



Elemore Woods

Management Plan 2018-2023

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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 Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations.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 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:	Elemore Woods
Location:	Easington Lane
Grid reference:	NZ355440, OS 1:50,000 Sheet No. 88
Area:	70.33 hectares (173.79 acres)
Designations:	Ancient Semi Natural Woodland, Ancient Woodland Site, Area of Landscape Value, County Wildlife Site (includes SNCI, SINC etc), Local Nature Site, Local Wildlife Corridor, Planted Ancient Woodland Site

2.0 SITE DESCRIPTION

2.1 Summary Description

Take a stroll among remnants of ancient woodland and mature conifer. Elemore Woods has a wealth of wildlife, a fascinating and varied flora, and vestiges of an intriguing past to discover. And adventurous visitors can follow an orienteering trail extending into the nearby White Hill Woods.

2.2 Extended Description

Elemore Woods were purchased by the Woodland Trust in May 1994. The site is made up of a number of woods and plantations surrounding Elemore Hall: Dog Kennel Bank, Brown's Plantation, Lily Hill Plantation, Elemore Wood, East Wood and Hetton-le-Hill Wood, the latter being separated from the rest by non-Trust land.

Located to the southwest of Easington Lane in Co. Durham. Covering an area of 70.34 ha, the woods are located in a landscape consisting mainly of arable farmland but including some adjacent grazing land and woodland. The SSSI site of Pig Hill is also located next to the east end of the woods, running along the southern and eastern boundary.

The majority of the woods and plantations are PAWS or are so similar in character that they can be treated as such. Scots pine and larches dominate most areas, though scattered broadleaves occur throughout the woods, consisting mainly of ash, sycamore and beech. Lime also grows in places and wych elm is common across the site, particularly among the under storey but oak is rare.

An extensive network of well used footpaths and tracks exists throughout the woods of which, around 4km is actively maintained by the Trust for public access. Of these paths, around 1.0 km consists of public footpaths that pass through Brown's Plantation and East Wood. The whole woodland complex is linked into the wider countryside by a comprehensive infrastructure of public footpaths that cross the surrounding farmland out from neighbouring towns and villages. Whacky sculptures can be seen slung between branches in the heart of the wood. Created by local artist Bruce Tuckey along with children from the local Springwell Dene School, they include a squirrel, a dial telephone, a string of Tibetan prayer beads and the face of Elvis Presley.

3.0 PUBLIC ACCESS INFORMATION

3.1 Getting there

By bus: The 259 and 260 buses run from Durham. There are bus stops on the A182 in Easington Lane and South Hetton, both around 1.6km/1 mile from the woods along public footpaths. Alternatively, you can get off at Littleton at the western end of the woods and then follow the public footpath from the end of Plantation Avenue along the bottom of Dog Kennel Bank into the main body of the woods.

By train: The nearest train station is Seaham (7km/4.5 miles). From the station, take bus 60 to New Seaham Mill Inn, then the 61 to Easington Lane.

For up-to-date information on public transport, visit traveline.org.uk (0871 200 22 33).

By car: From Durham, take the A690 eastwards for about 6.5km (four miles), and continue over five roundabouts. Drive past Ramside Hall Hotel and Golf Club, and turn right onto Pittington Road. Continue to Station Road and then turn left onto Front Street. Turn right onto Coalford Lane and then left onto Elemore Street, continuing to Elemore Lane.

There is no car park at the woods but you can park in one of the nearby villages and follow one of the public footpaths to the woods.

(February 2017)

3.2 Access / Walks

There are several entry points via public footpaths connecting the site to adjacent farmland and nearby woods, including the young White Hill Woods, another Woodland Trust site. Access is through squeeze stiles or step stiles, so unfortunately the site is not suitable for wheelchair users.

The woods have many trails, including a surfaced path on level ground, and an orienteering course running through Elemore and Whitehill Woods. You can approach it from Easington Lane, Elemore Vale or Littleton. You will need sturdy footwear as some of the control sites are on steep slopes.

In the heart of the woods, there are eight handcrafted sculptures made by local artist Bruce Tuckey and pupils from nearby Springwell Dene School. They include a string of Tibetan prayer beads, a phone, a squirrel and the face of Elvis Presley.

4.0 LONG TERM POLICY

To convert Elemore Woods back to predominantly high forest broadleaf woodland by 2025 through a programme of selective thinning to remove conifers and encourage natural regeneration of native species. Over the long-term (50-100 years) a woodland structure broadly resembling upland mixed ash woodland of W8 type as described in the Forestry Commission's The Management of Semi-Natural Woodlands Forestry Practice Guide 4 will be created.

A minimum of 3.0 km of formal permissive footpath will also be maintained within the woods and around 1.0 km of public footpath, to ensure continued public access is available. Many more kilometres of informal paths are available for use by the public.

The regeneration of broadleaf woodland at Elemore Woods will help to fulfill the Trust's corporate objective of improving woodland biodiversity, whilst providing public access also contributes to its corporate objective of increasing enjoyment of woodland.

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

Elemore Woods provides a large area of woodland in which people are free to walk and observe nature. Although public footpaths do exist on site, these only access a small part of the woods, whereas the Woodland Trust currently maintains around 4km of footpath and allows many more km of permissive footpath and desire lines to be used by the public. The woods are fully linked into the surrounding public footpath network, allowing them to be accessed from most direction and surrounding settlements.

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. Elemore Woods provide an important local amenity for people living in the parishes of Haswell and Pitlington, as well as for those from the wider region. It is the only substantial piece of woodland existing to the east of Durham city until Castle Eden Dene is reached along the southern edge of Peterlee. Because the wider landscape surrounding the woods is intensively farmed, freedom to roam is severely restricted. Elemore Woods is the only place locally where unrestricted access can be freely enjoyed.

Opportunities & Constraints

Opportunities

The re-surfacing of the main access track running through the main body of the woods in 1999, along with the installation of new culverts and bridge repairs, has provided the opportunity for a much wider range of people to enjoy the woods. This should be maintained and some of the permissive paths could be upgraded and maintained as main paths.

Constraints

Perhaps the most important constraint for wider public access to the woods is the lack of available parking close by. The minor roads around Hetton-le-Hill Wood and down to Lily Hill Plantation are generally too narrow to accommodate parked vehicles without causing a nuisance to others. The other major constraint to wider public access in Hetton-le-Hill Wood and Dog Kennel Bank are the dangerous limestone fissures that exist along the top of the slope in both woods, preventing formal path creation in these areas.

Factors Causing Change

Vandalism of entrances and other structures,
 Natural regeneration along cleared ride-sides,
 Wear and erosion of track surfaces due to the illegal motor bikes using the site

Long term Objective (50 years+)

To ensure public access to the woods for quiet recreation on foot continues to be available in the future by continuing to maintain a minimum of 4km of permissive and public footpath within the woods and all formal points of access that currently exist.

To act on any opportunity in the future that may arise (e.g. land sales, footpath dedication opportunities) that will allow Hetton-le-Hill Wood to be linked to the larger body of Elemore Woods.

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

During this plan period the short term objective is to:

- Improve the path/track network in the wood.
- Prevent motorbikes using the site.

This will include the following operational works:

1. Renew entrances and signage, as highlighted by the 2018 entrance survey carried out by Assistant Site Manager John Butler. Also maintain all official entrances (as indicated on map)
2. Ensure the surfacing of the 4km official path network is repaired after harvesting operations and also maintained to Woodland Trust pedestrian standard, including access points signage and estate furniture.
3. Repair and block boundary fencing to prevent illegal vehicle access, where highlighted in annual boundary survey.
4. Work with local police to prevent illegal use of the site.

5.2 Planted Ancient Woodland Site

Description

Under English Nature’s Ancient Woodland Inventory, Hetton-le-Hill Wood and part of Elemore Wood (sub-cpts 2f, part of 2g and 2h) are designated Ancient Semi-natural Woodland (ASNW). However, these areas have clearly been planted with conifers during the 20th century and should be classified as Planted Ancient Woodland Sites (PAWS) that have been cleared and replanted. Given the prevalence of dog’s mercury among the field layer in sub-compartments adjacent to these areas, it is likely that the area of PAWS is greater than that indicated by Natural England.

Significance

Ancient Semi-natural Woodland, a nationally rare habitat type whose preservation is both a local and national target within biodiversity action plans. Where ancient woodland sites have been planted with conifers, it is a stated aim of both the Government and the Woodland Trust that these should be restored back to native woodland. Restoration back to native broadleaves will increase the biodiversity of these areas and help save valuable elements of the former ancient woodland that may still be present among the understorey and field layers or among the seed bank preserved in the soil. Because the woods are located in an area of low woodland cover and on the Magnesium Limestone Plateau, this restoration is also of significant local and regional importance.

Opportunities & Constraints

Opportunities

The conifers to be removed from areas of PAWS contain a substantial amount of timber that has commercial value, which should help achieve its removal and conversion of these areas back to broadleaf woodland.

Constraints

Long extraction distances are however, likely to make this timber less attractive to potential buyers. The dominance of sycamore and beech among the broadleaf element of these woods makes their eradication from the areas of PAWS not a viable option. Consequently, these species will be accepted as part of the woodland structure.

High numbers of deer in the woodland.

Factors Causing Change

Heavy shade suppressing ground flora,
 Sycamore domination among understorey in places,
 Large quantity of Ash suffering from chalara.
 Mammal damage from browsing on the natural regeneration of native trees.

Long term Objective (50 years+)

To establish across the wood a predominantly broadleaved high forest woodland, consisting of species such as; beech, sycamore, elm and lime.
 Create stands of diverse age and structure above a floristically rich ground layer.

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

During this plan period the short term objective is to:

- continue with the restoration programme in the conifer-dominated PAWS compartments,

This will include the following operational works:

1. Thinning of conifer-dominated woodland. Sub-compartments and dates given in the harvesting schedule.
2. Control of the deer populations will be undertaken. The impact of deer on the wood will be re-assessed every 2 years and results of this will be fed into the level of deer control.

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	10.91	Japanese larch	1960	PAWS restoration	Housing/infrastructure, structures & water features on or adjacent to site, No/poor vehicular access to the site, Sensitive habitats/species on or adjacent to site, Site structure, location, natural features & vegetation	Informal Public Access	Area of Landscape Value, County Wildlife Site (includes SNCI, SINC etc), Planted Ancient Woodland Site

This sub-compartment makes up the bulk of Hetton-le-Hill Wood and occupies a moderately steep west facing slope with a private road running along its bottom. Japanese larch, Scots pine and sycamore are the dominant canopy trees, with lesser amounts of beech and ash. Generally, larch and Scots pine are dominant in the northern half of the wood, whereas towards the middle and southern end broadleaves become more numerous. Beech is also more prevalent in the northern half of the wood. The Japanese larch, Scots pine, sycamore and beech were all planted in 1960 in what appears to be an intimate mixture at 1.5m (5 foot) spacing in lines running up the slope, giving an original stocking density of 4444 trees/ha. Although ash is not mentioned in the planting records, it appears at least some was planted even if some resulted from natural regeneration. A fringe of broadleaves runs along the eastern boundary whilst Scots pine appears to have been concentrated along the bottom of the slope along the western boundary and includes some Corsican pine next to the road, particularly along the southern half of the boundary. Although no mention is made in the planting records of this area having been thinned, it appears on the ground as if some selective thinning has taken place in the past. The understorey contains numerous patches of sycamore and wych elm coppice regenerating from old stumps growing alongside hawthorn, ash and elder. Ash regeneration is particularly thick within the understorey at the northern end of the wood. Bramble is dominant among the field layer in the middle and northern end of the wood but at the southern end dog's mercury becomes the dominant species. Moss dominates among the ground layer.

1b	1.04	Ash	1988	High forest	No/poor vehicular access to the site, Site structure, location, natural features & vegetation	Informal Public Access	Area of Landscape Value, County Wildlife Site (includes SNCI, SINC etc), Planted Ancient Woodland Site
<p>This area was felled in 1988 and restocked using natural regeneration, though some semi-mature beech appears to have been retained in the southwest part of the sub-compartment. Ash and sycamore dominate the regenerating canopy but a scattering of beech is also present. Ash regeneration dominates among the dense understorey though sycamore regenerating from old stumps also occurs frequently with occasional hawthorn and wych elm here and there. Some management of the regeneration appears to have taken place as the occasional brown spiral still remains in place on some of the ash trees. The field layer consists mostly of coarse grass with some bramble and herbs, whilst the ground layer consists of mosses.</p>							
1c	0.68	Norway spruce	1960	PAWS restoration	Housing/infrastructure, structures & water features on or adjacent to site	Informal Public Access	Area of Landscape Value, County Wildlife Site (includes SNCI, SINC etc), Planted Ancient Woodland Site
<p>Stand of pure Norway spruce planted in 1960 on flat ground at the southwest corner of Hetton-le-Hill Wood, next to the road down to Elemore Hall School. Planted at 1.5m (5 foot) centres to give a planted stocking density of 4444 trees/ha, the trees have been selectively thinned in the past, most recently in December 2011, removing much of this stocking. No understorey exists and the ground layer consists of a carpet of spruce needles, whilst the field layer contains no more than the odd fern or bramble here and there.</p>							
2a	6.04	Sycamore	1957	PAWS restoration	Mostly wet ground/exposed site	Informal Public Access	Area of Landscape Value, County Wildlife Site (includes SNCI, SINC etc)

Mixed planting occupying a gentle west-facing slope with damp heavy clay soils on the lower slope in the western half of the sub-compartment and shallow calcareous loam on the upper slope to the east. The site was planted in 1957 with sycamore, Japanese larch, beech, oak, Norway spruce, Sitka spruce and Scots pine. Although planted, too few oak remain to include it as part of the sub-compartment's current stocking. The calcareous conditions are unlikely to suit oak, though along with beech and ash it was one of the trees recorded as growing on site prior to felling and replanting. Ash, on the other hand, although not planted, has regenerated well and now makes up a significant part of the stocking. In the eastern half of the sub-compartment, sycamore and Scots pine dominate the canopy. Scots pine tends to be concentrated to the north, planted on east-west running plough ridges at 1.5m (5 foot) centres, whereas sycamore is more prevalent in the south. In the western half of 2a, the spruces are concentrated in the southwest corner of the sub-compartment, south of the ride and form a band running east alongside it. Between this band and Green Lane to the south and to the east the trees become more mixed with Scots pine and birch becoming more prevalent. Japanese larch occurs to the north of this ride but following heavy thinning of this area (50% removal) in 1996 it is ash, wych elm and sycamore that now dominate the canopy. Hawthorn, wych elm and sycamore occur in the understorey, along with birch and the odd willow in more open places, such as along the ride side. The field layer is dominated by bramble but dog's mercury, bracken and bedstraw also occur. In the disturbed areas along the ride side invasive weeds such as nettles, rosebay willowherb and thistles have taken hold with rushes occurring in the damper areas. The ride widened through 2a in 1998 is the only significant area of open space in the sub-compartment and accounts for around 10% (0.6 ha) of its total area. An old limekiln and quarry exist in the western half of the plantation.

2b	4.85	Japanese larch	1957	PAWS restoration	Mostly wet ground/exposed site	Informal Public Access	Area of Landscape Value, County Wildlife Site (includes SNCI, SINC etc)
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Brown's Plantation consists of an intimate mix of conifers and broadleaves planted in 1957 on a level site previously occupied by sycamore, elm and beech. A burn flows through the northeast side of this sub-compartment and occupies a steep sided channel. The trees to the southwest of the burn appear to have been well thinned in the past but those to the northeast appear to have been untouched until they were heavily thinned (50% removal) during 1996 and thinned again in 2009. Larches dominate the canopy but sycamore also occurs in significant numbers. Norway and Sitka spruce also occurs scattered throughout the plantation but particularly towards the southeast end. Ash, Scots and Corsican pine are also present in the canopy with Scots pine forming a fringe along the southwest-facing boundary. Some birch, oak and sycamore are also found regenerating alongside the track that runs northwards through the plantation and which was widened during 1998. The understorey consists of a good mix of regenerating broadleaves, including sycamore, hawthorn, wych elm, beech, oak and rowan. The field layer consists of coarse grasses, bramble, bracken and honeysuckle.

2c	9.44	European larch	1956	PAWS restoration	No/poor vehicular access to the site, Sensitive habitats/species on or adjacent to site, Site structure, location, natural features & vegetation	Informal Public Access	Area of Landscape Value, County Wildlife Site (includes SNCI, SINC etc)
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Dog kennel Bank consists of a long and narrow northwest-facing bank with a public footpath running along its bottom. The slope is generally of moderate to gentle gradient becoming steeper at its western end and consists of deep calcareous loam over magnesium limestone. An old quarry with a vertical drop of several metres exists at the east end of the sub-compartment. Along the top of the slope occur a number of limestone fissures, some of which are two to three metres deep or more. Planted in 1956 with Scots pine, beech, oak, ash, sycamore and Japanese and European larch, the bank was previously occupied by mature beech, lime, sycamore and ash. The present stocking is dominated by larch, sycamore, beech and ash with a small amount of Scots and Corsican pine, the latter mostly at the eastern end of the wood and forming a fringe along the southeast-facing boundary at the western end of the wood. Again, oak is very infrequent despite being planted and is not a significant element among the current canopy. Ash regeneration dominates the understorey at the western end of the wood but elder is perhaps more frequent throughout. Also present in the understorey is wych elm, hawthorn and sycamore. Bramble is probably dominant among the field layer but coarse grasses and ferns also occur. Moss is the dominant ground layer vegetation.

2d	0.76	Beech	1938	PAWS restoration	Site structure, location, natural features & vegetation	Informal Public Access	Area of Landscape Value, County Wildlife Site (includes SNCI, SINC etc)
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This small sub-compartment forms a discrete area on level ground along the bottom of the slope at the western end of Dog Kennel Bank opposite White's Wood. The soils consists of deep loam over magnesium limestone with occasional sandy outcrops and was planted in 1938 with European larch, beech, ash and oak, replacing an earlier woodland cover consisting of mature beech, lime and sycamore. The trees were first thinned in 1965 and will have been thinned again since then but the records contain no information. Today the canopy is dominated by beech with a scattering of ash and the occasional larch, sycamore and oak. A poorly developed understorey exists consisting of a thin scattering of ash, beech and sycamore regeneration, as is usual under beech, along with a sparse field layer dominated by grass.

2e	8.38	Sycamore	1960	PAWS restoration	Mostly wet ground/exposed site, No/poor vehicular access to the site	Informal Public Access	Area of Landscape Value, County Wildlife Site (includes SNCI, SINC etc)
<p>A complex sub-compartment containing a mix of species, some forming discrete stands, all planted in 1960. The trees occupy a broadly level site, except for some steep north-facing slopes that drop down to Coldwell Burn where some lines still grow. Much of this area was occupied by an irregular body of water created in the 18th century and which was drained sometime in the 1920s. To the west of the main track in the southern half of 2e, sycamore dominates the canopy except in an area of about 0.5 ha adjacent to Red House where a stand of almost pure Norway spruce grows that was thinned (40% removal) in 1996. To the north of this, the trees are more mixed with Scots pine, Japanese larch, ash and Norway spruce also present with sycamore among the canopy. This area was thinned (40% removal) in 1997. Prior to planting, this part of 2e consisted of lime, sycamore and ash woodland. To the east of the track in the southern half of 2e and growing along side it, is a less uniform stand dominated by Scots pine and Norway spruce. To the east of this, a much larger stand of uniform conifers, planted in rows running east-west, occupies the triangle forming the southeast corner of 2e. This area was thinned in 1996 (30-40% removal) and is now dominated by Scots pine. The remainder of 2e running along the south side of the access track is again a more intimate mix of Japanese larch, Norway spruce, sycamore, ash, birch and Scots pine. The trees alongside the track to the north of Coldwell Burn were heavily thinned (40-50% removal) in 1996 to open up main ride at this point. Prior to planting, this part of 2e consisted of mature lime, sycamore and beech woodland. Understorey development varies across the sub-compartment considerably from areas with little or no understorey to well developed areas consisting of ash, sycamore and hawthorn. Throughout 2e, bramble is generally the dominant field layer species but ferns, dog's mercury and herb Robert are also present in places. In the southeast part of the sub-compartment where the ground can be wet and soft, rushes also occur among the field layer.</p>							
2f	0.54	Ash	1961	High forest	Sensitive habitats/species on or adjacent to site, Site structure, location, natural features & vegetation, Very steep slope/cliff/quarry/mine shafts/sink holes etc	Informal Public Access	Area of Landscape Value, County Wildlife Site (includes SNCI, SINC etc), Planted Ancient Woodland Site

This sub-compartment consists of a steep southwest-facing bank with light sandy calcareous loam containing many small fragments of limestone. English Nature’s Ancient Woodland Inventory classifies this part of Elemore Wood as Ancient Semi-natural Woodland (ASNW). As this bank forms part of a larger area recorded as being replanted in 1960/61, this would appear to be incorrect. However, the steepness of the bank and the thick carpet of Dog’s mercury forming the field layer strongly suggest this area is a Planted Ancient Woodland Site (PAWS). Ash and sycamore woodland occupied the bank prior to 1960/61. The uniform young age of the existing canopy cover and its condition prior to crown thinning in 1998, suggests that the bank was left to regenerate naturally after felling. Today, ash dominates the canopy, though some elm and sycamore is also present. A thin scattering of elm, ash and sycamore regeneration forms an understorey.

2g	2.87	Ash	1961	PAWS restoration	No/poor vehicular access to the site, Sensitive habitats/species on or adjacent to site	Informal Public Access	Area of Landscape Value, County Wildlife Site (includes SNCI, SINC etc), Planted Ancient Woodland Site
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This sub-compartment occupies level ground on top of the slope consisting of light sandy loam over limestone. This part of Elemore Wood is recognised as a Planted Ancient Woodland Site (PAWS) and a thick carpet of dog’s mercury dominates the ground flora. In 1960/61, the area was planted with Scots pine, Japanese larch, ash and sycamore. Prior to 1960, the site was covered with ash and sycamore woodland. Today, only a very small amount of pine and larch remains and the area is once again dominated by ash and sycamore. Ash regeneration dominates the understorey and along with hawthorn, wych elm and sycamore forms dense stands of young stems. Besides dog’s mercury, ferns and brambles are also present among the field layer, whilst mosses dominate the ground layer.

2h	1.16	Ash	1932	PAWS restoration	Sensitive habitats/species on or adjacent to site, Very steep slope/cliff/quarry/mine shafts/sink holes etc	Informal Public Access	Area of Landscape Value, County Wildlife Site (includes SNCI, SINC etc), Planted Ancient Woodland Site
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This moderately steep southeast-facing bank is a Planted Ancient Woodland Site (PAWS) with shallow loamy soils over limestone that before being planted in 1932 with larch and ash, was occupied by ash and sycamore woodland. Having received its third thinning in 1965, the canopy is now dominated by ash, with lesser amounts of larch and sycamore. Among the understorey, sycamore dominates, growing alongside hawthorn and wych elm. The field layer consists almost totally of dog’s mercury with just the occasional fern.

2i	3.57	Beech	1939	PAWS restoration	No/poor vehicular access to the site, Sensitive habitats/species on or adjacent to site, Site structure, location, natural features & vegetation	Informal Public Access	Area of Landscape Value, County Wildlife Site (includes SNCI, SINC etc), Planted Ancient Woodland Site
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A complex sub-compartment occupying a gentle southeast-facing slope and combining plantings of three different ages, though consisting mostly of trees planted in 1939. The northern end of the sub-compartment was planted in 1934 with larch, Scots pine, beech and sycamore, whilst the middle and southern areas of 2i were planted in 1939 with an intimate mix of Japanese larch, beech, Scots pine, ash, and oak. During 1956 further Japanese larch and some Douglas fir was planted in the middle of the sub-compartment. During 1963, the trees growing in the middle and northern end of 2i were thinned for the first time and the canopy in the middle of 2i is now dominated by beech. Overall, the percentage of canopy occupied by each species is difficult to establish, due to the intimate mix of trees but is assumed to be roughly equal. Although, recorded as planted, no Douglas fir was discovered on site and only the occasional oak. The density of understorey cover varies across the sub-compartment but includes ash, hawthorn, sycamore, beech and wych elm. The field layer is dominated by dog's mercury, suggesting that this area is a Planted Ancient Woodland Site (PAWS), though not recognised as such on English Nature's Ancient Woodland Inventory.

2j	7.17	Scots pine	1961	PAWS restoration	No/poor vehicular access to the site, Sensitive habitats/species on or adjacent to site, Site structure, location, natural features & vegetation	Informal Public Access	Area of Landscape Value, County Wildlife Site (includes SNCI, SINC etc), Planted Ancient Woodland Site
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A large sub-compartment occupying a gentle southeast-facing slope and planted in 1961 with Scots pine, Corsican pine, Japanese larch, European larch, sycamore and beech at 1.5m (5 foot) centres. Prior to planting, the northern half of 2j was an exposed area of scrub occupying a place used as a racecourse during the 19th century. The southern half of 2j was previously an area of hardwood coppice. Scots pine dominates the northern half of the sub-compartment and the larches the southern half. Parts of 2j were thinned (30-40% removal) in 1997 but other areas remained untouched and were to be thinned in 1998 but the work was never carried out. The understorey consists of the usual mix of sycamore, ash, hawthorn and wych elm. Although not recognised as a Planted Ancient Woodland Site (PAWS) on English Nature's Ancient Woodland Inventory, the dominance of dog's mercury among the field layer in the southern half of 2j suggests this area is a PAWS.

2k	0.89	Beech	1942	High forest	No/poor vehicular access to the site, Site structure, location, natural features & vegetation	Informal Public Access	Area of Landscape Value, County Wildlife Site (includes SNCI, SINC etc)
<p>This sub-compartment forms a narrow strip along the northeast boundary of the woods located on an almost level southeast-facing slope. Planted in 1942 with Scots pine, Japanese larch, ash and sycamore, the area today is almost pure beech woodland with only small amounts of sycamore, ash and oak, mostly scattered along the northeast boundary of the sub-compartment. The understorey consists of a thin scatter of beech, ash, sycamore, hazel and hawthorn regeneration, whilst the field layer contains bluebells, wood ruff, red campion, wood sorrel and ferns.</p>							
2l	10.23	Scots pine	1963	PAWS restoration	No/poor vehicular access to the site, Sensitive habitats/species on or adjacent to site, Site structure, location, natural features & vegetation	Informal Public Access	Area of Landscape Value, County Wildlife Site (includes SNCI, SINC etc), Planted Ancient Woodland Site
<p>Large sub-compartment occupying most of the northeast end of Elemore Woods. Located on southeast-facing slopes to the north of the main access track and level ground to the south, it was planted in 1963 with Scot pine, Norway spruce, Japanese larch, hybrid larch, beech and sycamore. Prior to planting, the east end of sub-cpt 2l was scrubland; what grew across the remainder of this sub-compartment is unknown. Currently, 2l is dominated by Scots pine. Japanese larch is concentrated to the south of the access track at the east end of 2l, whilst a scattering of hybrid larch occurs within the middle. Sycamore occurs across the whole area but beech is only found in the middle and to the west side. Parts of 2l to the north of the main access track were thinned during 1997 and 1998 and the public footpath (Pittington No 31) widened by removing a row of trees to each side of it , further thinning operations were conducted in 2009-2011. Naturally regenerated ash also forms part of the canopy across much of sub-cpt 2l. Norway spruce, though recorded as being planted in 2l is now rare, only occurring at the eastern end of the sub-cpt. A reasonably frequent understorey exists of hazel, elder, sycamore and ash occurs throughout whilst the field layer contains bluebells, red campion, bugle, primrose, wild strawberry and dog's mercury but also includes coarse grasses, ivy, brambles and ferns.</p>							

2m	1.18	Sycamore	1900	High forest	Management factors (eg grazing etc), No/poor vehicular access to the site, Sensitive habitats/species on or adjacent to site, Site structure, location, natural features & vegetation, Very steep slope/cliff/quarry/mine shafts/sink holes etc	Informal Public Access	Ancient Semi Natural Woodland, Area of Landscape Value, County Wildlife Site (includes SNCI, SINC etc)
<p>Small and irregular sub-compartment consisting of two blocks of mature/semi-mature broadleaves dominated by sycamore and occupying moderately steep northeast and southeast facing slopes. Probably represents a fragment of the earlier woodland cover that made up East Wood. The understorey consists of areas of sycamore and ash regeneration, along with hawthorn, wych elm, etc., with a field layer dominated by brambles and ferns. The SSSI site of Pig Hill directly adjoins this sub-compartment along its southern and eastern sides and Coldwell Burn flows along its southern boundary.</p>							
2n	0.63	Ash	1988	High forest	No/poor vehicular access to the site, Site structure, location, natural features & vegetation, Very steep slope/cliff/quarry/mine shafts/sink holes etc	Informal Public Access	Area of Landscape Value, County Wildlife Site (includes SNCI, SINC etc)
<p>Small sub-compartment created by a clear fell, probably during the later nineteen eighties, occupying a moderately steep east-facing slope and flat ground at the extreme northeast end of Elemore Woods. The area consists of a dense stand of regeneration dominated by ash but also including sycamore, wych elm, rowan and hawthorn. The field layer consists of nettles and brambles.</p>							

Appendix 2: Harvesting operations (20 years)

Forecast Year	Cpt	Operation Type	Work Area (ha)	Estimated vol/ha	Estimated total vol.
2018	2b	Thin	0.50	75	37.32
2018	2c	Thin	4.72	75	352.34
2018	2e	Thin	0.25	75	18.66
2018	2j	Thin	1.43	75	106.81
2019	2a	Thin	2.50	67	168.639999389648
2019	2b	Thin	1.44	67	97.129997253418
2019	2c	Thin	3.36	67	226.649993896484
2019	2d	Thin	0.75	67	50.5900001525879
2019	2e	Thin	2.80	67	188.869995117188
2019	2h	Thin	1.16	67	78.2399978637695
2020	1a	Thin	10.20	25	257
2020	1b	Thin	1.04	43	45
2020	2a	Thin	3.54	40	140
2020	2c	Thin	1.36	99	135
2020	2e	null	2.08	38	80
2020	2g	Thin	2.56	39	100
2020	2i	Thin	3.57	84	300
2020	2j	Thin	5.74	114	656
2020	2k	Thin	0.89	22	20
2020	2l	Thin	7.04	65	455
2025	1c	Thin	0.68	37	25
2025	2b	Thin	4.85	40	195
2025	2c	Thin	9.44	39	370
2025	2f	Thin	0.54	37	20
2025	2g	Thin	2.87	40	115
2025	2j	Thin	7.17	40	285
2028	1a	Thin	10.91	38	420

2028	1b	Thin	1.04	38	40
2028	2a	Thin	6.04	40	240
2028	2e	Thin	8.38	30	250
2028	2i	Thin	3.57	39	140
2028	2l	Thin	10.23	39	400

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.