Deans Wood (Plan period - 2024 to 2029)

**TRUST** 

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# Introduction to the Woodland Trust Estate

The Woodland Trust owns and cares for well over 1,250 sites covering almost 30,000 hectares (ha) across the UK. This includes more than 4,000ha of ancient semi-natural woodland and almost 4,000ha of non-native plantations on ancient woodland sites and we have created over 5,000ha of new native woodland. We also manage other valuable habitats such as flower-rich grasslands, heaths, ponds/lakes and moorland.

#### Our Vision is:

"A UK rich in native woods and trees for people and wildlife."

To realise all the environmental, social and economic benefits woods and trees bring to society, we:

- Create Woodland championing the need to hugely increase the UK's native woodland and trees.
- **Protect Woodland** fighting to defend native woodland, especially irreplaceable ancient woodland and veteran trees; there should be no loss of ancient woodland
- **Restore Woodland** ensuring the sensitive restoration of all damaged ancient woodland and the re-creation of native woodled landscapes.

# Management of the Woodland Trust Estate

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.

The following principles provide an overarching framework to guide the management of all our sites but we recognise that all woods are different and that their management also needs to reflect their local landscape, history and where appropriate support local projects and initiatives.

- 1. Our woods are managed to maintain their intrinsic key features of value and to reflect those of the surrounding landscape. We intervene in our woods when there is evidence that it is necessary to maintain or improve biodiversity, safety and to further the development of more resilient woods and landscapes.
- 2. We establish new native woodland for all the positive reasons set out in our Conservation Principles, preferably using natural regeneration but often by planting trees, 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. Where possible, we pro-actively engage with people to help them appreciate the value of woods and trees.
- 4. The long term vision for all our ancient woodland sites is to restore them to predominantly native species composition and seminatural 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 natural and cultural heritage value of sites is taken into account in our management and in particular, our ancient trees are retained for as long as possible.
- 7. Land and woods can generate income both from the sustainable harvesting of wood products and the delivery of other services. We therefore consider the appropriateness of opportunities 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 encourage our woods to be used for 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. We maintain a network of sites for long-term monitoring and trials leading to reductions in plastics and pesticides.
- 10. Any activities we undertake are in line with our wider Conservation Principles, conform to sustainable forest management practices, are appropriate for the site and balanced with our primary objectives of enhancing the biodiversity and recreational value of our woods and the wider landscapes.

# The Public Management Plan

This public management plan describes the site and sets out the long term aims for our management and lists the Key Features which drive our management actions. The Key Features are specific to this site – their significance is outlined together with our long, 50 years and beyond, and our short, the next 5 years, term objectives for the management and enhancement of these features. The short term objectives are complemented by an outline Work Programme for the period of this management plan aimed at delivering our management aims.

Detailed compartment descriptions are listed in the appendices which include any major management constraints and designations. Any legally confidential or sensitive species information about this site is not included in this version of the plan.

There is a formal review of this plan every 5 years and we continually monitor our sites to assess the success of our management, therefore this printed version may quickly become out of date, particularly in relation to the planned work programme.

Please either consult The Woodland Trust website

www.woodlandtrust.org.uk

or contact the Woodland Trust

operations@woodlandtrust.org.uk

to confirm details of the current management programme.

A short glossary of technical terms can be found at the end of the plan.

# Location and Access

Location maps and directions for how to find and access our woods, including this site, can be found by using the following link to the Woodland Trust web-site which contains information on accessible woodlands across the UK

https://www.woodlandtrust.org.uk/visiting-woods/find-woods/

In Scotland access to our sites is in accordance with the Land Reform Act (of Scotland) 2003 and the Scottish Outdoor Access Code.

In England, Wales and NI, with the exception of designated Public Rights of Ways, all routes across our sites are permissive in nature and where we have specific access provision for horse riders and/or cyclists this will be noted in the management plan.

# The Management Plan

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# 1. SITE DETAILS

# **Deans Wood**

Location:	Livingston	Grid	reference:	NT028693	OS	1:50,000	Sheet	No.	65
Area:	16.27 hecta	16.27 hectares (40.20 acres)							
External Designations:	Area of Landscape Value, Long Established Woodland of Plantation Origin								
Internal Designations:	N/A								

# 2. SITE DESCRIPTION

Deans Woods form part of the Woodland Trust's holding in Livingston, West Lothian and consist of a complex of six woodland compartments and belts located in the northwest of Livingston. Situated south of the M8, the woodland belts are an extremely important part of the infrastructure of Livingston. They provide separation, screening, and an attractive backdrop for various residential developments. The belts also function as windbreaks and act as a barrier to noise.

The woods lie on a shallow southwest-facing slope between the altitudes of 155m and 190m above sea level. The underlying geology of the area is sedimentary sandstones, limestone's, shale of the Carboniferous-Dinantian 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. The MLURI climate map identifies the area as fairly warm moist lowland and foothill, being moderately exposed with moderate winters.

The woodlands consist of mature policy (estate woodland) planting, with some younger Livingston Development Corporation (LDC) planting bordering the motorway. The older areas of woodland are recorded as being woodland sites on maps of the 1860's and are therefore classed as Long Established Woodland of Plantation Origin (LEPO) on the ancient woodland inventory. Since its acquisition in 1996, the Woodland Trust has focused on a minimal intervention approach for this site to retain the LEPO features and encourage continued development of mature trees.

A number of areas are dominated by mature Scots pine. The remaining stands are predominately mature broadleaves, with high proportions of beech and occasionally sycamore and a range of other species including oak, lime, elm, downy birch, ash, horse chestnut and Norway maple. Planting to screen houses from the motorway in compartment 5a, consists of a very varied mix of pole-stage alder, cherry, rowan, ash, sycamore, beech, Scots pine, Japanese larch and Sitka spruce.

There are patches of ground flora of interest but generally it does not appear to very diverse at present. It does contain examples of the more common species found in more natural mixed broadleaved woodland habitats, and grassy areas with soft grasses and strong bramble growth where more open conditions coincide with the damper fertile soils.

The woodlands are relatively diverse compared to other areas within Livingston and important for local biodiversity as they represent reserves of more natural vegetation within the built environment. The larger blocks on the edge of Dechmont Law also have higher conservation potential as they abut large, less intensively managed areas of grassland and small areas of tree planting. In addition, there has also been a relatively long continuity of woodland cover over much of the area.

The woodland blocks provide good opportunities for local users and contain a number of informal paths and desire lines accessible from entrance points which link to the tarmac footpath and cycleway networks. A number of tarmac paths, including the Loan Path, also pass through or run along the edges of the various woodland blocks which link

to another Woodland Trust site known as North Wood which is located to the north of the M8. There are no on-site car parks at any of the small woodland blocks however parking is available on adjacent streets.

# 3. LONG TERM POLICY

Deans Woods will be managed as a sustainable natural resource to safeguard their 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 intention is to maintain these woodland areas under continuous cover where possible, monitoring and ensuring that natural regeneration is occurring, and to enhance those areas which are currently predominantly coniferous through gradual conversion to predominantly native broadleaf woodland. Wherever possible, native and to a lesser degree non-native natural regeneration will be utilised. Planting gaps with native species will be considered if there is insufficient natural regeneration. Individual examples and groups of specimen conifers, particularly Scots pine, which is featured throughout West Lothian, will be retained where safe and practical to do so. An increase in native tree species will, over time, help to support healthy ground flora communities. In addition, standing and fallen deadwood will be retained where it is safe to do so.

Improving and enhancing biodiversity within this site will also be achieved by control and removal of invasive nonnative species, where it is realistic and practical to do so. For this site the focus will be on eradicating Rhododendron ponticum and Japanese knotweed, reviewing the effectiveness of control measures and impact on the recovery of native flora.

Existing footpaths will be maintained to suit local demand. Additional path upgrades and maintenance will be in response to changes in demand and with consideration to the on-going development in Livingston and its surrounds.

Livingston has been developed with an extensive network of street lit, tarmac cycleways and footpaths, linking north to south and east to west. Where the Trust's woods border these routes it often negates the need to improve internal woodland paths beyond their beaten earth standard.

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.

# 4. KEY FEATURES

## 4.1 f1 Connecting people to Woods and Trees

#### Description

Deans Wood is a well-used complex of woodlands to the north of Livingston. The six woodland compartments border several residential and industrial areas. With train station, bus stops and parking all available within walking distance, Deans wood is a highly convenient local resource for outdoor recreation for the population of Deans (estimated at over 4,200 people) within the wider Livingston population of approximately 57,000 (according to 2024 Locality Plan).

Considering the increasing local population, these woodland compartments are significant assets for Livingston, providing a valuable outdoor resource for the thriving local population in a highly urbanised area. As of 2024, Deans Woods provides highly for tree equity with scores between 87 to 100 (out of 100) across the area, due to the good access to trees and woodlands within the community for health, climatic and economic benefits.

The level of public use for Deans Woods is defined as WT Access Category A (High usage) and most users live locally and travel through the site to access amenities such as workplaces or, school. The site is also regularly used by dogwalkers and cyclists for informal recreation. The 6 woodland compartments are generally accessible directly from the surrounding suburban roads and pavement network, centred around the Deans area.

The site is close to public transport routes with the nearest bus stops are on Deans North Road, adjacent to the southern entrance of one of the blocks, and on Deans East Road, around 200 metres from the nearest block. The nearest train station is Livingston North train station is around 1.2km (0.7 miles) from the woods. There is no onsite parking, although parking is available in adjacent streets.

There are over 30 entrances to the woodland located across this site identified with a welcome post installed in early 2020. The majority of these entrances are barrier free, except a gate to the west of compartment 8b and a fence to the north of 9a. Internally, there are approximately 3.2km of surfaced and un-surfaced paths, the majority of which are flat. The condition varies across the site from tarmac to unsurfaced mown paths. Some areas of the path are wet and muddy throughout the year particularly in compartments 8a, 8b and the southwest of 7a. The latter compartment includes a wide bridge that crosses a drainage ditch.

Although generally straight-through routes, the paths across the compartments can be walked as a short circular route. They also link directly onto the Greenway and pavement network within Livingston giving access to long distance routes as well as providing shorter circular routes using soft and surfaced paths. The site is bordered by a core path- To the north west of the site, a tarmac track which is part of the 'Loan path' network runs parallel to the eastern boundary of compartment 5b leading to a bridge crossing over the M8 and leading to adjacent Woodland Trust site of North Wood. These routes link directly onto the Greenway network within Livingston giving access to long distance routes throughout the region. This includes Dechmont Law which is one of the largest green spaces in Livingston providing more opportunity for an extended woodland walk.

Built structures across the site are limited. Nevertheless, the easterly blocks of Deans Wood were once part of the

grounds of Dechmont House, built in 1863 but since demolished. The 2nd edition Ordnance Survey map of 1897 included the presence of lodge at the south-west corner of compartment 4b and a small rectangular building to the north of compartment 7a. These features may have been associated with Dechmont House. However, there are no remains of these buildings visible on site. Nevertheless, the stone gate posts that once formed the entrance to the house can still be seen at Woodlands Park. More recent additions include, a bench present in 4b and two sculptures located in the south east section of compartment 9a as well as fairy doors hidden in a Scots Pine tree in this area.

Previous human activity on site are also evidenced via numerous low drystone dykes and walls of former boundaries. Old quarries are also illustrated to be present in compartment 7a from the 1st edition Ordnance Survey map of the mid to late 1800s. Whilst some were thought to be in-filled and no longer included on the 2nd edition Ordnance Survey map, notable pits remain visible on site nodding to their former use.

The site is located within close proximity to multiple education centres including; Carmondean primary school (beside compartment 9a), Deans community high school (south of compartment 7a) and Meldrum Primary school (east of compartment 6a). The woodland is a significant asset for Livingston, providing a valuable outdoor resource for the thriving local population in a highly urbanised area. Meldrum primary uses compartment 6a for forest school activities.

Fly tipping, garden waste dumping, motorbike use and fires are issues for this site. Creation and use of informal bike trails has also increased in compartment 7a.

There are numerous Volunteer Woodland Wardens that cover Livingston, two of which are specifically dedicated to Deans wood. They regularly patrol the area and provide reports of any issues on the site.

A Woodland Working Group (WWG) was also set up for the Woodland Trust sites in West Lothian during late 2019. The aim of this group is to conduct practical conservation tasks across the 13 Woodland Trust sites in the area. Two introduction sessions were held at Deans Wood in early 2020 focusing on clearing rhododendron ponitcum from compartment 7a. In 2022, tree planting was completed by the WWG and volunteers from People's Postcode Lottery (PPL) in compartments 7a and 5c. Deans Wood continues to provide various opportunities for future volunteer tasks across the site.

Locally, a group known as 'West Lothian Litter Pickers' has been created by enthusiastic volunteers. Although this is an independently managed group, the members do cover many of the Woodland Trust sites in Livingston, including Deans Wood, and wider West Lothian. Their work helps to keep the sites clean as well as encouraging community engagement for the sites and reporting any issues of concern.

As of 2022, Woodland Trust has been meeting regularly with West Lothian Partnership Against Rural Crime (WLPARC) to discuss incidents and issues affecting woodland use and management with other local services and landowners. This has enabled open discussion to recognise trends and ability to streamline messaging and pool resources for the area. Woodland Trust is also a part of the Livingston North Regeneration Group meetings which includes the Deans area. This provides an opportunity to interact with other organisations and plans for the local area and enable collaboration for events and wider services.

#### Significance

The woods provide enjoyable woodland walks, within an urban setting and is used by the local community for walking and running. 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.

Deans Wood is accessible to a large demographic of people and easily reached with or without transport, forming an essential part of the local access network as well as linking to longer distance routes. The woodland belts are an extremely important part of the infrastructure of Livingston, providing separation, screening, and an attractive backdrop to the various residential developments. The belts also function as windbreaks and provide some barrier to noise.

The woodland is a significant asset for Livingston, providing a valuable outdoor resource for the thriving local population in a highly urbanised area.

Remnants of the history of this area are still present such as the stone entrances to compartment 7a and drystone dyke in compartment 8a which were once part of the Dechmont House estate in the 1860s.

In 1979, there was a UFO sighting in the nearby Dechmont Law Park resulting in a police investigation with the alleged encounter becoming known as the 'Livingston incident' which is still referred to by local people and attracts visitors from further afield.

#### **Opportunities & Constraints**

#### Opportunities:

To further promote and use the woodland as an educational resource. Engage with local schools to identify Deans wood as an available resource for forest school activities- particularly Carmondean primary and compartment 9a.

As there are currently minimal species records for Deans Woods anything recorded would essentially be a new record for the site. This would be a good opportunity to involve the local community in a potential Bioblitz event to raise awareness and understanding of biodiversity in our woodlands. This could link into existing local events with partner organisations such as 'Wild Wednesdays' hosted by West Lothian Council during the summer.

To further develop access facilities within the site, such as benches, responding to user demand. Multiple areas of the path are suffering from poor drainage and other areas have become narrow over time. Opportunity to upgrade the paths to provide a consistent surface and width across the whole site to improve access for buggy/wheelchair-friendly use.

Location within an urban setting may enable access to funding such as landfill funds, windfarm funds or Active travel funds. Also, close proximity to other Woodland Trust sites within Livingston allows for potential to group works (such as path upgrades) together to be more efficient and cost effective.

The large beech monolith in 7a could be a base for artistic carving creating a destination point for the wood.

#### Constraints:

The existence of historic built structures including the non-retaining walls at the northern entrance to compartment 7a and the drystone dyke in compartment 8b need to be considered and protected during operations on site.

Some areas of the paths which are unsurfaced can remain muddy throughout the year. This is due to the high levels of use and can make the area inaccessible especially for those with mobility issues. Poorly drained soils makes access provisions difficult to maintain on soft surface routes. Lack of infrastructure on site also complicates maintenance work such as path upgrades or tree felling as there is minimal appropriate places for machinery and material storage. This increases the cost and duration of these operations.

Previous incidents of fires and vandalism discourages investment in installation of structures such as sculptures or signage.

Fragmented compartments restrict the ability to establish large circular routes which can limit suitability for some events on site. Furthermore, there is no formal car parking, which can cause problems with neighbours and visitors parking on the local roads. This may restrict hosting larger events on site that may attract those travelling by car.

#### **Factors Causing Change**

Continuous litter, fly tipping and fire raising (the latter mainly localised to compartment 9a) detract from the natural beauty of this site and are hazardous to the public and wildlife.

Misuse by unauthorised motorbikes and ATVs contributing to increased degradation of path surfaces.

Numerous desire lines cause confusion for visitors and damage to ground vegetation- Windblow in compartment 8b has resulted in previous path routes becoming blocked and multiple desire lines emerging. Similarly, the southwest corner of 7a has numerous desire lines as the paths are not clear in this section and the ground conditions are damp throughout the year.

Paths edges growing in, reducing visibility and potentially resulting in personal safety concerns by users

Increase of public use due to increased development - various housing schemes have / are being built and large new developments are currently being constructed such as Bangour Village located to the north.

#### Long term Objective (50 years+)

There will be a well-maintained network of paths and rides with a variety of aspects allowing safe access across the site. The site should be accessible, safe and welcoming with management of infrastructure and signage.

Due to the location of the woods within the central belt and close proximity to large populations, the intention is to use

the woods to improve and raise awareness and understanding within the local community regarding the biodiversity, recreation and health benefits woodlands provide.

The site should be well used, appreciated and respected by the local community and it should be known for its wildlife interest, varied landscape and habitats.

Litter and fly-tipping will be removed as far as resources allow, to maintain the natural appearance of the wood and discouraging further abuse of the woodland.

#### 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 Deans Wood which is safe and enjoyable. Access provision for this site will be in keeping with WT access category A (high usage). This will be achieved by:

- 1) The site will be kept in a safe and welcoming condition through site maintenance:
  - a) Path cuts and entrance maintenance (twice annually)
  - b) Vegetation cutbacks from path to allow lines of sight where possible and appropriate (as required)
  - c) Litter and fly tip uplift (as required)
  - d) Regular site safety inspections (tree safety, footbridges, gates and fencing) (as per site risk assessment)
  - e) Estate furniture to be repaired (as required)
  - f) Street light pruning in blocks 4b, 5c, 6a, 7a, & 9a (2025/2027/2029)
- 2) Improving visitor access by upgrading infrastructure to begin after felling works have been completed:
  - a) Scrape back and resurface footpaths to standard 1.6m width:
    - i) Compartment 8a and b approximately 400m
    - ii) Compartment 7a approximately 500m
    - iii) Compartment 5c approximately 550m
    - iv) Compartment 5b approximately 50m
  - b) Replace bridge in compartment 7a
  - c) Approximately 28m of step upgrades in compartment 7a
- d) Consult with local community regarding interest in the possible installation of benches and potential suitable locations on site
  - e) Review entrance signage following any path upgrades considering user demand (before end of the plan period)
- 3) Providing and developing more opportunities for community engagement:
- a) Continue to meet with the West Lothian Partnership Against Rural Crime (WLPARC) group and the Livingston North Services Group to discuss updates and antisocial issues on site and collaborate with other local organisations where possible and appropriate (ongoing)
  - b) Engagement with local schools:
- i) Session on the Scotland Outdoor Access Code (SOAC) and responsible access in partnership with West Lothian Council Ranger Service (2025)
  - ii) Environmental Careers session considering different roles involved in the works being undertaken in Deans

Woods (during felling/path works)

- c) Community activities day- citizen science
- d) Liaise with the local community councils and Scout groups to support events and volunteering
- e) Conduct WWG volunteer sessions on site (annually)

## 4.2 f2 Long Established Woodland of Plantation Origin

#### Description

Covering a total of over 16ha across all compartments, Deans Wood includes 6 woodland compartments in and around housing to the northwest of Livingston. These woodland blocks are significant natural features within the local landscape despite fragmentation by development. The woods form an attractive backdrop and screening for the various housing developments in the area.

These woodlands LEPO status is confirmed by their existence on the 1860 OS map. The woodlands are dominated by mature Scot's pine, sycamore, sessile oak, lime, ash and horse chestnut. The older sections have existed for at least 150 years and were once part of the estate of the now demolished Dechmont House. Physical remains of the estate origin remain are visible in features such as non-retaining walls at the northern entrance to compartment 7a and the drystone dyke in compartment 8b. A Tree Preservation Order (TPO) covers adjacent residential areas built on the former Dechmont House site around compartments 5 and 8 but not the woodland areas referred to in this plan.

Many of the compartments in Deans Woods were planted as screening and are by design often small blocks and/or long and narrow. Although the majority of the site has consistent flat terrain, compartment 5 encompasses areas with steep inclines at the southern and western boundaries. Significant 'pit' formations are also present in compartments 7a and 9a which attract anti-social behaviour of dumping and fires in these areas.

Species composition across the site includes a large variety of native species including oak, Scots pine, beech, sycamore, elm, horse chestnut, ash, rowan, alder, wild cherry, holly, elder and lime. Areas of non-native conifers (including larch, lodge pole pine and Sitka spruce) were also planted with dense clusters present in compartments 5a, 5c and 7a.

Ash Die Back (ADB), also referred to as Chalara, has been identified on site. This is a particular issue for Deans Wood as, ash tree mapping in 2020 identified that there are high densities of this species throughout the site particularly in compartments 5a, 5b, 5c, 7a, 8a and 9a.

Deadwood is present in varying sizes and forms (branches, fallen and standing) across the site typically in good densities to provide an essential habitat supporting birds and invertebrates. Compartment 8b, for example, suffers from windblow which has increased the amount of large diameter deadwood in this area but has also compromised the paths in this sub-compartment.

The ground flora is moderately consistent in terms of density and species composition throughout the compartments. Bramble is the dominant species within the vegetation, often accompanied by large areas of bare ground under dense pockets of conifers or close canopy from high density of beech. Where ivy is present, such as in compartments 4b, 7a and 9a, it is dominant on trees and across ground level. Historical dumping of garden waste on site is evident through the presence of invasive species such as crocosmia and variegated yellow archangel which have been recorded across multiple compartments on site.

Considering much of the woodland is formed and functions as shelter belts, open ground on the site is limited. However, this type of habitat is represented by a small glade running west to east in compartment 7a as well as rough grassland located to the southwest of compartment 9a. Whilst this only equates to 1.8% of the total site this needs to be considered within the landscape context. Compartments 7 and 8 border large sections of council-owned and managed grassland to the north of compartment 7a and Dechmont Law Park to the east. The woodland is protected to some degree and buffered by additional planting throughout the 20th century. These woods form part of the wider habitat mosaic associated with Dechmont Law.

Whilst there are no large watercourses within Deans wood there are significant drainage ditches present in compartments 6a, 7a, 8a and compartment 5a is typically damp throughout the year providing wetland habitat in these areas.

Rhododendron ponticum and Japanese knotweed have been recorded on the site. The latter is only small, isolated stems in compartment 7a. The former, however, spread extensively across all compartments. Work on removing the rhododendron ponticum began in 2021 and ground flora is recovering now that rhododendron has started to be removed. Work continues on managing the regrowth of these invasive species. Other non-native, invasive species including laurel, snowberry are also present multiple compartments, the latter being particularly dominant in compartment 7a.

Species records are currently minimal for Deans Wood for birds, mammals and invertebrates. Roe deer have been seen in the woodland.

#### Significance

The amount of ancient woodland left in Britain has been drastically reduced over the last century. The woodland is on the Ancient Woodland Inventory as LEPO (2b) and was present on maps of 1860, which indicates a relatively high biodiversity potential.

The wood is a significant feature of the local landscape and provides screening and shelter between housing developments. It forms an integral component of the local landscape as Deans Wood functions as an important forested habitat within the wider mosaic landscape.

The woodland is also important for local biodiversity as a refuge from the built-up urban area and surrounding infrastructure.

#### **Opportunities & Constraints**

#### Opportunities:

Proximity to other Woodland Trust sites close by allows for potential to group works (such as felling) together to be more efficient and cost effective.

Once rhododendron is removed from compartments 4, 5, 7 and 8 significant areas of ground be available for natural regeneration. In areas where regeneration is limited or less varied, enrichment planting can be conducted. This could include the use of local oak acorns from the site to help the native species outcompete the beech present, for example.

Considering the presence of ADB there is the opportunity to retain deadwood in some areas to increase this habitat across the site.

Hold a citizen science event to catalogue species present in the woodland as there are currently no records.

#### Constraints:

There is a notable veteran ash tree in compartment 5a which is out with falling distance from the boundary and should be retained and protected during works in this area.

The existence of historic built structures including the non-retaining walls at the northern entrance to compartment 7a and the drystone dyke in compartment 8b need to be considered and protected during operations on site.

Proximity to infrastructure (motorway and roads) restricts appropriate methods for felling/harvesting result in complex operations which are time consuming to plan and expensive to execute. Furthermore, the planting of larger species such as oak will be restricted to avoid future conflict, growing to a large height inappropriate near the boundaries of the motorway and railway.

Proximity to residential housing and road links restricts the ability to leave standing deadwood close to boundaries, as well as paths, and limits suitable species for replanting in these areas-larger species such as oak should not be planted close to the boundary in order to avoid future conflict as species develop. Furthermore, historically, deadwood has been stolen for firewood.

The terrain in some areas prevents easy access for works particularly compartment 5a which is continuously wet with steep sides and dense vegetation to the west and large pits present to the south west of compartment 7a and 9a.

Areas of dense invasives species including; Rhododendron ponticum and snowberry, beech and sycamore restrict light levels and suppress natural regeneration. Areas where beech is dominant (such as compartment 5c) also lack natural regeneration of trees and/or ground flora. Currently, ash and beech are the most commonly regenerating species. This is concerning considering the ash regen may not be tolerant to ADB and the beech is likely to outcompete native species.

Works should be avoided in the areas where invasive species, such as Japanese Knotweed, have been identified to avoid spreading the invasive species.

Presence of Rhododendron ponticum on council land on boundary of Deans Wood outside of Woodland Trust ownership is a potential seed source for reinfestation. Ideally this should be removed at the same time as these species being treated within the Woodland Trust boundary to avoid invasives returning to site once removed. Collaboration with West Lothian Council is required to enable eradication of the species from the area.

Due to the urban location of Deans Wood within close proximity to multiple small woodland areas in Livingston, invasive species and diseases present elsewhere in Livingston are likely to be aided by people, spreading seeds or spores in soil on their footwear.

Squirrel damage and deer browsing are threats to young regeneration and planting on site. Whilst the urban location causes disturbance for these species and helps to limit impact of deer browsing in some areas, the urban locale also restricts the suitability and efficiency of possible control methods. With this in mind, no management of these species will be undertaken for the foreseeable future and further investment will be required to replace browsed or damaged trees.

#### **Factors Causing Change**

Wind throw has become more significant on this site since 2020. Furthermore, most of the conifers including the larch, Sitka spruce and lodge pole were planted as part of Livingston Development Corporation (LDC) during 1960s prior to the Woodland Trust's acquisition in 1996. These trees are now reaching their terminal height at which makes the woodland more vulnerable to windblow. This presents a threat to infrastructure and public safety in the areas with large clusters of conifers such as compartments 5a, 5c and 7a.

Deer browsing, squirrel and rabbit damage are all present and may contribute to potentially suppressing natural regeneration and continued healthy growth of established trees.

Garden waste dumping is an issue for Deans wood which not only compromises the beauty of the site but also undermines the native flora species as more invasive species are introduced and spread through the woodland. Garden waste can also facilitate the spread of tree diseases.

The continued development of the M8 and surrounding housing will encourage increased use and subsequently impact on local air quality and tree health.

A Health Plant Notice for Phytophthora ramorum was issued for an area to the north of Livingston in 2018. Whilst the affect buffer zone did not reach Deans Wood it is likely the disease will continue to spread. This could impact other areas of the site that do contain larch such as compartments 5, 7 and 8.

Phytophthora cambivora has also been recorded on another Woodland Trust Livingston site (Dedridge Wood, compartment 42a). This disease could also spread to Deans Wood and would be a particular concern for the mature beech and oak.

The large mature beech trees which are such a feature in the West Lothian landscape tend to be of a similar age and are now subject to ongoing senescence. They are becoming increasingly vulnerable to storm damage and disease which is becoming a challenge to manage in terms of tree safety and maintenance of the forested landscape. This decline will

continue and will have a particular impact on most compartments at Deans Wood as there are large numbers of mature beech throughout the site.

Ash die back is present on site and throughout Livingston. Due to the high proportion of ash at Deans Wood, this disease will have a significant impact on the composition of this woodland. This will increase the volume of standing deadwood in areas where it is suitable to retain declining individuals (i.e. away from roads and footpaths). Due to the prevalence of ADB, Ash will also not be included within restocking. Therefore, its density on the site overall is likely to decline in the long term.

Rhododendron ponticum and Japanese Knotweed have been mapped on site in 2020 and are also present on neighbouring land outside of the Woodland Trust boundary. If this is not removed this invasive species could continue to spread at the detriment to natural regeneration, woodland specialist flora and overall biodiversity across the site. Leaving any amount of the species within proximity to the site could result in re-introduction of this invasive species in the long-term.

Whilst there will be no deliberate attempts to establish more open ground on the site, areas of the canopy will naturally open-up gradually in response to ash die back. Likewise, light-levels will increase as result of rhododendron removal. These areas may result in coarse vegetation such as bracken and brambles becoming dominant. Although the dominance of brambles restricts floral diversity to some degree, the presence of this coarse vegetation helps to protect new trees from browsing.

#### Long term Objective (50 years+)

To restore the woodland to predominantly native species of mixed age by small scale felling, although species composition will be varied, with a proportion of conifers, beech and sycamore present.

The woodland composition will be dominated by native species across all compartments and biodiversity will be safeguarded by controlling the spread of invasive non-native invasive species where practical. Rhododendron understory will have been removed and replaced by a thriving shrub layer of mainly native species. Improvements to the canopy should help towards providing and supporting healthy ground flora communities.

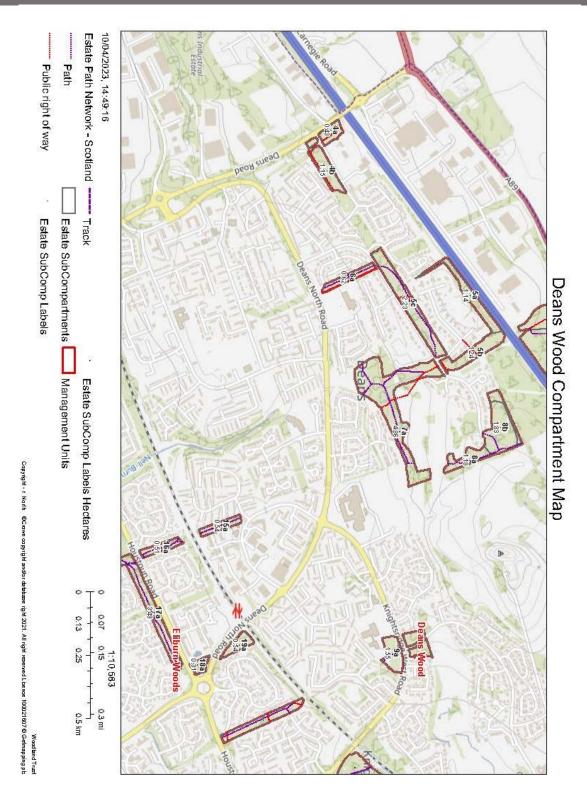
#### Short term management Objectives for the plan period (5 years)

The short-term objective at Deans Wood is to maintain the varied composition and structural diversity of the woodland. This will be achieved by:

- 1) Improve awareness and recording of species presence on site and wider area:
- a) Commission ecological surveys across the site identify sensitive areas/species requiring additional mitigation for site works (prior to path or significant felling works commencing)
- b) Discuss areas of non-native species and deer and squirrel management with neighbouring land owners including West Lothian Council within Livingston and explore possibilities for a collaborative approach concerning monitoring of these species and their impact locally (2024)
- c) Raising awareness regarding invasive garden species and the risk of garden waste dumping through letter drops to local residents (as required)

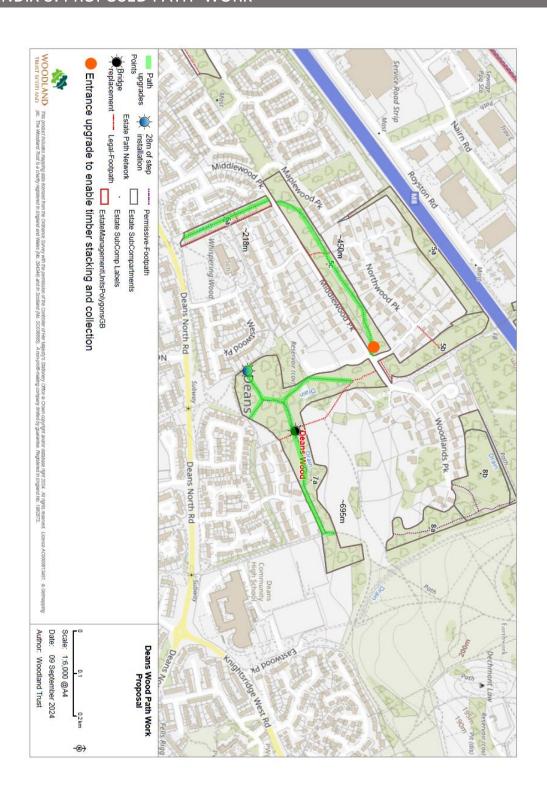
- 2) Restructuring areas for pro-active health and safety and enhanced biodiversity on site:
- a) Gradual ash removal across each compartment in response to ADB (as required)
- b) Infrastructure improvements in compartment 7a to allow appropriate access and stacking areas (prior to any large-scale felling)
- c) Conduct felling of dense conifer areas across the site
- i) Compartment 5a clear felling of approximately 1ha including the removal of Sitka spruce/lodge pole pine/ larch and any unsafe broadleaves within falling distance of the motorway (by the end of the plan period)
- ii) Removal of Sitka spruce present in compartments, 5b (0.2ha), 5c (0.25ha), 7a (0.6ha) and 9a (maximum 5 trees) (by the end of the plan period)
- 2) Optimise on potential areas for restructuring by adding species diversity and age complexity:
- a) Standing dead trees to be left where it is safe and appropriate to do so- away from boundaries and paths (as appropriate)
- b) Restock felled areas with native broadleaves and Scots pine as per approved felling license conditions. Planting in boundary areas (near housing, paths and roads) will be dominated with small trees and shrubs (including species such as hazel, hawthorn, elder, holly, bird cherry, birch and rowan). Scots pine can be planted out with falling distance of these areas (following the completion of the felling works)
- c) Monitor felled areas for natural regeneration and vitality of restocking (annually between felling completion and the end of the plan period)
- d) Weeding and replacing any dead planted trees to ensure fulfilment of felling license conditions (for minimum of 3 years following restocking)
- d) Identify areas requiring enrichment planting where there is currently a single species dominant in the natural regeneration (i.e. beech) and/or where rhododendron has been removed in compartment 5c, 5b and 7a (by end of the plan period)
- 3) Protecting the site's biodiversity by working towards the eradication of invasive species during this plan period:
- a) Rhododendron regrowth removal totalling up to 1.5ha across compartments 4, 5, 7 and 8 by digging out small regrowth. Sizable stumps/roots that cannot be dug out will be cut and treated with herbicide during winter (annually)
- b) Japanese knotweed in 7a (maximum 20 stems in one localised area) treated through stem injection where possible and spot treatment for smaller regrowth from July-September (annually)
- c) Trial non-chemical removal methods (possibly through the use of hot water, electrical control and digging out depending on what is deemed possible and appropriate) for other invasive species present: a) Snowberry particularly in compartment 7a b) Common-periwinkle in compartment 8a c) Variegated Yellow arch angel in compartments 4b and 9a (by end of the plan period)
- d) Review results of removal works and use records to determine if non-chemical removal has been successful in eradication, should be continued in the next planning period or has been ineffective (annually following treatment)

# APPENDIX 1 SUBCOMPARTMENT MAP



# APPENDIX 2 PROPOSED TREE WORK WOODLAND This product Estate SubCompartments Removal of individual non-native\* conifers on the boundary Removal of non-native conifer blocks Deans North Rd EstateManagementUnitsPolygonsGB Estate SubComp Labels Hectares Estate SubComp Labels Deans Woodlands Pk Deans North Rd 1.83 Azidhteridge West Rd Ad DOOMISE Author: Woodland Trust Date: 04 October 2024 Scale: Deans Woods Tree Work Proposal 1:6,000 @A4 Golf Course Ro 0.2 km <del>-3)</del>

# APPENDIX 3: PROPOSED PATH WORK



# APPENDIX 4 : HARVESTING TABLE (20 YEARS)

Compartment	Operation Type	Work Area (ha)	Forecast Year	Estimated Total Volume (m3)
4b, 5c, 6a, 7a, & 9a	Thinning-(Streetlight Pruning)	1	2025	1
4b, 5c, 6a, 7a, & 9a	Thinning-(Streetlight Pruning)	1	2027	1
5a	Clear Fell- (compartment restructure next to motorway)	1.14	2027	300
5c	Clear Fell- (non-native conifer removal)	0.2	2027	225
7a	Clear Fell (non-native conifer removal)	0.8	2027	275
9a	Removal of individual non-native conifers on boundary	0.05	2027	5
4b, 5c, 6a, 7a, & 9a	Thinning-(Streetlight Pruning)	1	2029	1
4b, 5c, 6a, 7a, & 9a	Thinning-(Streetlight Pruning)	1	2031	1
4b, 5c, 6a, 7a, & 9a	Thinning-(Streetlight Pruning)	1	2033	1
4b, 5c, 6a, 7a, & 9a	Thinning-(Streetlight Pruning)	1	2035	1
4b, 5c, 6a, 7a, & 9a	Thinning-(Streetlight Pruning)	1	2037	1
4b, 5c, 6a, 7a, & 9a	Thinning-(Streetlight Pruning)	1	2039	1
4b, 5c, 6a, 7a, & 9a	Thinning-(Streetlight Pruning)	1	2041	1
4b, 5c, 6a, 7a, & 9a	Thinning-(Streetlight Pruning)	1	2043	1
4b, 5c, 6a, 7a, & 9a	Thinning-(Streetlight Pruning)	1	2045	1

# APPENDIX 5 : COMPARTMENT DESCIPTIONS

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
4a	0.43	Scots pine	1955	Min- intervention	Services & Wayleaves, Housing/infrastructure, structures & water features	

Exposed stand of mature, well-spaced Scots pine separated by Hardie Road and bounding Deans Road to the west. A sparse understorey of sycamore, beech and hawthorn is found predominantly to the northwest. Ground flora consists of mainly soft grasses with brambles, nettles and patches of heath bedstraw. Rhododendron ponticum present along the western boundary of the northwestern block. Dead wood is mainly fallen branches, old stumps and chippings from previous thinning operations. Litter is common in this compartment.

4b	1.15	Beech	1900	Min-	Services & Wayleaves,	
				intervention	Housing/infrastructure,	
					structures & water	
					features	

This area can be referred to as 'Dechmont Long Drive Wood' (west). This compartment is a mature that is dominated by large beech trees, with mixed broadleaves including sycamore, oak, lime, birch, elm, ash and horse chestnut and occasional Scots pine to the north of Hardie Road. Housing to the south. Understorey of frequent beech and occasional rhododendron, holly, sycamore, willow, snowberry and broom. Ivy is well established along the southern and western boundaries. Yellow variegated arch angel is also present to the east. Sparse ground flora but where light allows there are infrequent nettles, soft grasses and brambles. Deadwood is infrequent and is generally dead branches within the canopy, fallen branches and old stumps from previous tree safety works. There are street-lit tarmac tracks to the south and east of this compartment and bench within the centre of this block.

5a	1.14	Scots pine	1975	Min-	Services & Wayleaves,
				intervention	Mostly wet
					ground/exposed site,
					Housing/infrastructure,
					structures & water
					features
					reacures

Strip of polestage mixed broadleaves, alder, cherry, rowan, ash, sycamore and beech, with Scots pine, Japanese larch and Sitka spruce separating and screening Northwood Park and the M8. There is the occasional elder, rowan and hawthorn understorey, with a ground flora of soft grasses and occasional juncus predominantly down the open ride/wayleave running east west down length of sub compartment. There is a veteran ash tree located towards the

	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
centre of	this compa	rtment.				
5b	1.24	Sycamore	1920	Min- intervention	Services & wayleaves, Housing/infrastructure, structures & water features	
Stand of understo sycamore thinnings paths.	mature/ ser rey includes e, beech and , old stump	ni-mature beech the occasional delm regenerati s, and shallow p	n and sycamo holly, rhodo on. Dead wo iles of chippi	ore, with occasion dendron, hawthor ood is occasional t ings. There are als	nounds part of NorthWood hal lime, horse chestnut, ash orn, Scots pine, Sitka spruce, throughout and comprised of so occasional standing dead near the entrance to North	and rowan. The elder, with ash, of small log piles from trees away from the
5c	2.23	Beech	1900	Min- intervention	Services & wayleaves, Housing/infrastructure, structures & water features	
peduncul	ate oak, ho partment fo	rse chestnut, lim rms part of the e he north and W	ne, downy bi extended po oodlands Pa	rch, ash, sycamore licy woods to Decl rk Road to the sou	s mature stand of beech, wi e, Norway maple, Scots pine hmont House and now prov ath. Understorey includes fr	e and Sitka spruce. The ride screening betwee equent rhododendror
Northwo occasiona allows. Sp running a	oarse groun	d flora consists on the roads	of soft grasse	es, brambles, brac	peech, ash, rowan and sycar sken and ivy mainly associat g from some larger felled st	ed with the old ditch
Northwooccasions allows. Sprunning a smaller b	parse groun long the no ranch wood	d flora consists orth of the roads	of soft grasse ide. Varied (	es, brambles, brac dead wood rangin	ken and ivy mainly associat	ed with the old ditch ems along with some

activities. It is Mature stand of Scots pine with occasional pedunculate oak, beech and sycamore around the edges.

Cpt No.	Area	Main	Year	Management	Major Management	Designations
	(ha)	Species		Regime	Constraints	

Pinewood park bounds the wood to the west with Middlewood Park to the north east and Meldrum Primary School and grounds to the east. Understorey includes frequent beech regeneration, occasional rowan and sycamore regeneration with occasional elder, hawthorn and holly. Remnant field hedges run in parts down east and west boundaries. Ground flora of soft grasses. Deadwood is limited to fallen branches, occasional stumps and chippings from safety felling. There is a ditch running down the eastern boundary.

7a	4.86	Beech	1900	Min-	Services & wayleaves,	
				intervention	Housing/infrastructure,	
					structures & water	
					features	

Also known as the 'Dechmont Park Woods' area. Originally part of the policy woodland surrounding Dechmont House this sub-compartment is a stand of mature beech and sycamore with lime, ash, horse chestnut, Norway maple, pedunculate oak, elm and birch. Occasional Sitka spruce, Scots pine and hybrid larch. The woodland provides a link between Dechmont Law parkland to the north with the housing areas to the west and south, Westwood Park, Elmwood Park and Beechwood Park. Understorey includes occasional hybrid larch, ash, elm, Scots pine, sycamore, beech regeneration, with snowberry, elder, holly and rhododendron. Rhododendron has historically been both dense and extensive particularly in the west and south of the compartment. This has been removed on an annual basis since 2020 which has reduced the cover of this invasive. Ground flora remains sparse throughout. There is occasional deadwood from previous safety work as well as small dead branch wood from the rhododendron ponticum removal works. There are numerous recreational paths throughout the site. There are drainage ditches dissecting from north to south and east to west. There is a bridge located connecting whin-dust path to the tarmac track that links Dechmont Law to western side of Beechwood Park.

8a	1.18	Sycamore	1900	Min-	Housing/infrastructure,	
				intervention	structures & water	
					features	

As known as 'Woodlands Park Wood' due to its proximity to the Woodlands Park residential area. Originally part of the policy woodland surrounding Dechmont House this sub compartment, is made up of 2 discreet stands of mature mixed broadleaves; beech, sycamore, ash, lime, elm and horse chestnut. This highly varied woodland provides an attractive backdrop for the houses at the eastern end of Woodland Park. Understorey includes frequent ash and beech regeneration, with occasional sycamore and larch regeneration and brambles. Historically there was a dense patch of rhododendron ponticum in the middle of the western stand. This was removed in 2021. Regrowth in this area is monitored annually. There is also a small patch of common periwinkle in this western area. Garden waste dumping is common along this housing boundary. Ground flora of soft grasses, brambles and some nettles. Deadwood is occasional but varied from large stems to small fallen branchwood. A whin-dust path leads from compartment 8b into the wider path network of Dechmont Law. The northern boundary of this compartment includes a deep ditch that is lined with mature beech trees.

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
8b	1.83	Scots pine	1950	Min- intervention	Services & Wayleaves, Housing/infrastructure, structures & water features	

This sub compartment is north of 8a as is differentiated by a stand of dense mature and very large Scots pine with occasional hybrid larch and mixed broadleaves, consisting of sycamore, lime, beech, rowan and downy birch. Understorey includes beech and sycamore regeneration, elder, and occasional hawthorn and holly. Ground flora of ferns with heavy brambles and occasional wild raspberries. Dead wood is varied from fallen, standing and hung-up dead trees as well as old stumps to the arisings from thinning operations and small branch wood from rhododendron ponticum removal. Rhododendron regrowth is present in this area. There is a gated entrance from woodlands park that leads into a whindust path which links into the path running from north to south in compartment 8. There is a low drystone dyke that dissects this compartment from west to east.

9a	1.55	Scots pine	1955	Min-	Services & Wayleaves,	
				intervention	Gullies/Deep	
					Valleys/Uneven/Rocky	
					ground, People issues	
					(+tve & -tve),	
					Housing/infrastructure,	
					structures & water	
					features	

Also known as 'Nether Dechmont Woods', this sub compartment is separated into 3 discreet blocks by Knightsridge West Road. The sections to the north of the road border Herd Green to the west and Duncan Green to the east with the Golf Course to the north. The southern compartment borders Carmondean Primary School and is used by them for adhoc outdoor activities. This includes a small area of open ground that has been retained to the south east of the compartment. The stands in these blocks are dominated by stands of mature Scots pine with occasional mature beech and sycamore with mixed broadleaves, sycamore, pole-stage ash, beech, willow, sweet chestnut, horse chestnut, alder, cherry and red oak. Understorey of Sitka spruce, mixed broad leaves, Scots pine with dog rose, hawthorn, holly and yew. Ground flora consists of soft grasses with brambles, nettles and willowherb. Rhododendron ponticum and yellow arch angel present in the northeastern block. Mixed levels of dead wood throughout mainly from previous safety felling.

There is an informal path running from north to south in the block next to Carmondean Primary School. Paths are also strimmed around two sculptures in the open ground section the southeastern block. The western side of this block includes significantly sloped ground forming a pit that is often used by for anti-social behaviour such as dumping, litter and fires. There is also an electricity substation located on the western boundary of the north eastern block.

# **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.

## Windblow/Windthrow

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

#### **Registered Office:**

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