

Native Woodlands

Ancient woodlands are of great importance as they are likely to contain the widest variety of plants and invertebrates



Background to this plan

This plan has resulted from a review of two separate Habitat Action Plans included in the current Biodiversity Action Plan for Greater Manchester, published in 2003. These Action Plans were for:

- ◆ Lowland Broadleaved Woodland
- ◆ Upland Oak Woodland

This new Habitat Action Plan has incorporated both habitat types into one plan because, after review, it was considered that the threats and actions needed to conserve these woodland types were similar across Greater Manchester. The Plan also now includes wet woodland, which was not previously covered in the Greater Manchester Biodiversity Action Plan, as this is identified as one of the UK's biodiversity habitats.

Ecology / Priority Habitat Description

Lowland Broadleaved

Lowland mixed broadleaved woodland occurs on free draining soils, which corresponds to the following NVC vegetation types:

- ◆ W8 Ash-maple - dogs mercury
- ◆ W10 Oak-bracken-bramble woodland

Many of the woodlands within Greater Manchester do not fit easily into the NVC, as they have been modified through intervention, management and disturbance throughout the centuries. However, the majority of lowland broadleaved woodlands within the county tend to have more resemblance to W10.

The plants within the shrub and ground layer vary according to soil type but typical shrub species can include hawthorn, holly, elder, hazel and rowan amongst its species. bramble, bracken, creeping soft grass and bluebell tend to dominate the ground flora, along with other species such as honeysuckle, ferns, lesser celandine, wood anemone and red campion.

Woodlands classed as lowland broadleaved may also be: ancient semi-natural woodlands, semi-natural secondary woodlands or plantation woodlands, dependant upon their respective age or origin. However to be classified as a priority habitat they need to exhibit a predominately semi-natural ground flora ([The GM SBI Selection Guidelines](#) Table 1 lists suitable species).

Lowland acid oak woodland, which occurs on free draining sandy soils, is also included within this action plan. The canopy is again dominated by oak and birch with holly and rowan scattered amongst the shrub layer. The ground flora is dominated by wavy hair grass with other notable species including heather, bilberry, bracken, foxgloves and woodrushes.

Lowland woodlands may also qualify as a priority habitat in Greater Manchester if they

Native Woodlands

include good populations of species such as purple hairstreak, butterfly, bats or birds such as, wood warbler, spotted flycatcher and willow tit. ([The GM SBI Guidelines](#) provide guidance on important bird assemblages and species).

Upland Oak

Two types of upland oak woodland are recognised by the National Vegetation Classification (NVC), however only one community type is found in Greater Manchester:

- ◆ W11 Sessile oak-downy birch-wood sorrel woodland

The main understorey species within this type of upland wood are holly, rowan and hazel. However, as many woodlands have a long history of management, disturbance and modification, the canopy and shrub layer frequently do not correspond well with this NVC classification and there may be some trend towards other NVC woodland communities on the NVC spectrum.

Typical ground flora species in upland oak woodland include:

| | |
|-----------------|-----------------------------|
| Wavy hair grass | <i>Deschampsia flexuosa</i> |
| Wood sorrel | <i>Oxalis acetosella</i> |
| Heather | <i>Calluna vulgaris</i> |
| Bilberry | <i>Vaccinium myrtillus</i> |
| Bracken | <i>Pteridium aquilinum</i> |

Native Woodlands

| | |
|--------------------|----------------------------|
| Broad buckler fern | <i>Dryopteris dilatata</i> |
| Great woodrush | <i>Luzula sylvatica</i> |
| Hard Fern | <i>Blechnum spicant</i> |

The ground layer may however vary locally due to the presence and intensity of grazing. Heavily grazed woodland will tend to show little natural regeneration and have a more restricted ground flora. Where occasional or seasonal grazing has occurred it can benefit the development of a diverse woodland habitat, with a mixture of species and ages in the tree canopy.



Gristlehurst Wood, Heywood (1)

Where the soil type is more alkaline, for example, along streambeds, plants such as ransoms, tufted hairgrass and dog's mercury may also be present. Ash and elm (wych

elm) may also be locally abundant in these areas.

Upland oak woodlands may again be ancient secondary woodlands, which have naturally colonised open ground or plantation woodlands for amenity, recreation, landscaping, or long-term biodiversity improvements. The priority habitat is best identified by the presence of a semi-natural ground layer.

Breeding birds of conservation interest:

| | |
|-----------------|--------------------------------|
| Redstart | <i>Phoenicurus phoenicurus</i> |
| Wood warbler | <i>Phylloscopus sibilatrix</i> |
| Pied flycatcher | <i>Ficedula hypoleuca</i> |

Other species of conservation concern associated with upland oak are bats.

Wet Woodland

Wet woodland occurs on poorly drained, or seasonally wet soils, usually with alder, birch and willows as the predominant tree species.

The habitat is found on floodplains (rare in Greater Manchester), margins of open water, as successional habitat mosslands, along the streams and flushes within Clough woodland, and in peaty hollows. This wide range of soil types and hydrological states gives a wide range of NVC woodland

communities, which are often difficult to attribute to any one wet woodland stand.

In addition, the boundaries with drier types of woodland may be sharp or gradual and may (but not always) change with time through succession, are dependant on the hydrological conditions and the management of the wood and its surrounding land. Wet woods frequently occur in mosaic with other woodland key habitat types (e.g. with lowland broadleaved or upland oak woods) and with open key habitats such as mosslands. Management of individual sites needs to consider both sets of requirements.



Healey Dell, Rochdale (1)

Wet woodland is also important for invertebrates particularly on long established sites. Some of these invertebrates are biodiversity action plan species in their own right, for example the beetles *Melanopion minimun* and *Rhynchaenus testaceus*.

Native Woodlands

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 logjams in streams.

Current status and distribution

Within Greater Manchester there is approximately 781ha of ancient woodland (native woodland present since at least 1600AD), as identified by the Provisional Ancient Woodland Inventory (2007). However, the inventory only identified woodlands over 2ha in area. Much of the existing resource is smaller and fragmented, and would not have been identified by the survey. Some of the larger areas of woodland within the conurbation also incorporate some remaining ancient woodland, within a larger more recent block. There are currently no estimates for secondary woodland and plantation woodland that qualify as priority habitat.

Lowland Broadleaved

National

Lowland mixed deciduous woodland is a UKBAP priority habitat, which is similar though not identical to the GM lowland

broadleaved types. Generally, the UK has low woodland cover, which makes the remaining resource scarce. This is a result of the clearance of land for agriculture and development, which has left many fragmented pockets of woodland. Although estimates are not wholly reliable, it is believed that there are approx 250,000ha of lowland broadleaved woodland in the UK. Of note, however, is the estimate that the remaining area of ancient semi-natural woodland within this category has declined by 30-40% through clearance, over grazing and replanting with non- native species. This represents the most ecologically biodiverse woodland within this category and its loss will therefore have the greatest impact on this ecosystem.



Hawthorn Blossom (1)

Greater Manchester

Lowland broadleaved woodland is classified as a scarce habitat within Greater

Manchester and is thought to cover approximately 2.5% of the land area of Greater Manchester.

All the districts of Greater Manchester contain lowland broadleaved woodland, although some districts such as Stockport and Tameside have a greater extent of the resource than other more sparsely wooded areas. The resource throughout Greater Manchester is characterised by relatively small woodlands often isolated from each other, although there are notable networks of woodlands along river corridors in Stockport and Bury.

Examples of good Broadleaved woodland:

| | |
|---------------------------|-------------------|
| Gower Hey | <i>Tameside</i> |
| Elnup Wood in Shevington | <i>Wigan</i> |
| Etherow Country Park | <i>Stockport</i> |
| Marple & Torkington Woods | <i>Stockport</i> |
| Cotteril Clough | <i>Manchester</i> |

Upland oak

National

Upland oak woodland is a nationally important habitat, which in Europe is restricted to the British Isles. The habitat is listed in Annex 1 of the EC Habitats and Species Directive and it is a priority habitat in the UK Biodiversity Action Plan. There are believed to be between 70,000 and

100,000ha of upland oak woodland in the UK, although there are no precise figures. The majority of this habitat and the largest woodland blocks are concentrated in Argyll, Lochaber, Cumbria, Gwynedd, Devon and Cornwall.

Although there are other habitats of a similar type in Europe, the British Isles are recognised as distinctive because of their extent and the unique communities, which they support.



Ringley Woods, SBI, Bolton (2)

Greater Manchester

Within Greater Manchester the total coverage of upland oak wood is unknown, and has experienced a long decline as woodlands have been clear felled, or have fallen into poor condition through over grazing and as a result of recreational pressures. The remaining areas of upland oak woodland are also fragmented, existing

Native Woodlands

in small isolated blocks on the edge of urban areas often surrounded by plantation or secondary woodland.

The upland oak woodland within Greater Manchester is therefore generally characterised by being in unfavourable, but stable condition. A number of woodlands are being brought into management, which should assist in a move towards favourable status.

The following districts contain upland oak woodland:

- Bolton
- Bury
- Oldham
- Rochdale
- Stockport
- Tameside

Examples of good upland oak woodland:

| | | |
|--------------------------|-----|----------------|
| Leavers Wood | SBI | <i>Oldham</i> |
| Tack Lee | SBI | <i>Heywood</i> |
| Gristlehurst Wood | SBI | <i>Heywood</i> |
| Saplin Wood | SBI | <i>Bury</i> |

Wet woodland

National

There is no precise data on the total extent of wet woodland in the UK, but in the late 1980s the, then Nature Conservancy Council, estimated the total extent of wet woodland within ancient semi-natural

woodland to be about 25,000 - 30,000 ha. It is further estimated that there may be an additional 25,000 to 30,000 of wet woodland of more recent origin. Thus a crude estimate of the total wet woodland area in the UK may be as high as 50,000 - 70,000 ha.

Notable concentrations of wet woodland occur on fens in East Anglia, Shropshire and Cheshire, whilst hillside 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 in the New Forest and Northern Scotland. Bog woodlands of pine are confined to Scotland, but fragments of birch bog woodland occur more widely in scattered stands across the UK. Wet woodlands develop naturally on wetland sites as a part of the process of natural succession.

Greater Manchester

Although the area of wet woodland within Greater Manchester is not known, the habitat occurs in all of the districts of Greater Manchester. Wet birch woodland occurs in Wigan, Salford and Trafford.

Notable examples of wet woodland include:

| | | |
|------------------|-----|-------------------|
| Fletcher Moss | SBI | <i>Manchester</i> |
| Lawns Wood | SBI | <i>Wigan</i> |
| Naden Brook | SBI | <i>Rochdale</i> |
| Birchmoss Covert | SBI | <i>Trafford</i> |

Factors affecting the habitat

Lowland broadleaved & upland oak

A number of factors have resulted in the loss of both lowland broadleaved and upland oak woodland in the UK. This has been the result of a number of issues including:

- ◆ Overgrazing by livestock and deer
- ◆ Clearance for development
- ◆ Clearance for agriculture
- ◆ New woodlands continue to be planted using non-locally native species and often with no longer-term management.
- ◆ Constraints on the spread of woodland onto adjacent ground from agriculture, industrial or residential development, leading to greater uniformity of structure across the site.
- ◆ Invasion of non-native species including sycamore, Japanese Knotweed, Himalayan Balsam, and Rhododendron.
- ◆ Cessation of traditional management practices and neglect of woodlands.

- ◆ A legacy of inappropriate practices such as felling to replant with conifers and formalisation as public parks.
- ◆ Recreational activities including motorcycling, scrambling and dog walking.
- ◆ Vandalism and anti-social behaviour, such as fires and fly tipping.
- ◆ Climate change, potentially resulting in changes in the vegetation communities.

Wet woodland

This type of woodland is affected by similar factors that impact on other lowland and upland woodlands, though access related issues tend to be less of a problem simply because the woods are often very wet and inaccessible. Issues specific to this type of woodland include:

- ◆ Clearance and conversion to other land-uses either directly or through adjacent development or agriculture affecting its drainage.
- ◆ Lowering of water tables through drainage or water abstraction,

resulting in change to drier woodland types.

- ◆ Inappropriate grazing levels and poaching of the soil by sheep, cattle and deer leading to a change in the woodland structure, ground flora impoverishment and inhibiting regeneration.
- ◆ Flood prevention measures, river control and canalisation, leading to loss of dynamic disturbance-succession systems and invertebrate communities, as well as possible reductions in the extent of individual sites.



Naden Brook (2)

- ◆ Poor water quality arising from eutrophication, agricultural run-off, industrial effluents or rubbish

dumping leading to changes in the composition of the ground flora and invertebrate communities.

- ◆ The river catchments in Greater Manchester acts as conduits for non-native species such as Himalayan balsam (*Impatiens glandulifera*), Japanese knotweed (*Fallopia japonica*) and giant hogweed (*Heracleum mantegazzianum*). They alter vegetation composition and lower conservation value. The management of these invasive species presents a challenge within many different environments.

Current actions

Within Greater Manchester, the area of native woodland is thought to be relatively stable, with any losses being small scale. However, much of the remaining woodland is not being actively managed.

- ◆ Many of the existing woodlands within Greater Manchester are selected as Sites of Biological Importance and it is proposed under the newly revised SBI Selection Guidelines (July 2008) that any remaining sites, which support ancient semi-natural woodland are

designated as SBI's across the conurbation.

- ◆ The Greater Manchester Ecology Unit is consulted on any planning proposals, which affect designated SBI sites and are able to propose measures to ensure that areas of woodland are maintained where appropriate.
- ◆ [PPS9 Biodiversity and Geological Conservation](#) identifies that planning decisions should prevent harm to biodiversity and that planning decisions should maintain, enhance, restore or add to biodiversity. In addition, The Natural Environment and Rural Communities Act (2006) also requires all public bodies including local authorities to have regard in exercising their functions to conserving biodiversity.
- ◆ Many local planning authorities have policies relating to nature conservation, biodiversity, green space, trees and woodland. All of these provide a degree of protection for woodland. Unitary Development Plan's are currently in the process of being replaced by Local Development Frameworks. These new plans are expected to contain

similar policies regarding nature conservation and biodiversity.

- ◆ Forestry Commission grant scheme.
The Forestry Commission through the Woodland Grant Scheme England, has funding available for both woodland creation and woodland management, either through the woodland improvement grant which is a one off grant which can be used to bring woodland into management for biodiversity, or the woodland management grant which is an annual payment for the ongoing management of woodlands.
- ◆ Plantation on Ancient Woodland Sites (PAWS) is also a priority for Forestry Commission funding. This endeavours to increase their ecological value by selective felling of the plantation woodland, and subsequently replanting with native species, or if appropriate facilitating natural regeneration. Restoration work has been undertaken at Encroft Wood in Stockport.
- ◆ Increased interest in and development of wood fuel burners may have a positive effect of bringing more woodland into

management as low grade logs and timber may become a saleable resource. Market and supply chain development is in the early stages, but a number of the Greater Manchester local authorities are actively investigating this possibility.

- ◆ A number of Greater Manchester districts have received accreditation from the UK Woodland Assurance Standard for the sustainable management of their woodlands.
- ◆ Planting of approximately 50 ha of native upland oak woodland is planned through United Utilities' Strategic Catchments Access Management Plan (SCaMP) fund. Precise figures are still to be confirmed through Forestry Commission and UU, but there will be approximately 30ha at Castleshaw Reservoir in Oldham, 11ha at Watergrove, Rochdale and 9ha at Greenbooth / Naden, Rochdale.

Objectives and targets

| Objective | Target | Quantity | Target Date |
|------------------------------|---|----------|-------------|
| Maintain current extent | Maintain the extent of the existing Greater Manchester lowland broadleaved, upland oak and wet woodlands. | 3500 ha | 2015 |
| Achieve favourable condition | Using appropriate management for each woodland type, restore the diversity of structure and species within the habitat to favourable condition. | 2500 ha | 2015 |
| Expand woodland habitat | Identify suitable areas to expand the three woodland habitats, through natural regeneration or woodland planting. | 480 ha | 2015 |

Proposed actions

- ◆ Disseminate information concerning the ecology of the three woodland types and best practice for habitat management. RRF, PEF, GMEU, GMBP, LA's. Ongoing
- ◆ Engage with woodland owners to assist with management planning and grant funding applications, and assist them to work towards FSC woodland certification or other schemes where appropriate. RRF, PEF. Ongoing
- ◆ Where appropriate, secure benefits through the planning system including habitat restoration, habitat management, new planting and expansion of extant sites. On appropriate sites secure a buffer zone around any new development to assist in retaining quality woodland habitat. GMEU, LA's. Ongoing
- ◆ Produce an accurate portfolio of woodland sites across the conurbation and determine the condition of these sites. RRF, PEF, GMEU, LA's, LWT. 2010

- ◆ Monitor condition of woodland to determine trends and ensure that management regimes are appropriate. RRF, PEF, UU, GMEU, LA's. Ongoing
- ◆ Identify opportunities to expand the three woodland types and either plant new trees or manage the woodland to allow natural regeneration to occur. Utilise available grants from the Forestry Commission and schemes such as SCaMP to create new woodland. RRF, PEF, UU, LA's. Ongoing

Lead partners

| | |
|------|--|
| BTCV | British Trust for Conservation volunteers |
| GMBP | Greater Manchester Biodiversity Project |
| GMEU | Greater Manchester Ecology Unit |
| LA's | Local Authorities |
| LWT | Lancashire, Greater Manchester & North Merseyside Wildlife Trust |
| PEF | Pennine Edge Forest |
| RRF | Red Rose Forest |
| UU | United Utilities |

Best practice guidelines

There are two principle methods of creating new woodland:

Native Woodlands

- 1) Natural regeneration
- 2) Woodland planting

1) Natural regeneration

Lowland broadleaved & upland oak

Natural regeneration is generally used where existing semi-natural woodland is being extended onto land of low ecological value. This can be used to enable the woodland to spread naturally. It has a number of advantages over planting in that the new woodland will contain, in the long term a mix of plant and tree species similar to the original woodland, which will be appropriate to the location and soil type. It will also reduce issues relating to local provenance, or the introduction of non-locally native or inappropriate species.

There are a number of conditions, which are necessary to ensure that natural colonisation can take place:

- ◆ The area for the woodland extension must be secured to ensure that grazing, or similar activity, will not severely limit the effectiveness of natural colonisation as seeds or the resulting new plants are a food source.
- ◆ A supply of appropriate seeds must be present and many seeds

(particularly large tree seeds) do not travel large distances, and will only colonise new areas if immediately adjacent to the newly proposed area. Seed collection may assist this process.

- ◆ Non-native / alien species will colonise an area and may need to be selectively removed.
- ◆ Successful colonisation is also determined by the method of dispersal and the frequency of seeding. Hence species such as birch, which produce large quantities of small seed annually, are rapid colonisers, whereas acorns are produced in large quantities in mast year and rely on small mammals and birds for dispersal. Therefore, seed dispersal may need to be facilitated.
- ◆ With any wind blown seed species, colonisation will be denser in the direction of the prevailing wind.
- ◆ Ground conditions and previous land use will affect the colonisation of a new area. Dense grass swards are potentially more difficult for tree seeds to penetrate and may reduce the rate of colonisation. Conversely, bare

earth will be colonised by a large variety of seeds, which may include wind blown species from a number of different sources.

General principles indicate that natural colonisation is more successful on sites which:

- ◆ Have poor soils
- ◆ Have suitable sites for germination
- ◆ Appropriate weed control may be needed
- ◆ Bracken is controlled where necessary
- ◆ Areas are protected from browsing
- ◆ Area is immediately adjacent to seed source trees
- ◆ Colonisation can be undertaken on a long time scale.

Wet woodland

As wet woodland is a complex mosaic of both tree species and invertebrates, natural regeneration is the most advisable form of habitat creation. This not only increases the potential for appropriate trees of local provenance to grow, but also ensures that the trees and plants, which grow naturally on the site are suitable for the precise site conditions. This method is most likely to be successful and to be colonised by invertebrates and flora where existing

woodland is being extended, or very close to existing woodland.

For natural regeneration of wet woodland to occur, the ground conditions also need to be suitable, such as a high water table, or in a river valley etc. Given the small and fragmented nature of many existing wet woodland sites, natural regeneration may rarely be a practical option.

It is important that invasive species such as Japanese knotweed or Himalayan balsam are removed from the site prior to the site being given over to wet woodland. Treatment may have to take place over a number of seasons to eradicate the plants, and minimise any potential re-growth.

Both alder and birch are commonly found in wet woodlands. Birch is a prolific producer of wind born seeds. Alder produces a good seed crop every two to three years.

2) Woodland Planting

Lowland broadleaved & upland oak

On many sites, and for large-scale woodland creation, woodland planting may be the more desirable option. It has the advantage of enabling large-scale proposals to be implemented quickly, and for the desired trees and shrubs to be grown. The disadvantage of this approach is that the tree

or shrub species, which are planted, are more susceptible during the establishment period to drought and weed competition because the roots have been disturbed by the planting process: there is a greater risk that the trees will not be genetically appropriate and it will be more costly in the short term.

- ◆ Any planted tree species need to be appropriate to the site and to be of local provenance.
- ◆ Planting phased over a number of years can help ensure that the woodland contains species with a mix of ages to mimic natural woodland.
- ◆ In some locations it may also be possible and appropriate to introduce additional nature conservation value to the site through planting of wildflower plugs or bulbs and the sowing of seeds. Great care needs to be taken with this approach to ensure that stock is of local provenance and is appropriate for the site.
- ◆ In the early years, it is important to ensure that any grass sward, or weeds, are carefully managed to reduce or eliminate competition and

ensure that newly planted tree stock has the maximum chance of survival.

Suitable species for lowland broadleaved woodland planting in Greater Manchester include:

| | |
|-------------------------|-------------------------------|
| Ash | <i>Fraxinus excelsior</i> |
| Birch; silver and downy | <i>Betula spp</i> |
| Holly | <i>Ilex aquifolium</i> |
| Rowan | <i>Sorbus aucuparia</i> |
| Common Oak | <i>Quercus robur</i> |
| Hawthorn | <i>Crataegus monogyna</i> |
| Hazel | <i>Corylus avellana</i> |
| Crab apple | <i>Malus sylvestris</i> |
| Wych elm | <i>Ulmus glabra</i> |
| Goat willow | <i>Salix caprea</i> |

Suitable species for upland oak planting include:

Birch; silver and downy
Holly
Rowan
Common & sessile oak
Hawthorn
Hazel

Wet Woodland

Where wet woodland is being created, planting must be undertaken by hand and not using machinery, as wet woodland soils are very fragile and prone to mechanical

damage by large heavy machinery. Exact species for planting should be informed by the nearest available wet woodland/s to give an indication of the species and mixtures which may be suitable and of local provenance.

When wet woodlands are planted, they are impoverished compared to naturally regenerating or long established wet woodlands, as species are slow to colonise, particularly over long distances. However, establishing new wet woodland by planting can still represent an environmental gain, particularly where it is being established in an area of little biodiversity interest, or forming a natural buffer between intensive agriculture, streams or other watercourses, where the water table is high.

In establishing wet woodland it is important to ensure that there are no plans or proposals, which will affect the drainage of the woodland, as it is essential that the high water level be maintained in the long-term for the stability of the woodland. As part of the site preparation, it may be necessary to consider rewetting the woodland, through blocking small slow-flowing drains or ditches. However, if the drainage cannot be guaranteed, it may be inappropriate to establish wet woodland.

Native Woodlands

Several willow, species are common within wet woodland and are more commonly grown from cuttings. With the exception of goat willow, the setts will easily take if planted into suitable ground. It is important that willow from local stock is used to maintain local hybrids and genotypes and not introduce alien species into the gene pool.

Suitable species in Greater Manchester dependent on locality and habitat include:

| | |
|-----------------------|------------------------|
| Goat Willow | <i>Salix caprea</i> |
| Grey Willow | <i>Salix cinerea</i> |
| Common Osier | <i>Salix viminalis</i> |
| Eared Willow | <i>Salix aurita</i> |
| Crack Willow | <i>Salix fragilis</i> |
| Alder | <i>Alnus glutinosa</i> |
| Silver or Downy Birch | <i>Betula spp</i> |
| Guelder Rose | <i>Viburnum opulus</i> |
| Bird Cherry | <i>Prunus padus</i> |
| Alder Buckthorn | <i>Frangula alnus</i> |

Management of woodland

Within Greater Manchester a lack of management (neglect) is a significant long-term threat to the resource of all types of woodland. Management of woodlands has declined as a result of a reduction in the skills base, lack of market for timber products and the costs of managing the woodlands.

Recreational pressures, development pressures and inappropriate use often exacerbate this.

Many upland oak woodlands are subject to grazing either intentionally from upland sheep, or from expanding wild deer populations. It can have a detrimental effect upon the long-term structure of the woodland, by preventing natural regeneration and damaging fragile soil and root structures. It may also act to reduce the ground flora through direct grazing or poaching of soils.

Within a natural ecosystem, it is probable that wet woodlands (particularly on fen and mossland sites) would be a temporary succession habitat, which would evolve over time into drier woodland types. Conversely, naturally changing watercourses and drainage patterns would ensure that new wet woodlands were established, ensuring a constant stock of the habitat. Given current constraints, there are few locations where this natural system can now work effectively. Therefore, management aims to maintain the wet woodland in situ. Maintaining the water table and preventing the woodland from drying out is crucial to their continued existence.

The key principles of management should be:

- ◆ Maintain semi-natural woodland types.

Management should be based on growing species both native to the site and appropriate to the local conditions of soils and hydrology, which occur on site.

- ◆ Maintain or restore diversity of structure.

A full range of age classes is preferable to single aged woodland. Wet woodland is frequently single aged as it often established following a change in management, land use or drainage.

- ◆ Maintain diversity of species and habitat, or increase them where appropriate.

A mixture of age classes and structure enhances habitat diversity. Open areas are also important such as, glades or rides within the woodland. Wet woodland is naturally a habitat of limited tree diversity, although there is some opportunity for diversification between both tree and shrub species.

- ◆ Maintain a mature habitat.

Dead wood is an important element in woodland. Where appropriate dead or

decaying standing and fallen timber should be retained.

- ◆ Minimise rates of change.

Intervention should be gradual and not drastic as wildlife takes time to adjust. Phase work over a number of seasons in different compartments of the wood.

- ◆ Use low-key restocking and management techniques.

Avoid the use of large machinery etc. that may damage soils, and intervene at a minimum to maintain a diverse and healthy woodland. Wet woodland, management should be undertaken by hand, as large scale mechanical interventions will damage the fragile soils and in consequence the habitat.

Management prescriptions for any area of wet woodland are determined by both the size and extent of the area within the wider woodland mosaic. Hence, a small area of wet woodland within larger dry woodland may be treated as a sub-compartment of the larger woodland block.

Impact of invasive species

Woodlands are subject to the invasion of a number of non-native species including Sycamore, Japanese Knotweed, Himalayan Balsam, and Rhododendron. These can alter

the vegetation composition and lower conservation value by restricting the growth of native species.

Further information about the control of invasive species can be found:

www.nonnativespecies.org Non-Native Species Secretariat

[Himalayan Balsam Advice](#) – Centre for Ecology and Hydrology

[Japanese Knotweed Advice](#) - Centre for Ecology and Hydrology

[Managing and controlling invasive Rhododendron](#) – Forestry Commission

[Invasive species information and control measures](#) – Environment Agency

Links to relevant BAP's

Bats
Native Black poplar
Willow tit

References

Forestry Commission (1994) The management of Semi-natural Woodlands 3. Lowland Mixed Broadleaved Woods

Native Woodlands

Forestry Commission (2003) The Management of Semi-natural Woodlands 5. Upland Oakwoods

Forestry Commission (1999) Using Natural Colonisation to Create or Expand New woodlands

Forestry Commission (1999) Creating New native Woodlands: Turning Ideas into Reality

[Cumbria Upland Oak Woodland Biodiversity Action Plan](#)

UK Biodiversity Action Plans

Acknowledgements

Thanks to Rochdale Metropolitan Borough Council (1) and Greater Manchester Ecology Unit (2) for the use of their photographs

Author

Emily Barker
Rochdale Borough Council
emily.barker@rochdale.gov.uk