WOODLAND TRUST

Northcote & Upcott Woods

Management Plan

2017-2022

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MAPS

THE WOODLAND TRUST

INTRODUCTION

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

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

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

PLAN REVIEW AND UPDATING

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 Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations.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

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

WOODLAND MANAGEMENT APPROACH

The management of our woods is based on our charitable purposes, and is therefore focused on improving woodland biodiversity and increasing peoples' understanding and enjoyment of woodland.

Our strategic aims are to:

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

All our sites have a management plan which is freely accessible via our website www.woodlandtrust.org.uk. Our woods are managed to the UK Woodland Assurance Standard (UKWAS) and are certified with the Forest Stewardship Council® (FSC®) under licence FSC-C009406 and through independent audit.

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

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

The following guidelines help to direct our woodland management:

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

SUMMARY

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

1.0 SITE DETAILS

Site name:	Northcote & Upcott Woods
Location:	Kingford, nr High Bickington
Grid reference:	SS615186, OS 1:50,000 Sheet No. 180
Area:	37.40 hectares (92.42 acres)
Designations:	Ancient Woodland Site, Planted Ancient Woodland Site

2.0 SITE DESCRIPTION

2.1 Summary Description

In a quiet rural position with limited parking, there were 37 woodland specialist plant species noted throughout these partly coniferised ancient woods in the pre-restoration survey completed in 2003 with many of those extending further around the wood as the restoration process continues. Three streams traverse the site and there are a number of springs providing floristically rich areas amongst the conifer plantations. A large area of broadleaf woodland separates the two plantations and provides a lighter and more attractive area to walk in as well as presenting a vision of how the wood will look when restoration is nearing completion.

2.2 Extended Description

Northcote & Upcott woods are adjoining woodland blocks situated close to the edge of the villages of Kingford, and High Bickington, south of Barnstaple, in North Devon. The woodland sits in one of a number of deep sided valleys that run roughly perpendicularly down to the River Taw. The wood straddles a minor road running west of the A377; with the bulk of the wood lying to the south and a very narrow broadleaf strip to the north of the road.

Sitting within the Culm Natural Area and the Culm Countryside Character Area (NCA 149), the wood is typical of the local landscape and is characterised by blocks of ancient woodland, some coniferised plantations on ancient woodland sites (PAWS), on the steep valley sides, and surrounded by pasture which in its semi-natural state constitutes the grassland that derives its name from the heavy clay Culm measures.

3 streams run through the wood. The first forms the northern-most boundary running parallel to the road; the other two run down through the valleys of the western and eastern ‘wings’ of the wood. They and a number of springs rising within the wood create wet flushes and habitats that along with track sides and canopy breaks support a wide range of 'woodland specialist' plant species. Rhododendron was abundant in Northcote Wood, but restoration works have almost eradicated it

The central north facing slope and upper plateau section of the wood are ancient semi-natural acid oak woodland, consisting almost entirely of stored oak coppice and some birch and occasional beech. Mature broadleaved trees are rare, with only occasional specimens on boundaries. The eastern and western sections of the wood are predominantly stocked with a mix of conifers (Douglas fir, Sitka spruce, Western hemlock and Western red cedar), planted into the ancient woodland during the 70s -80s (PAWS). However varying amounts of broadleaved species have re-established within the coniferised areas and wide strips of broadleaf woodland remains along the two stream corridors. Species here also include ash, willow and alder; which provide an open and light contrast to the darker conifer blocks either side as well as retaining robust colonies of ancient woodland flora.

Although collectively known as Northcote & Upcott Woods this block of woodland incorporates a number of separately named contiguous woods. These appear to be demarcated by earth banks. Other archaeology in the wood includes a small old quarry site close to the western entrance and charcoal platforms which are evident on the ground.

While a small number of locals visit the wood and use the network of tracks for recreation on a regular basis its quiet rural position and limited parking prevent it from being widely promoted and used and therefore currently public access is not a key feature for the wood.
wood

3.0 PUBLIC ACCESS INFORMATION

3.1 Getting there

Access is direct from the public highway via the two pedestrian gates located at the main entrances. Whilst open to the public, due to the quiet and rural location of the site, there is no specific public access management in this wood and therefore while most tracks are at least 3m wide with quite hard surfaces some paths may be difficult to walk at certain times of the year or in bad weather. The wood sits on the side of a hill, and walking a path circuit can involves short sections of steep slopes. There is very limited parking for only 1-2 cars at the two entrance gates into the wood from the adjacent road. There are no public footpath links into the wood and it is approximately 2 miles from High Bickington to the wood along roads, which can be busy, and have no pavements.

Nearest bus stop: High Bickington bus shelter, North Road - approximately 2 miles by road from the wood. Information taken from Traveline website as at Jan 2017
Nearest railway station: Portsmouth Arms - approximately 1/2 mile by road
Nearest toilet: None known closer than Barnstaple (approximately 12 miles by road), although there are several local pubs which offer facilities to their customers.

For further information on transport see the Traveline website www.travelinesw.com

3.2 Access / Walks

While a small number of locals visit the wood and use the network of tracks for recreation on a regular basis its quiet rural position and limited parking prevent it from being widely promoted and used and therefore currently public access is not a key feature for the wood. Access is direct from the public highway via the two pedestrian gates located at the main entrances. Whilst open to the public, due to the quiet and rural location of the site, there is no specific public access management in this wood and therefore while most tracks are at least 3m wide with quite hard surfaces some paths may be difficult to walk at certain times of the year or in bad weather. The wood sits on the side of a hill, and walking a path circuit can involves short sections of steep slopes. There is very limited parking for only 1-2 cars at the two entrance gates into the wood from the adjacent road. There are no public footpath links into the wood and it is approximately 2 miles from High Bickington to the wood along roads, which can be busy, and have no pavements.

4.0 LONG TERM POLICY

The Planted Ancient Wood (PAWS) areas will be restored to a diverse age, size and predominantly native broadleaved species woodland, in line with the Woodland Trust's restoration guidelines, via a continuous cover forestry regime. The majority of the conifers will be removed, although a small proportion of select species, excluding those that regenerate freely, will be retained for aesthetic and conservation benefits.

Non-native invasive species, especially rhododendron and laurel that have colonised the wood in the past, and any other species that may be introduced to the wood, will be controlled.

In line with the geological report, care will be taken during management operations not to create conditions which may result in high levels of water runoff that may create the potential for land slippage.

The Ancient Semi natural broadleaf areas of Upcott Wood and around the margins of the woodland will be managed via natural processes assisted where necessary via a limited intervention continuous cover system as a predominantly oak high forest canopy interspersed with small proportions of mixed broadleaved species and supporting an abundant native species shrub layer and ground layer rich in ancient woodland flora.

Natural secondary areas of woodland such as those along streamside corridors are to be managed towards a predominantly native broadleaved woodland high forest with varied shrub and flora layers via natural processes assisted where necessary by a limited intervention regime and to maintain a healthy stream habitat
Although not closed to the public, public access levels are very low, only meeting the Trusts access category D and public access does not therefore form a key feature for the wood and therefore tracks and paths will not be managed specifically for public access. Access tracks will however be managed to maintain management access and this will provide facilities suitable for its low level recreational use.

5.0 KEY FEATURES

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

5.1 Ancient Woodland Site

Description

The woodland is designated as ancient woodland site which suggests it has all been felled and replanted at some time in its history. Approximately 54% (cpts 2a, 2b) is broadleaf canopy cover that falls broadly into three NVC wood types: W11 (sessile oak/downy birch/wood sorrel)(cpt 2a) with W9 (ash/rowan/dogs mercury) (cpt 2b)on the more fertile, base rich areas and W7 (alder/ash/yellow pimpernel) along stream sides and wetter areas (Cpt 2b). 37 specialist woodland plants have been identified throughout the wood especially in areas of broadleaf woodland present in the centre of the wood, wood edges and along the stream sides. The area is predominantly stocked with stored oak coppice of a very even size structure however this may be the result of low management input, poor soils and local climate slowing down growth rates. It is likely that this area was coppiced for charcoal over a relatively short period of years so is considered even aged as well Some mature mixed broadleaved trees are evident around the edges of this compartment and some maidens are present throughout which might suggest a coppice with standards management regime, however the maidens are still far from mature so may be the result of past singling towards a high forest.

The remainder of the wood is coniferised with mainly Douglas fir (cpt 3), and Sitka and Norway spruce (cpt 1), with occasional small blocks of Western red cedar and Western hemlock (3c, d) all planted between 1969 and 1988. There is a fringe of mixed broadleaves around most of the boundaries of the wood, along the stream corridors, along edges of wider ride sections and along occasional wet flushes running through the conifer. These broadleaves include oak, ash, hazel, beech, birch, rowan and occasional willow and alder. Much of the conifer appears to have been managed under low intensity with a very closed canopy evident when the wood was acquired. The typically dense conifer canopy has suppressed much of the ancient woodland ground flora, however where light levels are higher such as in areas where the canopy has been thinned as part of restoration processes, along track sides, where there are gaps in the canopy and throughout the natural secondary woodland areas ancient woodland vegetation and broadleaf regeneration colonies are now quite robust. The very dense shade cast by the western hemlock however continues to create virtually bare ground other than where lateral light penetrates from the edges and the trees regenerate easily increasing threats to adjacent areas.

To the north a narrow strip of the wood (cpt4) is separated from the main block by a highway. This strip is of mixed high forest broadleaves with a wide range of species, size and age classes. On the northern edge of this is a small stream that forms the property boundary and some habitat diversity. Beyond that stands a commercially managed plantation of Douglas fir which due to its south facing slopes, lighter canopy shade and its more regular historical management shows better progression towards restoration.

Ground flora diversity reflects the difference in shade between conifer and broadleaf. Bryophytes, ivy and moss predominate, but woodland indicator species such as bluebell and dog's mercury and

wood sorrel are developing under the conifer canopy and appear in robust colonies in broadleaf or mixed canopy areas. Of particular note is a small population of Twayblade on the western edges of Week Wood.

Although there are no veteran trees, there are broadleaves that predate the planted conifers along some boundaries of the wood. In particular there is a line of oak and ash pollards on part of the south west boundary, where the Woodland Trust owned wood borders an area of oak, ash, hazel woodland in private ownership. Areas of younger Douglas fir which were not 'cleaned' nor had an early thinning support a good proportion of broadleaved species although many are etiolated and drawn up towards the light.

Deadwood is present as numerous hardwood stumps predating coniferisation, broadleaved trees within the conifer stands that have been suppressed by the shade and via softwood elements resulting from recent fell to waste. Wind damage and natural processes such as the self-thinning of the stored oak coppice in cpt 2, as well as on-going management operations, is gradually increasing the amount of standing and fallen broadleaf deadwood

The wood is bounded by a green lane on the north west and there is both Ancient woodland and PAWS adjacent or close to it. To the north a narrow strip of the wood is separated from the main block by a highway. This strip is of mixed high forest broadleaves with a wide range of species, size and age classes. On the northern edge of this is a small stream that forms the property boundary and beyond that a commercially managed plantation of Douglas fir and again some of this is AWS and PAWS. Due to its south facing slopes, lighter canopy shade due to the species and its more regular historical management this shows much progression towards restoration. Beyond this, surrounding land use is improved pasture.

Significance

Planted Ancient Woodland Sites (PAWS) are valuable as they contain remnant populations of ancient woodland communities and species, often in small, isolated pockets and provide opportunities to restore and increase our very limited resource of ancient woodland habitat. Northcote & Upcott Woods contain specialist woodland flora, which are a key characteristic of ancient woods, as well as other important species such as lichens, fungi and deadwood. Many of these species are part of a complex ecological system and do not spread easily to new areas so it is important that these sites are managed appropriately for the long-term benefit of the habitat. PAWS can also have an historic and cultural importance; Northcote and Upcott Woods contain evidence of past land management uses such as quarries, old tracks, earth walls, and charcoal platforms which may be used to help explain the history of the landscape and how it developed.

The woods contain 3 habitats with action plans in the Devon, Regional and National Biodiversity Action Plans. These are ‘oak woodland’, ‘alder & willow wet woodland’ and ‘rivers streams & fluvial processes’.

One of the Trust's main objectives is to ensure no further loss of Ancient Woodland -The management and the exemplar restoration of this woodland in an area of extensive PAWS helps to deliver the Trust’s aims of protecting trees and woods and their wildlife for the future. Although the existing low level of public access does not constitute inclusion as a key feature, the wood’s prominence in the local landscape and location alongside a very busy road, as well as its low level access use help to deliver the Trust’s objective of inspiring everyone to enjoy and value woods and trees.

Opportunities & Constraints

Opportunities
Improve entrances and loading bay areas as well as parts of the wider management track network to facilitate more efficient and effective restoration of the PAWS.
Select fell WH coupes within sub cpt 3c,d and restock with mixed native broadleaved species as the coupes have responded poorly to attempts to gradually open the canopy through selective thinning; cast heavy shade on the wood floor directly below it and around its edges and is starting to regenerate and therefore felling will reduce these pressures and create the opportunity for quicker regeneration of a broadleaf canopy through the subsequent restocking process

Potential acquisition/collaboration on PAWs area to north of the site

Constraints
Limited quality of management access infrastructure within the wood. Good track network but often too narrow, wet etc. to be suitable for modern and larger scale machinery/operations notably around the entrances and loading and stacking areas
Western Hemlock – heavy shade not allowing response to thinning, natural regeneration within its stand area and outwards into adjacent areas that are responding to restoration and therefore constraining the implementation of our gradual approach.
Flooding – due to topography – watercourses often block culverts and flood eroding tracks, flooding woodland and washing onto road.

Factors Causing Change

• Deer browsing of and damage to natural regeneration of flora and Broadleaved trees
• Blocked culverts causing flooding, erosion and land slippage
• Abuse/misuse of site by local mountain bikers creating trails riding trials bikes and horses through wood
• WH natural regeneration
• Heavy shade cast by conifer canopy
• Non-native invasive species – re-establishment of Rhododendron in wood or establishment of new species via fly tipping etc.
• Wind damage – high levels of wind damage following first substantial thinning of the un-thinned and closed canopy conifer areas
• Pest and Diseases – Ash die-back may have substantial effect on the natural secondary broadleaf areas of the wood. Spruce bark beetle causing death to SS/NS in the wood.

Long term Objective (50 years+)

Ancient Semi-natural woodland and natural secondary areas will be managed as a mixed predominantly native broadleaf high forest woodland and understorey with trees, shrubs and frequent natural regeneration of a wide species, age and size structure, achieved via an on-going limited intervention continuous cover regime to support natural processes.

The PAWS areas will be restored to a predominantly mixed native broadleaf woodland canopy with some conifer, retained to grow on to over-maturity and senescence for conservation and amenity values.

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

Continue gradual restoration process throughout PAWs areas (Cpt 1 and 3) by selective thinning of most of the conifer stands and select felling of Western hemlock coupes to ensure protection and enhancement of precursor broadleaves, ancient woodland flora, deadwood and other remnants, create a greater structural diversity within the woodland canopy and move towards a predominantly broadleaved species woodland habitat

Continue management of the natural secondary broadleaf areas under a limited intervention continuous cover regime to protect and develop a multi age, size and species structure, while maintaining the quality of the water course habitats running through them

Continue management of non-native invasive species within the wood

Continue management of the roadside banks and wood edges via tree safety works, thinning, shrub coppicing and hedge flailing to deliver statutory highways clearances and maintain road-user safety.

Maintain and, as necessary, upgrade track network throughout the wood to facilitate management access and support low level public access. Improve and widen entrances to facilitate access by lorries for timber haulage; improve loading areas to accommodate greater quantities of larger log material,; widen, grade and improve track surfaces to make them more robust for harvesting operations and improve culvert bridges over streams to maintain safe machinery access, and reduce the risks of flooding and water build-up in culvert pipes

Undertake regular deer impact assessments to monitor population and damage levels and undertake deer control as part of the 5 yearly Woodland condition assessment

Increase levels of standing and fallen deadwood throughout the woodland as part of on-going thinning and tree safety operations to encourage the spread of fungal and invertebrate species which form an essential part of the ancient woodland ecosystem.

Maintain water courses and culverts to reduce blockages and associated flooding issues within the wood and onto the adjacent highway

Manage occasional misuse and abuse of the wood (e.g. unauthorised mountain bike, trials bike and horse access, fly-tipping) as necessary

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	7.69	Sitka spruce	1970	PAWS restoration	Sensitive habitats/species on or adjacent to site, Site structure, location, natural features & vegetation	Ancient Woodland Site	Planted Ancient Woodland Site
Predominantly Sitka and Norway spruce planted 1969 and 1970, with a small element of western red cedar on the northern boundary of Week Wood south of the road. There is a fringe of mixed broadleaves on most of the boundaries of the compartment, along the stream edge, around glades on rides and along occasional wet flushes running through the conifer. These broadleaves include oak, ash, hazel, beech, birch, rowan and occasional willow and alder. Underneath the conifer canopy there is some developing broadleaf regeneration. Ground flora is largely of shade tolerant species Bryophytes, ivy and moss, but woodland indicator species such as bluebell and dog's mercury and wood sorrel are developing under the conifer canopy and appear in robust colonies in broadleaf or mixed canopy areas. Of particular note is a small population of Twayblade on the western edges of Week Wood. Although there are no veteran trees, there are pre-cursor broadleaves that predate the planted conifers along some boundaries of the wood. Deadwood is present as numerous hardwood stumps predating coniferisation, The sub-compartment is well serviced with management tracks that follow the contours and are largely level throughout. Tracks ‘linking’ these are quite well planned to reduce gradients but can be steep of have sharp turns in places. As they were presumably constructed to aid original clear fell and restock they have a tendency to be slightly narrow for modern machinery, but main tracks were improved 2017 to support future works. The slopes are moderately steep but most are driveable with modern machinery however due to the presence of two to three tracks per valley slope the rack distances are short between and less driveable as a result.							
2a	7.81	Oak (sessile)	1920	High forest	Sensitive habitats/species on or adjacent to site, Site structure, location, natural features & vegetation	Ancient Woodland Site	Ancient Woodland Site

Upcott Wood. Typical Western oak woodland, of predominantly stored oak coppice mixed with young beech, birch, hazel, holly and rowan and occasional maturing maiden trees. The ground flora includes ferns, grasses, bilberry and cow wheat. The general feel is of open oak woodland with the oaks becoming larger and more widely spaced towards the eastern side of the compartment.

The compartment has the road as its northern boundary, arable land to the south and contiguous coniferised sections of the woodland to the west and east.

Dense blocks of rhododendron were present along the length of the stream and were cut and treated to eradicate 2006-2008. Some limited regrowth still occurs.

3a	3.16	Ash	1974	High forest	Mostly wet ground/exposed site, Sensitive habitats/species on or adjacent to site, Site structure, location, natural features & vegetation	Ancient Woodland Site	Planted Ancient Woodland Site

Wide strip of broadleaves following the eastern stream valley through Northcote Wood. Predominantly ash, alder with frequent large willow. Minor species include cherry, elm, sycamore, birch and hazel. A small block of Douglas fir stands at the southern end, but is included in this sub cpt as its lies within the ‘loop’ track and has strong ground flora along with the rest of the sub cpt Dense blocks of rhododendron were present along the length of the stream and were cut and treated to eradicate 2006-2008. Some limited regrowth still occurs.

The sub-compartment is well serviced with management tracks that follow the contours and are largely level throughout. Tracks ‘linking’ these are quite well planned to reduce gradients but can be steep of have sharp turns in places. As they were presumably constructed to aid original clear fell and restock they have a tendency to be slightly narrow for modern machinery, but main tracks were improved 2017 to support future works.

The field layer is dense and species rich. Species present include giant fescue, primrose, yellow pimpernel, yellow archangel, wood spurge and common saxifrage.

3b	16.89	Douglas fir	1970	PAWS restoration	Gullies/Deep Valleys/Uneven/ Rocky ground, Sensitive habitats/species on or adjacent to site, Site structure, location, natural features & vegetation	Ancient Woodland Site	Planted Ancient Woodland Site

The sub compartment covers the eastern valley of the site and includes Sweet Hill Copse.

Predominantly Douglas Fir planted between 1967 and 1988 with the younger plantings forming scattered but distinct blocks throughout. .

There is a substantial element of intruded broadleaf within some areas of the sub mostly along the wood and ride edges, and where the conifer crop has failed or management was reduced. This is particularly noticeable on the eastern edge of the wood where there is a dense block of young birch, hazel, ash, oak, with some rowan, willow and sycamore, and a ground flora including bluebells dominating what was planted as a stand of Norway spruce.

The sub-compartment is well serviced with management tracks that follow the contours and are largely level throughout. Tracks 'linking' these are quite well planned to reduce gradients but can be steep of have sharp turns in places. As they were presumably constructed to aid original clear fell and restock they have a tendency to be slightly narrow for modern machinery, but main tracks were improved 2017 to support future works. As they were presumably constructed to aid original clear fell and restock they have a tendency to be slightly narrow for modern machinery, but there is space to improve most as necessary.
The slopes are moderately steep but most are driveable with modern machinery however due to the presence of about three tracks per valley slope the rack distances are short between and less driveable as a result.

Badger sett against north-western boundary in south-western corner of the wood

Two blocks of Western Hemlock planted within the eastern facing slopes of the main Douglas fir. Both adjacent to tracks. Tree growth is sizeable considering adjacent DF and many are also large and coarse esp. on track side. Typical heavy shade cast by the closed canopy has completely suppressed ground flora and there is very little response to priority phase works other than around stand edges.

Dense blocks of rhododendron were present along the length of the stream and were cut and treated to eradicate 2006-2008. Some limited regrowth still occurs.

3c	0.60	Western hemlock	1970	High forest	Sensitive habitats/species on or adjacent to site, Site structure, location, natural features & vegetation	Ancient Woodland Site	Planted Ancient Woodland Site
The sub compartment stands on the upper western slopes of the eastern valley (Cpt3) of the site and adjacent to the eastern boundary of Cpt 2 As of 2017 there is a no intruded broadleaf within the stand and very minimal ground flora even as a result of phase 1 works to increase light levels, there is though increasing amounts of WH regen which is threatening to spread into adjacent BL and conifer areas and adversely effect restoration progress there. The sub-compartment is well serviced with management tracks that follow the contours and are largely level throughout. Tracks 'linking' these are quite well planned to reduce gradients but can be steep of have sharp turns in places. As they were presumably constructed to aid original clear fell and restock they have a tendency to be slightly narrow for modern machinery, but main tracks were improved 2017 to support future works. The slopes are moderately steep but most are driveable with modern machinery however due to the presence of about three tracks per valley slope the rack distances are short between and less driveable as a result. Dense blocks of rhododendron were present along the length of the stream and were cut and treated to eradicate 2006-2008. Some limited regrowth still occurs.							
3d	0.80	Western hemlock	1970	High forest	Sensitive habitats/species on or adjacent to site, Site structure, location, natural features & vegetation	Ancient Woodland Site	Planted Ancient Woodland Site

The sub compartment stands on the lower western slopes of the eastern valley (Cpt3) of the site and adjacent to the rich broadleaf corridor along the valley water course

As of 2017 there is a no intruded broadleaf within the stand and very minimal ground flora even as a result of phase 1 works to increase light levels, there is though increasing amounts of WH regen which is threatening to spread into adjacent BL and conifer areas and adversely effect restoration progress there.

The sub-compartment is well serviced with management tracks that follow the contours and are largely level throughout. Tracks 'linking' these are quite well planned to reduce gradients but can be steep of have sharp turns in places. As they were presumably constructed to aid original clear fell and restock they have a tendency to be slightly narrow for modern machinery, but main tracks were improved 2017 to support future works.

The slopes are moderately steep but most are driveable with modern machinery however due to the presence of about three tracks per valley slope the rack distances are short between and less driveable as a result.

Dense blocks of rhododendron were present along the length of the stream and were cut and treated to eradicate 2006-2008. Some limited regrowth still occurs.

4a	0.50	Oak (pedunculate)	1901	High forest	Mostly wet ground/exposed site, No/poor vehicular access within the site, Sensitive habitats/species on or adjacent to site	Ancient Woodland Site	Ancient Woodland Site

An area of mixed broadleaf woodland separated from the rest of the wood by a public highway. This sub cpt is very long and narrow extending the length of the northern boundary but extending between only 1m and 15m wide from the road edge to the stream which forms the property's northern boundary. Most of the strip is formed by a bank that supports the road with 'additional width'' being formed by wet alluvial soils of the stream bed and springs that arise in the bank and from under the road. Trees range from a small number of large mature oaks, through a wide range of semi-mature alder, ash, beech and oak to patchy hazel coppice. Many have a stored coppice history.
There is a rich field layer present including Wood melick, Common cow wheat, spurge, yellow pimpernel, primrose, wood sorrel, wood speedwell, and wood millet.
All trees are very close to road making work difficult. The stream has flooded in the past and there are signs of root and road erosion as a result . It is contiguous with a larger block of planted ancient woodland, which, due to south facing slope and more regular management creating higher light levels, is responding well and progressing towards a more restored habitat.

Appendix 2: Harvesting operations (20 years)

Forecast Year	Cpt	Operation Type	Work Area (ha)	Estimated vol/ha	Estimated total vol.
2018	1a	Thin	7.70	71	545
2018	3b	Thin	15.29	72	1100
2018	3b	Selective Fell	1.40	459	643
2023	1a	Thin	7.70	71	550
2023	3b	Thin	15.29	78	1200
2027	1a	Thin	7.70	71	550
2027	3b	Thin	15.29	78	1200

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.