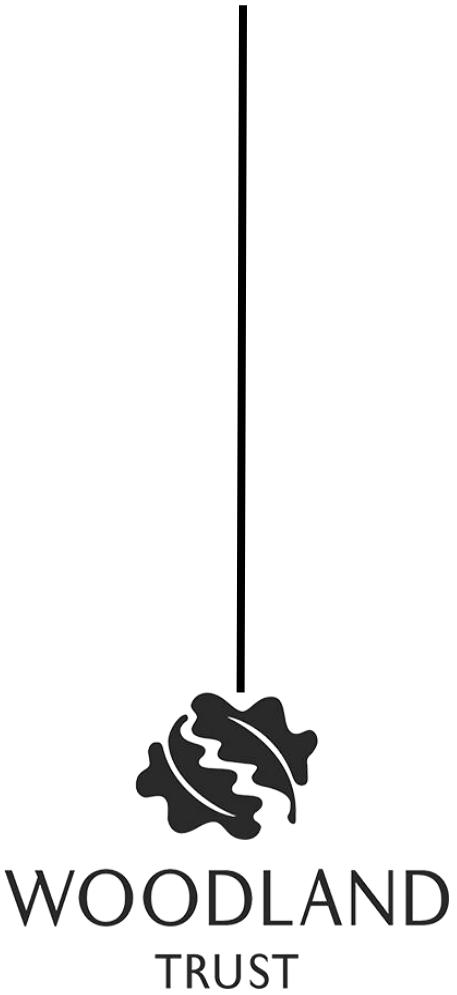
Penn Wood

(Plan period – 2024 to 2029)



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Introduction to the Woodland Trust Estate

The Woodland Trust owns and cares for well over 1,250 sites covering almost 30,000 hectares (ha) across the UK. This includes more than 4,000ha of ancient semi-natural woodland and almost 4,000ha of non-native plantations on ancient woodland sites and we have created over 5,000ha of new native woodland. We also manage other valuable habitats such as flower-rich grasslands, heaths, ponds/lakes and moorland.

Our Vision is:

"A UK rich in native woods and trees for people and wildlife."

To realise all the environmental, social and economic benefits woods and trees bring to society, we:

- **Create Woodland** – championing the need to hugely increase the UK's native woodland and trees.
- **Protect Woodland** – fighting to defend native woodland, especially irreplaceable ancient woodland and veteran trees; there should be no loss of ancient woodland
- **Restore Woodland** – ensuring the sensitive restoration of all damaged ancient woodland and the re-creation of native wooded landscapes.

Management of the Woodland Trust Estate

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.

The following principles provide an overarching framework to guide the management of all our sites but we recognise that all woods are different and that their management also needs to reflect their local landscape, history and where appropriate support local projects and initiatives.

1. Our woods are managed to maintain their intrinsic key features of value and to reflect those of the surrounding landscape. We intervene in our woods when there is evidence that it is necessary to maintain or improve biodiversity, safety and to further the development of more resilient woods and landscapes.

2. We establish new native woodland for all the positive reasons set out in our Conservation Principles, preferably using natural regeneration but often by planting trees, 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. Where possible, we pro-actively engage with people to help them appreciate the value of woods and trees.

4. The long term vision for all our 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 natural and cultural heritage value of sites is taken into account in our management and in particular, our ancient trees are retained for as long as possible.

7. Land and woods can generate income both from the sustainable harvesting of wood products and the delivery of other services. We therefore consider the appropriateness of opportunities 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 encourage our woods to be used for 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. We maintain a network of sites for long-term monitoring and trials leading to reductions in plastics and pesticides.

10. Any activities we undertake are in line with our wider Conservation Principles, conform to sustainable forest management practices, are appropriate for the site and balanced with our primary objectives of enhancing the biodiversity and recreational value of our woods and the wider landscapes.

The Public Management Plan

This public management plan describes the site and sets out the long term aims for our management and lists the Key Features which drive our management actions. The Key Features are specific to this site – their significance is outlined together with our long, 50 years and beyond, and our short, the next 5 years, term objectives for the management and enhancement of these features. The short term objectives are complemented by an outline Work Programme for the period of this management plan aimed at delivering our management aims.

Detailed compartment descriptions are listed in the appendices which include any major management constraints and designations. Any legally confidential or sensitive species information about this site is not included in this version of the plan.

There is a formal review of this plan every 5 years and we continually monitor our sites to assess the success of our management, therefore this printed version may quickly become out of date, particularly in relation to the planned work programme.

Please either consult The Woodland Trust website

www.woodlandtrust.org.uk

or contact the Woodland Trust

operations@woodlandtrust.org.uk

to confirm details of the current management programme.

A short glossary of technical terms can be found at the end of the plan.

Location and Access

Location maps and directions for how to find and access our woods, including this site, can be found by using the following link to the Woodland Trust web-site which contains information on accessible woodlands across the UK

https://www.woodlandtrust.org.uk/visiting-woods/find-woods/

In Scotland access to our sites is in accordance with the Land Reform Act (of Scotland) 2003 and the Scottish Outdoor Access Code.

In England, Wales and NI, with the exception of designated Public Rights of Ways, all routes across our sites are permissive in nature and where we have specific access provision for horse riders and/or cyclists this will be noted in the management plan.

The Management Plan

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GLOSSARY

1. SITE DETAILS

Penn Wood

Location:	Penn Street Grid reference: SU914959 OS 1:50,000 Sheet No. 165
Area:	176.33 hectares (435.72 acres)
External Designations:	Ancient Semi Natural Woodland, Area of Outstanding Natural Beauty, Green Belt, Planted Ancient Woodland Site
Internal Designations:	Ancient Woodland Restoration Project, Demonstration Site - Silver, Welcoming Sites Programme

2. SITE DESCRIPTION

Penn Wood lies in the heart of the Buckinghamshire Chilterns, and is the largest single ancient woodland 176.69 ha (435.42 acres) in the Chilterns National Landscape. The Chilterns is characterised by its high density of ancient woodland, much of which is semi natural. A number of ancient woods adjoin Penn Wood at various points around its boundary, including Common Wood to the south which is another significant block of ancient woodland at 103ha (255 acres), and is managed entirely by the volunteers of the Penn and Tylers Green Residents Association.

Penn Wood was acquired by The Woodland Trust in 1999 following a long running and successful campaign by the local community to prevent the wood from being developed as an 18-hole golf course. The Environment Secretary at the time, John Prescott refused the development proposal in 1998 because of the "paramount importance" of conserving ancient woodland and securing its good management.

The history of Penn Wood was researched by Miles Green, a local historian, who conclusively proved that the area had been woodland since Doomsday (1086). For many centuries Penn Wood was a well wooded part of Wycombe Heath an area that once comprised some 1600ha (4000 acres) of heath and woodland, where seven surrounding towns and parishes once shared rights of common and therefore as a ‘wooded common’ with grazing rights. Penn Wood’s recorded history as a wood-pasture derives its name from the Old English term for enclosure or pen and dates back to when the area was a deer enclosure during Anglo-Saxon times. Penn and Common Woods were legally enclosed in 1855 and common rights were immediately extinguished. Seven years of lawlessness from the dispossessed householders followed, and Penn Wood was recorded as being one of the most difficult areas in which to restore order.

Since 1855 the woodland has had several waves of felling and replanting with conifers, mixed with broadleaves of mainly beech and oak (sessile as well as pedunculate). The whole site is classified as a planted ancient woodland site (PAWS) in the ancient woodland inventory because of this replanting. Currently 40% of the site (approximately) is conifer-dominated woodland due to the planting of Douglas fir, European larch, Corsican pine and Norway spruce in the mid to late 20th century; 40% is largely composed of predominately beech and oak planted at various dates during the 20th century intermixed with other species such as birch, cherry and rowan; the remaining 20% of the site is open grassland with widely spaced trees and scrub mainly found in the southern part of Penn Wood. This latter habitat was partly the result of illegal tree clearance for the proposed golf course fairways in the 1990’s prior to Woodland Trust ownership. Exotic or non-native shrubs were established along the major rides of the wood, dating from the mid-19th century, with the main species being Rhododendron ponticum. These same rides also contain large specimen conifer trees such as Douglas fir dating back to the early 20th century.

Penn Wood has a scattering of trees over 200 years old, mainly beech, which date from when the site was part of Wycombe Common with 24 veteran trees being recorded. One in particular is a special oak tree that was integral in the decision to confirm the ancient status of the site, the ‘Holey Oak’. In 2023 it was noted that the 'Holey Oak' had less than 5% live growth in the crown and is now a fantastic feature of old standing dead wood.

The more open habitat mostly in the southern part of Penn Wood consists of a mixture of acid grassland, large open grown trees (oak and beech) with scrub and bracken. Cattle now graze 57ha (140 acres) of this habitat to restore a wood-pasture management system consistent with the historical land use - a management system which is now very scarce in the Chilterns. This open habitat can also be found in other parts of Penn Wood indicating its historical use

as common land where several historic ponds exist which would have been important watering places for the livestock which grazed the common.

Many archaeological features are present such as a wood-bank around most of the perimeter, flint and clay pits, and old tracks. In 1800 the wood from the site was a source of legs, stretchers, spindles and sticks for Windsor and cane-backed chairs. Many bodgers working in Penn Wood supplied this thriving industry. The chair-manufacturing firm Dancer & Hearne started up in a shed behind the Hit or Miss pub in Penn Street, and was at one time the largest chair maker in Europe, producing 450,000 chairs and employing over 300 people. A LIDAR survey was commissioned in 2015 and a number of interesting features were identified including a rectangular bank and ditch enclosure, about 90 metres square, with various linear ditches nearby. Numerous other banks and quarries have also been located in the wood.

The soil at Penn Wood is made up of loamy clayey which is slightly acidic with impeded drainage which sits over chalk and flint, on a plateau in the Chilterns that rises gently to 170 meters (557 feet) above sea level.

A booklet called ‘The History of Penn Wood’ by local historian Miles Green, originally written for Friends of Penn Wood as part of the fight to save the site from development and later to celebrate the purchase of Penn Wood by the Woodland Trust, is available to buy and contains some absorbing reading and historical detail.

Over the past 20 years the Trust has actively managed the site with frequent operations, focusing on the restoration of PAWS areas, including the removal of non-native and invasive tree and shrub species and re-introduced grazing on the site with cattle.

3. LONG TERM POLICY

The long term intentions for Penn Wood will seek to realise two of the Woodland Trust's four key aims:

- to protect native woods, trees and their wildlife
- to restore damaged ancient woodland

The following proposals have been itemised to mirror Penn Wood's key features.

Ancient woodland restoration:
The PAWS areas of the woodland will be restored in line with best restoration and reversion practice, to address the threats to the semi-natural components, (in particular the flora, archaeology and the older broadleaved trees), and to attain a largely broadleaved woodland over time. Restoration of PAWS provides the only opportunity to increase the area of ancient woodland with semi-natural characteristics.

Practically this means that the conifer and broadleaf plantation component, where identified after assessment as a threat to diverse broadleaf regeneration and/or forming dense shade suppressing ground flora, will be managed using Continuous Cover Forestry (CCF) techniques. The aim is to achieve a gradual change to more semi-natural broadleaved conditions. CCF operations will thin and convert stands to robust levels without clear felling areas thereby reducing the threat from plantation species to remnant ancient woodland features. Part of this management practice may provide an economic return. A component of conifer will be retained long-term (no more than 20%) to provide increased biodiversity and woodland resilience. Specimen conifer planting will be retained as a feature of the woodland's history. Broadleaved trees will develop within the stands via natural regeneration.

As the woodland matures, operational management will diversify the overall age structure and stand species composition. Some broadleaved trees will be left to reach old age and decline naturally. Decaying wood, both standing and fallen will be maintained to provide important niche habitats within the wood, particularly for invertebrates and fungi, except if they pose a significant tree safety risk. Some areas will be identified for minimum intervention, ie management of these areas will only be undertaken if they start to become a safety risk or a new threat develops (eg an invasive species). A wide ride habitat will also be encouraged along some of the main rides where the woodland on the edge of a ride is coppiced on a short rotation to link up restored high forest areas and increase the biodiversity across Penn Wood.

Observations will be carried out to record any factors causing change that may be detrimental to the vitality and structure of the woodland. For example there should be no damaging invasive species present on the site, and the colonisation by ash dieback (Hymenoscyphus fraxineus) and other pests and diseases monitored and managed where necessary.

Deer and squirrel numbers will be assessed and managed where necessary, to allow the natural development of the woodland.

Rhododendron control:
Rhododendron ponticum will be eradicated from within the stands in the woodland and the open grassland areas to remove the threat it poses to flora and broadleaf regeneration across the whole site. Non-invasive Rhododendron

varieties and any other non-invasive exotic shrubs along the central rides will be managed, so this element of Penn's history is kept.

Wood pasture management:
Approximately 50ha of open habitat will be largely managed through cattle grazing. Grazing will take place in areas to the south of the central east-west ride (Compartments 1a, 1b, 1c, 2d, and 2f) with PAWS restoration focused north of this. Open semi-natural habitat elsewhere and especially to the north of the central ride will be managed through mechanical means with the intention of extending grazing management to some of these parts in the future after the PAWS areas are restored. The aim of wood pasture management will be to achieve an approximate balance of 30% grassland, 20% scrub and 50% woodland in the grazed areas. This grazed woodland is likely to need some mechanical cutting of bracken, scrub and trees to maintain this balance.

Management of old trees:
Old growth trees (those older than 200 years) will be allowed sufficient growing space to ensure they live as long as possible and do not become dominated by younger surrounding trees. Specimen conifer trees along the central rides will also be managed in the same way, so they remain strong features in the wood. A number of younger trees will be selected to become future veteran trees to ensure a continuity of this vital habitat component.

Management for public access:
The public's enjoyment of the woodland will be enhanced by maintaining an accessible and safe network of paths and rides. Entrances, boundary fences, and benches will be maintained as necessary and the access provision will be monitored and provided in line with the Woodland Trust's Category A site definition: 'high usage sites, regularly used at all times of year, more than approx. 15 - 20 people using one entrance every day'. Open access will be retained at the wood and well used paths will be made open and sunny in parts. The wood will be made as safe as practicable through regular safety inspections. Good information will be made available on and off the site to enable visitors to explore and navigate around the wood and to appreciate its inherent qualities. High quality and prominent signage will greet visitors on their arrival to the wood. Penn Wood will be widely promoted in the Chilterns local area as one of largest accessible woods for people to visit and enjoy.

4. KEY FEATURES

4.1 f1 Ancient Woodland Site

Description

Penn Wood at 176.69 ha is identified as PAWS (plantation on ancient woodland site). Within 22 sub compartments totalling approximately 87ha (2a, 2b, 2c, 2d, 2e, 2f, 2g, 2h, 2i, 2j, 2k, 2l, 2m, 2n, 2o, 2p, 2q, 2r, 2s, 2t, 2u, 3d) planting was carried out between 1954-1982 with European larch, Norway spruce, Douglas fir, western hemlock, Corsican pine, southern beech and beech. In addition, beech planted on ancient woodland as a crop for the local furniture industry with oak is classified as PAWS and this can be found within 5 sub compartments totalling approximately 31ha (3a, 3b, 3c, 3e, 3f). Significant restoration work within these 5 sub compartments has taken place over the Woodland Trust's ownership and they are now assessed as being 'secure' or 'threatened (recovering)' with a more semi-natural composition and structure. The remaining part of the woodland is made up of open wood pasture within 3 sub compartments totalling 58.45ha (1a, 1b, 1c, 2d) - see Key Feature 2.

Throughout the wood and along the ride network there are approximately 50 special interest and veteran trees, planted around 1900.

Penn Wood has ‘old growth’ woodland characteristics with trees exceeding 200 years of age and with a continuity of old trees reaching into the past. There are at least 50 of these ‘old growth’ trees (mainly beech) on the site and they date back to when Penn Wood was common land, prior to its enclosure. The majority of the old trees are along the northern edge of the wood. In the same area there are small areas remaining of hazel coppice with oak standards.

Penn Wood occupies a plateau in the landscape for much of its area and the soils are mildly acidic, pH 4.5 to 5.5. This acidity greatly influences the naturally occurring vegetation on the site, with wavy hair-grass being common as well as heather (ling). The majority of the woodland approximates to W14 (beech-bramble) under the National Vegetation Classification (NVC). As well as frequent bramble, drifts of bluebells can be found beneath the stands of trees, most notably on the west side, together with other ancient woodland species such as wood spurge. The land slopes in the far south of the site and here the soil becomes more calcareous (Compartment 3f). Consequently the flora is far richer in this area, with species such as sanicle, primrose, woodruff and black bryony present. An invertebrate study of the site in 2000 found 10 nationally scarce beetles, of which 2 are considered to be ancient woodland indicator species.

Shortly after the site’s enclosure some of the main rides were made more formal with the planting of exotic flowering shrubs and specimen conifer trees such Douglas fir, Corsican and Austrian pine (the conifers are now an impressive size). Amongst the shrubs Rhododendron ponticum was planted and would have also been the rootstock for other Rhododendron varieties. The R. ponticum had spread from these rides and invaded the surrounding woodland, as well as the open areas of woodland. Mapping in 2017 determined that the plant covers approximately 5.5 ha (13.5 acres) of the site. This has subsequently been controlled by flailing and ongoing treatment of regrowth with herbicide.

Penn contains a number of archaeological features which are typical of an ancient woodland site. There is large wood

bank surrounding most of the perimeter which is many centuries old and this is particularly prominent on the southwest and northern boundaries. There are also pits and dells, some of these are manmade quarries for acquiring flint and clay, but others are thought to be natural 'solution hollows' where pockets of underlying chalk has dissolved.

Three ponds can be found within the woodland, the biggest being Beamond End pond that has been regularly maintained through coppicing trees and cutting back vegetation around the edge and dredging in 2016. Several seasonal ponds can also be found throughout the woodland when conditions are right.

Significance

Ancient woodland is a limited and irreplaceable resource which is home to more species of conservation concern than any other habitat in the UK.

Buckinghamshire is a county where 45% of ancient semi natural woodland has been lost since the Second World War with only 4000 ha (9885 acres) remaining. Restoration of ancient woodlands by removing the shading effects from plantation species is the only way the area of ancient semi-natural woodland can be increased.

The larger a woodland is, the more species it will be able to support. As one of the largest ancient plateau beech woods in the Chilterns, Penn Wood is important woodland as it is part of a large woodland landscape to include Penn estate and Common Wood.

Old growth woodland (woodland containing trees over 200 years old and with a continuity of old trees reaching into the past) is rare and declining worldwide. A substantial number of specialist woodland species are almost wholly confined to old growth stands.

Ancient woodland is very important due to the continuity of woodland cover over hundreds of years which allows for a diverse range of wildlife and vegetation to develop over time that cannot be found in new woodland creation sites.

Opportunities & Constraints

Constraints:
- Potential compaction of poorly drained soils and damage to tracks/paths through the use of forestry machines undertaking PAWS restoration. Timing and extraction routes need to be carefully planned.
- Damage to archaeological and historic features when implementing forestry operations.
- Protected species present such as bats and red kite that require strict conditions on working practices and timing of operations.

Opportunities:
- To use the site to demonstrate the Trust's approach to woodland management and to influence neighbouring landowners and other key stakeholders.
- Extending wood pasture management over a greater area of the site after PAWS areas are restored.

Factors Causing Change

- Invasive Rhododendron ponticum.
- Rides within the wood are succeeding to scrub and woodland thickets, dominated by birch and beech.
- Invasive bracken.
- Natural regeneration of broadleaves is occurring within the formerly thinned conifer stands.
- Increasing shade and loss of age structure in minimum intervention stands.
- Mammal damage (deer, rabbits, squirrels, edible dormice).
- Natural processes creating space and dynamism with changes in structure and gaps in canopy due to wind-blow and disease/dieback e.g. Hymenoscyphus fraxineus in ash.

Long term Objective (50 years+)

To secure and enhance the ancient woodland components of the site; to achieve a resilient woodland with species and structural diversity. Management will be informed by the Woodland Trust's Ancient Woodland Restoration (AWR) Guidance Modules 4 and 5.

Penn Wood will become predominantly semi-natural in composition and structure and the majority of the woodland will be composed of existing and naturally regenerating broadleaved trees (typically beech, oak, cherry, rowan and birch) with a minor percentage of conifers in the mixture (no more than 20%). The high forest structure will be managed on a continuous cover silvicultural system to produce uneven-aged, self-regenerating stands of high conservation and amenity value. Use of selective and variable density thinning techniques will have helped to create structural complexity across the woodland which will benefit the ecosystem recovery. A matrix of denser groves or areas will be left to develop through natural processes amongst the silviculturally-managed areas.

In the long term stands that are currently conifer-dominated should all be predominantly broadleaved in character, with all other major ancient woodland components in a secure and improving condition, including old growth trees, ground flora, archaeological features; and diverse decaying wood components. A cohort of future veteran trees will have been selected across the site. There will be no invasive non-native species within the restored stands of trees, or open ground habitat.

Any exotic shrubs and trees growing along the internal rides will be non-invasive, and there will be remnants of large specimen conifers along these rides.

There will be a network of managed wide rides providing open and early successional habitats

Deer damage to regenerating broadleaf trees will be monitored and action taken if the damage becomes a threat.

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

This section should be read in conjunction with the ancient woodland restoration (AWR) assessment and strategy maps.

Restoration
All PAWS compartments that have been identified in the AWR strategy (reviewed in 2022) as being threatened through high or medium shade will be thinned during this plan period. The thinning will concentrate on removing plantation trees to benefit remnant ancient woodland features such as old broadleaf trees, hotspots of important flora and to encourage the development of an understorey through natural regeneration in cpts 2a, 2b, 2c, 3d, 2e, 2f, 2r, 2n, 2o, 2p, 2u 2t, 2l, 2m, 2j, 2d, 2q, 3c (work area: 44.5ha) over duration of the plan period.

Manage new plantings ,
Weeding, beating up, removing old tree guards. Cpts 2l/2o (1.25ha). 2024.

Manage veteran and special interest trees
Introduce halo thinning around 50 veteran and special interest trees where necessary; identify 50 trees to manage as future veterans, over the duration of the plan.

Ride management
Maintain the 3 zone wide ride habitat along approximately 4.5km of selected rides in Cpts 2g, 2h, 2j, 3b, 2k, 3c, 2l, 2r, 2s, 2q, 3d through cyclical cutting. Zone 1 areas cut annually, zone 2 areas cut on a rotation of 3-5 years, and zone 3 areas cut on a rotation of 10-12 years, and all cut in a piecemeal fashion. Annually for duration of the plan.

Pond restoration/protection
Coppicing of trees, cutting ground vegetation. dredging and fencing around 3 ponds. 2024-2025.

Management access improvement
Goose Pond gate: upgrade 100m of track to forest road spec. 2024/2025.

Control of Rhododendron ponticum
Approx 5ha previously mulched in 2017and 690m along Penner Ride. Control of regrowth to be by uprooting seedlings where possible. Herbicide to be used only if determined by Glyphosate ESRA. Annually over duration of the plan.

Bracken management
Mechanical control along 760m ride through Cpt 2g, 2h, 2j, 3d, 2k. Reduce cover by 50%. Annually over duration of the plan.

Deer and squirrel control
Deer and squirrels will be managed by lethal control to reduce impacts from high/medium to medium/low as determined by the Herbivore Impact Assessment undertaken in 2020 and subsequent monitoring (thermal imaging counts/abbreviated HIA). Full HIA to be repeated in 2025.

5-yearly formal woodland condition/PAWS assessment to be undertaken in 2028 to inform the next management plan review. Assessments will cover the range of threats outlined in factors causing change above.

4.2 f2 Wood Pasture

Description
Wood pasture habitat is found within 3 compartments 1a, 1c, 2b (57.62 ha) in the southern half of the site and was created when illegal felling was carried out in preparation for the development of a golf course in the mid 1990's and retained due to the woodland's history as grazed wooded pasture when it was part of the much wider Wycombe Common. These sub compartments contain remnant areas of semi-natural acid grassland which paradoxically benefitted by being increased in area when tranches of the illegal tree clearance occurred. Patches of more open woodland, containing the acid grassland, exist throughout the site and in the northern half of the site the open woodland exists largely as glades between the blocks of plantations. The acid grassland is very rich and diverse and

contains 20 plant species which are uncommon in the county. As well as numerous species of grass, sedge and rush the grassland also contains flora such as heath bedstraw and patches of heather (ling). Within these more open areas of woodland there are also occasional old growth trees and widely spaced mature oaks and beeches, dating from early plantations in the 19th century.

Historically this open habitat would have been managed through commoners grazing their animals and removing some tree growth for fuel. This management ceased following enclosure of the former common (1855). However, in 2001 winter grazing was re-introduced by The Woodland Trust on the southernmost two-thirds of the site (approx. 50ha) to help manage and maintain a wood pasture habitat, since 2012 grazing has been year-round, using Dexter cattle.

As with the denser woodland areas, rhododendron ponticum had invaded from the formalised rides into parts of the open grassier areas; especially from the east-west central ride, this was managed extensively in 2017 and a small amount of regeneration continues to be managed annually.

Significance

Wood pasture is a nationally rare habitat and especially rare in the Chilterns. There is also a suite of species associated with this habitat, which are by association rare and rely on the right conditions of old trees in open conditions with associated flora.

Within the Chilterns there only are few sites where relict wood pasture features exist and where there is an opportunity for restoration; Penn Wood is one of these sites. The old growth trees at the site are especially important in this context.

Opportunities & Constraints

Constraints:
- There is a need to actively thin stands of pole stage conifer in parts of the site. This is a priority and precludes wood pasture in these areas until lighter woodland conditions are created and the stands are largely broadleaved in character

- Grazing a large area extensively can be problematic for graziers because of stock welfare.

Opportunities:
- There is an opportunity for 'No Fence' technology to be used to allow grazing to target specific areas and ensure excellent animal welfare.

- Extending low level grazing management across the site on rotation following restoration of PAWS stands. It has been reported that this could be the largest opportunity to recreate wood pasture in the Chilterns (N. Sanderson, Ecological and Historic Assessment of Penn Wood, Aug 2000).

- Continued restoration and management of a wood pasture habitat at Penn Wood could provide suitable conditions for priority species for conservation including birds such nightjar and woodlark

Factors Causing Change

- Rhododendron ponticum could spread within the wood pasture from the main central rides
- Open areas within the wood are succeeding to scrub and woodland thickets, dominated by birch and beech
- Bracken cover is also increasing in the open habitat, though mechanical cutting and cattle grazing in the coming years will reduce the extent of this succession

Long term Objective (50 years+)

Wood pasture management has been implemented over approximately one third of the site area, in the southern half of the wood. Grazing by cattle will be used to manage a balance of approximately 50% woodland, 20% scrub and 30% open grassland in this area with widely spaced trees. Bracken and bramble will be present but part of the scrub component and therefore at a manageable level.

As PAWS compartments become restored then wood pasture management will be extended into these areas, and open glades with species rich acid grassland will be managed in the PAWS areas until this time. No invasive non-native species will be present within the wood pasture. Old growth trees will be in open conditions and not in competition with younger trees.

Over time and with continued wood pasture management, some of the beech and oak planted in the 18th century will develop into future old growth trees. With careful manipulation of the grazing pressure, some saplings will also develop in patches to become future veteran trees as well.

Several seasonal pool/ponds will be found within the grazed area which is vital for a diverse array of invertebrates to thrive in.

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

Approximately 57ha of wood pasture habitat across cpts 1a, 1b, 1c and 2d will be managed to the required balance of 50% woodland, 20% successional trees/scrub and 30% grassland with widely spaced trees. This will be achieved by the following:-

Grazing
Year-round grazing by Dexter or other appropriate breeds of cattle at a grazing density of 0.2 livestock units per ha.

Internal fencing

Approximately 1367m of internal stock fencing within the grazed areas of cpts 1a, 1b, 1c and 2d area will be removed 2024/2025 and replaced with 'No Fence' technology spring 2025.

External fencing
Approximately 4400m will be retained as stock fencing with approx. 1508m of barbed and plain wire replaced with stock netting and post and rail at 12 access points. This will be undertaken as an annual rolling inspection and repair programme.

Cattle handling facilities Cpt 1a
Replace existing facility with post and rail corral with provision for a crush. 2024/2025.

Rhododendron ponticum control
Approximately 1ha of rhododendron will be controlled, initially through a regime of cutting and treating regrowth with herbicide subject to Glyphosate ESRA being completed. Next intervention due March 2024.

Bracken control
Mechanically control approximately 2ha of bracken by cut and collect or rolling with a bracken bruiser annually in early August.

4.3 f3 Connecting People with woods & trees

Description

Penn Wood is located in the hamlet of Penn Street in Buckinghamshire. Combined with the surrounding Holmer Green and Tylers Green as well as the larger village of Penn itself, the local population is approximately 8,000. The towns of High Wycombe (pop 125,000) and Amersham (pop 15,000) are 5 miles (8km) south west and north east of the wood respectively.

Penn Wood is a large site with good complex of legal and permissive paths across the whole area, totaling over 6 miles (10km). There is easy access from Penn Street, where there is parking available with permission from the Holy Trinity Church at their car park. There is also limited parking near the village green, along Gravelly Way and off the A404 to the north.

Most of the paths in the wood are un-surfaced but there is a surfaced 0.75 mile (1.2km) easy access path which starts at the main entrance at Holy Trinity Church. There is a permissive bridleway for horse riding from Mop End at the north to the village green at Penn Street. There are 7 main entrances to the wood and there are 3 rights of way running through the wood which link to the surrounding countryside. There is also a link to Common Wood (a wood managed by the Penn and Tylers Green Residents Society with public access - http://commonwood.pennandtylersgreen.org.uk) at the western corner of Penn Wood. Information for visitors is provided at 4 of the entrances: Church gate, Beamond End gate, Justice gate and Goose Pond gate. There are currently two trails through the wood: a short, surfaced and way-marked 0.75 mile (1.2km) circular trail which includes sculptures and carvings produced by local primary school children as part of HLF funded Bringing History to Life project. The second, longer trail 4 mile (7km) is also circular but runs through Penn and Common Woods as well as the privately-owned Penn Estate.

The local community are engaged and interested in the wood. There is a cattle-watchers group, and volunteer wardens

who help with the day to day monitoring of the site. In total, there are 17 volunteers registered at Penn Wood. There is also an active Forest School site within the wood, regularly used by two local primary schools.

Penn Wood is a diverse site with many natural features that may be of interest to visitors. The central avenue comprises a rhododendron lined ride with mature feature trees dating to the Victorian period when the estate belonged to Earl Howe. There are many archaeological features across the site including saw-pits, banks, holloways, quarries and ditches. Natural features of interest include ponds, wood-pasture, colourful and often rare displays of native flora, stands undergoing PAWS restoration and open areas of acid grassland.

The site is well used by locals and visitors. There is currently an average of 8000 day visits per month at the site with main user groups being dog walkers and families, and it is an important resource for the local village and schools. There are approximately 12 other WT woods in the local area (less than 10km) which are all smaller woods. The closest is Common Wood, which connects with Penn Wood through a way-marked trail, and is often visited in conjunction with Penn Wood. Due to its location in the Chilterns, there are many other woodlands, nature reserves and estates in the area which will be attractive to visitors, including a number of National Trust-owned houses and gardens. With so many visitor options in the area, the visitor experience offer at Penn Wood will continue to focus on communicating the Woodland Trust's 'Protect' and 'Restore' messages, to engage visitors in the importance of native woodland and the habitat it provides and show how they can help. Promoting access to other nearby sites and links with local businesses and tourist attractions for visitors is also a key part of Penn Wood development. This will help to encourage a more diverse range of new visitors to the site.

Significance

In a busy part of the country Penn Wood provides a relatively peaceful, accessible and free place for visitors to enjoy. This is one of the largest ancient woodlands open to the public in the Chilterns and offers a good experience to visitors, as well as good connectivity to neighbouring landscape of high amenity value. Saved from becoming a golf course by the local community with help from the Woodland Trust in 1999, the woodland once again provides access to visitors for quiet informal recreation, and will do in perpetuity.

Opportunities & Constraints

Constraints:
- Enhanced signage/ information and activities at the site need to be balanced against preserving its natural qualities.

- There could be a conflict between more grazing animals and an increase in people using the site in the future.

- Formal car parking is limited to one location with other locations dangerous for visitors to use due to roadside parking.

Opportunities:
- Increased community involvement in management of the wood through volunteering opportunities.

- Car park and size of Penn wood make it a good location for holding legacy events and great opportunity to recruit new member on regular basis. increase membership opportunities.

- Further develop relationships with local partners e.g. Chilterns AONB for cross-promotion and joint working on engagement activities including listing Penn on key visitor information websites.

- Continued and expanded use of Penn Wood as a demonstration site to key partners and stakeholders.

- Proximity to London makes it a good location for engaging with partners and potential high end stakeholder.

- Opportunity to upgrade car park and pull in at Beamond End subject to funding.

- A refresh of interpretation across Penn Wood, to include visitor counts subject to funding.

Factors Causing Change

- An increase in visitors is likely to occur through better facilities and greater promotion of the wood. This could also lead to more antisocial behaviour and more conflicts between different user groups.

- Economic changes will affect funding and staff capacity and will impact opportunity to develop and enhance the site.

- Government adopted local housing targets will lead to increased development in the area and further pressure on the wood through increased visitor numbers.

Long term Objective (50 years+)

The woodland will provide an extensive area of quiet informal recreation to a wide range of users both from the local community and from further afield. The use of the site by visitors will be promoted through positive relationships with neighbouring tourist destination sites, with good signage and interpretation.

Penn Wood will offer a high quality visitor experience in line with its Woodland Trust access category A designation (high usage with more than 20 people using one entrance per day).

Open access for a range of users will be retained at the wood in perpetuity and there will be a well-managed network of paths. Well used paths will be made open and sunny in parts to add variety and interest for the visitor, as well benefitting woodland edge wildlife. The wood will be made as safe as practicable through regular safety inspection of trees in high risk zones and inspection of access furniture. Good information will be made available on and off the site to enable visitors to explore and navigate around the wood and to appreciate its inherent qualities. High quality and prominent signage will greet visitors on their arrival to the wood. Penn Wood will be widely promoted in the Chilterns local area as one of largest accessible woods for people to visit and enjoy. The local community will continue to be engaged with the management of the wood through volunteer opportunities.

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

Over the next 5 years the Woodland Trust will improve and maintain the site for the visiting public and continue to offer opportunities for volunteering.

- Approximately 6 miles (10km) of paths and 7 main entrances will be cut and managed on an annual basis to keep

them in good condition and open for use, all year around.

- Remedial works to car parks to be carried out if needed after annual observations.

- Stakeholders and supporters will continue to be engaged and relationship with Penn and Tylers Green Society retained.

- A walk-over tree safety survey will be undertaken along maintained paths and rides every 2 years with any remedial work undertaken in the appropriate timescale.

- The quality of access infrastructure will be inspected formally at least once during this 5 year plan period.

- Provision of further volunteering opportunities for local community through woodland working group and 'Woodland Welcome volunteers' as well as livestock checking volunteers.

- Consultation: public meeting in relation to change to grazing area and use of No Fence technology. 2024/2025.

5. WORK PROGRAMME

Year	Type Of Work	Description	Due Date
2024	SL - Tree Safety Works - Zone A	Work associated with planned tree safety works alongside areas such as car parks, roadsides and boundaries	April
2024	SL - Routine Safety Work	Works associated with undertaking planned visitor and structure safety orientated actions, such as erection/creation or maintenance of safety features such as fencing, rails, re-pointing of retaining walls etc	May
2024	WMM - Wood Pasture Grazing Work	Works associated with the maintenance of grazing regimes to manage wood pasture and parkland sites such as grazier costs, fence repairs, water supply costs	May
2024	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	May
2023	PC - Deer Control - Shooting	Works associated with deer management by shooting – such as stalker costs, high seats, signage, maintenance of tracks and open ground provided specifically for deer management etc	June
2024	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	June
2024	WMM - Ride Management	Works associated with the management of existing rides/open areas for biodiversity - ride edge coppicing and thinning programmes, ditch works	August
2024	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	August
2024	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	August
2024	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	August

Year	Type Of Work	Description	Due Date
2024	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	September
2024	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	October
2024	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	November
2024	NWH - Maintenance Work	Works associated with the maintenance of non-woodland habitats – mechanical management, hay cutting, fence and wall maintenance etc	November
2024	WMI - PAWS Restoration	Works associated with the restoration phase of Planted Ancient Woodland Sites (PAWS) such as halo thinning around existing native trees, thinning and felling works, ride restoration, access improvements to aid restoration.	November
2024	WMI - Ride Restoration	Works associated with the initial restoration, creation or significant reinvestment to new/existing woodland rides such as – initial coppicing and felling for widening, ditching etc.	November
2024	PC - Squirrel Control - Trapping	Works associated with grey squirrel control by live trapping / air rifle shooting / good nature traps – such as controller and volunteer costs, baits, traps, feeding stations etc	December
2024	WMM - NR Management	Work associated with the ongoing maintenance / protection of areas of Natural Regeneration – such as fence and shelter maintenance	December
2024	WMM - Ride Management	Works associated with the management of existing rides/open areas for biodiversity - ride edge coppicing and thinning programmes, ditch works	December
2024	WMI - PAWS Restoration	Works associated with the restoration phase of Planted Ancient Woodland Sites (PAWS) such as halo thinning around existing native trees, thinning and felling works, ride restoration, access improvements to aid restoration.	December
2024	WMI - PAWS Restoration	Works associated with the restoration phase of Planted Ancient Woodland Sites (PAWS) such as halo thinning around existing native	December

Year	Type Of Work	Description	Due Date
		trees, thinning and felling works, ride restoration, access improvements to aid restoration.	
2024	AW - Management Access Maintenance	Works associated with the maintenance of management access infrastructure and tracks Such as repairs to vehicle entrance points, maintaining vehicle bridges and repairing / reinstating surfaced management access routes.	February
2025	SL - Safety / Legal Obligation Work (SODS)	Works associated with specific Health and Safety legislation or associated legal requirements such as – safety fencing of quarries, safety requirements stipulated in planning consent for car parks or entrance points etc	February
2025	SL - Tree Safety Works - Zone A	Work associated with planned tree safety works alongside areas such as car parks, roadsides and boundaries	February
2025	SL - Tree Safety Works - Zone B	Work associated with planned tree safety works alongside routes such as paths and rides within the woodland	February
2025	SL - Tree Safety Works - Zone A	Work associated with planned tree safety works alongside areas such as car parks, roadsides and boundaries	February
2024	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	February
2025	WMI - Invasive Plant Control	Works associated with the initial phase of invasive plant control – such as rhododendron felling and mulching	February
2024	WMM - Invasive Plant Control	Works associated with the on-going management of invasive plants– such a repeat cutting and control treatments	March
2025	WMM - Wood Pasture Grazing Work	Works associated with the maintenance of grazing regimes to manage wood pasture and parkland sites such as grazier costs, fence repairs, water supply costs	March
2025	CS - General Consultancy	Use of external consultant to support Woodland Trust site management	April
2025	PC - Deer Control - Shooting	Works associated with deer management by shooting – such as stalker costs, high seats, signage, maintenance of tracks and open ground provided specifically for deer management etc	April
2025	AW - Management Access Maintenance	Works associated with the maintenance of management access infrastructure and tracks Such as repairs to vehicle entrance points, maintaining vehicle bridges and repairing / reinstating surfaced management access routes.	May

Year	Type Of Work	Description	Due Date
2025	CS - Planning Permissions / Designs	Use of external consultants to undertake planning permission designs, supporting documents, oversee planning application process and presentation to planning committees	May
2025	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	May
2025	SL - Tree Safety Works - Zone B	Work associated with planned tree safety works alongside routes such as paths and rides within the woodland	June
2025	WMM - General Site Management	Works associated with maintaining conservation and physical features within the sites such as boundary ditches, fences and walls, hedges,	June
2025	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	June
2024	PC - Deer Control - Shooting	Works associated with deer management by shooting – such as stalker costs, high seats, signage, maintenance of tracks and open ground provided specifically for deer management etc	June
2025	PE - Volunteer on site activity	Support for activities at the site of visiting volunteer groups, such as corporate partners, local groups. Support could include tools, external trainers or materials for work parties	July
2025	WMM - Ride Management	Works associated with the management of existing rides/open areas for biodiversity - ride edge coppicing and thinning programmes, ditch works	August
2025	WMM - Wood Pasture Management	Works associated with the on-going management of wood pasture and parkland sites – such as the need to mechanically manage open areas, bracken control etc	August
2025	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	August
2025	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	August

Year	Type Of Work	Description	Due Date
2025	CS - General Consultancy	Use of external consultant to support Woodland Trust site management	August
2025	AW - Management Access Maintenance	Works associated with the maintenance of management access infrastructure and tracks Such as repairs to vehicle entrance points, maintaining vehicle bridges and repairing / reinstating surfaced management access routes.	September
2025	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	September
2025	NWH - Grazing Work	Works associated with the maintenance of grazing of a non-woodland habitat to protect and enhance its conservation value – grazier costs, fence repairs, water supply costs etc	November
2025	WMM - Wood Pasture Grazing Work	Works associated with the maintenance of grazing regimes to manage wood pasture and parkland sites such as grazier costs, fence repairs, water supply costs	November
2025	WMM - Wood Pasture Management	Works associated with the on-going management of wood pasture and parkland sites – such as the need to mechanically manage open areas, bracken control etc	November
2025	AW - Visitor Access Infrastructure	Works associated with the construction of a new or extension to existing car parking facilities.	November
2025	WMI - Ride Restoration	Works associated with the initial restoration, creation or significant reinvestment to new/existing woodland rides such as – initial coppicing and felling for widening, ditching etc.	November
2025	WMI - PAWS Restoration	Works associated with the restoration phase of Planted Ancient Woodland Sites (PAWS) such as halo thinning around existing native trees, thinning and felling works, ride restoration, access improvements to aid restoration.	November
2025	WMM - Invasive Plant Control	Works associated with the on-going management of invasive plants– such a repeat cutting and control treatments	December
2025	PC - Squirrel Control - Trapping	Works associated with grey squirrel control by live trapping / air rifle shooting / good nature traps – such as controller and volunteer costs, baits, traps, feeding stations etc	December
2025	WMM - Ride Management	Works associated with the management of existing rides/open areas for biodiversity - ride edge coppicing and thinning programmes, ditch works	December

Year	Type Of Work	Description	Due Date
2025	WMM - NR Management	Work associated with the ongoing maintenance / protection of areas of Natural Regeneration – such as fence and shelter maintenance	December
2026	WMM - Invasive Plant Control	Works associated with the on-going management of invasive plants– such a repeat cutting and control treatments	February
2026	PE - Interpretation & Signage	Works associated with the provision of visitor signage, waymarking, interpretation features and leaflets	March
2026	SL - Routine Safety Work	Works associated with undertaking planned visitor and structure safety orientated actions, such as erection/creation or maintenance of safety features such as fencing, rails, re-pointing of retaining walls etc	May
2026	WMM - Wood Pasture Grazing Work	Works associated with the maintenance of grazing regimes to manage wood pasture and parkland sites such as grazier costs, fence repairs, water supply costs	May
2026	WMM - Wood Pasture Grazing Work	Works associated with the maintenance of grazing regimes to manage wood pasture and parkland sites such as grazier costs, fence repairs, water supply costs	May
2026	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	June
2025	PC - Deer Control - Shooting	Works associated with deer management by shooting – such as stalker costs, high seats, signage, maintenance of tracks and open ground provided specifically for deer management etc	June
2026	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	July
2026	WMM - Ride Management	Works associated with the management of existing rides/open areas for biodiversity - ride edge coppicing and thinning programmes, ditch works	August
2026	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	August
2026	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing	August

Year	Type Of Work	Description	Due Date
		pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	
2026	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	September
2026	WMM - Wood Pasture Management	Works associated with the on-going management of wood pasture and parkland sites – such as the need to mechanically manage open areas, bracken control etc	September
2026	WMI - Ride Restoration	Works associated with the initial restoration, creation or significant reinvestment to new/existing woodland rides such as – initial coppicing and felling for widening, ditching etc.	November
2026	WMI - PAWS Restoration	Works associated with the restoration phase of Planted Ancient Woodland Sites (PAWS) such as halo thinning around existing native trees, thinning and felling works, ride restoration, access improvements to aid restoration.	November
2026	WMM - Wood Pasture Grazing Work	Works associated with the maintenance of grazing regimes to manage wood pasture and parkland sites such as grazier costs, fence repairs, water supply costs	November
2026	WMM - NR Management	Work associated with the ongoing maintenance / protection of areas of Natural Regeneration – such as fence and shelter maintenance	December
2026	WMM - Ride Management	Works associated with the management of existing rides/open areas for biodiversity - ride edge coppicing and thinning programmes, ditch works	December
2026	PC - Squirrel Control - Trapping	Works associated with grey squirrel control by live trapping / air rifle shooting / good nature traps – such as controller and volunteer costs, baits, traps, feeding stations etc	December
2026	WMM - Ancient / Veteran Tree Work	Works associated with the on-going management of ancient, veteran or culturally significant trees including the creation of next generation of such trees. Activities may include works to prolong the life of the tree, removal of competing trees, the creation of new pollards	December
2027	SL - Legal Obligation Work	Works that have to be undertaken by Woodland Trust as part of with legal agreements made with third parties such as erection of boundary fencing, surfacing of joint access tracks , maintenance of drainage ditches. Also works associated with safeguarding the Woodland Trust legal position – such as erection of boundary markers on open	February

Year	Type Of Work	Description	Due Date
		boundaries, removal of illegal third party structures/vehicles/ campsites	
2027	WMM - Invasive Plant Control	Works associated with the on-going management of invasive plants– such a repeat cutting and control treatments	February
2027	WMM - Wood Pasture Grazing Work	Works associated with the maintenance of grazing regimes to manage wood pasture and parkland sites such as grazier costs, fence repairs, water supply costs	May
2026	PC - Deer Control - Shooting	Works associated with deer management by shooting – such as stalker costs, high seats, signage, maintenance of tracks and open ground provided specifically for deer management etc	June
2027	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	June
2026	PE - Volunteer on site activity	Support for activities at the site of visiting volunteer groups, such as corporate partners, local groups. Support could include tools, external trainers or materials for work parties	July
2027	WMM - Ride Management	Works associated with the management of existing rides/open areas for biodiversity - ride edge coppicing and thinning programmes, ditch works	August
2027	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	August
2027	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	August
2027	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	September
2027	WMM - Wood Pasture Management	Works associated with the on-going management of wood pasture and parkland sites – such as the need to mechanically manage open areas, bracken control etc	September

Year	Type Of Work	Description	Due Date
2027	WMI - PAWS Restoration	Works associated with the restoration phase of Planted Ancient Woodland Sites (PAWS) such as halo thinning around existing native trees, thinning and felling works, ride restoration, access improvements to aid restoration.	November
2027	WMI - Ride Restoration	Works associated with the initial restoration, creation or significant reinvestment to new/existing woodland rides such as – initial coppicing and felling for widening, ditching etc.	November
2027	WMM - Wood Pasture Grazing Work	Works associated with the maintenance of grazing regimes to manage wood pasture and parkland sites such as grazier costs, fence repairs, water supply costs	November
2027	PC - Squirrel Control - Trapping	Works associated with grey squirrel control by live trapping / air rifle shooting / good nature traps – such as controller and volunteer costs, baits, traps, feeding stations etc	December
2027	WMM - Invasive Plant Control	Works associated with the on-going management of invasive plants– such a repeat cutting and control treatments	December
2027	WMM - Ride Management	Works associated with the management of existing rides/open areas for biodiversity - ride edge coppicing and thinning programmes, ditch works	December
2027	WMM - NR Management	Work associated with the ongoing maintenance / protection of areas of Natural Regeneration – such as fence and shelter maintenance	December
2027	WMM - Wood Pasture Grazing Work	Works associated with the maintenance of grazing regimes to manage wood pasture and parkland sites such as grazier costs, fence repairs, water supply costs	February
2028	WMM - Invasive Plant Control	Works associated with the on-going management of invasive plants– such a repeat cutting and control treatments	February
2027	CS - Ecological Survey & Assessment	Use of external consultants to support the provision of ecological surveys, assessment and biodiversity / species monitoring	February
2028	WMM - Wood Pasture Grazing Work	Works associated with the maintenance of grazing regimes to manage wood pasture and parkland sites such as grazier costs, fence repairs, water supply costs	May
2027	PC - Deer Control - Shooting	Works associated with deer management by shooting – such as stalker costs, high seats, signage, maintenance of tracks and open ground provided specifically for deer management etc	June
2028	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing	June

Year	Type Of Work	Description	Due Date
		pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	
2027	PE - Volunteer on site activity	Support for activities at the site of visiting volunteer groups, such as corporate partners, local groups. Support could include tools, external trainers or materials for work parties	July
2028	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	August
2028	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	August
2028	AW - Visitor Access Maintenance	Works associated with the maintenance of existing visitor access infrastructure and paths. Work could include items such as repairing pot-holes and path surfaces, mowing grass paths, path widening, maintaining footbridges and steps, cleaning signage etc,	September
2028	WMI - Ride Restoration	Works associated with the initial restoration, creation or significant reinvestment to new/existing woodland rides such as – initial coppicing and felling for widening, ditching etc.	November
2028	SL - Tree Safety Works - Zone A	Work associated with planned tree safety works alongside areas such as car parks, roadsides and boundaries	November
2028	WMI - PAWS Restoration	Works associated with the restoration phase of Planted Ancient Woodland Sites (PAWS) such as halo thinning around existing native trees, thinning and felling works, ride restoration, access improvements to aid restoration.	November
2028	WMM - Wood Pasture Grazing Work	Works associated with the maintenance of grazing regimes to manage wood pasture and parkland sites such as grazier costs, fence repairs, water supply costs	November
2028	WMM - Ancient / Veteran Tree Work	Works associated with the on-going management of ancient, veteran or culturally significant trees including the creation of next generation of such trees. Activities may include works to prolong the life of the tree, removal of competing trees, the creation of new pollards	December
2028	WMM - NR Management	Work associated with the ongoing maintenance / protection of areas of Natural Regeneration – such as fence and shelter maintenance	December

Year	Type Of Work	Description	Due Date
2028	WMM - Ride Management	Works associated with the management of existing rides/open areas for biodiversity - ride edge coppicing and thinning programmes, ditch works	December
2028	WMM - Invasive Plant Control	Works associated with the on-going management of invasive plants– such a repeat cutting and control treatments	December
2028	PC - Squirrel Control - Trapping	Works associated with grey squirrel control by live trapping / air rifle shooting / good nature traps – such as controller and volunteer costs, baits, traps, feeding stations etc	December
2028	CS - Ecological Survey & Assessment	Use of external consultants to support the provision of ecological surveys, assessment and biodiversity / species monitoring	December
2028	WMM - Wood Pasture Grazing Work	Works associated with the maintenance of grazing regimes to manage wood pasture and parkland sites such as grazier costs, fence repairs, water supply costs	February

APPENDIX 1 : COMPARTMENT DESCRIPTIONS

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
1a	32.26	Beech	1900	Wood pasture	Archaeological features, Sensitive habitats/species on or adjacent to site	Area of Outstanding Natural Beauty, Green Belt, Planted Ancient Woodland Site
Mainly widely spaced mature pedunculate oak and beech planted in 19th century with open grassland in between the trees. Several larger pre-plantation (old growth) beech trees are present. Large patches of bracken and bramble are present in the grassland. The compartment is much more open in eastern half. Avenues of rhododendron present to the north with specimen conifer trees. Rhododendron has spread further into the compartment but the 2017 operation has mulched the majority of this, and herbicide treatment will continue in order to eradicate will be monitored. There are Medieval wood-banks (hollow way) on the southern boundary.						
1b	22.79	Birch (downy/silver)	1900	Wood pasture	Archaeological features, Sensitive habitats/species on or adjacent to site	Area of Outstanding Natural Beauty, Green Belt, Planted Ancient Woodland Site
Mainly widely spaced mature pedunculate oak and beech planted in 19th century with open grassland in between these trees. Blocks of younger woodland (less than 20 years) also present especially in the eastern half, and this is dominated by naturally regenerating birch with some beech and oak present; the grassland forms smaller glades in this half. Patches of bracken and bramble are present. Rhododendron avenues to the west and north with specimen conifer trees; Rhododendron has spread further into the compartment but the 2017 operation has mulched the majority of this, and herbicide treatment and monitoring will continue in order to eradicate. There are Medieval wood-banks (hollow way) on the south-eastern boundary, and pits of historic origin which have been mapped and are shown in the study of Penn Wood by N A Sanderson (Aug 2000).						
1c	2.26	Birch (downy/silver)	1986	Wood pasture	Archaeological features, Sensitive habitats/species on or adjacent to site	Area of Outstanding Natural Beauty, Green Belt, Planted Ancient Woodland Site
Plantation of much self sown birch, and beech and oak were planted in 1986 with some red oak Rhododendron is present on the eastern boundary but the 2017 operation has mulched the majority of this, herbicide treatment and monitoring will be continue in order to eradicate.						

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
2a	2.07	European larch	1979	PAWS restoration	Archaeological features	Area of Outstanding Natural Beauty, Green Belt, Planted Ancient Woodland Site
Plantation of European larch and beech planted in 1979. The larch was last thinned in 2014.						
2b	1.67	Norway spruce	1979	PAWS restoration	Archaeological features	Area of Outstanding Natural Beauty, Green Belt, Planted Ancient Woodland Site
Plantation of Norway spruce and southern beech planted in 1979. This was last thinned by lines in 2012.						
2c	3.6	European larch	1986	PAWS restoration	Archaeological features	Area of Outstanding Natural Beauty, Green Belt, Planted Ancient Woodland Site
Plantation of European larch and sessile oak planted in 1986 and last thinned (by lines) in 2010. There is Rhododendron in north and west which is part of the avenue complex and has spread further into the compartment, but the 2017 operation has mulched the majority of this, and herbicide treatment will continue in order to eradicate.						
2d	1.14	Oak (pedunculate)	1983	PAWS restoration	Archaeological features, Sensitive habitats/species on or adjacent to site	Area of Outstanding Natural Beauty, Green Belt, Planted Ancient Woodland Site
Plantation of Norway spruce and pedunculate oak planted in 1983. The spruce was last thinned to waste in 2009 and is now present only in small clumps, with much naturally regenerating birch within the stand. Also beech, cherry, ash and hawthorn present and gaps of grassland. There is an old pond site to the south of the compartment. Rhododendron is present and invading from the boundary with the house, but the 2017 operation has mulched the majority of this, and herbicide treatment will continue in order to eradicate.						
2e	0.89	Beech	1965	PAWS restoration	Archaeological features, Sensitive habitats/species	Area of Outstanding Natural Beauty, Green

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
					on or adjacent to site	Belt, Planted Ancient Woodland Site
Plantation of European larch and beech planted in 1965 with the larch now a minor component, due to silvicultural works in past. No further thinning of conifers is required for restoration. Patches of Rhododendron are present however the 2017 operation has mulched the majority of this, and herbicide treatment and monitoring will continue in order to eradicate.						
2f	3.81	European larch	1982	PAWS restoration	Archaeological features	Area of Outstanding Natural Beauty, Green Belt, Planted Ancient Woodland Site
Plantation of European larch, pedunculate oak and ash planted in 1982, with self sown beech and birch (now taller than planted oak) present. Rhododendron present especially to east, but the 2017 operation has mulched the majority of this, and herbicide treatment and monitoring will continue in order to eradicate. Medieval bank and hollow way present on southern boundary. Last operation was undertaken in 2014, and recovery time is required to allow canopy closure and minimise threat from coarse vegetation succeeding.						
2g	2.23	Japanese larch	1982	PAWS restoration		Area of Outstanding Natural Beauty, Green Belt, Planted Ancient Woodland Site
Plantation of Japanese larch, pedunculate and sessile oak with Scots pine to east, planted in 1982 and last thinned by lines in 2007 and 20% thin in 2023.. Minor components of ash, cherry and birch also present. Old sewage sludge pipes still evident (southwest corner), from when this was spilled into the wood with nettle abundant close by. Medieval boundary bank and hollow way present along southwest boundary, needs to be marked out when carrying out operations .						
2h	3.67	Beech	1969	PAWS restoration		Area of Outstanding Natural Beauty, Green Belt, Planted Ancient Woodland Site
Plantation of European larch and beech planted in 1969. The larch has been routinely thinned and the last operation was in 2023, where larch and beech were thinned. Extensive mammal damage present on the beech. Mature specimen Douglas fir trees situated along ride edge to south. Much bracken present to the south. In 2017 operation						

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
has mulched the majority of the Rhododendron, herbicide treatment and monitoring will continue in order to eradicate. Drifts of bluebells are present. Sewage pipes also present. Ride management along southern edge occurred in 2023						
2i	1.95	Douglas fir	1982	PAWS restoration		Area of Outstanding Natural Beauty, Green Belt, Planted Ancient Woodland Site
Plantation of Douglas fir and pedunculate oak planted in 1982 with much birch regeneration. The conifers were thinned by lines in 2011 and a 20% thin in 2023						
2j	1.08	Norway spruce	1965	PAWS restoration		Area of Outstanding Natural Beauty, Green Belt, Planted Ancient Woodland Site
Plantation of Norway spruce, European larch and beech planted in 1965. The southern front edge of the compartment has been thinned more routinely and beech is dominant here. Elsewhere the compartment is dominated by conifers and much darker. Last operation was undertaken in 2012. Rhododendron has spread further into the compartment but the 2017 operation has mulched the majority of this, herbicide treatment and monitoring will continue in order to ensure eradicate. Ride management along southern edge occurred in 2023						
2k	5.75	European larch	1970	PAWS restoration		Area of Outstanding Natural Beauty, Green Belt, Planted Ancient Woodland Site
Plantation of European larch and beech planted in 1970. The larch has been routinely thinned. Large dell present in the northwest corner. Extensive mammal damage present on the beech. Rhododendron is invading from the rides on the east and south sides, but the 2017 operation has mulched the majority of this, herbicide treatment and monitoring will continue in order to eradicate. Last operation was undertaken in 2012. Next operation planned for 2024						

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
Ride management along southern edge occurred in 2023						
2l	2.81	Oak (sessile)	1984	PAWS restoration		Area of Outstanding Natural Beauty, Green Belt, Planted Ancient Woodland Site
Plantation of European larch and sessile oak planted in 1984 with some self sown birch and beech. The large Beamond End Pond is present in northwest corner which was de-silted in 2005, 2007 and 50% of the reed mace was cleared in 2016, and opened up around its perimeter. The conifer element was thinned heavily in 2015. Oak was being suppressed by conifers and there was limited ground vegetation other than mosses, now coarse vegetation is present bracken / bramble. Re-planting of mixed BL's to take place early 2018 on southern and western sides of Cpt. North and east to be retained as scrub / successional habitat adjacent to pond and main east-west path.						
2m	1.97	European larch	1976	PAWS restoration		Area of Outstanding Natural Beauty, Green Belt, Planted Ancient Woodland Site
Plantation of beech and European larch planted in 1976, in 3 small blocks. The conifers have been thinned by line and selectively, latest operation 2016. The broadleaves are being suppressed within the blocks by the conifers. The matrix between the blocks is young birch and oak (less than 20 years) with grass and bracken.						
2n	1.64	European larch	1981	PAWS restoration		Area of Outstanding Natural Beauty, Green Belt, Planted Ancient Woodland Site
Plantation of beech, pedunculate oak and European larch planted in 1981. The larch was thinned by lines in 2004 and 2010. Rhododendron is invading from the ride on the south side, but the 2017 operation has mulched the majority of this, and herbicide treatment and monitoring will continue in order to eradicate. Acid grassland with heather present along this section of the ride also.						
2o	3.99	Beech	1980	PAWS restoration		Area of Outstanding Natural Beauty, Green Belt, Planted Ancient Woodland Site

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
Plantation of Douglas fir, European larch, Western hemlock, Norway spruce, pedunculate oak and beech; planted in early 1980's. The conifers were last thinned by lines in 2004 and again in 2010, and then heavily in 2015, last operation 2021. Acid grassland with heather present at southern edge, and also some heather present within the compartment. Re-planting of mixed BL's to take place early 2018.						
2p	1.91	European larch	1985	PAWS restoration		Area of Outstanding Natural Beauty, Green Belt, Planted Ancient Woodland Site
Plantation of pedunculate oak and European larch planted in 1985. Archaeological features are present (pits and depressions). The larch was thinned by lines in 2003 & 2010, last thinned 2021. Rhododendron is invading from the ride on the south side, but the 2017 operation has mulched the majority of this, and herbicide treatment and monitoring will continue in order to eradicate.						
2q	1.81	Oak (pedunculate)	1981	PAWS restoration		Area of Outstanding Natural Beauty, Green Belt, Planted Ancient Woodland Site
Plantation of European larch and pedunculate oak planted in 1981 with self sown birch and sycamore, and a minor component of planted cherry. The larch was line thinned in 2013 and 2016, last thinned in 2021. Rhododendron has spread further into the compartment but the 2017 operation has mulched the majority of this, and herbicide treatment will continue in order to eradicate.						
2r	7.13	Beech	1975	PAWS restoration		Area of Outstanding Natural Beauty, Green Belt, Planted Ancient Woodland Site
Plantation of Western hemlock and beech, planted in 1975, with a scattering of mature oaks thought to be planted in 19th century. Much of the hemlock in the central portion of this compartment has been felled creating a habitat of acid grassland and heather through the middle. The hemlock was thinned in 2003, 2008, 2016 and 2021. It is now present in the compartment in clumps, covering no more than 15% of the total area. Drifts of hemlock seedlings are now growing in the middle of the area, and are being managed by pulling.						

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
2s	24.99	Beech	1978	PAWS restoration		Area of Outstanding Natural Beauty, Green Belt, Planted Ancient Woodland Site
Plantation of Corsican pine and beech planted in 1978 together with areas of pure broadleaved woodland. The conifers are present in 6 distinct blocks, which can be viewed on the PAWS strategy map. The pine was thinned in 2012 ,2016 and 4X blocks of European larch thinned in 2020. In between the conifer blocks the woodland is broadleaved and mixed structured. There is a scattering of old growth trees (beech and oak) including a hollow veteran oak. These older trees are mixed with planted mature oak and beech and also more recent thickets of natural regeneration consisting of beech and birch. The compartment overall is approximately 40% conifer plantation (containing some broadleaves) and 60% pure broadleaves. There is a screen of rhododendron and cherry laurel spreading from the church perimeter in the south-eastern corner, which was reduced in 2017 but needs further work to stop it from spreading . A mediaeval wood bank exists along the northern boundary. Small open grassy areas are present.						
2t	3.01	Douglas fir	1978	PAWS restoration		Area of Outstanding Natural Beauty, Green Belt, Planted Ancient Woodland Site
Plantation of Douglas fir, European larch, beech and pedunculate oak planted in 1978. A minor component of self sown birch is present. The Douglas fir in this compartment was last thinned in lines in 2011 and 2020, the Eastern end of this compartment was not thinned in the last operation. There is medieval wood bank on boundary with Compartment 2s.						
2u	1.21	Beech	1965	PAWS restoration		Area of Outstanding Natural Beauty, Green Belt, Planted Ancient Woodland Site
Plantation of European larch and beech planted in 1965, which was last selectively thinned in 2011 and 2020 (note thinning of cpt was completed). The stand is now over 70% broadleaved and will require one further thin of the larch to be restored. Mediaeval wood bank present on boundary with Compartment 2s and enclosure bank along northern boundary.						
3a	5.72	Beech	1900	High forest		Area of Outstanding Natural Beauty, Green

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
						Belt, Planted Ancient Woodland Site
A mixture of mature beech and pedunculate oak planted towards end of 19th century. Mature rowan and birch also present, with younger beech, all of which are probably self sown. This is the most important area of the woodland for old growth trees with over 20 scattered across this compartment (mostly beech). There are several open glades containing patches of heather but also much bracken and rush. Drifts of bluebells are present beneath the trees.						
3b	2.64	Beech	1900	High forest		Area of Outstanding Natural Beauty, Green Belt, Planted Ancient Woodland Site
Area of broadleaved woodland contained within surrounding conifer blocks. Mostly widely spaced mature beech planted towards the end of 19th century with young natural regeneration of mostly birch and beech in between. The compartment is more open and grassy through its center. Birch coppice along southern ride edge for Ride management, occurred in 2023						
3c	20.78	Beech	1900	High forest		Area of Outstanding Natural Beauty, Green Belt, Planted Ancient Woodland Site
Broadleaved woodland consisting of widely spaced beech and pedunculate oak planted at end of 19th century. There is a matrix of open grassy glades and clumps of younger natural regeneration of birch and beech between these older trees. A proportion of the compartment, approximately 25%, consists of recently restored PAWS conifer plantations from the 1960's and 70's. swaiths of blue bells can be found in this compartment. European larch and Scots pine remain from this as a minor component. Last operation 2021 20% thin of beech.						
3d	9.47	Beech	1954	PAWS restoration		Area of Outstanding Natural Beauty, Green Belt, Planted Ancient Woodland Site
Plantations of European larch and beech planted in 1954. There are now only remnants of larch present plus a minor component of pedunculate oak. Pockets of young self sown birch and beech are present, which are probably the result of wind-blow of the plantation. Rhododendron and cherry laurel thickets present to the north, but the 2017 operation has mulched the majority of this, and herbicide treatment will continue in order to eradicate. Several						

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
small glades present, dominated by bracken but containing occasional heather as well as grasses. The beech was selectively thinned in 2016.						
3e	1.31	Oak (pedunculate)	1986	High forest		Area of Outstanding Natural Beauty, Green Belt, Planted Ancient Woodland Site
Plantation of beech and oak planted in 1986 with some red oak and much self sown birch, especially in the northern half.						
3f	0.82	Beech	1986	High forest		Area of Outstanding Natural Beauty, Green Belt, Planted Ancient Woodland Site
Young beech, pedunculate oak, ash and hornbeam plantation with some exotics such as red oak and Norway maple planted in 1986 with self sown birch, ash, and hazel. One of the only chalk rich areas in the woodland and because of this the ground flora is diverse containing species such as woodruff, sanicle and black bryony amongst others. A medieval hollow way is present on the northern boundary with compartment 1b.						

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.

Windblow/Windthrow
Trees or groups of trees blown over (usually uprooted) by strong winds and gales.