WOODLAND
TRUST SCOTLAND

Formonthills

Management Plan
2017-2022

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MAPS

THE WOODLAND TRUST

INTRODUCTION

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

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

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

PLAN REVIEW AND UPDATING

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 Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations.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

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

WOODLAND MANAGEMENT APPROACH

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

Our strategic aims are to:

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

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

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

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

The following guidelines help to direct our woodland management:

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

SUMMARY

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

1.0 SITE DETAILS

Site name:	Formonthills
Location:	Glenrothes
Grid reference:	NO259036, OS 1:50,000 Sheet No. 59
Area:	118.47 hectares (292.75 acres)
Designations:	Area of Landscape Value, Tree Preservation Order

2.0 SITE DESCRIPTION

2.1 Summary Description

Formonthills may be a young woodland but it's got a lot to offer, with 80,000 trees planted with the help of the local community, wildflower meadows, wetland areas, abundant wildlife, several circular walks, and a commanding position offering spectacular views.

2.2 Extended Description

Formonthills Woodland is a mosaic of young planting, mature woodland and open ground, located in and around the north-western boundary of Glenrothes. It is important both for the diversity of its habitats and also the range of marginal habitats created between adjacent areas. Rhind Hill is included within the site boundary, this being a high point in the local area, at 233m above sea level (a.s.l.), and the lowest point in the south west corner is approximately 140m a.s.l.

Most of the woodlands have been established on what was previously improved or semi-improved farmland. Over most of the site the soils are brown earths of reasonable fertility, often underlain by clays derived from glacial drift. Dolerite boulders (probably brought in drift from the nearby Lomond Hills) are frequent and form the building materials for the old farm dykes. The site drainage is complex and has been modified by previous farm drainage works, including clay field drains, stone conduits and burn diversions.

The area around Glenrothes is described by the MLURI climate maps as being fairly warm, moist

lowland foothill. However much of the site is surprisingly exposed given its lowland classification.

The central area of woodland is dominated by young native woodlands with a gross area of about 55 hectares (ha). These were established between 1995 and 1997 shortly after the Trust took ownership of the site. In the northern parts of the woodland creation area there is a mosaic of groups of Scots pine and broadleaves. The trees are now mostly well established and have generally closed canopy. In mosaic with the young woodland are glades, shrubs, gorse scrub, and semi-wetland habitats.

The creation of the 50ha native woodland at Formonthills provides a very significant addition to the local landscape and biodiversity. It all the more important for integrating these benefits into the urban fringe and providing an interface with the more open landscape of the Lomond Hills. Fife generally has a very fragmented and low level of woodland cover, and much of the existing resource is either coniferous or non-native broadleaved. The new woodlands at Formonthills border little existing woodland outside of the site.

In 2001 the Ground Flora Project was begun with the aim of establishing the ground flora component of new native woodland at the same time as the tree canopy. This resulted in the seeding of 11ha with wild flower seeds and the establishment of a number of trial plots. The seeded areas have established well (in particular primrose, bluebell, red campion, St Johns wort & meadowsweet) and provide colour and nectar throughout the spring and summer. The introduction of woodland ground flora has also increased the biodiversity value and visual interest of the woodlands and provided a model for other such projects.

A belt of more mature mixed woodland provides a backdrop to the housing boundary in the south. These woods were mainly planted by the Glenrothes Development Corporation as part of the establishment of the new town and date from the 1980's. They are quite varied in species and structure and their most abundant components are ash, Scots pine, larch, birch, oak, alder, beech and sycamore.

In the east of the site, conifer woodlands were planted in the 1970's, dominated by Sitka spruce. After extensive windblow in 2012, these were felled and replanted with native broadleaves and Scots pine. Some mature Sitka spruce still remains to the west of Pitcairn Centre.

Within the young native woodland there are 4 large glades and several smaller ones. These are areas of grassland that have been mown once or twice annually since c.1997. Arisings are removed with the long term aim of reducing fertility to improve floral diversity. There is a substantial area of semi-improved acid grassland centred on Rhind Hill. This has some botanical interest and was grazed until 2016. Adjacent to Rhind Hill there are also extensive gorse thickets.

There are several wetland areas throughout the site, with varied plant communities, dominated by grasses and rushes but including water horsetail and early purple orchid. There are also a number of ditches and water courses passing through the site. Many of these are the result of previous agricultural drainage and their current courses are artificial, although naturalised over many years. An informal study by SEPA in 2006 showed a high diversity of invertebrate fauna in the burn near the Pitcairn Centre, indicating good water quality. The largest water course is the Conland/Coul burn which runs along the northern boundary of the site.

Many features such as stone dykes, hedgerows and mature hedgerow trees remain from the site's agricultural past. These now form valuable niche habitats. Mature hedgerow trees account for most of the few mature broadleaves in north-west Glenrothes.

The site supports a host of bird life, including buzzards, kestrels, skylarks, meadow pipits and crows. Mammals include roe deer, rabbits and moles.

Most of the site lies within the Lomond Hills Area of Great Landscape Value (AGLV). The Trust's land marches with the southern boundary of the Lomond Hills Regional Park, although it lies wholly outside the Park. There is a Tree Preservation Order on 7 mature oak trees (cpt 3a).

Formonthills provides a major resource (113ha) of land for informal public access in the north-west of Glenrothes with a population of 39,000. The path network is extremely well-used by local people. It is also popular with visitors from other parts of Glenrothes and beyond.
There are nearly 10km of paths forming a strategic network linking the communities adjoining the woodland as well as providing a network of routes through new and existing woodland. These routes are suited to a variety of users and on mostly level ground or shallow slopes and without steps. Some routes are surfaced, whereas others are un-surfaced and may be muddy in places. Some paths are part of the Core Path Network. There are 30 entrances and 3 car parks adjacent to the site (one on Trust land). The boundaries with housing areas total about 4.5km in length.

The site provides an educational resource to local schools and nurseries.

3.0 PUBLIC ACCESS INFORMATION

3.1 Getting there

By bus: There is a regular service, Monday to Saturday, to Collydean (Pitcairn Avenue) from either Markinch railway station or Glenrothes bus station.
For more information contact Traveline Scotland on 0871 200 2233 or visit www.travelinescotland.com

By car: On entering Glenrothes from Leslie on the A911, take the first exit at the Leslie roundabout onto Western Avenue (B969). At the next roundabout (Pitcoudie), take the first exit onto Formonthills Road (look out for brown tourist sign). Go straight over other roundabouts and onto Benvane Road. The main car park is reached at the end of this narrow road. Parking is also available at the Fife Council car parks at the Pitcairn Centre (Moldart Drive) and Coul Den Nature Reserve (Calder Court).

Maps: OS Explorer 370, OS Landranger 59; Grid Ref: NHO259034

3.2 Access / Walks

The three miles of boundary which backs directly onto residential streets is served by more than 20 entrances. There are over six miles of paths forming a strategic network, linking the communities adjoining the woodland as well as providing a network of routes through new and existing woodland. These routes are suited to a variety of users and are on mostly level ground or shallow slopes, without steps. Some routes are surfaced whereas others are un-surfaced and may be muddy in places. Some paths are part of the Core Path Network. Interpretation and orientation on site is via information boards at 2 car parks, and sculptures situated at main path junctions.

A variety of circular routes of different lengths are possible, with excellent long-distance views obtained from many parts of the site. The path network links into external paths through Coul Den Local Nature Reserve and into the Lomond Hills Regional Park.

4.0 LONG TERM POLICY

Woodland
To move towards a mixed woodland of diverse age and structure. Canopy species will be mostly ash, birch, oak, rowan, cherry and sycamore with a variety of other native tree and woody shrub species. There will be occasional groups and individuals of mature Scots pine and exotic conifers for colour and diversity, where these can be retained against wind damage. The canopy will generally be fairly open for reasons of both amenity and diversity of ground flora. There will be frequent deadwood. The woodland will form an attractive backdrop to Glenrothes and be a key element in the local landscape.

Connecting people with woods and trees
The site will be a welcoming and pleasant place for walkers, horse riders and mountain bikers, providing an extensive area of green space, both woodland and open space, for quiet informal recreation. There will be a wide range of users, mainly local dog walkers and families, but also by people from further afield. Schools and groups will be using the area for outdoor learning and practical activities.
The path network will be easily accessible from residential areas and form links between them, as well as onto other wider path networks. There will be a framework of surfaced paths and a more extensive network of un-surfaced paths with a range of visitor experiences. Access provision will be in keeping with WT access guidelines and site access coding (A). Interpretation will include a series of sculptures to help with orientation and added interest on site.

Other habitats
There will be a diversity of semi-natural non-woodland habitats across the site, providing both an interesting amenity landscape and a high biodiversity potential. Habitats present are likely to include gorse thicket, grassland, wetland, woodland specialist ground flora, streams and old boundary features. It is accepted that natural successional changes will take place and that existing habitats may evolve over time in nature and location.

5.0 KEY FEATURES

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

5.1 Connecting People with woods & trees

Description

Formonthills provides a welcome accessible greenspace area on the north-western edge of Glenrothes, a new town with a population of 39,000 residents. The woodland acts as an important buffer between housing and agricultural fields and hill land to the north. The 118 hectares is a mosaic of young planting, mature woodland, and open ground and is one of the most significant areas of public open space near the town. Rhind Hill is the high point at 233m with amazing views over the town and beyond to the Firth of Forth, Bass Rock and Largo Law.

There are approximately 10km of paths forming a strategic network linking the communities adjoining the woodland and providing a network of routes throughout the woodland, as well as onto external paths through Coul Den Local Nature Reserve and into the Lomond Hills Regional Park. These routes are suited to a variety of users and on mostly level ground or shallow slopes in the Southern part of the site, with steeper ground as you head towards Rhind Hill. Some paths are surfaced with hard-core (hedgehog way marked route and path between Western Avenue and Calder Court) whereas others are grass and earth paths and may be muddy in places. In addition to the managed paths there are many informal desire line paths. There are two way-marked path loops (hedgehog and squirrel) with posts carved with drawings done by local school children. Many of the paths are part of the Core Path Network, and lead onto land managed by the Fife Coast and Countryside Trust.

There is a Woodland Trust car park at the end of Benvane Road, which is surfaced with aggregate and has room for about 15 cars. There are two further car parks adjacent to the woodland - Coul Den car park at the end of Calder Road, and Pitcairn Centre car park at the end of Moidart Drive. These are also surfaced with aggregate and have room for a similar number of cars and are both owned by the Council. The Trust car park is shut at night. There is a large grassy glade next to the Benvane Road car park, which can be used for events and overflow car parking.

There are 30 entrances to the woods, all with Woodland Trust welcome threshold signs. On Benvane Road there is a large threshold sign and wooden ladder board sign, and there are brown tourist signs directing visitors from Leslie Roundabout, along Western Avenue and onto Formonthills Road, and Benvane Road. There are two information boards (at Benvane Road and Pitcairn Centre car parks), and several sculptures on site at main path junctions to help orientate the visitor. Some entrances have got wide kissing gates with radar padlocks, which enables them to be opened fully up for wheelchair access, and step-over boards to allow access for horses but discourages motorbikes. Other entrances have no access barriers. The entrances into the deer fenced area behind Moidart Drive are by self-closing pedestrian gates.

The path network has been improved over the last decade and there has been a gradual increase in visitor numbers, mostly local dog walkers but also people from further afield. Mountain bikers and

horses also regularly use the site. In the spring and summer the many wild flowers along paths and in several large glades are a great attraction. Some schools and nurseries use the site regularly for outdoor education.

There are several volunteers (Wood Wardens) who help to keep an eye on the wood, pick up litter and report back any issues. Several local walkers also help to keep the area free of litter.

The high public usage and closeness to a large urban area also creates occasional management difficulties such as vandalism, fly tipping, litter, motorbikes, poaching deer, out of control dogs chasing wildlife, dog poo, and garden waste tipping.

Significance

The path network is extremely well-used by local people, and is also popular with visitors from other parts of Glenrothes and beyond. Although Glenrothes is generally well-provided with woodland, Formonthills provides one of the most significant areas of public open space, giving a varied experience of open ground and woodland habitats close to people's homes. The paths provide direct routes between housing developments and link into the wider path network.
There are 20 primary schools and 3 high schools in Glenrothes, and the site provides an educational resource for outdoor learning, and practical activities. Currently Formonthills is used regularly by Carleton Nursery and Collydean Primary School, which is within walking distance.
The current level of public usage is defined as WT access category A - High (Regularly used at all times of year, more than 15-20 people per day using main entrances).
The nearest other Woodland Trust sites are Keil's Den and Largo Serpentine in Largo.

Opportunities & Constraints

Opportunities: To encourage more use of the woods: by upgrading more paths and entrances to make them more welcoming; by holding more public engagement events; by promoting the wood; by encouraging regular use of the wood by schools; and providing opportunities for groups wanting to do practical work (such as tree tube removal). There is also the opportunity for partners to use the site for health walks or green gyms.

Constraints: anti-social behaviour and barriers to access.

Factors Causing Change

Climate change & greater visitor numbers is making un-surfaced paths muddier.

Long term Objective (50 years+)

The site will be a welcoming and pleasant place for walkers, horse riders and mountain bikers, providing an extensive area of green space, both woodland and open space, for quiet informal recreation. There will be a wide range of users, mainly local dog walkers and families, but also by people from further afield. Schools and groups will be using the area for outdoor learning and practical activities.
The path network will be easily accessible from residential areas and form links between them, as well as onto other wider path networks. There will be a framework of surfaced paths and a more extensive network of un-surfaced paths with a range of visitor experiences. Access provision will be in keeping with WT access guidelines and site access coding (A). Interpretation will include a series of sculptures to help with orientation and added interest on site.

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

The site will be well-maintained and welcoming. Achieved by:
• Ensuring that all managed paths are kept free from encroaching vegetation, and well-drained where possible (edges cut twice annually).
• Ensuring entrances are kept in good order and welcoming (annually). Carry out entrance audit by end 2018 to consider: removing barriers where no longer needed; replacing Woodland Trust signs if not in good condition; removing some “do not” signs (e.g. no fires / no motorbikes) if no longer needed, and any other improvements to make entrances more welcoming. Carry put entrance improvements by end 2019.
• Regular collections of litter (every 2 months) and clearing dumping (when occurs);
• Regular site safety surveys of trees and access features (bridges, benches, structures) as per risk assessment;
• Removal of remaining old fences along ex-grazing area (by 2017), and all other scattered old fences, posts and gates (by 2019);
• In grassland area (ex-grazing area to north), allow desire lines to develop where people want to walk, and consider if any improvements or mowing is required (by 2020).
• Upgrade paths: between Formonthills Road and Balgeddie Park, by scraping back vegetation from edges (in 2017); from Formonthills Road north to bridleway loop where narrow with roots, by rerouting to west onto flatter ground (in 2017); by benching (cut and fill) the grass path with a cross slope west of the car park and reseeding with grass so more level (by 2018).
• Maintenance of ditches and culverts to keep paths as dry as possible (annual).
• Install 2 more sculptures at main path junctions to help orientate visitors and add interest (by 2020).
• Try to reduce amount of garden waste tipped on boundaries by a leaflet drop and press release (in 2017).

Opportunities for public engagement will be sought when possible. Achieved by:
• Encourage schools to use the site more for educational purposes, by contacting very local schools to promote the area for outdoor learning – sharing WT outdoor learning pack, free trees for schools and communities, Green Tree schools awards, nature detectives and other outdoor learning resources (every 3 years).
• To hold public events (at least one community / school event every 2 years). Event in 2017 to focus on being a responsible dog owner, and the following one on tree planting.

5.2 Secondary Woodland

Description

The main block of woodland to the NW comprises of young native trees established between 1995 and 1997, shortly after the Trust took ownership of the site. The site was previously farmland, consisting of improved grassland in the south and semi-improved grassland in the north. The main species, which were planted in shelters, are oak, birch, ash, alder, and groups of Scots pine in the northern parts. A fire in 2003 destroyed about 4.5ha in the east of 6a, and this was replanted, mainly with ash, and is now well established.
The existing woodland, both broadleaved and coniferous, form strips adjacent to housing areas around Balgeddie, Collydean, Pitcairn and Coul. These woods were mainly planted by the Glenrothes Development Corporation as part of the establishment of the new town and probably date from the 1970s - 80s. They are quite varied in species and structure and their most abundant components are ash, Scots pine, birch, Sitka spruce and sycamore with frequent wild cherry, oak, rowan and alder and occasional larch, willow and beech. There were areas of Sitka spruce at the western end (cpt 3a & 4a & 4b) which were felled and replanted in 2012 after major windblow in 2011 & 2012.
Woodland along the edges of houses, paths and Scots pine blocks were thinned in 2015, to reduce the issues with trees growing close to houses, and to let more light to the ground for a greater diversity of plants.
The woodlands also contain mosaic of other habitats – glades, marsh, gorse, streams and acid grassland.
Ash dieback disease (chalara) is present and is killing the young ash trees.

Significance

Both broadleaved and coniferous woodlands contribute to the overall diversity of the site, in terms of ecology, landscape, biodiversity and visitor experience. In several places they link into external woodland shelterbelts, creating habitat networks. The woods provide an interface between urban fringe and the more open landscape of the Lomond Hills AGLV/Regional park. Fife generally has a very fragmented and low level of woodland cover

Opportunities & Constraints

Opportunities: To gradually restructure the conifers to native species to improve ground flora diversity by increasing light to the forest floor.
Constraints: Proximity to housing and general high public use makes some operations difficult. Garden tipping is an issue along boundaries where excessive garden cuttings smothers trees, looks unsightly, can introduce invasive plants, blocks drains and makes access for boundary inspections difficult.
Deer and rabbit browsing make protection of young trees essential.
Tree Preservation Order on 7 oaks between Calder Court and Pitcairn Centre.

Factors Causing Change

Wind blow (particularly of conifers), ash dieback disease (chalara), build up of garden dumping and invasive plants (rhododendron and variegated yellow archangel).

Long term Objective (50 years+)

To move towards a mixed woodland of diverse age and structure. The canopy will generally be fairly open for reasons of both amenity and diversity of ground flora. There will be frequent deadwood. The woodland will form an attractive backdrop to Glenrothes and be a key element in the local landscape.

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

• Ensure the establishment of young planted woodland. Achieved by: maintenance of tree shelters as needed as a result of wind-damage or vandalism (cpt 2d/g, 3a, 4a/b/d annually); remove shelters when no longer needed for protection (cpt 1d, 2g, 5, 6, 7 by end 2021) using volunteers as much as possible; weed newly planted trees to reduce competition if needed in first few years (cpt 2d, cpt 3a beat ups, cpt 4d in 2017 - 2019). Non-native regeneration will be accepted as a nurse crop (and can be re-spaced when trees have established).
• Monitor areas where invasive rhododendron has been controlled recently and deal with any regrowth by cutting / pulling / spraying whenever present. (Cpt 2f & 5b in 2019 and 2021).
• Monitor ash for chalara (ash dieback disease) and consider options when large groups die (by 2021). Trees that have died next to houses, roads, and paths may need to be felled for safety reasons (regular tree safety inspections as per safety database).
• Plant up grassland to north of the wood (ex-grazing area), planting small blocks and groups of trees on no more than a third of grassland area (18 hectares), leaving the remaining area as open ground (cpt 8e, maximum of 5 hectares by 2019). Proposed area shown on management map with exact area to be confirmed after floral survey in 2017 and according to grant conditions. Also plant up half of large grassy glade in cpt 4d with shrubs and trees (0.03ha of cpt 4d in 2017 with volunteers).
• Retain existing mature trees as long as possible to give a great a diversity of ages as possible, unless need felled for safety reasons or large groups blow over.
• Renew (or repair) boundary fence on western boundary of in partnership with neighbour (cpt 8b, 700m by 2019).
• Continue thinning of Scots pine blocks to open up for stability and light for ground flora (cpt 6a & 7a in 2018)

5.3 Mixed Habitat Mosaic

Description

Formonthills is a diverse site with a variety of different habitats integrated into the woodland landscape. In particular:
(a) Glades: Within the young native woodland (cpts 5, 6, 7) there are 3 large glades and several smaller ones, totalling 3.14ha. These are areas of grassland that have been mown once or twice annually since c.1997. Arisings are removed with the long term aim of reducing fertility to improve floral diversity. However, floral diversity has remained low due to lack of seed source.
(b) Ground flora: In 2001 the Ground Flora Project was begun with the aim of establishing the ground flora component of new native woodland at the same time as the tree canopy. This resulted in the seeding of 11ha with wild flower seeds and the establishment of a number of trial plots. The seeded areas have established well (in particular primrose, bluebell, red campion, St Johns wort & meadowsweet) and provide colour and nectar throughout the spring and summer. As part of the Fife's Buzzing project in 2016, 2 glades and the marshy area near the boardwalk were planted with wildflower plugs.
(c) Wetland: The main area of permanent wetland is the upper part of 5c with water horsetail and early purple orchid. The lower part of 5c is seasonally wet and dominated by grasses and rushes (5c total 1.78ha). The western part of 5d (1.72ha) is a large open area of wet grassland of rushes, tufted hair grass and creeping buttercup. There are other isolated pockets of poorly drained land in cpts 6, 7 and 8 where rushes dominate.
(d) Water courses: There are 2 burns which run along the northern boundary: Coul Burn in cpt 4b and Conland Burn in cpt 8.There are also a number of ditches and water courses passing through the site. Many of these are the result of previous agricultural drainage and their current courses are artificial, although naturalised over many years. An informal study by SEPA in 2006 showed a high diversity of invertebrate fauna in the burn near the Pitcairn centre, indicating good water quality.
(e) Semi-improved acid grassland: This area, centred on the area around Rhind Hill, occupies about 55% of cpt 8a in a mosaic with gorse thicket.
(f) There are extensive gorse thickets, occupying about 25% of cpt 8a (mostly nearest Conland Burn in the north) and anecdotal evidence indicates that the gorse is spreading. There are also isolated thickets of gorse among the young woodland, particularly in cpt 6.
(g) Hedgerows, dykes and old hedgerow trees: Many boundary features remain from the site's agricultural past. These now form valuable niche habitats. Mature hedgerow trees account for most of the few mature broadleaves in north-west Glenrothes.

Significance

Formonthills is important both for the diversity of its habitats and also the range of marginal habitats created between adjacent areas. Formonthills is sandwiched between a relatively intensive agricultural landscape and the urban fringe, both of which contain few of the habitats concerned.

Opportunities & Constraints

Opportunities: To increase wetland diversity by creating a scrape or pond to give some open water.
Constraints: The drainage system is in a state of flux with springs appearing as old clay pipes get blocked. This causes problems when affect paths.
Occasional fire-setting by youths causes unplanned changes in gorse distribution.

Factors Causing Change

Natural succession of open ground to woodland.
Gorse expansion.
Climate change.
Fires.

Long term Objective (50 years+)

There will be a diversity of semi-natural non-woodland habitats across the site, providing both an interesting amenity landscape and a high biodiversity potential. Habitats present are likely to include gorse thicket, grassland, wetland, woodland specialist ground flora, streams and old boundary features. It is accepted that natural successional changes will take place and that existing habitats may evolve over time in nature and location.

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

Maintaining floral diversity and amenity of glades. Achieved by: mowing glades once annually and continue to remove arisings to reduce fertility (3.14ha annually).
Ensure diversity of habitats by leaving marshy areas and open aspect of at least two-thirds of the acid grassland area in cpt 8 including Rhind Hill, (with up to a third being planted with native trees - see secondary woodland key feature).
To create a small scrape in the west of the main marshy area (where wettest) to give some open water, for increased insect biodiversity (cpt 5c up to 0.25ha).
Control gorse in open grassland to stop further spread of gorse and to keep a range of ages for diversity, by cutting half the accessible areas (c. 3ha) once every 5 years on a rotational basis, leaving older bushes on slopes inaccessible by machinery (c. 2ha) (cpt 8a, cut 1.5ha in 2020).

6.0 WORK PROGRAMME

Year	Type of Work	Description	Due By

APPENDIX 1: COMPARTMENT DESCRIPTIONS

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Key Features Present	Designations
1a	3.05	Mixed broadleaves	1973	High forest		Connecting People with woods & trees, Mixed Habitat Mosaic	
A south-facing broadleaved woodland, last thinned in 2009. The semi-mature canopy (80% cover) is dominated by sycamore, with frequent downy birch, occasional Scots pine and oak and rare ash, cherry, willow, beech and alder. The understorey (30% cover) consists of dominantly snowberry, with frequent juvenile downy birch and rare rowan, hazel and oak. There is frequent regeneration of mostly birch, with occasional oak and rare hazel and hawthorn. A small burn runs through the subcompartment from north to south, bordered by mature native broadleaves dominated by oak, with occasional beech, sycamore and cherry, and a hawthorn hedge to the west. There is a patch of juvenile sycamore to the west. Ground flora is dominated by grasses, including abundant tufted-hair grass, with frequent thistles and dock and occasional rosebay willowherb, dog rose and creeping buttercup. The south-western finger contains young planting, grasses and thistles. Occasional evidence of deer and rabbit browsing, both old and recent. Occasional brash and twigs form the only deadwood habitat.							
1b	2.28	Mixed broadleaves	1965	High forest		Connecting People with woods & trees, Mixed Habitat Mosaic	
Mainly broadleaved woodland, last thinned in 2002. The semi-mature canopy (90% cover) is dominated by alder with abundant ash, and occasional birch, oak and Scots pine and rare sycamore, larch, cherry and beech. The understorey (25% cover) is dominated by snowberry, with occasional hawthorn, especially in a hedge running through the centre, and rare rowan, blackthorn and juvenile Scots pine. There is occasional rabbit browsing of the frequent alder and ash regeneration. Ground flora includes abundant grasses and creeping buttercup, frequent nettles and dock, and occasional daisies, ground ivy, wood avens, hogweed, broad buckler fern, soft rushes, bramble and rosebay willowherb. There is occasional dead wood.							
1c	0.16	Mixed broadleaves	1900	High forest		Connecting People with woods & trees, Mixed Habitat Mosaic	

A narrow subcompartment that runs between a field and a horse paddock with a small stream running along the western boundary. The canopy (50% cover) consists of mature and semi-mature trees, with frequent mature cherry and sycamore, occasional willow and birch and rare ash. The footpath is kept relatively open, with the mature trees on either side. The understorey is varied, including frequent juvenile cherry and elder, occasional birch, hawthorn and sycamore, and rare snowberry, Sitka spruce, gorse, blackthorn, rowan and dog rose. There is occasional bark stripping by squirrels of sycamore and cherry trees. Regeneration of cherry and elder is occasional. Ground flora is dominated by grasses, with abundant creeping buttercup, frequent ground ivy, rosebay willowherb, dock and woodruff, as well as occasional broad buckler fern, cleavers, nettles and wood avens. Occasional dead mature trees are present.							
1d	3.09	European larch	1965	High forest		Connecting People with woods & trees, Mixed Habitat Mosaic	
A mainly coniferous woodland of varied species and age structure. The canopy (95% cover) is dominated by larch, with frequent ash, Scots pine and beech, occasional willow, poplar and Norway spruce, and rare birch, cherry, rowan and oak. The understorey (40% cover) consists of frequent juvenile ash and beech as well as elder and hawthorn, occasional rowan, cherry and sycamore, and rare snowberry, dog rose, Norway spruce and oak. There is frequent beech and ash and occasional poplar and sycamore regeneration. Ground flora consists of abundant grasses, nettles and wood avens, frequent bramble, woodruff, dock and creeping buttercup, and occasional hogweed, thistles and broad buckler fern. The area is relatively flat. A burn runs through the centre, from north to south, bordered by a mature hawthorn hedge. There is occasional dead wood. There is isolated windblow, worst affected to south of playing field.							
1e	0.41	Mixed broadleaves	1900	High forest		Connecting People with woods & trees, Mixed Habitat Mosaic	
A thin belt of trees between housing developments and containing a well-used path. The strip is dominated by a row of widely spaced, mature trees of oak, frequent sycamore and cherry, and occasional ash and Norway maple (60% cover). Several of the mature trees are subject to frequent remedial safety work. The understorey (50% cover) is dominated by hawthorn (remnants of a hedge) with occasional juvenile oak and cherry and rare holly, rowan and beech amongst other shrubs. Ground flora is dominated by grasses, abundant creeping buttercup, frequent nettles and brambles, and occasional wood avens, dock, rosebay willowherb and broad buckler fern. There is occasional dead wood in the form of dieback in mature trees or fallen dead branches.							
1f	0.70	Mixed broadleaves	2002	High forest		Connecting People with woods & trees, Mixed Habitat Mosaic	

An area of young planting in 1.2m shelters. Species consist of abundant ash and birch, frequent oak, rowan and wild cherry, and occasional goat willow, hawthorn and hazel. The cpt was planted in 2002 and is well established. A mature hawthorn hedge runs through the centre of the compartment. Ground flora is prolific and is dominated by grasses and thistles, with abundant nettles and frequent dock and hogweed.							
2a	1.38	Mixed broadleaves	1974	High forest		Connecting People with woods & trees, Mixed Habitat Mosaic	
An area of juvenile and semi-mature mixed broadleaved and coniferous planting, last thinned in 2009. The canopy (80% cover) is dominated by ash, with frequent birch, sycamore and Scots pine and occasional cherry and rowan. The sparse understorey is dominated by snowberry, with frequent hawthorn and occasional juvenile birch and ash and rare oak, rowan, elder, hazel and lilac. There is frequent regeneration of ash and birch, mainly from coppicing, with occasional hawthorn. Ground flora is dominated by grasses, with frequent bramble, rosebay willowherb and dock, and occasional nettles, creeping buttercup, ragwort, thistles and soft rushes. There is frequent deer browsing on sycamore regeneration. Frequent fallen branches make up the deadwood habitat.							
2b	0.78	Mixed broadleaves	1972	High forest		Connecting People with woods & trees, Mixed Habitat Mosaic	Area of Landscape Value
An area of mixed semi-mature woodland (85% cover), last thinned in 2009, consisting of frequent alder, Scots pine and rowan, with occasional ash in the southern strip as well as larch, and rare birch and oak. There is a line of mature oak and ash trees along the western boundary. The understorey (40% cover) is dominated by snowberry, with occasional rowan, juvenile birch and ash, hawthorn and elder. There is abundant ash regeneration with occasional alder and hawthorn as well. Ground flora consists of abundant grasses, rosebay willowherb, frequent hogweed, and occasional bramble, daffodils and creeping buttercup. Occasional small branches form the deadwood habitat.							
2c	1.12	Mixed broadleaves	1974	High forest		Connecting People with woods & trees, Mixed Habitat Mosaic	Area of Landscape Value

An area of semi-mature broadleaved woodland. The western part was last thinned in 2002 and is still fairly open. The eastern part has not been thinned. The canopy (80% cover) is dominated by ash, with occasional birch, Scots pine and rowan. The understorey (35% cover) consists of frequent rowan, snowberry and hawthorn, and occasional sycamore and birch. There is abundant ash regeneration from coppice, and occasional hawthorn. A mature hawthorn hedge grows along the entire northern edge of the subcompartment. A watercourse bisects the subcompartment, bordered by brambles, nettles and hawthorn. There is abundant browsing on ash regeneration by deer, as well as occasional debarking. Ground flora is dominated by grasses and nettles, with frequent soft rush, hogweed and bramble and occasional creeping buttercup. Frequent branches make up the deadwood habitat.

2d	0.83	Mixed broadleaves	2009	High forest		Connecting People with woods & trees, Mixed Habitat Mosaic	Area of Landscape Value

Ash, sycamore, Scots pine and birch with young planting of shrubs (2016). The area was Sitka spruce planted approx 1970, but felled in 2016. Ground flora is sparse, dominated by grasses, with abundant nettles and rosebay willowherb, frequent hogweed and occasional bramble, rose, thistle and foxglove. There is frequent dead wood in the form of brash and fallen branches.

2e	0.42	Mixed broadleaves	1974	High forest		Connecting People with woods & trees, Mixed Habitat Mosaic	Area of Landscape Value

Broadleaved woodland last thinned in 2002. Dominated by pole-stage ash, with frequent alder and willow and rare birch. Poorly drained, often with areas of standing water. The understorey (50% cover) is dominated by juvenile ash, with occasional juvenile alder. There is frequent ash regeneration, as well as occasional sycamore and willow coppice. Occasional deer browsing is evident on the sycamore. Ground flora is dominated by tufted hair-grass, with frequent nettles and grasses, and occasional hogweed, creeping buttercup, cleavers, dock and brambles. There is frequent dead wood.

2f	1.75	Mixed broadleaves	1972	High forest		Connecting People with woods & trees, Mixed Habitat Mosaic	Area of Landscape Value

The woodland is dominated by ring of mature Sitka spruce with a central patch of pole stage broadleaves. The compartment was thinned in 2009. The understorey consists of frequent beech, rowan and sycamore, occasional cherry and elder, and rare birch, oak, hazel, larch and hawthorn. There is frequent regeneration of mostly beech, with occasional rowan, oak and sycamore. Ground flora consists of frequent grasses and bramble, with occasional male and lady ferns and rosebay willowherb. There has been winblow of spruce in 2011/12. There is occasional deadwood.

2g	0.59	Mixed broadleaves	2002	Wood establishment		Connecting People with woods & trees, Mixed Habitat Mosaic	Area of Landscape Value
An area with a mosaic of open grassland and groups of young planting (2002) in tree 0.75m shelters. Species consist mainly of shrubs with pedunculate oak, holly, hawthorn, rowan, juniper, hazel, and blackthorn. Vandalism has been a problem is this area and the trees are not yet well established.							
3a	7.37	Mixed broadleaves	2012	Wood establishment		Connecting People with woods & trees, Mixed Habitat Mosaic	Area of Landscape Value, Tree Preservation Order
Mixed woodland planted 2012 after clearing mature Sitka spruce after major windblow in 2012. Regeneration is frequent, mostly of poplars. Ground flora is also abundant, dominated by broad buckler fern, with frequent grasses and occasional bramble, rosebay willowherb, nettles, hogweed and lady fern. There is frequent dead wood in the form of brash and blown stems. The area is deer fenced. A small burn bisects the area to the north, running west to east.							
4a	1.03	Mixed broadleaves	2012	Wood establishment		Connecting People with woods & trees, Mixed Habitat Mosaic	Area of Landscape Value
A mixed young woodland, planted in 2012 after major windblow of Sitka spruce. The area next to houses was felled and replanted with broadleaves in 2010. The broadleaves consist of frequent birch, willow, sycamore, beech, ash, cherry, rowan & elder. There is frequent regeneration, mostly in and near the patches of deciduous trees, consisting of beech, elder and sycamore. Ground flora consists of broad buckler fern, with abundant nettles, frequent bramble, and occasional lady fern and rosebay willowherb. There are occasional branches and some brash forming a minimal deadwood habitat.							
4b	3.14	Mixed broadleaves	2012	Wood establishment	Very steep slope/cliff/quarry/mine shafts/sink holes etc	Connecting People with woods & trees, Mixed Habitat Mosaic	Area of Landscape Value
A relatively narrow woodland between the Coul burn in the north and housing in the south. Broadleaves were planted in tubes in 2012 after major windblow of Sitka spruce. Three small areas were cleared and replanted a few years earlier. Pole stage sycamore extends along the burn in the northwest. The understorey is dominated by elder, with occasional juvenile ash and sycamore and rare hawthorn, snowberry and birch. There is occasional regeneration of ash, sycamore and birch. Ground flora consists of abundant grasses and nettles, with frequent broad buckler fern and occasional butterbur, soft rush, lady fern and hogweed.							

4c	0.70	Beech	1900	High forest		Connecting People with woods & trees, Mixed Habitat Mosaic	Area of Landscape Value
This is an area of mixed, mainly broadleaved mature woodland. It is mainly mature beech and ash, with a denser, younger canopy to the southeast. A row of mature beech borders a wall along the south-western boundary. Overall, the canopy (80% cover) is dominated by mostly mature sycamore and beech, with rare ash, willow and alder. The understorey (25% cover) consists of abundant elder, occasional ash, beech and Sitka spruce, and rare oak and hawthorn. There is abundant ash and beech regeneration, with occasional oak and Sitka spruce regeneration. Ground flora is dominated by grasses with abundant butterbur, frequent bramble and occasional broad buckler fern, hogweed, soft rush and lady fern. The Coul Burn runs along the north eastern boundary and enters a large culvert on WT land. There is no notable browsing. Occasional dead wood is present.							
4d	2.98	Mixed broadleaves	2001	Wood establishment		Connecting People with woods & trees, Mixed Habitat Mosaic	Area of Landscape Value
A young broadleaved woodland (planted 2001). Species consist of abundant sessile oak and ash, with frequent rowan and birch, and occasional holly and hawthorn. It is generally well-established although not yet closed canopy. There is a mown glade, but within the woodland the ground flora is dominated by grasses, with abundant hogweed, bramble, willowherb, raspberry and thistles, and occasional soft rushes.A strip of pole stage woodland to the south 90% cover) is predominantly ash and sycamore with frequent Sitka spruce and Scots pine and occasional birch. The understorey (15% cover) in the southern section consists of mostly juvenile sycamore, with frequent snowberry and occasional elder, birch and Sitka spruce. There is rare dead wood. Some browsing is evident.							
5a	3.75	Mixed broadleaves	1995	Wood establishment		Connecting People with woods & trees, Mixed Habitat Mosaic	Area of Landscape Value
An area of young broadleaved woodland and shrubs (planted 1995) composed of pole stage ash, aspen and alder to the west and juvenile mixed woody shrubs to the east (blackthorn, grey willow, elder, dog rose and hawthorn). An access track and burn bordered by a mature hawthorn hedge bisect the subcompartment. There is little ground flora under the well-established trees to the west, but in the east it is dominated by grasses with abundant soft rushes, frequent thistle and dock, and occasional greater plantain. There is occasional recent deer browsing of ash regeneration. Dead wood is rare in this area.							

5b	13.13	Mixed broadleaves	1995	Wood establishment		Connecting People with woods & trees, Mixed Habitat Mosaic	Area of Landscape Value
Young broadleaved woodland and designed open ground planted 1995. The planted species consist of abundant sessile oak, ash and silver birch, with frequent wild cherry, bird cherry, elder, hawthorn and occasional gorse and broom. Establishment has been successful in most areas and some parts have achieved canopy closure and had shelters removed. There are also some patches which are less well established and will require maintenance for longer. There are a number of mature trees and old hedgerows on the field boundaries. Ground flora is dominated by grasses and rosebay willowherb, frequent dock, nettles, soft rushes and tufted hair-grass, and occasional thistles, bramble and hogweed. In the east there are substantial mown glades, managed as spring flower meadows.							
5c	1.78	NULL		Non-wood habitat	Services & wayleaves	Connecting People with woods & trees, Mixed Habitat Mosaic	Area of Landscape Value
This is an area of open permanently wet ground and wetland, where ground flora is dominated by rushes and grasses, with frequent thistle and tufted hair-grass, and occasional dock, rosebay willowherb and bramble. The westerly section has frequent water horsetail and the area is known to support a substantial population of early purple orchids. An access track and burn divide the compartment interrupting what would once have one wetland system. There is no notable tree regeneration. In 2005/6 the Fife Ranger Service engaged local schoolchildren in planting wildflowers (inc. marsh marigold) and creating wet scrapes and newt hibernation mounds. In 2016, wetland wildflower plug plants were planted under the Fife's Buzzing Project, including marsh marigold, ragged robin and yellow flag iris.							
5d	1.72	NULL		Non-wood habitat		Connecting People with woods & trees, Mixed Habitat Mosaic	Area of Landscape Value
An area of low lying open ground, divided by the main vehicular access track to the car park. The western part is moderately wet at most times of year. The eastern part is somewhat less wet, as access related drainage works have been carried out. Ground flora is dominated by rushes, with abundant grasses and occasional tufted hair-grass, creeping buttercup, dock, horsetail and hogweed. There is frequent grazing on the rushes, presumably by rabbits. There is no woody regeneration.							

6a	22.80	Mixed broadleaves	1996	Wood establishment		Connecting People with woods & trees, Mixed Habitat Mosaic	Area of Landscape Value
An area of young, mainly broadleaved woodland (planted 1995/6) .Species are dominated by sessile oak and silver birch with frequent rowan, hawthorn, blackthorn, bird cherry and occasional juniper. There are some groups of Scots pine in the central northern area. Spacing varies from 2m to 3m and the original planting was done in Tubex quills, with many of the oak subsequently upgraded to 1.2m shelters. In most areas the canopy has been slow to close due to a combination of browsing and exposure. A fire in 2003 destroyed about 4ha in the south-eastern corner, which was subsequently replanted, mainly with ash, in 1.2m tubes, although a few of the original trees have recovered. There are several annually mown glades. Within the woodland areas ground flora is dominated by grasses and rosebay willowherb, with frequent nettles, thistles and soft rushes, occasional hogweed and bramble. Dead wood is rare. Browsing is frequent and there is much evidence of the presence of roe deer. Scots pine blocks were thinned in 2016.							
7a	13.50	Mixed broadleaves	1997	Wood establishment		Connecting People with woods & trees, Mixed Habitat Mosaic	Area of Landscape Value
Mixed young woodland mosaic of broadleaves and Scots pine (planted 1996/7) and occupying the highest parts of the new woodland. The groups of Scots pine are well established and are providing shelter for the ongoing establishment of broadleaves, consisting of mainly sessile oak and downy birch with frequent rowan & hawthorn and occasional holly and juniper. Spacing varies from 2m to 3m and the original planting was done in Tubex quills, with many of the oak and birch subsequently upgraded to 1.2m shelters in 2002 and a further 4500 in 2006 due to continued roe browsing. There are also patches of gorse spreading within the planting. Exposure is also an issue for establishment and canopy has not yet closed in the broadleaved areas. There are two annually mown glades. Ground flora within the woodland is dominated by grasses and rosebay willowherb, with frequent thistle and hogweed, and occasional dock. Scots pine blocks were thinned in 2016.							
7b	0.02	NULL		Non-wood habitat		Connecting People with woods & trees, Mixed Habitat Mosaic	
An area of permanently wet open ground. The ground flora is dominated by soft rush, with abundant grasses and mosses.							
8a	13.71	NULL		Non-wood habitat		Connecting People with woods & trees, Mixed Habitat Mosaic	Area of Landscape Value

An area of semi-improved acid grassland, gorse thicket, and wet marshy ground. This area includes Rhind Hill and the steep slopes down to the Conland Burn. There are areas that are colonised by gorse, being more extensive nearer Conland Burn along the north of the site, and covers approximately 5 hectares. There are occasional incidents of gorse fires. There is no notable tree regeneration except close to the burn. Ground flora is dominated by grasses, with occasional soft rushes, particularly in the south west. Rabbits are also present, with warrens in the gorse. There are no formal footpaths in this compartment, although there is a lightly used route to the summit of Rhind Hill. The area was let for grazing until 2016, and fences seperating the grassland from the rest of the woodland were removed in 2016.							
8b	4.38	Mixed broadleaves	1995	High forest		Connecting People with woods & trees, Mixed Habitat Mosaic	Area of Landscape Value
This subcompartment consists of four separate areas of planting (in 1995) composed of mixed native broadleaves and conifers in stock-fenced exclosures (to be removed in 2017). The long thin exclosure in the west is older than the others and dominated by gorse scrub, juvenile birch and ash, with frequent rowan and Sitka spruce, and occasional Scots pine, hawthorn and elder. The other exclosures consists of abundant Scots pine and birch, frequent rowan and hawthorn, and occasional juniper, holly and gorse. The compartments have generally closed canopy. Ground flora is dominated by grasses including occasional tufted hair-grass, with frequent soft rushes, and occasional nettles, brambles and thistle. Deer browsing is rare, but rabbit browsing occasional. There is no notable natural regeneration.							
8c	0.08	Sitka spruce	1965	High forest		Connecting People with woods & trees, Mixed Habitat Mosaic	Area of Landscape Value
An isolated small block of semi-mature Sitka spruce. Previous thinned but still provides almost 100% cover. There is no notable regeneration or ground flora due to the dense canopy, except for occasional grasses and rare soft rush and nettles. Dead wood is frequent due to logs from the recent thinning operation, as well as windblow. Brash from fallen trees was chipped in 2017 after a couple of incidents of bonfires next to mature trees.							
8d	0.75	NULL		Non-wood habitat	Services & wayleaves	Connecting People with woods & trees, Mixed Habitat Mosaic	Area of Landscape Value
Two areas of permanently wet open ground. The ground flora is dominated by soft rush, with abundant grasses and mosses.							

8e	5.00	Mixed broadleaves	2019	Wood establishment		Connecting People with woods & trees, Mixed Habitat Mosaic	
Area of grassland to be planted in this plan period with native trees and shrubs in small blocks.							

Appendix 2: Harvesting operations (20 years)

Forecast Year	Cpt	Operation Type	Work Area (ha)	Estimated vol/ha	Estimated total vol.
2018	6a	Thin	4.16	1	4
2018	7a	Thin	13.62	2	25

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.