

## DECIDUOUS WOODLANDS HABITAT STATEMENT

### 1. INTRODUCTION

Deciduous woodlands are important habitats for biodiversity, representing in the case of Ancient Semi-natural Woodlands continuous tree cover stretching back over centuries. However, despite this length of time, man to a greater or lesser extent has affected all deciduous woodlands. The following five types of deciduous woodland that occur in Caerphilly county borough have been identified as priority habitats in the UK Biodiversity Action Plan<sup>42</sup>:

- **Upland Oak Woodland\***
- **Upland Mixed Ash Woodland\***
- **Lowland Beech and Yew Woodland\***
- **Wet Woodland\***
- **Lowland Wood Pasture and Parkland\***

### 2. HABITAT DEFINITIONS

#### 2.1 Upland Oak Woodland

Upland oak woods occur on base-poor to acidic soils under conditions of high rainfall. "Upland" is used in a UK sense rather than as a direct reference to elevation, although typically they are found covering the steep valley sides. These woodlands are one of four National Vegetation Classification (NVC) types that are outlined in the appendix to this statement.

The main tree species is sessile oak (*Quercus petraea*), but birch (*Betula* spp.) and an understorey of hazel (*Corylus avellana*), rowan (*Sorbus aucuparia*) and holly (*Ilex aquifolium*) are common. Epiphytic lichens, mosses and liverworts thrive in the clean humid air of upland oak woods providing a suitable habitat for many internationally rare species. A patchwork of other woodland types may be present where there are different soil conditions, for example, soils flushed with water may support ash (*Fraxinus excelsior*), elm (*Ulmus* spp.) and hazel, and boggy hollows supporting alder (*Alnus glutinosa*). Soil fertility, drainage conditions and the extent of grazing are major factors in determining the composition of the ground flora of upland oak woods. Bluebell (*Hyacinthoides non-scriptus*), bramble (*Rubus* spp.) and ferns are the most common on the richer soils, whilst heather (*Calluna vulgaris*), bilberry (*Vaccinium myrtillus*) and mosses are more prominent on the acid and nutrient poor soils.

Animals are well represented in these valuable habitats. Distinctive breeding birds such as pied flycatcher (*Ficedula hypoleuca*), redstart (*Phoenicurus phoenicurus*) and wood warbler (*Phylloscopus sibilatrix*) can be found as well as a range of deadwood invertebrates.

#### 2.2 Upland Mixed Ash Woodland

Upland mixed ash woodlands are found on base-rich soils under conditions of high rainfall. The distinction between upland and lowland ash woodland in Caerphilly county borough is not clear, and for the purpose of this plan, all the NVC communities for ash woodland have been included (see appendix to this statement). Classification can also be difficult as upland mixed ash woodlands may merge into lowland beech or wet woodland. Ash is always the major species, although oak, elm, birch and sycamore can all be locally abundant. Hazel is very common as an understorey species, occasionally forming the canopy. Some rare native trees may be found in these woodlands, notably large-leaved lime (*Tilia platyphyllos*) and various whitebeams (*Sorbus*

spp.) Despite variations in the canopy composition ground flora remains broadly similar and particularly rich for an upland habitat. Bright displays of flowers can be found such as bluebell, primrose (*Primula vulgaris*), wood cranesbill (*Geranium sylvaticum*) and wild garlic (*Allium ursinum*).

Upland ash woodlands can support a rich invertebrate fauna with uncommon or declining species and the dense and varied understorey of these woodlands can also provide suitable habitats for dormice (*Muscardinus avellanarius*), and an important lichen flora.

### **2.3 Lowland Beech and Yew Woodland**

Lowland beech and yew woodland comprise three NVC types reflecting different soil and topographical conditions (see appendix). "Lowland" is used in its UK context, but Welsh beech stands of any altitude are included in this Habitat Statement. Beech woodlands tend to be found as high forest structure and often in a mosaic with other woodland communities.

Calcareous beech woods form around 40% of the total lowland beech and yew woodland habitat. The canopy can include mixtures of beech, ash, sycamore, yew (*Taxus baccata*) and whitebeam. Oak is less common than in other types of beech wood. Characteristic uncommon or rare plants include box (*Buxus sempervirens*), red helleborine (*Cephalanthara rubra*), coralroot bitter-cress (*Cardamine bulbifera*) and bird's nest orchid (*Neottia nidus-avis*).

Beech woodland on neutral, slightly acidic soils comprises about 45% of the habitat. It is found on heavier soils, often where the drainage is poor or impeded. Stands tend to be dominated by beech, but oak is commonly associated and bramble forms a characteristic ground layer. Although a shrub layer is often lacking, holly, and occasionally yew, can form a second layer. Mosaics with oak-bracken-bramble woodland are common and it can be found colonising western oak woods.

The remaining 15% of the habitat comprises acidic beech woodland (pH 3.5 - 4.5). Holly is the main understorey species and oak a common canopy associate. It is not uncommon for it to form mosaics with oak-birch-wavy-hair grass communities. It also has spread into western oak woods.

### **2.4 Wet Woodland**

Wet woodland occurs on poorly drained or seasonally wet soils. They usually have alder, willows or birch as their main species and comprise a wide range of NVC types (see appendix). There are three main situations in which wet woodland can be found:

1. Successional developments on wetlands such as mires, fens, bogs, wet meadows and lake margins. The flora of these stands is highly variable.
2. Alder stands on seepages and spring lines on valley sides. They are frequently part of mosaics with upland oak woods or upland mixed ash woodland. If unmanaged or undisturbed the alder component may decline and drier examples may succeed to upland mixed ash woodland.
3. On floodplains and along river edge. If well developed they can be extremely diverse both biologically and structurally. The wettest areas may hold carr vegetation, poorly drained areas, alder and willow, and free-draining areas mature stands of oak or ash.

## 2.5 Lowland Wood Pasture and Parkland

Lowland wood pasture and parkland, often with veteran trees, are present today largely due to historic land management systems and represent a vegetation structure as opposed to a plant community. Sites often consist of grazed woodlands and open grown or forest trees, many reaching veteran age. Today these habitats often survive in the form of golf courses, deer parks, ancient orchards and landscaped parkland. Trees specific to each site influence the variety of invertebrates and lichens. Typical tree species found in wood pasture, parkland and veteran tree habitats include oak, ash and beech; mature trees can occur as either maidens or pollards. Due to the variety of structure and composition they can be difficult to classify under NVC communities although they are most commonly associated with four woodland types (appendix). Additionally, the more open wood pastures and parkland may include various scrub, heathland, and improved and unimproved grassland communities.

## 3. CURRENT STATUS

Although around 60 Sites of Nature Conservation Importance (SINC) have been declared by Caerphilly county borough council for their woodland habitat<sup>4</sup>, only a small percentage have been classified under NVC types and can be identified as belonging to the five habitats within this Habitat Statement. The remainder of the SINC woodlands are unclassified at present but may reveal further information about the current status of these priority habitats.

### 3.1 Upland Oak Woodland

Upland oak woods are restricted to the oceanic fringe of Western Europe, with the UK having the most extensive and best-developed examples. There is, therefore, a significant international responsibility to this habitat and it is recognised as a UK BAP priority habitat. The total UK area of upland oak woods is estimated to be around 80,000 to 110,000 hectares<sup>12</sup> of which Wales has some 40% (39,000ha). The highest cover within Wales occurs in a zone covering most of Snowdonia, the borders of Powys and Ceredigion, northern Camarthenshire and north Pembrokeshire. In Wales, upland oak woods account for nearly half the semi-natural woodland cover. Regionally, upland oak woods cover an estimated 327ha in Glamorgan and 610ha in Gwent. The Gwent woodlands are found at some of the habitat's eastern-most limit in the UK.

Within Caerphilly county borough there are six SINC woodlands recorded as having examples of upland oak wood habitat, **Coed Deri Newydd** (NVC type: W16), **Craig Ysgwydd-gwyn** (W11), **Troed-rhiw'r-fuwuch** (W17), **Cwm-Ilydrew Wood** (W11), **Coed Gelliau'r-Gwellt** (W10, W11) and **Blackwood Riverside Woodlands** (W11)<sup>4</sup> (see **Map 2.1**).

### 3.2 Upland Mixed Ash Woodland

Although its exact distribution is not clear, upland mixed ash woodland occurs throughout the Western seaboard of Europe with its range restricted by climatic requirements. The UK has a significant international responsibility for this habitat and it is recognised as a UK BAP priority habitat. The UK estimate for the total area of upland mixed ash woodland is 67,500 hectares<sup>12</sup>, occurring mainly in southwest England, Wales, northern England and Scotland. Wales has approximately 25% (17,000 ha) of the UK total with the largest concentrations on the limestone areas of Clwyd, Monmouthshire, South and West Glamorgan and central Camarthenshire. Across Wales upland mixed ash woodlands make up about 20% of the total area of semi-natural woodland. Glamorgan has an estimated 3,200ha and Gwent 2,100ha.

Within Caerphilly county borough upland mixed ash woodlands can be found at SINC sites such as **Cwm Syfiog Woodland** (W8), **Penmaen Woodlands** (W8), **Cwm Dows Valley** (W9), **Cwm**

**Pennar (W9), Nant y Draenog (W9)<sup>4</sup>** (see **Map 2.2**). Other SINC sites may prove to contain upland mixed ash woodland habitat but difficulties exist as upland mixed ash and lowland mixed woodlands form an ecological continuum. They may also merge with lowland beech woods on base rich soils.

### 3.3 Lowland Beech and Yew Woodland

In the UK beech is considered native only in southern England and southern Wales. It is likely that it would have spread naturally to other areas had forest fragmentation not impeded its progress. The UK estimate for this habitat type is between 15,000 and 25,000ha with Wales having around 3,700ha<sup>12</sup>. These figures increase if recent beech woodland is included. In Wales the native range is generally accepted to be Gwent and the eastern halves of Mid- and South Glamorgan. Gwent has approximately 1,500ha and Glamorgan 680ha. Lowland beech and yew woodland found within Caerphilly county borough is important within a Welsh context. SINC: **Cwm Syfiog Woodland (W14)** and **Blackwood Riverside Woodlands (W14)<sup>4</sup>** (see **Map 2.3**).

### 3.4 Wet Woodland

Wet woodlands on floodplains are associated with most river systems but are usually small and fragmented due to the high agricultural productivity of the floodplain. Alder stands on valley sides can be found throughout most of the central upland zone often in association with upland oak woods and upland mixed ash woodland. Successional sites tend to have a more scattered distribution with a series of wetland sites in West Gwynedd and Anglesey, bog complexes in mid-Wales and sand dunes in South Wales. An estimated 70,000ha of wet woodland can be found in the UK<sup>12</sup>. Wales has between 8,500 - 10,000ha, with 310ha found in Gwent and 1,100ha in Glamorgan.

SINC sites within Caerphilly county borough that contain wet woodland include **Troed-rhiw'r fuwuch (W7)** **Pottery Road Woods (W6)**, **Coed Gellia'r-Gwellt (W7)** and **Blackwood Riverside Woodlands (W7)<sup>4</sup>** (see **Map 2.4**).

### 3.5 Lowland Wood Pasture and Parkland

Preliminary estimates by CCW indicate approximately 6,500 - 7,500ha of parkland (excluding other wood pasture) is found in Wales out of the 10,000 - 20,000ha estimated to be in good condition in the UK<sup>12</sup>. Many sites are of historic, cultural and landscape importance. The descriptions of designated SINC sites within Caerphilly county borough suggest that there are several examples of this habitat within the county borough<sup>4</sup>. However, as lowland wood pasture and parkland NVC types are similar to some of the other woodland communities further examination of these sites is necessary.

### 3.6 Associated Species

- **Birds:** *spotted flycatcher\**, *song thrush\**, *bullfinch\**, *tree sparrow\**, *green woodpecker*, *long-eared owl*, *barn owl*, *nightjar\**, *linnet\**, *buzzard*, *kestrel*, *redstart*
- **Mammals:** *dormouse\**, *brown long-eared bat*, *badger*, *yellow-necked mouse*, *greater horseshoe bat\**, *lesser horseshoe bat\**, *pipistrelle bat\**, *brown hare\**; and *otter\** (wet woodland)
- **Amphibians:** *great-crested newt\**, *common frog* and *toad*, *palmate* and *smooth newt*
- **Invertebrates:** *red wood ant\**, *waved carpet moth\**, *buttoned snout moth\**, *netted carpet moth\**, *violet click beetle*, *stag beetle\**, *bark beetle (Emporus tiliae)*; *beetle (Gastrallus immarginatus)*, *heart moth*

- **Plants:** *bluebell, Cornish moneywort, Orchids, devil's bolete fungus, hedgehog fungus, knothole moss, orange-fruited elm lichen, Lichens (*Bacidia incompta, Enterographa sorediata, and Schismatomma graphidioides*); Royal bolete fungus, oak polypore*

### **3.7 Links with other Habitats**

Many of the woodlands within Caerphilly county borough contain a mix of NVC types. For example, wet woodlands may be found within upland oak woods or upland mixed ash woodlands. Similarly, upland mixed ash woodland can form a continuum with lowland beech and yew woodland. Therefore, this Deciduous Woodland Habitat Statement should be read in its entirety rather than as specific woodland habitat types. Links with habitats other than woodland include:

- *Wetlands*
- *Species-rich Grasslands*
- *Wildlife Corridors* (hedgerows)
- *Post-Industrial Land*
- *Urban Habitats*

## **4. CURRENT FACTORS AFFECTING THE HABITAT**

- Overgrazing leading to changes in structure, ground flora impoverishment and difficulties for regeneration **(All)**
- Invasion by sycamore and other species not generally native to these woods **(All)**
- Development pressures such as new roads and quarrying **(All)**
- Until the early 1980s replacement of deciduous woodlands with conifers **(All)**
- Changing agricultural practices leading to increased ecological isolation **(All)**
- Cessation of traditional management practices such as coppicing or unsympathetic forest management **(All)**
- Climate change and atmospheric pollution **(All)**
- Dutch Elm disease **(upland mixed ash woodlands)**
- Grey squirrel damage to young trees **(lowland beech and yew woodland)**
- A predominance of older age classes **(lowland beech and yew woodland)**
- Loss of habitat due to the restoration of other, particularly wetland, habitats **(wet woodland)**
- Unsympathetic management of pollarding and grazing **(lowland wood pasture and parkland)**
- The perception that sites should be left 'clean and tidy' by removing felled timber and dead wood at sites with high amenity use **(lowland wood pasture and parkland)**

- Conversion to arable land resulting in the loss of pasture and damage to trees (**lowland wood pasture and parkland**)
- Lack of management where ancient trees fail to be replaced (**lowland wood pasture and parkland**)
- Remote factors such as changing groundwater levels, water abstraction, drought, climate change and disease (**lowland wood pasture and parkland**)

## 5. CURRENT ACTION

- 5.1 The Forestry Commission (FC) has a presumption against clearance of native woodland for conifer planting or agricultural use and all woodland is expected to be managed according to the UK Forestry Standard. Felling licences from the FC are normally required when the woods are not being managed under a plan approved by them.
- 5.2 FC operates the Woodland Grant Scheme to promote the sympathetic management of woodlands.
- 5.3 FC is preparing a Welsh Forestry Strategy that will form the basis for future woodlands incentives policies.
- 5.4 Forest Enterprise (FE) has produced management plans for upland oak woods based on their Action Plan for the habitat.
- 5.5 FE is currently surveying all ancient woodland sites within the FE estate in Wales to determine the condition and NVC types of all ancient semi-natural woodland and replanted ancient woodland. This information will then be used to guide the restoration of plantations on ancient woodland sites to native tree species. The NVC types of ancient semi-natural woodlands will help in the production of further FE Habitat Action Plans. Survey work is expected to be complete in October 2001.
- 5.6 CCW has set targets of 10% expansion and 10% restoration in the various woodland habitat types with a ranking system for each LBAP area as to which woodland type is of greater importance. Within Caerphilly county borough upland mixed ash woodland and lowland beech and yew woodland are ranked of greater importance than the other types within this statement.
- 5.7 CCW identifies Sites of Special Scientific Interest (SSSI) and promotes the proper management of ancient semi-natural woodlands. Future management will be considered against a framework that is being drawn up for the whole of Wales. No SSSIs have been designated for woodland in Caerphilly county borough.
- 5.8 Coed Cymru, through its Caerphilly/Blaenau Gwent/Torfaen county borough woodland officer, is able to offer advice on management and the development of local markets for woodland products that can provide an impetus to the management of these woodlands.
- 5.9 Tir Gofal, the Welsh agri-environment scheme, offers grant aid on a whole farm basis and encourages the sympathetic management of deciduous woodlands.

- 5.10 Promotion and identification of actions for native woodland through the South East Wales Woodland Group.
- 5.11 Caerphilly county borough council has declared **Graig Coch**, an oak - beech - birch woodland, a Local Nature Reserve.
- 5.12 Caerphilly county borough council has drawn up a list of Sites of Interest for Nature Conservation (SINC) including many woodland sites<sup>4</sup>.
- 5.13 CCBC Countryside Strategy includes a commitment to the preparation of a Woodland Strategy.

## **6. CONSERVATION DIRECTION**

### **6.1 The Main Objectives** for this habitat are to:

- **Prevent** the further loss of existing habitats
- **Manage** existing woodlands through appropriate management
- **Rehabilitate** damaged woodlands to favourable condition through habitat management, and to expand, where appropriate, the habitat.

The 10% targets set by CCW for restoration and expansion are pro-rata across all woodland habitat types and across all of Wales. The ranking system means that upland mixed ash woodland and lowland beech and yew woodland are currently considered of more importance than the other woodland types in this statement.

### **6.2 Possible actions:**

- Encourage surveys to identify further woodlands that comprise these woodland habitat types. Where they meet SSSI selection criteria they should be designated as such.
- Woodland SINC sites within Caerphilly county borough should be evaluated to ensure that they are properly classified. Other woodlands should be considered for selection as SINC.
- Ensure that woodlands within the ownership of CCBC and other conservation bodies are appropriately managed.
- Ensure that management plans and appropriate management regimes are in place for all designated sites.
- Promote management advice and support the development of markets for sustainable woodland products through Coed Cymru to woodland owners.
- Produce CCBC Woodland Strategy.
- Encourage the reversion of conifer plantations on ancient woodland sites back to a native woodland character.
- Raise awareness of the nature conservation value of deciduous woodlands in all sectors of the community, including agriculture, business, developers, government and the general public.
- Identify sites that can be used to expand the woodland types in this habitat statement.

## APPENDIX: NVC COMMUNITIES

### 1. Upland Oak Woods

W17: *Quercus petraea* - *Betula pubescens* - *Dicranum majus* woodland  
(Sessile oak - Downy birch - *Dicranum majus* (fern) woodland)

W16b: *Quercus* spp. - *Betula* spp. - *Deschampsia flexuosa* woodland with *Vaccinium myrtillus* - *Dropteris dilatata* sub-community  
(Oak - Birch - Wavy hair-grass woodland with Bilberry - Broad buckler fern sub-community)

W11: *Quercus petraea* - *Betula pubescens* - *Oxalis acetosella* woodland  
(Sessile oak - Downy birch - Wood sorrel woodland)

W10e: *Quercus robur* - *Pteridium aquilinum* - *Rubus fruticosus* woodland  
(Pedunculate oak - Bracken - Bramble woodland)

### 2. Upland Mixed Ash Woodlands

W8: *Fraxinus excelsior* - *Acer campestre* - *Mercurialis perennis* woodland  
(Ash - Field maple - Dog's mercury woodland)  
(d) *Hedera helix* (Ivy);  
(e) *Geranium robertianum* (Herb Robert);  
(f) *Allium ursinum* (Wild garlic)  
(g) *Teucrium scorodonia* (Wood sage)

W9: *Fraxinus excelsior* - *Sorbus aucuparia* - *Mercurialis perennis* woodland  
(Ash - Rowan - Dog's mercury woodland)

W8 (a-c), W7c and W13 *Taxus baccata* woodlands may be found in mosaic with the above. Also upland mixed ash woodlands that merge into beech woods (W12 and W14) may be difficult to place in either upland mixed ash woodlands or lowland beech and yew classifications.

### 3. Lowland Beech and Yew Woodlands

W12: *Fagus sylvatica* - *Mercurialis perennis* woodland (base-rich soils)  
(Beech - Dog's mercury woodland)

W14: *Fagus sylvatica* - *Rubus fruticosus* woodland (mesotrophic soils)  
(Beech - Bramble woodland)

W15: *Fagus sylvatica* - *Deschampsia flexuosa* woodland (acidic soils)  
(Beech - Wavy hairgrass woodland)

W13: *Taxus baccata* woodland (Yew stands)

#### **4. Wet Woodland**

- W1: *Salix cinerea* - *Galium palustre* woodland  
(Grey willow - Common marsh bedstraw woodland)
- W2: *Salix cinerea* - *Betula pubescens* - *Phragmites australis* woodland  
(Grey willow - Downy birch - Common reed woodland)
- W3: *Salix pentandra* - *Carex rostrata* woodland  
(Bay willow - Bottle sedge woodland)
- W4: *Betula pubescens* - *Molinia caerulea* woodland  
(Downy birch - Purple moor-grass woodland)
- W5: *Alnus glutinosa* - *Carex paniculata* woodland  
(Alder - Greater tussock sedge woodland)
- W6: *Alnus glutinosa* - *Urtica dioica* woodland  
(Alder - Common nettle woodland)
- W7: *Alnus glutinosa* - *Fraxinus excelsior* - *Lysimachia nemorum* woodland  
(Alder - Ash - Yellow pimpernel woodland)

Some birch stands classified as W4 (a and b) are relatively dry, and if they occur in association with upland oak woods they are best treated as a phase of that habitat rather than as distinct wet woodland.

The driest sections of the floodplain woodlands may also contain "dry" NVC communities, most commonly W8: *Fraxinus excelsior* - *Acer campestre* - *Mercurialis perennis* woodland.

#### **5. Lowland wood-pasture and parkland**

- W10: *Quercus robur* - *Pteridium aquilinum* - *Rubus fruticosus* woodland  
(Pedunculate oak - Bracken - Bramble woodland)
- W14: *Fagus sylvatica* - *Rubus fruticosus* woodland  
(Beech - Bramble woodland)
- W15: *Fagus sylvatica* - *Deschampsia flexuosa* woodland  
(Beech - Wavy hairgrass woodland)
- W16: *Quercus spp.* - *Betula spp.* - *Deschampsia flexuosa* woodland  
(Oak - Birch - Wavy hairgrass woodland)

In more open wood pasture and parkland various scrub, heathland, improved and unimproved grassland NVC communities may occur.