WOODLAND TRUST

Upper Barn & Crowdhill Copses

Management Plan 2020-2025

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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 Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations.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:	Upper Barn & Crowdhill Copses
Location:	Fisher's Pond
Grid reference:	Upper Barn:SU484202 Crowdhill:SU485197, OS 1:50,000 Sheet No. 185
Area:	28.43 hectares (70.25 acres)
Designations:	County Wildlife Site (includes SNCI, SINC etc), Planted Ancient Woodland Site

2.0 SITE DESCRIPTION

2.1 Summary Description

Upper Barn Copse and Crowdhill Copse are two separate planted ancient woodland sites (PAWS) totalling 28.43 hectares (70 acres). They are situated within the South Hampshire Lowlands National Character Area (NCA) in Fair Oak, approximately one and a half miles east of Eastleigh, north of Southampton. The South Hampshire Lowlands NCA is a low lying plain of farmland, pasture, and woodland (9% of which is ancient semi-natural) between the Hampshire Downs and South Downs NCA's to the north, and the New Forest and South Coast Plain NCA's to the south.

Upper Barn Copse is surrounded by arable fields and horse paddocks, while Crowdhill Copse is bordered by recent residential developments to the south and east and Stoke Park Wood, a large 89ha Forestry Commission PAWS woodland to the southwest. Fairoak and neighbouring town, Bishopstoke, encircle the copses and Stoke Park Wood to the south and west. To the north and east is a mosaic of arable fields, residential housing, hedgerows and copses. Many of these copses are also fragments of ancient woodland that link loosely to the South Downs National Park less than one mile from Upper Barn and Crowdhill Copses. The terrestrial mosaic is intertwined with a variety of watercourses including lakes, ponds, rivers and streams which form part of the catchment of the river Itchen which flows north to south approximately one mile west of Upper Barn & Crowdhill Copses. The copses themselves include ephemeral or permanent streams, most notably in Crowdhill Copse where a stream runs along the south boundary and continues

along the north boundary through a steeply banked valley.

The copses were once part of the Bishop of Winchester's hunting grounds and were only significantly re-planted with non-native conifers and beech in the 1950's and 60's, resulting in their current PAWS designation. They were owned by the Forestry Commission before they were acquired by the Woodland Trust in March 1990 and since then the Trust has been undertaking work to restore them to a predominantly native broadleaf composition.

Currently both copses have a broadleaf exterior which blends sympathetically into the landscape, with old woodbanks and boundary hedgerow trees indicating the copses' ancient past. However, their interiors are more reminiscent of ex Forestry Commission sites, with occasional uniform conifer stands between planted broadleaves, with areas that have undergone restoration works yet to establish a more natural structure. They are still attractive and appealing woodlands and never more so than in spring when many areas are carpeted with ancient woodland ground flora, with some spectacular bluebell displays.

At 19.23ha (47 acres), Upper Barn Copse is the largest and northern-most of the two copses and comprises beech plantation blocks along with mixed broadleaf stands of ash, oak, sweet chestnut and birch, with alder in the wetter areas and remnant conifer blocks of western hemlock and Douglas fir. Understorey is sparse in the beech and conifer blocks, but more abundant in the mixed broadleaf stands and mainly comprises hazel and holly.

Crowdhill Copse is approximately 180 metres south of Upper Barn Copse, separated by a field but accessible via a choice of public footpaths and bridleways. At 9.19ha (23 acres) it is considerably smaller than Upper Barn Copse and is a curved woodland belt of up to 250 metres across at its widest point. The majority of the copse has been restored to a mixed broadleaf composition of oak, ash, sweet chestnut and birch, with an understorey comprised mainly of hazel and holly. The stream valley through this copse is also flanked by stands of alder and a ground flora of ferns and mosses. There are few conifers remaining and these include western hemlock, western red cedar and Norway spruce.

A permissive path and ride layout provides access to most parts of the copses, with public rights of way providing additional access and routes to the surrounding area. However, they can be muddy in winter or prolonged wet weather. Both the immediate area surrounding the copses and the wider landscape are currently undergoing extensive development or are subject to development proposals, meaning that the copses have never been more important for their ecological value, provision of public access to woodland, and their connectivity to the habitat network in the wider landscape.

2.2 Extended Description

3.0 PUBLIC ACCESS INFORMATION

3.1 Getting there

Upper Barn and Crowdhill Copse are two woods just north of Bishopstoke. To the south they adjoin the Forestry Commission's much larger Stoke Park Wood. Crowdhill Copse can be accessed from Harding Lane, at the end of which is a parking area for a couple of cars. Upper Barn can be accessed from the same point by walking up through Crowdhill Copse, or more directly by public footpath from the east side from the Fox

& Hounds pub on the B3354 Winchester Road.

A public footpath runs up through Crowdhill Copse and connects to a bridleway leading by a field to Upper Barn. Another public footpath crosses Upper Barn at the southern end. This connects to several permissive paths within the wood. The paths are mostly grassy and liable to be muddy when wet. Access points are mostly hunting gates and kissing gates.

Nearest Bus Stop : Fox & Hounds Pub, Crowdhill. Accessible from Winchester and Bishop's Waltham by Stagecoach Service No. 69. From there walk west down track to Crowdhill Copse. Also Sandy Road, Fair Oak, accessible from Eastleigh by Solent Blue Line Service No. 2. (Information from Traveline May 2007 www.traveline.org.uk 0871 200 2233).
Nearest Station : Eastleigh 2.5 miles

Nearest Public Toilet : Bishopstoke Recreation Ground (2 miles) (Information from Eastleigh BC 02380 688409)

3.2 Access / Walks

4.0 LONG TERM POLICY

In the long-term Upper Barn and Crowdhill Copses will consist of semi-natural woodland with a diverse species and age range, dominated by native broadleaves including oak, beech, birch and alder. They will have a well-developed understorey of native shrubs such as hazel, holly and hawthorn, and a diverse field layer of a variety of woodland plants including ancient woodland ground flora such as bluebell, lesser celandine and wood anemone. A proportion of non-native trees such as sweet chestnut and a small number of mature conifers (less than 20% of the total canopy cover across both copses) such as Douglas fir, Norway spruce and western hemlock will be retained and will complement, not threaten, the native ecosystem.

A veteran and ultimately ancient tree population will be sustained or increased where possible, by selectively retaining and securing a proportion of trees for long-term retention throughout the restoration process and beyond.

The permanent and seasonal stream valleys throughout both copses will be thriving riparian habitats for species such as alder, ferns and mosses that depend on damp, wet and shady conditions.

The diversity of species, age and structure of the copses will all contribute to the woodlands resilience to threats such as climate change and pests and diseases.

A minimum of 10% open space will be present in Upper Barn Copse, primarily made up of managed rides and paths, while Crowdhill Copse will retain the proportion of open space provided by maintaining the wide central ride as a minimum. Levels of temporary open space are likely to fluctuate according to the stage of restoration and tree safety and disease management requirements. This may include anything from small canopy gaps from the loss of individual trees or selective tree removal, to larger openings and glades created by silvicultural works such as selective felling and thinning of ash and conifers. The combined open space will

encourage and support diversity in the field and ground layers, from swathes of ancient semi-natural woodland ground flora such as bluebell and wood anemone, open space and other flora such as herb robert and red campion, to patches of coarse vegetation and scrub such as bramble and bracken. It will also provide opportunities for natural regeneration of tree species which will replace trees lost to disease. These levels will be sufficient to sustain diversity within the copses, with more significant open habitats provided by the adjacent fields and surrounding area.

Animal damage (e.g. deer browsing) will not be preventing succession and establishment of broadleaf trees from natural regeneration, or resulting in significant losses of established trees (e.g. by ring-barking from squirrels) following appropriate management to prevent any detrimental impact on the habitat.

The copses will be a highly frequented and valued asset to the local community and to the wider landscape. Access facilities will be sufficient to support the high numbers of visitors, with multiple entrances which accommodate varying access needs and welcome signs that name the individual copses at key access points. Bridges will facilitate access across streams and ditches where required to maintain a circular or connective route. However, paths will remain natural and unsurfaced to preserve the ancient woodland soil and aesthetic.

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 Woodland Site

Description

Upper Barn Copse is essentially comprised of 3 distinctive areas each occupying approximately one third of the site, separated by straight rides that radiate out from a central point. Oak/ash (sub-cpts 6b,7a, and 7b), beech plantation (sub-cpt 4b and cpt 8a) and western hemlock plantation (sub-cpts 4a and 6a and cpt 5a).

The oak/ash area is largely comprised of even-aged stands of semi-mature trees yet to mature and achieve a more semi-natural aesthetic following restoration works. Ash occupies approximately 25% (4.8ha) of the total canopy cover of the copse, with ash dieback disease first recorded in 2017 affecting ash of all age classes. Beech plantation areas are dominated by a largely even-aged canopy of semi-mature and mature trees in rows and the stands of mature western hemlock are of a variety of densities following past thinning, last carried out in 2009. Rare young and semi-mature individual Norway spruce, Douglas fir and western hemlock are unevenly distributed throughout the copse.

The majority of the perimeter of the copse is a mix of mature native broadleaf tree and hedgerow species including mature pre-plantation boundary trees and coppice stools on sections of woodbank. Species include hawthorn, field maple, spindle, holly, oak, ash, beech, birch and alder in wetter areas.

Holly and hawthorn form a sparse understorey beneath the beech while a denser understorey of hazel, holly, field maple, hawthorn and wild cherry (including some larger over-mature specimens) and occasional goat willow is present beneath the oak/ash stands. Oak, beech, sweet chestnut, birch, holly, elder, blackthorn, hazel, and field maple are all regenerating and establishing on the periphery and in canopy gaps created by previous restoration works. However, they are rarely able to establish where there is a uniform beech or hemlock canopy due to significant shade and prolific western hemlock regeneration and apparent deer browsing.

Bluebells are the dominant ground flora within the beech plantation areas before canopy closure. Elsewhere, ground flora includes occasional patches of mixed ASNW flora (Solomon's seal, enchanter's nightshade, lesser celandine, wood anemone and dog's mercury) and coarse vegetation (bramble/bracken/nettle) on ride edges and in areas thinned and disturbed during restoration.

Crowdhill copse is comprised predominantly of two linear compartments (2a and 3a) of mixed broadleaf stands totalling nearly 8.5 ha either side of a wide central ride, with single figures of young western red cedar and semi-mature Norway spruce and a small stand of western hemlock remaining in cpts 1a and 2a.

The canopy is dominated by semi-mature oak and ash following restoration works which were carried out in 2003, 2009 and 2010. Sweet chestnut, birch, beech, field maple and rarely yew are also present. Mature pre-plantation oak, beech, ash and sweet chestnut, including coppice stools, are present in the eastern and

southern edges. Ash occupies approximately 30% (3ha) of the total canopy cover of the copse, with ash dieback disease first recorded in 2017 affecting ash of all age classes.

Hazel and holly are the most abundant understorey plants, with hawthorn, wild cherry and privet, and goat willow also present. Natural regeneration includes ash, birch, beech, and field maple.

Ground flora includes occasional ancient woodland species such as bluebell, yellow archangel, Solomon's seal and wood anemone, along with foxglove, ferns, bramble and bracken, tormentil and creeping soft grass. The exception is a stream valley which runs loosely parallel with the length of the north and west boundary (cpt 2a), flanked by alder, ash and birch with a ground flora of mosses and ferns.

There is little evidence of pre-plantation broadleaves within the interior of both copses including a notable absence of dead wood and large stumps which are often characteristic and ecologically valuable ancient relics at PAWS woodlands.

Significance

The amount of ancient semi-natural woodland (ASNW) left in Britain has been drastically reduced over the last century. Approximately 40% of England's ASNW is found in the South East. It is irreplaceable due to the continuity of woodland cover over hundreds of years and contains many rare and threatened species. The planting of conifers during the 1950's and 60's had a significant negative impact on our ancient woods and the restoration and prevention of their loss are two of the main aims of the Trust. Securing the remnant pre-plantation features and restoring a predominantly native broadleaf composition will conserve and enhance the copses which are an important wildlife hub, connected to the wider landscape via watercourses, hedgerows and other wooded habitats, providing corridors for flora and fauna to move through and colonise.

Opportunities & Constraints

Constraints
Ground conditions: The ground can be very wet and muddy in prolonged wet weather and in autumn and winter, dictating the timing of operations.
Stream valleys: There are some steep-sided slopes, deep trenches and boggy areas formed by these features which limit or dictate access routes throughout the copses.
Timber extraction: Timber from both copses can only be extracted through Crowdhill Copse and Forestry Commission land, resulting in a long extraction route and requiring collaboration with adjacent landowners.

Factors Causing Change

Ash dieback: This disease is present in both copses and was first observed there in 2017. It is currently evident wherever ash is present and is affecting all age classes of the species. This is likely to have a significant impact on the composition and structure of the copses, with trees removed for safety reasons or lost through natural decline resulting in gaps and opportunities for other species such as oak, birch, sweet chestnut, beech, shrubs and ground flora to establish in their place. There is likely to be an increase in dead wood as a result of the disease and this will be retained on site where possible, in places where it does not present a hazard to neighbours or visitors to the wood.
Animal damage: A significant deer presence is evident throughout both copses, with multiple trails, hoof prints and browsed shrubs and young trees. The most significant signs are apparent in Upper Barn Copse which together with its dominant shade casting plantation structure has resulted in a notable lack of successional trees of young age classes. Occasional squirrel damage is also evident and combined with the

other factors limiting regeneration of trees, may be significant.
Watercourses and soil: There have been significant changes to the local water catchment following development on neighbouring land. These changes affect run-off and channeled water ingress at the copses. There is a potentially increased risk of flooding and pollution via these sources into the watercourses and soil within the copses.
Climate change: Wetter winters may result in significant changes to the water table, saturation of soil and watercourses in and around the copse. Conversely longer drought periods and increased temperatures are also anticipated through spring and summer. This increases the likelihood of knock-on effects such as drying or waterlogging of soils, increased vulnerability to tree diseases and changes in species composition to those that are best adapted to the changing conditions. The even-aged and single species stands are vulnerable to the effects of climate change and tree diseases due to their lack of diversity.

Long term Objective (50 years+)

The restoration to semi-natural broadleaf cover will be a gradual process, delivered at a rate that will allow broadleaf trees to naturally regenerate and establish with the aim of minimizing exposure, vegetative competition and windthrow. Remnant ancient woodland features such as woodbanks, specialist ground flora, veteran trees, and riparian corridors will be secured by removing threats from non-native conifers through gradual thinning of the canopy to release existing broadleaf trees and natural regeneration and diversifying the broadleaf composition.

Restoration works will be prioritised in those areas under the most immediate threat e.g. by dense shade from non-native conifers. Diversification of beech plantation areas is a lower priority objective due to the fact that these areas are currently secure from short-term threats, having a broadleaf canopy and an abundance of ancient semi natural woodland ground flora. However, any opportunities to increase diversity and natural regeneration in these areas in the short-term (e.g. whilst carrying out other PAWS or tree safety works) will be capitalized on.

The diversity of the outer edges of the copses will be capitalized on as initial areas to expand as these are typically the most abundant with broadleaf trees, including some larger historic boundary trees and natural regeneration due to the space and light and from past silvicultural works nearest extraction routes. Tree safety works to manage diseased or dangerous trees along the footpath network (e.g. from ash dieback) will also be incorporated into the restoration process as they are also largely centred around the periphery of the copses and compartments. Diseased trees that present a risk to visitors will be removed, thinning out a proportion of the canopy, scalloping path edges and providing gaps for existing broadleaf regeneration and ground flora to establish in, and potentially new plants to colonise. Trees affected by disease in areas that do not present a risk to visitors will be retained to allow continuity of cover, more gradual change from natural processes and the retention of a proportion of standing and fallen dead wood, essential to a viable woodland ecosystem. Where high concentrations of diseased trees are present (e.g. in the case of ash dieback), the relevant sections of the copses will be closed off and/or paths diverted where necessary to safeguard visitors and the habitat. Rare young Norway spruce of low densities which present a low risk of threat to the eco-system will be retained in the short to medium term to provide interim tree cover following felling and natural loss of ash in the areas most affected by ash dieback (e.g sub-cpts 6b, 7a and 7b). These cpts will be re-evaluated in subsequent PAWS assessments and the Norway Spruce removed if deemed to be a threat in future years.

The restoration process will reduce conifers to less than 20% of total canopy cover across the two copses, including occasional western hemlock, Douglas fir and Norway spruce which will be retained as specimen

trees.

The stream valleys and wet woodland stands throughout both copses will be minimum intervention areas except where works are required to safeguard or improve them (e.g. PAWS restoration or safety works), providing links to the landscape beyond the copses.

Restoration works will result in pockets of temporary open space while sustained open space will be provided by rides which will be maintained through annual maintenance and periodic ride-side coppicing works. The resulting diversity of species, age and structure of the copses will all contribute to the woodlands resilience to threats such as climate change and pests and diseases.

The effect of deer on natural regeneration will be assessed and monitored in each plan period and if deemed to be preventing regeneration to a detrimental level then management options such as the protection of regeneration in fenced enclosures, deer control by culling or a combination of both will be undertaken.

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

To continue PAWS restoration works in threatened areas and manage the risk from ash dieback. This will be achieved through the following:

Crowdhill Copse:
• Annual coppicing of hazel and suppressed trees adjacent to 140m of the central ride between cpts 2a and 3a.
• PAWS restoration works: Selective felling of 50% of western hemlock in 0.36ha of cpts 1a and 2a in 2021.
• Selective felling of ash with mid to advanced ash dieback decline symptoms within falling distance of footpaths, roads and neighbouring properties within the plan period (approximately 150 trees) if required following annual assessments.

Upper Barn Copse:
• Closure of cpt 7b (2.45ha) in 2020 to prevent access to the area worst affected by ash dieback and to allow the disease and habitat to progress naturally. Path entrances to this compartment will be closed off with arisings from felled ash with mid to advanced decline symptoms and/or post and rail fencing and explanatory signs.
• Thinning of ash with mid to advanced decline symptoms (approximately 100 trees) adjacent to approximately 1.3km of footpaths on the periphery of cpts 5a, 6a, 6b, 7a & 7b in 2021.
• Selective felling of ash with mid to advanced ash dieback decline symptoms (approximately 100 trees) within falling distance of the public footpath and neighbouring properties on the north and east boundaries (cpt 7b & 8a) within the plan period if required following annual assessments.
• PAWS restoration works:
Removal of remainder of young hemlock natural regeneration in 6.5ha of cpts 4a, 4b, 5a & 6a in 2020.
Thinning of western hemlock and beech in 7.5ha of subcpts 1a, 4a, 4b, 5a, 6a & 8a.

Both copses:
• Annual summer assessment of the progress of ADB and the recruitment of suitable natural regeneration of future canopy trees.
• A thermal imaging assessment of deer in 2020 and implementation of annual deer management recommendations and monitoring.
• A PAWS and woodland condition assessment in 2024.

5.2 Connecting People with woods & trees

Description

Upper Barn Copse and Crowdhill Copse are situated in Fair Oak, a large village approximately one and a half miles east of Eastleigh, to the north of Southampton. They are within the Fair Oak & and Horton Heath parish which has a population of approximately 10,000 people. The copses are Woodland Trust category A access sites (high usage, regularly used at all times of the year, with more than approximately 15-20 visitors using one entrance every day). They have a high footfall from local residents within walking distance following extensive development in the surrounding area and from visitors from further afield who have access to the copse via the extensive road network and nearby M3 and M27.

Visitors are attracted by the recreational opportunities that the copses (and the Forestry Commission's Stoke Park Wood) offer in contrast to the surrounding urban environment. Many visitors are dog walkers and runners, with occasional horse riders using the bridleway network which crosses and encircles Crowdhill Copse and runs parallel with the south boundary of Upper Barn copse. Bluebells are one of the biggest attractions which significantly increase footfall annually in spring.

Both copses are accessible on foot via an extensive network of public rights of way (RoW) from all directions, however, there is no direct access to the copses by car and parking in the immediate area is scarce. The owners of the Fox & Hounds pub (SO50 7GD) allow free parking for visitors to the copses in the large car park surrounding the pub. The copses are then accessible on foot via the small mown green to the side (west) of the pub, which joins a bridleway that runs west to the copses.

Each copse is named individually with wooden welcome signs on main entrances. The main entrance to Upper Barn Copse is a kissing gate located in the south east corner, with one additional pedestrian entrance gate on the east boundary and two squeeze gap entrances on the south boundary. It has many permissive paths including a wide central ride, a circular peripheral path and various off-shoots through the copse. One public RoW footpath crosses the copse at the south end, while RoW footpaths and bridleways run parallel

with the length of the south and east boundaries outside of the copse. Path surfaces in Upper Barn Copse are entirely natural and can become very wet in autumn/winter. Both copses have seasonal streams which rise significantly in wet periods and autumn and winter. Pedestrian bridges facilitate access across the deepest channels where required to maintain a circular or connective route.

The paths are mainly peripheral to each compartment which allows the central areas to be left largely natural for wildlife habitat. However, ash is an abundant tree along much of the periphery of the copse and within cpts 7a and 7b (5ha), with ash dieback disease now detrimentally affecting ash and removing the suitability of formal access within and adjacent to cpt 7b (2.45ha).

Crowdhill Copse has access-for-all RADAR key gates at the north and south ends which lead to a central ride running along the length of the copse. The majority of the central ride is a public footpath, which diverts west approximately 130 metres before the southern entrance/exit and leads to a squeeze gap via a slatted bridge which crosses a stream. A RoW bridleway crosses the copse at the north east end which provides access between the two copses. Both the central ride and bridleway surfaces are comprised of compacted coarse stone and clay several metres wide, giving a raised but largely natural surface.

The Forestry Commission's Stoke Park Wood, a large 89ha predominantly coniferous PAWS woodland, is immediately adjacent to Crowdhill Copse and can be accessed on foot from both copses. See Forestry England's website for more details: https://www.forestryengland.uk/stoke-park-wood

Two other Woodland Trust woods are situated to the west of Upper Barn and Crowdhill Copse within driving distance:
Otterbourne Park Wood, Otterbourne, SO21 2HY - A 23 hectare ancient woodland, approximately 5km (3 miles) away.
Valley Park Woods, Chandler's Ford, SO53 4QX – A complex of four ancient and secondary woodlands totally nearly 30 hectares, approximately 11km (7 miles) away.

Significance

Upper Barn and Crowdhill Copses' urban fringe setting and high local demand for public access is reflective of the increasing development in south east England and the corresponding need for accessible open space. The copse's close proximity to residential areas make them ideal for local residents situated within walking distance. The car parking available also caters for visitors from further afield and their connectivity with Stoke Park Wood and the wider landscape provides opportunities for longer walks and visits. Both copses also provide historical and visual interest both in the landscape and through their mixed habitats and stunning ancient woodland ground flora. Therefore, the copses provide an important ecological and recreational resource, providing benefits to both mental and physical health.

Opportunities & Constraints

Constraints:
Paths and rides can become very muddy during prolonged wet weather, in autumn and winter and following operations such as timber extraction.

Opportunities
Increasing visitor numbers may provide volunteer and engagement opportunities.

Factors Causing Change

Ash dieback: This tree disease affects public access provision, requiring tree safety works and path closures to maintain safe access at the copses.
Local development: There is an ongoing local authority proposal to build a road between Upper Barn Copse and Crowdhill Copse, along with additional housing estates and facilities which would significantly increase visitor numbers to the copses. This increases the likelihood of positive and negative effects including anti-social behaviour, littering, dog fouling, fires, cycling, new desire lines and trampling of ground flora, volunteering and local support for the copses and the Trust.

Long term Objective (50 years+)

The copses will provide a safe and enjoyable woodland experience for visitors and links to the surrounding landscape, with a suitable provision of accessible footpaths, entrances, infrastructure and signage. They will continue to be valued and frequently visited by local residents and visitors from further afield, with strong local support for their conservation.

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

To provide a safe, enjoyable woodland experience for visitors. This will be achieved through the following within the plan period:
• Annual entrance maintenance and path cut (approx. 2.8km) to maintain the footpath network in both copses.

• Annual infrastructure inspections and maintenance.

• Annual tree safety inspections and remedial works as required in line with the Trusts Tree Risk Management Policy.

• An assessment of access infrastructure and signs in 2024 as part of the whole site woodland condition assessment.

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	0.76	Mixed native broadleaves	1968	PAWS restoration	Diseases, Gullies/Deep Valleys/Uneven/Rocky ground, Housing/infrastructure, structures & water features on or adjacent to site	Ancient Woodland Site, Connecting People with woods & trees	County Wildlife Site (includes SNCI, SINC etc), Planted Ancient Woodland Site
This cpt is a small triangular area in the extreme south-west of Crowdhill Copse. It is bounded to the south-west by a woodbank adjacent to a public bridleway, beyond which is Forestry Commission land. The main central ride through the copse (a RoW footpath) bounds the eastern edge adjacent to a field which was incorporated into a neighbouring housing development completed in 2020. The field includes an outfall that discharges into the copse from a series of balancing ponds within the development site. To the north a public footpath separates cpt 1a from 2a. A stream with some steep sloped sides crosses the compartment loosely east to west. Mixed broadleaves (oak, alder, ash, birch, field maple and rarely beech) currently dominate most of the cpt, but one threatened area of western hemlock remains adjacent to the stream. Understorey consists of hazel, goat willow, holly, wild cherry and privet, and hawthorn. Natural regeneration includes ash, birch, beech, field maple and western hemlock. Ash dieback is present affecting ash of all age classes present. Ground flora includes occasional ancient woodland species such as bluebell, yellow archangel, Solomon's seal and wood anemone, along with foxglove, ferns and bramble, tormentil and creeping soft grass (holcus mollis - a woodland/hedgerow species). There are currently large swathes of bare ground beneath the densest areas of Western Hemlock.							
2a	3.93	Oak (pedunculate)	1957	High forest	Diseases, Gullies/Deep Valleys/Uneven/Rocky ground	Ancient Woodland Site, Connecting People with woods &	County Wildlife Site (includes SNCI, SINC etc), Planted Ancient Woodland Site

						trees	

This cpt is a linear belt of predominantly native broadleaves to the north and west of the wide central ride (a RoW footpath) that runs the length of Crowdhill Copse. It is bounded by improved grass fields adjacent to the north boundary of the copse and by the central ride on the east boundary of the cpt. The eastern end of the cpt is bisected by a bridleway which runs north to south leaving a thin wooded strip adjacent to the periphery of a slightly older housing development.

A stream valley with some steep sides runs the length of the cpt, flanked by alder, ash and birch with a ground flora of mosses and ferns. This area is relatively undisturbed away from the footpath and provides a contrasting species composition and topography to the majority of the copse.

The strip north and west of the stream is dominated by ash, with oak, beech and birch. The strip to the east and south of the stream was thinned in summer 2003 and 2009 and a final block of western red cedar and spruce felled to waste along the stream in 2010. This section is now dominated by oak with birch, beech, ash, sweet chestnut and an understorey dominated by hazel and holly. Rare individual mature Norway spruce have been retained and are no longer threatening the habitat and there is a negligible amount of western red cedar regeneration remaining.

Additional understorey shrubs throughout the compartment include, goat willow, wild cherry and privet, and hawthorn. Natural regeneration includes ash, birch, beech, field maple and western hemlock, and rarely - yew.

Ash dieback is present affecting ash of all age classes present.

Ground flora includes occasional ancient woodland species such as bluebell, yellow archangel, Solomon's seal and wood anemone, along with foxglove, ferns, bramble and bracken, tormentil and creeping soft grass (holcus mollis - a woodland/hedgerow species) with the exception of the damp, shady stream valley. Ivy and honey suckle are also present.

3a	4.50	Oak (pedunculate)	1968	High forest	Diseases, Housing/infrastructure, structures & water features on or adjacent to site	Ancient Woodland Site, Connecting People with woods & trees	County Wildlife Site (includes SNCI, SINC etc), Planted Ancient Woodland Site

This cpt is a belt of predominantly native broadleaves to the south and east of the wide central ride (a RoW footpath) that runs the length of Crowdhill Copse. It is bounded by the central footpath on the west boundary of the cpt and by a housing development completed in 2020 to the south and east. The southern boundary of the cpt borders a field which includes an outfall that discharges into the copse from a series of balancing ponds within the development site. The discharged water enters a stream near the south boundary, within Trust land which flows into to a pond immediately adjacent to the central ride. A culvert beneath the ride then discharges the water into the stream that crosses cpt 1a and continues the length of cpt 2a. The eastern end of the cpt is bisected by a bridleway which runs north to south leaving a thin wooded strip adjacent to the periphery of a slightly older housing development. In the south east corner a

sliver of land juts out into the housing development and is mainly consists of a mixed native mature hedgerow with few trees.

Oak currently dominates, with significant ash stands, with sweet chestnut, birch, field maple and rarely yew also present. There are some large sweet chestnut and ash coppice stools towards the eastern edge. Natural regeneration includes ash, birch, beech, field maple and rarely - yew.

Understorey is dominated by hazel and holly, with wild cherry and goat willow also present.

Ash dieback is present affecting ash of all age classes present.

Ground flora includes occasional ancient woodland species such as bluebell, yellow archangel, Solomon's seal and wood anemone, along with foxglove, ferns, bramble and bracken. Ivy and honeysuckle are also present.

4a	1.84	Beech	1958	PAWS restoration		Ancient Woodland Site, Connecting People with woods & trees	County Wildlife Site (includes SNCI, SINC etc), Planted Ancient Woodland Site

This sub-cpt is the southern-most section of the copse. It is bounded to the north by the wide central ride through the copse and by a public footpath that marks the boundary with sub-cpt 4b, and by a bridleway and improved grass field to the south.

It is predominantly beech plantation with a stand pf approximately 100 western hemlock roughly central to the area. Other broadleaves across the whole compartment include occasional semi-mature and mature birch and sweet chestnut (including a few large coppice stools). Understorey is sparse due to the dominance of shade casting species and deer browsing, and mainly comprises holly, beech and hemlock regeneration.

The southern edge contains a mix of mature native broadleaves and hedgerow species on and around a prominent woodbank including hawthorn, field maple, spindle, holly, oak, ash, beech and birch with some older, larger boundary oaks.

Ash dieback is present affecting ash of all age classes present.

Ground flora includes occasional ASNW flora, mainly bluebell (particularly beneath the beech) and coarse vegetation (bramble/bracken/nettle) particularly on edges and in areas thinned and disturbed during restoration. There are occasional ferns and patches of bare ground beneath the densest areas of hemlock.

4b	1.38	Beech	1958	PAWS restoration		Ancient Woodland Site, Connecting	

						People with woods & trees	

This sub-cpt is bounded to the north by the wide central ride through the copse, a public footpath to the south and by a remnant straight track to the west. The track is a sunken depression along the footprint indicated on maps, with no surfacing and little compaction visible. It is currently demarcated by a notable change in species composition from beech to a 'wall' of western hemlock along the east boundary of the adjacent cpt (5a).

It is predominantly beech plantation with occasional semi-mature and mature birch and sweet chestnut (including a few large coppice stools) and rare western hemlock, mainly on the northern boundary adjacent to the central ride through the copse. Understorey is sparse due to the dominance of shade casting species and deer browsing, and mainly comprises holly, with holly, beech, birch and rare western hemlock regeneration.

Ground flora includes frequent ASNW flora, mainly bluebell (particularly beneath the beech) and coarse vegetation (bramble/bracken/nettle) particularly on edges and in areas thinned and disturbed during restoration. There are occasional ferns and patches of bare ground.

5a	2.97	Western hemlock	1959	PAWS restoration		Ancient Woodland Site, Connecting People with woods & trees	County Wildlife Site (includes SNCI, SINC etc), Planted Ancient Woodland Site

This cpt forms the west half of the south west quadrant of Upper Barn Copse. It is bounded to the east by an old straight track indicated on maps, however, this is only visible on site as a sunken depression along the tracks original footprint. There is no surfacing or compaction of a track surface visible. It is currently demarcated by a notable change in species composition from a 'wall' of western hemlock to plantation beech on the west boundary of the adjacent cpt (4b). A bridleway and improved grass field mark the boundary to the south, while the west boundary is adjoined by a field and the north boundary is demarcated by a permissive footpath. A curved permissive footpath bisects the cpt through the centre, dividing into two triangular 'halves'.

The 'half' to the west of the footpath is a roughly even spread of broadleaves and conifers with beech and birch interspersed with approximately 70 western hemlock. The 'half' to the east of the footpath is predominantly beech plantation with a stand of approximately 100 western hemlock roughly central to the area. There are noticeable canopy gaps from past thinning of hemlock in 2009. Understorey is sparse due to the dominance of the shade casting conifers and deer browsing, and mainly comprises holly, beech and hemlock regeneration.

The southern and western edges contain a mix of mature native broadleaves and hedgerow species on and around a prominent woodbank including hawthorn, field maple, spindle, holly, oak, ash, beech and birch with some older, larger boundary oaks.

Ash dieback is present affecting ash of all age classes present.

Ground flora includes occasional ASNW flora, mainly bluebell (particularly beneath the broadleaves) and coarse vegetation (bramble/bracken/nettle) particularly on edges and in areas thinned and disturbed during restoration, There are occasional ferns and patches of bare ground beneath the densest stands of hemlock.

6a	2.10	Western hemlock	1964	PAWS restoration		Ancient Woodland Site, Connecting People with woods & trees	County Wildlife Site (includes SNCI, SINC etc), Planted Ancient Woodland Site

This sub-cpt is bounded to the north by a stream with a slatted wooden bridge across the deepest section, to the south by a straight permissive footpath that separates this sub-cpt from 5a, and to the west by an agricultural grass field.

It is is dominated by a stand of approximately 150 western hemlock which comprise approximately 80% of the canopy with prolific regeneration in recent years (cleared in 2019 & 2020). There are however, large gaps in the canopy following previous restoration works, with abundant coarse vegetation (bramble/bracken/nettle) and ferns in these more exposed pockets. Young oak, beech, sweet chestnut, birch, holly and elder are also establishing in the gaps and they are also regenerating, particularly on the periphery of the compartment.

Alder is a notable addition adjacent to the stream itself and along the western edge which often accumulates standing water in winter.

The western edge contains a mix of mature native broadleaves and hedgerow species on and around a prominent woodbank including hawthorn, field maple, spindle, holly, oak, ash, beech and birch with some older, larger boundary oaks. Butcher's broom is frequent in this section.

Ash dieback is present affecting ash of all age classes present.

6b	1.27	Oak (pedunculate)	1958	High forest		Ancient Woodland Site, Connecting People with woods & trees	

This sub-cpt is bounded to the north and west by agricultural grass fields and on the east by the wide ride that runs through the centre of the copse. The southern boundary is marked by a stream with a slatted wooden bridge across the deepest section.

It is an oak stand with occasional ash and an understorey of hazel and holly, with rare young Norway spruce,

retained following the removal of the majority of the spruce in 2009 which was the dominating conifer in this section prior to restoration. The north boundary is defined with a woodbank dominated by ash and oak which are pre-plantation boundary trees and on average are much larger than those in the interior of the cpt following restoration works. Alder is a notable addition adjacent to the stream.

The western and northern edges contain a mix of mature native broadleaves and hedgerow species on and around a prominent woodbank including hawthorn, field maple, spindle, holly, oak, ash, beech and birch with some older, larger boundary oaks. Butcher's broom is frequent in this section.

Ash dieback is present affecting ash of all age classes present.

7a	2.58	Oak (pedunculate)	1958	High forest	Diseases	Ancient Woodland Site, Connecting People with woods & trees	County Wildlife Site (includes SNCI, SINC etc), Planted Ancient Woodland Site

This sub-cpt forms the west half of the north east quadrant of Upper Barn Copse. It is bounded by the wide ride that runs through the centre of the copse to the west and by a ride that separates this sub-cpt from 7b to the east. Ride-side coppicing was carried out along the eastern ride in 2015 and this is currently relatively open with log piles and patches of coarse vegetation and scrub developing on the edges, and it is often very wet with large areas of standing water. It has attracted numbers of a variety of butterflies in recent years including silver-washed fritillaries, speckled woods and white admiral. The section of central ride to the west is also often very wet with a low point at the junction of all of the rides (almost central to the copse) becoming very muddy in wet periods and autumn/winter. The south boundary is formed by a shadier ride adjacent to cpt 8a. The north boundary abuts a grass field.

Species include ash, oak, beech and birch and occasional young Norway spruce which are remnants of the dominant conifer prior to restoration with the last thinning in 2009. Understorey includes hazel, field maple, holly, hawthorn and wild cherry (including some larger over-mature specimens) and occasional goat willow. Ash, beech, blackthorn, hazel, holly and field maple are all regenerating.

Coarse vegetation, mainly bramble is establishing in gaps and ride edges, and there are many sedges, rushes and ferns. Ground flora near the external edges contains occasional ancient woodland ground flora (mainly bluebells).

The north boundary is defined with a woodbank dominated by ash and oak which are pre-plantation boundary trees and on average are much larger than those in the interior of the cpt following restoration works.

Ash dieback is present affecting ash of all age classes present.

A small section of stream crosses the south end of this sub-cpt and into sub-cpts 6a&b.

7b	2.45	Ash	1958	High forest	Diseases	Ancient Woodland Site, Connecting People with woods & trees	County Wildlife Site (includes SNCI, SINC etc), Planted Ancient Woodland Site

This sub-cpt forms the east half of the north east quadrant of Upper Barn Copse. It is bounded by a ride that separates this sub-cpt from 7b to the west and a RoW footpath outside of the copse boundary bordering fields and horse paddocks. The east and north boundaries are defined with a woodbank dominated by ash and oak which are pre-plantation boundary trees and on average are much larger than those in the interior of the cpt following restoration works, including some large multi-stem coppice stools. The south boundary is defined by a small section of ride.

Species include ash (including some large multi-stem coppice stools), oak, beech, birch, rare alder and occasional young Norway spruce which are remnants of the dominant conifer prior to restoration with the last thinning in 2009. Understorey includes hazel, field maple, holly, hawthorn and wild cherry (including some larger over-mature specimens) and occasional goat willow. Ash, beech, blackthorn, hazel, holly and field maple are all regenerating.

Ash dieback is present affecting ash of all age classes present.

Coarse vegetation, mainly bramble is establishing in gaps and ride edges, and there are many sedges, rushes and ferns. Ground flora near the external edges contains occasional ancient woodland ground flora (mainly bluebells) and notable patches of butcher's broom.

8a	4.63	Beech	1958	High forest	Sensitive habitats/species on or adjacent to site	Ancient Woodland Site, Connecting People with woods & trees	County Wildlife Site (includes SNCI, SINC etc), Planted Ancient Woodland Site

This cpt forms the south east quadrant of Upper Barn Copse. It is bounded to the east by a RoW footpath outside of the copse boundary bordering fields and horse paddocks. The east boundary is defined with a woodbank dominated by ash and oak which are pre-existing boundary trees and on average are much larger than those in the interior of the cpt following restoration works, including some large multi-stem coppice stools. Notable patches of butchers broom are also present here. The north boundary is a ride running east to west and is notable by the significant change in species composition evident on either side, defining this cpt and the neighbouring ones (7a & 7b). The southern end of this cpt narrows to a point defined by the wide ride on the west boundary that runs the length of the centre of the copse, with the main entrance to the copse in the south east corner. A right of way footpath crosses the cpt from east to west, nearest the southern end, eventually crossing into cpt 4a.

Plantation beech forms the majority of the cpt following the last thinning of Douglas fir and western hemlock

in 2009. Rare Douglas fir and young hemlock are still present but no longer threatening the habitat. Additional trees and understorey are extremely scarce with the exception of some peripheral areas of the compartment, with birch, ash, sweet chestnut, alder, holly and hawthorn all present. Ash and are beech regenerating with frequent seedlings and rare saplings, however, they are rarely able to establish due to the dense shade from the uniformity of beech cover in the plantation and significant deer browsing.

Bluebells are the dominant component of the ground flora, with an impressive carpet covering the majority of the beech plantation before canopy closure. Occasional patches of bare ground are present beneath the densest areas of shade.

The north and west extremities of the compartment are divided by streams which run loosely parallel with the respective boundaries, and form wet boggy areas which fluctuate significantly according to the seasons and rainfall. These areas have the highest concentration of alder along with a greater diversity of ancient woodland ground flora including Solomon's seal, enchanter's nightshade, lesser celandine, wood anemone and dog's mercury in addition to bluebells.

Ash dieback is present affecting ash of all age classes present.

Maps show an old straight track which is a continuation of the ride that divides sub-cpts 7a and 7b, however, this is only visible on site by lines of occasional open space and peripheral shrubs along the tracks original footprint.
There is no surfacing or compaction of a track surface visible, and tree cover dominates along this line.

Appendix 2: Harvesting operations (20 years)

Forecast Year	Cpt	Operation Type	Work Area (ha)	Estimated vol/ha	Estimated total vol.
2021	1a	Selective Fell	0.36	42	15
2021	2a	Ride edge Coppice	0.20	20	4
2021	4a	Thin	0.92	49	45
2021	4b	Thin	1.20	37	45
2021	5a	Thin	0.55	36	20
2021	5a	Thin	1.59	47	75
2021	6a	Thin	1.58	47	75
2021	6a	Thin	0.54	37	20
2021	6b	Thin	0.30	50	15
2021	7a	Thin	0.98	31	30
2021	7b	Thin	0.28	54	15
2021	8a	Thin	1.85	38	70
2022	2a	Ride edge Coppice	0.20	20	4
2023	2a	Ride edge Coppice	0.20	20	4
2024	2a	Ride edge Coppice	0.20	20	4
2025	1a	Ride edge Coppice	0.20	20	4
2026	4a	Thin	0.92	49	45
2026	5a	Thin	1.70	53	90
2026	6a	Thin	1.58	47	75
2031	2a	Ride edge Coppice	0.20	25	5
2031	4a	Thin	0.92	49	45
2031	4b	Thin	0.90	33	30
2031	5a	Thin	1.59	47	75
2031	6a	Thin	1.58	47	75
2031	7a	Ride edge Coppice	0.20	50	10
2031	8a	Thin	1.50	33	50
2032	2a	Ride edge Coppice	0.20	25	5
2032	7a	Ride edge Coppice	0.20	50	10
2033	2a	Ride edge Coppice	0.20	25	5
2033	8a	Ride edge Coppice	0.20	50	10

2034	2a	Ride edge Coppice	0.20	25	5
2034	8a	Ride edge Coppice	0.20	50	10
2035	1a	Ride edge Coppice	0.20	25	5
2035	6a	Ride edge Coppice	0.20	50	10

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.