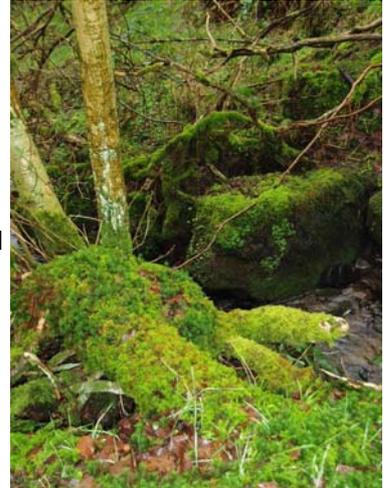


WET WOODLAND

Nationally

Wet woodland occurs on poorly drained or seasonally wet soils, usually with alder, birch and willows as the predominant tree species, but sometimes including ash, oak, pine and beech on the drier riparian areas. It is found on floodplains, as successional habitat on fens, mires and bogs, along streams and hill-side flushes, and in peaty hollows. These woodlands occur on a range of soil types including nutrient-rich mineral and acid, nutrient-poor organic ones. The boundaries with dryland woodland may be sharp or gradual and may (but not always) change with time through succession, depending on the hydrological conditions and the treatment of the wood and its surrounding land. Therefore wet woods frequently occur in mosaic with other woodland key habitat types (e.g. with upland mixed ash or oakwoods) and with open key habitats such as fens. Management of individual sites needs to consider both sets of requirements.



Many alder woods are ancient and have a long history of coppice management which has determined their structure, and in some situations it appears that this practice has maintained alder as the dominant species and impeded succession to drier woodland communities. Other wet woodland may have developed through natural succession on open wetlands (sometimes following cessation of active management) and structurally are little influenced by direct forestry treatments.

Notable concentrations of wet woodland on fens occur in East Anglia, Shropshire and Cheshire, while hill-side and plateau alder woods are more restricted to Wales, Cumbria and western Scotland. Fragments of ancient floodplain forest are rare, and the best examples are probably in the New Forest and northern Scotland. Bog woodlands of pine on bog are confined to Scotland, but fragments of birch bog woodland occur more widely in scattered stands across the UK. Some wet woods include habitats identified under Annex 1 of the EC Habitats Directive, for example Residual alluvial forests and Bog Woodland.

There are no precise data on the total extent of wet woodland in the UK, but in the late 1980s the Nature Conservancy Council estimated the total extent of this type in ancient semi-natural woodland to be about 25,000 - 30,000 ha. The area of recent wet woodland may be at least as large again. Thus a crude estimate of the total wet woodland area in the UK is 50,000 - 70,000 ha.

Wet woodland combines elements of many other ecosystems and as such is important for many taxa. The high humidity favours bryophyte growth. The number of invertebrates associated with alder, birch and willows, is very large, although some are now confined to just a few sites, for example the biodiversity priority species beetles *Melanopion minimum* and *Rhynchaenus testaceus*. Even quite small seepages may support craneflies such as *Lipsothrix errans* and the endemic *Lipsothrix nervosa*. Dead wood within the sites can be frequent, and its association with water provides specialised habitats not found in dry woodland types - the fly *Lipsothrix nigristigma* for example is associated with log jams in streams. Wet woodland provides cover and breeding sites for otters *Lutra lutra*. While few rare plant species depend on wet woodland *per se*, there may be relict species from the former open wetlands on the site such as the marsh fern *Thelypteris palustris*.

**Extent in UK:
56,513 ha**

In the Peak District

Wet woodland comprises a range of alder, birch, or willow dominated semi-natural woodland habitats and is most frequent in the Dark and South West Peak Natural Areas. It is most widespread on flushed slopes, valley sides and moorland cloughs where the ground is permanently waterlogged. It also occurs in association with other semi-natural woodland such as oak/birch or ash woodland (a good example is Clough Wood, Darley Dale) or within conifer plantations, or may form transitions to open habitats such as acid grassland, heath or acid flush. Although most sites are restricted to the Dark and South West Peak, spring-lines on dalesides sometimes support wet woodland which, although usually on a small scale, may be important for biodiversity locally.

Wet birch woodland occurs in a few locations on deep peat around the margins of blanket bog. It may form mosaics with marshy grassland or wet heath and in some situations forms transitions to other semi-natural woodland. Sites include isolated areas on the Eastern Moors such as Ramsley Moor and birch/willow scrub on the Warslow Moors.

Wet woodland, typically dominated by alder, also occurs on the floodplain of rivers such as the Derwent, Wye and Dove, where it has survived on waterlogged land not reclaimed for agriculture. Such sites may include transitions to other habitats including other priority woodland types and other wetland habitats, but also include isolated wet

woodland areas separated by agricultural land.

Wet woodland has also developed in mineral extraction sites, disused railway lines and tip sites, not all of which are recent. Examples include Rowsley Sidings, Hogshaw Sidings (Buxton) and Gamesley Sidings.



Wet woodland combines elements of several other ecosystems and as such is important for many species. The flora can be very rich with species such as marsh marigold and tussock sedge. It can provide cover and breeding sites for otters and the retention of this habitat, especially along river valleys, is an important factor in the re-colonisation of the Peak District by this species. The numbers of invertebrates associated with birch, alder, willows and elm is large, although some are confined now to just a few sites. This is an important habitat for some groups including moths, hoverflies and craneflies that require a natural, seasonably variable, hydrology. Dead wood within riverside sites can be frequent and provides good habitats for associated beetles, especially longhorn beetles, other invertebrates and fungi, whilst dead branches and trunks (also known as large woody debris) in streams create a particularly specialised habitat supporting a rich invertebrate fauna.

Otter © Paul Hobson

**Extent in PD:
c. 88 ha**

Current Factors Affecting the Habitat & Habitat Condition

- Clearance of damp woodland for agriculture or intensive forestry.
- Removal of larger moss-covered trees and dead wood; removal of old or diseased trees.
- Water pollution & nutrient enrichment of ponds from agricultural run-off.
- Loss of bankside tree cover.
- Alteration of hydrology through loss or dredging of woodland ponds; ditching of streams; drainage or interception of seepages; groundwater abstraction.
- Scrub invasion resulting from mismanagement of water levels.
- Tidying of flood debris or major disturbance of tidal flooding; tidying of fallen wood from woodland streams.

Recent Work

The importance of riverside habitats to flood alleviation is increasingly being recognised in the Peak District. Work by Staffordshire and Derbyshire Wildlife Trusts, Trent Rivers Trust and various angling clubs has included the installation of woody debris into river channels, and sensitive management of riverside trees.

Future work is likely to include management and creation of wet woodland alongside rivers and streams in conjunction with other appropriate habitats.

Associated BAP Species in the Peak District

Otter	<i>Lutra lutra</i>
Bullfinch	<i>Pyrrhula pyrrhula pileata</i>
Spotted flycatcher	<i>Muscicapa striata striata</i>
Song thrush	<i>Turdus philomelos clarkei</i>

Lesser spotted woodpecker	<i>Dendrocopos minor comminutus</i>
Nightjar	<i>Caprimulgus europaeus europaeus</i>
Willow tit	<i>Parus montanus kleinschmidtii</i>
Marsh tit	<i>Parus palustris palustris/dresseri</i>

NVC Communities

The principal vegetation types (and their associated sub-communities) included in this habitat are:

- W1** - *Salix cinerea* - *Galium palustre* woodland
- W2** - *Salix cinerea* - *Betula pubescens* – *Phragmites australis* woodland
- W3** - *Salix pentandra* - *Carex rostrata* woodland
- W4c** - *Betula pubescens* – *Molinia caerulea* woodland: *Sphagnum* sub-community
- W5** - *Alnus glutinosa* - *Carex paniculata* woodland
- W6** - *Alnus glutinosa* - *Urtica dioica* woodland
- W7** - *Alnus glutinosa* - *Fraxinus excelsior* – *Lysimachia nemorum* woodland