



Hollow's Wood

Management Plan 2020-2025

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THE WOODLAND TRUST

INTRODUCTION

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

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

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

PLAN REVIEW AND UPDATING

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 Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations.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

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

WOODLAND MANAGEMENT APPROACH

The management of our woods is based on our charitable purposes, and is therefore focused on improving woodland biodiversity and increasing peoples' understanding and enjoyment of woodland. Our strategic aims are to:

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

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

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

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

The following guidelines help to direct our woodland management:

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

SUMMARY

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

1.0 SITE DETAILS

Site name:	Hollow's Wood
Location:	Chelsfield
Grid reference:	TQ496632, OS 1:50,000 Sheet No. 188
Area:	58.50 hectares (144.56 acres)
Designations:	Ancient Semi Natural Woodland, Area of Landscape Value, Area of Outstanding Natural Beauty, County Wildlife Site (includes SNCI, SINC etc), Green Belt, Planted Ancient Woodland Site, Tree Preservation Order

2.0 SITE DESCRIPTION

2.1 Summary Description

Hollows Wood extends to 58.5 hectares (144.56 acres) but is part of a larger area of woodland once continuous from Well Hill to Poll Hill but which is now much fragmented by the M25 and link roads, which abut the wood. Hollows Wood itself is split into three separate compartments divided by the M25/A24 link road and Chelsfield Lane while the Orpington By-Pass Road bounds the site to the south-west. Administratively, the wood falls within the Borough of Sevenoaks and is split between the parishes of Shoreham and Badgers Mount and lies within the London Greenbelt. The site was purchased by the Woodland Trust in 1988, with an additional small area of adjacent woodland in the north acquired in 1993.

The whole of Hollows Wood lies within the North Kent Downs Area of Outstanding Natural Beauty (AONB) and North Downs Landscape Character Area (NCA 119). The entire site is designated as a Local Wildlife Site. The terrain is moderately steep in places rising from 140m at Goss Bushes to 187m at the summit of Well Hill and is very visible in the surrounding landscape. The underlying geology ranges from chalk at the lower southern side of the wood through to sandstone and to clay on the higher ground with freely-draining slightly acid loamy soils over the whole site.

The majority of the site is ancient semi-natural woodland with extensive sweet chestnut coppice along with standards of oak, beech, ash and birch. Only two of the woodland subcompartments (1b & 3c) are not ancient woodland and these areas contain a significant conifer component of Scot 's pine and larch along with mixed broadleaves. There are two former agricultural fields (subcompartments 2b & 3b) which are in the early successional stages of becoming scrub woodland. In spring, many parts of the woodland produce a good display of specialist woodland plants including bluebells and wood anemones, with the ride and path edges particularly rich in flora.

There are no scheduled archaeological sites but there are a few interesting archaeological features including a lynchet which marks the former boundary of the woodland towards the eastern side of compartment 1. There is also a former ditch and bank now inside the wood towards the eastern boundary of compartment 3.

Hollows Wood has a good network of public rights of way, informal footpaths and both public bridleway and a permissive horse riding route but the absence of formal parking and any prospect of creating car parks restrict this site to being accessible mainly to local people. There is limited car parking close to the management gates off Chelsfield Lane.

High voltage power cables with their associated wide wayleave form a corridor through the wood to the north side of the M25 link road (Subcompartment 1a) and connect to a substation south of Chelsfield Lane.

2.2 Extended Description

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3.0 PUBLIC ACCESS INFORMATION

3.1 Getting there

Hollows Wood is located on the SE edge of London, near Orpington, and is between the villages of Well Hill and Badgers Mount. Public footpaths link the north of the wood to Well Hill, and the south of the wood to Badgers Mount. These entrances contain no obstructions but the paths are un-surfaced.

There are also a number of entrances to the wood off Chelsfield Lane, which runs through the centre of the wood. These entrances are narrow and lead onto mainly un-surfaced paths. Paths around the wood can be quite steep in places. Access for horse riders is available at the wood, via a public bridleway from Badgers Mount and a permissive bridleway which runs next to a Chelsfield Lane

There is no formal parking available for visitors, but there is limited space for a few cars next to the management entrances off Chelsfield Lane. There is also the possibility of parking in the surrounding residential roads in Well Hill or badgers Mount, leaving a relatively short walk into the wood.

The nearest bus-stop to the wood is next to the Bo-Peep public house, which is approximately 5 minutes walk away. From the pub you walk down Shoreham Road which leads onto Chelsfield Lane and subsequently to various entrances into the wood. The nearest railway station is Knockholt station, which is difficult to walk to from the wood. There are no public toilets close to the wood. Lullingstone Park Visitor centre is approximately 5 miles away and this has public toilets.

For further information about public transport please contact Traveline - www.traveline.org.uk Tel: 0870 6082608

Access / Walks

4.0 LONG TERM POLICY

Hollows Wood will be managed to develop a resilient structure within its complex of ancient woodland by providing a good range of different habitats typical of lowland broadleaved woodland National Vegetation Classification (NVC) W10 oak-bracken-bramble woodland and W8 ash-field maple-dogs mercury woodland. There will be a mosaic of areas managed within a coppice rotation interspersed by areas of high forest managed through minimal intervention. Through the active management of the coppiced areas, successional habitat for a range of invertebrate, bird and mammal species, including woodland specialist species which rely on temporary open space will develop.

The 5 hectares of former conifer plantation/mixed woodland (Subcompartments 1b & 3c) will be treated as Plantation Ancient Woodland (PAWS). These areas are in the process of restoring to broadleaved woodland but further thinning of conifer may be required within the next 10 years, particularly in subcompartment 1b to reduce the conifer component and fully restore PAWs. The need to carry out work will depend upon the findings of future woodland condition assessments.

Most of the coppice has not been managed for over 30 years and in order to maintain a succession of temporary open and dense scrub habitats that managed coppice provides, a coppice regime will be implemented across the site, concentrating on the more productive and easily accessible stands of sweet chestnut. The first 5 years of the coppice programme will focus on establishing coppice panels along ride edges based upon Zone B tree safety surveys. Restoring and maintaining an active coppice cycle will benefit a suite of species including ground flora, invertebrates, birds and reptiles. The impacts of disease on sweet chestnut and ash in particular will lead to a more varied composition of some stands in the future.

The areas of over mature coppice (not being coppiced) will be managed through minimal intervention. Areas of coppice with broadleaf standards will develop to provide a diverse high forest habitat structure whilst areas of mature pure coppice stands will likely collapse and produce a mosaic of successional woodland of different ages dominated by species such as sweet chestnut, birch, oak, beech and sycamore; all areas will see an increase in the age of the trees and will therefore accumulate dead wood which will help to support a large range of invertebrates and fungi. In addition, as the trees senesce there will be an increasing prevalence of coppice stools splitting and falling apart. This will not only help to generate more deadwood but also allow the regeneration of an understory through increasing light levels. Elsewhere the areas of secondary and ancient woodland will mostly be left to develop under the influences of natural processes, except where intervention is required to address issues caused by pests and diseases and to control invasive non-native species.

A network of wide rides will continue to be managed with the ride edges being coppiced on a short rotation (5-10 years) to create woodland edge habitat that will exhibit a good range of specialist woodland plants as well as woody shrub species and enhance the overall biodiversity of the site as well as dealing with tree safety issues.

Management of tree safety hazards and threats brought on by pests and diseases will be required in high risk areas along roads, next to the path network and along boundaries shared with residential housing. Whilst trees showing resistance to ash dieback will be retained as a seed source to create

future resistant generations of ash, ride-side management will remove dangerous ash trees. This work will widen rides, enhancing the biodiversity and visual interest of the wood.

The former agricultural fields will continue to be largely left to recolonise towards secondary woodland through natural succession from scrub through to woodland with the various stages of recolonisation providing a mosaic of open, scrub and young woodland habitat increasing the species diversity and habitat niches across the site. Due to the historic agricultural land use and the impact on soils and the seedbank, subcompartment 2b which was formerly under arable production is likely to retain a more open structure in the longer-term (up to 70% open habitat). In subcompartment 3b, which was historically under grass, woodland re-colonisation is already well established and the field is heading towards 60-70% woodland/scrub cover with a rich mosaic of herb and grasses developing in the open areas. To protect and enhance the botanical interest, a network of open, grassy rides will be maintained and a minimum of 30% open habitat retained.

The Trust will ensure that the public can enjoy good and appropriate open access to Hollows Wood by maintaining the numerous entrances and fencing, checking that the main paths remain safe and unblocked and cutting back vegetation along the main paths each year. The Trust's regular inspections, including routine tree safety inspections will continue.

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 d

Description

The ancient semi natural woodland throughout Hollows Wood is dominated by sweet chestnut coppice much of which was probably planted post 1800 to support Kent's hop industry. The vegetation community types are typical of NVC W10 oak-bracken-bramble woodland and W8 ash-field maple-dogs mercury woodland in response to the variations in geology and soil types across the site. The sweet chestnut coppice ranges in structure from pure coppice stands to coppice with broadleaf standards. There are also localised areas of sweet chestnut mixed with hazel and ash coppice. The sweet chestnut coppice varies in age from 10 years -50+ years although only narrow strips (<10m wide) along ride and road edges have been coppiced in recent years. However, the majority of sweet chestnut has not been coppiced since around 1982 and the effect of this is that some of the chestnut stems are starting to die out and collapse, increasing the standing and fallen deadwood resource and creating small glades. These glades are showing some signs of birch regeneration. There are also a few mixed stands and overstood coppice which have been singled, adding a high forest element to the woodland. Ink disease was first recorded in some of the sweet chestnut in 2006 but to date has not resulted in significant dieback.

Two areas of mixed woodland totalling 5 ha within subcpts 1b & 3c are not included in the Ancient Woodland Inventory. These areas support significant components of larch and Scots pine together with mature mixed broadleaves and are distinctive in character and feel compared to the surrounding sweet chestnut coppice. The conifer component has been thinned in the past and a recent woodland condition assessment (2019) suggests the remaining conifer component currently presents little threat to the surrounding ancient woodland components from shading or natural regeneration. However these areas will be treated as if they are PAWs and will continue to be monitored through future woodland condition assessments and further thinning may be required to fully restore their character.

Specialist woodland flora, such as bluebell and wood anemone, appear in large drifts through much of the woodland and their presence on this scale indicates that the woodland is historic. There are some interesting archaeological features including a lynchet which marks the former boundary of the woodland towards the eastern side of cpt 1. There is also a former ditch and bank now inside the wood towards the eastern boundary of of cpt 3.

Significance

The amount of ASNW left in Britain has been drastically reduced over the last century. Approximately 40% of England's ASNW is found in the South East. ASNW 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. In a heavily wooded area where woodland has become fragmented larger areas of woodland are able to withstand external pressures such as climate change much better. Ancient woodland is irreplaceable and the prevention of its loss is one of the main aims of the Trust.

Hollows Wood is part of a once larger contiguous woodland area that was severed by the construction of the M25 and associated link roads. Despite this it is still a large ancient woodland close to London, with a diversity of woodland habitats and species and remnant ancient woodland features such as old woodbanks, ancient trees and specialist woodland flora. Locally, the areas of ancient woodland within the wood provide beneficial habitat diversity and contribute to the overall ecological resilience of the site. This is recognised in the designation of the whole of the wood as a Local Wildlife Site (SE09- Woodland west of Shoreham).

Opportunities & Constraints

Opportunities

- Use Hollows Wood as a case study site to monitor and demonstrate structural and biodiversity change through re-instatement of a rotational coppice regime.

Constraints

- Extent of neglected sweet chestnut coppice and limited resources mean that it could take many years to re-establish a rotational coppice regime.
- Limited space to stack coppice products at roadside.
- Squirrel/deer damage limiting regeneration of cut coppice stools.

Factors Causing Change

- Move to natural regeneration and eventually high forest due to non-intervention.
- Death and collapse of sweet chestnut stems due to disease (e.g. Ink Disease or chestnut blight) or old age.
- Pests & diseases resulting in loss of damage to other broadleaf trees. Ash die back (*Hymenoscyphus fraxineus*) is likely to have a significant impact on the population of ash trees within Hollows Wood over the next decade. The oak trees are at risk from chronic and acute oak decline and the spread of oak processionary moth across SE England.
- Climate change with predicted increase in extreme events has the potential to cause woodland restructuring through windblow from increased storm events.
- Loss of veteran trees particularly collapse of veteran beech trees due to age and fungal diseases.
- Development of dense holly stands in localised areas (e.g. Subcompartment 3a - Saunder's Spring Wood) .
- Presence of invasive non-natives such as laurel and Himalayan honeysuckle around property boundaries at Well Hill and Badgers Mount.
- Erosion to ancient woodland soil structure and damage to trees caused by illegal felling/camp building/bike and motorbike track building.

Long term Objective (50 years+)

In the long-term, approximately 65% of Hollow's Wood has the potential to be brought back into active coppice rotation whilst around 20ha (35%) of the wood will remain under minimum silvicultural intervention ie no active coppicing. In areas of minimum intervention, the sweet chestnut coppice will gradually collapse over a period of several decades, leaving a mix of natural regeneration, open glades and some mature chestnut. The open glades should encourage natural regeneration, but this may be prohibited if bracken or bramble become dominant. Clearance of these species and additional planting may be required to encourage a successor broadleaf canopy.

In areas where sweet chestnut is being managed (<10-year short rotation along roads and rides and long-term 20 to 30-year rotation for the productive chestnut stands) a varied woodland structure will develop supporting a variety of age ranges and associated habitat niches.

There will continue to be a network of wide ride habitats managed by short -rotation coppicing that will increase the structural diversity and biodiversity of the site. Good deadwood habitat will be present through standing and fallen dead trees and ancient living trees. Ground flora should continue to contain specialist woodland plants, indicative of ancient woodland, including bluebell.

Thinning operations may be carried out in the small areas of mixed woodland (Subcpts 1b & 3c) beyond the next 5 year plan period in order to remove more of the conifer component and progress restoration to a predominantly broadleaved canopy. Currently these areas are diversifying naturally and are difficult to access. Therefore, thinning will not be carried out in the next 10 years unless the next WCA (2024) identifies that the conifer component is regenerating and/or threatening the development of the woodland ground flora and shrub layer.

Veteran trees, will be retained and next generation veterans encouraged through selective halo thinning, which will lead to species like oak and beech becoming veterans within 50-100 years.

The dense holly stands that have been partially cut in 2019/20 (subcpt 3a) will need to be monitored and are likely to require re-coppicing/pollarding in approximately 25-30 years time.

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

The management priorities for the next 5 years will focus on coppicing areas associated with ride management and roadside compartments to address tree safety issues, retaining good public access and developing structural diversity by re-introducing a coppice rotation. Subcpts 1c, 2c & 3d&e initially, focusing on mature coppice stands bordering Chelsfield Lane adjacent to property and entrances (refer to Hollows Wood coppice rotation map which identifies individual coupes & priorities to work). Aim to coppice approx. 2ha a year going forward with around 9.2 ha over the first 5 years.

Annual ride management will continue along key rides tackling between 200m and 500m of rides per year.

Demolition and surface restructuring in 2021 of illegal bike/motorbike tracks built in subcpt 2a (~0.75ha in damaged habitat area).

Retaining the ancient beech trees found scattered through the wood as long-term retentions will preserve them into the future as important landscape and wildlife features. However, some of these trees are affected by fungal bracts which pose tree safety issues or are threatened by over-shading. Key trees in subcpts 1a, 3a and 3c that are existing or future veterans will be identified and monitored to assess the need for tree surgery to address safety issues or if they would benefit from halo thinning in the next 5 to 10 years to encourage canopy growth.

Remove invasive growth of cherry laurel, with progress to be reviewed midway through the plan period. Laurel is increasing in density close to property boundaries within the ancient woodland (notably subcpts 1a & 3a). Remove laurel from ~1ha in the SE corner of subcpt 3a near to the public bridleway and the back gardens of the homes in Badger's Mount. Additionally, remove ~0.75ha of laurel along the footpath from the Well Hill entrance to the powerlines in subcpt 1a.

Creation of a hard standing loading/turn round bay in sub comp 3e during 2021 to allow for proper management of coppice by facilitating timber removal from site.

Site managers will remain vigilant for signs of pests and diseases during routine site visits in addition to monitoring visit in 2022/3 and WCA, for example, chestnut blight (*Cryphonectria parasitica*), ink disease (*Phytophthora* spp) and oriental chestnut gall wasp (*Dryocosmus kuriphilus*) in sweet chestnut and if necessary will instigate any plant health measures required.

5.2 s**Description**

The whole of the Trust's holdings at Hollows Wood is open to the public for quiet, informal recreation and is rated with a WT access B category designation (5 - 15 people using one entrance per day). Hollows Wood is furnished with a good network of paths and tracks. A public footpath and public bridleway (SR569 & SR649) run north-south through the wood linking to local residents living in Well Hill and Badgers Mount. These settlements are located in the parishes of Shoreham and Badgers Mount which together support a small population of around 2000 residents. There is also a permissive bridleway in the northern half of the wood, which allows riders some relief from using the narrow Chelsfield Lane. There is no formal car-parking at the wood and informal parking opportunities at entrances or along the roadside are extremely limited.

Significance

Public access is important at Hollows Wood because it provides open access to a large area of woodland on the doorstep of people living in Well Hill and Badgers Mount, in a busy part of the country where opportunities to stray from public rights of way are limited.

Opportunities & Constraints**Constraints**

- The lack of any formal car-parking limits the site to local use only
- The motorway link road and the low sided bridge over it make it difficult to link up the official bridleway to the permissive one
- The quiet, isolated nature of the wood but which is at the same time is easily accessible from key transport routes has resulted in acts of vandalism and anti-behaviour some of which are drug related.

Factors Causing Change

- Vandalism & fly-tipping especially around entrances
- Litter
- Horse encroachment
- Motorbike encroachment
- Path creep and development of desire lines along informal path network

Long term Objective (50 years+)

Hollows Wood will continue to offer a good quality visitor experience in line with its category B access designation. Free and open access will continue through a well-maintained path and entrance network, and access along the permissive bridleway will continue for the foreseeable future.

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

The Trust will ensure that the public can enjoy free and good and open access to Hollows Wood by maintaining the twelve entrances into the side and checking that the main paths remain safe and unblocked and cutting back vegetation along the main paths twice a year. The Trust's regular inspections, including routine tree safety inspections will continue. To achieve this management priorities will focus on the following activities:

Within the next 12 months, close a short section of the permissive horse route (~200m) from the powerlines to the Well Hill entrance to try and reduce encroachment into the wider wood.

Within next 2 years, repair and upgrade 4 entrances (Chelsfield Lane x 2, Bo Peep, Well Hill) to replace horse steps, improve appearance and signage, guide horses to permissive horse route and discourage illegal encroachment by motorbikes & quad bikes.

Carry out tree safety inspections in Zone A: annually, alternating summer and autumn and in Zone B: Minimum every 2 years due to tree disease (ash and SCH dieback). If disease impact is high carry out annually. Follow up arboriculture work to be carried out as appropriate.

Carry out an annual path cut along 4km of routes to maintain good public access throughout the wood.

5.3 d

Description

Two former agricultural fields (totalling almost 5 hectares in subcpt 2b and 3b) where agricultural tenancies had ceased by 1997 are in the early transitional phases of reverting back to native woodland with scrub and young trees starting to colonise through natural succession. The former agricultural use has impacted the soil and seed bank which is influencing the rate and type of re-colonisation.

Historic photographs show that subcpt 2b was formerly an arable field until at least 1990 and its past land use means the field is currently dominated by rank grasses and vigorous weed species such as creeping thistle and nettle although species diversity is increasing. There is little tree growth at present other than a small stand of planted broadleaves in the NW corner and on the western edge although hawthorn dominated scrub is starting to develop around the perimeter and sporadically across the wider field. Golden rod and pampas grass have previously been removed from the field. A set of active bee hives are located on the western edge of the field which are managed by a third party.

The second field (subcpt 3b) was formerly under grass and is developing into transitional woodland more rapidly with a diverse range of species starting to colonise across the field including oak, birch, hawthorn, cherry, willow, ash, rowan, sweet chestnut and beech. A wide variety of ground flora is also present including bluebells, vetch, meadow cranesbill, buttercup, thistle, wild strawberry, honeysuckle, stitchwort, nettle and cow parsley. Invasive non-natives including Buddleia and Himalayan honeysuckle are also present.

Deer browsing is evident in both fields, though not having an intensive negative impact at present.

Significance

The new woodlands evolving on these fields will be a mixture of native trees and will probably be more diverse in species than the largely planted chestnut woodland of much of Hollows Wood. The scrub habitat developing in the early stages of colonisation is an important habitat in its own right. The permanent grassy ride network that will become established along with larger areas of open habitat will develop into semi-natural species rich grassland which will enhance the species diversity and botanical value of the site.

Opportunities & Constraints

Constraints

- Colonisation by woodland will remove/reduce current open space habitat within Hollows Wood
- The process of natural regeneration in these areas is very slow, especially subcpt 2b
- Criminal/anti-social behaviour (e.g. incidents of illegal incursion & cannabis cultivation)

Opportunities

- Woodland creation by natural regeneration will create ecologically valuable early successional scrub habitat
- Woodland is a robust habitat and will require lower management costs than maintaining large areas of open space

Factors Causing Change

- Past agricultural cultivation affecting soil conditions slowing development of good quality habitat with competition from rank grasses and coarse agricultural weeds.
- Deer browsing
- Invasion of invasive non-native plant species
- Reduction in area of open habitat as woodland succession progresses

Long term Objective (50 years+)

The former agricultural fields will be left to develop into mature secondary woodland and through natural processes to become broadleaf woodland dominated by native species such as oak, beech, birch and rowan interspersed with areas of scrub and managed semi-natural grassland. Subcpt 2b will retain a larger proportion of open habitat (up to to 60-70%) managed under an annual mowing regime to promote the development of a botanically rich semi-natural grassland. Subcpt 3b will be more heavily wooded but still retain a grassy ride network (with a minimum of 30% open habitat) to retain habitat diversity. The open areas in both fields will be developed and maintained through an annual mowing regime and the location of these areas will be dictated by habitat response on the ground over the next 10 years.

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

Continue to develop a mosaic of habitats comprising young woodland, scrub, open grassy rides/glades through selective mowing once per year in July/early August to retain up to 70% open habitat in subcpt 2b and a minimum of 30% open habitat in subcpt 3b. The location of the permanent open areas in subcpt in 2b will be influenced by monitoring the habitat response on the ground and in 3b by targeting the cutting to edges of existing rides/tracks areas where scrub & secondary woodland is not currently re-colonising.

Monitor for invasive non-native species (annual walk over in June/July) and instruct works to remove any species which pose a threat

Monitor for deer impact to ascertain if browsing is significantly impacting woodland recolonisation and to ascertain if additional control measures are needed in the longer-term.

6.0 WORK PROGRAMME

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

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Key Features Present	Designations
1a	12.19	Sweet chestnut	1900	Min-intervention	Diseases, No/poor vehicular access within the site, Very steep slope/cliff/quarry/mine shafts/sink holes etc	Connecting People with woods & trees	Ancient Semi Natural Woodland, Area of Landscape Value, Area of Outstanding Natural Beauty, County Wildlife Site (includes SNCI, SINC etc), Green Belt, Tree Preservation Order
<p>This compartment forms the northern part of Hollows Wood, to the north of the M25. The compartment comprises Pascells Wood, Hollows Wood and Longspring Wood. The compartment is mostly sweet chestnut coppice with standards. The majority of the sweet chestnut has not been cut since at least 1982, with the exception of a strip through the middle of the compartment under the power lines that is cut on a short rotation by contractors from the power companies. Other canopy trees include oak, beech, birch, sycamore and ash with a minor component of Scots pine and larch. Hawthorn, hazel and willow dominate the shrub layer in places. Ground flora is relatively poor. There is a permissive bridle path that runs through the compartment.</p>							
1b	2.8	Scots pine	1970	PAWS restoration	No/poor vehicular access within the site, Very steep slope/cliff/quarry/mine shafts/sink holes etc	Connecting People with woods & trees	Area of Landscape Value, Area of Outstanding Natural Beauty, County Wildlife Site (includes SNCI, SINC etc), Green Belt

This compartment is known as Well Hill and has a distinctly different character from the rest of the wood. It is dominated by Scots pine and Larch is also present. There are smaller pockets of mixed broadleaves including sweet chestnut, oak, ash and birch. Veteran beech and oak line the boundary bank adjacent to the permissive bridle path. Part of the area appears to have been thinned/clear felled in the north-west corner of the compartment adjacent to the permissive bridleway. The groundflora is poor and dominated by coarse species such as bramble, bracken and nettles which are dense in the more open areas. A wayleave runs through the centre of the compartment under the powerlines which is kept clear of trees by the power company's contractors.

1c	7.1	Sweet Chestnut	1900	Coppice	No/poor vehicular access within the site,	Diseases, No/poor vehicular access within the site,	Area of Landscape Value, Area of Outstanding Natural Beauty, County Wildlife
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This compartment forms the north western part of Hollows Wood, to the north of the M25 an area known as Pascells Wood. The compartment is mostly sweet chestnut coppice with standards. The majority of the sweet chestnut has not been cut since at least 1982, with the exception of a strip through the middle of the compartment under the power lines that is cut on a short rotation by contractors from the power companies. The 2020-25 plan recognises the need to reinstate the coppice rotation in this part of the woodland both for biodiversity gain and tree safety. As a result a coppice rotation will be initiated in this compartment from 2021 with the area being subdivided into 10 coppice cants. Mixed hazel and sweet chestnut coppice is present in the north west corner of Pascells Wood. Other canopy trees include oak, beech, birch, sycamore and ash with a minor component of Scots pine and larch. Hawthorn, hazel and willow dominate the shrub layer in places. Ground flora is relatively poor, but on the far eastern side includes a striking display of wood anemone in the spring. There is an old woodbank/lynchet to the east of the compartment on a ridge of high ground. There is a permissive bridle path that runs through parts of this compartment.

2a	2.9	Sweet chestnut	1900	Min-intervention	Diseases, No/poor vehicular access within the site, Very steep slope/cliff/quarry/mine shafts/sink holes etc	Connecting People with woods & trees	Ancient Semi Natural Woodland, Area of Landscape Value, Area of Outstanding Natural Beauty, County Wildlife Site (includes SNCI, SINC etc), Green Belt, Tree Preservation Order
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The sub-compartment is made up of mixed broadleaves with a component of beech present and a small number of conifers (sitka spruce and larch). Hazel and holly are present in the shrub layer. The ancient woodland flora is well established to the east of the compartment but partial under the conifer and beech to the west of the compartment.

2b	2.16	Mixed native broadleaves	1995	Wood establishment	No/poor vehicular access within the site	Connecting People with woods & trees	Area of Landscape Value, Area of Outstanding Natural Beauty, County Wildlife Site (includes SNCI, SINC etc), Green Belt
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Open field which used to be grazed. Vigorous weed species such as creeping thistle and nettle and rank grasses have become well established but hawthorn scrub is starting to colonise across the compartment with sporadic dog rose, hawthorn, hazel, elder and willow. A small patch in the NW of the field has been planted with native broadleaves including oak. A local beekeeper keeps hives in the top northern edge of the field. Buddleia and pampas grass were removed from the compartment in 2013.

2c	10.64	Sweet chestnut	1900	Coppice	Diseases, No/poor vehicular access within the site, Very steep slope/cliff/quarry/mine shafts/sink holes etc	Connecting People with woods & trees	Ancient Semi Natural Woodland, Area of Landscape Value, Area of Outstanding Natural Beauty, County Wildlife Site (includes SNCI, SINC etc), Green Belt, Tree Preservation Order
<p>The sub-compartment is almost entirely sweet chestnut coppice with some oak standards and occasional birch. Most of the coppice has not been cut since 1982, but there are some areas of younger stands where patches of broom are present. Hazel and holly are present in the shrub layer. The ancient woodland flora is well established within the coppice coupes with dense swards of bluebells and wood anemone. The 2020-25 plan recognises the need to reinstate the coppice rotation in this part of the woodland both for biodiversity gain and tree safety, especially in areas bordering the M25. As a result a coppice rotation will be initiated in this compartment from 2021 with the area being subdivided into 18 coppice cants.</p>							

3a	4.77	Sweet chestnut	1900	Min-intervention	Diseases, No/poor vehicular access within the site	Connecting People with woods & trees	Ancient Semi Natural Woodland, Area of Landscape Value, Area of Outstanding Natural Beauty, County Wildlife Site (includes SNCI, SINC etc), Green Belt, Tree Preservation Order
<p>This sub-compartment forms the southern part of Hollows Wood and two areas of minimal intervention within the coppice rotation areas of 3d & 3e. Sweet chestnut is dominant however oak, ash, beech, birch and hazel are also present with hawthorn in the shrub layer. A large number of mature beech trees are present in the south of the compartment and some of the veteran beech have required tree surgery or suffered collapse due to fungal growth (<i>Ganoderma brackets</i> & <i>Kretzschmaria deusta</i>). Ground flora includes drifts of bluebells and wood anemone, especially closer to the lighter path edges. Laurel is present along the boundary with adjacent properties at the southern edge of the compartment and isolated bushes of Himalayan honeysuckle are also present..</p>							
3b	2.38	Mixed native broadleaves	1995	Wood establishment	No/poor vehicular access within the site	Connecting People with woods & trees	Area of Landscape Value, Area of Outstanding Natural Beauty, County Wildlife Site (includes SNCI, SINC etc), Green Belt
<p>Open field which effectively forms a large glade in the centre of the wood. Agricultural cultivation (linseed) came to end around 1997. Natural regeneration is becoming well established with oak, birch, cherry, willow, ash, rowan, sweet chestnut and beech. A wide variety of ground flora is also present including bluebells, vetch, meadow cranesbill, buttercup, thistle, wild strawberry, honeysuckle, stitchwort, nettle and cow parsley. Buddleia and Himalayan honeysuckle are also present.</p>							
3c	2.30	Mixed native broadleaves	2019	Min-intervention	Diseases, No/poor vehicular access within the site	Connecting People with woods & trees	Area of Landscape Value, Area of Outstanding Natural Beauty, County Wildlife Site (includes SNCI, SINC etc), Green Belt

This compartment comprises an area known as Broomhatch which is quite distinctive in character from the sweet chestnut coppice which dominates rest of the woodland to the south of Chelsfield Lane. Mixed broadleaves comprising oak, ash, sycamore, birch, sweet chestnut and rowan dominate the canopy. Scots pine and larch form a significant component in localised areas and these areas were last thinned in 2004. Hawthorn, hazel and holly dominate the shrub layer. The groundflora is made up of a typical woodland community including bluebell, dog's mercury, wood sorrel, lords & ladies, ivy, honeysuckle, ferns and sedges.

3d	6.97	Sweet chestnut	1900	Coppice	Diseases, No/poor vehicular access within the site, Very steep slope/cliff/quarry/mine shafts/sink holes etc	Connecting People with woods & trees	Ancient Semi Natural Woodland, Area of Landscape Value, Area of Outstanding Natural Beauty, County Wildlife Site (includes SNCI, SINC etc), Green Belt, Tree Preservation Order
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This sub-compartment forms the southern part of Hollows Wood and comprises areas known as Goss Bushes Wood. The coupes are primarily sweet chestnut coppice of mixed age with components of hazel coppice. Oak, ash, birch and hazel are also present with hawthorn in the shrub layer. Ground flora includes drifts of bluebells and wood anemone, especially closer to the lighter path edges. The 2020-25 reintroduced a coppice rotation in this compartment, dividing it into 12 coppice cants.

Appendix 2: Harvesting operations (20 years)

Forecast Year	Cpt	Operation Type	Work Area (ha)	Estimated vol/ha	Estimated total vol.
2021	2c	Coppice	1.8	576	320
2021	3a	Ride edge Coppice	0.44	66	150
2021	3a	Coppice	0.5	75	150
2021	3d	Coppice	0.55	164	298
2022	1a	null	0.58	180	310
2022	1c	Coppice	0.64	256	400
2022	3e	Coppice	0.49	228	465
2023	2c	Ride edge Coppice	0.38	126	332
2023	2c	Coppice	0.25	73	292
2023	3e	Coppice	0.57	228	400
2024	1a	Ride edge Coppice	0.42	63	150
2024	1c	Ride edge Coppice	0.55	83	151
2024	1c	Coppice	0.83	125	151
2024	1c	Coppice	0.6	186	310
2024	3d	Coppice	1.33	370	278
2025	2c	Coppice	0.56	156	279
2025	2c	Coppice	0.6	320	533
2026	3d	Coppice	0.64	134	209
2026	3e	Coppice	0.53	212	400
2027	1c	Coppice	0.72	223	310
2027	2c	Coppice	0.34	40	118
2027	2c	Coppice	0.31	108	348
2027	3e	Coppice	0.5	180	360
2028	3d	Coppice	1.28	307	240
2029	1c	Coppice	0.51	158	310
2029	3d	Coppice	0.49	103	210
2029	3e	Coppice	0.48	192	400
2030	1c	Coppice	0.97	350	361
2030	2c	Coppice	0.87	304	349
2030	3d	Coppice	0.43	86	200

2031	2c	Coppice	0.52	78	150
2031	2c	Coppice	0.4	140	350
2031	2c	Coppice	1.8	250	139
2032	1c	Coppice	0.65	200	308
2032	3d	Coppice	0.36	75	208
2033	3d	Coppice	0.48	75	156
2033	3e	Coppice	0.44	127	289
2034	1c	Coppice	0.42	130	310
2034	3d	Coppice	0.37	74	200
2035	2a	Coppice	1.16	363	313
2035	2c	Coppice	0.62	175	282
2035	2c	Coppice	0.54	190	352
2035	3a	Coppice	0.37	74	200
2036	1a	Coppice	1.54	231	150
2036	1c	Coppice	1.54	231	150
2036	3e	Coppice	0.49	196	400
2037	2a	Coppice	0.49	74	151
2037	2c	Coppice	0.49	75	153
2037	3d	Coppice	0.57	120	211
2037	3e	null	0.37	148	400
2037	3e	Coppice	0.4	75	188
2038	1a	Coppice	0.52	160	308
2038	1c	Coppice	0.52	161	310
2038	2a	Coppice	0.85	297	349
2038	2c	Coppice	0.85	300	353
2038	3d	Coppice	0.4	75	188
2039	2a	Coppice	0.98	303	309
2039	2c	Coppice	0.57	160	281
2039	2c	Coppice	0.41	150	366
2040	2c	Coppice	0.6	90	150
2040	3d	Coppice	0.41	85	207
2040	3d	Coppice	0.37	75	203

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.