



# Murdishaw Wood

## Management Plan 2016-2021

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 Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations.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

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## 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>	Murdishaw Wood
<b>Location:</b>	Runcorn
<b>Grid reference:</b>	SJ557802, OS 1:50,000 Sheet No. 108
<b>Area:</b>	16.34 hectares (40.38 acres)
<b>Designations:</b>	Ancient Semi Natural Woodland, Community Forest, Local Nature Reserve, Local Wildlife Site

## 2.0 SITE DESCRIPTION

### 2.1 Summary Description

Murdishaw Wood is a varied woodland site on the outskirts of Runcorn and contains semi-natural ancient woodland, open grassy areas and small streams. It is part of the Murdishaw Valley Local Nature Reserve with wildlife including foxes, badgers, squirrels, bats and woodland bird species including woodpeckers. There is a network of surfaced footpaths in the wood and valley allowing visitors to enjoy walks through a range of habitats and in spring and summer the woods and meadows have colourful displays of wildflowers.

## 2.2 Extended Description

Murdishaw Wood is Semi-Natural Ancient Woodland located on the south eastern edge of Runcorn on the urban fringe and is within a landscape of houses, roads, the M56 motorway and a mix of amenity and semi-natural green spaces nearby. The site is part of Murdishaw Wood and Valley Local Nature Reserve which contains a range of habitats from semi-improved grassland and wetlands as well as younger woodland planting from the 1980s. It is also a Local Wildlife Site and contains several BAP habitats and species. Most of the grassland in the valley is owned by Halton Borough Council and most of the wooded areas have been owned by the Woodland Trust since the mid-1990s. The woodland is split into three distinct compartments which are separated from each other by roads.

Stockham Wood (Compartment 1): This small (<1ha) block of secondary woodland is separated from the main woodland by Murdishaw Avenue and lies about 150m to the west of the main body of the site. It comprises mature broadleaves, predominantly oak and sycamore with some ash, beech, willow, alder and several Scots pine. The under storey consists of under planted beech, rowan, wild cherry and naturally regenerating sycamore. Ground flora is dominated by bramble. The compartment is bounded by a bus way to the north, housing to the west and a surfaced footpath to the east. An informal footpath runs through the wood and links the neighbouring housing estate with a bus stop and local high school.

Murdishaw Wood west (Compartment 2): This is a 9ha block of woodland and is designated Ancient Semi-Natural Woodland (ASNW). The compartment is bounded by the M56 motorway to the south, a bus way to the east, a large local authority housing estate to the north and playing fields to the west. The northern fringes of the compartment contain oak, sycamore, ash with occasional alder. As you move further south into the compartment diversity is reduced to primarily sycamore with ash. Under storey is reasonably developed with group plantings of beech, ash, wild cherry, and rowan. This under planting was carried out in the early 1980's. Ground flora is reasonably diverse with excellent numbers of bluebell in the spring.

Murdishaw Wood east (Compartment 3): This 6ha block of woodland lies to the east of compartment 2, separated by a busway and is split into three sub-compartments varying from recent structure plantings (1980's) of mixed broadleaves with occasional pine along the motorway boundary, secondary broadleaf woodland to the north and an area of mature oak high forest which is recorded as ASNW. The compartment borders Murdishaw Valley and has a mosaic of high forest, graduated edge zones, open space, and scrub.

There are several small streams and ditches in compartments 2 and 3 including a deeply incised clough with a ditch flowing east to west through the northern section of compartment 2.

Public access is available to the wood and adjoining Murdishaw Valley with a good network of surfaced and some unsurfaced footpaths. The site is very well-used by the public and is connected by footpaths to other nearby green spaces. It suffers from on-going anti-social issues including vandalism, fires, motorbikes riding on footpaths, fly tipping and litter.

The key features for the site are Informal Public Access, Ancient Semi-Natural Woodland and Secondary Woodland.

## 3.0 PUBLIC ACCESS INFORMATION

### 3.1 Getting there

There are several entrances into Murdishaw Wood from the surrounding housing estates and roads as well as from Murdishaw Valley to the east of the wood. The main entrance is from Murdishaw Avenue by the mini-roundabout with Barnfield Avenue. There is a network of approximately 1200m of surfaced and some unsurfaced footpaths throughout the wood, with some steps and gradients in several places. The paths can become muddy during the winter and after periods of rain.

**By car:** From Runcorn, head south/ east on the A533 Southern Expressway (signposted for Northwich) and follow this road to the large roundabout at the end of the Expressway. Turn left at the roundabout onto Murdishaw Avenue (signposted for Murdishaw) and continue on this road for about 1/4 mile to a mini-roundabout at the junction with Barnfield Avenue. Murdishaw Wood is immediately on the right hand side of the road. There is no car park at the wood, however if you go straight over the roundabout there are housing estate roads on the left hand side of Murdishaw Avenue where it is possible to park.

**By bus:** There are several buses from Runcorn to Ormiston Bolingbroke Academy on Barnfield Avenue, Murdishaw. It is then a few minutes walk to Murdishaw Avenue where there is an entrance into the wood.

**By train:** The nearest train station is Runcorn East which is about one mile to the north of Murdishaw Wood along Barnfield Avenue.

For information on public transport visit [traveline.org.uk](http://traveline.org.uk), or telephone 0871 200 22 33.

There are no public toilets within the immediate vicinity. The closest are in the Brookvale Recreation Centre off Barnfield Avenue or at the Halton Lea Shopping Centre about 2 miles from the wood.

### 3.2 Access / Walks

There are multiple entrance points. The main entrance for Murdishaw and Stockham Woods is off Murdishaw Avenue to the west of the main body of woodland. There is an extensive network of surfaced paths suitable for year-round use, although some areas are steep and there are some steps.

## 4.0 LONG TERM POLICY

The long term intention for Murdishaw Wood is to maintain a high forest broadleaved woodland, of predominantly native species with oak, sycamore, alder, beech and horse chestnut in the canopy and diverse shrub and ground flora layers. It will be managed primarily as a landscape feature, woodland habitat and amenity for local people to enjoy.

Guided by the Woodland Trust's woodland management approach, conservation and access policies long term management will aim to seek a balance between conservation and public enjoyment. The wood will be managed to maintain a diverse structure and mix of species to ensure that it is as resilient as possible to future threats such as climate change, pests and tree disease. Mature trees will be retained for as long as safe to do so and natural regeneration will be promoted. Public access, safety and long term stand stability will be key drivers for woodland management operations, particularly focussing on areas bordering roads, buildings and footpaths.

Open public access will be retained at the wood in perpetuity and visitor access maintained with approximately 1200 metres of footpath and 6 entrances. The Trust's duty of care to neighbours and visitors will continue to be addressed through on-going tree safety and site risk assessment inspections.

Working with partners including Halton Borough Council and local housing associations we will aim to tackle threats to the wood (in particular fly-tipping) and encourage the local community to take an interest and care for the site .

The woodland will be regularly monitored for long term threats from tree diseases, pests, non-native species, human impacts and measures will be taken to tackle these where appropriate.



## 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

There is a network of approximately 1200 metres of footpaths throughout the wood with several pedestrian access points from the nearby roads and housing estates as well as from Murdishaw Valley to the east of the wood. The paths are mostly surfaced, but there are some unsurfaced paths, with some steps in several places and gradients on some sections of path. There is no car park at the wood, however it is possible to park on nearby housing estate roads.

#### Significance

In accordance with the Woodland Trust's general aims the wood is open to the public for quiet informal recreation. The proximity of the site to a large residential population in Murdishaw means that it is accessible to a significant number of people and provides opportunities for recreation and access to nature all year round.

The woodland serves as a valuable amenity space and landscape feature in this urban fringe area and is linked to other nearby green spaces and semi-natural habitats including Murdishaw Valley.

#### Opportunities & Constraints

The Trust will seek opportunities to work with partner organisations, local groups and residents to encourage people to take an interest in the wood.

Management access is limited within some areas of the wood.

#### Factors Causing Change

Littering, camp fires and vandalism, mainly in the summer months.

Fly tipping of household and garden waste occurs from time to time.

Motorbikes using paths may cause damage to path surfaces especially if wet ground conditions.

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

The existing level of public access and network of footpaths and entrances will be maintained so that people can use them all year round and to make them welcoming for visitors. Public safety will be addressed through on-going tree safety inspections and site risk assessment process.

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

Vegetation encroaching onto paths will be cut back annually and maintenance of all woodland fixtures, including, signs, gates, entrances, fences and litter control will be a part of an annual estate maintenance contract.

Path edge coppicing will be carried out during the plan period to improve sight lines for visitor access.

The condition of footpaths, entrances, site fixtures and levels of fly tipping, vandalism will be monitored once during the plan period.

## 5.2 Ancient Semi Natural Woodland

### Description

Compartments 2 and 3b are designated as Ancient Semi-Natural Woodland on the English Nature Ancient Woodland Inventory. However the trees were probably clear felled in large parts of the wood and subsequently replanted during the last 100 years. Since the 1980's the woodland has been subject to disturbance and fragmentation due to the construction of housing estates, roads, a busway and the motorway to the south. The wood still retains indicator species for ancient woodland particularly the ground flora which includes bluebells, wood anemone, lesser celandine in the less disturbed areas with steep slopes and the stream corridor. The main trees species in these areas comprise oak, ash, birch, hazel (lowland mixed broadleaved woodland NVC 8-10) although sycamore, alder, willow and pines are common or even dominant in other areas of the ASNW.

### Significance

Less than 2% of woodland in the UK is Ancient Woodland and this is therefore a rare habitat and is particularly scarce in urban areas. The amount of ASNW and AWS within Cheshire is extremely low. The conservation of this habitat is a priority for the Biodiversity Action Plan for Cheshire and therefore most of the wood (apart from Stockham wood) is designated a Local Wildlife Site. The site is part of a wildlife corridor and this wider area has been designated as the Murdishaw Wood and Valley Local Nature Reserve. It contains several BAP habitats and species and regional and local indicators.

### Opportunities & Constraints

Sensitive ASNW ground flora and steep slopes in parts of the woodland constrains management access which is limited to paths and tracks.  
 Opportunities for natural regeneration will develop from canopy openings resulting from safety works or failures amongst the mature trees.  
 Mature trees should be retained for as long as possible to provide habitat and food sources for a wide range of organisms including, fungi, invertebrates, birds and mammals.

### Factors Causing Change

Sycamore is the dominant canopy species in large parts of Cpt 2 which is suppressing natural regeneration and ground flora.  
 Small amount of rhododendron is re-growing in Compartment 2 near the boundary with the sports pitches.  
 Neighbours occasionally fly tip household/ garden waste into the woodland which could have a negative effect on woodland flora and regeneration.  
 Squirrels are causing some minor damage to trees by bark stripping, but it is not having a significant impact at present.

### Long term Objective (50 years+)

To maintain the high forest canopy of mixed, broadleaved species with a varied structure in terms of species and age class distribution. Management will aim to provide an on-going amenity to the local population and ensuring continuity of the Ancient Semi-Natural woodland habitat. Where safe to do so, the development of stand structure, species mixture and the rise and decline of mature trees will be allowed to develop naturally. Tree safety will be a priority and may provide opportunities to further enhance structural variety, areas of natural regeneration and the ASNW ground flora.

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

Thinning of sycamore will be carried out in the central area of Cpt 2 Management to create gaps in the canopy to encourage natural regeneration and ground flora.

Tree safety inspections will be undertaken on a regular basis and work carried out if necessary for public safety.

The health of trees will be monitored at least once per plan period through the woodland condition assessment for any diseases, pests or other threats.

Rhododendron regeneration will be monitored and controlled during the plan period.

Fly tipping will be monitored during the plan period to ensure its not posing a threat to woodland flora or regeneration. Where it is a serious issue, we will work with neighbours/ housing associations and Halton Borough Council to address this.

## 5.3 Natural Secondary Woodland

### Description

Compartment 1 (Stockham Wood) and 3 (Murdishaw Wood East) are a mix of mature secondary woodland predominantly oak, ash, sycamore, alder and Scots pine and in the south east of compartment 3 there is a belt of structure planting (1980's) of mixed broadleaves with occasional pine. The under storey consists of mixed plantings from the 1980's including oak, ash, beech, rowan, wild cherry and naturally regenerating sycamore. The ground flora is dominated by bramble with some patches of wildflowers.

### Significance

The woodland provides an important biodiversity habitat for wildlife particularly birds in an urban location as well as acting as an amenity feature in the local landscape. The importance of urban woods like this is that they serve as a habitat for a wide range of plants and wildlife, such as mammals, birds and amphibians. The relatively large size of the woodland and connectivity with adjoining habitats adds value to local biodiversity.

### Opportunities & Constraints

Constraints on management access from steep slopes and wet ground conditions in places. Opportunities for natural regeneration will develop from canopy openings resulting from safety works or failures amongst the mature trees. Mature trees should be retained for as long as possible to provide habitat and food sources for a wide range of organisms including, fungi, invertebrates, birds and mammals.

### Factors Causing Change

Occasional tipping of household/ garden waste into the woodland which could have a negative effect on woodland flora and regeneration.

### Long term Objective (50 years+)

To maintain a high forest canopy of mixed broadleaved species with a varied structure in terms of species and age class distribution. Where safe to do so mature trees will be retained into senescence and standing columns of dead wood will be kept on site to provide important deadwood habitat. Tree safety work may provide opportunities for gaps in the canopy to encourage natural regeneration to develop as future canopy trees and to encourage the development of woodland ground flora.

### 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. Apart from this no silvicultural management is planned in these compartments. The health of trees will be monitored at least once per plan period through the woodland condition assessment for any diseases, pests or other threats. Fly tipping will be monitored during this plan period to ensure its not posing a threat to woodland flora or regeneration. Where it is a serious issue, we will work with neighbours/ housing associations and Halton Borough Council to address this.

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## 6.0 WORK PROGRAMME

Year	Type of Work	Description	Due By
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## APPENDIX 1: COMPARTMENT DESCRIPTIONS

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Key Features Present	Designations
1a	0.87	Oak (pedunculate)	1940	High forest	No/poor vehicular access to the site, People issues (+tve & -tve)	Informal Public Access	Community Forest
<p>This compartment is known as Stockham Wood and lies about 150 metres to the west of the rest of Murdishaw Wood (separated by Murdishaw Avenue). It is a roughly rectangular block of mature secondary woodland on flat ground. The site is bounded to the west by a housing estate (Backford Close), to the north by a busway, to the south by Murdishaw Avenue and to the east by a tarmac footpath with street lighting (owned by Halton Borough Council). A ditch runs along the back of the housing estate however this was largely filled in by the housing developers and is now dry. The wood consists mainly of mature oak, Scots pine and hawthorn with occasional sycamore, ash, alder and willow. It was been heavily under planted in the 1980s with beech, oak, ash, rowan, hazel and hawthorn. An unsurfaced informal footpath runs through the wood from the busway on the northern boundary to the southern corner where it joins with a tarmac footpath (owned by Halton Council) leading into the housing estate. The compartment lies outside of the Murdishaw Wood and Valley LNR and LWS area.</p>							
2a	9.04	Sycamore	1920	High forest	Gullies/Deep Valleys/Uneven/Rocky ground, No/poor vehicular access to the site, People issues (+tve & -tve), Sensitive habitats/species on or adjacent to site	Informal Public Access	Ancient Semi Natural Woodland, Community Forest, Local Nature Reserve, Local Wildlife Site

This sub-compartment lies to adjacent to Murdishaw Avenue, Halton Sports club and the M56. It is bounded by Murdishaw Avenue and a grassed area adjacent to houses on Blyth Close to the north, sports fields and facilities to the west, a busway to the east and the M56 to the south. The canopy consists of mature sycamore, oak, ash alder and beech with a reasonably well developed understorey of mixed broadleaves including alder, field maple and beech. Under planting took place in the 1980s consisting of oak, ash, rowan, wild cherry, alder, Norway maple, hawthorn, pine and larch. The central part of the compartment has a fairly even aged canopy dominated by sycamore and here the understorey is suppressed. There is a reasonably diverse ground flora including large areas of bluebell along the motorway edge and Blyth Close bank, and other ancient woodland indicators species including wood anemone, lesser celandine, and lords and ladies. The site has been used for bluebell seed collection by Landlife as part of the Bluebell Recovery Project. A stream/ drainage ditch runs through the northern part of the sub-compartment in an east- west direction near to the boundary with Blyth Close. This follows a deep ravine making this part of the wood inaccessible. Surface water from Murdishaw Avenue and the neighbouring sports pitches runs into this watercourse. Another stream/ drainage ditch runs along the southern boundary near the M56. A network of shale surfaced footpaths run through the sub-compartment forming a circular footpath route with several access points from the adjoining housing estate and green spaces.

3a	1.83	Ash	1980	High forest	Mostly wet ground/exposed site, No/poor vehicular access to the site	Informal Public Access	Community Forest, Local Nature Reserve, Local Wildlife Site
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This sub-compartment lies to the east of compartment 2 and is at western end of Murdishaw Valley. The ground is flat in the northern part, but then slopes down towards the stream in the valley bottom. It is bounded to the west by a busway and surfaced footpath with street lighting, to the north by Murdishaw Avenue and amenity grassland, to the east by wooden marker posts (and beyond the grassland of Murdishaw Valley), and to the south by a shale footpath. Most of the area contains group planted mixed broadleaves dating back to the 1980s including ash, oak, beech, poplar with rowan, willow, alder, birch, cherry, Norway maple and larch. Dog rose, hawthorn and blackthorn was planted along the footpath that runs north-south through the sub-compartment.

3b	1.60	Oak (pedunculate)	1920	High forest	No/poor vehicular access to the site, No/poor vehicular access within the site, Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Informal Public Access	Ancient Semi Natural Woodland, Community Forest, Local Nature Reserve, Local Wildlife Site
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This sub-compartment lies to the east of compartment 2 and at the western end of Murdishaw Valley. It is a remnant of Ancient Semi-Natural woodland that was cut off from the main block of the wood during the creation of the busway and motorway. It is bounded to the west by the pavement adjacent to the busway, to the south by the motorway embankment, to the east by the recent plantings within sub-compartment 3C and to the north by the stream that runs through Murdishaw valley. The ground is flat by the stream but then slopes up a steep embankment to the motorway at the southern boundary.

The main canopy species consist of oak, sycamore, ash, alder with occasional beech. The understorey is reasonably diverse and consists of ash, cherry, rowan, oak (with some naturally regenerating sycamore). The ground flora is reasonably diverse with ancient woodland indicators species including bluebell, wood anemone, lesser celandine and lords and ladies.

There is no formal public access or footpaths within this section of woodland.

3c	2.80	Mixed native broadleaves	1980	High forest	No/poor vehicular access to the site, No/poor vehicular access within the site	Informal Public Access	Community Forest, Local Nature Reserve, Local Wildlife Site
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This sub-compartment lies to the east of sub-compartment 3b and contains mainly recent planting as a buffer between the Murdishaw Valley to the north west and M56 motorway to the south east. It was planted in the mid-1980's with mixed broadleaves including oak, ash, birch, alder, poplar, willow, cherry, rowan, field maple, hazel, hawthorn, rose, blackthorn. There are some areas of open grassland and scrub within the compartment with quite diverse flora including early purple orchids.



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**Appendix 2: Harvesting operations (20 years)**

Forecast Year	Cpt	Operation Type	Work Area (ha)	Estimated vol/ha	Estimated total vol.
2020	3c	Selective Fell	2.80	4	10
2021	2a	Thin	5.00	2	10
2023	1a	Ride edge Coppice	0.25	8	2
2023	1a	Ride edge Coppice	0.25	8	2
2031	2a	Thin	5.00	2	10

## 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.