WOODLAND TRUST

# Liverton Copse

# Management Plan

# 2020 – 2025

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## Management

# 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 Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations.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:** | Liverton Copse |
| **Location:** | Littleham, Exmouth |
| **Grid reference:** | SY025822, OS 1:50,000 Sheet No. 192 |
| **Area:** | 3.15 hectares (7.78 acres) |
| **Designations:** | |

# 2.0 SITE DESCRIPTION

## 2.1 Summary Description

Liverton Copse is a secondary woodland planted with mixed broadleaves by the Woodland Trust between 1981 and 1987. The woodland was previously a Norway Spruce timber plantation, established in 1922 and clear felled by the previous owner in 1980. The exact history is unknown, but it is thought to have been woodland for some time before 1922, appearing on the 'Withycombe Raleigh' tithe map in the early 1800s, there is also possible mention of the wood in the settlement of ‘Raleigh’, in the Hundred of Budleigh in the Domesday Book.

Around 50% of the canopy is currently dominated by Ash around 20-30 cm in diameter, predominantly in the south east and south west of the site, which is infected with Ash Die Back. The rest of the canopy features a diverse mix of species including Oak, Lime and

Hazel. The site has a range of ground flora, including ancient woodland indicator species such as Primrose, Dog's Mercury, and Moschatel. However, the site is not listed on the UK's Ancient Woodland Inventory. The wood is generally flat with a slight northerly aspect, although a steep slope leads down towards the stream on the northern boundary, where there is frequent ground compaction and erosion to the streamside bank just outside the boundary of the site. The wood is situated in the South Devon national character area (151, NE338), which is characterised by flat plateau farmland with steep wooded valleys linked by hedgerows. Although no public footpaths cross the land, Liverton Copse is well placed to provide easy access for the local population from the surrounding housing estates, via a permissive circular path joining the entrances on the western and southern entrances. The wood is set within a significantly urbanised environment relative to the rest of South Devon, providing a proportion of the small remaining green space areas within the settlement of Exmouth, and forming part of the buffer between town and countryside.

## 2.2 Extended Description

Liverton Copse is a secondary woodland planted with mixed broadleaves by the Woodland Trust between 1981 and 1987. The woodland was previously a Norway Spruce timber plantation, established in 1922 and clear felled by the previous owner in 1980. The exact history is unknown, but it is thought to have been woodland for some time before 1922, appearing on the 'Withycombe Raleigh' tithe map in the early 1800s, there is also possible mention of the wood in the settlement of 'Raleigh', in the Hundred of Budleigh in the Domesday Book.

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# 3.0 PUBLIC ACCESS INFORMATION

## 3.1 Getting there

The site has three main access points with signage and infrastructure on the Northwest, West and South West boundaries, and features a well maintained circular route within the wood. The two nearest bus stops to the site are 120m from the main entrance, on Dinan Way near to the Concorde Road turning, and 0.25 miles from the wood, on Salterton Road, opposite Liverton Close. The nearest train station is Exmouth, approximately 2 miles from the site. Bus and train stops can both be reached via well surfaced roads with pavements.

For more information visit Traveline website www.traveline.org.uk or phone 0871 200 22 33

## 3.2 Access / Walks

A circular permissive path runs around the wood, accessed via 3 entrances with pedestrian squeeze stiles. The main entrance, on the western boundary of the wood, leads direct from Normandy Close residents' parking area via a short stretch of grass verge. A second route goes from either side of houses no 47a and 47b to reach the north west corner of the wood. Immediately after entering there is a short wide flight of steps. The third entrance comes into the south west corner of the wood across another short piece of grass from the southern cul-de-sac of Normandy Close. Within the wood, the path is generally flat, although they rise to the south east corner. Paths have an unmodified natural surface that has some undulations, tree roots, etc. On-street parking is available in the surrounding residential streets of Dinan Way, Breton Way & Normandy Close.

# 4.0 LONG TERM POLICY

The long term policy for Liverton Copse is to actively manage the site as a multi-aged woodland with predominantly native broadleaved species, encouraging natural regeneration to diversify the age structure, species composition, genetic resilience and to conserve and enhance the existing varied ground flora. The aim is to restore and improve biodiversity by leading to an increasingly semi-natural wood, representative of the Trust's corporate objectives. Ecological resilience will be maintained by monitoring for the introduction of non-native species, pests and diseases, which will be eradicated appropriately. Deer pressure will also be monitored going forward to assess whether management of these species populations is needed to aid in the regeneration of the wood. In the event that natural regeneration is dominated by species such as Sycamore, enrichment planting of a diverse range of native tree species will be used in order to maximise resilience. Another key long-term objective is to provide a suitable level of access provision, appropriate to the size and ecology of the site, by maintaining path and entrance infrastructure, ensuring safety of visitors and seeking ways to promote the woodland for quiet recreation and education, working with local stakeholder bodies such as East Devon District Council. This will work towards the Trust's corporate objective of increasing enjoyment and understanding of woodland. Climate change, pests and diseases and changes to atmospheric conditions will be a huge factor in the long-term management in the woodland, a key objective is promoting maximum resilience in the woodland to allow species to adapt to the best of their ability to a rapidly changing environment.

# 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 Informal Public Access

### Description

Liverton Copse is set on the eastern edge of Exmouth (population approx. 32,000, 5th most populous settlement in Devon), immediately adjacent to housing on its western boundary, with further housing to the north and a large undeveloped industrial estate to the east of the boundary. Liverton copse forms part of the buffer between town and countryside in the wider landscape. There is a freshwater stream which runs along the northern edge of the wood, which sits below a steeply sloped, wooded bank. Parking is on-road and mainly used by local residencies, meaning there are limited spaces, the site has a relatively flat topography throughout, excluding the steep bank on the northern edge. Liverton has a single, well levelled footpath which circumnavigates the woodland interior and there are three pedestrian access points, on the north west, west and south west corners of the wood, the squeeze gap and post infrastructure is designed to restrict access by vehicles but the central access point does feature a 10ft secure vehicle gate. Due to its size, lack of parking facilities and the competing attractions of the coast and Woodbury Common, it is presumed that Liverton Copse caters predominantly to the local population.

### Significance

Increasing people's ability to enjoy woodlands and maintaining open access to our sites is a corporate objective. The close proximity of the wood to a large residential area, and the relative lack of other green space resources close-by make access to the wood highly important for local residents.

### Opportunities & Constraints

Opportunities:

1) Location - Close proximity to large population, opportunities to provide free or low cost environmental education and engagement opportunities to local residents through third party involvement.

2) Ash Die Back - visual opportunity to engage community with wider woodland

management issues such as climate change and pests and disease.
Constraints:
1) Size – Not large enough for significant engagement events, or to encourage large numbers of visitors.
2) Parking – Limited parking, and possible conflict with resident's parking spaces.
3) Visibility – Access to site through residential area from main road, entrance not clear.
4) Ash Die Back – presents significant, imminent safety issue to people using the site due to increase in falling trees/ limbs.

## Factors Causing Change

1) Pests and diseases such as Ash Die Back increasing the likelihood of hazardous trees
2) Fly-tipping and Littering: Dumping of domestic and garden waste along the western boundary. Frequent and large scale littering present across site.
3) Misuse including fires, camping, drugs etc putting other visitors off
4) Unofficial access from adjacent park and industrial estate

## Long term Objective (50 years+)

Liverton Copse is a biodiverse and resilient oasis of wildlife in an otherwise highly urbanised area, providing mental and physical health benefits to local residents. Paths, entrance infrastructure and interpretation are safe, well maintained, and appropriate to site and fit for purpose, encouraging responsible use of the woodland and allowing visitors to access and enjoy the benefits of the site quietly and safely, with minimal disturbance to wildlife. Pests and diseases such as Ash Die Back are proactively managed in an on-going way, mitigating the safety risks to people accessing the wood.

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

Easily accessible, attractive, well-maintained and safe woodland that a wide range of public frequently enjoy. Entrances, path network and facilities are safe and appropriate for level and type of use.
Work Programme:
1) Paths will be cut bi-annually to their full width to ensure good access for visitors. In addition, designated entrances will be maintained to ensure the wood is welcoming to visitors.
2) Appropriate levels of ride-side coppicing will be carried along seasonally water-logged sections of path to improve accessibility by increasing light levels and promoting drier conditions. Hedge laying will also be carried out along site boundaries to reduce encroachment onto site, which has led to the formation of unofficial paths and bank

erosion on adjacent stream.
3) Tree safety surveys will be carried out following the programme within the site risk assessment and any work necessary to make the wood safe will be undertaken, with an additional focus on Ash Die Back.
4) Anti-social behaviour, littering and trampling will be reduced through a soft management approach, including public engagement events run in partnership with local stakeholders to encourage more responsible use of the woodland by the public.

## 5.2 Local Woodland Habitat

### Description

Liverton Copse is an ex-coniferous (Norway Spruce) plantation, planted in 1922 and clear-felled in 1980. It was replanted with broadleaf species in 1981 and 1887 by the Woodland Trust and is now an established secondary broadleaved woodland, it is suspected the site was wooded prior to 1922, appearing on the 'Withycombe Raleigh' tithe map in the early 1800s. Around 50% of the canopy is currently dominated by Ash (Fraxinus excelsior), around 20-30 cm in diameter, predominantly in the south east and south west of the site, which is infected with Hymenoscyphus fraxineus or Ash Die Back. The rest of the canopy features a diverse mix of species including Oak (Quercus robur), Lime (Tilia sp.), Hazel (Corylus avellana), Hawthorn (Crataegus monogyna), Blackthorn (Prunus spinosa), Holly (Ilex aquifolium), Yew (Taxus Baccata), Rowan (Sorbus aucuparia), Elder (Sambucus nigra), Goat Willow (Salix caprea), Alder (Alnus glutinosa), Field Maple (Acer campestre), Silver Birch (Betula pendula), Cherry (Prunus spp), Sycamore (Acer pseudoplatanus) and Norway Maple (Acer platanoides). Ground flora is fairly species rich and includes ancient woodland indicator species such as Primrose (Primula vulgaris), Dog's Mercury (Mercurialis perrenis), Bluebell (Hyacinthoides non-scripta), Dog violet (Viola riviniana), and Moschatel (Adoxa moschatellinia), however the site is not listed on the UK's Ancient Woodland Inventory. Gorse is also present in the understory. The wood has predominantly even aged canopy structure, 50% dominated by Ash, but natural processes are beginning to produce a multi-aged structure due to wind blow, gap creation and natural regeneration (predominantly comprised of Sycamore). Ash Die Back is present throughout the site and will inevitably lead to the loss of large areas of the canopy (particularly in the south west and south east of the wood), and facilitate the natural regeneration of other seed-dispersing species within the site to increase their proportional representation within the woodland structure. Other tree species forming the remaining 50% of the canopy layer include Lime, Alder, Willow, Oak, Sycamore, Cherry, Silver Birch, Rowan, Yew, Holly, Hazel, Field Maple, Hawthorn and Norway Maple. It is expected Sycamore will replace Ash as the dominant canopy tree. Non-native, invasive species such as isolated patches of Laurel and Bamboo are present on the site.

### Significance

The aim is to restore and improve biodiversity by leading to an increasingly semi-natural wood, representative of the Trust's corporate objectives. The wood is an isolated refuge for wildlife in an otherwise dense urban environment with little permeability and landscape

connectivity. The site has a high diversity of native and non-native broadleaf species, abundant and diverse ground flora, which indicate the wood is potentially unmapped ancient woodland. The site also has an adjacent linear water feature (stream) which provides added benefits to wildlife using the site.

## Opportunities & Constraints

Opportunities:

1) Increase the ecological resilience of the wood to pests and diseases through regeneration thinning and potential planting of diverse range of tree species (should natural regeneration fail).

2) Increased standing and fallen deadwood habitat volumes due to Ash Die Back.

3) Increased biodiversity due to structural changes and light levels introduced due to Ash Die Back and management of the disease, e.g. ground flora, invertebrate communities.

Constraints:

1) Size – small size of woodland reduces opportunity for significant species habitat and resilience

2) Access – limited logistical access to site through residential areas in the context of timber removal

## Factors Causing Change

1) Climate Change creating pathways for new pests and diseases and species, putting pressure on existing species within the wood to regenerate and survive.

2) Ash Die Back and other unknown pest and diseases altering the species composition of the canopy.

3) Human impacts causing ground compaction, damage to tree stems, pollution (littering) and affecting the ability of the wood to regenerate, (likely to get worse with growing population and urbanisation).

4) Squirrel and Deer damage on regenerating saplings undermining ability of woodland to regenerate and maintain diversity.

5) Soil acidification from increased man-made nitrogen and sulphur oxides in the atmosphere reducing soil nutrient availability and potentially altering species composition and reducing species richness.

6) Biosecurity – visitors to the wood risk inadvertently introducing non-native pests and diseases such as Xylella fastidiosa.

7) Non-native invasive species present on site – Bamboo, Laurel and other garden invasive species in small patches.

8) Limited species diversity of natural regeneration

## Long term Objective (50 years+)

Liverton Copse is a biodiverse and resilient oasis of wildlife in an otherwise highly urbanised area, acting as both a refuge and habitat corridor for wildlife species to access survival resources and move across the landscape. The site has a rich diversity of species, including trees which due to encouraged natural regeneration provide genetic and species resilience against both climate change and the increased numbers of pest and diseases introduced to the site. Diseases such as Ash Die Back have been actively managed to increase the volume of deadwood on site, available to species that depend on saproxylic habitat. The site has a diverse, multi-age canopy structure which provides maximum habitat opportunities for wildlife and biodiversity, and ensures the site can regenerate after stochastic events such as increasingly severe storm and drought events. Work has been carried out to remediate soil health and condition, after a period of severe compaction in some areas. Non-native invasive species, pests and diseases have been monitored for and eradicated or mitigated against to ensure minimised damage to woodland ecology. Deer pressure has been monitored and appropriate action taken such as population control to safeguard regeneration, Similarly, partners such as East Devon District Council have been worked with to reduce the level of anti-social behaviour and boost public awareness to benefit issues directly affecting woodland regeneration and ecological health.

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

Actively manage areas of monoculture ash as a high forest, continuous cover system to increase light levels, fallen deadwood and to mitigate the safety issues associated with Ash Die Back, to encourage natural regeneration of other tree and shrub species and create opportunities for ground flora species and associated food-chain species.

Work Programme:

1) Actively manage ash due to the predominance of infected ash in the canopy, so as to promote other species in its place. Variable intensity thinning throughout ash component, harvesting 30% of volume, 60m3. This will slowly create opportunities for other tree species to regenerate into the canopy, and slow the decline of the existing Ash marginally due to better through-flow of air and increased space, light and nutrient opportunities. Second thinning to be considered in next management plan review. Some deadwood will also be left to increase saproxylic resource volumes.
2) Ride-side and streamside coppicing and hedge-laying, to reduce encroachment of

unofficial paths which is causing ground compaction and to provide coppiced shoots and young leaves for wildlife species specific to coppice systems.
3) Removal of invasive, non-native species such as Laurel, Rhododendron, Bamboo and Variegated Archangel.
4) Remediate areas of compacted soil through hand rotovation or technical solutions such as air spade treatment.

# 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 | 3.20 | Ash | 1984 | High forest | | Informal Public Access, Local Woodland Habitat | |

Ex-coniferous (Norway Spruce) plantation, planted in 1922 and clear-felled in 1980. It was replanted with broadleaf species in 1981 and 1887 by the Woodland Trust and is now an established secondary broadleaved woodland, it is suspected the site was wooded prior to 1922, appearing on the 'Withycombe Raleigh' tithe map in the early 1800s. Around 50% of the canopy is currently dominated by Ash (Fraxinus excelsior), around 20-30 cm in diameter, predominantly in the south east and south west of the site, which is infected with Hymenoscyphus fraxineus or Ash Die Back. The rest of the canopy features a diverse mix of species including Oak (Quercus robur), Lime (Tilia sp.), Hazel (Corylus avellana), Hawthorn (Crataegus monogyna), Blackthorn (Prunus spinosa), Holly (Ilex aquifolium), Yew (Taxus Baccata), Rowan (Sorbus aucuparia), Elder (Sambucus nigra), Goat Willow (Salix caprea), Alder (Alnus glutinosa), Field Maple (Acer campestre), Silver Birch (Betula pendula), Cherry (Prunus spp), Sycamore (Acer pseudoplatanus) and Norway Maple (Acer platanoides). Ground flora is fairly species rich and includes ancient woodland indicator species such as Primrose (Primula vulgaris), Dog's Mercury (Mercurialis perrenis), Bluebell (Hyacinthoides non-scripta), Dog violet (Viola riviniana), and Moschatel (Adoxa moschatellinia), however the site is not listed on the UK's Ancient Woodland Inventory. Gorse is also present in the understory. The wood has predominantly even aged canopy structure, 50% dominated by Ash, but natural processes are beginning to produce a multi-aged structure due to wind blow, gap creation and natural regeneration (predominantly comprised of Sycamore). Ash Die Back is present throughout the site and will inevitably lead to the loss of large areas of the canopy (particularly in the south west and south east of the wood), and facilitate the natural regeneration of other seed-dispersing species within the site to increase their proportional representation within the woodland structure. Other tree species forming the remaining 50% of the canopy layer include Lime, Alder, Willow, Oak, Sycamore, Cherry, Silver Birch, Rowan, Yew, Holly, Hazel, Field Maple,

Hawthorn and Norway Maple. It is expected Sycamore will replace Ash as the dominant canopy tree. Non-native, invasive species such as isolated patches of Laurel and Bamboo are present on the site.

## Appendix 2: Harvesting operations (20 years)

| Forecast Year | Cpt | Operation Type | Work Area (ha) | Estimated vol/ha | Estimated total vol. |
|---|---|---|---|---|---|
| 2020 | 1a | Thin | 3.20 | 19 | 60 |

# 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.