

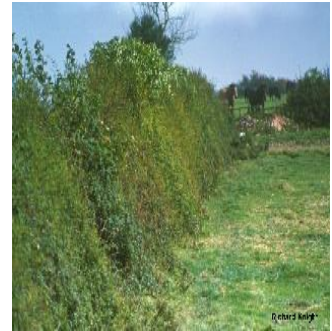


## REVISED PLAN MAY 2017

# HEDGEROWS

## 1. INTRODUCTION

Hedgerows are boundary features, dominated by tree and shrub species and used to enclose fields, woods and property. Hedges provide a home for many forms of wildlife. Their wildlife value is frequently complemented by an adjacent bank, ditch, field margin, verge or some other type of semi-habitat. Hedgerows are typically linked together to create a network of wildlife corridors, often through intensively-farmed landscapes and help link other important habitats such as woods, ponds, grasslands and wetlands.



© Farming&Wildlife AdvisoryGroup

Hedgerows can support hundreds of species of plants and animals including small mammals, especially if they are maintained in a sympathetic way, layered or flailed every third year. They also form valuable nesting sites for a variety of birds including song thrush, tree sparrow and yellowhammer, as well as being an important winter food source. The hedge is of particular conservation significance for insects (mainly beetles, flies, bees and wasps) associated with decaying wood; networks of old hedgerows can support a range of species similar to that of substantial areas of ancient semi-natural woodland (Wolton, 2015).

Sheltered herb-rich hedge margins can support many butterflies and other invertebrates, including the nationally notable leaf beetle species *Cryptocephalus frontalis* and the species which feed on them and their larvae. They are the main habitats for the brown hairstreak and white-letter hairstreak butterflies (both national BAP species) and vital to their survival. The brown hairstreak is very rare in Warwickshire, being found in only 4 x 1km square; it needs mainly suckering blackthorn. The white-letter hairstreak needs fairly mature elm.

Ancient hedgerows, which tend to be those which support the greatest diversity of plants and animals, are those which were in existence before the [Parliamentary Enclosure Acts](#), passed mainly between 1720 and 1840. Ancient hedgerows are often associated with banks and ditches and are particularly common in the Arden area of the sub-region. They tend to support more woody species than more recent hedgerows and may support ancient woodland herbs such as bluebell and wood anemone at their base. Species-rich hedgerows are those which on average support 5 or more woody species in a 30m length.

The species-poor, straight hedgerows surrounding the large regular fields in the east and south of the sub-region mostly originate from the Parliamentary Enclosure Acts and tend to be dominated by hawthorn, blackthorn, elm and elder, with a less interesting flora at their bases compared to ancient species-rich hedges. However, in what can be a very intensively farmed landscape, they still provide valuable blossoms, berries and shelter as long as they are not flailed annually. Research has suggested that the majority of farm biodiversity could be conserved by retaining appropriately managed uncultivated habitats

such as hedges, out of all proportion to the 4.5% of land area they occupied (Wolton, 2015).

Many mature and veteran trees can be found within hedgerows and there is evidence that their presence markedly increases macro-moth species richness (Wolton, 2015). Unfortunately as traditional management techniques have declined, the age structure of hedgerows trees has become biased towards mature trees as very few young trees are planted or allowed to grow on. [Dutch Elm Disease](#) has also substantially reduced the total number of hedgerow trees since the mid -1970's as our sub-region was one of the worst affected (due to a predominance of English elm).

Since the middle of the last century there has been a huge loss of hedgerows within the UK, although the rate of loss has been substantially reduced in recent years and the new hedges are being planted.

2.	OBJECTIVES*	TARGETS*
Associated Action Plans are: 'Gardens', 'School Grounds', 'Allotments', 'Field Margins', 'Roadside Verges', 'Bats', 'Common Dormouse', 'Hedgehog', 'Barn Owl', 'Song Thrush', 'Farmland Birds' and 'Great Crested Newt'		
<b>PLEASE CONSULT THE '<i>GENERIC HABITATS</i>' ACTION PLAN IN CONJUNCTION WITH THIS DOCUMENT FOR OBJECTIVES COMMON TO ALL HABITAT PLANS</b>		
A.	To seek to complete the survey of hedgerows throughout the sub-region to enable the development and maintenance of a central database of information.	2020
B.	To maintain overall numbers of hedgerow trees at least at current levels by encouraging new planting and natural regeneration.	ongoing
C.	To restore 151km of degraded hedgerows. <i>With over-achievement by 2016, the target has been increased from 32km.</i>	2026
D.	To expand the length of hedgerows in the sub-region by planting 160km of native species-rich hedges.	2026
*Derived from Regional Spatial Strategy Phase 3 Technical Report (2009) and based on a minimum mapping unit of 0.25ha. Numerical targets have been incorporated into section 6. See <b>Generic Habitats Plan</b> for rationale for derivation of targets and definitions of favourable and unfavourable condition ('Habitats overview' in 'State of the Natural Environment' (NE,2008,p49).		

### 3. NATIONAL BAP OBJECTIVES & TARGETS

Hedgerows are on the current UK Biodiversity Action Plan (BAP) list of Priority Habitats published in 2007([Joint Nature Conservation Committee](#)). The targets and objectives for the [Ancient and/or species-rich hedgerows](#) BAP, updated in 2010-11, may be seen online.

## 4. CURRENT STATUS

In the 20<sup>th</sup> century there was a huge net loss of hedgerows in the UK. Between 1984 and 1990 121000km of hedgerows were lost (ITE report, 1991). Currently, the UK hedgerow resource is estimated to be about 450000km. Baseline data from the 1998-2001 Habitat Biodiversity Audit recorded 9,586km of hedgerows in Warwickshire, 174km in Coventry and 509km in Solihull, a total of 10,269km, but this underestimated the length of urban hedgerows.

In 2012 a new hedgerow survey form was introduced which records hedge boundaries in 7 categories including defunct hedges and linear scrub and trees. For the other 4 categories - intact hedge, native species-rich hedge, hedge with trees and native species-rich hedge with trees – the length recorded in Warwickshire, Coventry and Solihull was 10,652km, of which 39.63km were identified as species-rich (HBA, 2017). Of the total hedge boundary length of 15485km, 23% were identified as defunct as they were no longer functioning as true hedges. DEFRA's own estimates are that only 22% of UK hedgerows are in favourable condition (DEFRA 2007).

Hedgerows designated as Local Wildlife Sites (LWS) by 2016 were Beanit Farm Hedge and Beanit Green Lane. Surveyed but not yet designated were Daw Mill Lane and North Brook Lane.

The majority of rural hedges are managed by flailing although many are neglected. Traditional hedge-laying, which had become uncommon, has had a resurgence in popularity since 1990s. [Agri-environment schemes](#) administered by NE in 2016 offer payment towards the cost of hedge restoration and planting, through the following Higher Level (HLS) options

- HR: hedgerow restoration includes laying, coppicing and gapping up
- HSC: hedgerow supplement - substantial pre-work
- HSL: hedgerow supplement - top binding and /or staking
- PH: hedgerow planting – new hedges

### 4.1 Legal and Policy Status

A wide range of species and habitats are protected under international and domestic laws, including the [Wild Birds Directive](#) (1979), the [Wildlife and Countryside Act](#) (1981), the [Conservation Regulations](#)(1994) and [EC Habitats Directive](#) (1992). Protection of sites is afforded nationally through [Sites of Special Scientific Interest](#) (SSSI), [Special Areas of Conservation](#) (SAC) and [Local Nature Reserve](#) (LNR) statutory status. Other sites are offered recognition of their value through Local Wildlife Site status (LWS), Local Character Areas and identified Landscape Scale Areas. The [National Planning Policy Framework](#) (2012) chapter/section 11 states conditions with regard to any development negatively affecting biodiversity, including protected sites, ancient woodland and other irreplaceable habitats (paragraph 118). The Wildlife & Countryside Act and schedule 2 of the [Conservation of Habitats & Species Regulations 2010](#) make it an offence to intentionally kill, injure, take, possess, sell, buy or transport a range of species.

The [Hedgerow Regulations 1997](#) make it unlawful to remove a rural hedgerow without obtaining permission from the local planning authority through submitting a hedgerow

removal notice. Mature trees within hedgerows can be protected by [Tree Preservation Orders](#) and may require a felling licence.

Some species associated with hedges (nesting birds, badgers, bats and great crested newts) receive legal protection under the 1981 Wildlife & Countryside Act (as amended). In addition, [Local Development Plans](#) contain policies that protect hedges and other landscape features.

## 4.2 Current Factors Affecting the Habitat

Hedgerows are being adversely affected by both destruction and lack of appropriate management, however at the same time new hedges are being planted and more are receiving sympathetic management through schemes such as Countryside Stewardship and since 2002, the [Environmental Stewardship Scheme](#), administered by Natural England (NE).

- **Physical removal**, because of agricultural intensification leading to the creation of larger fields and urban development e.g. housing, roads.
- **Neglect**, such as a decline in the practice of in hedge laying, resulting in gaps and loss of structure.
- **Poorly timed or over zealous cutting** can cause severe damage, leading to a decline in wildlife and landscape value. Flailing every third year only is recommended as this allows time for fruiting and has less impact on invertebrate eggs, etc.
- **The introduction or natural colonisation of non-native and invasive species** such as Sycamore.
- **The loss of mature trees within hedgerows** due to non-native pest species including Dutch Elm Disease and [Chalara dieback of ash](#), a serious disease caused by a fungus called *Chalara fraxinea*, from 2009 onwards. This loss was acute following the major Dutch Elm Disease epidemic of the 1970s and continues as oak and ash succumb belatedly to the drought summers of the 1990s and semi-mature elm succumbs to re-infestation. Little attempt is being made to replace such mature trees.
- **Fragmentation i.e. the increasing separation of hedgerows from other semi-natural habitats** such as woodlands, water bodies and flower rich grasslands. This reduces the capacity of hedgerows to support high biodiversity and act as wildlife corridors. Hedges are most valuable when they exist alongside other habitats and act as links between other habitats.
- **Pesticide and herbicide spray** can also affect hedgerow wildlife.
- **Damage** through the creation of desire lines, bank and ditch erosion and fly tipping especially in urban areas.

## 5. CURRENT LOCAL ACTION

- The Habitat Biodiversity Audit (HBA) maintains a digitised database which includes rural hedges and some urban ones in the sub-region. This information has been gathered recently commencing 1997, but only records presence or absence of a hedge. More detailed information is currently being added regarding hedgerow structure from the WWT/CPRE surveys.
- The [Warwickshire Biological Records Centre](#) maintains an extensive database of sites, habitats and species in the sub-region. This also includes considerable hedgerow data, the data has been added to in recent years as the result of surveys in relation to the assessment of Important Hedgerows under the Hedgerow Regulations 1997.
- Staff from [Warwickshire Museum](#) (until 2011) and [Herbert Art Gallery & Museum](#), Coventry (until 2009), have carried out entomological surveys of hedgerows as part of a wider survey effort.
- Local planning authorities administer the Hedgerow Regulations 1997, and qualitative hedgerow surveying takes place in response to hedgerow removal notices but such surveys only cover a small proportion of the total.
- New hedges are created periodically by landowners, farmers and developers, and some of these are designed to be semi-natural in character by using native species.
  - A study in 2001 identified that 36% of hedges in the area had been removed between 1950 and 2000 (Julie Nixon, WWT).
- Steven Falk's book *Warwickshire's Wildflowers* includes a list of key hedgerow indicator species found in the sub-region, e.g. guelder rose, small leaved lime and wild service tree.
- The [Warwickshire Bat Group](#) has created an improvement in connectivity for barbastelle bats around Whichford Wood by planting 1.1km of hedges (2013-14).
- [Butterfly Conservation](#) (BC) is working with NE to get farms to adopt sympathetic management of hedgerows and to plant disease resistant elm under stewardship schemes.
  - BC's new hedgerow species mixes vary depending on soil and on the species of interest and attitude:
    - minimum / main species: common hawthorn, blackthorn, hazel, guelder rose, broad leaved willow (*Salix caprea*), dog rose.
    - extra options are: silver or downy birch, English or sessile oak, wych or disease resistant elm, field maple, holly, wild privet, crab apple.
- [Butterfly Conservation Warwickshire](#) carries out a minimum of 4 x 12 year hedge laying rotations at Ryton and by 2016 had planted:
  - 50-100 disease resistant elms at Hunters Lane Rugby, Ryton Wood Meadows, Ryton Wood, Ryton Pools Country Park, Nelson's Wharf, Tasker's Meadow, Draycote Water.
  - brown hairstreak food plants, mainly blackthorn, at Ryton Meadows and Ryton Pools Country Park.



## Warwickshire, Coventry and Solihull Local Biodiversity Action Plan

- [Warwickshire Wildlife Trust](#) (WWT) in association with the [Campaign to Protect Rural England](#) (CPRE), has co-ordinated hedgerow survey work by volunteers. This information has been fed into the Habitat Biodiversity Audit. This survey is being supported by the local authorities in some parts of the county. WWT projects include:
  - [Princethorpe Woodlands Living Landscape](#) area: a survey of over 15 tetrads in 2012 found a mix of old and new hedgerows in the project area; 6.2km of hedgerow had been restored by 2014.
  - [Tame Valley Wetlands Partnership](#): restoration of 80m of hedgerow in 2015 and 95m in 2016 by hedgelaying, predominantly at Kingsbury Water Park, the Environment Agency's Lea Marston Lakes and RSPB Middleton Lakes. Targets of 500m of hedgerow restoration and 500m of creation will be met by 2017, working with volunteers, contractors, landowners (including WWT at Whitacre Heath SSSI) and the Woodland Trust.

## 6. PROPOSED LOCAL ACTIONS

ACTION	Lead	Partners	By
<b>PLEASE CONSULT THE 'GENERIC HABITATS' ACTION PLAN IN CONJUNCTION WITH THIS DOCUMENT FOR ACTIONS COMMON TO ALL HABITAT PLANS</b>			
<b>Policy, Legislation &amp; Protection</b>			
<b>PL1.</b> Continue to select all qualifying hedgerows as LWSs and enter onto database.	LWSP	WWT NE HBA SMBC CCC WCC	ongoing
<b>PL2.</b> Ensure that the protection of hedgerows is included in Local Development Plans, Neighbourhood Plans and any other relevant strategies, including targets for maintenance, restoration and expansion for each Local Authority.	WCC	NE HBA LAs	ongoing
<b>PL3.</b> Ensure that new minor or major developments aim for net biodiversity gain through adherence to the mitigation hierarchy.	WCC	NE WWT LPAs NWBC NBBC	ongoing
<b>PL4.</b> Make effective use of the Hedgerow Regulations in securing the protection of important hedgerows and hedgerow trees e.g. within the Princethorpe Woodlands Landscape area.	WWT	BCW WWT WCC LAs PWLL	2015-2026
<b>Site / Species Safeguard &amp; Management</b>			
<b>SM1.</b> Maintain the 39.63km of identified species-rich hedgerows, (HBA, 2017), making effective use of agri- environment schemes to create buffer strips to protect hedgerow flora, including the	CSG	WCC WWT NE LAs TOs LOs	ongoing

ACTION	Lead	Partners	By
<b>PLEASE CONSULT THE 'GENERIC HABITATS' ACTION PLAN IN CONJUNCTION WITH THIS DOCUMENT FOR ACTIONS COMMON TO ALL HABITAT PLANS</b>			
cessation of spraying hedge bases with herbicide.			
<p><b>SM2.</b> Manage hedgerows for targeted species of butterflies:</p> <ul style="list-style-type: none"> <li>by managing elm hedgerows in suitable condition, encouraging use of disease resistant elm to maintain the white-letter hairstreak butterfly (<i>Satyrrium w-album</i>) in a minimum of 30 out of the 37 x 10km squares of the BCW recording area.</li> <li>by planting relevant food species, especially blackthorn, into new and existing hedgerows in order to increase the breeding occurrence of the brown hairstreak butterfly (<i>Thecla betulae</i>) to 10 x 1km squares. Ensure appropriate timing of management to avoid egg-laying time.</li> </ul>	BCW	WWT SRNBG LOs	ongoing
<p><b>SM3.</b> Restore 16 km of degraded hedgerow by 2015, a further 75km by 2020 and a further 60km by 2026, using planning conditions/ obligations where relevant.</p>	WCC	NE LAs TOs WWT TVWP LOs	2015-2026
<p><b>SM4.</b> Expand the length of hedgerows in the sub-region by planting 11.5km of native species-rich hedges annually to give a total increase of 160km by 2026, using planning conditions/ obligations where relevant.</p>	WCC	NE TOs SRNBG WWT LAs LOs	annually
<p><b>SM5.</b> Ensure that the maintenance, restoration and expansion of hedgerows (see actions <b>SM1/SM3/SM4</b>) take account of the need for feeding habitats and flight lines for bats, especially in locations where barbastelle and lesser horseshoe bat roosts occur, e.g. Whichford Wood.</p>	NE	WBRC WWT WBG	ongoing
<b>Advisory</b>			
<p><b>A1.</b> Promote Best Management Practice for hedgerow biodiversity in Princethorpe Woodlands landscape area.</p>	WWT	FC HBA NE LOs BCW CLA LAs WWT CPRE NFU TOs WBRC	ongoing
<p><b>A2.</b> Actively encourage landowners to apply for current management incentives, such as agri-environment schemes, for the sympathetic</p>	NE	BCW RSPB WWT	ongoing

ACTION	Lead	Partners	By	
<b>PLEASE CONSULT THE 'GENERIC HABITATS' ACTION PLAN IN CONJUNCTION WITH THIS DOCUMENT FOR ACTIONS COMMON TO ALL HABITAT PLANS</b>				
management of hedgerows .				
<b>A3.</b> Produce benchmark new hedgerows species mixtures, based on what is found locally using the <a href="#">WCC Landscape Guidelines</a> ) with notes on what fauna each species benefits and why local provenance is important.	BCW	WCC BSBI	WWT	ongoing
<b>Research &amp; Monitoring</b>				
<b>RM1.</b> Continue to identify species- rich hedgerows for inclusion in <b>SM1</b> through HBA Phase 1 and project habitat surveys.	HBA	WCC LAs	WWT	ongoing
<b>RM2.</b> Update the information in the WBRC and HBA to include quality information on hedgerow structure and/or species.	HBA	NE WWT RSPB LAs WBRC	BCW CPRE WIs TOs LOs	ongoing
<b>RM3.</b> Produce digitised maps of the sub-region showing hedgerow quality, frequency and connectivity to enable targeting of conservation work.	HBA	NE	WWT	ongoing
<b>RM4.</b> Complete the programme of hedgerow surveys to enable mapping of species rich hedgerows within Princethorpe Woodlands landscape area.	WWT	HBA LAs	CPRE	2014
<b>Communication, Education &amp; Publicity</b>				
<b>CP1.</b> Ensure that the Hedgerow Regulations and <a href="#">Felling Licence</a> requirements are made known to landowners/managers via information on each local authority and other partner's website.	WCC	WWT LAs	CLA FC NFU	ongoing
<b>CP2.</b> Provide practical demonstrations on hedgerow planting and management in Princethorpe Woodlands landscape area - at least 2 per year across the sub-region.	WWT	WCV	LAs	2020

**Abbreviations:** **BCW** – Butterfly Conservation Warwickshire, **BSBI** – Botanical Society of British Isles, **CLA** – Country Landowners' Association, **CPRE** – Campaign to Protect Rural England, **CSG** – LBAP Core Steering Group, **FC** – Forestry Commission, **HBA** – Habitat Biodiversity Audit, **LAs** – Local Authorities, **LOs** – Landowners, **LPAs** – Local Planning Authorities, **LWSP** – Local Wildlife Sites Project, **NE** – Natural England, **NFU** – National Farmers' Union, **PWLL** - Princethorpe Woodlands Living Landscape partnership, **RSPB** – Royal Society for the Protection of Birds, **SRNBG** – Sun Rising Natural Burial Ground, **WCV** – Warwickshire Conservation Volunteers, **TOs** – Tree Officers, **WCC** – Warwickshire County Council, **TVWP** - Tame Valley Wetlands Partnership, **WBRC** – Warwickshire Biological Records Centre, **WIs** – Women's Institutes, **WWT** – Warwickshire Wildlife Trust.



## 7. PROGRESS WITH ACTIONS

From 2015–2020 there will be a rolling programme of reporting on progress, of 10 action plans per year with an annual summary of results. Progress with this plan up to 2016 can be seen at [www.warwickshirewildlifetrust.org.uk/LBAP](http://www.warwickshirewildlifetrust.org.uk/LBAP).

## 8. BIBLIOGRAPHY

E. Pollard, M.D Hooper & N.W Moore (1977) Hedges. New Naturalist Series. Collins.

ITE/ NERC (1991) Changes in hedgerows in Britain between 1984 and 1990. (Unpublished)

DEFRA (2007) The [Hedgerow Survey Handbook](#) sets out a standard way of recording hedgerows.

Falk, S.J. (2009) Warwickshire's Wildflowers - provides habitat-specific species lists, and explanations of habitats from a botanical viewpoint.

Treweek Environmental Consultants (2009) Regional Spatial Strategy (R.S.S.) Phase 3 Regional Habitats Targets Review, Technical Report pp.71-94, prepared for the W. Midlands Regional Assembly.

Lawton, J.H. (2010) [Making Space for Nature](#): a review of England's wildlife sites and ecological network. Report to Defra, advocating a landscape-scale approach guided by four key principles, summarised as '*more, bigger, better and joined*'.

DEFRA (2011) [Biodiversity 2020](#): A strategy for England's wildlife and ecosystem services.

HBA (2013) The State of the Habitats of Warwickshire, Coventry and Solihull.

Wolton, R. (2015) Life in a Hedge. A 2 year study of the species in one Devon hedgerow. British Wildlife vol.26, no.5, pp.306-16.

Devon Hedge Group (2015) [Devon Hedges](#) – although regional, much of the information and techniques given are applicable elsewhere.

RSPB (2016) [State of Nature](#) – a stocktake of all our native wildlife by over 50 wildlife organisations.

Wright, J. (2016) A Natural History of the Hedgerow and ditches, dykes and dry stone walls. Profile Books.

Natural England (2016) [Conservation Strategy for the 21<sup>st</sup> Century](#). Sets out how NE will help deliver DEFRA's ambitions for the environment to reverse biodiversity loss, sustain distinctive landscapes and enhance engagement with nature.

## 9. FURTHER INFORMATION

Habitat Biodiversity Audit (HBA) for Warwickshire, Coventry & Solihull – mapping habitat data set and associated information. Phase 1 ([JNCC](#)) 1996-2002 and Phase 2 (Local Wildlife Sites) ongoing.

[Biodiversity Planning Toolkit](#) - a new online resource to help incorporate biodiversity and geodiversity into the planning system and new development.

[Buglife](#) - the Invertebrate Conservation Trust (2004)- provides information on the habitat-management requirements of key invertebrates (CD-Rom available)

[Game & Wildlife Conservation Trust](#) offers an on-farm advisory service: Tel. 01425 652381.

[Flora Locale](#) – promotes the restoration of wild plants and habitats for the benefit of biodiversity, landscapes and people in town and countryside.

[Plantlife](#) – carries out plant species and habitat conservation, owns and manages nature reserves, campaigns, and raises awareness through education.

[Hedgelinek](#) – a partnership that brings everyone interested in hedgerows together, to share knowledge and ideas, to encourage and inspire, and to work with farmers and other land managers to conserve and enhance our hedgerow heritage.

## 10. CONTACT

Chris Talbot, Habitat Biodiversity Audit Partnership, Warwickshire Wildlife Trust.  
Email: [christalbot@warwickshire.gov.uk](mailto:christalbot@warwickshire.gov.uk)