



COED CADW  
WOODLAND  
TRUST

# Coed Aber Eden

## Management Plan 2016-2021

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## THE WOODLAND TRUST

### INTRODUCTION

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

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

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

### PLAN REVIEW AND UPDATING

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 Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations.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

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## 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](http://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.

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## 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

<b>Site name:</b>	Coed Aber Eden
<b>Location:</b>	Ganllwyd, Dolgellau
<b>Grid reference:</b>	SH725251, OS 1:50,000 Sheet No. 124
<b>Area:</b>	2.51 hectares (6.20 acres)
<b>Designations:</b>	Ancient Semi Natural Woodland, National Park, Site of Special Scientific Interest, Special Area of Conservation

## 2.0 SITE DESCRIPTION

### 2.1 Summary Description

This small area of ash and hazel alongside the A470 is, as the pictures show, a great place to see bluebells. Also on the ground, you can see dog violet and varieties of fern. There is a path through the wood but there is no obvious parking space.

## 2.2 Extended 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 provide a walk through the woodland in a figure-of-eight from the main entrance off the A470 and this is also the management access to the site. Whilst public usage is limited by the lack of a footway along the busy road from the nearby village and lack of parking space, it is nevertheless a key feature of the site.

## 3.0 PUBLIC ACCESS INFORMATION

### 3.1 Getting there

The site is adjacent to the A470 trunk road north of Dolgellau, in a busy holiday area. It is sometimes possible to park in the lay-by some 200 metres to the south but the walk along the side of the road is exposed and utmost care should be taken. There are only permissive paths in the site which are steep and rocky in places. An adjacent public footpath appears to be unused.

### 3.2 Access / Walks

## 4.0 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 within the coming decade. 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 if 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, informal public access may 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 of course be addressed.

## 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 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. Small colonies of dog's mercury (*Mercurialis perennis*) persist and remnants of an ancient woodland lichen flora are to be found on the few remaining old trees around the perimeter. 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 Dolmelynlyn 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 the deeply fissured bark preferred for colonisation. 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. 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. Particularly attention will be paid to the monitoring of woodland/ tree health: if a choice is to be made between maintaining internal public access and retaining standing ash, then conservation objectives should take precedence here. Browsing impacts will also be monitored and should be low/ not impacting on the wood's ability to regenerate.

## 5.2 Informal Public Access

### Description

Wide rides, created to extract timber, have extended the original footpaths (shown on the 1901 map) and now provide a very short circular walk 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). 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).

### Significance

Access to local woodland is an important amenity and Coed Aber Eden in spring, in particular, provides an uplifting display of woodland wildflowers, especially bluebell. The wide rides are associated with particularly spectacular flora.

### 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 expect.

### 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 maintained both for informal access and the floristic display they support. 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. In the eventuality of ash dieback, consideration will be given to the temporary closure of the footpaths in order to allow a significant build up of standing deadwood.

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

The existing ride network will be cut annually and trees along the A470 managed for safety reasons as necessary. Consideration will be given to the temporary suspension of public access if necessitated by tree disease impacts.

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## 6.0 WORK PROGRAMME

Year	Type of Work	Description	Due By
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## APPENDIX 1: COMPARTMENT DESCRIPTIONS

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Key Features Present	Designations
1a	1.00	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	Ancient Semi Natural Woodland, National Park, Site of Special Scientific Interest, Special Area of Conservation
<p>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.</p>							
1b	0.60	Birch (downy/silver)	1950	Min-intervention	Mostly wet ground/exposed site, No/poor vehicular access within the site	Ancient Semi Natural Woodland	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 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	0.90	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	Ancient Semi Natural Woodland, National Park, Site of Special Scientific Interest, Special Area of Conservation
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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 group of 5 mature conifers and 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. 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.