WOODLAND TRUST

Wormley Wood & Nut Wood

Management Plan

2017-2022

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MAPS

THE WOODLAND TRUST

INTRODUCTION

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

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

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

PLAN REVIEW AND UPDATING

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 Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations.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

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

WOODLAND MANAGEMENT APPROACH

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

Our strategic aims are to:

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

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

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

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

The following guidelines help to direct our woodland management:

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

SUMMARY

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

1.0 SITE DETAILS

Site name:	Wormley Wood & Nut Wood
Location:	Hoddesdon nr Hertford
Grid reference:	TL317057, OS 1:50,000 Sheet No. 166
Area:	142.51 hectares (352.15 acres)
Designations:	Ancient Semi Natural Woodland, Archeological Site, National Nature Reserve, Planted Ancient Woodland Site, Site of Special Scientific Interest, Special Area of Conservation

2.0 SITE DESCRIPTION

2.1 Summary Description

Located less than 20 miles (32km) from central London, these two neighbouring ancient woods are rich in native oak and hornbeam. In spring, they are one of the best places in Hertfordshire to enjoy drifts of bluebells, while in summer, visitors have a good chance of spotting one of Britain's rarest butterflies, the purple emperor.

2.2 Extended Description

Wormley Wood and Nut Wood form 142ha of predominantly Ancient Semi-Natural Woodland lying between Hertford and the M25. It is part of the Broxbourne Woods National Nature Reserve (NNR), one of the largest and most northerly expanses of sessile oak and hornbeam woodland in Europe. Its structure and comparative rarity has given it European importance and it has been designated a Special Area of Conservation (SAC), qualifying as sub-Atlantic and medio-European oak or oak-hornbeam forest of the Carpinion betuli (Oak-hornbeam forest).

As well as being the only NNR in Hertfordshire, the wood is also designated a Site of Special Scientific Interest (SSSI) due to its varied woodland structure, wide habitat diversity and a correspondingly rich flora. In addition there are the numerous ancient hornbeam pollards and coppice stools that adorn the wood, a strong characteristic of the traditional woods in the area.

Whilst most of the woodland is ancient in origin, in the past it was common for areas to be cleared and brought either into agricultural production during the 1800's or more recently (post WW1) replanted with conifers. At the time of the agricultural recession in the late 1800's, the areas formerly cleared of trees, visible in the county epoch maps, were allowed to revert back to woodland. The areas planted with conifers have been largely harvested or heavily thinned allowing the wood to develop more semi-natural broadleaf characteristics again. These dense, less mature areas provide a distinct contrast to the open high forest in the rest of the wood.

Nestled in between outer London's busy towns, the Broxbourne Woods and immediate area has a surprisingly rural feel; heavily wooded and interspersed with varied agriculture covering the gently undulating Hertfordshire plateau. The site has a varied aspect with soils predominantly derived from acidic London clay with scattered gravel deposits. The woodland is easily accessible, being only a few miles from the M25 and close to large population centres. Currently management access is poor, and can only be gained via 4wd along the bridleway through Bencroft Wood, or via Calves Croft Farm to the south.

Wormley Wood has been managed intensively since at least medieval times for timber and coppice-wood production. A network of ancient earth banks covers the entire wood. These are thought to be echoes of late Bronze Age field systems, old track and drove ways, later agricultural clearances and settlements, and in the east-west parish boundary a possible Saxon Kingdom boundary. Some of the older ponds and boggy areas throughout the wood hold pollen records dating back to the Neolithic. A Grade II Listed coal post can also be found in the wood dating back to around 1860 it is one of 250 scattered around the outskirts of London that mark points where duty was once collected on coal and wine entering the city. The tax money collected helped to develop infrastructure in the capital and it is thanks to these that many of the bridges over the Thames were built. There is extensive remnant WW2 infrastructure to the west of the wood as Ponsbourne Railway Tunnel was the focus of anti-aircraft emplacements and a gun train used in the protection of London.

Wormley Wood is a unique and important habitat, steeped in history, and hugely appreciated by the public.

3.0 PUBLIC ACCESS INFORMATION

3.1 Getting there

By bus:
The nearest bus stop is located to the south of Wormley Wood on Hammondstreet Rd, opposite Gladding Road. Services are provided by Intalink from Chesunt (no. 245 & 247) and Waltham Cross (no.248). Please confirm timetables and service with Intalink (www.intalink.org) or via the Traveline on 0871 2002233, as rural bus services are subject to regular change. From the bus stop it is a 1km walk west along the pavement and then north up Chain Walk to the wood.

By train
The nearest station is at Bayford, 1.2 miles (2km) north-west, which is served by trains from Finsbury Park. There is also a station at Broxbourne, three miles (4.8km) to the east, which has services from London Liverpool Street. For further information contact National Rail Enquiries on 03457 48 49 50 or visit www.nationalrail.co.uk/

By car:
From the A10, follow the brown tourist attraction signs for Paradise Wildlife Park (post code EN107QA), located on White Stubbs Lane. Bencroft West Car Park is located off White Stubbs Lane approximately 1.4km west of Paradise Wildlife Park. Bencroft West car park has space for around seven cars. Wormley and Nut Woods are about 270 yards (250m) south from the car park along stoned paths..

3.2 Access / Walks

The woods have a good rights of way network and are popular with local people. Public access at the northern end of the woodland is from the Herts County Council Bencroft Wood West car park, which is off White Stubbs Lane. At the southern end there is no car park. Access to the wood is via a public footpath from Darnicle Hill.

A public footpath runs north to south through the wood with ‘squeeze gap’ entrances at White Stubbs Lane and at Hammondstreet Road.

A hard surfaced bridleway also runs through Wormley Wood from Bencroft Wood, at Wormley Wood’s north-east corner. It leaves the wood close to Hammond Street.

Within the wood there is a good network of paths as well as a waymarked trail. The paths have gentle ups and downs, with some steep sections, steps and footbridges. At some times of year the paths can be muddy in places.

4.0 LONG TERM POLICY

The long-term objective for Wormley Wood is the continuation of a primarily sessile oak / hornbeam woodland with sufficient pockets of species and structural diversity to leave it well placed to adapt to a changing climate and new pests and diseases. The rarity, quality and geographical location of the oak / hornbeam habitat (at the upper limit of its range) are the reasons for its multiple designations; and maintaining this main species composition, although not vital, is both desirable and important.

In the mature northern half of the woodland a combination of recruiting natural regeneration clusters and widening exisiting canopy gaps, plus some limited re-coppicing and thinning to improve both age and structural diversity, will be used to further develop the woodland, increasing its resilience and diversity without changing the overall feel. The decay and collapse of increasingly old stools and trees in the wood will continue to punch holes in the canopy, creating additional regen clusters and further structural diversity, particularly where fallen trees remain rooted and alive. The aging oaks covering the northern half of the site and forming much of the overstorey will be left to senescence and beyond resulting in a large number of ancient trees. Ancient hornbeam pollards and stools on banks will be left to collapse and naturally regenerate. Occasional light thinning/selective felling will be used to favour some of the best and most ecologically valuable trees and stools. Standing and lying deadwood will be retained throughout the wood adding to the overall biodiversity.

In the southern half of the wood the blocks of secondary and regenerated woodland will be subject to a rolling programme of cleaning, racking and thinning with a view to developing a productive native broadleaf woodland with thriving understorey, shrub and field layers, and the necessary infrastructure to continue management on a continuous cover basis.

The ancient earth banks should remain evident and undamaged and the coal post preserved in good condition providing an excellent visual reminder of the wood's character and deep historical links to the surrounding landscape and its social history. Both natural and man-made ponds and old boggy areas will be retained for the habitat diversity they provide and the pollen records they preserve.

The Trust's corporate objective of increasing people's awareness and enjoyment of woodland is furthered by the maintenance of the path infrastructure and provision of NNR-wide information boards. Work will continue to improve and maintain the visitor and management access to the site in order to provide welcoming all-weather low-impact access to much of the wood, this will include mowing, scalloping, ride widening, renewal of drainage ditches and old tracks, and maintenance of footbridges, gates, and other Trust furniture, as well as the removal of cluttered, obsolete, or damaged signs and items.

5.0 KEY FEATURES

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

5.1 Ancient Semi Natural Woodland

Description

Wormley Wood
The northern half of the wood (Subcpt. 1a. Old Grove and the central part of Westfield Grove) is superb, rare sessile oak / hornbeam ASNW, normally a central European habitat type (classed as Sub-Atlantic and Medio-European oak or oak-hornbeam forests of the Carpinion betuli). Consequently Wormley is part of the larger Broxbourne Woods NNR, also designated a SSSI and SAC. It falls outside the typical ancient woodland National Vegetation Classifications as Wormley has stands of almost pure hornbeam (Carpinus betulus) coppice and maidens, overstocked with planted sessile oak (Quercus petraea) standards. It comes closest to NVC W10 (Oak-Briar-Bracken) but also with similarities to the NVC W14 (Beech-Oak-Briar) woodland. Ground flora is generally poor, largely due to the heavy shading of a closed oak and hornbeam canopy, possible historical pannage, and more recently deer browsing (primarily muntjac). Across the sub-cpt there is however widespread setting of seed which fizzles out before putting on woody growth except where there is a break in the canopy when it develops into dense hornbeam dominated carpets and clusters of regen with occasional oak and ash saplings mixed in. Along the northern edge of the wood the canopy is more fragmented with bracken, birch and sweet chestnut more widespread, lending it a more ‘heath-like’ feel.

The southern half of the wood (sub cpts 1c, 2a, 2b, the eastern and western ends of Westfield Grove, Long Grove and Derrys Wood) are characterised by younger, wetter, and more mixed species secondary woodland on old assarted fields or regenerating native woodland following clearance, planting, and harvesting of larch post WW2. In this respect they represent secure and recovering PAWS woodland or well established ash-dominated secondary native woodlands. Hornbeam and birch dominate in the regenerating areas, occurring in dense dark thicket-like stands which also support oak, willow, ash, hawthorn, blackthorn, and in sub cpt 2b, a scattering of remnant larch. Often the hornbeam is growing from surviving coppice stools and is a direct link to the original woodland type here. Where the ground is wetter willow dominates alongside the hornbeam and birch. The field layer is generally bare, with patches of grass, moss, and rushes. The external edges of the southern half of the wood preserve the original mature hornbeam oak mix seen in subcpt 1a to the north and reflect the historical character of this southern section of the wood. A further pocket of undisturbed ancient woodland is found in the narrow isolated southern spur of the wood (subcpt 2c) which supports a closed canopy of pure mature hornbeam coppice over a widespread field layer of ransoms, bluebells and grass.

Nut Wood (subcpt 1b)
Another largely ancient woodland (apart from three quarters of the isolated eastern block of woodland which is secondary wood on former fields) but with greater species diversity, less hornbeam coppice and a more fragmented canopy. Mature oak, ash, hornbeam, birch, sycamore, poplar, scots pine, lach and willow are found here, as well as more widespread shrub and field

layers supporting hazel, holly, thorn, elder, briar and bracken alongside rushes nearer the wetter streamside southern edge.

In its entirety this largely native broadleaved woodland is an important habitat in the UK Biodiversity Action Plan (BAP) supporting priority species such as song thrush, bullfinch, lesser spotted woodpecker, the white admiral and purple emperor butterfly. Additionally wet flushes and ponds occur throughout the wood providing valuable habitat diversity, and store within them (at the more peaty flushes in particular) intact prehistoric pollen records predating the clearance and conversion of the wood to coppice silviculture.
A constant reminder of the wood's ancient past are the numerous earth banks and ditches criss-crossing the wood, many of which can be explained by reference to the county series maps, forming old property, track, and woodland boundaries, as well as echoing the bronze age field systems and parish boundary found in the surrounding landscape. These are commonly lined with ancient hornbeam pollards and coppice stools.

Significance

ASNW's have been in existence for many hundreds of years but are a declining resource. As well as being a traditional feature in the landscape they support an abundance of plants, mammals, birds, insects and fungi adapted to poor soils, shady conditions, and coppice silviculture. It is one of the Trust's main objectives to ensure no further loss of ASNW. They take centuries to develop and are irreplaceable. This unique woodland habitat has resulted in Wormley Wood (as part of the Broxbourne Woods NNR) being designated a SSSI and SAC.

Opportunities & Constraints

Opportunities:
Manage deer population to reduce levels of damage.
Improve and restore infrastructure to facilitate sensitive access throughout the site for management and public visitors.
Develop, as a good example of WT best forestry practice, the regenerated southern half of the woodland into a productive and biodiversity/habitat rich native broadleaf woodland, managed under CCF principals.
Seek to buffer / extend ancient woodland through adjacent land acquisition / influencing neighbouring landowners.
Engage with and co-opt mountain bikers to use wood responsibly
Renew and reinvigorate areas of mature woodland by favouring and bringing on clusters of natural regen.

Constraints:
Derelict management tracks and access points not fit for purpose.
Browsing of young natural regeneration by deer.
Motorbikes, quad bikes, and more recently mountain bikes, are using the wood illegally and have damaged the path structure and ground flora by creating new routes and constructing jumps, cuttings, banks, and bridges.
Horse riders straying off the bridleway have the potential to damage woodland ground flora, and poach footpath surfaces.

Factors Causing Change

Closed shade casting canopy
Mountain bike, motorbike, and quad bike damage
Pests and diseases (ash die back, emerald ash borer, oak processionary moth)
Deer Damage
Horse damage
Constrained access limiting nature and scale of forest operations
Forest Operations

Long term Objective (50 years+)

A productive mixed broadleaf native woodland, dominated by the current oak / hornbeam characteristics that provide its unique importance as a woodland ecosystem. Allow the wood to develop silviculturally and naturally, resulting in a varied age range and structure, abundant deadwood, a healthy understorey and ground flora, and good levels of natural regeneration. Ancient woodland characteristics should remain evident throughout the wood.

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

Operational objective:

Through both natural processes and silvicultural interventions (thinning, selective felling, coppicing), retain the healthy and attractive oak / hornbeam woodland with a predominantly hornbeam understorey and evidence of natural regeneration of all ages throughout the wood. Windblown trees, producing gaps in the canopy, should release natural regeneration which should be recruited and enhanced by selective felling and coppicing to develop the age structure of the wood. Continue to meet Natural England's conservation objectives for the site and reduce deer damage of natural regeneration and ground flora to an acceptable level.

Work Programme:

See Map 4 - Proposed Track Improvements
See Map 5 - Proposed Forest Operations
See Map 6 - Annual Maintenance

Annual housekeeping:

Carry out 10 man days/year or 0.5Ha of ride widening along bridleway and thinning of adjacent trees to increase light levels and create welcoming paths. Retain plenty of sallow, a key habitat for the purple emperor butterfly.

Where desirable increase the size of the existing scallops by 30% to provide greater areas of bright open space and early successional habitat.

Maintain the deer management programme in Wormley and undertake annual monitoring of activity and damage levels. If required increase take once large-scale thinning operations start in year 2 with greater site-line and browsing opportunities available.

Seek to buffer and protect the ancient woodland by encouraging adjacent landowners to adopt more sensitive practices.

Be proactive in seeking additional land for joining and linking ancient woodland in this high profile area.

Forest Operations

Year 1 2018-19

Clear and selective felling along 3.8km of track to provide sufficient clearance for track improvement work and the movement of forestry machinery along restored tracks: Estimated volume 70 tons

Restore, repair, and upgrade existing entrances, path and track network to create a stoned circuit of linked tracks through the bulk of the woodland, providing all-weather access for both visitor and management purposes.

Year 2 2019-20

Coppice 1 Ha along northern road edge, retaining healthy standards. Erect temp deer fence. Estimated volume: 80 tons

Thin and recoppice to punch holes in canopy over approx. 1Ha of mature hornbeam coppice and oak standards to release, recruit, and expand areas of natural regeneration. Erect temporary deer fence if necessary. Estimated volume: 80 tons

Year 3 2020-21
Clean, rack , and thin approx. 13. Ha of regenerated woodland in sub-cpt 2b. Estimated volume: 400 tons

Year 4 2021-22
Selective fell, thin and recoppice approx. 4x 1Ha coupes of mature hornbeam coppice and oak standards in sub-cpt. 1a to release, recruit, and expand areas of natural regeneration. Erect temporary deer fence around coupes. Estimated volume: 320 tons

Year 5 2022-23
Clean, rack , and thin approx. 19. Ha of regenerated woodland in sub-cpt 2a. Estimated volume: 570 tons

Year 6+
Remove temporary deer fence from year 1 and 2.

Approximate Percentage area of woodland impacted by forest operations: 30%

For best value proposed forest operations at Wormley maybe bundled with operations at Broad Riding, Thunderfield, and Hoddesdon Park to produce commercially attractive contracts of approx. 1000 tons.

All felling operations subject to consent from Natural England and the Forestry Commission

All track improvements subject to consent from Natural England

2022-2027 Some limited coppicing/thinning to favour regen
2028-2033 Further thinning and coppicing

5.2 Informal Public Access

Description

As part of the larger Broxbourne NNR the wood is well used for quiet and informal recreation, primarily by locals, visitors from nearby towns and those enjoying a longer walk through the countryside. There are several access points around the perimeter leading into a vast network of paths. A circular way marked walk and part of the longer NNR trail meander through the wood. A hard surfaced bridleway and public footpaths run north-south through the site forming part of 2 formal trails, the Hertfordshire Trail (1 loop around Hertfordshire) and Chain Walk (15 linked circular walks) The adjoining Bencroft Wood has two well used car parks a short distance from the Trust boundary.
Site information boards provide descriptions of the access provision.

Significance

Wormley's size and location make it a natural attraction for the local population who can enjoy and appreciate the varied woodland and its associated habitats.

Informal Public Access raises people's awareness and enjoyment of woodland, fulfilling one of the Trust's four corporate objectives.

Opportunities & Constraints

Opportunities:
Increase the profile of, and access to, Wormley as part of the wider network of Broxbourne NNR woods owned by the Trust through infrastructure and signage improvements.
Continue partnership working with NNR stakeholders to build on the existing NNR links and promotional work.
Explore possibility of links with local scout, cadet, and army reserve units, particularly as Broxbourne Woods provides the opportunity for activities to take place over several sites in close proximity to each other.

Constraints:
Horses straying off the bridleway cause severe damage to path surfaces and potentially to woodland ground flora.
Mountainbikes, motorbikes, and quad bikes damaging archaeology, ecology, path surfaces, and peace and quiet.
Limited frontage to public highway meaning most access points are reached via others ground and their associated signage.
Signage clutter and information fatigue

Factors Causing Change

Horse and bike users straying from the paths.
Motorbikes, mountain bikes, and quad bikes damaging the paths, archaeology, and ecology.
Forest operations opening up currently uninviting areas of the woodland.
Track improvements making more areas accessible year round.

Long term Objective (50 years+)

The whole wood will remain open to the public for quiet informal recreation predominantly by locals from the surrounding villages and suburbs. The waymarked walks and recreational links with the Broxbourne NNR will be maintained and the information boards retained,enhanced, and refined in line with public use and demand.

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

Operational objective:

Easily accessible, welcoming, well maintained and safe woodland regularly used by the public. Path network, way markers and entrances maintained in good condition and are appropriate for level and type of use and in accordance with access category A.

Work programme:

Annual house keeping:
Cut paths throughout woodland twice a year to a minimum width of 2m.

Create scallops and thin trees at track sides and around ponds, particularly through the dense parts of Derry's Wood to create a more attractive, welcoming environment for visitors. Approx. 1/2ha of thinning/coppicing per year. Bramble should not be totally cleared as it is an important nectar source for the rare white admiral butterfly. Honeysuckle and willow are also important for the purple emperor butterfly.

Annual inspection of all gates, bridges, culverts, waymarkers and information boards and regular monitoring of path surfaces.

Annual tree safety inspection of Zones A and B and arboricultural work as required.

Ditch and culvert maintenance alongside main tracks as required to help protect path surfaces.

Encourage further opportunities to enhance the site and positively encourage development projects that will improve public access.

Infrastruture Upgrades:
Year 1 2018-19
Restore, repair, and upgrade existing entrances, path and track network to create a stoned circuit of linked tracks through the bulk of the woodland, providing all-weather access for both visitor and management purposes. (See Map 4 Proposed Track Impovements). Particularly relevant to this KF will be the stoning and ditching of the southern half of the western footpath from Calves Croft Farm to the E-W parish boundary ditch which at present is a treacherous swamp all year round, and the stoning and restoration of the old E-W path in the north-eastern corner of the wood, linking the bridleway to the main diagonal track across the northern half of the wood

6.0 WORK PROGRAMME

Year	Type of Work	Description	Due By

APPENDIX 1: COMPARTMENT DESCRIPTIONS

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Key Features Present	Designations
1a	83.01	Oak (sessile)	1860	High forest	Archaeological features, Gullies/Deep Valleys/Uneven/ Rocky ground, No/poor vehicular access to the site, Services & wayleaves	Ancient Semi Natural Woodland, Informal Public Access	Ancient Semi Natural Woodland, Archeological Site, National Nature Reserve, Site of Special Scientific Interest, Special Area of Conservation

Compartment 1a accounts for the bulk of the site and takes in the woods known as Wormley Wood, Old Grove and Westfield Grove.
The area is heavily stocked with sessile oak standards, established around 1850 and occupying about 70% of the total canopy cover. Hornbeam (mostly coppice last cut around 1970), forms another 20% of the overstorey and the majority of the understorey. The remaining canopy consists of scattered birch, sweet chestnut, and ash. There are occasional clusters of ash and rare individual wild service trees. Ancient hornbeam coppice stools and pollards can be found alongside the bridleway and on many of the internal banks. The shrub layer is characterised by scattered holly and occasional hawthorn, though where there are breaks in the canopy dense thickets and carpets of hornbeam domintated regen are present. Natural regeneration of hornbeam and oak, less occasionally ash and birch, is abundant but rarely putting on woody growth before dying due to the dense shade under the closed hornbeam canopy.
Ground flora includes bramble, bracken, ferns, honeysuckle, wood anemone and bluebell, but is dominated by extensive areas of bare ground/leaf litter. Multiple windblown trees are scattered throughout the sub-compartment, with those still alive providing further horiziontal structural diversity.
Archaeological features are abundant in this sub compartment including many ancient wood banks and a Grade II Listed Structure - an 1860's coal post. Many ditches, banks, and tracks can clearly be seen in the OS County series maps from the 1880's.
A series of low valley streams, some seasonal, meander through the wood before joining Wormleybury Brook and heading eastwards out of the wood. An attractive, tranquil pond can be found near the south east corner next to the wood edge, with further ponds and wet ditches along the parish boundary. The northern edge of the subcpt has a more open 'heath-like' feel, whilst the eastern edge of Old Grove and the plateau of Westfield Grove have less coppice and are much more traditional high forest than the rest of the sub-compartment.
A nationally important oil pipeline runs under the derelict Byway Open to All Traffic (an extension of Beaumont Road) which forms the southern boundary of the sub-cpt. (Operated by BPA, part of the 650km UKOP line supplying oil and fuels from terminals in Medway and Mersey, include 50% of the aviation fuel to Heathrow and Gatwick)

1b	5.10	Oak (sessile)	1860	High forest	Archaeological features, No/poor vehicular access to the site, Services & wayleaves	Ancient Semi Natural Woodland, Informal Public Access	Ancient Semi Natural Woodland, National Nature Reserve, Site of Special Scientific Interest, Special Area of Conservation
Compartment 1b is known as Nut Wood and consists of two separate woodland blocks, the smaller more eastern of which is largely mature secondary woodland on a former field, but otherwise the majority of the sub-compartment is ancient woodland. Both are characterised by greater structural and species diversity than sub-compartment 1a, with mature oak, ash, hornbeam, birch, poplar, willow, sycamore, larch, and scots pine over a scattered understorey of holly, hazel and thorn. Natural regen of ash and hornbeam is present where the canopy is fragmented, especially along the stream edges. Similar to the northern edge of 1a there is a 'heath-like' feel to the upslope portions of this subcpt with bracken the dominant field element in the northern third, whilst briar, grass, rushes, and moss predominate further downslope. The northern edge is defined by the footpath and a distinct woodbank.							
1c	2.65	Ash	1900	High forest	Archaeological features, No/poor vehicular access to the site	Ancient Semi Natural Woodland, Informal Public Access	Ancient Semi Natural Woodland, National Nature Reserve, Site of Special Scientific Interest, Special Area of Conservation
A very distinct block of secondary woodland on a set of assarted fields which supported a number of agricultural buildings including a kennel (of which there is no visible trace). This sub-compartment has a very different feel to the rest of the wood with a classic mature ash coppice and oak dominated canopy allowing plenty of light to the floor resulting in a rich shrub and field layer supporting hawthorn, holly, hazel, elder, field maple, rushes, grass, dogs mercury, honeysuckle, cleevers, and briar. Ash, hornbeam, and oak regen are present across the subcpt. The ground is somewhat wetter, presumable due to the silted ditches which used to drain the fields. A 'lost' footpath runs diagonaly across the subcpt marking an old route from the kennels across the field. The subcpt gradually transitions into a more hornbeam dominated mix as it progresses west into Westfield Grove in subcpt 1a.							

2a	31.13	Birch (downy/silver)	1980	High forest	Archaeological features, Mostly wet ground/exposed site, No/poor vehicular access to the site, Services & wayleaves	Ancient Semi Natural Woodland, Informal Public Access	Ancient Semi Natural Woodland, National Nature Reserve, Site of Special Scientific Interest, Special Area of Conservation
Formerly ancient semi natural woodland, much of this area has been cleared and used for agriculture in the 18th and 19th centuries. Long since abandoned as farm land, and after post-war clearance, coniferisation, and clearfelling , the area has reverted back to native woodland dominated by self-set birch , hornbeam, and willow, alongside recoppicing hornbeam and occasional oak and ash. The wood is generally young, wet, dense, and dark having closed canopy and consequently produces little in the way of an understorey or ground flora, though some hawthorn and blackthorn is present and patches of grass, bracken, and reed are found Many ancient hornbeam stools/pollards are still evident along the woodbanks that divide the compartment into smaller sections and fields such as Wellfield Grove, Long Grove, Derry's Wood and some of Hazel Grove and Westfield Grove; further low earthworks appear throughout, many explained by field patterns detailed in the County series maps. A high pressure underground oil pipeline cuts E-W across the compartment along the route of an old lane/track echoing the bronze age field patterns in the surrounding landscape (a continuation of the lane to the east which runs along Baisley’s Wood and Beaumont Manor and recently re-linked to Wormley wood by the creation of a new footpath). Managed by BPA (www.bpa.co.uk), it is their responsibility to keep the line clear of large trees, whose roots could interfere with the pipeline. The pipeline route is wet and covered with rush as the ditches along the old track are no longer maintained. Abandoned and silted agricultural ditches carrying water from the northern plateau of the sub-cpt have resulted in much of the sub-cpt sitting wet and waterlogged, particularly in its south-western portion (Long Grove) where the stream breaks its silted ditches/culverts and finds its way naturally to the external boundary ditch. Small ponds and wet hollows are found in abundance and rideside scalloping has shown regeneration of ground flora to be prolific with a high representation of wetland grasses and wild roses.						
2b	17.05	Mixed native broadleaves	1980	High forest	Archaeological features, No/poor vehicular access to the site, Services & wayleaves	Ancient Semi Natural Woodland, Informal Public Access	Ancient Semi Natural Woodland, National Nature Reserve, Site of Special Scientific Interest, Special Area of Conservation

This compartment which takes in the larger part of Derry's Wood was formerly ancient semi-natural woodland that was cleared and replanted with larch in the 1960's,. The larch crop struggled and was heavily thinned in 2002 as part of the Trust's aim to restore it to native species and move towards ancient woodland composition.
The densely self-set species in the sub-cpt are dominated by hornbeam, birch, and willow, with less frequent oak, poplar, and ash, all under a scattered and struggling overstorey of larch . Many old hornbeam stools have recoppiced with larger stools more frequent to the south-east.
Ground flora is mostly confined to canopy gaps and consists of grasses, moss and honeysuckle with ancient woodland indicators such as Yellow archangel cropping up every now and then. There are many seasonal ponds and wet hollows some of which have received additional works to increase light levels around their southern edges.
Scalloping works along the stoned bridleway give an open welcoming feel to sections of the path whilst the majority of the sub-cpt retains a dark and somewhat claustrophobic feel due to its density, closed canopy, and mouldering piles of thinned larch.
The purple emperor butterfly can be found here feeding and resting up in the willows; and the white admiral butterfly, a UK priority species, can also be seen nectaring on the bramble in the clearings and using the honeysuckle for laying eggs.
The northern edge of the compartment is marked by the underground oil pipe along the ancient track route described in subcpt 1a and 2a above.
A high voltage overhead power line runs outside the sub-cpt on its southern edge but within falling distance of larger trees at the very south-east corner. It also runs over the main southern management access route.

2c	3.55	Hornbeam	1980	High forest	No/poor vehicular access to the site	Ancient Semi Natural Woodland, Informal Public Access	Ancient Semi Natural Woodland, National Nature Reserve, Site of Special Scientific Interest, Special Area of Conservation

Compartment 2c occupies the lower third of Long Grove and consists of pure mature hornbeam coppice over a sparse shrub storey but a verdant field layer of bluebells and ransoms on the wet floodplain around the stream, and grass on the sloping banks.
There is a large north-south earthwork with large marker trees, in particular some mature ash, and a little used public footpath runs north to south from Darnicle Hill into the main part of the wood. The footpath follows the course of the stream, but traffic generally sticks to informal path on the higher ground to the east.

Appendix 2: Harvesting operations (20 years)

Forecast Year	Cpt	Operation Type	Work Area (ha)	Estimated vol/ha	Estimated total vol.
2019	1a	Coppice	1.00	80	80
2020	1a	Selective Fell	2.66	19	50
2020	2b	Selective Fell	0.45	18	8
2020	2c	Selective Fell	0.69	17	12
2021	1a	Thin	1.00	80	80
2022	1a	Coppice	4.00	80	320
2022	2b	Thin	13.00	31	400
2023	2a	Thin	19.00	30	570

GLOSSARY

Ancient Woodland

Ancient woods are defined as those where there has been continuous woodland cover since at least 1600 AD. In Scotland ancient woods are defined strictly as sites shown as semi-natural woodland on the 'Roy' maps (a military survey carried out in 1750 AD, which is the best source of historical map evidence) and as woodland all subsequent maps. However, they have been combined with long-established woods of semi-natural origin (originating from between 1750 and 1860) into a single category of Ancient Semi-Natural Woodland to take account of uncertainties in their identification. Ancient woods include Ancient Semi-Natural Woodland and plantations on Ancient Woodland Sites (see below). May support many species that are only found in ancient woodland.

Ancient Semi - Natural Woodland

Stands in ancient woods defined as those consisting predominantly of native trees and shrubs that have not obviously been planted, which have arisen from natural regeneration or coppice regrowth.

Ancient Woodland Site

Stands in ancient woods that have been converted to plantations, of coniferous, broadleaved or mixed species, usually for timber production, including plantations of native species planted so closely together that any semi-natural elements of the understorey have been suppressed.

Beating Up

Replacing any newly planted trees that have died in the first few years after planting.

Broadleaf

A tree having broad leaves (such as oak) rather than needles found on conifers (such as Scots pine).

Canopy

The uppermost layer of vegetation in a woodland, or the upper foliage and branches of an individual tree.

Clearfell

Felling of all trees within a defined area.

Compartment

Permanent management division of a woodland, usually defined on site by permanent features such as roads. See Sub-compartments.

Conifer

A tree having needles, rather than broadleaves, and typically bearing cones.

Continuous Cover forestry

A term used for managing woods to ensure that there are groups or individual trees of different ages scattered over the whole wood and that some mature tree cover is always maintained. Management is by repeated thinning and no large areas are ever completely felled all at once.

Coppice

Trees which are cut back to ground levels at regular intervals (3-25 years).

Exotic (non-native) Species

Species originating from other countries (or other parts of the UK) that have been introduced by humans, deliberately or accidentally.

Field Layer

Layer of small, non-woody herbaceous plants such as bluebells.

Group Fell

The felling of a small group of trees, often to promote natural regeneration or allow planting.

Long Term Retention

Discrete groups of trees (or in some cases single trees) that are retained significantly past their economic felling age. Operations may still be carried out within them and thinning is often necessary to maintain stability.

Minimum Intervention

Areas where no operations (such as thinning) will take place other than to protect public safety or possibly to control invasive exotic species.

Mixed Woodland

Woodland made up of broadleaved and coniferous trees.

National vegetation classification (NVC)

A classification scheme that allows an area of vegetation to be assigned to the standardised type that best matches the combination of plant species that it contains. All woodlands in the UK can be described as being one of 18 main woodland types (W1 - W18), which principally reflect soil and climatic conditions. For example, Upland Oakwoods are type W11, and normally occur on well drained infertile soils in the cooler and wetter north and west of Britain. Each main type can be subdivided into numerous subtypes. Most real woods contain more than one type or sub-type and inevitably some woods are intermediate in character and can't be properly described by any sub type.

Native Species

Species that arrived in Britain without human assistance.

Natural Regeneration

Naturally grown trees from seeds falling from mature trees. Also regeneration from coppicing and suckering.

Origin & Provenance

The provenance of a tree or seed is the place where seed was collected to grow the tree or plant. The origin is the geographical location within the natural range of a species from where seeds/tree originally derives. Thus an acorn collected from a Turkey oak in Edinburgh would have an Edinburgh provenance and a southern European origin.

Re-Stocking

Re-planting an area of woodland, after it has been felled.

Shrub Layer

Formed by woody plants 1-10m tall.

Silviculture

The growing and care of trees in woodlands.

Stand

Trees of one type or species, grouped together within a woodland.

Sub-Compartment

Temporary management division of a compartment, which may change between management plan periods.

Thinning

The felling of a proportion of individual trees within a given area. The remaining trees grow to fill in the space created.

Tubex or Grow or Tuley Tubes

Tubes placed over newly planted trees or natural regeneration that promote growth and provide protection from animals such as rabbits and deer.

Weeding

The control of vegetation immediately around newly planted trees or natural regeneration to promote tree growth until they become established. Either by hand cutting or with carefully selected weed killers such as glyphosate.

Windblow/Windthrow

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