to the path. Bracken and bramble are dominant along the west of the cpt. and in places to the north. Grass is dominant across the whole site and foxgloves occasional.

2a	0.78	Japanes e larch	1955	PAWS restoration	1	Natural Woodland,	Ancient Woodland Site, Area of Outstanding
					_	Feature, Informal Public	Natural Beauty, Other, Planted
						Access,	Ancient
							Woodland Site
						Ancient	
						Woodland Site	

This compartment is bounded by cpt.3a the main woodland on three sides and cpt.1a to the north. The canopy is made up predominantly of mature Japanese larch (0.5ha) with some mature sycamore mainly around the edges of the compartment. The understorey in this cpt. is poor, but where it exists mainly around the edges of the cpt. and in gaps in the canopy, it is predominantly young beech, some sycamore and elder and rare holly bushes. Bracken occurs throughout the compartment rarely, grass is abundant on the larger open areas in the canopy and bluebells occur frequently along the eastern boundary of the cpt.

3a	16.46	Sycamor e	1870	High forest	location, natural features & vegetation	Natural Woodland, Geological Feature, Informal Public Access, Planted	Ancient Woodland Site, Area of Outstanding Natural Beauty, Other, Planted Ancient Woodland Site
						Planted Ancient	Woodland Site
						Woodland Site	

Compartment 3a, to the west of Hyning Scout Lane, is the largest compartment and takes in the majority of the wood (some 15+ ha) ii which there is public access with 5 entrances and numerous footpaths criss-crossing the wood... Cpt.2a lies to the north and cpt.6a in the south. There are a lot of exposed areas of limestone pavement and boulders throughout the cpt. and a disused lime kiln is located to the south of the cpt. There is generally quite a lot of fallen and standing dead wood throughout the cpt. creating some gaps in the canopy. The canopy is made up of predominantly sycamore with ash, oak, sweet chestnut and beech and the occasional mature yew, Corsican pine, Scot's pine, larch, cypress, birch and cherry. The understorey is made up of predominantly beech, sycamore and ash regeneration with hazel, holly and elder. The age structure is very varied with mature pine, yew, chestnut and beech circ 1840. Mature yew is particularly abundant along the top of the main limestone scar that runs parallel to the main track through the cpt. In the vegetation layer mosses and ferns occur mainly on any exposed limestone pavement and include male fern (Dryopteris filix-mas), common polypody (Polypodium vulgare) and hart's tongue fern (Asplenuim scolopendrium) plus frequent dog's mercuy (Mercurialis perennis). The ground flora includes ivy (Hedera helix) locally dominant and bramble (Rubus fruticosus) throughout plus bluebells (Endymion), guelder rose (Viburnum opulus), herb Robert (Geranium robertianum) and honeysuckle (Lonicera periclymenum) all occurring occasionally throughout the cpt. depending on light conditions. Herb paris (Paris quadrifolia) and Solomon's seal (Polygonatum multiflorum) are also present in small numbers. Ash regeneration is very good in most of the compartment with seedlings forming guite a dense carpet. Also sycamore and beech regenerate readily; oak regeneration very rare.

4a	2.44	Ash	1890	High forest	location, natural features & vegetation	Natural Woodland, Geological Feature, Informal Public Access, Planted	Ancient Woodland Site, Area of Outstanding Natural Beauty, Other
						Ancient Woodland Site	

This is the only compartment within Hyning Scout Wood that lies to the east of the main road. It is bounded on all four sides by dry stone walls, with a grazed field to the south and east, the road to the west, an access track along the northern boundary. The access road into Hyning Hall Monastery splits the compartment from east to west in the southern section. There are no public entrances into this area and no footpaths through the woodland.

There is a lot of exposed pavement and boulders throughout the cpt. The canopy (planting year 1890) consists of a mixture of ash, beech, sycamore, oak and occasional mature Scot's pine, larch and Corsican pine. The canopy trees are well spaced throughout the compartment, leaving good gaps in the canopy layer for understorey development. This is made up of a mixture of sycamore and beech, not particularly dense. Within the vegetation layer, ivy is dominant particularly towards the southern end of the cpt. and bluebells occurs rarely throughout the cpt. There is a lot of ash regeneration across most of the cpt.

5a	0.95	Ash	2000	High forest	1	Natural Woodland, Geological Feature, Informal Public	Ancient Woodland Site, Area of Outstanding Natural Beauty, Other, Planted Ancient
						Access,	
						Ancient Woodland Site	Woodiand Site

Cpt.3a surrounds compartment 5a on all sides. Two footpaths cross the compartment and there is a dry stone wall all round the compartment. This cpt. was thinned in 1999 and a small coupe fell of Japanese larch in 2003. As a result there are large open gaps with predominantly ash, sycamore with rare Corsican pines in the canopy. As with the rest of the stand, beech regeneration is dominant in the understorey layer along the western boundary of the cpt., along with occasional hazel and elder. Regeneration of predominantly sycamore and ash is good. Holly occurs rarely in places within the cpt. Within the vegetation layer moss is abundant and bramble occurs in dense patches. Bracken occurs rarely.

## Appendix 2: Harvesting operations (20 years)

Forecast Year	Cpt	Operation Type	Work Area (ha)	Estimated vol/ha	Estimated total vol.
2015	1a	Coppice	0.10	20	2
2016	1a	Coppice	0.10	20	2
2017	1a	Coppice	0.10	20	2
2017	2a	Thin	0.70	11	8
2018	2a	Thin	0.70	11	8
2018	2a	Thin	0.70	11	8
2019	3a	Ride edge Coppice	0.50	8	4
2020	4a	Ride edge Coppice	0.50	8	4
2021	2a	Ride edge Coppice	0.50	8	4
2022	1a	Ride edge Coppice	0.50	8	4

#### **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.