WOODLAND
TRUST SCOTLAND

Wilderness

Management Plan
2019-2024

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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 Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations.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:	Wilderness
Location:	Livingston
Grid reference:	NT039652, OS 1:50,000 Sheet No. 65
Area:	18.58 hectares (45.91 acres)
Designations:	Tree Preservation Order

2.0 SITE DESCRIPTION

2.1 Summary Description

Bisected by a burn and including diverse coniferous and broadleaf woodland, Wilderness provides good wildlife habitats and foxes, weasels, squirrels, pygmy shrews, hedgehogs and owls have been seen. Heather, blaeberry and other flora are present.

2.2 Extended Description

Wilderness wood is located towards the present southwest edge of Livingston, and lies directly to the north of the A71, opposite the Brucefield Industrial Estate. The wood lies between the altitudes of 130m above sea level in the north, to 155m a.s.l. in the south and generally faces north. The wood is bound to the north by a health club and to the east by recent housing developments of Adambrae.

The underlying geology of the area is sedimentary sandstones/ limestone's/ shale of the Carbonioferous-Dinatian period. Soils are derived from a glacial till of carboniferous sedimentary sandstones and shale. They are generally brown forest soils with gleying, of the Rowanhill association and are characterised by slowly permeable clayey horizons at varying depths between 40 and 80cm. Soils to the south and west of the site include more acidic areas, as evidenced by remnant healthy vegetation, whereas those on flatter areas of the central and especially the east of the site are more poorly drained. The site is bisected by a narrow burn, which runs in a northerly direction through the site, collecting water from a series of deep drainage ditches. The MLURI

climate map identifies the area as fairly warm moist lowland and foothill, being moderately exposed with moderate winters.

Wilderness wood is an attractive and diverse woodland. About two-thirds of the site consists of plantation woodland, whilst the eastern third of the wood is an even-aged stand of dense downy birch, which seems to have regenerated naturally about 40 years ago, apparently following a fire. This area now represents most closely the natural woodland type of the area which is Sessile oak-downy birch – Dicranum majus woodland (NVC17). Birch, which is also widespread throughout the plantation area, now accounts for about half of the woodland area.

The plantation woodland has a diverse species composition of broadleaves and conifers of various ages. The conifer species present include Douglas fir, western hemlock, Scots pine, Sitka spruce, hybrid larch and lodgepole pine; while the broadleaf species include downy birch, alder, beech, oak, ash and sycamore. Both single species and mixed stands occur within this part of the wood, but there are also some very mixed areas in terms of both age and species content. These may have developed through deliberate under planting of less-successfully established plantations, but perhaps are more likely as the result of natural colonisation by a range of young trees following pocket-clearance of windblow in the past. Diversity is also increased by stands of trees which range from fairly dense close canopy conifers to relatively open mixed species stands and wet woodland areas of more natural character.
Several stands, especially in the central area of the wood have been and continue to be affected by regular wind damage. Stands containing lodgepole pine and areas of sitka spruce have been particularly susceptible in the past.

Ground flora in the wood is influenced by topography, drainage and canopy density. Soft grasses (wavy hair grass, creeping soft grass and tussock grass) with varying amounts of ferns (male fern, scaly male fern, broad buckler fern and hard fern) occupy much of the area. Areas containing patches of heather, occasional blaeberry and heath bedstraw are more common to the south and west of the site and Polytrichum and Sphagnum moss is present with these species and ferns beneath the wet birch woodland.

Apart from grass rides, there are few open areas within the site, however the drains and watercourses and associated valley floors add additional habitats to the area. Drains running through the wood are important for non-flowering plants and Lemon scented fern, which is uncommon in lowland sites, has been recorded here. Wetter areas are also important habitats for non-flowering plants and surveys show that the wood is relatively rich in bryophyes, fungi and ferns. These are recorded in The Wilderness Plantation a Natural History Survey (May 1995).

The wood is considered as one of the better natural areas within Livingston, with a relatively high diversity of plants and animal life but one which could also benefit from improvements. In addition to plants recorded above, the wood is important for larger mammals such as rabbits, hare and roe deer and a fox den has been identified within the wood. A range of smaller mammals including grey squirrels, stoats, weasel, hedgehog, wood mouse, pygmy shrew and bank vole have been listed for the wood. Birds recorded as resident for the area include tawny owl, tree sparrow, sparrow hawk, as well as a range of common woodland and woodland edge species, with redwing, fieldfare, brambling and jay and tree pipit as seasonal visitors. No records are held for invertebrates.

The Wilderness plantation provides an important area of more extensive woodland within Livingston.

Lying between the A71 and recent housing developments at Adambrae, it is an increasingly important part of the infrastructure of Livingston and provides an attractive backdrop to these areas. Its value as an amenity site for recreational use is also anticipated to increase as more residents become aware of the woodland.

The woods are shown as mixed woodland on maps of 1898 and presumably were planted sometime in the late 1800's as they do not appear on the earlier OS maps of the 1860s. Work completed to date under these schemes has included upgrading and maintaining the path network, extensive thinning operations throughout the various stands to improve light levels reaching the woodland floor, small scale felling and restocking, tree safety work and litter clearance.

Situated to the south west of Livingston, within the Central Scotland Forest, the wood provides good public access for a range of users with approximately 1.8km of managed paths throughout gained via three entrances. These paths are generally surfaced with blaise and are well drained providing good access throughout the year, either as a through route or as a circular return route from any of the entrances. The site also provides excellent public access for both short and longer routes when viewed as part of the local network as it ties into the Livingston Greenways via the south east entrance. Following the development of Adambrae a number of unmanaged desire lines have appeared around the site and these suffer seasonal water logging.

Entrances to the wood are via kissing gates suitable for wheelchairs at the north and south ends of the wood. There is no Woodland Trust car park at the site but parking close to the site is available in neighbouring streets.

3.0 PUBLIC ACCESS INFORMATION

3.1 Getting there

Wilderness wood is located north of the A71 between the Adambrae and Brucefield areas on the south-western side of Livingston. The wood is accessible from three entrances, one with kissing gate at Bannatynes health club, Another with kissing gate and gate by Adambrae housing estate in the south east, and the other through a narrow opening off the Wilderness Roundabout. There is access to all areas of the woods.

There is a good network of paths within the wood, allowing several short circular routes. The site generally slopes from south to north but is centred around a small steep-sided burn. The main entrance routes and a loop of paths in the centre of the wood are blaise-surfaced, leading to two seats, one in a small grassy clearing. Two of the other links are dead-ends but several informal paths have developed through the adjacent woodlands, though these routes can be waterlogged at times.

There is no on-site parking, and parking locally can be difficult. Parking is available on a number of roads within the Adambrae housing estate approximately 500m from the eastern entrance. There are not always pavements to access the site, particularly along the A71.

Nearest public toilet: Almondvale Shopping Centre, Almondvale South, approximately 1.5km away - toilets suitable for the disabled, not open 24 hours.

Nearest bus stop: Bankton Road, approximately 300m away from the southern entrance at the Wilderness Roundabout (no pavements).

Further information about public transport is available from Traveline Scotland - www.travelinescotland.com

3.2 Access / Walks

4.0 LONG TERM POLICY

The wood will be managed to safeguard its public amenity and biodiversity value and in line with the Woodland Trust's corporate objectives of improving and enhancing biodiversity, encouraging public access and enhancing people's enjoyment of woodlands.

The long term vision is to maintain and enhance the woodland areas using continuous cover silviculture where possible. The woodland will consist of mixed broadleaves of a mainly native character, with areas of Scots pine dominating some compartments and other conifers remaining in smaller numbers. Where planting adjoins residential and commercial properties we may continue with a coppice regime to maintian lower stature trees and to reduce some of the conflicts between woodland and housing. Large scale felling intervention is not expected to be utilised unless windblow makes this unavoidable. Instead regular thinning and small scale group felling will be undertaken to diversify the age structure and canopy and to promote natural regeneration and diversification of ground flora. Where regeneration is not forthcoming or the species mix is poor then replanting with native species will be undertaken.
Where safe to do so, standing and fallen dead wood will be retained, although the risk of fire raising may sometimes prevent this option.

Existing on site access facilities will be maintained to suit local demand, which is classed as Grade A – high usage, and improvements will be made responding to changes in demand and with consideration to the development of West Lothian's Core Path Network. On-going development in Livingston and its environs is likely to impact on levels of use on all paths throughout.

Due to the woods location within the central belt and close proximity to large populations, the intention is to use the woods to improve and raise awareness, through education, of the biodiversity, recreation and health benefits woodlands provide.

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 Connecting People with woods & trees

Description

Access/Infrastructure/Events

Wilderness Wood is a well-used woodland on the south western periphery in Livingston. It has a network of approximately 1.8km of blaze-surfaced paths throughout the wood, with a number of additional unmanaged desire lines. There are 3 entrances around the wood suitable for public access by a range of user groups. The woodland is used predominantly by dog walkers/cyclists. Horse riders do use the wood but it is not known how many and frequency. It is estimated that 20 people minimum use the wood daily. One volunteer warden patrols and carries out checks on site every 2 weeks. There are three locations along the paths that have benches in place. There is no onsite car park, though parking is available locally. The paths, as well as providing an internal circular walk, link directly onto the Greenway network within Livingston giving access to long distance routes.
Currently there are no events at the wood.

Significance

Woodland of this size and composition is a rare feature in the urban landscape and therefore the site provides a chance to promote access to a safe, natural environment close to where people live. It forms an essential part of the local access network, providing varied and alternative routes as well as linking to longer distance routes.

Opportunities & Constraints

Constraints

•Anti-social behaviour/lack of community engagement
•No formal car parking, which can cause problems with neighbours and visitors parking on the local roads
•Winblow due to wet soils and poor drainage within site.

Opportunities

• To further develop access facilities within the site, responding reactively to user demand.
• To further promote and use the woodland as an educational resource.
• Upgrading paths and removing the gates and small access points to improve access for buddy/wheelchair-friendly use
• Tree planting opportunities with local community and partners
• Small scale events with community/local schools and community group involvement
• Opportunity to improve infrastructure within woodland by more benches/
• Promotion to Bannatyne gym, TCV green gyms, Park Run and Paths for All to use the area

Factors Causing Change

New development in the vicinity may be increasing the use of woodland.
Wetter weather has been detrimental to path surfaces.
Vandalism/fly tipping/ anti sociable behaviour
1) Senescing beech - The ongoing senescence of the large mature mainly beech trees which are such a feature in the West Lothian landscape and tend to be of a similar age. They are becoming increasingly vulnerable to storm damage and disease which is becoming a challenge to deal with in terms of tree safety and also maintenance of the treed landscape and is expected to become even worse in coming years.

2) Windblow - Most of the spruce and larch planted as part of LDC landscaping is reaching its terminal height at which it is vulnerable to windblow.

3) Chalara on ash. Ash is a frequent species and is well suited to the clay soils of West Lothian. Young trees already badly affected and some mature trees also. Removes one of the more suitable species for replanting.

4) Phytophthera ramorum. 2 SPNs already issued in the Livingston area and likely to spread.

5) Increased development - various schemes have / are being built and large new developments are currently being planned for north, SW and SE Livingston.

6) Squirrels, rabbits and roe deer are all present and likely to prevent trees developing into healthy, mature trees.

Long term Objective (50 years+)

Wilderness wood will have a well-maintained network of paths to suit all abilities for wheelchair access to horse riders. The wood will see regular walkers/dog walkers using the site daily and regularly. There will be a continued involvement and support from the local community.

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

During this plan period, the short term objective is to continue to provide public access at Wilderness wood which is safe and enjoyable. This will be achieved by:

- Two paths cuts annually (June & September)
- Annual inspection of footbridges, steps, benches, way markers
- New sign and entrance improvements in 2019- entrance and path beside A71
- Regular tree safety inspections
- Path upgrades of 3km along river in compartment 40g (2019/2020)

5.2 Secondary Woodland

Description

The woodland is a significant feature in the local landscape lying adjacent to the A71 and providing screening between Adambrae and the agricultural land to the west. The woodland is in two distinct blocks; the eastern more semi natural downy birch now represents most closely the natural woodland cover for this area. The remaining area is more obviously of plantation origin, still with a good percentage of birch but with a range of mixed conifers and broadleaves throughout. The majority of the 18.4ha has matured from planting in the mid-1950s. The main species present include Douglas fir, Scots pine, Sitka spruce, larch and lodgepole pine; while the broadleaf species include downy birch, alder, beech, oak, ash and sycamore. A history of patchy windblow has left an open mixed age and fairly diverse woodland.

Significance

The wood is a feature of the local landscape and provides effective screening and an attractive backdrop for the various housing, industry and road developments that surround it. It separates the agricultural land to the west from the Adambrae housing estate. The woodland is important for local biodiversity and has potential for improvement.

Opportunities & Constraints

Opportunities - To further increase biodiversity through continued thinning operations particularly in the predominantly coniferous areas to promote continuous cover and establish a mixed-aged, windfirm predominantly native broadleaved woodland.
Constraints – Susceptibility to wind damage.

Factors Causing Change

Frequent wind damage to conifers/increasing squirrel damage/ fire damage/pests or diseases.

Long term Objective (50 years+)

To create and maintain a diverse, mixed age and mixed species woodland habitat in perpetuity. Species composition will be mostly native though a proportion of conifers and non-native broadleaves will be accepted. Improvements to the canopy should help towards supporting a variety of ground flora communities.

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

To maintain the varied composition and structural diversity of the woodland. This will be achieved by minimum intervention in the majority of the wood.

•The impacts of deer, rabbits, squirrels and tree diseases will be monitored through the WT's woodland condition assessment process.
• Carry out forest mensuration in compartment 40g (2018)
• Tender out the contract for the work required in order to achieve this felling in compartment 40g1.6ha of larch(2019)
• Restock compartments with native broadleaf species, using 1.2m tubes, annual weeding where necessary as per felling license (2021/2022)

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
40a	0.25	Mixed native broadleaves	2003	High forest		Connecting People with woods & trees, Secondary Woodland	
Felled and replanted in 2002 this sub cpt is now well established. Species include ash, sessile oak, downy birch, rowan, alder, hazel and hawthorn. The access road to the health club bisects the area. Ground flora is mainly grasses and brambles with some foxglove. There is no significant deadwood which is restricted to a mulched layer throughout.							
40b	0.54	Mixed native broadleaves	2012	Wood establishment		Connecting People with woods & trees, Secondary Woodland	
Stand of polestage beech and ash. Beech dominates to the west and ash dominates to the east of the sub cpt. Thinned in 2002. Understorey is sparse but under the beech there are occasional sycamore and beech, with ash regenerating under its own canopy with occasional sycamore. Ground flora is poor but under the ash soft grasses dominate. There is no significant deadwood other than the sparse arisings from the original thinning.							
40c	0.79	Scots pine	1955	High forest		Connecting People with woods & trees, Secondary Woodland	
Open stand of mature Scots pine with occasional hybrid larch to the west and the occasional oak, birch and western hemlock. Understorey includes occasional rowan holly regeneration.Ground flora is sparse with soft grasses and ferns in areas of better light. Occasional windblow, especially of larch provides the limited deadwood content.							
40d	1.39	Mixed native broadleaves	2012	Wood establishment		Connecting People with woods & trees, Secondary Woodland	

Replanted in 2012 with mixed native broadleaves to replace Western hemlock and Sitka spruce. Planted by M&S and Quintiles volunteers. Some trees tubed but a lot of birch natural regeneration also expected to establish. Some deer and hare browsing evident.							
40e	0.63	Alder species	1955	High forest	Mostly wet ground/exposed site	Connecting People with woods & trees, Secondary Woodland	
Stand of semi-mature mixed broadleaves consisting of alder, downy birch, beech, sycamore and ash, with occasional hybrid larch. Understorey includes frequent alder and beech regeneration, with occasional soft grasses in the ground flora on a flushed valley site. Limited deadwood.							
40f	0.21	Mixed native broadleaves	1955	High forest		Connecting People with woods & trees, Secondary Woodland	
Open stand of occasional semi mature downy birch, previously surrounded by dense unthinned sitka spruce which was felled in 2006. Replanted with sessile oak and ash in equal proportions in 2007 in 0.6m shelters at 1100 stems per ha.							
40g	3.31	European larch	1955	High forest		Connecting People with woods & trees, Secondary Woodland	
Mixed stand of mature broadleaves and conifers. Previously opened up by wind damage and the removal of small groups of unstable conifers this compartment containing oak, birch, beech, ash, sycamore with larch and Scots pine dominating to the west and occasional groups and individuals of mixed conifers, larch, sitka spruce, Douglas fir, lodgepole pine and Scots pine. Several mature specimens of beech over look the burn from the east. Open areas gradually regenerating with rowan, ash, holly, birch and occasional oak. Ground flora varies with canopy structure but is strong where light allows and dominated by ferns, soft grasses and brambles. Mixed levels of deadwood ranging from blown stems to branchwood. Occasional standing deadwood.							
40h	2.56	Mixed native broadleaves	1955	High forest		Connecting People with woods & trees, Secondary Woodland	

Mixed mature stand dominated by downy birch with occasional hybrid larch, lodgepole pine, sitka spruce, Scots pine and Douglas fir. Other broadleaves include oak, beech, willow and rowan. There has been significant windblow within this stand (mainly pine/larch) in the past leaving a very open feel. The occasional to frequent understorey is made up of mixed age regeneration of birch, holly, rowan, beech with some Scots pine and sitka spruce throughout. Ground flora of occasional patches of soft grasses, ferns, heather and heath bedstraw. Lemon scented fern has been found in the eastern drain with polytrichum and other mosses frequent throughout. Good levels of deadwood throughout.							
40i	6.34	Birch (downy/silver)	1970	High forest		Connecting People with woods & trees, Secondary Woodland	
Stand of semi-mature downy birch with occasional beech throughout. The understorey comprises frequent beech regeneration with rowan, willow and occasional oak. Fairly diverse ground flora includes patches of soft grasses, polytrichum and sphagnum mosses, broad buckler fern, heather, heath bedstraw, wood sorrel and wild strawberry.							
40j	2.56	Scots pine	1955	High forest		Connecting People with woods & trees, Secondary Woodland	
Stand of mature/ semi-mature Scots pine, with occasional mature birch, ash, beech, sycamore and lodgepole pine. Understorey includes birch, willow, rowan, oak, sweet chestnut and holly with honeysuckle throughout. Ground flora of soft grasses, ferns, bramble and heath bedstraw. Deadwood levels have been improved by thinning of the Scots pine and spruce which has been left in situ.							

Appendix 2: Harvesting operations (20 years)

Forecast Year	Cpt	Operation Type	Work Area (ha)	Estimated vol/ha	Estimated total vol.
2022	40b	Clear Fell	0.54	56	30
2022	40c	Clear Fell	0.79	51	40
2022	40g	Thin	3.31	12	40
2022	40h	Thin	2.56	4	10
2022	40j	Thin	2.56	16	40

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.