



Bow Wood

Management Plan 2018-2023

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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 Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations.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 or contact the Woodland Trust (wopsmail@woodlandtrust.org.uk) to confirm details of the current management programme.

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

WOODLAND MANAGEMENT APPROACH

The management of our woods is based on our charitable purposes, and is therefore focused on improving woodland biodiversity and increasing peoples' understanding and enjoyment of woodland. Our strategic aims are to:

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

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

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

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

The following guidelines help to direct our woodland management:

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

SUMMARY

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

1.0 SITE DETAILS

Site name:	Bow Wood
Location:	Lea Bridge
Grid reference:	SK314563, OS 1:50,000 Sheet No. 119
Area:	10.75 hectares (26.56 acres)
Designations:	Ancient Semi Natural Woodland, Ancient Woodland Site, Area of Landscape Value, Local Nature Site

2.0 SITE DESCRIPTION

2.1 Summary Description

A good example of the semi-natural oak and birch woodland that once cloaked this area. The Wickey Tor offers stunning views towards the north east across the valley. Well used by local people walking the Shining Cliffs complex of paths.

2.2 Extended Description

Bow Wood is part of the important Derwent Valley landscape of woodlands, occupying a prominent hillside location and affording good views over the valley and to the north east. The area is important as a tourist centre with Matlock and the High Peak Junction of the Cromford Canal and the Derwent very close by.

The wood itself was kindly bought for the Trust by Mr Kenneth Andrews in memory of his wife Ann. It extends to just over 10ha and is a good example of ancient semi natural woodland on gritstone with a long history of early industrial activity, important in the context of the nearby "birthplace of the Industrial Revolution" at Cromford where Arkwright set up his first mill works.

Given its steep and rocky terrain it is almost certain that Bow Wood was never cultivated or converted to pasture. It appears in documents of the 16th century as "Boghewode" when restrictions were placed on the wood with others in the vicinity to prevent tree felling for purposes other than lead smelting. The production of lead in these woods dates back to the middle ages and was carried out on site using white coal (partly processed charcoal) produced in the wood. The open hearth furnaces were set up in draughty west facing slopes such as Bow Wood to get the necessary air circulation into the fire. Upon the invention of water powered bellows in the 18th century the lead production moved down into the valley but still utilised locally produced white coal. The building of the Cromford Canal to bring in cheap coal, and the invention of coal furnaces meant that in 1740 new coal fired lead production replaced the old industry in Lea Bridge and the exploitation of the woods ceased.

Some 19th century landscape planting of beech was carried out, but the last major period of interference took place when the east section of the wood was largely cleared for the war effort during the first world war. There is some evidence of a large scale fire (bark burning scars) in the same area that would have occurred in the last few decades.

The wood shows a continuum of native woodland types up the hill from a flushed alder ash wet woodland type through acid, mixed or oak woodland with holly, hazel, rowan, crab apple and notably small-leaved lime, up to an upland type acid oak/birch woodland complete with open rocky and scree areas with heath vegetation. NVC woodland types or ground flora composition have not been established, and there is no information available on woodland fauna except that the upper reaches of the wood hold a large number of wood ant hills. The wood forms part of a much larger core area of semi natural ancient woodland in the area, and is fairly robust and unchanging and more recent management has concentrated solely on removing the sycamore element and this is now concentrated in the small area of cpt 1C.

Because the wood is in a somewhat obscure position although relatively close to a major Peak District Car Park the amount of visitor use is lower than it might otherwise be. It is well used by locals and locally based walkers as it is on one of the major walking routes up the Derwent Valley. The area at the top of the wood suffers from an ongoing rotational slump landslip and is in a dangerous and unstable condition with deep hidden fissures. The safety fencing should not be crossed.

3.0 PUBLIC ACCESS INFORMATION

3.1 Getting there

Public access is fairly good as the wood links well with the existing and widespread local footpath routes. Car parking is available close by at the Peak Park's High Peak Junction car park a short walk away, followed by a quarter of a mile uphill walk to Lea Bridge along the roadside footpath, then through a traditional stone squeeze gap adjacent to a wooden gate on the left just before you get to John Smedley Mill then a further 150m along the public footpath to reach the wood. Apart from the bisecting public footpath which is on the level the other paths are narrow and have steep gradients. Good views can be obtained from the top of the property from the rocks on Wickey Tor.

Please do not trespass over the boundary fencing in the upper part of the wood, due to the dangers of landslide and deep fissures.

Buses run regularly to Lea Bridge from Matlock (4miles) and Matlock Bath (2 mile) which both have stations. Bus and train information can be gleaned from the Traveline website www.traveline.org.uk or alternatively ring Traveline on 0871 200 2233.

Public facilities are available at High Peak Junction a short walk from the car park.

The main visitors tend to be locals and those walking from the routes to the northwest. The many car born visitors that park at High Peak Junction tend to get focused in the direction of the Cromford Canal , the High Peak Junction and the High Peak Trail leading west to the Black Rock Woods.

3.2 Access / Walks

4.0 LONG TERM POLICY

To manage the wood towards predominantly native high forest through a likely minimum intervention approach. The wood is fairly robust and unchanging in the short to middle term and site management to date has concentrated on the removal of all sycamore from cpt 1B and 1C. This has been successful. The Woodland Trust position on sycamore and its management has evolved in recent years and the current woodland management approach says... 'when considering the need to control a species, its native or non-native status is unimportant. The key issue is whether it is causing significant on-going habitat change or loss of species, additional to that of climate change. However, even where this is the case, remedial action is only undertaken if it can be sustained'.

The evidence suggests that except where there is disturbance sycamore is unlikely to cause significant on-going habitat change. On this basis the need to control sycamore should be questioned. Even if control were deemed necessary in the future, any strategy should focus on the need to maintain the woodland canopy and avoid disturbance in order to reduce the impact and spread of sycamore.

This supports the Woodland Trust view in our woodland management approach (based on managing woods primarily for their biodiversity value) that our ancient semi-natural woods should be allowed to develop naturally.

The current low key level of visitor provision will be maintained along with the current path network, over the long term.

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

Ancient semi natural woodland showing a continuum of woodland types up a gradient from a flushed alder ash wet woodland type through acid, mixed or oak woodland up into an upland type acid oak/birch woodland complete with open rocky and scree areas with heath vegetation. Ornamental planting of beech and possibly sycamore in some areas of the site was carried out in the 19th century. Significant felling was carried out in the eastern end of the wood in the first world war. The upper reaches of the wood hold a large number of wood ant hills.

Significance

The wood is important because it is ancient semi natural woodland, it contains a variety of natural woodland types and it forms part of a larger almost contiguous core area of ancient woodland habitat in the upper Derwent Valley.

Opportunities & Constraints

Any management of the wood is hampered by very poor access to the site and little vehicular access within it. Any felling work that may be considered would have to be carried out to waste, and disturbance to the canopy and ground flora would be more likely to encourage the regeneration of sycamore.

The landslip area is extremely hazardous and conditions preclude access for survey work, assessments and silvicultural work.

Factors Causing Change

sycamore control, possible landslip

Long term Objective (50 years+)

The wood will be maintained as ancient semi natural woodland, with predominantly native species through minimum intervention.

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

Manage through minimum intervention and monitor at least once during every plan period, through key features and woodland condition observations, checking that there are ample levels of regeneration to maintain the woodland cover. Assess for sycamore and beech regeneration which should remain relatively constant given the now low levels of woodland disturbance.

5.2 Informal Public Access

Description

Bow Wood is part of the important Derwent Valley landscape of woodlands, occupying a prominent hillside location and affording good views over the valley and to the north east. The area is important as a tourist centre with Matlock and the High Peak Junction of the Cromford Canal and the Derwent very close by.

The wood links well with the extensive local footpath network and although no car parking exists at site, the High Peak Junction car park is a short walk away just opposite the south end of the wood. Within, a network of paths enables the visitor to circuit the wood and to gain access to the gritstone outcrop, Wickey Tor, at the top. Visitor facilities are low key in keeping with the ambience of the wood.

Significance

Bow Wood provides a quiet and beautiful location for walking close to very heavily used routes for those who take the time to find it and want to escape from the madding crowd. The area has a large number of footpath routes, many in woodland settings, so locally this provision is not that significant.

Opportunities & Constraints

As the wood is ancient woodland, a greater prominence of visitor provision would be out of keeping with its character and a balanced and appropriate level of path provision is already provided. The dangerous section of ground at the hill top marginally restricts access at present but that could spread in future years. Given the closeness of High Peak Junction, many more visitors could be enticed into the wood.

Factors Causing Change

changes in level of use, possible landslip curtailing safe access.

Long term Objective (50 years+)

Maintain the current low key level of visitor provision.

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

Ensure current level of provision exists at the end of the plan period, and ensure that paths signs and access furniture are maintained on at least one occasion per year. Safety fencing should be inspected annually along with checking and replacing clear signage.

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	4.72	Birch (downy/silver)	1950	High forest	No/poor vehicular access to the site, People issues (+ve & -ve), Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Ancient Semi Natural Woodland, Informal Public Access	Ancient Semi Natural Woodland
<p>The upper section of the wood comprises almost pure oak/ birch woodland (roughly 30/70%). Although ancient semi natural woodland, it has been heavily modified in the past by coppicing for lead production since the middle ages, and more recently by fellings in the first world war to the east, and more recently there is evidence of a wide scale fire on the trunks of the remaining oaks. Consequently a lot of the birch woodland is likely to be of a more secondary woodland nature with many small stems and a wide age variation , having recolonised since early last century. The remaining oaks are generally poor stunted specimens and usually multi stemmed and will be a mixture of coppice regrowth from the felling or retained reject stems. In some places they are suffering from competition with the birch. It is believed that the principal clear felled area lay to the east of the central field as this shows up as scattered wood with heath on the 1930's edition OS map. Both sessile and pendunculate oak are present on site although pendunculate oak increases in dominance on site with decreasing altitude. The birch species present is predominantly silver birch although downy birch does also occur. Few other trees are present except the occasional rowan, hazel and holly. The ground flora is dominated by a dense sward of bracken although prior to its emergence swathes of bluebells and wood sorrel can be seen. It is likely that bracken is inhibiting the regeneration of the oak in particular throughout the sub compartment. No full survey of ground flora has been undertaken. Wood ants are a feature of this area and many large and active anthills can be seen throughout. No information on the woodland fauna exists. The area at the top of the wood suffers from an ongoing rotational slump landslip and is in a dangerous and unstable condition with deep hidden fissures. The safety fence should not be crossed.</p>							
1b	4.47	Birch (downy/silver)	1950	High forest	No/poor vehicular access to the site, No/poor vehicular access within the site, Very steep slope/cliff/quarry/ mine shafts/sink holes etc	Ancient Semi Natural Woodland, Informal Public Access	Ancient Semi Natural Woodland

The lower section of the wood consists of a more mixed woodland on deeper and moister soils than above. Silver birch and oak (mainly pendunculata) are again dominant but there is a wide variety of minor species in association: crab apple, rowan, hazel, holly and most notably small leaved lime. This area again is ancient semi natural woodland but has been actively managed for coppice from the middle ages up to the advent of water and steam powered bellows in lead production which relocated smelting down into the valley in the eighteenth century. Parts of the sub compartment also has the remnants of some nineteenth century landscape planting of beech and also possibly sycamore although this could have colonised naturally. The sycamore has now been almost totally removed however the large mature beech are to be retained till they fall over. One or two ash exist on the boundary of the field but the wood is generally of an acid nature and will not favour this species. Ground flora has not been surveyed but again it is dominated by bracken with extensive bramble and *Dryopteris* spp. and other ferns, with bluebells and wood sorrel in spring. No information on fauna exists.

1c	0.61	Alder species	1950	High forest	Mostly wet ground/exposed site, No/poor vehicular access to the site	Ancient Semi Natural Woodland, Informal Public Access	Ancient Semi Natural Woodland
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At the bottom of the wood adjacent to the public road, this sub compartment is characterised by a series of spring flushes that make the ground wet throughout the year. Species are alder and sycamore, with slightly more alder than sycamore present and the occasional ash. It is bounded on the north side by the start of the slope and an electricity wayleave. Ground flora contains dominant ransoms with opposite leaved golden saxifrage, ivy and nettles. A hazel hedge runs along the top of the roadside dyke.

1d	1.03	Open ground		High forest	Very steep slope/cliff/quarry/mine shafts/sink holes etc	Ancient Semi Natural Woodland, Informal Public Access	Ancient Semi Natural Woodland
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The north east side of the wood is characterised by a steep slope running down from the Wickey Tor gritstone outcrop at the top of the hill. A lot of the ground comprises scree and large boulders with only patches of deeper soils. Tree cover is limited to scattered specimens of oak, holly, birch, and beech which account for around 50% of the area. The ground is dominated by bracken, but heathy areas with heather and bilberry occur around the Tor. The area at the top of the wood, to the north of and below the Tor, suffers from an ongoing rotational slump landslip and is in a dangerous and unstable condition with deep hidden fissures. The safety fence should not be crossed.

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.