



# Langley Moor Plantation

## 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 Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations.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 [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>	Langley Moor Plantation
<b>Location:</b>	Quaking Houses
<b>Grid reference:</b>	NZ180507, OS 1:50,000 Sheet No. 88
<b>Area:</b>	16.42 hectares (40.57 acres)
<b>Designations:</b>	Community Forest

## 2.0 SITE DESCRIPTION

### 2.1 Summary Description

Mainly a conifer plantation but very well used by local people. The site forms part of the former Great North Forest (GNF) and is located next to Quaking Houses in Co. Durham. Young planted broadleaved woodland adjoins its northern and western sides and to the south lies a large landfill site, now reclaimed and planted with mixed woodland. Also to the south lies an extensive area of lowland heath, part of which to the southeast (south of Quaking Houses) is designated a Site of Special Scientific Interest (SSSI) and a Site of Nature Conservation Interest (SNCI).

## 2.2 Extended Description

Langley Moor is a conifer plantation consisting of Japanese larch, Scots pine, Sitka and Norway spruce with a remnant (1.66 ha) of degraded beech woodland still surviving in sub-cpt 1f at the southwest end of the plantation. Extending to 16.37 hectares (40.45 acres), the plantation occupies a flat site (grid ref: NZ 182 508) next to Quaking Houses, southwest of Stanley in Co. Durham. The property was acquired by the Woodland Trust in August 1995 and forms part of the former Great North Forest (GNF).

Young planted broadleaved woodland adjoins its northern and western sides and to the south lays a large landfill site, now reclaimed and planted with mixed woodland. Also to the south lies an extensive area of lowland heath, part of which to the southeast (south of Quaking Houses) is designated a Site of Special Scientific Interest (SSSI) and a Site of Nature Conservation Interest (SNCI).

Langley Moor is shown on the first edition 1862 Ordnance Survey map as mixed woodland occupying its present boundaries and was probably first planted sometime in the early 19th century on the lowland heath, most likely to provide pit props for the local coal mining industry. The present woodland is believed to have been planted in 1958. Prior to planting the site was ploughed and the trees planted on the plough ridges. Consequently, because the site is also wet in many places with gleyed soils, windthrow is increasingly becoming a problem over much of the plantation. Two small burns pass through the plantation, becoming one and flowing out to the northeast to join Stanley burn that runs along the northern boundary and through the northeast corner of the site where the main entrance to the wood is located.

Access for management is taken from the A693 past Langley View and down the track (public footpath South Moor No 23) to the northeast corner of the plantation that lies outside the fence line at this point. The only public footpath to occur on site is South Moor No 22 that runs along the outside of the northern boundary then cuts through the northeast corner of Langley Moor. Nonetheless, the property is very well used by local people for informal recreation, accessing the site via a number of permissive paths and tracks. Consequently, informal recreation is the main key feature dictating the management of this site.

## 3.0 PUBLIC ACCESS INFORMATION

### 3.1 Getting there

For visitors wishing to reach the wood by public transport, bus stops exist on the A693 on the western edge of Stanley from where the wood can be reached within 15 minutes walk by following the A693 westwards towards Annfield Plain then taking the road to Langley View, from where a semi-metalled track runs past the end of the houses down to the main entrance of Langley Moor, a distance of about 500m. Alternatively, a bus stop exists at the southwest end of Quaking Houses from where the wood can be reach within five minute walk by taking the rough path between the garage and the end of the houses northwards down to the main entrance or by taking the semi-metalled path off the turning circle heading south-westwards then bearing right to follow the track to the southern entrance into Langley Moor. Visitors coming by car will have to find on-road parking within Quaking Houses then access the wood by foot from there, as no parking near the wood exists.

The only public right of way to enter Langley Moor is public footpath South Moor No 22 that crosses the northeast corner of the plantation. Otherwise access to site is permissive and follows the semi-metalled track that runs right around the plantation, mostly on level ground with only two short, moderately steep slopes to negotiate. The main entrance to the plantation is located at its northeast corner and crosses Stanley Burn via a culvert from the public footpath. Other entrances are located just east of the main entrance and along the western boundary, off the track that runs along the outside of the plantation and from the south across land owned by Durham County Council. Each of the main entrances is secured with a metal boom gate with a chicane entrance next to it for pedestrians. However, please note that to reach Langley Moor from both Langley View and Quaking Houses, boom gates with kissing gates have also to be passed through.

### 3.2 Access / Walks

## 4.0 LONG TERM POLICY

To maintain the current level of pedestrian access to the site into the future so that the plantation continues to function as a public amenity for local people, thus helping to fulfil the Trust's corporate objective of increasing public enjoyment and understanding of woodland. Over the next 50 years, most of the plantation will be converted to mixed high forest woodland dominated by native broadleaves and watercourses naturalised to improve overall habitat quality. Some areas where lowland heath vegetation cover still survives may be converted back to lowland heath by removing the woodland cover if the ecological case for doing so becomes overriding.



## 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

Except where a public footpath cuts through the northeast corner of Langley Moor, a network of permissive paths and tracks running throughout the site provides public access to the plantation. In 2002, the main track that provides a circular route through the plantation was re-surfaced and made into a semi-metalled route. The main entrance to the wood is taken off the public footpath at the northeast corner. Two other points of access are taken off the track that runs down the outside of the western boundary, though it should be noted that this path is not a public right of way (see legal map). Another entrance occurs where the public footpath along the outside of the northern boundary enters the northeast corner of the site. People can now also enter Langley Moor from the south via an entrance created in the southern boundary that links the track running through the plantation with routes across land owned by Durham County Council to the south.

#### Significance

Providing public access to woods is a cornerstone of the Trust's management approach to its properties and is encapsulated in its corporate objective of increasing enjoyment of woodland. Langley Moor Plantation is one of very few larger areas of mature woodland near to Stanley and Annfield Plain where public access is allowed and therefore the plantation is an important local amenity for people living in this area and consequently, is well used.

#### Opportunities & Constraints

Langley Moor Plantation continues to suffer considerable unauthorised use by horse riders and motor cyclists resulting in damage to the track surface. Because of this, the plan to create a permissive riding route through the eastern side of the plantation in 2002 has not happened. However, the planting of amenity woodland to the north and west of the plantation has provided walkers with a greater area of woodland to explore.

#### Factors Causing Change

Path damage by horse riders & motor cyclists  
Vandalism of entrances and signs  
Increased danger from windblow

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

To ensure, as a minimum, the current level of public access provision is maintained into the future. Where an opportunity to work with landowners, such as Durham County Council and others around Langley Moor occurs that could lead to improving public access facilities, these will be pursued.

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

The three formal entrances currently providing access to the wood will be maintained annually to ensure the public enjoy the same level of access to the wood in the future as they do today. All formal paths in the wood will also be maintained annually for public access. Secure entrance furniture will be installed at all three entrances to try and prevent unauthorised access and periodic tree safety surveys will be carried out on trees along the track side to monitor and deal with any windblow damage that could present a safety risk to woodland users.

## 5.2 Secondary Woodland

### Description

Langley Moor is a woodland plantation planted on heathland probably around 150-200 years ago. Much of the surrounding land to the north, south and west is owned by Durham County Council who have, in recent years, planted much of the adjacent land with trees to create amenity woodland. The current canopy trees in Langley Moor were planted in 1958 following clear felling during the war and consists of coniferous high forest dominated by non-native conifers planted for commercial purposes, probably to supply the local mining industry with pit props. Consequently, much of the plantation has a low value in terms of biodiversity with heavily modified watercourses associated with former mining activities. This is clear from the sparse or absent understory and the rank, impoverished condition of much of the field layer.

### Significance

Biodiversity is now internationally recognised as essential to maintaining vibrant and viable ecosystems and this is reflected in the production of regional and national biodiversity action plans. Improving woodland biodiversity is one of the Trust's four key corporate objectives as well as being integral in its approach to conservation. Increasing biological diversity is not only important in terms of creating more suitable habitats for a wider range of plants and animals but will also increase the robustness of the plantation, helping to protect it from disease and damaging agents, such as the increasing wind damage the plantation is currently experiencing. Biological diversity, by its very nature, will also improve the aesthetic appearance of the plantation over the long-term, thus making the plantation more attractive for people. The fact that much of the adjoining land has been planted with (mostly) native broadleaved trees now makes Langley Moor part of a much bigger woodland area, greatly increasing its biodiversity potential.

### Opportunities & Constraints

As the conifers growing on Langley Moor are now of a size that can be sold, restructuring by thinning and selective felling, etc., can be used to reduce the amount of conifers on site and allow native broadleaves to be introduced via natural regeneration, enrichment planting, restocking and under-planting, as appropriate, to convert Langley Moor, over the long-term, into a mixed woodland dominated by broadleaves, consisting mostly of native trees and shrubs. The increasing amount of wind blow occurring among the conifers causes problems for both public safety and future harvesting, whilst wet/soft ground conditions, long extraction distances and low to average timber quality add further problems. The artificial nature of the watercourses offers the opportunity to increase habitat value and biodiversity through re-naturalising these and opening up and restructuring the riparian zone. However, anti-social behaviour such as vandalism, vehicle trespass and particularly arson, makes carrying out habitat improvements on this site difficult. The planting of adjacent land with trees enhances the biodiversity potential of the plantation by extending the area of woodland cover. This will help to buffer the existing woodland ecosystem from potentially harmful farming practices and, over the long-term, increase the valuable core area of woodland.

### Factors Causing Change

Heavy shading under conifers  
Arson  
Wind damage  
Overhead power lines

### Long term Objective (50 years+)

To establish at Langley Moor Plantation mixed high forest woodland dominated by broadleaves, consisting mostly of native trees and shrubs made up of a range of age-classes creating structurally and biologically diverse woodland.

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

In 2018, a woodland condition assessment will be carried out that will establish how the wood is responding to previous thinning and to establish if sufficient native broadleaves are becoming established within the stands to achieve the long-term objective for the wood. To combat the on-going problem with fires in the wood, during any future harvesting operations, any lop and top generated from the thinning work will be disposed of well away from the track side or if this is not possible, the arisings will be chipped or removed from site.

During the first half of 2017, working with the Wear Rivers Trust through the Greening Twizell Partnership, improvements will be made to the water courses that run through the wood to create more natural watercourses and improved biodiversity by removing old mining structures from the watercourses (following an archaeological programme to recording these) and installing leaky dam structures to help re-naturalise the watercourses. Some selective felling of trees along the burn edge will also be carried out to improve the riparian zone and some replanting of suitable native broadleaved species (alder, downy birch, grey willow, osier, rowan and common oak).

Responding to the concerns following more wind blow in 2017 the timing of the thinning of the wood will be brought forward into 2018. This will aid in the overall stand stability as the trees are gradually opened up. This operation will include clearing two areas directly adjacent to and either side of the overhead power lines in Cpt. 1d, where wind blow has been most evident and where the trees are within falling distance of the over head power lines. Work will be undertaken in conjunction with Northern Powergrid, who also expressed concerns about the trees within the red and amber zones. The areas will be left to naturally regenerate, which has already been proven to be successful in other areas of the wood. If however these areas have not regenerated by December 2021, they will be replanted with mixed native broadleaves.

## 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	6.60	Japanese larch	1958	High forest	Mostly wet ground/exposed site, People issues (+tve & -tve), Services & wayleaves	Informal Public Access, Secondary Woodland	Community Forest
<p>Sub-compartment 1a makes up the bulk of the plantation (6.60 ha) to the north of the burns that mark its southern and eastern boundaries. It is horse-shoe shaped wrapping around sub-compartment 1b with stands of semi-mature Japanese larch, Scots pine, Norway and Sitka spruce growing in its northern side and to the south and east of the track that runs through the sub-compartment. The larch and Scots pine within the eastern and southern parts of 1a between the track and the boundary with sub-compartment 1b were clear felled in 2005 in the interests of public safety to avoid windblown trees coming down over the track. This area was then restocked in November with a mix of native broadleaved trees and shrubs (oak 600, ash 600, silver birch 580, rowan 120 and hazel 100) but also contains naturally regenerating birch, beech and larch.</p> <p>The spruces are generally planted in mixture with the Scots pine but are perhaps more abundant in the northern half of 1a where some regeneration of these species is occurring in the understory. Selective thinning of part of the sub-compartment adjacent to the power lines was carried out in 1997 and other parts of 1a have clearly been thinned prior to this. Overall however, at best, the conifers are only of average quality with a product mix made up mostly of chip and pallet wood with a small amount of saw log material</p> <p>The ground is flat except where it forms short and sometimes steep banks alongside the watercourses. It is alongside these watercourses where the few broadleaves (mostly willows) occur, particularly along the east side, though a few willows have also colonised the open space under the two power lines that cross the northwest corner of 1a. The understory is poorly developed consisting of the odd beech, elder, sycamore, holly, hawthorn and an occasional ash alongside Stanley Burn that marks the northern boundary of the plantation. Ground flora consists of coarse grasses, bracken and brambles. The old dam shown on the map in the northeast corner of 1a no longer exists, though rubble from its destruction is still present in the streambed.</p>							
1b	2.44	Birch (downy/silver)	2000	High forest	Mostly wet ground/exposed site, People issues (+tve & -tve)	Informal Public Access, Secondary Woodland	Community Forest

Sub-cpt 1b extends to 2.44 ha and was created after an area of extensive windthrow was set on fire in May 1999, resulting in the area being cleared of the fire-damaged trees. The sub-cpt occupies level ground, slightly rising to the west. Much of the soils are very wet and patches of standing water occur, particularly in the eastern half of 1b where rushes are spreading and forming dense patches. At the western end of 1b conditions are drier but brash left over from the clearance operations is particularly dense in this area. Coarse grasses and rushes are dominant in the field layer but bramble and rosebay willowherb are also spreading.

The sub-cpt was replanted in early 2000 with a mix of native broadleaf trees and shrubs among which oak is most abundant but also included hazel, ash, grey willow, aspen and alder. These were bare rooted transplants planted at a density of 2000/ha without any protection (due to vandalism problems on site). However, in 2001, a further 100 alder, 50 oaks and 50 willow were added and these were planted in brown spirals, with a further 300 of the initial plantings being placed in spirals as well, due to some rabbit damage having occurred.

Because natural regeneration was already occurring on site, particularly birch, which is forming dense stands in the northern end of 1b, this is also being used to restock the sub-cpt. Also regenerating naturally within 1b is a scattering of beech and spruce, which in the short-term, will be accepted as part of the restocking.

1c	1.33	Scots pine	1958	High forest	Mostly wet ground/exposed site, People issues (+tve & -tve), Services & wayleaves	Informal Public Access, Secondary Woodland	Community Forest
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Sub-cpt 1c covers 1.33 ha and occupies the west-facing slope next to the burn that flows through the eastern side of the plantation and which marks the western boundary of 1c. Consisting of an even-aged block of Scots pine and Norway spruce planted in an intimate mixture, no understory exists and very little ground flora beyond an odd bit of bramble and coarse grass here and there where light has reached the ground. A scattering of willows occurs along the lower slope next to the burn where conifers have not been planted. Scots pine is the most abundant tree but overall, the quality of the conifers in commercial terms is average at best, with some damage to the trees caused through vandalism and wind blow. The southern end of the sub-cpt is crossed by two overhead power lines and an old mineshaft (recorded as old on the 1862 Ordnance Survey map) is located near the eastern boundary in the southern end of 1c. A permissive footpath runs through the sub-cpt along its eastern edge and is well used.

1d	3.96	Norway spruce	1958	High forest	Mostly wet ground/exposed site, No/poor vehicular access to the site, People issues (+tve & -tve), Services & wayleaves	Informal Public Access, Secondary Woodland	Community Forest
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This sub-cpt occupies a level area of ground covering 3.96 ha bounded on two sides by burns. At the northern end the ground drops sharply down to the burn. The soils, particularly in the southern side of 1d, appear to be quite clayey. Japanese larch and Norway spruce are the most dominant species but Scots pine and birch are also present in significant quantities. In 1997, the stand of spruce at the western end of 1d and the stands of larch and Scots pine south of the permissive footpath were selectively thinned and a small amount of windblow/snap is occurring in these areas. The larch to the south of the permissive path has now died and is being replaced by birch regeneration. Phytophthora ranorum was suspected and investigated with the Forestry Commission but proved not to be the cause and it is now suspected that leaching from the adjoining landfill site that was used for the disposing of foot and mouth carcasses may be the cause.

Two sets of overhead power lines cross the sub-compartment east to west and under these a large area of birch regeneration was clear felled during line clearance operations in 2004. Two 1ha areas of spruce and larch that are directly adjacent to the overhead power lines will be cleared in 2018 from within the red and amber zones, with the remaining trees also felled to prevent windthrow. The areas will be left to naturally regenerate, if however by December 2021 regeneration has been unsuccessful the areas will be replanted.

Across the whole of 1d, no significant understory exists and the field layer is dominated by bramble, with coarse grasses, bracken, gorse and rushes in wet areas. A small amount of heather and bilberry still survive here and there reflecting the former heathland on which the plantation was established. Where the burn flows under the footpath, a large culvert is located consisting of a 1m diameter concrete pipe with brick walls to each side. An old well is also recorded on the old Ordnance Survey maps within the stand of spruce at the western end of 1d close to the boundary with 1e but evidence of this has yet to be identified on the ground.

1e	0.38	Mixed native broadleaves		High forest	Mostly wet ground/exposed site, People issues (+tve & -tve)	Informal Public Access, Secondary Woodland	Community Forest
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Small sub-compartment (0.38 ha) located in the southwest part of the plantation occupying a level area of ground with a field layer consisting of coarse grasses, nettles, rosebay willowherb and rushes in wet/damp areas. The area was planted with Japanese larch and beech, probably sometime around 1990 but the stocking was rather patchy and gorse has established itself in several places. In January 2003, enrichment planting with 200 native broadleaved trees was carried out in brown spirals to increase the stocking density, consisting of 100 sessile oaks, 50 downy birch, 25 wild cherry and 25 rowan.

1f	1.66	Beech	1800	High forest	Mostly wet ground/exposed site, People issues (+tve & -tve)	Informal Public Access, Secondary Woodland	Community Forest
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This sub-cpt covers an area of 1.66 ha and occupies flat and gently sloping ground to each side of a small watercourse at the extreme southwest end of Langley Moor. The soils consist of a dark silty brown earth with wet flushes on the flatter ground in the western half of the area, marked by patches of rushes. Overall, the field layer consists of grass with some bramble alongside the burn and a dense patch of nettles south of the burn in the eastern half of the sub-cpt. 1f contains the only remnant of the former broadleaf woodland still surviving at Langley Moor consisting almost entirely of beech situated within the eastern half of the sub-cpt with only the odd sycamore and oak in its western half. Around 25% of the sub-cpt consists of open ground, mostly consisting of wet flushes left unplanted because of their habitat value. To increase the biodiversity in 1f and help maintain broadleaf woodland cover, enrichment planting of around 15% of the sub-cpt, that was formally open ground, was carried out in early 2002 with 200 bare root transplants of sessile oak, birch, willow and alder, protected by brown spirals. A small dense stand of young Scots pine and birch is located at the western end of 1f next to an area of marshy ground, whilst in the eastern half of the sub-cpt the understory contains the odd bit of beech and holly regeneration. Where the track marking the eastern boundary of 1f crosses the burn a culvert consisting of a 0.8m diameter cast iron pipe is located. Its facing wall is made of brick and its outflow wall of stone.

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

Forecast Year	Cpt	Operation Type	Work Area (ha)	Estimated vol/ha	Estimated total vol.
2018	1a	Thin	6.10	48	292
2018	1d	Clear Fell	2.00	280	560.38
2018	1d	Thin	2.00	52	103
2020	1c	Thin	1.32	61	80

## 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.