

# **Crinan Wood**

# Management Plan 2015-2020

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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 Consequently this printed version may quickly become out of date, particularly in relation to the planned work programme and on-going monitoring observations.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 <a href="www.woodlandtrust.org.uk">www.woodlandtrust.org.uk</a> 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 <a href="www.woodlandtrust.org.uk">www.woodlandtrust.org.uk</a>. 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.
- 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: Crinan Wood

Location: Crinan

**Grid reference:** NR789938, OS 1:50,000 Sheet No. 55

**Area:** 35.00 hectares (86.49 acres)

**Designations:** Ancient Semi Natural Woodland, Ancient Woodland Site,

Conservation Area, National Scenic Area, Scheduled Ancient

Monument

#### 2.0 SITE DESCRIPTION

# 2.1 Summary Description

With sweeping vistas across Loch Crinan to the romantic Duntrune Castle and the Argyll coastline, there can hardly be a wood with a more breathtaking outlook. Here, the moist, mild climate has created a temperate rainforest of ancient Atlantic oakwood, dripping with rare fern, moss and lichen, and brimming with wildlife, including the iconic red squirrel. Crinan Wood is one of our must-see gems.

# 2.2 Extended Description

Situated at the west end of the Crinan Canal, the picturesque village of Crinan lies 25 miles south of Oban in Argyll. Crinan Wood rises 100 metres above the village affording superb views across the Argyll coastline, west to the Isle of Jura and north to the islands of Scarba, Luing, Seil and Mull.

From this vantage point the 12th century Duntrune Castle, the family seat of the Malcolms of Poltalloch can be seen across Crinan Loch, and the roar of the famous Corrievreckan whirlpool can sometimes be heard, when the right combination of tide and wind prevails. Looking south, the flat 1200 flat expanse of the Moine Mhor (a National Nature Reserve) stretches inland towards Dunadd, where the early kings of Scotland were crowned.

The Crinan canal, constructed at the turn of the 18th century, was the main route for ships trading up the west coast from Glasgow, including the Clyde Puffers of 'Para Handy' fame. Although the village below the wood is now peaceful spot - best known to pleasure seekers on foot, bicycle and boat - in the 18th century it supported a thriving industrial works producing ascetic acid, probably for the lithographic trade.

The woods have a long history of occupation, exploitation and management which has resulted in today's rich and diverse woodland habitat of rocky ridges, sunny glades, damp hollows and ancient trees.

The characteristic ridged landscape earned this part of Argyll the Norse name of 'Knapdale' - knaps being the ridges and dales the valleys between. The area is underlain mainly by schists, phillites and slates, which give rise to a number of soil types including brown rankers and peaty soil on the ridge tops, stony brown earths on the slopes, and deep brown earths on the valley bottoms.

The Gulf Stream climate of the West coast is warm and wet, with mild but often very windy winters. The Atlantic oakwoods, of which Crinan is typical, are often described as temperate rainforests. Crinan is also classified as an Ancient Semi Natural Woodland. In the southern portion of the site there are some more recent plantings dating from the 19th century, mainly of beech and sycamore.

Tree cover is predominantly oak and birch with scattered individuals and groups of hazel, ash, rowan, elm, willow, holly and alder. Phoenix trees, which have fallen, then subsequently regrown, occur throughout the site and contribute the diversity of the woodland structure.

The flora is rich with ferns, lichens and bryophytes (mosses and liverworts), including some which are confined to oceanic climates. There are thirteen species of ferns, three of which are only found on the west coast. Species present include golden scale fern, hay-scented fern, Tunbridge filmy fern and Wilson's filmy fern.

The woodland includes a number of open glades, and a larger area of heath vegetation in the South-western corner. Open areas tend to be dominated by bracken, although there are also areas of heather, blueberry and grasses. The smaller glades within the valley bottoms are a relict of the site's history as a cultivated agricultural landscape (see 'History' below). These glades also provide a valuable habitat for a range of plant and invertebrate species.

The Atlantic oakwood is an important UK Biodiversity Action Plan (BAP) habitat, with its own Habitat Action Plan (HAP). The Argyll and Bute LBAP also includes a number of Species Action Plans which apply to the wood, including wych elm, otter, bats, Pearl Bordered Fritillary and Red Squirrel.

The woods at Crinan are part of an important complex of Ancient Semi Natural Woodlands (ASNW), Planted Ancient Woodland Sites (PAWS) and other woodlands in the northwest corner of Knapdale, which includes the extensive ancient oakwoods at Taynish National Nature Reserve 8km to the south. In 2008, a licence was granted by the Scottish Government to introduce beavers to Forestry Commission land close to Crinan Woods as part of a six-year trial reintroduction programme. This is now completed and a report by Scottish Natural Heritage will be submitted to the Scottish Government in May 2015 to decide the future of the beaver trial.

#### History

Crinan Wood is an example of a wooded landscape occupied since prehistoric times, and managed by man for a variety of objectives throughout the centuries. On an early military map drawn up by General Roy c.1760, a distinct land use pattern is evident, with woods along the parallel ridges or 'knaps', and open areas in the valley bottoms. The Ordnance Survey 1st Edition six inch map of 1860 shows the detailed mosaic of small, thin fields and wooded ridges that makes up the wood today.

The remains of several settlements of 18th-19th century origin can be seen within the woodland. A prominent row of cottages in the middle of the site is known as 'New York', and is likely to have been constructed by the York Building Company, perhaps as accommodation for workers on the Crinan Canal. These are shown as already roofless on the Ordnance Survey map of 1860, but substantial remains survive. Mention of house cows, gardens and potato land in documents and rental rolls of the early 19th century indicates a significant level of agricultural activity.

The wood was acquired as part of a much larger tract by the Malcolms of Poltalloch towards the end of the 18th Century. Estate records from 1791 describe the wood as agricultural; grazed extensively with arable crops grown in the valley bottoms. It is probably around this time that new 'policy woodlands'; predominantly of beech, with sycamore, ash and elm were planted.

A notable feature of the present day woodland is the presence of many previously coppiced, or occasionally pollarded, veteran oak. These trees survive on the steep uncultivable slopes of the ridges. It is not clear whether they are remnants of an earlier wood pasture system or if they are associated with exploitation on an industrial scale during the 18-19th century. However the coppice originated, small scale agricultural activities were maintained alongside the managed woodland. At the edge of each ridge the footings of a stone dyke can still be seen, separating the woodland from the valley bottom fields.

From the mid 18th century, coppicing of woodlands became widespread in Argyll to provide the raw materials for a range of industries, including charcoal for iron smelting and bark for tannin. At Crinan the manufacture of ascetic acid at the pyroligneous works, established around 1824 and known as the 'Vinegar Factory', would have required large quantities of timber. It may also be significant that the tenant of Kilmahumaig in 1802 was a shoemaker; the leather for his trade would have required oak bark for tanning.

The industrial exploitation of coppice woodland in Scotland had largely ceased by the late 19th century. At the same time there was a marked decline in population associated with emigration, famine and the clearance of tenants to make way for sheep farming. It is probable that the majority of the settlements in Crinan Wood were abandoned around this time, and that the site was given over to grazing.

The Forestry Commission purchased the site 1930, and although much of the surrounding land was afforested. Crinan Wood continued to be grazed until its acquisition by the Woodland Trust in 1988.

The low intensity farming of the past century has maintained the site as a mosaic of open ground and woodland, although natural regeneration and planting activities since 1988 have gradually increased the proportion of woodland cover. A policy of removal of non- native trees (mainly beech) was implemented by the Woodland Trust after acquisition, with the exception of a mature stand adjacent to the house of Kilmahumaig, which was were retained for its contribution to the cultural

landscape.

Looking at the evidence from historical records, as well as the physical evidence from the woodland itself, it seems reasonable to suggest that Crinan Wood is the product of an ancient wood pasture system. Key factors supporting this include the historical records of cultivation and grazing, the presence of many veteran, formerly coppiced or pollarded oaks and the remains of settlements and an extensive field system throughout the site

Nonetheless, Crinan Wood does not altogether fit the classic picture of a wood pasture, which generally only has a scattering of trees. It might be better described as the product of an intimate mosaic of managed woodland and small scale agriculture. Similar mosaics have been identified at the nearby Taynish National Nature Reserve and further afield at Ardery woods on Loch Sunart and Rassal National Nature Reserve in Wester Ross (Quelch 2008). It is possible that historic land use patterns such as these were once an important component of the cultural landscape of west Scotland.

# 3.0 PUBLIC ACCESS INFORMATION

# 3.1 Getting there

On foot or by bike: Along the canal towpath from Lochgilphead (10km, including around 1.5km along a minor road, and several road and bridge crossings).

By car: From Oban, follow the A816 towards Lochgilphead for around 30 miles. Turn right onto the B8025 and continue for four miles, then turn right again onto the B841. Follow the road around Crinan Canal to the village of Crinan.

There is a car park next to the canal basin in Crinan village centre. Limited parking is available for up to four cars in the British Waterways parking bay at the swing bridge off the B841. Informal parking near the start of the track at Kilmahumaig is reserved for less able visitors. Please avoid blocking access along this track as it is in daily use.

By bus: Crinan village can be reached by bus from Lochgilphead.

By train: The nearest train station is in Oban which connects with Glasgow, although trains are infrequent.

For further information on public transport, contact Traveline on 0871 200 2233 or visit travelinescotland.com.

# 3.2 Access / Walks

Crinan Wood lies south-east of Crinan village, and is bordered to the north and east by the Crinan canal.

There are walks from the following access points, where you will find information boards:

- 1. From the canal basin in Crinan. The main woodland path forms a 2.5km loop from the village, which takes in five scenic viewpoints and a beautiful section of the British Waterways towpath. The path has a soft surface, which may be wet and muddy, and there are steep sections and steps, which may limit access for some visitors. Wear sturdy footwear, such as walking boots.
- 2. From the canal towpath to the east of the wood, next to a swing bridge off the B841 Cairnbaan-Crinan road (1km south of the village). The towpath (which continues to Lochgilphead 10km to the south) is suitable for all abilities, although it has steep drops from the banks.
- 3. From a track at Kilmahumaig on the B841 shortly before Crinan village, where an all-ability surfaced track offers access into the woodland.

# 4.0 LONG TERM POLICY

Crinan Wood is one of a number of scattered ancient woodland fragments in this area. It will act as a reservoir of ancient woodland species, which can colonise adjacent plantations and PAWS woodlands as site conditions become suitable.

Within the site, it is planned to maintain a mixed habitat mosaic of woodland and open ground, while preserving and extending the Atlantic Oakwood component. The woodland cover will be encouraged to expand into selected open compartments, particularly the formerly wooded heathland in compartment 3, and parts of compartment 5 in the centre of the site. There is also potential to plant parts of compartment 6 that is currently let for grazing.

Over the whole site it is estimated that approximately 60% is currently wooded and 40% is open ground. It is expected that in the medium to long term (+50 years) woodland cover will increase to 70% or more. The matrix of open ground and woodland will be allowed to develop naturally as young trees establish and mature trees senesce and/or blow over.

Bracken is currently dominant in several open compartments and may continue to dominate as there will be no chemical control due to the sensitivity of the other fern species in the wood. Manual control may be used where necessary around plantings and key archaeological features.

The woodland will continue to provide a place of quiet enjoyment, with links to the surrounding path network. Paths and viewpoints within the site will be maintained in their present form as natural beaten earth and stone pitched paths.

# 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 Mixed Habitat Mosaic

#### Description

The habitat mosaic of Crinan wood is made up of several distinct components arranged in an irregular pattern of small and large patches:

Approx. 19 ha woodland, of which approx. 14ha is ancient woodland.

Approx 1 ha mature policy woodlands, predominantly non-native broadleaves

Approx 0.5 ha mixed broadleaves (mainly seedlings raised from local seed) planted since 1988.

Approx 5.5 ha open heathland on ridge tops, dominated by bracken and coarse grasses.

Approx 6 ha open ground on formerly cultivated or grazed areas in valley bottoms, dominated by soft grasses and bracken.

Approx 2.5 ha improved grassland, currently let for grazing

Approx. 0.5ha permanently wet ground and open water.

112 species of woodland and open habitat plants have been recorded on the site including primrose, violet, wood sorrel, foxglove, yellow iris, red campion, dog's mercury, bluebell, tormentil, sheep's sorrel, heather, blaeberry, heather, juncus and wood rush. The site is significant for 13 species of ferns including hay-scented fern, Tunbridge filmy fern and Wilson's filmy fern.

A bird census of 1990 revealed 24 species of breeding bird inhabiting the wood, including, buzzard, tree pipit, redstart, tree creeper, wood warbler, willow warbler, siskin an blue, great, long tailed and coal tit. Barn owls are also known to nest on the site. Osprey may be seen fishing nearby.

# Significance

The mosaic of woodland with different unimproved and semi improved open ground habitats in an intimate mosaic has created a very biodiverse area. The maintenance and enhancement of this mixed habitat mosaic supports the Trusts objectives to restore and improve the biodiversity of woods and increase the area of native woodland. A large area of semi-natural woodland, encompassing ASNW, in a mosaic with other open ground habitats is likely to be more stable and resilient to climate change than the individual patches of ancient woodland. The Atlantic oakwood component is an important Biodiversity Action Plan (BAP) habitat, with its own Habitat Action Plan (HAP). The Argyll LBAP also includes Species Action Plans (SAP) for a range of species present on the site, including wych elm, otter, bats, Pearl Bordered Fritillary and Red squirrel.

# **Opportunities & Constraints**

Deer browsing and dense bracken are a constraint on successful tree regeneration

A low intensity cattle grazing trial was undertaken from 2007-2014 to reduce bracken dominance and increase habitat diversity through the development of herb rich grassy patches and regeneration of native trees in compartment 3. The effectiveness of this may have been constrained by a lack of precise information on appropriate stocking regimes and the preference of cattle to forage in more palatable grassland. Further constraints were the availability of cattle for grazing the site in the appropriate numbers and at the right time, the damage to growing trees by browsing and the need for adequate fencing. The trial did show signs of helping natural regeneration because elsewhere it appears that natural regen is doing better in areas without cattle. No further trials planned.

# **Factors Causing Change**

Grazing by deer plays a part in maintaining the habitat mosaic. At high levels, however, deer impact limits natural regeneration and causes damage to young, and even well-established trees.

Natural regeneration is occurring in open areas and may successfully establish to increase woodland cover on currently open compartments.

# Long term Objective (50 years+)

There will be a diversity of semi-natural woodland and non-woodland habitats across the site, providing a high biodiversity potential, and retaining the cultural interest of the historic wood pasture landscape.

The proportion of woodland cover to open ground will be gradually increasing, however it is expected that approximately 20% open ground habitat will remain within the mosaic.

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

- a) Monitor natural regeneration in compartment 3 now that cattle have been removed. Increase density of trees to 1100 stems/ha by planting if natural regeneration is not adequate by 2020.
- b) Plant an additional 200 oak and hazel trees in compartment 5 by 2020.
- c) Deer management will be unrtaken throught current plan period.

#### 5.2 Ancient Semi Natural Woodland

#### Description

The site encompasses approx 14ha ancient woodland, predominantly Atlantic oakwood, supporting many old coppiced or pollarded specimens and a rich woodland ground flora.

There is a diverse lichen and bryophyte flora present with many western oceanic species including Lepidozia cupressina and the 'ancient woodland indicator' liverwort Adelanthus decipiens, as well as several Lobarion lichens and the uncommon oceanic liverworts Plagiochila exigua and Cololejeunea minutisima.

The site as a whole is possibly ancient wood pasture with significant numbers of veteran and subveteran coppiced or pollarded trees, areas of open ground which have been formerly grazed or cultivated, and associated archaeological features including dykes and two former settlements.

# Significance

The ASNW at Crinan is part of an important complex of ASNW, PAWS and plantation forest in northwest Knapdale. It has the potential to contribute to the restoration of a functional woodland ecosystem in this area by acting as a reservoir of ASNW components.

The presence of veteran coppiced oaks provides a reservoir of ancient woodland species to pass on to future veterans within the wood.

The association of veteran trees with archaeological remains is of significant historical interest, and has a cultural value as a record of land use patterns.

Atlantic oakwood is an important Biodiversity Action Plan habitat.

# **Opportunities & Constraints**

Deer browsing and dense bracken may limit successful tree regeneration. Reducing the number of trees developing as a successor generation.

Woodland specialist flora may be suppressed by regenerating beech trees.

Unmanaged hazel provides an important lichen habitat and should not be coppiced.

# **Factors Causing Change**

Deer browsing

Beech regeneration

#### Long term Objective (50 years+)

Ancient Woodland flora will be secure within the woodland compartments of the site and expanding into areas where tree cover is increasing.

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

- a) Beech regeneration within compartments 7 & 9 will be surveyed by 2020 and removed if detrimental to ancient woodland flora or suppressing locally native trees.
- b) Invasive non native species that are detrimental to the ancient woodland flora will be surveyed for during woodland condition assessments annually and controlled in subsequent EMC contracts.
- c) Deer browsing will be monitored annually and their numbers managed if excessive damage is recorded. Primarily non-native Sika deer will be targeted.

#### 5.3 Informal Public Access

# Description

The site is within the Knapdale national scenic area (NSA) and is highly visible from long distances, especially from the north and west (Crinan and the sound of Jura) and the north and east (Dunadd and the Moine Mhor).

The paths create an enjoyable walk for both local residents and visitors. There are approximately 1.8km of unsurfaced paths throughout the wood. The main access track through the centre of the site is surfaced with tarmac.

The main woodland path forms 2.5km loop from Crinan village, including a very attractive section along the British Waterways tow path.

The canal towpath continues to Lochgilphead, 10km to the south, linking the wood with other popular walking/biking routes.

There are two maintained viewpoints along the path network giving good views of the west coast.

# Significance

The path network is well-used by local people and visitors. Although the resident population is not large, Crinan receives a significant number of visitors, many of whom arrive by boat on their way through the Crinan canal.

Although there are many spectacular viewpoints on the Argyll coast, few have established access provision. Crinan wood provides welcoming access for visitors who may not feel comfortable crossing rugged countryside without paths or signposting.

Links with the external path & waterway network allow the wood to be accessed from some distance without a car.

The current level of public usage is defined as WT access category A (High: Regularly used at all times of year, more than 15-20 people per day using main entrances). The provision of access supports the Trust's objective of 'Increasing people's awareness and enjoyment of woods'.

# **Opportunities & Constraints**

There are opportunities for working with other organisations such as British Waterways, Forestry Commission Scotland, Visit Scotland and local community groups to develop joined up access provision, interpretation and management. This includes keeping open the circular walk from Crinan through the wood and back to Crinan along the canal towpath that requires crossing the canal swing bridge.

The steep and rugged terrain makes the site difficult to access for some people.

# **Factors Causing Change**

None noticeable at present, paths are holding up to current levels of use.

# Long term Objective (50 years+)

The site will provide an extensive area of quiet informal recreation to a wide range of users both from the local community and from further afield.

There will be a network of unsurfaced paths suited to active, able users.

The network will continue to link into the surrounding path network.

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

Access provision will be in keeping with WT access guidelines and site access coding (A) Achieved by:

- a) Ensuring that all managed paths are kept well-drained and free from encroaching vegetation, and that access features (e.g. bridges, steps, entrances, boundary features, etc. are kept in good order (annually).
- b) maintaining a small mown picnic area at the main entrance by Kilmahumaig (vol. warden)
- c) ensuring that both key viewpoints are maintained free of encroaching vegetation by annual cutting within EMC contract as necessary.
- d) Provision of orientation and interpretation by: the ongoing provision of a site leaflet, available at local businesses and local tourist offices.
- e) The site will be kept safe and welcoming by: repair of vandalism (when needed); clearing of fallen trees where access is obstructed (as needed); and regular site safety surveys (as per risk assessment).

#### 5.4 Historic Features

# Description

The site has significant historic and prehistoric interest with archaeological evidence from the Iron Age, and relict features of earlier agricultural and industrial land uses.

The ruins of a historic settlement called New York, a row of workers cottages within compartment 5, lies close to Rhuaglach cottage.

#### Significance

The historic landscape is of significant local and regional value as a record of human occupation and land use.

#### **Opportunities & Constraints**

The New York ruins are almost at ground level for the most part and are easily obscured by vegetation. There is an opportunity to make them more of an interesting feature with interpretation and by strimming around them to make them more visible.

# **Factors Causing Change**

Trees and bracken may obscure the evidence of the historic landscape and damage archaeological remains.

# Long term Objective (50 years+)

Archaeological remains at New York, Dun Mor and the iron age fort site in the SE corner of the wood will not be adversely affected by woody growth.

The historic use of the site will remain discernable with open ground around the former New York settlement.

Evidence of previous human settlement and occupation will contribute to the attractiveness and interest of the site.

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

The vegetation around the New York settlement will be maintained annually by strimming where it is obscuring the view of the ruined cottages.

- -Vegetation at other archaeological sites will be monitored annually and added to the subsequent EMC contract for control as necessary.
- 2017- Compartment 5a more strimming and flattening of bracken in entire stretch with additionally 50 oak trees planted

# 6.0 WORK PROGRAMME

Year Type of Work Description Due By

# APPENDIX 1: COMPARTMENT DESCRIPTIONS

Cpt No.	Area (ha)	Main Species	Year	Management Regime	Major Management Constraints	Key Features Present	Designations
1a	4.81	Birch (downy/s ilver)	1940	High forest	Archaeological features, No/poor vehicular access to the site	,	Natural

A knap of mature and semi-mature downy birch, hazel and oak with occasional rowan and rare holly. The steep ridge sides support a number of old coppiced oaks. There is a wet area in the centre with frequent willow. Woodland specialists are dominant in the ground flora with soft grasses, ferns, blaeberry, woodrush and bluebells with occasional bracken becoming frequent in open areas. There are important western atlantic fern species in the north of this cpt. The entrance from Crinan is in the NW corner of the cpt. An attractive spreading oak, with metal/wood sculptures is accessed by a short path in the S end of the cpt. There is a deserted settlement with two ruined buildings close to Rhuaglach Cottage. Approximately half of this cpt is ASNW.

2a	0.88	Birch	1900	High forest	No/poor	Informal Public	Ancient Semi
	0.00	(downy/s			vehicular access		
		ilver)			1	Habitat Mosaic	
		,			Services &		National Scenic
					wayleaves, Very		Area
					steep		
					slope/cliff/quarry/		
					mine shafts/sink		
					holes etc		

Mixed broadleaves on steep slopes; dominant downy birch, with frequent rowan and oak and occasional hazel. Occasional beech regen. Woodland specialists are dominant in the ground flora of in this cpt. with woodrush, bluebells and tormentil. Soft grasses and blaeberry in the upper areas. Most of this cpt is designated ASNW.

3a	4.13	NULL	Non-wood habitat	'	Informal Public	
			nabitat	vehicular access to the site,	Habitat Mosaic	
				Services &		National Scenic
				wayleaves		Area

Area of open ground with frequent large patches of dominant bracken interspersed with frequent areas of coarse and soft grasses. Bluebells, foxgloves, tormentil, sheep's sorrel, heather and blaeberry are frequent, and there is an area of juncus around a small lochan. Occasional scattered oak and birch, becoming frequent by the track in the SE of the cpt alongside a group of planted ash, and oak seedlings raised from local seed. Bracken has been controlled previously with asulam, and a number of small areas were scarified c.2001 to create a suitable seedbed conditions. Regeneration over the cpt has, however, been poor, due to persistent, dense bracken and a thick vegetation mat, and to browsing by deer. Periodic grazing by Highland cattle was introduced Dec 2007-Dec 2014, with the objective of reducing bracken vigour and breaking up vegetation mats. A small part of this cpt along the W. edge is designated ASNW.

4a 1.74 Beech 1920 Non-wood habitat	Informal Public Ancient Semi Access, Mixed Habitat Mosaic Woodland, National Scenic Area
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Open grassy area alongside the main access track. Occasional scattered oak, birch, willow hawthorn and hazel throughout. A grassy space to the rear of Kilmahumaig is maintained as a mown glade for public enjoyment, wildflowers and butterfly interest. There is a wooden 'solstice' sculpture and an information board in this area. A small portion in the centre of this cmpt is designated ASNW

5a	4.04	NULL	Non-wood habitat	Archaeological features	Informal Public Access, Mixed Habitat Mosaic	Natural
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'New York Hollow' - a shallow, linear valley between the higher 'knaps'. Mainly open ground with dominant bracken in the N end. An area in the centre of the cmpt has been progressively planted up with locally raised tree seedlings since 1988. Towards the S of the cmpt there is frequent beech and occasional birch regeneration. A new grass path was established through the area in 2006. There is a substantial row of ruined dwellings in the N of the cmpt, this settlement is known as 'New York', possibly named after the York Building company, and perhaps associated with the building of the Crinan Canal. The Roy map of 1747-55 indicates that the shallow valleys on the site were unwooded; and it is likely that they were grazed as part of a wood pasture system.

6a	2.42	other oak	1900	High forest	Services &	Informal Public	National Scenic
		spp			wayleaves	Access, Mixed	Area
						Habitat Mosaic	

Open fields of improved grassland, which are rented out for grazing. The western field is an important element within the local landscape.

7a	0.70	Beech	High forest	No/poor vehicular access to the site	Habitat Mosaic	Natural Woodland, National Scenic
						Area

Stand of mature beech, elm and sycamore. Occasional ash, oak, downy birch, rowan and hazel, becoming frequent in the south of the cpt. Frequent beech and sycamore regeneration. Woodland specialist flora of soft grasses, foxgloves, bluebells and ferns rare under mature exotic trees, but frequent elsewhere. A notable Ash and a notable Beech have been recorded for the Ancient Tree Hunt in this cpt. A former (recent) tree nursery bed is situated behind Kilmahumaig cottages. It is no longer in cultivation. The SE half of this cpt is designated ASNW. The present stand of mature trees originated as 19th C. policy plantings along a new driveway to Kilmahumaig house (now gone). A dyke which enclosed the planted area is still partially intact.

8a	l .	Open	Wood	'	Informal Public	
		ground	establishment	vehicular access	Access, Mixed	Natural
				to the site,	Habitat Mosaic	Woodland,
				Services &		National Scenic
				wayleaves		Area

Open glade in valley bottom dominated by bracken with scattered hazel, oak and birch. Likely to have been grazed as part of former Wood Pasture system

9a	14.56	other oak	High forest	Archaeological	Informal Public	Ancient Semi
		spp		features, No/poor		
		' '		vehicular access		
				to the site,		Conservation
				Services &		Area, National
				wayleaves, Very		Scenic Area,
				steep		Scheduled
				slope/cliff/quarry/		Ancient
				mine shafts/sink		Monument
				holes etc		

A large cpt. of semi mature to mature mixed woodland clothing three out of the four knaps that run NE to SW, and falling steeply down to the canal side to the N and E. Abundant oak, some coppiced, and Downy birch with frequent Hazel and Rowan and occasional Cherry, Elm and Ash; A small area of wet Alder woodland in the north. Frequent Beech regeneration to the south. Two veteran oaks have been recorded for the Ancient Tree hunt in this cpt. Woodland specialists are dominant in the ground flora except in open glades and on the summit at Dun Mor. They include bluebells. tormentil, primrose, wood sorrel and dog's mercury. There are important western Atlantic fern species in the north of this compartment. Occasional areas of dominant bracken in open glades towards the SE. There is an area of open ground 'Dun Mor' with bracken, soft grasses and heather on the ridge top in the W of the cpt, possibly the site of an iron age fort. Excellent panoramic views are obtained from this area. A path with steep sections and some stone pitching runs through this cpt from Kilmahumaig and Crinan village to a parking area by the swing bridge on the canal to the E. A viewpoint on the N end of the ridge overlooks 'New York' and looks out to sea. There is second viewpoint on E facing the slope above the canal. A 'boat' sculpture formerly stood at this spot. In the extreme SE corner of the compartment there is a steep sided knoll surmounted by an Iron Age dun. Almost the whole of this cpt is designated as ASNW.

# **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.