



# Ancient / Species-Rich Hedgerows Habitat Action Plan

## 1. Introduction

Ancient and species-rich hedgerows are a priority UK HAP due to the decline in the habitat and resulting impacts on key species. Hedgerows are a characteristic feature of the Worcestershire countryside, as identified in the county Landscape Character Assessment, particularly in the north, west and centre of the county. Hedgerow trees, primarily *Quercus rober* oak, are also a prominent feature of the county. Hedgerows provide valuable habitat corridors for the movement of species within an increasingly fragmented landscape, and this importance will become more critical as climate change prompts the adjustment of range and distribution of many species.

## 2. Current Status

### 2.1 Ecology and habitat requirements

A **hedgerow** is defined as any boundary line of trees or shrubs over 20m long and less than 5m wide at the base, provided that at one time the trees or shrubs were more or less continuous. It includes an earth bank or wall only where such a feature occurs in association with a line of trees or shrubs. This includes 'classic' shrubby hedgerows, lines of trees, shrubby hedgerows with trees and very gappy hedgerows (where each shrubby section may be less than 20 m long, but the gaps are less than 20m) (Defra 2007).

Most hedgerows originated as lines of shrubs forming field boundaries. They combine the wildlife benefits of scrub, wood, and woodland edge habitats and support many common species as well as some rare ones. For instance *Rhamnus cathartica* buckthorn, a scarce plant in the county, is found in hedges and rarely elsewhere. Hedges vary in age and the number of species found in them. Some hedgerows will have remained on the same line for well over 1000 years.

A few British hedgerows may have existed since Roman times or earlier; others have been created at various times since then, particularly in the post mediaeval period as open fields were enclosed. Many were planted during the Parliamentary Enclosures between 1750 and 1850. Others were derived from woodland around the edge of clearings, and still others have arisen by default through germination of woody plants along boundaries.

The landscape and wildlife quality of a hedge depends on the variety of species present and its management. In the past hedges were usually laid by hand to make a stock-proof barrier trimmed by hand every few years. A field margin of wild plants usually occurred alongside a hedge next to both permanent pasture and arable land. Such hedges, (especially if A-shaped in cross profile, with good bottom growth), vary in height, width and tree content, and with sympathetically managed field margins and varied species are very rich in wildlife.

Mixed hedges, those with a good variety of species, are in general better for wildlife than those planted with a single species, usually *Crataegus monogyna* hawthorn but occasionally *Prunus spinosa* blackthorn or other prunus species.

The geology, soil type and drainage will have some influence on the species mix in a hedge, as it does in woodland from which the shrubs may well have been derived. Five different woody species per thirty metres in a mixed hedge is regarded as very valuable for wildlife – typical species would include *Corylus avellana* hazel, *Cornus sanguinea* dogwood, *Viburnum opulus* guelder rose, *Ligustrum vulgare* wild privet, *Viburnum lantana* wayfaring tree, *Acer campestre* field maple and *Crataegus laevigata* midland hawthorn, alongside common hawthorn and blackthorn.

Hedges sometimes contain veteran trees, which have great landscape value and are important for bat roosts, bird nest holes and dead wood-dependent invertebrates. These trees are frequently ancient in age and often show evidence of past management such as laying or coppicing. In the west of Worcestershire old hedges often contain uncommon woodland trees such as *Tilia cordata* small-leaved lime and *Sorbus torminalis* wild service tree as well as other more common species.

Worcestershire lost very large numbers of hedgerow *Ulmus* sp. elm trees from Dutch Elm disease in the 1970s. Elm still survives as a trimmed hedge plant (which is not susceptible to elm disease), often forming long stretches of hedgerow. These are an important surviving resource, especially for *U. procera* English elm. There was also a local Worcestershire tradition of planting fruit trees such as *Prunus domestica* subsp. *insititia* damson, *Malus domestica* apple and *Pyrus communis* pear in hedgerows.

## 2.2 Population and distribution

West of the Severn and also in the centre of the county in the Forest of Feckenham, many hedges would probably have been derived from surrounding woodland. These hedges are remnants of the ancient woodland that once surrounded small irregular assarts (woodland clearings) and they contain a mix of typical woodland species. This is *ancient countryside* (Rackham 1986) where the pattern of fields and woods was formed many hundreds of years ago. These hedges often contain a wide range of tree and shrub species, frequently including woodland ground flora such as *Hyacinthoides non-scriptus* bluebell, *Primula vulgaris* primrose and *Mercurialis perennis* dog's mercury, and are important for fauna such as *Thecla betulae* brown hairstreak, *Musccardinus avellanarius* dormouse and many species of farmland bird.

In contrast, hedges planted during the parliamentary enclosures of the 18th and 19th century tend to be straight and enclose rectangular fields. This is *planned countryside* created from either large medieval fields or by the enclosure of waste or common land. These hedges tend to be less rich in woody species and were most commonly planted as hawthorn hedges that have since been invaded by other woody species. The patterns of enclosures in both planned and ancient countryside remained relatively stable until the mid 20<sup>th</sup> century after which the rate of hedgerow removal greatly increased.

The distinction in woodland and hedgerow prominence is closely linked with settlement pattern: the heavily wooded areas being cleared more slowly and in a more ad-hoc way, as opposed to the open arable and horticulture-based landscape that developed in the southeast. In addition, much of the wooded part of Worcestershire has a long history of management as Royal Forest during the

twelfth and thirteenth centuries, which would have prevented much of the woodland clearance that might have otherwise occurred.

Parish boundary hedges are of particular importance both for wildlife and archaeological reasons. These boundaries were probably defined 1-2,000 years ago and contain more woody species and wildlife than younger enclosure hedges.

Hedgerows are often retained in modern housing estates as in Redditch and Warndon. Some such hedges retained in towns can be very important, particularly where they are old and contain mixed species. For instance old hedges retained in Upton-upon-Severn support a breeding colony of the nationally threatened *Lucanus cervus* stag beetle. However, many such hedges suffer from lack of suitable management and vandalism.

### **2.3 Legislation**

Legal protection for countryside hedgerows is provided for by the Hedgerow Regulations 1997 (made under Section 97 of the Environment Act 1995). This makes it an offence to damage or remove a hedgerow without application to the local planning authority. The hedgerow can then be assessed against certain criteria and the local planning authority can order the retention of those hedgerows considered 'important'. The serving of a Hedgerow Retention Notice can then protect 'important' hedgerows without time limit. Hedges on the edge of a town and those marking the boundary between residential and agricultural land are not considered to be countryside hedges and are therefore not protected by the Regulations. Many valuable hedges within such areas fall just short of the current Hedgerow Regulations. Despite a Government review starting in 1998, no changes have yet been made to the Regulations to afford better protection to those hedges not classed as countryside hedgerows.

Trees within a hedgerow can be made subject to a Tree Preservation Order (TPO) (Town and Country Planning Act 1990) if they are considered to be under threat and of public amenity value. It will then be necessary to obtain permission from the local planning authority to fell or work on the tree.

Hedgerow trees within a Conservation Area designated under section 69 of the Planning (Listed Buildings and Conservation Areas) Act 1990 have some limited protection as the local planning authority must be notified of any works to trees above a certain size.

Hedgerows consisting of a line of trees may also be protected by the requirements for a Forestry Commission felling license (Forestry Act 1967).

Hedgerows may be protected because they are part of the designation of a Site of Special Scientific Interest (Wildlife and Countryside Act 1991) or Special Area of Conservation (Habitats Directive 1992) and the destruction, removal or pruning of a hedgerow is listed as one of the operations likely to damage the special interest of the site.

Scheduled Ancient Monument consent (Ancient Monuments and Archaeological Areas Act 1979) is required prior to uprooting trees and hedges associated with an ancient monument. However, it will be the scale of ground disturbance caused

by the removal of the hedge rather than the merits of the hedgerow itself that will be considered.

Where the hedgerow forms a habitat for a legally protected species under the Wildlife and Countryside Act 1981 (as amended by the Countryside & Rights of Way Act 2000), or the Conservation (Natural Habitats etc.) Regulations 1994, it may be indirectly protected.

## 2.4 Summary of important sites

The ancient landscape of the west, north and central parts of the county has a significant wooded characteristic to it and this woodland cover includes the prominent presence of hedgerows and hedgerow trees.

## 3. Current factors affecting the habitat

In the past the vast majority of hedgerow loss was due to agricultural intensification: farmers were given financial incentives for hedgerow removal. Today, because of the changes in farming regulations and raised awareness of farmland biodiversity, this is no longer the case. The de-coupling of production and grant support has removed the incentive for maximising cropping area and yield. The vast majority of countryside hedges will be situated on farms now receiving the Single Farm Payment and as such these farms are subject to the measures designed to protect and enhance the natural features of our landscape, with hedgerows being an important component of this. See section 4.2 for details of Cross Compliance and Environmental Stewardship and how they relate to hedgerows.

However, in some cases the following factors still apply:

- Lack of grass field margins to separate the hedge from arable land leaving the hedge bottom vulnerable to ploughing and to sprays used within the crop or on arable margins to control invasive weeds or pests.
- Excessive and badly timed flail cutting.
- Damage by livestock grazing.
- Lack of hedgerow management to maintain optimum size and structure.
- The loss of hedgerow trees through disease and felling without replacement planting.

Increasingly, the following factors are also a problem:

- **Removal of hedgerows through development and inadequate legislative power to prevent this happening.** The Hedgerow Regulations 1997 assume that planning legislation in the form of planning conditions protects urban hedges. Unfortunately, such measures usually apply for a limited period only and cannot deal with the long-term pressures on a natural hedge that has been incorporated into a residential development.
- **Hedges in urban areas that are conveyed jointly to two households often suffer, as management responsibilities are unclear.**

## 4. Current Action

### 4.1 Local protection

The intrinsic value of a well-managed species-rich hedgerow to the wider natural environment of the countryside should not be underestimated. Hedgerow

habitats are important to a number of both nationally and locally significant species:

- Many farmland bird species use hedgerows as foraging and / or nesting habitat. This includes a number of Red Data Book Red and Amber List species that have Species Action Plans at UK level and / or are included within the Worcestershire Farmland Birds Species Action Plan: *Emberiza schoeniclus* reed bunting, *Emberiza calandra* corn bunting, *Carduelis cannabina* linnet, *Passer montanus* tree sparrow, *Pyrrhula pyrrhula* bullfinch, *Turdus philomelos* song thrush, *Emberiza citrinella* yellowhammer and *Perdix perdix* grey partridge.
- The brown hairstreak butterfly, a Worcestershire BAP species listed in schedule 5 of the 1981 Wildlife and Countryside Act, lays its eggs on suckering blackthorn and relies heavily on blackthorn hedgerows as its primary habitat. The brown hairstreak colony in and around Grafton Wood and surrounding woodlands in Worcestershire is the only colony in the West Midlands and is a thriving stronghold for the species. The butterfly is still threatened by inappropriate hedgerow and woodland management.
- The dormouse is of national importance, as it has declined dramatically over the last century. It has become extinct in up to 7 counties (comprising half of its former range) during this period. It is a priority species within the national BAP and a Worcestershire BAP species. Dormice are known to use hedgerows both as feeding habitat and as corridors for moving between areas of woodland.
- Bats use hedgerows as corridors both for hunting along and for moving across open countryside. Within the UK all bats are protected under the Habitats Regulations and the Wildlife and Countryside Act 1981. 11 of the 14 UK species have been recorded in Worcestershire and all species are included within the Worcestershire Bats Species Action Plan. Of those 11 recorded in the county, four are UK BAP species.

#### **4.2 Site management and programmes of action**

There are a number of **Government planning guidance** documents relating to the protection of the environment that include the general aim of effectively protecting and enhancing the natural environment. (Planning Policy Statement 1: Delivering Sustainable Developments, Planning Policy Statement 7: Sustainable Development in Rural Areas, Planning Policy Statement 9: Biodiversity and Geological Conservation). By aiming to protect the countryside and the diversity of its landscapes, heritage and wildlife, the planning process needs to take account of important features such as hedgerows.

In 2007 Defra published the revised ***Hedgerow Survey Handbook: A standard procedure for local surveys in the UK*** that sets out standard practice for surveying hedgerows and determining 'favourable condition' for wildlife.

Under the **Cross Compliance** regulations all landowners are required to adhere to minimum standards for achieving and maintaining Good Agricultural and Environmental Condition on their farm. This includes the stipulations that hedgerow management must not be carried out within the bird nesting season and that for hedges of more than 5 years old there must be a protection zone of 2m from the centre of the hedge that is free from cultivation and chemical application. Controls are also in place to prevent the overgrazing of semi-natural

vegetation and farmers must comply with existing legislation including that affecting hedgerows.

Within the **Environmental Stewardship** agri-environment schemes there are options for hedgerow management under the Entry Level scheme and for hedgerow maintenance, restoration and creation under Higher Level. However, the funding available through HLS is competitive and highly targeted. To date just over 1,500 km of hedgerows in Worcestershire are being managed as part of an ELS or HLS agreement. ELS hedgerow options EB1 and 2, which have so far proved the most popular, require the height of the hedge to be raised to a minimum of 1.5m and for cutting to be staggered across the farm with each section of hedgerow cut no more frequently than once every two years. These measures will have beneficial consequences on both the visual impact of the hedgerow within the landscape and on the contribution that the hedgerow makes in supporting farmland wildlife.

A review of the **Hedgerow Regulations 1997** is currently underway.

### **4.3 Survey, research and monitoring**

Sample surveys by the **Worcestershire Wildlife Trust** in 1996 have shown that the length of hedgerows in Worcestershire has been greatly reduced in the last fifty years. Studies of ordnance survey maps provide an estimate that Worcestershire contained about 18,810 km of hedges in 1920. Sample surveys of 50 1x1 km squares estimate that by 1970 16,725 km of hedgerow remained; by 1984 12,100 km; by 1996 10,715 km. This gives a cumulative loss of around 8,000 km or 43% of hedges, most being lost in the 1970s. Between 1970 and 1996 about 130 km of new hedges were planted. Since the launch of Environmental Stewardship in 2005, a further 9.2 km of new hedgerows have been planted as part of the capital works for 22 agreements (source: Natural England ES options data, 2007).

A conference on Biological Assessment and Hedgerow Survey organised by Defra in March 2007, on behalf of the Steering Group for the UK Hedgerows Habitat Action Plan, acted as a launch for the revised Hedgerow Survey Handbook and a means of promoting its use in local surveys. The conference workshops identified the priority issues where progress needed to be made in order to achieve UK BAP and LBAP targets for hedgerows and then explored current and intended extent and also barriers to hedgerow surveying across the UK. Key issues raised were the limited funding available for new hedgerow planting, a lack of recognition of the importance of local variation, characteristics and styles of management of hedges, a need for more training to be available in survey techniques and the problems faced by local authorities in enforcing hedge protection and dealing adequately with the different pressures facing urban and countryside hedgerows.

An unpublished survey by Martin Johnson of the University of East Anglia of samples of roadside hedges from three different areas within the county indicates that different rock types influence the shrubby species mix in hedgerows to some extent. Planting tradition may also be a factor. Either way the local characteristics of good mixed hedges should be taken into account when restoring hedgerows or planting new hedges.

In summer 2004 the Worcestershire Federation of Women's Institutes conducted a countywide survey on ancient and species-rich hedgerows. In total 88 individual hedges were surveyed by identifying the woody species within the hedge and the ground flora present beneath the hedge in 30 yard sections. 71 of the hedgerows surveyed had the 5 or more woody species required to be considered of high value for wildlife and eleven hedgerows had 10 or more. This survey, although not done by random sampling and biased towards hedges known to be old, provides a valuable and detailed snapshot of the importance of the ancient and species-rich hedgerows within Worcestershire.

## 5. Associated Plans

Arable, Dormouse, Brown Hairstreak, Farmland Birds, Acid Grassland, Neutral Grassland, Calcareous Grassland, Scrub, Woodland, Veteran Trees, Bats.

## 6. Vision Statement

That all hedgerows in Worcestershire are managed to at least the minimum standards required under the Cross Compliance regulations as part of achieving and maintaining Good Agricultural and Environmental Condition of the land holding.

## 7. Targets

Target Type	Target Text	Baseline value	Target Value	Target Timescale
Maintain extent	To maintain the extent of Worcestershire hedgerows under conservation management through Environmental Stewardship schemes	1534 km	1534 km	2017

## 8. Actions

Action Code	Action Category	Action Text	Location	Complete Action By	Lead Organisation	Support Organisation
WRC SRH ID 01	8.1	Worcestershire Register of Ancient Trees to enable details to be recorded of ancient and/or species-rich hedgerows occurring as habitat adjoining / adjacent to veteran trees surveyed through the Ancient Tree Project.	Worcestershire	2009	WR	
WRC SRH FR 01	4.1	Promote the uptake of hedgerow management options by landowners applying for Entry Level environmental stewardship, and hedgerow restoration and planting options through the Higher Level scheme.	Worcestershire	2017	NE	WWT, FWAG
WRC SRH CA 01	2.15	Run two training events for local authority staff on the conservation issues surrounding urban hedgerow and urban hedgerow tree protection and management.	Worcestershire	2017	WCC	WWT
WRC SRH CA 02	2.15	Run two training events for arboricultural workers on the conservation and management issues surrounding urban hedgerow and urban hedgerow tree protection and management.	Worcestershire	2017	WCC	WDC, RBC, MHDC, WFDC, WorcsCC, BDC
WRC SRH CA 03	2.11	Publicise to landowners the availability of Natural England's Hedge Cutting Leaflet.	Worcestershire	2010	NE	NFU, FWAG, NE, WWT
WRC SRH CA 04	2.11	Hedge Cutting Leaflet to be available on the Worcestershire Biodiversity Partnership website.	Worcestershire	2008	WCC	
WRC SRH SU 01	13.6	Publicise the availability of the Hedgerow Survey Handbook to landowners taking up	Worcestershire	2017	NE	WWT, FWAG

		hedgerow options in ES and encourage them to periodically monitor the status of their hedges against the favourable criteria developed by the UK BAP Steering Group.				
<b>WRC SRH SU 02</b>	<b>13.6</b>	Hedgerow Survey Handbook to be available on the Worcestershire Biodiversity Partnership website.	Worcestershire	2008	WCC	
<b>WRC SRH CA 05</b>	<b>2.15</b>	Run one training event for officers / local volunteers / landowners that incorporates hedgerow survey techniques.	Worcestershire	2012	FWAG	

<b>WWT</b> – Worcestershire Wildlife Trust	<b>WCC</b> – Worcestershire County Council	<b>FWAG</b> – Farming and Wildlife Advisory Group
<b>NE</b> – Natural England	<b>NFU</b> – National Farmers Union	<b>WR</b> – Worcestershire Recorders
<b>WDC</b> – Wychavon District Council	<b>BDC</b> – Bromsgrove District Council	<b>RBC</b> – Redditch Borough Council
<b>WorcsCC</b> – Worcester City Council	<b>WFDC</b> – Wyre Forest District Council	<b>MHDC</b> – Malvern Hills District Council
<b>Defra</b> – Department for Environment, Food and Rural Affairs		

### References and further information

Defra (2007) *Hedgerow Survey Handbook*. A standard procedure for local surveys in the UK. Defra, London.

Wolton, R (2007). *Hedge cutting: answers to 18 common questions*. Natural England.

Worcestershire Federation Of Women's Institutes (2004). *Science Club Hedgerow Survey Summer 2004*. Available from the Federation Science Officer via WI House in Worcester or from Worcestershire BAP Manager.