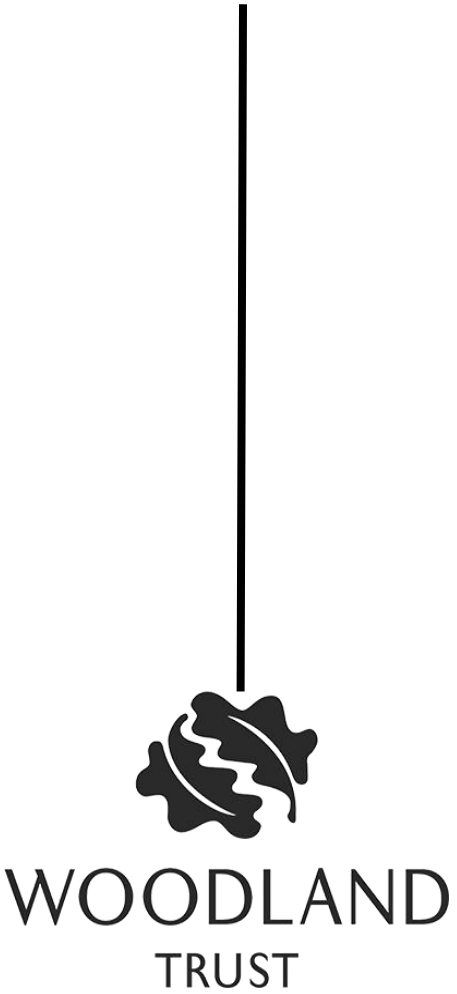
Coed Aber Eden

(Plan period – 2021 to 2026)



Management Plan Content Page

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

1. SITE DETAILS

Coed Aber Eden

Location:	Ganllwyd, Dolgellau Grid reference: SH725251 OS 1:50,000 Sheet No. 124
Area:	2.51 hectares (6.20 acres)
External Designations:	Ancient Semi Natural Woodland, National Park, Site of Special Scientific Interest, Special Area of Conservation
Internal Designations:	N/A

2. SITE DESCRIPTION

Coed Aber Eden is an ancient semi-natural woodland site within the Snowdonia National Park and comprises 2.5 ha of predominantly ash woodland with hazel as the typical understorey species. A key feature of the site, the semi-natural broadleaved woodland occupies a steep and boulder-strewn east-facing slope and is an important landscape feature alongside the A470. It is continuous with ancient semi-natural oak woodlands of Ganllwyd valley to the south, forming part of Ganllwyd SSSI and the Meirionnydd Oakwoods and Bat Sites SAC. To the north and east lie the predominantly coniferised woodlands of Coed y Brenin.

Successive felling has degraded the woodland by removing the majority of the older trees, including most of the mature oak. Felling (c. 1960) on the lower slopes is indicated by younger birch, ash and sycamore. The upper slopes of the woodland were clear felled (c. 1980) and have regenerated primarily with ash, which was re-spaced in 1990/91 and again in 2003, and hazel coppice. Birch is the dominant canopy species to the north of the woodland. Conifer seedlings continue to establish throughout the woodland from the forestry plantation. The occasional mature beech is also present. Locally native species include goat willow, the occasional rowan and hawthorn and infrequent wych elm.

The ground flora includes Bluebell, Dog violet, Lady's bedstraw, Honeysuckle, Male fern and Hard fern. Vestiges of an 'old woodland' lichen flora are to be found. Wide rides created during past timber extraction describe a figure-of-eight within the woodland, accessed from the single management access entrance off the A470. Public usage has always been extremely limited by the lack of a footway along the busy road from the nearby village and lack of parking space; in 2020, the decision was made to close the path to the public due to the extent of ash dieback within the woodland so there is currently no formal public access to the site, although this may be reviewed in future plan periods subject to the progress of the disease and local demand.

3. LONG TERM POLICY

In the long term, the current predominance of ash in the canopy and understorey will reduce: this process will likely be accelerated by the arrival ash dieback disease. Over the next 50 to 100 years, more sycamore (a potential substitute for ash as a lichen substrate) and oak will be recruited to the canopy, occurring alongside birch and wych elm, over a locally dense understorey of hazel (which will not be coppiced, in order to provide some continuity of cover and lichen habitat). Typical Atlantic bryophytes and ancient-woodland lichen communities will persist under a relatively light canopy and mature trees will be retained to senescence wherever possible. Beech will occur but not at sufficient density to significantly increase shading. Rhododendron and non-native conifer will be removed before reaching reproductive size.

The volume of standing and fallen deadwood will increase over time - potentially quite rapidly as ash dieback takes hold, with up to 80% of canopy trees potentially affected. Whilst it is the intention to maintain the current (little-used) network of wide rides in the long term, informal public access will be curtailed for a period to allow the retention of high volumes of standing deadwood for ecological benefit. The safety of neighbours and motorists on the A470 will be addressed.

4. KEY FEATURES

4.1 f1 Ancient Semi Natural Woodland

Description
A predominantly ash-hazel woodland (W9). A degraded woodland in transition following large scale fellings of the larger mature trees - notably oak which is now largely absent. Wych elm characteristic of this woodland type is present and downy birch is locally dominant. The ground flora is relatively diverse, with a range of vascular indicator species including bluebell and dog's mercury (Mercurialis perennis) persist. Remnants of an ancient woodland lichen flora are to be found on the few remaining old trees around the perimeter and are gradually re-establishing within the stand. Bryophyte species characteristic of western oakwoods are represented, including several species of western and atlantic communities. The woodland is on a steep east facing slope and prominent within the local landscape, contiguous with neighbouring woodland and parkland in the valley, and visible from the A470.
Significance
Ancient woodland is an irreplaceable and biodiverse habitat that has been lost from the UK at an alarming rate, now comprising just 2% of Britain's land use. Upland mixed ashwood is a UK Biodiversity Action Plan (BAP) and European priority woodland habitat. The SSSI and SAC designations reflect the importance of the wood at a national and European scale. Notable lichen species are present. Coed Aber Eden is continuous with woodland/parkland of Coed Ganllwyd and Parc Dolmelynllyn to the south. A prominent feature adjacent to the A470.
Opportunities & Constraints
A large part of the woodland was subject to illegal felling (c. 1980) by a previous owner, which has probably negatively impacted on the distribution of rarer woodland species that were dependent on the previous mature tree canopy. The resulting regenerating woodland is largely dominated by a single canopy species (ash), the current tree regen likewise being predominantly that of ash, which may negatively impact on the wood's resilience. The very steep boulder strewn slope makes management access difficult. Lichen species nonetheless persist on older and adjacent trees, including sycamore: there are a small number of mature seed trees which could foster natural regeneration. Past coppicing of hazel may also limit its usefulness for lichens, however, there is a robust understorey cover of the species throughout much of the wood, which may help to buffer rapid changes in canopy make up e.g. through the impact of tree disease. The proximity to a busy A road means tree safety is a priority.
Factors Causing Change
Dutch elm disease probably explains the low frequency of wych elm; with ash dieback disease now spreading rapidly across the UK, it is likely that the woodland composition (currently c 80% ash in terms of canopy composition and natural tree regeneration) will change dramatically within the next decade or so. This could result in rapid increases in standing (and fallen) deadwood volumes and significant canopy gaps in the medium term. These impacts could interact with those of other tree pests and diseases arriving in the region, as well as the on-going threat of non-native conifer and rhododendron, which may re-colonise from adjacent plantations. Past observations have noted squirrel damage and periodic browsing pressure, from deer and possibly stray livestock or feral goats, which currently are at tolerable

levels as they may help maintain light conditions suitable for lichens, but could prove detrimental to future recruitment of new canopy trees.

Long term Objective (50 years+)

The diversification of the canopy was always a long term objective, however the pace of this change may be accelerated. Ash will be maintained as a primary canopy tree and allowed to regenerate, being retained into decline and as standing deadwood, as a high priority, even if this is at the expense of public access within the woodland. Sessile/ hybrid oak and sycamore will increase within the canopy over time, occurring with birch and occasional elm increasing as a canopy species. Hazel will form a dense understorey across much of the site, although there will be some diversity of structure. The lichen and bryophyte flora will be maintained and will benefit from the retention of trees to over-maturity, providing continuity and allowing re-colonisation of the stand from marginal remnants. Standing and fallen dead wood habitats will increase (30m cu per ha optimum). There will be a lush ground flora, comprising both mosses and liverworts and specialist vascular plants of woodlands such as bluebell and dog's mercury. Invasive species and non-native conifer will be absent. Browsing will not occur at levels that threaten the periodic replenishment of the canopy by native trees.

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

There will be limited intervention over the coming five years except where required for safety along the A470/ tree safety zones. A repeat lichen survey will establish how well ancient woodland lichens have re-colonised the regenerating woodland and inform future roadside tree safety operations, enabling protection of any particulaly rare species/ communities wherever possible. The hazel understorey will be maintained and not coppiced. Natural regeneration will be abundant and include a range of site-native broadleaves. Invasive species and non-native conifer will be rare and not reach reproductive age, being controlled where necessary. Temporary closure of the path network to the public will facilitate the retention of ash and of increased volumes of standing deadwood. Browsing impacts will also be monitored and should be low/ not impacting on the wood's ability to regenerate.

4.2 f2 Informal Public Access

Description

The wood is currently closed to the public due to the accumulating volumes of deadwood due to ash dieback, however, there is the option to review this in future plan reviews. Given the low level of public use, this is expected to have a minimal impact on the local community and be the most appropriate course of action to preserve the high conservation value of the site.

There is little evidence of regular public usage although neighbours may occasionally visit. The paths do not connect to the wider rights of way network (the adjacent public right of way shown on the OS map has clearly fallen out of use). Wide rides, created to extract timber, extended the original footpaths (shown on the 1901 map) and provide a short circular loop from the A470. The wide stony tracks form a figure-of-eight up the steep slopes. The track edges are generally steep banks and access into the woodland from the tracks is difficult. Access is at the south-eastern corner of the woodland, adjacent to the driveway to the property Aber Eden where parking is limited to one vehicle (suitable for management purposes only).

Significance

Coed Aber Eden provides an uplifting display of woodland wildflowers, especially bluebell, visible to passers by, however, the wood does not appear to be a significant resource for local recreation given its location and difficult access.
Opportunities & Constraints
The tracks are steep. There is no local car parking and the approach on foot along the A470 is hazardous. This will seriously constrain the number and type of actual visitors the wood can ever expect, even when access can be granted once more.
Factors Causing Change
Without maintenance the rides may be colonised by tree regeneration or coarse vegetation. Changes in local access provision might provide safer access opportunities from adjacent land.
Long term Objective (50 years+)
The existing rides will be retained for access and floristic interest. If opportunities arise to link into the adjacent public rights of way network these will be considered, however, public access will remain a low priority except in the context of systematic local development. The closure of the internal path network to the public will be reviewed at least every 5 years in the context of the progress of ash dieback in the stands and changing patterns of demand.
Short term management Objectives for the plan period (5 years)
Management will be limited to tree safety inspections and follow-up work along the A470 and property boundaries. Cutting of the internal path network will be suspended initially, however, this will be periodically reviewed to ensure management access and rideside flora is maintained. The closure of the internal path network will be reviewed at the end of the plan period.

5. WORK PROGRAMME

Year	Type Of Work	Description	Due Date
2021	WMM - AWS silviculture	Works associated with silvicultural operations within ancient woodlands to meet our primary aims of conserving woodlands and encouraging public enjoyment– such as the removal of non-natives, thinning and promotion of native trees and shrubs, creating and managing view points and providing welcoming sites for visitors	June
2021	SL - Tree Safety Works - Zone A	Work associated with planned tree safety works alongside areas such as car parks, roadsides and boundaries	November
2023	WMM - Invasive Plant Control	Works associated with the on-going management of invasive plants– such a repeat cutting and control treatments	September
2024	SL - Tree Safety Works - Zone A	Work associated with planned tree safety works alongside areas such as car parks, roadsides and boundaries	February

APPENDIX 1 : COMPARTMENT DESCRIPTIONS

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
1a	1	Ash	1984	Min-intervention	Mostly wet ground/exposed site, No/poor vehicular access within the site, Very steep slope/cliff/quarry/mine shafts/sink holes etc	Ancient Semi Natural Woodland, National Park, Site of Special Scientific Interest, Special Area of Conservation
The lower slopes of the woodland, parallel with and adjacent to the A470 road, contain some of the older and larger trees that survived the c. 1980 fellings, predominantly ash with oak, sycamore and some birch. Understorey is sparse with a few hazel, young ash and beech. The ground level is raised up from the road and bounded by a low retaining wall. Trees growing on the wall have been coppiced to preserve the wall and for highway safety reasons. The ground rises steeply west of the track (which runs parallel with the A470) to the boundary of the compartment, the remains of a stone boundary wall. Above the track to the south-west a large mature beech has been substantially reduced in height as a safety precaution after severe storm damage. The dominant tree species is ash. The southern boundary is not marked on the ground but is evident with the transition to a laurel understorey and the occasional exotic conifer species. To the north of the compartment young-mature ash are closely spaced, tall with high crowns and hazel is the understorey species. There is a mature wych elm and a couple of wych elm saplings below the main track near the south-east entrance. The ground flora includes Bluebell, Dog violet, Lady's bedstraw, Honeysuckle, Male fern and Hard fern.						
1b	0.6	Birch (downy/silver)	1950	Min-intervention	Mostly wet ground/exposed site, No/poor vehicular access within the site	Ancient Semi Natural Woodland, National Park, Site of Special Scientific Interest, Special Area of Conservation
The north-western section is dominated by mature birch. Large moss-covered boulders cover the ground. Ground flora comprises moss species and ferns - beech fern Phegopteris connectilis is recorded in two locations. Fewer old tree stumps are evident and this part of the woodland may not have been as affected by the earlier fellings. In the north-east corner near the boundary with Bryn Goleu and adjacent to the road are groups of mature sycamore and ash with oak and some birch. Understorey species are sparse with a few hazel and the occasional western hemlock seedling. Young beech, rowan and holly are also present. The western boundary wall with the conifer plantation and Bryn Golau is partially collapsed. Rhododendron is present in the adjacent plantation. A drainage ditch from the forestry boundary in the south-west corner of the compartment curves south to create an ephemeral stream down						

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Designations
the slope and into compartment 1a. The gradient at the north end of the woodland is gradual, much less steep than in compartments 1a and 2a.						
2a	0.9	Ash	1984	Min-intervention	Mostly wet ground/exposed site, No/poor vehicular access within the site, Very steep slope/cliff/quarry/mine shafts/sink holes etc	Ancient Semi Natural Woodland, National Park, Site of Special Scientific Interest, Special Area of Conservation
The majority of the compartment was clear felled c.1980 and has regenerated as a predominantly young ash woodland with hazel coppice both as a canopy and understorey species. The ash have been selectively singled and respaced (1990/91 and 2003). Mature trees are generally confined to the western perimeter and there are large old oaks, sycamore and ash alongside the boundary wall in the adjacent field (these support notable ancient woodland lichens, evidence of the flora that was most likely present prior to the removal of the old trees in the woodland). Obligate ancient woodland lichen species are recorded on trees in the wood (a large old sycamore with Sticta spp. and a scarce ancient woodland indicator species Pannaria conoplea on an ash). The high boundary wall along the western edge provides shelter and a microclimate that favours the bryophyte communities. In the north-west corner adjacent to the forestry plantation is a small group of box Buxus sempervirens. Hazel is the dominant tree species in the north-west section of the compartment. In wetter flushes on the slopes to the south and east and alongside the tracks goat willow is common. A central section encircled by tracks is characterised by young mature ash with the occasional birch, oak coppice and goat willow. Older hazel understorey in the south-west corner supports a number of ancient woodland lichen species and a nationally rare ancient woodland indicator lichen is common on ash saplings. The ground flora is characterised by moss species with ferns, some bramble, infrequent honeysuckle and occasional dogs mercury.						

GLOSSARY

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

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

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

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

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

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

Clearfell
Felling of all trees within a defined area.

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

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

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

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

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

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

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

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

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

Mixed Woodland
Woodland made up of broadleaved and coniferous trees.

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

Native Species
Species that arrived in Britain without human assistance.

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

Origin & Provenance
The provenance of a tree or seed is the place where seed was collected to grow the tree or plant. The origin is the geographical location within the natural range of a species from where seeds/tree originally derives. Thus an acorn collected from a Turkey oak in Edinburgh would have an Edinburgh provenance and a southern European origin.

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

Shrub Layer
Formed by woody plants 1-10m tall.

Silviculture

The growing and care of trees in woodlands.

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

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

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

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

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

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