WOODLAND
TRUST SCOTLAND

Murieston Woods

Management Plan
2019-2024

MANAGEMENT PLAN - CONTENTS PAGE

ITEM **Page No.**

MAPS

THE WOODLAND TRUST

INTRODUCTION

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

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

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

PLAN REVIEW AND UPDATING

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 Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations.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

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

WOODLAND MANAGEMENT APPROACH

The management of our woods is based on our charitable purposes, and is therefore focused on improving woodland biodiversity and increasing peoples' understanding and enjoyment of woodland.

Our strategic aims are to:

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

All our sites have a management plan which is freely accessible via our website www.woodlandtrust.org.uk. Our woods are managed to the UK Woodland Assurance Standard (UKWAS) and are certified with the Forest Stewardship Council® (FSC®) under licence FSC-C009406 and through independent audit.

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

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

The following guidelines help to direct our woodland management:

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

SUMMARY

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

1.0 SITE DETAILS

Site name:	Murieston Woods
Location:	Livingston
Grid reference:	NT039643, OS 1:50,000 Sheet No. 65
Area:	3.43 hectares (8.48 acres)
Designations:	Local Authority Conservation Area, Tree Preservation Order

2.0 SITE DESCRIPTION

2.1 Summary Description

This wood consists of mature mixed broadleaves, including sycamore, beech, elm, lime, ash, oak, downy birch and Norway maple, with willow in the wetter areas.

2.2 Extended Description

Murieston Woods form part of the Woodland Trust's holding in Livingston, West Lothian and consist of two separate woodland blocks located in the south of Livingston. The western block (compartment 43) lies to adjacent to the south of the A71 and forms the present western boundary of Brucefield Industrial Estate. This woodland block is better known as the Limefield Strip and is located close to Bellsquarry, rather than the Murieston residential area. The more easterly block (compartment 44, Wellheads Strip) lies adjacent to Murieston Road for approximately 0.6 km and consists of the remnants of a wood which once covered a larger area. These woodlands consist of mainly mature policy planting that has been retained for screening of recent developments. The woods are generally flat with a slight northerly aspect and lie between the altitudes of 150m and 185m above sea level.

The underlying geology of the area is sedimentary sandstones/ limestone's/ shale of the Carbonioferous-Dinatian period. Soils are derived from a glacial till of carboniferous sedimentary sandstones and shale. They are generally brown forest soils with gleying, of the Rowanhill association and are characterised by slowly permeable clayey horizons at varying depths between

40 and 80cm. The MLURI climate map identifies the area as fairly warm moist lowland and foothill, being moderately exposed with moderate winters.

Murieston Woods form part of the Woodland Trust's holding in Livingston, West Lothian and consist of two separate woodland blocks located in the south of Livingston. The western block (compartment 43) lies to adjacent to the south of the A71 and forms the present western boundary of Brucefield Industrial Estate. This woodland block is better known as the Limefield Strip and is located close to Bellsquarry, rather than the Murieston residential area. The more easterly block (compartment 44, Wellheads Strip) lies adjacent to Murieston Road for approximately 0.6 km and consists of the remnants of a wood which once covered a larger area. These woodlands consist of mainly mature policy planting that has been retained for screening of recent developments. The woods are generally flat with a slight northerly aspect and lie between the altitudes of 150m and 185m above sea level.

The underlying geology of the area is sedimentary sandstones/ limestone's/ shale of the Carbonioferous-Dinatian period. Soils are derived from a glacial till of carboniferous sedimentary sandstones and shale. They are generally brown forest soils with gleying, of the Rowanhill association and are characterised by slowly permeable clayey horizons at varying depths between 40 and 80cm. The MLURI climate map identifies the area as fairly warm moist lowland and foothill, being moderately exposed with moderate winters.

The woodland areas making up Murieston Woods are remnants of an older shelterbelt and woodland complex. The Limefield Strip appears on maps of the 1860s and is classed as Long Established Woodland of Plantation Origin (LEPO) and originally formed part of the Limefield House estate woodlands. Scots pine is a prominent component, particularly in Wellheads Strip. The rest of the woodland generally consists of mature mixed broadleaves including sycamore, beech, elm, lime, ash, oak, downy birch and Norway maple, with willow in the wetter areas. Oak in Wellheads Strip has been under planted in the past with lodgepole pine, which is now beginning to emerge into the canopy. The amount of under storey and regeneration is generally strong throughout.

The central strip of the 'E' shaped Limefield Strip was clear felled in 2004 leaving occasional mature broadleaves, particularly towards the western end. This was replanted in early 2005 with a mix of native broadleaves, a proportion of Scots pine and a good proportion of shrub species along the boundaries to help create an 'A' shape shelterbelt profile.

Ground flora is mainly dominated by soft grasses with ferns or patches of bramble, although there are also occasional patches of wood sorrel and blaeberry in the woodlands near Brucefield.

The conservation value of the woodlands is limited by their small size and high edge effects due to narrowness and fragmentation of the original woodland structure, combined with a high proportion of non-native species. However, they are important for local biodiversity as they represent small reserves of more natural vegetation within the built environment. In some areas there has also been a relatively long continuity of woodland cover. Larger mammals such as rabbits and deer are uncommon, but grey squirrels and a range of birds, smaller mammals and invertebrates can be expected to benefit from the woodland cover, as do a number of common woodland and woodland edge plants.

The woodland belts are an important part of the infrastructure of Livingston providing screening and

an attractive backdrop to the various residential and industrial developments. The belts also function as windbreaks and provide some barrier to noise.

The woodland blocks provide a good local amenity, particularly Wellheads Strip. A well-used internal un-surfaced path exists through compartment 44 and runs parallel to the tarmac footpath to the south of the block. This tarmac path now forms part of the Murieston Trail, a circular recreation route that connects with many greenways within the area.

Although open for access, Limefields strip is less well used, partly as it lies to the west of Brucefield Industrial estate with business units to the east and undeveloped land to the west. There is a faint desire line within the wood but the majority of use at present is by pupils from West Calder High School using it as a short cut at lunch time. There is also a tarmac pavement on the north side of the wood along the A71 which is heavily used.

There is no on-site parking; however parking is available in adjacent streets.

3.0 PUBLIC ACCESS INFORMATION

3.1 Getting there

Murieston Woods consist of two independent blocks of woodland, the Limefield Strip (Block 43) along the western edge of the Brucefield industrial estate and Wellheads Strip (Block 44) in the Murieston area of Livingston. Both woodland blocks are accessible directly from the surrounding suburban roads and pavement network, and there is barrier-free access to all areas, though there are few paths in Limefield Strip.

Due to the layout of the woods most routes are linear, but return routes are available on tarmac paths outwith the woodland boundaries and the paths link into a wider network of paths and Greenways throughout Livingston, including the Murieston Trail. A single beaten earth path runs through the centre of Wellheads Strip, while there are a few feint informal paths through the central part of Limefield Strip.

There is no on-site parking, but parking is available on a number of neighbouring roads, both off Murieston Road and within Brucefield industrial estate.

Nearest public toilet: Almondvale Shopping Centre, Almondvale South, approximately 2km away - toilets suitable for the disabled, not open 24 hours.

Nearest bus stop: Murieston Road, immediately adjacent to Block 44 along pavements and West Calder Road, 200m away from Block 43 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 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 woodlands as a diverse mix of species, including non-native conifers and broadleaves. This will be achieved through natural regeneration of species but also planting native broadleaves in gaps if needed to retain a suitable under storey.

An increase in native tree species will support the development of healthy ground flora communities and the retention of more standing and fallen deadwood will further improve the habitat for biodiversity.

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 reduces 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, it is our intention to use the woods to improve and raise awareness of the biodiversity, recreation and health benefits that woodlands provide.

5.0 KEY FEATURES

The Key Features of the site are identified and described below. They encapsulate what is important about the site. The short and long-term objectives are stated and any management necessary to maintain and improve the Key Feature.

5.1 Informal Public Access

Description

Wellheads Strip, located to the south of Livingston is a well-used woodland. Internally there are approximately 350m of un surfaced path, with 4 entrances. There is no on-site parking, although roadside parking is available nearby. The paths, although generally straight 'through' routes, link directly onto the Murieston trail which is a very popular circular route that also links onto the wider Greenway and pavement network within Livingston.

Significance

The woods provide enjoyable woodland walks, within an urban setting and are 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.

Opportunities & Constraints

Opportunities - Very few due to linear nature of site.
Constraints – Linear nature of site constrains potential for circular routes within the site.

Factors Causing Change

Increased use

Phytophthora cambivora near by in block 42a

1) Senescing beech - The ongoing senescence of the large mature mainly beech trees which are such a feature in the West Lothian landscape and tend to be of a similar age. They are becoming increasingly vulnerable to storm damage and disease which is becoming a challenge to deal with in terms of tree safety and also maintenance of the treed landscape and is expected to become even worse in coming years.

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

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

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

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

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

Long term Objective (50 years+)

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 Murieston wood which is safe and welcoming. This will be achieved by:

•Annual path cut (July) in all blocks where necessary
•Minor path repair to the entrances and path network in compartment 42a (2019) with local volunteer group
•Litter pick every month and pro-active fly tipping monitoring
• Entrance upgrades at 4 locations and 1.5km of path upgrades (2019)
• Annual inspection of fences/paths and internal structures
• Regular tree safety inspections

5.2 Long Established Woodland of Plantation Origin

Description

The woodlands LEPO status is confirmed by its existence on the 1860 OS map. The diversity of the wood has been greatly compromised due to past management history and little or no features of continuous woodland cover remain. However it is a significant natural feature within the local urban landscape, despite intensive management in the past and fragmentation by development. The woods form a landscape infrastructure and attractive backdrop and screening for the Brucefield Industrial estate.

Significance

The woodland is on the Ancient Woodland Inventory as LEPO on 1860 maps, which indicates a relatively high biodiversity potential in parts of the site. The woods are a significant feature of the local landscape and provide screening and shelter between housing developments and industrial estates. They form an integral component of the local landscape.

Opportunities & Constraints

Opportunities
To improve the biodiversity value of the woodland and ground flora by continuing to manipulate the canopy and species composition through targeted felling.
Constraints
Small scale of woodland and high ‘edge effect’.

Factors Causing Change

Additional development adjacent to the site will increase future removal of trees due to safety concerns.
Squirrel damage is increasing

Long term Objective (50 years+)

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

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

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

•The impacts of deer, rabbits, squirrels and tree diseases will be monitored through the Woodland Trust's woodland condition assessment process.
•Assess natural tree regeneration and browsing within open areas every 5 years when management plan is reviewed to ensure that native species are abundant or dominant and successfully establishing.

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
43a	1.84	Sycamore	1900	Min-intervention	Mostly wet ground/exposed site	Informal Public Access	
Stand of mixed broadleaves - sycamore, beech, ash, pedunculate oak, downy birch, alder with occasional Norway maple, lime and Scots pine.The understorey contains young Scots pine, beech, ash, Sitka spruce as well as established shrubs such as elder and holly.The ground flora consists of soft grasses, ferns, wood sorrell and nettles, with areas of bramble and raspberries. There are also patches of blaeberry to the south.							
43b	0.59	Mixed broadleaves	2005	Wood establishment	No/poor vehicular access within the site	Informal Public Access	
Area replanted (2005) with mixed broadleaves including sessile oak, ash, downy birch, gean, rowan, hazel, hawthorn, blackthorn, lime, and Scots pine. Planted without shelters due to potential vandalism the young trees had signs of browsing by rabbits and many were then put in spirals. Ground flora throughout planting area contains soft grasses, brambles and nettles.							
44a	0.50	Scots pine	1920	Min-intervention		Informal Public Access	
Stand of mature Scots pine, with the occasional downy birch, hybrid larch, pedunculate oak and Norway spruce.The understorey contains frequent beech regeneration, with occasional holly, ash, rowan, honeysuckle, hawthorn, lime and sycamore.The ground flora consists of mosses, soft grasses and ferns, with areas of bramble.							
44b	0.44	Scots pine	1900	Min-intervention		Informal Public Access	
Mature stand of pedunculate oak and downy birch, with occasional lodgepole pine, sycamore and ash.The understorey contains a hawthorn hedge, a beech hedge and frequent lodgepole pine.The ground flora consists of soft grasses and ferns, with frequent areas of brambles.							
44c	0.05	Mixed broadleaves	1954	Min-intervention		Informal Public Access	
Open stand of mature willow and beech, with occasional understorey of whin and hawthorn.The ground flora consists of soft grasses, ferns and brambles.							

Appendix 2: Harvesting operations (20 years)

Forecast Year	Cpt	Operation Type	Work Area (ha)	Estimated vol/ha	Estimated total vol.
2025	43a	Thin	1.80	2	3
2025	44a	Thin	0.50	6	3
2025	44b	Thin	0.50	6	3

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.

The Woodland Trust, Kempton Way, Grantham, Lincolnshire NG31 6LL.
The Woodland Trust is a charity registered in England and Wales no. 294344 and in Scotland no. SC038885.
A non-profit making company limited by guarantee. Registered in England no. 1982873. The Woodland Trust logo is a registered trademark.