

WILDLIFE CORRIDORS HABITAT STATEMENT

1. INTRODUCTION

The Wildlife Corridors referred to in this habitat statement are:

- **Ancient and/or Species-Rich Hedgerows***
- **Roadside Verges**
- **Railway Lines and Cycle-ways**
- **Stone Walls**

Three main types of boundary feature are recognised in the UK BAP⁴⁹, but it is only ancient and/or species-rich hedgerows that have been identified as a UK priority habitat*. Stone walls, railway lines (some with cycleways) and roadside verges are considered to be important for biodiversity conservation locally. River and canal corridors are included in the *Wetlands Habitat Statement*.

2. HABITAT DEFINITIONS

2.1 Wildlife Corridors

Boundary features, as described in the UK BAP⁴⁹, are an important biological characteristic of the British landscape, and many can be described as "Wildlife Corridors"; for example lines of trees and shrubs, grassland, other semi-natural habitats. These are usually linear habitats and often occur on agricultural land and alongside roads and railway lines. Wildlife corridors are often said to act as a means of dispersal for many species by linking isolated habitats such as woodland and grassland, allowing the movement of species through otherwise open terrain. They are also important in the dispersal of plants, acting as a linear habitat for the dispersal of seeds, and attracting insects for pollination. They contain a large part of the countryside's biodiversity, but are also considered important for agricultural, cultural and archaeological reasons. This is in keeping with available guidance such as the Planning Guidance Wales⁵⁶, which recognises the need for wildlife corridors in maintaining viable populations that would otherwise suffer as a result of fragmentation and isolation.

2.2 Ancient and/or Species-rich Hedgerows

Hedgerows form a distinctive and highly attractive part of the landscape of much of Britain. Ancient hedgerows are defined as those that were in existence before the Enclosure Acts (1720 - 1840) in Britain. It is these that tend to support the greatest diversity of plants and animals, but species-rich hedgerows are taken as those containing 5 or more native woody species on average in a 30 metre length, or 4 or more in upland Wales. Hedges containing fewer woody species but support species-rich ground flora of herbaceous plants should also be included, but the practical criteria to identify them have yet to be agreed by the national steering group. Planted species-rich hedges have been included recently⁴⁹. The definition for this statement covers boundary lines of woody vegetation, including associated features such as banks, ditches, and standard trees which form part of the hedgerow. Hedgerows often resemble woodland edge habitat with the most important rich in relicts of ancient woodland. A well-maintained hedge with a good variety of trees and shrubs will provide a year-round supply of food, shelter for winter hibernation, and shelter and cover for small mammals, which then provide food for owls and other predators. Insects such as butterflies are attracted to the flowers and the nectar, and in turn provide food for insectivores such as hedgehogs, shrews and birds.

2.3 Roadside Verges

Many thousands of miles of roads occur throughout Britain. Many of these include verges, banks or hedgerows, which represent small areas of semi-natural habitat, and are an important collective biodiversity resource. Road verges can often support species-rich, long-established neutral grassland vegetation, diverse calcareous grassland, heath vegetation, mixed scrub or emerging woodland. They are therefore also important for many animal and invertebrate species, often providing a refuge where many uncommon species can still survive. The conservation value of road verges has long been recognised, they are important in linking fragmented habitats such as woodland, grassland and wetland areas, allowing animals to travel between isolated areas of habitat. They also provide food and shelter for a wide range of wildlife, from badgers and foxes to small mammals such as voles and bats, to invertebrates such as butterflies and moths. Verges can, if managed properly, represent a valuable and under-utilised resource³⁶, with some potential for habitat enhancement and creation.

2.4 Railway Lines and Cycle-ways

Disused railways have developed wildlife interest through natural colonisation. Old railway lines often now form well-established, specialised habitat in an area of upheaval and disturbance caused by industrialisation. The materials used on railways, for example railway ballast, also provide suitable habitats for some specific species types. Calcicoles sometimes grow where basic steel slag or limestone chippings have been used as ballast. A few moderate calcicoles also grow on some old basic slag-heaps, for example wild thyme (*Thymus praecox*)⁵². These calcareous grassland communities are a priority habitat. Some disused railways are often used for walking and cycling, and some have been made into cycle-ways. These still retain adjacent habitats and are an important corridor for wildlife. They also provide an opportunity for many people to enjoy the countryside, and become more aware of the importance of biodiversity. But it is not just disused railways that are important for wildlife, the active railway system also supports well-established semi-natural vegetation on embankments and cutting slopes, and are contiguous with important woodland sites and other habitats.

2.5 Stone Walls

Dry stone walls are most typically found in areas of enclosed upland pastures, where they provide a boundary to sheep and other grazing animals. They are an important component of the landscape and have become an attractive addition to new homes and gardens in many areas where the traditional skill is still implemented. Traditional techniques and local varieties of stone make the walls very unique to the area and contribute to local identity. They also provide important habitats for a wide range of flowering plants, ferns, mosses and lichens adapted to rock habitats, plus a wide range of invertebrates, reptiles, birds and mammals which use them for feeding, breeding or as shelter.

3. CURRENT STATUS

3.1 Ancient and/or Species-rich Hedgerows

In Europe, ancient hedged landscapes are found only in parts of France, northern Italy, the Austrian Alps, Greece and the Republic of Ireland and the UK. The current UK total is estimated at 450,000km, and in 1993 it was estimated that about 49,000km of hedgerow remained in Wales¹. Some 42% of British hedges or about 154,000km (20,600km in Wales) are ancient and/or species-rich⁴⁹. These are concentrated in the southwest of England and southern Wales, and are closely related to landscape history, varying significantly at the local level. However, many continue to decline through lack of survey work or sympathetic management of the adjacent land as well as the hedgerow and hedgerow trees. Between 1984 and 1990, the

overall loss of hedgerow length in Wales was estimated at 25%¹¹. Hedges are an important component of the Welsh lowland landscape where they are an irreplaceable historical record of how land was divided and managed in the past.

Hedgerows still remain a strong feature in many parts of the Caerphilly county borough landscape, but it is not possible at this time to estimate the length or the proportion that is species-rich. The CCW Phase 1 Habitat Survey did not record the presence or condition of hedgerows in the county borough, but they do give broad estimates for Gwent (4,000km or 8% of the total Welsh resource) and Glamorgan (6,000km or 12%)⁸. In the county borough hedges are characteristic features of the slopes between the valley floor and the open hilltops, but the current condition of hedges is very variable. The interconnected network of hedges and hedgerow trees in the area is a valuable feature for biodiversity conservation, with a wide variety of woody species including beech, hazel, hawthorn, sycamore, oak, field maple, holly, dog rose and field rose, willow and blackthorn. Although there may be few 'ancient' hedgerows, the majority of those that remain can be considered species-rich and/or locally distinctive, distinguishing the landscape in different parts of the borough and representing a feature that people may use to define local areas of countryside. Ancient and species-rich hedgerows, along with hedgerow trees, are disappearing, and many of those in the county borough are gappy and defunct. Those on farmland are often neglected, leading to the shading out of ground flora and arable crops. Without appropriate management and/or restoration they will continue to deteriorate. Roadside and 'country lane' hedgerows are regularly cut, but no hedge-laying is undertaken on Council hedgerows, except on specific projects, for example, a programme of hedgerow restoration was introduced to the Sir Harold Finch Memorial Park, Pontllanfraith (SSSI), and at Ynys Hywel Farm and Llancaiach Fawr⁹.

SINC sites⁴: 57 **Llancaiach Fawr Meadows**, 79 **Penmaen Carr**, 121 **Coed Penallta and Railway Line (Penallta Community Park)**, 159 **Craig y Fedw**, 164 **Gypsy Lane Wetland** and 165 **Wern Ddu Woodlands** (see **Map 4.1**).

General regions: Mynydd Islwyn, Mynydd Maen, Cwmcarn, Penmaen, Pen-y-fan and Manmoel and Argoed/Markham uplands.

There are over 600 plant, 1,500 insect, 65 bird and 20 mammal species known to live, feed or breed in hedgerows, especially butterflies and moths, farmland birds, bats and dormice. In a typical hawthorn hedge there can be as many as 34 species of breeding birds in a 1,000m section, and almost 30 species of mammal regularly use hedgerows either as cover, for food or as hunting grounds⁵⁵. The hedgerows around Wern Ddu support populations of dormice.

3.2 Roadside Verges

In the 1970s it was estimated that there were some 180,000ha of roadside habitat in England and Wales, of which about 100,000ha was actively managed grass verge habitat⁵⁵. There is 1,050km of road in Caerphilly county borough and a variety of adjacent habitats are found in both urban and rural areas. The majority comprise grassland habitats with some heathland communities and scrub, and associated features such as a hedgerow, bank, ditch, fence, trees and/or small woodland. On the mountain roads there is often a hedgerow on top of a grass bank made up of mixed soil and stone. There are also a number of examples of wooded roadside verges; a typical example is the stretch of the A4048 between Pontllanfraith and Ynysddu. The essential cutting back of woody species benefits the ground flora by opening up areas and increasing the available light. The density of bluebells at this site indicates that it has been wooded for many years, as they are typically slow to colonise¹⁶. Road verges are important in

linking fragmented habitats such as woodland, grassland and wetland areas in the county borough, allowing animals to travel between isolated areas of habitat.

The majority of roadsides in the county borough are maintained for highway safety reasons. Maintenance regimes vary for different types of roadside verge, and the Council recognises eight types; for example the "Highway Verge" is a one metre wide strip that is cut three times a year, and is managed mainly as a pedestrian refuge. The minimum cut of any verge is once a year, but verges and roundabouts in urban areas are managed more regularly in order to prevent them causing an obstruction to traffic. Roadside verges are not currently managed to sustain wildlife, but there is a policy in the Local Transport Plan for the future consideration of wildlife⁵. New roads also contribute to this network of linear habitats, and the associated planting of local native species will attract wildlife as existing roadsides do. The main type of habitat planted is woodland, using native tree and shrub species. This has been done in large-scale road construction schemes and means that relatively little management is required during the establishment years. An example of well-established woodland is on the Risca - Rogerstone Bypass, planted in 1986.

SINC sites⁴: 86 **Victoria Road Slopes** (an area of roadside verge of botanical interest);

Other sites: '**Heads of the Valleys' Road (A465), Llechryd** (2ha of unimproved grassland) where the roadside verge was reported important for its calcareous grassland with purging flax, lady's mantle, yellow rattle and other plants³⁷; **roadside verge near Maesycwmmmer**; 1ha of neutral grassland, with some unusual plants including harebell and salad burnet; **road near the "Rowan Tree", Nelson**; hedgerow on road verge with good botanical interest³⁷; and **Heol Ddu, Bargoed**; roadside verge in an urban area³⁷ (see **Map 4.2**).

3.3 Railway Lines and Cycle-ways

Woodland, scrub, grasslands and heathland communities often colonise **disused railway cuttings and embankments**, providing an important habitat in much the same way as roadside verges, linking fragmented habitat areas and providing food and shelter. There are 47,478 metres of disused railway in Caerphilly county borough, and much of this is continually under threat from development of pipelines and restoration for transport. Many plant species are found on disused railway lines in the county borough, for example, pearly everlasting (*Anaphalis margaritacea*), which is an important local species as it is found only in Monmouthshire and Glamorgan, in particular in the Rhymney Valley⁵².

The 40,335m of **active railway** in Caerphilly county borough also represents a significant wildlife habitat, for example the extensive Coed Llanbradach woodland, Coed y Brain and Llanbradach Quarry SSSI, which are adjacent to the active Cardiff - Rhymney railway line. Without some form of management, however, invasive species will colonise the railway line rapidly, to the detriment of the important vegetation including species such as pearly everlasting, rosebay willowherb and nettles which provide food and breeding opportunities for butterflies, birds, bats, and other animals. Management also curtails natural succession of vegetation, which would otherwise result in the formation of woodland and scrub, and the loss of open habitat, in particular butterfly rides and areas for reptiles to bask in the sun.

The 34,412m of **cycleway on former railway lines** is of similar biodiversity value as the corridor and its adjacent habitats remain largely unaffected, and the leisure aspect ensures regular management and local people's enjoyment of the countryside. The old drainage ditches that were part of the railway system are also managed, there still being a need to divert excess water. These represent an additional habitat for plants and animals, including frogs, toads and

newts. In some instances the mature trees lining the railway are unaffected by the construction of the cycleway and retain their importance as feeding corridors for bats. Bridges found along railways and cycleways also add to the diverse nature of these areas. They are often quite damp, moist places attracting lichen, liverworts, mosses and ferns. Cycleways are an ideal starting point to encourage local people to visit the countryside.

Map 4.3 shows the extent of railways and cycleways in Caerphilly county borough, and SINCs associated with them⁴:

- Disused railway lines
Crosskeys - Markham (SINC 33)
Crumlin - Pentwynmawr
Blackwood - Tredegar; Maesycwmmmer - Machen
Maesycwmmmer - Fleur de Lys
- Cycleways on disused railway lines
Sirhowy Valley Country Park Cycleway
Parc Cwm Darran Cycleway (SINC 12)
Aberbargoed - New Tredegar - Abertysswg
Pontllanfraith - Nelson (SINC 121)
Penyrheol (Caerphilly) - Abertridwr (cycleway on up to Senghenydd)
- Sites of Importance for Nature Conservation (SINCs)⁴
12: Cwm-Llydrew Meadows
33: Markham Railway Line
45: Cwm Afon Railway Line
121: Coed Penallta and Railway Line (cycleway)
173: Caerphilly/Machen Disused Railway
- Active railway lines
Newport - Ebbw Vale
Cardiff - Rhymney

3.4 Stone Walls

In Caerphilly county borough these mainly occur in the enclosed rough upland grazing areas, replacing hedgerows as boundaries to grazing livestock. There are quite a number of such walls with the majority in good condition, however there are a number in need of repair. They are important habitats for reptiles, for example lizards; amphibians for example, great crested newt, and many types of lichen, moss and fern. However, the lack of survey work means that the quality of the walls and their value for wildlife is unknown. The creation of new walls is negligible countywide, but some have been built in Penallta Community Park. It is a labour-intensive, costly and time-consuming operation for many landowners, but in the long term, by using local stone and traditional techniques, they are much more sustainable than temporary boundaries or fencing. The following sites contain examples of dry stone walls: (see **Map 4.4**)

SINC sites: 158 **Ty'n-y-Parc**; old walls colonised by spleenworts; 121 **Coed Penallta and Railway Line** (*Penallta Community Park*);

General regions: Mynydd Islwyn; Mynydd Maen and Cwmcarn; Pen-y-fan and Manmoel; Manmoel Common/Cruglwyn (dry stone walls in disrepair)

3.5 Associated Species

- **Birds:** *linnet**, *tree sparrow**, *grey partridge**, *bullfinch**, *song thrush**, *redstart*, *green woodpecker*, *barn owl*, *buzzard*, *kestrel*, *chaffinch*
- **Mammals:** *pipistrelle**, *brown long-eared*, *greater horseshoe** and *lesser horseshoe** *bats*, *dormouse**, *badger*, *stoat*, *weasel*, *fox*, *wood mouse*, *harvest mouse*, *field vole*, *common and pygmy shrews*
- **Amphibians:** *great-crested**, *palmate and smooth newts*, *common frog*, *common toad*
- **Reptiles:** *common lizard*, *slow worm*, *grass snake*, *adder*
- **Invertebrates:** *dragonflies*, *moths (buttoned snout*)* and *butterflies*
- **Plants:** ***cowslip***, *early purple orchid*, *southern marsh orchid*, *bluebell*, *yellow rattle*, many other flowering plants, lichens and ferns

3.6 Associated Habitats

- *Wetlands* (rivers and streams, canal corridors)
- *Deciduous Woodlands* (lowland wood pasture and parkland)
- *Species-rich Grasslands* (neutral, calcareous and acid communities)
- *Common Land* (agricultural land; upland pasture and enclosed land)
- *Coedcae* (often forms linear habitat on ridges in the Uplands alongside Common Land)
- *Heathland* (communities on roadsides, and as linear corridors adjacent to Common Land)
- Ancient/mature trees, banks, and ditches, scrub

4. CURRENT FACTORS AFFECTING THE HABITATS

- Neglect - development of gaps; encroachment of scrub and woodland, the eventual collapse of *stone walls*, reflecting modern high labour costs, the loss of traditional skills and, often, non-intervention in the belief that no management is beneficial (**All**)
- Poor management - too frequent or wrongly timed, leading to poor habitat conditions, development of gaps, probable species change, disturbance in the breeding/fertilising months (**All**)
- Loss of hedgerow trees - senescence or felling, and no replacement (**hedgerows**)
- Use of herbicides, pesticides and fertilisers - often used up to the base/bank; leads to nutrient enrichment and decline in species-diversity; spray drift and run-off also major problems (**hedgerows, roadside verges**)
- Increased stocking rates and traffic - erodes the feature, and can be replaced with fencing which then reduces the necessity for maintenance (**hedgerows, stone walls, roadside verges**)
- Deliberate removal - often carried out for agricultural or development purposes (**hedgerows, stone walls**)
- Development - housing, industry and road construction and widening are the main threats to wildlife corridors (**All**)

- Planting - of trees and shrubs on existing corridors increases the possibility of woodland and scrub encroachment; inappropriate use of non-native species in planting schemes is also a problem (**roadside verges, railway lines, cycle-ways, hedgerows**)
- Increasing disturbance - from maintenance of services such as gas, electricity, and telecommunications (**roadside verges**)
- Road features - widening and alignment results in direct loss of traditional boundaries and verges; the provision of features such as pavements and lay-bys may conflict with roadside habitats (**roadside verges, hedgerows**)
- Infilling and reclamation - for example a railway at Maesycwmmmer has been infilled; others have disappeared or are threatened by redevelopment and reclamation. (**disused railway lines**)
- Invasive Species - Japanese knotweed and ragwort threaten native plant species by competing for space and light (**All**)
- Gritting - necessary on roads when conditions threaten highway safety, but salt can affect vegetation (**roadside verges**)
- Theft of stone from local walls (**stone walls**)

5. CURRENT ACTION

- 5.1 The Conservation (Natural Habitats, etc) Regulations 1994 recognise that linear features are essential for the migration, dispersal and genetic exchange of wild species.
- 5.2 Article 10 of the EC Habitats Directive²³ requires Member States to encourage management of hedgerows in their land use planning and development policies. Deterioration of individual hedgerows also leads to the fragmentation of the important habitat corridors.
- 5.3 Hedgerow management advice available from many sources, such as NAWAD, GlamWT, GWT, BTCV.
- 5.4 Grant aid available for positive management; the CCW Hedgerow Renovation Scheme is now superseded by Tir Gofal; this new agricultural scheme requires agreement holders to maintain existing stockproof boundaries, including capital payments for hedgerow restoration, and it is a condition of set-aside payments to protect adjacent features such as hedgerows.
- 5.5 Positive use of countryside designations to attract relevant funds and initiatives.
- 5.6 Implementation of legislation (Hedgerow Regulations, 1997¹⁸) to protect wildlife corridors, and UDP³ policies for Nature Conservation includes hedgerow and hedgerow trees.
- 5.7 Ongoing research such as LANDMAP projects and WDA landscape studies.

- 5.8 The use of Tree Preservation Orders (TPOs) protects a number of hedgerows and roadside verges.
- 5.9 Highways Authorities have a role to play in managing roadside verges, roadside hedgerows and other features. The CCBC Local Transport Plan⁵ recognises the importance of roadside verges and states - "verges of roads will be managed actively to sustain wildlife, provided highway safety is not compromised".
- 5.10 The Local Transport Plan⁵ also identifies the need for progress on the National Cycle network, 2 routes already exist (numbers 4 and 47), but CCBC are in the process of identifying additional areas of interest, most will have links with disused railway lines.
- 5.11 CCBC SIN C selection criteria⁴ identifies hedgerows and scrub habitats where they form linkages with habitats of higher value or where they support rare species, and where they form part of a habitat mosaic⁷.
- 5.13 Planting alongside new roads in construction schemes usually involves planting native trees and shrubs to establish species-rich woodland, with suitable funding.
- 5.14 Cycleways are managed by appropriate methods to conserve the diversity of habitats and species. Country park management plans involve work on the cycleway and adjacent habitats. A cycleway is usually 2-3m wide, and must be maintained to prevent encroachment alongside and above (canopy). Public use of existing cycleways (eg, Penallta to Nelson) is high and CCBC are currently in the process of formally adopting existing cycleways as 'highways', which will ensure regular management.

6. CONSERVATION DIRECTION

6.1 Main objectives for Wildlife Corridors will be to:

- **Survey** to identify the extent and quality of wildlife corridors in the county borough for both habitats and species;
- **Halt** the loss of any species-rich and good quality examples identified, and maintain and enhance important wildlife corridors, protecting features of conservation value and bringing derelict features into appropriate management;
- **Promote** the biodiversity value of wildlife corridors to landowners, land managers and the general public, and provide education and training where necessary.

6.2 Possible actions:

- Develop methodologies for the identification and management of important wildlife corridors.
- Survey and compile a register of hedgerows, together with a register of hedgerow trees, in order to establish base line data.
- Undertake a road verge assessment, and ask the general public to report potentially interesting roadside verges (using indicator species), and follow-up with survey/assessment work. Produce a 'first tranche' register of important roadside verges in Caerphilly county borough.
- Protect all wildlife corridors from damage and destruction through the implementation of Hedgerow regulations and the Local Transport Plan policy TE4 to manage road verges. Designate wildlife corridors as SSSI, SIN C, etc.

- Encourage and support farmers, landowners and managers in their efforts to use measures such as Tir Gofal and the Hedgerow Scheme to manage wildlife corridors sensitively. Also apply positive management on Council owned land.
- Extend wildlife corridors to increase cover and connect isolated habitat fragments, encourage the planting of hedgerows and building of stone walls in new developments, road improvement projects and restoration schemes. Apply sound ecological principles by planting mixtures of native species rather than single species.
- Promote the importance of hedgerows and other wildlife corridors to the farming community and the general public. Provide advice and training on traditional techniques such as hedgelaying, and sources for possible funding/grants.
- Educate the general public, farming and landowning communities, and council staff about the conservation value of wildlife corridors. Perhaps set-up community-based projects, hold training days for council staff and contractors on traditional techniques such as hedge-laying and dry stone walling.
- Continue to monitor, after initial survey work, the populations of associated priority and local species.
- Continue work on hedgerow enhancement in the Caerphilly Mountain Countryside Service area, and research the possibility of similar work elsewhere.