



Habitat Action Plan: Woodland

Introduction

Scope

This grouped Habitat Action Plan (HAP) includes all habitats found within the semi-natural woodland complex:

- Lowland Mixed Deciduous Woodland
- Upland Mixed Ashwoods
- Upland Oakwood
- Veteran Trees
- Wood-Pasture & Parkland

The interface between woodland habitats and other habitats such as grassland or waterbodies is important for many species and can be particularly diverse. These woodland edge habitats are considered as part of this plan.

NB Wet Woodlands are covered in the Wetlands HAP. Traditional Orchards and Hedgerows are covered in the Farmland HAP. Transport corridors and street trees are included in the Brown Field / Urban HAP.

Management of designated sites to maintain and/or improve the condition of their features is not within the scope of this plan. Such sites have their own management plans and actions are reported elsewhere (eg special sites database). This plan seeks to focus on 'other' sites and the connectivity between sites in order to improve ecosystem functioning and the robustness of the area to threats such as climate change. This, landscape scale approach to woodland habitats in Pembrokeshire highlights three priority areas in which conservation effort could be concentrated:

- The Gwaun and Nevern valleys (including parts of the North Pembrokeshire Woodlands Special Area of Conservation).
- The Daugleddau Woodlands (including areas of ancient parklands and esturine woodlands).
- Wooded coastal slopes & valleys (often small and isolated wooded areas).

Vision Statement

To maintain and improve the condition and extent of woodland habitats and their associated species in Pembrokeshire.

Description of Habitats

Woodland in Pembrokeshire tends to be confined to marginal agricultural land, reflecting the pattern of intensive farming in the County. Semi-natural broadleaved woodland is predominantly Oak woodland and covers approximately 4% of the County, with some of the finest examples occurring in the Gwaun and Nevern valleys and in the upper Daugleddau Estuary. These support exceptionally rich lichen communities and populations of ferns, bryophytes & fungi. Where adjacent to waterbodies, they can also provide important resting and breeding sites for Otters. Woodland in Pembrokeshire also has important populations of Dormouse, bats, birds, butterflies and other invertebrates. Many of the sites have carpets of classic woodland flowers such as Bluebell, Wood Anemone and Wood Sorrel.

Most Oak woodland in Pembrokeshire is lowland in character, reflecting the mild oceanic climate. In the South of the County, pockets of Ash woodland survive on base-rich soils overlying limestone.

Wood pasture is scarce in the County and is of particular value for lichens and invertebrates. Individual trees can be 300-400 years old, although trees as old as this are now scarce. The full extent of this habitat in Pembrokeshire is likely be greater than that currently known and the collection of data on its extent and associated wildlife is vital for identifying issues and priorities and for the management of sites.

Veteran trees may be associated with other woodland habitats, but are also commonly found scattered throughout fields where they have traditionally served as boundary markers.

Woodlands provide important ecosystem services such as climate regulation, flood alleviation and as a recreational resource to promote the health and wellbeing of the human population. They also provide a valuable economic resource.

Threats

Management of woodlands, including surrounding land use and management of boundary features and woodland edges, can greatly influence their biodiversity value. In general, the abandonment of historical management practices has resulted in a lack of age and structural diversity in woodlands and therefore also a lack of standing and fallen dead wood which can support a variety of invertebrates and fungi.

Threats to woodland habitats in Pembrokeshire have been identified as:

- Loss resulting in isolation and fragmentation of remaining habitat.
- Inappropriate, or lack of management (including grazing) – both current and historic.
- Climate change.
- Invasive non-native species.
- Disease, such as *Phytophthora* and *Chalara fraxinea* (ash dieback).
- Pollution – eg long range deposition of dust, NO_x & SO_x from diffuse & point sources (including agriculture).
- Development – including quarrying and associated activities such as construction of access tracks and associated infrastructure.
- Increasing demand for firewood is a threat where ad-hoc collection of fallen dead wood or felling of trees without regard for the long term management of the site occurs. However, demand for firewood can also be an opportunity to stimulate the re-introduction of traditional management practices such as coppicing.
- Increasing demand for recreational access resulting in greater potential for disturbance.

Related Plans and Policies

Other plans / policies directly affecting the management of woodland habitats in Pembrokeshire are:

- Woodlands for Wales Strategy. Website available at: <http://wales.gov.uk/topics/environmentcountryside/forestry/woodlandsforwales/?lang=en>
- Pembrokeshire Coast National park Management Plan. Available at: <http://www.pembrokeshirecoast.org.uk/default.asp?PID=196>
- North Pembrokeshire Woodlands Special Area of Conservation. Website available at: <http://www.ccw.gov.uk/landscape--wildlife/protecting-our-landscape/special-sites-project/north-to-rhos-sac-list/north-pembs-woodlands-sac.aspx>
- SSSI Management Plans. Refer to Natural Resources Wales local offices.
- Urban Habitat Action Plan: <http://ukbars.defra.gov.uk/project/show/36376>

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- Farmland Habitat Action Plan:
<http://ukbars.defra.gov.uk/project/show/36376>
- Wetlands Habitat Action Plan:
<http://ukbars.defra.gov.uk/project/show/36376>
- Invasive Non-Native Species Action Plan (being developed at the time of publication of this review. Once complete it will be available at the following web page): <http://ukbars.defra.gov.uk/project/show/36376>
- Rhododendron Clearance: recommendations for reducing the impact on the otter (Lyles, 2006). CCW report; Contact Natural Resources Wales local offices for details.

Species Associated with these Habitats

Priority Species Associated with this Grouped Habitat Action Plan				
Species Name	Common Name	UK Bap Spp	S42 list Welsh Spp	Locally Important Spp
Mammals				
<i>Barbastella barbastellus</i>	Barbastelle Bat	✓	✓	
<i>Lutra lutra</i>	Otter	✓	✓	
<i>Muscardinus avellanarius</i>	Dormouse	✓	✓	
<i>Mustela putorius</i>	Polecat	✓	✓	
<i>Myotis bechsteinii</i>	Bechstein's Bat	✓	✓	
<i>Nyctalus noctula</i>	Noctule Bat	✓	✓	
<i>Pipistrellus nathusii</i>	Nathusius Pipistrelle			✓
<i>Pipistrellus pipistrellus</i>	Common Pipistrelle		✓	
<i>Pipistrellus pygmaeus</i>	Soprano Pipistrelle	✓	✓	
<i>Plecotus auritus</i>	Brown Long-eared Bat	✓	✓	
<i>Rhinolophus ferrumequinum</i>	Greater Horseshoe Bat	✓	✓	
<i>Rhinolophus hipposideros</i>	Lesser Horseshoe Bat	✓	✓	
Birds				
<i>Anthus trivialis</i>	Tree Pipit	✓	✓	
<i>Carduelis cabaret</i>	Lesser Redpoll	✓	✓	
<i>Cuculus canorus</i>	Common Cuckoo	✓	✓	
<i>Dendrocopos minor subsp. comminutus</i>	Lesser Spotted Woodpecker	✓	✓	
<i>Falco tinnunculus</i>	Kestrel		✓	
<i>Ficedula hypoleuca</i>	Pied Flycatcher		✓	
<i>Locustella naevia</i>	Common Grasshopper Warbler	✓	✓	
<i>Milvus milvus</i>	Red Kite			✓
<i>Muscicapa striata</i>	Spotted Flycatcher	✓	✓	
<i>Parus montanus subsp. kleinschimdti</i>	Willow Tit	✓	✓	
<i>Parus palustris subsp. palustris/dresseri</i>	Marsh Tit	✓	✓	
<i>Phoenicurus phoenicurus</i>	Redstart			✓
<i>Phylloscopus sibilatrix</i>	Wood Warbler	✓	✓	
<i>Picus viridus</i>	Green Woodpecker			✓
<i>Prunella modularis subsp. occidentalis</i>	Hedge Accentor	✓	✓	
<i>Pyrrhula pyrrhula subs. pileata</i>	Common Bullfinch	✓	✓	
<i>Turdus philomelos subs. clarkei</i>	Song Thrush	✓	✓	
Reptiles / Amphibians				
<i>Anguis fragilis</i>	Slow-worm	✓	✓	
Invertebrates				
<i>Boloria euphrosyne</i>	Pearl-bordered Fritillary	✓	✓	
<i>Boloria selene</i>	Small Pearl-bordered Fritillary	✓	✓	
<i>Thecla betulae</i>	Brown Hairstreak	✓	✓	
Vascular Plants				
<i>Hymenophyllum</i>	Tunbridge Filmy Fern			✓

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<i>tunbrigense</i>				
<i>Hymenophyllum wilsonii</i>	Wilson's Filmy Fern			✓
<i>Melittis melissophyllum</i>	Bastard Balm	✓	✓	
Lower Plants				
<i>Anaptychia ciliaris</i> subsp. <i>ciliaris</i>	A Lichen	✓	✓	
<i>Bacidia incompta</i>	A Lichen	✓	✓	
<i>Lobaria</i> Community	Lungwort		✓	✓
<i>Megalospora tuberculosa</i>	A Lichen	✓	✓	
<i>Physcia tribacioides</i>	Southern Grey Physcia	✓	✓	
<i>Wadeana dendrographa</i>	A Lichen	✓	✓	
<i>Leptodon smithii</i>	Prince of Wales Feather Moss		✓	
<i>Rhytidiadelphus subpinnatus</i>	Scarce Turf Moss	✓	✓	

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Plan Aims

In many cases the extent or condition of the habitats are unknown, or the actions required will run far beyond the life of this plan. In these instances, it is not possible to set meaningful numeric targets, so they are expressed here as aims. Where numeric targets can be set, they are specified. The focus of this plan is on provision of high quality habitats in a well connected landscape which will provide suitable opportunities for associated species. Species specific conservation measures may be appropriate in some instances and may be added as individual actions below.

Ref	Aim	Deadline	Comments
W01	Maintain the extent of semi-natural broadleaf woodland in Pembrokeshire - 6600 ha (Priority Habitats of Wales, 2003).	Life of this plan - 2019	This is a no <i>net</i> loss aim.
W02	No loss of ancient semi-natural woodland in Pembrokeshire (4,616 ha)	Life of this plan - 2019	Figures as mapped in the Ancient Woodland Inventory.
W03	Where possible, seek to restore Plantations on Ancient Woodland Sites (PAWS) to Native Woodland. Reduce proportion of conifers in plantations to maximise the contribution of these sites to the ancient woodland resource.	Ongoing	Priority identified by Woodland Ecosystem Group of the Wales Biodiversity Partnership.
W04	Eradicate Laurel and Rhododendron in Pembrokeshire woodlands where practicable.	Ongoing	See INNS Species Action Plan Refer to: Rhododendron Clearance: recommendations for reducing the impact on the otter (Lyles, 2006)
W05	Encourage development of larger buffers between woodland and sources of pollution to reduce the effect of pollution on the priority habitat (regulating the source of the pollution falls outside the scope of this plan).	Ongoing	
W06	Encourage development of larger buffers between woodland and development sites to reduce the effect of those developments on the priority habitat (regulating the development falls outside the scope of this plan).	Ongoing	

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W07	Improve the robustness of woodland habitats to threats such as climate change by increasing connectivity and functional area. Target: one site per year planted for this purpose.	Report annually	
W08	Improve resilience to disease amongst Pembrokeshire woodlands by maintaining diversity between and within species. Planted stock is often not local to Pembrokeshire (sometimes not even of British origin) and may come from a narrow gene pool. Natural regeneration and sowing of locally collected, Pembrokeshire tree seed should be encouraged over planting of nursery stock where possible. Target 25Ha natural regeneration.	2033	
W09	Encourage establishment and development of veteran or future veteran trees across the County where this would not compromise other priority habitat and where land capacity allows.	Ongoing	
W10	Identify key wood pasture / parkland sites in Pembrokeshire through lichen and invertebrate surveys and produce inventory. Target sites currently under the Tir Gofal scheme which could be at risk at the end of the scheme.	2020	
W11	Increase awareness about the effects of human behaviours (such as gathering firewood, foraging, dog walking, keeping cats near Dormouse habitat etc) on these priority habitats.	Ongoing	

Action

Code	Action	Report By	Lead Role	Progress / Additional Information
POLG1.01	To ensure adequate provision for the conservation of habitats and species within the Pembrokeshire County Council and National Park Local Development Plans,		PBP	To address aims W01, W02, W05 & W06. Included in the Policy and Legislation Generic

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	including biodiversity outside of designated sites.			Action Plan
POLG1.03	Through the implementation of Pembrokeshire's Biodiversity Supplementary Planning Guidance, ensure all Planning applications are assessed for possible effects on biodiversity resources. Ensure that planning applications which affect LBAP Habitats and Species are addressed and include full ecological surveys which are properly considered, and mitigation measures which significantly address potential negative impacts.		PBP	To address aims W01, W02, W05 & W06. Included in the Policy and Legislation Generic Action Plan
W01.1				
W02.1				
W03.1	PAWS Restoration at Minwear Woods		NRW	
W03.2	PAWS Restoration at Canaston Woods		NRW	
W04.1				
W05.1				
W06.1				
W07.1				
W08.1	25Ha natural regeneration at Penlan woods	2033	PCNPA	
W09.1	Survey veteran trees in Pembrokeshire by 1Km squares.	2015	PBP	
W10.1				
W11.1	Produce promotional material for use by partners in woodlands with public access – 'Don't take dead wood'	2015	PCNPA	
W11.2	Produce promotional material for use by partners in woodlands with public access – 'Dogs and <i>Phytophthora</i> '	2015	PCNPA	