

Kilmagad Wood (2024 – 2029)



WOODLAND
TRUST

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Introduction to the Woodland Trust Estate

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

Our Vision is:

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

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

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

Management of the Woodland Trust Estate

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

www.woodlandtrust.org.uk

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

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

1. Our woods are managed to maintain their intrinsic key features of value and to reflect those of the surrounding landscape. We intervene in our woods when there is evidence that it is necessary to maintain or improve biodiversity, safety and to further the development of more resilient woods and landscapes.
2. We establish new native woodland for all the positive reasons set out in our Conservation Principles, preferably using natural regeneration but often by planting trees, particularly when there are opportunities for involving people.
3. We provide free public access to woods for quiet, informal recreation and our woods are managed to make them accessible, welcoming and safe. Where possible, we pro-actively engage with people to help them appreciate the value of woods and trees.
4. The long term vision for all our ancient woodland sites is to restore them to predominantly native species composition and 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 natural and cultural heritage value of sites is taken into account in our management and in particular, our ancient trees are retained for as long as possible.
7. Land and woods can generate income both from the sustainable harvesting of wood products and the delivery of other services. We therefore consider the appropriateness of opportunities to generate income from our Estate to help support our aims.
8. We work with neighbours, local people, organisations and other stakeholders in developing the management of our woods. We recognise the benefits of local community woodland ownership and management. Where appropriate we encourage our woods to be used for local woodland, conservation, education and access initiatives.
9. We use and offer the Estate where appropriate, for the purpose of demonstration, evidence gathering and research associated with the conservation, recreational and sustainable management of woodlands. We maintain a network of sites for long-term monitoring and trials leading to reductions in plastics and pesticides.
10. Any activities we undertake are in line with our wider Conservation Principles, conform to sustainable forest management practices, are appropriate for the site and balanced with our primary objectives of enhancing the biodiversity and recreational value of our woods and the wider landscapes.

The Public Management Plan

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

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

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

Please either consult The Woodland Trust website

www.woodlandtrust.org.uk

or contact the Woodland Trust

operations@woodlandtrust.org.uk

to confirm details of the current management programme.

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

Location and Access

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

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

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

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

The Management Plan

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GLOSSARY

1. SITE DETAILS

Kilmagad Wood

Location:	Scotlandwell, Loch Leven Grid reference: NO183023 OS 1:50,000 Sheet No. 58
Area:	31.53 hectares (77.91 acres)
External Designations:	Area of Landscape Value, Long Established Woodland of Plantation Origin
Internal Designations:	Tree For All Site

2. SITE DESCRIPTION

Kilmagad Wood is situated on the south-western flanks of Munduff Hill, at the south-western end of the Lomond Hills. It is a broadly triangular site, wider on the lower slopes and narrowing to a point near the top of the slope. A commercial forestry plantation borders the site to the east and on the lower western slope a golf course, whilst on the upper slopes to the north and west the site is bounded by unimproved hill ground. The wood overlooks the village of Scotlandwell and beyond to the Loch Leven catchments and is visible from a considerable distance. It lies on steep slopes, rising from approximately 100m above sea level at the access point from the A911 road to approximately 340m above sea level at the highest point on the northern boundary of the site.

The underlying rocks of the Lomond Hills present a range of strata as the hill is ascended. The lower slopes consist of sandstones from the Devonian period (old red sandstones) and produce deep, sandy, somewhat acidic soils. At upper levels the Carboniferous 'lower limestone' group is encountered, consisting of calciferous sandstones and thin layers of limestone. These rocks result in a more fertile soil. Apart from the old limestone quarry areas near the top of the site there are no natural outcrops. All the soils are freely draining. Further past the upper slopes of Kilmagad, the tops of the Lomond Hills are capped by a hard layer of quartz dolerite (part of the Midland Sill complex) an igneous rock emplaced near the end of the Carboniferous period. The Lomond Hills are a Geological Conservation Review (GCR) area.

The woodland is important in providing additional habitats on the largely open Lomond Hills and shelters a range of small mammals, as well as rabbit, brown hare, roe deer and fox. Birds seen include kestrel, buzzard, wren, tree creeper, skylark, great spotted and green woodpecker. There is no detailed species list for the site at present. Directly to the north Kilmagad Wood is bordered by the Bishop Hill SSSI, which is notified for its calcareous grassland.

The steeper slopes of Kilmagad Wood are shown as wooded on the first edition OS map (c.1856), and local legend has it that it was planted in the shape of a lion, although this is not currently discernible. From the rig and furrow on the central plateau (compartment 1c/1d) and the abundance of tracks, it is clear that the easier slopes were farmed at some point. There are also a number of tracks leading from a limestone quarry near the top of the site to the limekiln on the lower slopes (dates of working are not known). It is also held by local historians that there was significant felling in WWI and that the woodland had been in decline for some years. More recently the hill was used as grazing land. The site was purchased in 1998 by the Woodland Trust with assistance from the Scottish Office Rural Challenge Fund, Perth and Kinross Council, the Gannochy Trust and the local community. Since then, sheep have been excluded and woodland restoration has commenced.

In 2008 the site was extended by the purchase and planting of an additional 4.75ha of land consisting of the two fields (compartments 5a, 5b and 5c). This was strongly supported by the local community and has improved access to the site and local path network as well as providing a focus for schools and community engagement during the initial establishment phase. A small orchard was planted on the site in 2012, by the Portmoak Community Woodland Group. The Trust has leased a small rectangular block (no delineation on ground) at the bottom of the woodland strip 5b from the Church of Scotland to assist in the early establishment of the young planting in 5a and 5c.

The paths through the site are well-used by both local people and visitors, many passing through either to the Lomond Hills or on the Michael Bruce Way (named after a local poet). The path network passes through young

planted woodland, mature broadleaved woodland and open ground, and offers spectacular panoramic views across Loch Leven and to the south and west.

The Portmoak Community Woodland Group regularly uses the site to facilitate community engagement events and workshops, both in the woodland and community orchard area. Volunteers regularly contribute to practical site management tasks including removing redundant tree guards and reporting any site maintenance issues.

3. LONG TERM POLICY

The long-term vision (100 years plus) is that the site will be a mosaic of mixed woodland, scrub and open grassland. Approximately 70% of the site will be native woodland of mixed species and ages. This will be concentrated on the lower and western parts of the site which have previously been wooded (LEPO) and on the formerly grazed fields in compartment 5. The main canopy trees, on the more base-rich soils will be: oak, birch, sycamore, beech along with hawthorn, hazel and rowan. All of the currently mature broadleaved trees will be retained, as long as possible, and there will be frequent aerial, standing and fallen deadwood scattered throughout. There will be a diverse ground flora approximating to NVC classes W11/W9. The woodland will blend, naturally, into the form of the landscape and key viewpoints from within the wood will be maintained. The site will continue as an area for informal recreation and enjoyment and continue to provide access to the Lomond Hills.

The site will provide quiet informal access to local users as well as visitors accessing the Lomond Hills, Portmoak path network and Michael Bruce Way in accordance with the Scottish Outdoor Access Code. The managed path network will be maintained and kept clear of obstacles and overhanging branches. It will provide access to a range of habitats from lowland woodland to upland open ground and provide panoramic views across Loch Leven, the Firth of Forth and beyond. The paths link well into the surrounding path network and the site will continue to develop and enrich the surrounding landscape.

Portmoak Community Woodland Group will continue to be involved with the on-going management of the wood through regular updates at their monthly meetings and occasional volunteer days to undertake various tasks including tree shelter removal and the on-going maintenance of the community orchard within compartment 5a.

Local community involvement will continue to be encouraged. Wider public consultation will also be undertaken whenever the management plan is reviewed.

4. KEY FEATURES

4.1 F1 Connecting People with woods & trees

Description

Kilmagad Wood is an attractive location for a variety of visitors, with a peaceful orchard, short loop path and linking paths for walkers accessing the wider Lomond Hills. It provides a mix of ancient woodland, young woodland areas (including a community orchard) and open ground. The views from the top of the site are extensive, from North Berwick Law across to the Wallace Monument in Stirling and the mountains of Highland Perthshire.

The nearest car park is in the village of Scotlandwell, where it is possible to park at the church or village hall car parks just off the A911 to access the three southern entrances to the wood. There are interpretation boards at the community orchard entrance to the site and at a viewpoint on the path towards the top of the wood. There is a large picnic bench at the orchard and several benches throughout the wood. From the orchard, 2.7km of maintained paths can be accessed which connect five entrances to the woodland. The Michael Bruce Way (core path PTMK/118 and PTMK/5) crosses the middle of the site for 700m and is a popular route linking the villages of Scotlandwell and Kinnesswood with Kilmagad Wood, Portmoak Moss and the Loch Leven Heritage Trail. The most northern entrance allows access to Munduff Hill (core path PMTK/120) and to the wider Lomond Hills.

The internal path network is maintained annually by strimming paths/verges and cutting back encroaching vegetation. Desire lines exist within the wood, although these are not maintained. The paths can become muddy after wet weather and due to the nature of the site, most of the paths are steep.

The nearest communities to Kilmagad Wood are the villages of Scotlandwell and Kinnesswood, and the towns of Kinross (10km away with a population of approximately 5,500) and Glenrothes (10km away with a population of approximately 38,000). It is assumed that most of the people who use the woodland are local people, however the Loch Leven Heritage Trail and Lomond Hills are popular with tourists and visitors from further afield. Most visitors are walkers, but the site is also used by runners and the occasional mountain biker, with estimated visitor numbers of around 10,000 visits per year.

Nearby Loch Leven also attracts numerous visitors, in particular cyclists, runners and long-distance walkers to the surfaced loop path around the Loch. The loch is designated as a National Nature Reserve (primarily for the birdlife found there) and NatureScot have installed a bird hide on the shores which is popular with families and bird watchers. RSPB manage a nature reserve and visitor centre nearby and Historic Environment Scotland manage the popular Lochleven Castle, accessible in summer by boat.

The Portmoak Community Woodland Group (PCWG) run a variety of public and school engagement and work party days at Kilmagad Wood and nearby Portmoak Moss (which is also owned by Woodland Trust). At Kilmagad, PCWG run an annual community apple juice making event, wood whittling workshop and a variety of local interest and nature events throughout the year. PCWG volunteers regularly engage with the local Portmoak Primary School (1km away),

where volunteers have helped facilitate John Muir Awards and outdoor education events for school pupils. PCWG volunteers have produced two booklets for young people: 'Bogtastic' and 'Treetastic' which provide a fun, interactive and educational resource for young people visiting Kilmagad Wood and Portmoak Moss, printed copies of which are available in leaflet dispensers at entrances to the sites.

There are very basic facilities on site to host groups, with only a large picnic bench and open grassy space in the community orchard. Parking is limited to approximately 40 cars between the church and village hall car parks. The village hall and local farm shop have previously been used as an event venue and catering.

Significance

Kilmagad Wood is a significant and visible area of native woodland on the edge of the Lomond Hills, which are otherwise a largely treeless landscape. Lying on the edge of the Loch Leven National Nature Reserve, it provides a key linking path network from the Loch Leven Heritage Trail into the Lomond Hills. It is well-used by nearby communities and from those visiting from further afield. The community orchard is now bearing fruit and a popular annual apple juice making event is held here every year by Portmoak Community Woodland Group.

Opportunities & Constraints

Constraints:

- Steep slopes and occasional sections of soft ground surfaces make the site unsuitable for multi-use or all-abilities access.
- There is limited car parking nearby and poor vehicle access onto the site, which is restrictive for the larger path maintenance machinery and for facilitating large volunteer groups. Pedestrian access with large groups is hazardous due to the narrow pavement and busy road which forms the boundary of Kilmagad Wood.

Opportunities:

- Increase path links and interpretation from Loch Leven Heritage Trail.
- Possibility of linking in with future access initiatives within the Lomond Hills.
- Possibility to engage with the community council to facilitate a new and safer active travel link between Scotlandwell and Kinnesswood.
- Opportunities for greater engagement with local schools and to work more closely with the Portmoak Community Woodland Group to facilitate greater community engagement.
- Press and media content from the Portmoak Community Woodland Group's volunteer work and public events.

Factors Causing Change

Gorse encroachment and erosion on path network during periods of heavy rainfall.
The nearest car parking for the site is owned by Portmoak Parish Church, which is likely due to be sold during this plan period.

Long term Objective (50 years+)

The site will provide quiet informal access to local users as well as visitors accessing the Lomond Hills and Michael Bruce Way. Entrances and signage will be welcoming, encouraging a wide variety of visitors to the woodland. Drainage on the managed path network will be maintained and paths will be cleared of any obstacles and overhanging branches. The site will be as free of barriers and accessible to as wide a range of users as is practical. The path network will link into the surrounding core path network and the roadside route between the villages will become more diverse by the

increased amount of native woodland.

The Woodland Trust will continue to work closely with the Portmoak Community Woodland Group to facilitate community and school engagement events as well as small-scale volunteering opportunities.

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

- Ensure that the site is safe and welcoming for visitors in line with Woodland Trust access guidelines and site access coding (A), and according to the Scottish Outdoor Access Code. This will be achieved by annual mowing of managed paths, in addition to keeping managed paths well-drained and free from vegetation/scrub encroachment, obstacles and over-hanging branches. Site furniture and steps will be maintained and replaced as needed, with tree safety work carried out as per the site risk assessment.
- Work with the community council to explore a safe active travel link through the bottom of compartments 5a and 5c, which could allow a link between Scotlandwell and Kinnesswood, in addition to a safer loop walk around Kilmagad Wood. This could allow for increased sustainable development in the local community, in addition to greater engagement with the site and interpretation options if a wider sector of the community is using the edge of Kilmagad Wood as part of their daily commute.
- Provide on-going engagement and support to the Portmoak Community Woodland Group to develop and promote the orchard area through facilitating a range of community events and learning opportunities for local schools.
- Facilitate a community-run project to increase interpretation in community orchard area by labelling fruit trees with species and description to encourage the community to use the orchard and its produce.

4.2 F2 Long Established Woodland of Plantation Origin

Description

Kilmagad lies on the shoulder of Munduff Hill, and is highly visible from the surrounding landscape. It consists of approximately 27% mature broadleaved woodland, 28% young broadleaved woodland (established since 1999) and 45% open ground. Historically, a greater area was wooded, and the NatureScot Ancient Woodland Inventory shows the lower slopes as LEPO (Long Established of Plantation Origin) up to between 250-300m elevation. However, the 1st edition OS map (1856) shows the whole site, except sub-compartments 1c and 1d, as woodland (approximately 80% wooded). The tree species and ground flora in most parts of the site support the LEPO description, although patches of woodrush throughout the site and the presence of wood sorrel and bluebell in the south-eastern parts may hint that parts of the wood are older. The main tree canopy is currently concentrated to the south, west and north of the site, whilst the upper and eastern parts predominately comprise of open ground. The ground vegetation and the remaining scattered mature trees suggest that the central area (compartments 2b and 3c) were wooded until fairly recent times, the woodland having declined through a combination of grazing, windblow and loss of elm. The remnant trees in this area are gradually declining. Between 2010 – 2016 there has been some new planting in the area. To the east of the site, compartments 1c and 1d are shown as open on the earliest maps and show clear rig and furrow lines.

Where there is mature woodland the abundant tree species are sycamore, beech and oak with frequent birch, rowan and hawthorn, and occasional Scots pine, ash, larch and hazel. There is little regeneration in the areas, probably due the dense grass cover and browsing by roe deer. Where new planting has occurred sporadic patches of dense gorse have colonised the disturbed ground. The ground flora is dominated by grasses, with frequent patches of woodrush in the

LEPO area and patches of dense bracken spreading upwards from the lower ground. The NVC classification over most of the site is W11, with W9 on the more base-rich soils.
Significance
The woodland is on the NatureScot Ancient Woodland Inventory (AWI) as LEPO. The areas that are presently under woodland cover have the potential for relatively high biodiversity. Some areas of woodland cover that have been lost, over recent decades, are likely to retain an element of woodland habitat. These areas are therefore considered priority areas for reinstating to native woodland. The site contains a mosaic of varied habitats; from mature woodland and scrub through to sunny glades and expanses of open ground-which are favoured by a variety of butterflies and insects. The woodland is prominent in the surrounding landscape and is designated as an Area of Landscape Value. There is little other ancient woodland in the vicinity. However, Kilmagad Wood does link into several semi-natural scrub and open ground habitats on Munduff Hill and borders a commercial conifer plantation to its east.
Opportunities & Constraints
<p>Constraints:</p> <ul style="list-style-type: none"> - Slopes/access: the topography of the site limits access to small size machines, especially in the upper areas. - Landscape: visual aspect influences design and management. - Exposure: higher ground is more open and vulnerable to exposure. - Browsing: high roe deer populations evident from lack of regeneration, although due to the dominance of beech and sycamore, regeneration would likely be restricted to these two species, having an adverse effect on ground flora and overall species diversity. Managing deer would be challenging due to high visitor numbers, and perhaps futile unless neighbours employ a similar approach. <p>Opportunities:</p> <ul style="list-style-type: none"> - To reinstate woodland cover in the LEPO areas on the lower, mid and parts of the upper ground. - Increase shrub cover in woodland areas.
Factors Causing Change
Invasive gorse and deer damage.
Long term Objective (50 years+)
The site will be a mix of woodland, scrub and open grassland. Approximately 70% of the site (concentrated on the LEPO area; mid, lower and western parts of the site) will be broadleaved woodland of mixed species and age. The main canopy trees will be oak, birch, beech, sycamore and, it is hoped, occasional ash on the base-rich soils, along with small amounts of hawthorn, hazel and rowan. Mature broadleaved trees will be retained for as long as possible, along with some aerial, standing and fallen deadwood, where it is safe to do so. There will be a diverse ground flora approximating to NVC classes of W11/W9. The woodland will sit comfortably within the existing landscape and views will be maintained.
Short term management Objectives for the plan period (5 years)
- Mature woodland areas will develop naturally without planned intervention in this plan period. Aerial, standing and fallen deadwood will remain in situ, where it is safe to do so. Except tree safety works, there is no planned silvicultural intervention. At the end of the management plan period, the Woodland Condition Assessment will highlight the need

for any required future management intervention.

- Undertake herbivore impact assessment during the management plan period, which will inform the feasibility of future management of deer on the site.
- If HIA results suggest deer management would be beneficial, discuss the practicalities of deer management on the site with neighbouring landowners and community stakeholders as part of the next plan review.

4.3 F4 New Native Woodland

Description

Compartments 1c, 4a, 4f, 5a and 5c all contain young planted woodland. These areas were planted with a species mix representative of NVC W10 and include sessile oak, downy birch, silver birch, ash, rowan, hawthorn and hazel. The areas were planted at a density of 1600 stems/ha with designed open ground, located to give an undulating lower edge, and open space around key viewpoints. Annual spot weeding was carried out using Glyphosate for the first few years after planting until establishment. This area of woodland is now established and tree survival and growth rate post planting has generally been very good.

Ash dieback was discovered on the site in 2015, almost all of the planted ash trees have died. The loss of the ash component (15%) is not expected to have a significant effect on the development of the woodland in the long-term and no supplementary planting is planned.

Significance

Woodland creation on the site meets both the Trust's objectives of protecting ancient woodland and creating new native woodland, especially where this links and expands areas of ancient woodland. Broadleaved woodland makes up only a small proportion of the semi-natural vegetation in the area, and this has added to both the landscape diversity and biodiversity. Much of the surrounding land is intensively managed for agriculture (arable or turf production).

Opportunities & Constraints

Opportunities:

- Continued community involvement removing redundant tree shelters.
- Shrub layer is almost non-existent, planting shrub species could be considered if deer are controlled or through a trial of plastic-alternative tree shelters.

Constraints:

- Deer browsing: there is only limited regeneration in these areas which is struggling to establish due to high deer pressure. The site is busy with visitors, so managing deer would be challenging and perhaps futile unless neighbours are employing a similar approach.

Factors Causing Change

High deer browsing pressure.

Long term Objective (50 years+)

These compartments will gradually become mature native woodland. Consisting of mainly of oak and birch, along with a variety of other native trees and shrubs. There will be some variation in canopy density and a diverse woodland

structure. A natural shrubby lower edge will develop, blending into grass and tall herbs near the road and there will be grassy open space around the key viewpoints. The woodland will develop naturally in the local landscape, integrating well with the more mature LEPO woodland around it. The ground flora will gradually lose its field characteristics as grasses are shaded out and woodland specialists begin the slow process of colonisation.

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

- Ensure tree shelters are removed systematically where young planting has established by the end of the plan period. Tree shelters will be recycled or re-used on other sites where possible and the community will be engaged with through volunteer work parties where practical. The Woodland Condition Assessment undertaken at the end of the plan period will highlight any areas where tree guards need to be removed in the future management plan period.
- Safeguard the establishment of young planted trees throughout the site. This will be achieved by reassessing their establishment in 2027 half-way through the management plan period and again at the end of the management plan period through the Woodland Condition Assessment.
- Undertake herbivore impact assessment during the management plan period, which will inform the feasibility of future management of deer on the site.

APPENDIX 1 : COMPARTMENT DESCRIPTIONS

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
1a	1.64	Mixed native broadleaves	1999	High forest	Mostly wet ground/exposed site, No/poor vehicular access within the site, Site structure, location, natural features & vegetation, Very steep slope/cliff/quarry/mine shafts/sink holes etc	Area of Landscape Value
<p>The most northerly section of the site at the highest elevation, the southern half of this sub compartment is steep sloping. The sub-compartment is bisected by an area of open ground belonging to compartment 1d. The majority of the area is planted with mixed native broadleaves in 1.2m tubes (mainly birch and oak) planted 1999. There is also a scattering (approximately 10%) of mature and semi-mature trees dominated by larch, with occasional sycamore, beech and rowan, Scots pine, ash and Norway spruce. The young trees have grown fairly slowly due to the harsh exposed upland conditions. The oak trees appear to have coped better with the conditions and are now growing reasonably well, considering climatic factors. There is no understorey and no notable natural regeneration. Ground flora is patchy and dominated by tufted-hair grass, with frequent soft rushes, occasional woodrush and bilberry, and rare wood-sorrel. Nettles and thistles also occur occasionally. There are occasional standing and fallen mature dead Scots pine trees.</p>						
1b	1.48	Mixed broadleaves	1900	High forest	Mostly wet ground/exposed site, No/poor vehicular access within the site, Site structure, location, natural features & vegetation, Very steep slope/cliff/quarry/mine shafts/sink holes etc	Area of Landscape Value
<p>On a south-westerly slope, this sub compartment has about 70% cover of mature and semi-mature trees, consisting of frequent sycamore, larch and Scots pine, occasional birch and beech, and rare ash, oak, Norway spruce and hazel. Trees are slow growing and stunted due to exposure. There is no understorey and only occasional beech regeneration under the beech canopy. There is about 70% cover of ground flora, predominantly grasses including frequent tufted-hair grass, as well as frequent soft rushes and occasional bilberry, nettles and creeping cinquefoil. There is abundant dead wood, both fallen and standing. There is occasional evidence of rabbits, including a small warren in the west.</p>						

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
1c	0.81	Oak (sessile)	2016	Wood establishment	Mostly wet ground/exposed site, No/poor vehicular access within the site, Site structure, location, natural features & vegetation, Very steep slope/cliff/quarry/mine shafts/sink holes etc	Area of Landscape Value
<p>This is an area of open hill ground covered with dense tussock grasses including abundant tufted-hair grass, as well as occasional woodrush, heather, blaeberry, soft rush, thistle, creeping cinquefoil and gorse. In 2000 the site was chosen as a natural regeneration trial area. A rabbit fence was erected to enclose the area and protect any emerging regeneration from browsing. The trial proved unsuccessful and the old rabbit fence was removed in 2013. The area previously rabbit fenced (0.6ha) was planted in October 2016 with mixed native species (sessile oak 40%, silver birch 15%, aspen 10%, Scots pine 15%, hazel 5%, rowan 8% blackthorn 7%, and an element of open ground was retained) at approximately 2,000 trees/ha. Most trees were planted in 1.2m tree shelters (hazel, blackthorn in 0.6m shrub shelters). Aspen and Scots pine planted on the south western front to shelter the oak from the exposed winter weather conditions and strong prevailing winds. Spot weeded, (twice per year if necessary), using Glyphosate, and annually thereafter until established. Beating up of trees took place in winter 2017/18.</p>						
1d	5.12	Open ground		Non-wood habitat	Mostly wet ground/exposed site, No/poor vehicular access within the site, Site structure, location, natural features & vegetation, Very steep slope/cliff/quarry/mine shafts/sink holes etc	Area of Landscape Value
<p>A mainly open area on moderate to steep slopes with old drainage lines visible. Ground flora (95% cover) consists mainly of grasses, including abundant tufted-hair grass and soft rush, frequent heather and occasional woodrush, creeping cinquefoil, blaeberry, thistle and sedge species. The terrain is tussocky and uneven with wet flushes. Approximately 10% of the area is covered by gorse, including an extensive patch occupying c. 0.5ha in the southeast of the area, and some further scattered patches on the eastern side. This an open ground area devoid of trees.</p>						
2a	1.34	Mixed broadleaves	1900	High forest	Mostly wet ground/exposed site, No/poor vehicular access within the site, Site structure, location, natural features & vegetation, Very steep	Area of Landscape Value, Long Established Woodland of Plantation Origin

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
					slope/cliff/quarry/mine shafts/sink holes etc	
<p>Steep with a mainly westerly aspect, the area has about 80% mixed mature canopy cover with frequent larch and beech, occasional sycamore and Scots pine and rare oak, willow, rowan, birch and ash. Trees become more scattered at edges. Beech and sycamore dominate in the lower and mid slopes, with larch in narrow belts along the northern boundary. The understorey (5% cover) consists of gorse with occasional hawthorn. There is abundant beech regeneration from spring 2004 under the beech canopy. There is 95% cover of ground flora (sparse under beech) dominated by grasses including frequent tufted-hair grass, frequent woodrush, occasional wood-sorrel, bracken (in open areas) and nettles. There is frequent standing and fallen dead wood. A few rabbits are present.</p>						
2b	2.02	Open ground	1900	Non-wood habitat	Mostly wet ground/exposed site, No/poor vehicular access within the site, Site structure, location, natural features & vegetation, Very steep slope/cliff/quarry/mine shafts/sink holes etc	Area of Landscape Value, Long Established Woodland of Plantation Origin
<p>An area of generally steep slopes (running west to south-west) bisected by two steep, narrow, gullies in the south. Predominantly open ground with less than 10% canopy cover in three small isolated groups of trees, dominated by sycamore and larch, frequent beech, with occasional ash and hazel, and rare rowan. Most of the remnant trees are in decline due to age and exposure and there are occasional standing dead trees. There is occasional gorse. There is no notable tree regeneration. Rabbits and brown hares frequent the area. Ground flora is dominated by grasses including frequent tufted-hair grass, as well as frequent woodrush (in patches) and heather, occasional soft rushes, thistle and nettles.</p>						
3a	0.58	Sycamore	1900	High forest	Gullies/Deep Valleys/Uneven/Rocky ground, Mostly wet ground/exposed site, No/poor vehicular access within the site, Very steep slope/cliff/quarry/mine shafts/sink holes etc	Area of Landscape Value, Long Established Woodland of Plantation Origin
<p>Moderately steep west-facing slope with 70% mature and semi-mature canopy cover. Trees are relatively dense in gullies and more scattered on ridges, dominated by sycamore, with frequent rowan, occasional oak and rare ash and beech. Beech regeneration from spring 2004 evident, and there is occasional browsing. Areas of open ground occur throughout, dominated by grasses with abundant patches of woodrush and bracken, as well as frequent wood-sorrel</p>						

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
and occasional gorse, dock, creeping buttercup and creeping cinquefoil. There are several fallen mature trees, and some standing dead wood.						
3b	1.65	Sycamore	2010	High forest	No/poor vehicular access within the site, Site structure, location, natural features & vegetation, Very steep slope/cliff/quarry/mine shafts/sink holes etc	Area of Landscape Value, Long Established Woodland of Plantation Origin
A strip of open, mature broadleaved woodland on a steep slope. Delineated at its upper boundary by an old hill track and at its lower by the footpath. Species are dominated by sycamore, with occasional oak and rowan, beech and rare ash and hazel, covering approximately 50% of the area, and becoming more open at its upper margins. There is some sycamore regeneration despite there being a small rabbit warren. Enrichment planting carried out in 2010 has helped to bolster the upper margin, particularly to the east. The enrichment planting crosses into compartment 3c. Species include birch, ash and oak with mixed shrubs in 1.2m tree shelters. About 20% of the area is covered by gorse, which encroaches rapidly where mature trees have been lost and ground is disturbed. Ground flora is dominated by grasses, frequent patches of bracken, and occasional woodrush, germander speedwell and wood-sorrel. There are occasional fallen and standing dead trees.						
3c	4.11	Mixed native broadleaves	2010	Wood establishment	Gullies/Deep Valleys/Uneven/Rocky ground, Mostly wet ground/exposed site, No/poor vehicular access within the site, Site structure, location, natural features & vegetation, Very steep slope/cliff/quarry/mine shafts/sink holes etc	Area of Landscape Value, Long Established Woodland of Plantation Origin
Mainly open and generally steep south-westerly facing sloping, bisected by several deep gullies in the western half. About 5% of the area is covered by mature and semi-mature trees, dominantly sycamore and beech with occasional ash and rare oak. Many trees are gradually declining, due to age and exposure. There is abundant dead wood, both fallen and standing. To the south east of the compartment, some enrichment planting has been carried out (2010), covering approximately 0.3ha which is an extension to the planting in 3b. Species include oak, ash, birch and mixed shrubs. There is dense clumps of gorse in the gullies, along the south-eastern track edge and some encroachment from 3b below. Otherwise, Ground flora is dominated by grasses, with occasional woodrush and woodruff, and rare wood-sorrel. Bracken is encroaching from the lower slopes.						

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
4a	0.5	Mixed native broadleaves	2003	Wood establishment	No/poor vehicular access within the site, Site structure, location, natural features & vegetation	Area of Landscape Value, Long Established Woodland of Plantation Origin
<p>A west-facing slope, this area is mostly occupied by planting (2003) of native species (sessile oak, ash, birch, rowan, hazel and hawthorn) in 1.2m tree shelters. Approximately 70% of this area has now been reinstated to native woodland. Some mature broadleaves are scattered throughout, mainly sycamore and beech. Area between central gullies to remain as open ground to retain landscape interest, views out from top path and provide open ground habitat. There is dense gorse in places, amongst younger trees. Planting is established and trees have grown well, especially the oak and birch, tree shelters are being removed. There is occasional beech regeneration under beech canopy. The ground flora is dominated by grasses, with frequent dock and thistle and occasional germander speedwell, creeping buttercup and great woodrush. There are rare patches of bracken. Ash dieback was discovered in this compartment in 2015.</p>						
4b	3.29	Sycamore	1900	High forest	Archaeological features, Gullies/Deep Valleys/Uneven/Rocky ground, No/poor vehicular access within the site, Site structure, location, natural features & vegetation	Area of Landscape Value, Long Established Woodland of Plantation Origin
<p>A strip of mature woodland running along the lower, gentler slopes of the site below the Michael Bruce Way, and crossed by a series of broad ridges and wide gullies, one of which contains an old limekiln. The density of trees varies (approx 80% overall) with abundant sycamore, frequent beech and oak, and occasional rowan, birch and ash. There is patchy gorse (10%) in open areas. There are occasional pulses of sycamore regeneration. Ground flora is sparse in the gullies and under beech canopy, and is dominated by grasses, with frequent wood-sorrel and occasional creeping buttercup, great woodrush, soft rush, bracken and nettles, with rare bluebells. There is frequent aerial and fallen dead wood.</p>						
4c	0.26	Open ground		Non-wood habitat	No/poor vehicular access within the site, Site structure, location, natural features & vegetation	Area of Landscape Value, Long Established Woodland of Plantation Origin
<p>Open area enclosed by cpt 4b with shallow south westerly slope, Scattered mature trees (10%) stand in an area mostly dominated by grasses, with bracken dominating to the east. Occasional beech regeneration.</p>						

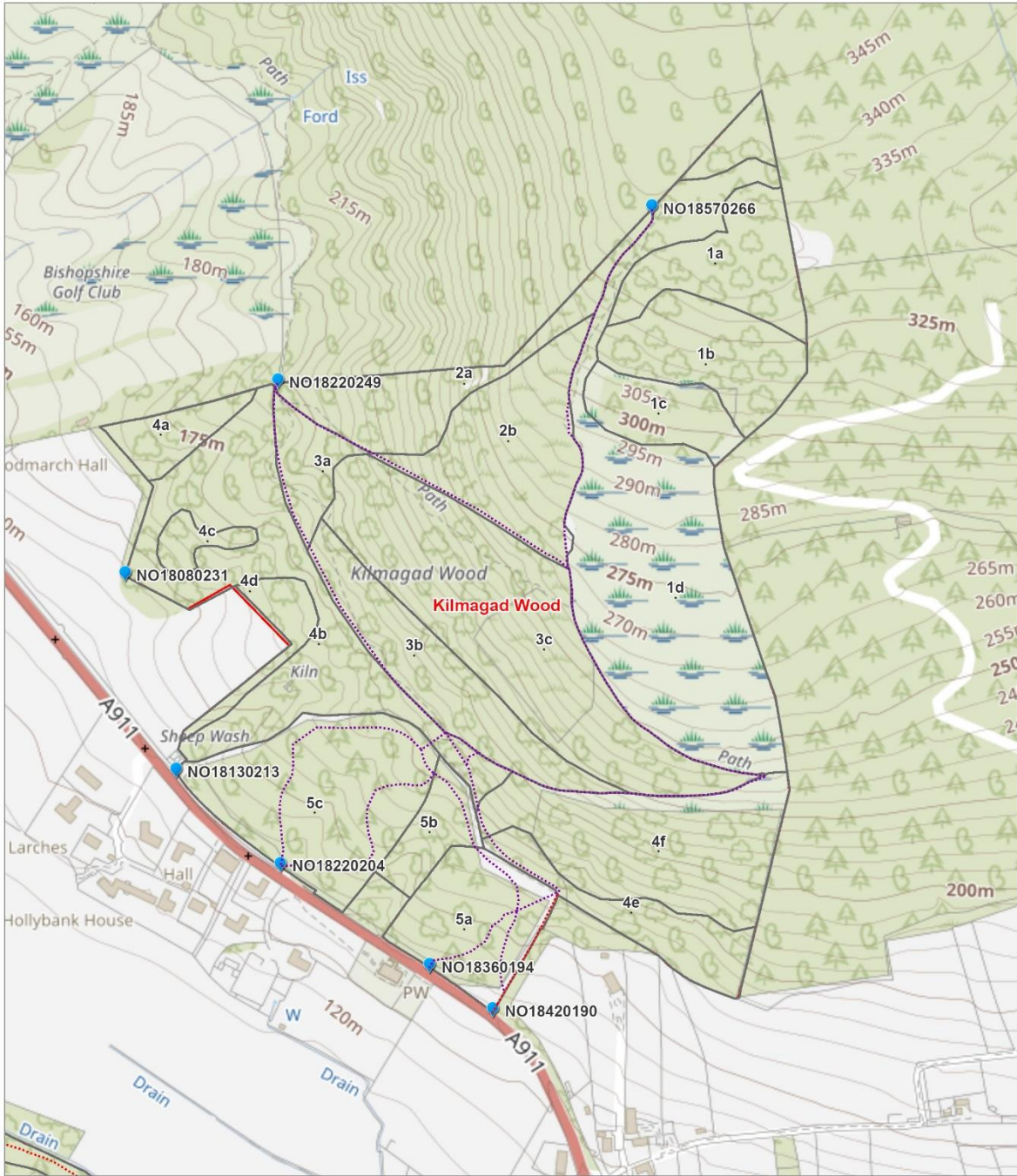
Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
4d	0.43	Mixed native broadleaves	1999	Wood establishment	No/poor vehicular access within the site, Site structure, location, natural features & vegetation	Area of Landscape Value, Long Established Woodland of Plantation Origin
<p>An area partly planted (1999) with mixed native broadleaves (oak, birch, ash, rowan, hazel, hawthorn) in 1.2m shelters, a few trees are in 0.75 shrub shelters-which are frequently browsed. Ground flora of soft grasses on gentle slope with patches of gorse. There is rare beech regeneration. Ground flora is dominated by grasses with occasional thistle, woodruff and germander speedwell. There is rare dead wood.</p>						
4e	0.98	Sycamore	1900	High forest	No/poor vehicular access to the site, Site structure, location, natural features & vegetation	Area of Landscape Value, Long Established Woodland of Plantation Origin
<p>Mature broadleaved woodland consisting of abundant sycamore, frequent oak, occasional birch, and rare ash. Most of the compartment lies within a rabbit fenced enclosure. Some trees showing early signs of gradual decline. Frequent sycamore regeneration. The ground flora includes soft grasses, bluebells and oxalis, but the more open upper edge is dominated by encroaching bracken. There is frequent aerial and fallen deadwood.</p>						
4f	2.61	Mixed native broadleaves	2010	Wood establishment	No/poor vehicular access to the site, Site structure, location, natural features & vegetation	Area of Landscape Value, Long Established Woodland of Plantation Origin
<p>An area of steeply sloping, south facing ground, which was previously open ground. There is less than 5% mature tree cover (oak with occasional rowan and sycamore). In 2010, most of the area was deer fenced and planted with a mix of; silver and downy birch, sessile oak, ash, rowan, hazel and mixed shrubs, all in 0.75m shelters to protect from, the then, abundant rabbits. Gorse encroachment sporadic, forming dense clumps in places, particularly in the east, north-west and along the top path. Occasional birch regeneration, which is often browsed. Ground flora is dominated by grasses, with frequent tufted hair grass, foxglove and woodruff, and occasional thistles, nettles and bracken. There is some earlier young planting (by local community) in the east and south (1.2m tubes) and west (spiral guards), the latter having been heavily browsed. There is occasional aerial and fallen deadwood. Tree growth has been relatively slow, and survival is patchy in places, but trees are gradually establishing. Tree shelter and deer fence maintenance, and gorse cutting still required.</p>						

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
5a	1.44	Mixed native broadleaves	2009	Wood establishment	Site structure, location, natural features & vegetation	Area of Landscape Value
<p>An area of sloping, south facing ground. Previously improved grassland for grazing. Acquired by Woodland Trust in 2008 for a woodland creation extension to Kilmagad Wood. The land has been regularly grazed, up to and including spring 2009. Therefore, ground flora limited to; a vigorous grass sward with patches of nettle and thistle and occasional gorse establishing along the field boundary, along with some fine veteran oaks along the northern boundary. In 2009 the area was deer fenced and was planted entirely by school children and volunteers in 2009 with native tree species: silver and downy birch, sessile oak, ash, rowan, gean, bird cherry, aspen, hazel, hawthorn and holly. Birch and oak are the dominant species (approx NVC W10).</p> <p>The trees have grown well on this southerly facing slope. Stocking density and survival rates are high-the site is considered established. Ash dieback was discovered in this cpt in 2015. Routine maintenance of the deer fence/gates and paths will be on-going for the next 5 years.</p>						
5b	0.57	Mixed broadleaves	1900	High forest	Gullies/Deep Valleys/Uneven/Rocky ground, Site structure, location, natural features & vegetation	Area of Landscape Value, Long Established Woodland of Plantation Origin
<p>A belt of mature sycamore and oak in a Southerly facing dry gully. Some older trees contain some aerial and fallen deadwood. Until 2009 the area was grazed. Hence, there is little ground flora-predominately soft grasses and no regeneration. There are scattered isolated gorse bushes on the boundaries. Note; that there is no marked boundary between this block and the leased area owned by the Church of Scotland to the south.</p>						
5c	2.68	Mixed native broadleaves	2010	Wood establishment	Site structure, location, natural features & vegetation	Area of Landscape Value
<p>An area of sloping, south facing ground. Previously improved grassland for grazing. Acquired by Woodland Trust in 2008 for a woodland creation extension to Kilmagad Wood. The land has been regularly grazed, up to and including spring 2009. Therefore, ground flora limited to; a vigorous grass sward with patches of nettle and thistle and occasional gorse establishing along the field boundary, along with some fine veteran oaks along the northern boundary. In 2009 the area was deer fenced and was planted entirely by school children and volunteers in 2010 with native tree species: silver and downy birch, sessile oak, ash, rowan, gean, bird cherry, aspen, hazel, hawthorn and holly. Birch and oak are the dominant species (approx NVC W10). Some trees (a mix of native tree species, with a shrub component) were also planted at the same time, just outside the deer fenced area (between the deer fence and the main road). Nearly all trees have grown well on this southerly facing slope. Stocking density and survival rates are high-most of the trees are now established, though some of the oak have been rather slow to get away. Grassland plants (predominately grasses and herbs) have flourished on the ungrazed sward. As a result, a wide variety of butterflies and insects can be found on the site during the summer months. This part of the site is well</p>						

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
<p>used for walking and gaining access to the rest of the site and the Lomond Hills. A small orchard area of mixed species was planted by the Community Woodland Group in 2011 and has grown well. The orchard area is used by the community and local school children for fruit picking, informal recreation and outdoor learning. Routine maintenance of the deer fence/gates and paths will be on-going for the next 5 years. The main entrance to the site, welcome sign and information board is located at the south of this compartment (opposite the Church car park). Ash dieback was discovered in this compartment in 2015 and is already having a major impact upon the young ash trees.</p>						

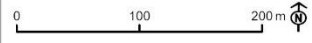


APPENDIX 2 : SITE MAP



- Estate Path Network - Scotland
 - Path
 - Public right of way
- Estate Access Points
 - Access points
- Estate SubCompartments
 - Estate SubComp Labels
 - EstateManagementUnitsPolygonsGB

Kilmagad Management Plan



Scale: 1:5,000 @A4
 Date: 23 January 2024
 Author: Woodland Trust



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Ancient Woodland

Ancient woods are defined as those where there has been continuous woodland cover since at least 1600 AD. In Scotland ancient woods are defined strictly as sites shown as semi-natural woodland on the 'Roy' maps (a military survey carried out in 1750 AD, which is the best source of historical map evidence) and as woodland all subsequent maps. However, they have been combined with long-established woods of semi-natural origin (originating from between 1750 and 1860) into a single category of Ancient Semi-Natural Woodland to take account of uncertainties in their identification. Ancient woods include Ancient Semi-Natural Woodland and plantations on Ancient Woodland Sites (see below). May support many species that are only found in ancient woodland.

Ancient Semi - Natural Woodland

Stands in ancient woods defined as those consisting predominantly of native trees and shrubs that have not obviously been planted, which have arisen from natural regeneration or coppice regrowth.

Ancient Woodland Site

Stands in ancient woods that have been converted to plantations, of coniferous, broadleaved or mixed species, usually for timber production, including plantations of native species planted so closely together that any semi-natural elements of the understorey have been suppressed.

Beating Up

Replacing any newly planted trees that have died in the first few years after planting.

Broadleaf

A tree having broad leaves (such as oak) rather than needles found on conifers (such as Scots pine).

Canopy

The uppermost layer of vegetation in a woodland, or the upper foliage and branches of an individual tree.

Clearfell

Felling of all trees within a defined area.

Compartment

Permanent management division of a woodland, usually defined on site by permanent features such as roads. See Sub-compartments.

Conifer

A tree having needles, rather than broadleaves, and typically bearing cones.

Continuous Cover forestry

A term used for managing woods to ensure that there are groups or individual trees of different ages scattered over the whole wood and that some mature tree cover is always maintained. Management is by repeated thinning and no large areas are ever completely felled all at once.

Coppice

Trees which are cut back to ground levels at regular intervals (3-25 years).

Exotic (non-native) Species

Species originating from other countries (or other parts of the UK) that have been introduced by humans, deliberately or accidentally.

Field Layer

Layer of small, non-woody herbaceous plants such as bluebells.

Group Fell

The felling of a small group of trees, often to promote natural regeneration or allow planting.

Long Term Retention

Discrete groups of trees (or in some cases single trees) that are retained significantly past their economic felling age. Operations may still be carried out within them and thinning is often necessary to maintain stability.

Minimum Intervention

Areas where no operations (such as thinning) will take place other than to protect public safety or possibly to control invasive exotic species.

Mixed Woodland

Woodland made up of broadleaved and coniferous trees.

National vegetation classification (NVC)

A classification scheme that allows an area of vegetation to be assigned to the standardised type that best matches the combination of plant species that it contains. All woodlands in the UK can be described as being one of 18 main woodland types (W1 - W18), which principally reflect soil and climatic conditions. For example, Upland Oakwoods are type W11, and normally occur on well drained infertile soils in the cooler and wetter north and west of Britain. Each main type can be subdivided into numerous subtypes. Most real woods contain more than one type or sub-type and inevitably some woods are intermediate in character and can't be properly described by any sub type.

Native Species

Species that arrived in Britain without human assistance.

Natural Regeneration

Naturally grown trees from seeds falling from mature trees. Also regeneration from coppicing and suckering.

Origin & Provenance

The provenance of a tree or seed is the place where seed was collected to grow the tree or plant. The origin is the geographical location within the natural range of a species from where seeds/tree originally derives. Thus

an acorn collected from a Turkey oak in Edinburgh would have an Edinburgh provenance and a southern European origin.

Re-Stocking

Re-planting an area of woodland, after it has been felled.

Shrub Layer

Formed by woody plants 1-10m tall.

Silviculture

The growing and care of trees in woodlands.

Stand

Trees of one type or species, grouped together within a woodland.

Sub-Compartment

Temporary management division of a compartment, which may change between management plan periods.

Thinning

The felling of a proportion of individual trees within a given area. The remaining trees grow to fill in the space created.

Tubex or Grow or Tuley Tubes

Tubes placed over newly planted trees or natural regeneration that promote growth and provide protection from animals such as rabbits and deer.

Weeding

The control of vegetation immediately around newly planted trees or natural regeneration to promote tree growth until they become established.

Windblow/Windthrow

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

Registered Office:

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