



Railway Wood

Management Plan 2019-2024

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THE WOODLAND TRUST

INTRODUCTION

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

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

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

PLAN REVIEW AND UPDATING

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 Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations.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

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

WOODLAND MANAGEMENT APPROACH

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

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

All our sites have a management plan which is freely accessible via our website

www.woodlandtrust.org.uk. Our woods are managed to the UK Woodland Assurance Standard (UKWAS) and are certified with the Forest Stewardship Council® (FSC®) under licence FSC-C009406 and through independent audit.

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

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

The following guidelines help to direct our woodland management:

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

SUMMARY

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

1.0 SITE DETAILS

| | |
|------------------------|------------------------------------|
| Site name: | Railway Wood |
| Location: | Livingston |
| Grid reference: | NT053703, OS 1:50,000 Sheet No. 65 |
| Area: | 6.49 hectares (16.04 acres) |
| Designations: | |

2.0 SITE DESCRIPTION

2.1 Summary Description

A mainly coniferous woodland enclosing a network of unsurfaced paths. Sitka spruce and Scots pine make up the majority of species, and ground life includes birdsfoot trefoil, greater plantain, hogweed, silverweed and sneezewort.

2.2 Extended Description

Railway Wood is a single block of woodland situated to the northeast of Livingston and lies between the M8 to the north and the Edinburgh-Bathgate railway line to the south, just east of junction 3 on the M8. The wood lies at an altitude of 115m-125m above sea level and has a slightly northern aspect.

The geology of the area is sedimentary sandstones/ limestone's/ shale of the Carboniferous-Dinarian period. The soils are derived from a glacial till of carboniferous sedimentary sandstones and shale and are generally Rowanhill association brown forest soils with gleying, some gleys are non-calcareous or humic. Rowanhill association soils 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 Beugh Burn emerges in the west of the site and flows for approximately 200m in a steep-sided ditch before exiting along the northern boundary.

Railway wood is a narrow elongated strip of woodland that broadens towards its western end. The mainly conifer woodland was planted in the early 1970s by Livingston Development Corporation. As is a feature of Corporation planting the wood is made up of mainly single species blocks, with very few areas of mixed species. The main species are Sitka spruce and Scots pine which together makes up over 70% of the wood with to a discreet blocks of sycamore, sessile oak, European larch, Norway spruce and beech. The stands in the east of the wood are generally slightly (approx. 5yrs) older than those to the west.

The ground flora within the woodland is generally poor under conifers and dominated by brambles and grasses elsewhere. Most species diversity occurs in the narrow strip of grassland retained along the southern boundary at the eastern end of the wood and the three other open areas throughout the wood, which generally coincide with old field boundaries, with a few remnant hawthorn bushes marking old hedgerows.

The Beugh burn has been opened up but until 2006 had trees planted close to its banks over much of its length. The increased light levels should help improve diversity along this length. The 1990 Botanical Atlas identifies the central part of the site as being relatively diverse, holding a number of common species associated with damp grassland and hedgebanks, including: Birds foot trefoil, Large bittercress, Creeping buttercup, Dock, Hogweed, Common hemp nettle, Cow parsley, Parsley piert, Greater plantain, Ragged Robin, Soft rush, Silverweed and Sneezewort. Rapidly maturing dense conifer cover has led to a reduction in suitable habitat for many of these species, however thinning operations may assist in improving areas beneath woodland cover, which have grown considerably denser since these plants were recorded. The wood was last thinned in 2006 with additional small clearing felled to provide planting gaps for shrubs along the motorway boundary.

Representing a small reserve of more natural vegetation within the built environment, the woodland and associated habitats are not of high quality, but are important for local biodiversity within the urban area. Even larger mammals such as deer are can be found here and a range of smaller mammals, insects and birds can be expected to benefit from the woodland cover. Buzzards that are now common along our motorways have also been seen in the woodland.

Railway Wood is an important part of the infrastructure of Livingston, providing separation and screening between industrial areas and major transport routes. It forms a prominent feature when accessing Livingston from the east along the M8 motorway. Unfortunately litter is an ongoing problem and although cleared regularly does, while visible, detract from the amenity of the woods as well as creating a hazard to wildlife.

The wood provides good public access for local residents, with just over 1km of un-surfaced footpaths throughout the site, from two entrances, across a railway footbridge from Todd Square to the south and from the main entrance at the eastern end of the wood off Pumpherstons Road (B8046) between the M8 and railway bridges. Although there are no formal circuits, the brash open nature of the stands allows free access to most areas. The wood also links onto longer distance routes to the south between Pumpherstons and Livingston Greenway network.

There is no Woodland Trust car park at the site, but parking areas can be found to the south and east of the wood.

Management access is obtained from Pumpherstons road, where a small stacking area has been

constructed at the woodland edge.

A "Welcome to Livingston" sign, visible from the M8 and owned by West Lothian Council is situated in the middle of the wood and the council has maintenance access to this.

3.0 PUBLIC ACCESS INFORMATION

3.1 Getting there

Railway Wood is located between Uphall Station and Houstoun Industrial Estate on the northeastern edge of Livingston. The wood forms a narrow strip between the M8 motorway and the railway and is accessible from only two entrances, a narrow squeeze beside a vehicle barrier off the B8046 in the east and over a railway bridge from Todd Square in the south. There is access to all areas of the wood and much of it is relatively open with a brashed surface.

The main route runs the length of the site along a brashed cut through the plantation; its surface is a thick floor of brash, which is often uneven and occasionally wet. The site is largely flat and due to its linear nature no circular route is available. However, there is a tarmac route running along the south side of the railway between Todd Square and Uphall Station.

There is no on-site parking, but parking is available in both Uphall Station and Todd Square.

Nearest public toilet: Deer Park Service Station, approximately 1.5km away - toilets suitable for the disabled and open 24 hours.

Nearest bus stop: Pumpherston Road, Uphall Station, approximately 200m away from eastern entrance along pavements. Information from Traveline Scotland website as at December 2006. Uphall train station is also approximately 200m away along pavements.

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

3.2 Access / Walks

4.0 LONG TERM POLICY

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

The long term vision of the woodland is to convert the conifer woodland into native broadleaf through various harvesting operations and restocking. The woodland will consist of mixed broadleaves of a mainly native character, with a proportion of Scots pine retained.. Where planting is adjacent to transport corridors a mixture of shrubs and low stature species will be established creating a more natural woodland edge and relieving some of the 'pressure' associated with the juxtaposition between woodland and transport corridors. Non-native trees such as sycamore and a proportion of conifers and their natural regeneration, will be accepted although the intention will be to increase the proportion of native species in the overall mixture.

Access facilities will be maintained to suit demand which is currently classed as Grade B - moderate usage. Ongoing development in Livingston and its surrounds is likely to impact on levels of use on all paths.

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

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

Railway Wood lies on the northern periphery of Livingston sandwiched between the railway line and the M8. There is approximately 0.9km of un surfaced path through the wood running between the two entrances at either end. There is no onsite public car park, though parking is available on nearby streets. The path, although a straight through route links directly onto the Greenway network within Livingston giving access to long distance routes as well as creating part of a loop path from Uphall station when combined with the tarmac path running along the south of the railway line. In 2012 the level of public use is defined as WT Access Category B (Moderate usage).

Significance

Its main function is primarily to screen parts of Uphall from the M8.

Opportunities & Constraints

Opportunities - To improve the footpath using chippings from thinning and felling operations.

Constraints - Linear nature of site constrains potential for circular routes within the site.

Factors Causing Change

Increasing use/fly tip/vandalism

- 1) Senescing beech - The ongoing senescence of the large mature mainly beech trees which are such a feature in the West Lothian landscape and tend to be of a similar age. They are becoming increasingly vulnerable to storm damage and disease which is becoming a challenge to deal with in terms of tree safety and also maintenance of the treed landscape and is expected to become even worse in coming years.
- 2) Windblow - Most of the spruce and larch planted as part of LDC landscaping is reaching its terminal height at which it is vulnerable to windblow.
- 3) Chalara on ash. Ash is a frequent species and is well suited to the clay soils of West Lothian. Young trees already badly affected and some mature trees also. Removes one of the more suitable species for replanting.
- 4) Phytophthora ramorum. 2 SPNs already issued in the Livingston area and likely to spread.
- 5) Increased development - various schemes have / are being built and large new developments are currently being planned for north, SW and SE Livingston.
- 6) Squirrels, rabbits and roe deer are all present and likely to prevent trees developing into healthy, mature trees.

Long term Objective (50 years+)

To maintain and enhance public access for informal recreation.

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 Railwaus which is safe and enjoyable. This will be achieved by:

- Assess frequency of use 2018/ upgrade path once harvesting operation has taken place (2019)
- Annual inspection boundary fence and access routes
- Regular tree safety inspections

5.2 Secondary Woodland

Description

The woodland is a significant feature in the local landscape, lying between the M8 and Edinburgh to Bathgate railway, screening industrial areas at the entrance to Livingston. Planted as a screen, Railway wood is by design, long and narrow (>1km long but only 6.5ha) Throughout the wood, plantings are mainly single species blocks, planted between 1970 and 1975, with the main species being Sitka spruce and Scots pine which together make up over 70% of the wood planted around discreet blocks of sycamore, sessile oak, European larch, Norway spruce and beech.

Significance

The wood is a significant feature of the local landscape. It forms the northern edge of Livingston, separating the motorway from the Houstoun Industrial Estate. The woodland is important for local biodiversity and has potential for improvement.

Opportunities & Constraints

Opportunities - To further increase biodiversity through conversion of conifer to native broadleaf species
 Constraints - Wind, poor access for harvesting.

Factors Causing Change

Windblow/ pests and diseases/fire damage/ increasing squirrel damage

Long term Objective (50 years+)

To convert this predominantly conifer plantation to mixed species woodland habitat more suitable for this narrow site. Species composition will be varied, being mostly native though a proportion of conifers, beech and sycamore will be accepted. Improvements to the canopy should help towards supporting a variety of ground flora communities.

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

To maintain the varied composition and structural diversity of the woodland. This will be achieved by the following:

- Japanese Knotweed removal in compartment 2b by herbicide use subject to permit from SEPA as it is beside a watercourse, 0.02ha to be removed. Two herbicide treatments a year, the first in spring and the second in mid-summer (with prior cutting to ensure growth is no higher than 1m) is the recommended minimum initial treatment programme. Treatment programmes can last from 2-5 years to ensure effective control.
- The impacts of deer, rabbits, squirrels and tree diseases will be monitored through the Woodland Trust's woodland condition assessment process.
- Establish compartments for clear felling in 2a/2b and carry out forest mensuration (2018)
- Tender out the contract for the work required in order to achieve this felling (2019)
- Contact Network Rail and negotiate access for felling (2019/2020)
- Restock compartments where necessary as per felling license (2021/2022) with native trees and shrubs appropriate to this location.

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 |
|--|-----------|----------------|------|-------------------|------------------------------|--|--------------|
| 2a | 3.25 | Sitka spruce | 1970 | High forest | | Informal Public Access, Secondary Woodland | |
| <p>A predominantly coniferous stand of early mature high forest planted in 1970, made up of Sitka spruce and Scots pine with patches of European Larch. There are three discreet single species groups of sessile oak planted through the compartment with occasional birch, rowan, sycamore, beech, hawthorn, gean and elder throughout. Understorey and ground flora are virtually absent from beneath the conifer element of the compartment, except along the compartment edges. There are also 3 separate small areas of open ground (approx. 0.3ha) with occasional natural regenerating gean, birch and rowan. The eastern end contains WLCs large 'Livingston' welcome sign. The easternmost open area is used as the stacking/turning area for management. Deadwood is mainly stumps, branchwood and mulch left following thinning in 2006.</p> | | | | | | | |
| 2b | 3.25 | European larch | 1975 | High forest | | Informal Public Access, Secondary Woodland | |
| <p>A predominantly coniferous stand of early mature high forest planted in the mid 1970s, made up of Sitka spruce and Scots pine with patches of Norway spruce and European Larch. Throughout there are occasional groups of mixed broadleaves, birch, rowan, sycamore and beech. Understorey and ground flora are virtually absent from beneath the conifer element of the compartment, except along the compartment edges and along the banks of the small Beugh burn. Towards the south of the compartment along the railway the stand becomes more open with an area approx, 0.2ha of open ground to the south east of the compartment. There is an old remnant field hedge at the eastern end of the compartment at the boundary with cpt 2. Deadwood confined to stumps, branchwood and mulchings left following thinning in 2006.</p> | | | | | | | |

Appendix 2: Harvesting operations (20 years)

| Forecast Year | Cpt | Operation Type | Work Area (ha) | Estimated vol/ha | Estimated total vol. |
|---------------|-----|----------------|----------------|------------------|----------------------|
| 2022 | 2a | Clear Fell | 3.27 | 153 | 500 |
| 2022 | 2b | Clear Fell | 3.25 | 154 | 500 |

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.