



Hedgerows Habitat Action Plan

1. Introduction

Hedgerows were listed as a UK BAP priority habitat, and subsequently included in Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006, due to loss of 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, in particular English oak (*Quercus robur*) and ash (*Fraxinus excelsior*), 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 Description of habitat

A hedgerow is defined in the Defra Hedgerow Survey Handbook (2007) 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).

Hedgerows combine the wildlife benefits of scrub, woodland and woodland edge habitats and support many common species as well as some rare ones. Hedges vary in age and the number of species found in them. Their origins tend to fall into one of the following categories:

- Hedgerows created by the assarting of fields from woodland, where a line of shrubs was left between fields and managed as a boundary.
- Hedgerows planted along an ancient boundary, for example parish boundaries: these hedgerows may have remained on the same line for well over 1000 years.
- Hedgerows created during the period of post-mediaeval open field enclosure.
- Hedgerows planted during the Parliamentary Enclosures between 1750 and 1850.
- Hedgerows planted within the last 20 years as part of agri-environment schemes, although these will often be replacements for hedgerows previously removed.
- Hedgerows arising by default through germination of woody plants along boundaries such as fences.

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 to make a stock-proof barrier and trimmed 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 ground flora, and with sympathetically managed field margins and a varied woody species composition, can be 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. Single species hedgerows are usually hawthorn (*Crataegus monogyna*) but occasionally blackthorn (*Prunus spinosa*). 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 have been derived. Five different woody species per thirty metres in a mixed hedge is regarded as very valuable for wildlife. Typical hedgerow shrub species in Worcestershire include hawthorn, blackthorn, hazel (*Corylus avellana*), dogwood (*Cornus sanguinea*), English elm (*Ulmus minor 'Atinia'*), elder (*Sambucus nigra*), field maple (*Acer campestre*) and guelder rose (*Viburnum opulus*). Less common species include spindle (*Euonymus europaeus*), wild privet (*Ligustrum vulgare*), wayfaring tree (*Viburnum lantana*) and holly (*Ilex aquifolium*).

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, coppicing or pollarding. In the west of Worcestershire old hedges often contain trees indicative of ancient woodland such as small-leaved lime (*Tilia cordata*) and wild service (*Sorbus torminalis*) as well as other more common species.

Worcestershire lost very large numbers of hedgerow elm trees to Dutch Elm disease in the 1970s and 1980s. Immature elm is still frequent as a hedgerow shrub, often forming long stretches of hedge. These are an important surviving resource, especially for English elm. There was also a local Worcestershire tradition of planting fruit trees such as damson (*Prunus domestica*), apple (*Malus domestica*) and pear (*Pyrus communis*) in hedgerows.

Hedgerows can be an important nectar source for invertebrates and a species-rich, well-managed hedge can provide nectar for an extended flowering season. The fruits produced by different woody shrubs can also be an important autumn food source for birds and small mammals. Hedgerows can (should) have a strip of ground flora at their base which may contain species associated with ancient woodland such as bluebell (*Hyacinthoides non-scriptus*), primrose (*Primula vulgaris*) and dog's mercury (*Mercurialis perennis*).

2.2 Distribution and extent

West of the River Severn 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 an associated woodland ground flora, and are important for fauna such as the dormouse (*Muscardinus avellanarius*) and many species of farmland bird.

In contrast, hedges planted during the parliamentary enclosures of the 18th and 19th centuries tended to be straight and enclose rectangular fields, as seen in

much of the south east of the county. 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 20th century after which the rate of hedgerow removal greatly increased.

The character of the county's woodlands and hedgerows is closely linked to topography and to settlement pattern: the less accessible or more 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. The most ancient of these boundaries were probably defined 1-2,000 years ago and generally contain more woody species and wildlife than younger enclosure hedges.

Hedgerows are often retained in modern housing estates as in Redditch and Warndon Villages (Worcester). 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 help to support a breeding colony of the nationally threatened stag beetle (*Lucanus cervus*). Blackthorn hedges within Redditch have recently been found to support brown hairstreak (*Thecla betulae*). However, many such hedges suffer from lack of suitable management and from vandalism.

2.3 Protection of the habitat

Legal protection for countryside hedgerows is provided for by the Hedgerow Regulations 1997. This makes it an offence to damage or remove a countryside hedgerow without application to the local planning authority. Submission of a hedgerow removal application means that the hedgerow can 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 marking the curtilage of residential 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.

Hedgerows are listed as habitats of principle importance under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

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 have particular 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 from felling or significant tree works by the requirement for a Forestry Commission felling license (Forestry Act 1967).

Hedgerows may be protected if they are part of the designation of a Site of Special Scientific Interest (SSSI) under the Wildlife and Countryside Act 1991 (as amended) or a Special Area of Conservation (SAC) under the 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.

One 2km-long linear Local Wildlife Site (LWS) has been listed within the county comprising parallel species-rich hedgerows with associated scrub, woodland, wet flushes and grassland along an old trackway (now a bridleway).

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), or the Conservation (Natural Habitats etc.) Regulations 2017, it may be indirectly protected. The Wildlife and Countryside Act makes it an offence to take, damage or destroy the nest of any wild bird while it is in use or being built.

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. Hedgerows in west Worcestershire containing small-leaved lime and wild service may be nationally important.

All hedgerows provide a vital landscape connectivity function and in this context should all be considered 'important sites'.

3. Current factors affecting the habitat

In the past the vast majority of hedgerow loss was due to agricultural intensification when farmers were given financial incentives for hedgerow removal. Today, thanks to the Hedgerow Regulations, changes to farming regulations and raised awareness of farmland biodiversity, this is a rare occurrence. Over-management or inappropriate management of hedgerows is still a significant issue.

- Lack of sufficient field margin width separating the hedge from arable land leaving the hedge bottom vulnerable to ploughing and to sprays used within the crop or on margins to control invasive weeds or pests.

- Excessive and badly timed flail cutting.
- Damage by livestock, including grazing, nutrient input to the base of the hedge where livestock congregate and physical damage to shrubs leading to 'leggy' and 'gappy' hedges.
- Lack of hedgerow management leading to the hedge growing out into a line of trees.
- The loss of hedgerow trees through disease (such as *Chalara* ash die-back disease and Dutch elm disease) and felling without replacement planting.
- Consideration is rarely given to the establishment or future management of hedgerow base flora when new hedgerows are planted. Previous assumptions were that these species would 'simply arrive', especially if the new hedgerow had good connectivity to existing hedgerows and ancient semi-natural woodland. Recent survey work has suggested that such establishment, within the modern intensively farmed landscape, is so slow as to be negligible. More research needs to be done to fully understand the ecology of establishing and managing hedgerow flora.
- Removal of hedgerows through development and inadequate legislative power to prevent this happening. Planning conditions governing management usually apply for a limited period only and cannot deal with the long-term pressures on a 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.
- Management requirements for different species utilizing the hedge may conflict.

4. Current Action

4.1 Local protection

The intrinsic value of a well-managed 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 and in some circumstances this will offer protection to the hedgerow itself.

- Many farmland birds use hedgerows as foraging and / or nesting habitat. This includes a number of Red Data Book Red and Amber List species, such as reed bunting (*Emberiza schoeniclus*), corn bunting (*Emberiza calandra*), linnet (*Carduelis cannabina*), tree sparrow (*Passer montanus*), bullfinch (*Pyrrhula pyrrhula*), song thrush (*Turdus philomelos*), yellowhammer (*Emberiza citrinella*) and grey partridge (*Perdix perdix*).
- The brown hairstreak butterfly, protected under schedule 5 of the Wildlife and Countryside Act 1981 (as amended), 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 and is 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 Conservation of Habitats and Species Regulations (2017) and the Wildlife and Countryside Act 1981 (as amended). 16 of the 18 UK species have been recorded in Worcestershire.

4.2 Habitat management and programmes of action

The revised ***Hedgerow Survey Handbook: A standard procedure for local surveys in the UK*** was published in 2007 by Defra and sets out standard practice for surveying hedgerows and determining their condition and value for wildlife.

The current **Cross Compliance** regulations place stipulations on all landowners regarding the management of hedgerows in order to maintain Good Agricultural and Environmental Condition on their farm.

Agri-environment schemes have included options for hedgerow management, maintenance, restoration and creation. Requirements of the schemes such as raising the height of hedgerows to a minimum of 1.5m and for cutting to be staggered across the farm on a two-year cycle will have had beneficial consequences for both the visual impact of the hedgerow within the landscape and on the contribution that the hedgerow makes in supporting farmland wildlife.

4.3 Survey, research and monitoring

Surveys by **Worcestershire Wildlife Trust** in 1996 showed that the length of hedgerow in Worcestershire had reduced by an estimated 43% between 1920 and 1996, with most being lost in the 1970s.

In 2004 the **Worcestershire Federation of Women's Institutes** conducted a countywide survey on ancient and species-rich hedgerows. The woody species component and the ground flora of 88 hedgerows were surveyed. 71 of those hedgerows had the five or more woody species required to be considered of high value for wildlife and eleven hedgerows had 10 species 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.

In 2009 a Defra-funded hedgerow survey was undertaken by the **Malvern Hills Area of Outstanding Natural Beauty (AONB) Partnership** which aimed to gather information on the current biodiversity value of hedgerows within the AONB, the differing types and styles of hedgerow management being undertaken by landowners and the contribution of hedgerows to local distinctiveness. 63

hedgerow sections totalling 1890m were surveyed and a questionnaire on hedgerow management regimes, attitudes towards and influences on hedgerow management was returned by 34 landowners. Just under half of hedgerows surveyed passed the good condition assessment thresholds within the Hedgerow Survey Handbook with the most common reason for failing the assessment criteria being leggyness of the hedge arising from lack of management and livestock damage. At the culmination of the project 21 landowners attended an event on good hedgerow management and biodiversity supported by Natural England, the AONB Partnership and the Farming and Wildlife Advisory Group.

5. Associated Plans

Arable Farmland, Dormouse, Brown Hairstreak, Farmland Birds, Grassland, Scrub, Woodland, Ancient and Veteran Trees, Bats, Stag Beetle.

6. Conservation Aim

Worcestershire has a strong and coherent network of biodiversity-rich, well-managed hedgerows.

7. Conservation Objectives

- Improve and consolidate our understanding of how to best restore and manage hedgerows and their ground flora in different situations and on different soil types
- Maximise engagement with landowners to communicate best practice in hedgerow management for biodiversity
- Promote the preparation of whole-farm integrated hedgerow management plans that maximise the biodiversity value of hedgerows
- Prioritise research into and support for the establishment and management of hedgerow ground flora, including publishing species lists for different character areas and soil types that could be used in the development of seed and plug plant planting packages
- Promote the creation and restoration of botanically rich hedgerow ground flora and seed bank resources and work with Defra and Natural England to ensure that future farm support/agri-environment payment structures provide proper financial incentives for this
- Promote the planting and marking of new hedgerow trees and the selection and marking of existing stems or saplings to be managed as hedgerow trees
- Encourage the planting of disease-resistant English elm hedgerow trees and, if research supports the case for doing so, encourage the propagation and planting of disease-resistant ash

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