

HEDGEROWS

a guide to wildlife and management

Most hedges were originally planted to enclose livestock or define boundaries and have existed as long as man has cleared woodland for agriculture. The Old English word for field is *feld*, literally an area of felled trees. Some of the earliest records in England date from 547AD in the west country, whilst some parish boundaries are still marked today with hedges over 1,000 years old. There are even older hedges on Dartmoor which are a continuation of the reeves system (a system of parallel banks found mainly on south Dartmoor built in Bronze Age times, 3,500 years ago). However hedge laying as a management technique is more recent in origin, and is linked to the process of enclosure which transformed the landscape throughout the Middle Ages. From 1603 over 7 million acres of open fields or common land were enclosed, and Oliver Rackham estimates that over 200,000 miles of hedge were planted between 1750 and 1850.

Increased mechanisation of farming methods during the 20th century and the move towards larger field sizes has meant that many miles of hedgerow have been removed. Calls to reduce the number of hedges, on the grounds of efficiency, began even as enclosure was still taking place. But the significant decline of hedges did not begin until after the Second World War. In 1946 there were an estimated 500,000 miles of hedgerow in England, which had decreased to 236,000 by 1993. Hedgerows can only survive in the long term with correct management. Today, neglect and incorrect management, such as too-frequent trimming, are responsible for more hedgerow loss than outright removal.

Post-war agricultural policy change gradually reversed the loss of hedges and their importance was recognised with The Hedgerow Regulations 1997. These were designed to protect exceptionally species rich hedgerows and those of landscape, archaeological and historical importance - i.e. ancient hedgerows, which have been in existence since the enclosures, and species rich hedgerows, which contain 5 or more native shrub species within a 30m length (4 or more in northern and eastern counties). Remaining hedges vary significantly in size and structure across the country and are managed in very different ways. All hedgerows which contain more than 80% native species are now classified as Priority Habitats in the UK and have their own Habitat Action Plan. Nearly all hedgerows are also protected through cross compliance measures. This guide will explain how to make your hedgerows more wildlife friendly.

wildlife in h

Hedgerows are a key feature of our landscape and provide resources for birds, mammals and insect species. They
right. Native hedge plants such as blackthorn, hawthorn, hazel, dogwood and field maple will support many m
hedge contains, the more wildlife it can sup

Shrubs

Hawthorn is probably our most common shrub having been extensively used as a hedgerow plant. Its common name is derived from the Anglo Saxon *hagathorn* which literally means 'hedge thorn'. Also known as the May bush, this shrub is covered with a profusion of white blossom in the spring, whilst in the autumn the shiny red haws with their single stone are unmistakeable. Hawthorn is an excellent shrub for a stock fence as its spiky structure discourages browsing. **Blackthorn**, a similar thorny shrub, is special because the flowers open before the leaves, so they form a white mass in the otherwise dead looking hedge in the spring before anything else flowers. Later in the year bitter black sloes are produced that are popular with birds. However, unlike hawthorn blackthorn produces suckers that can enable the shrub to spread out from the hedge and encroach into neighbouring fields, making it an important habitat for dormice and brown hairstreak butterflies, among others. **Field maple** is our only native maple and more often seen in the hedgerow as a shrub than as a tree because it responds well to being cut and regrows with numerous, vigorous shoots. The honeydew produced by the leaves is a good food source for white hairstreak butterflies. Field maple also supports several species of moth caterpillars. **Hazel** is commonly used for hedging. As well as supporting five species of moth that are specialist feeders on hazel, this plant is incredibly important to many invertebrates, birds and mammals because of the protein-rich nuts it produces in the autumn. **Bramble** is a invaluable plant because its blackberries, flowers and nectar provide a food source for invertebrates as well as for many bird and mammal species. The thorny stems also create a safe nesting place for many birds and small mammals such as hazel dormice. **Other shrub species** to encourage or plant that are beneficial as food sources for wildlife include wild privet, spindle, dog rose, field rose and guelder-rose.

Trees

Standard trees within the hedgerow should be encouraged but not in such numbers or to such a large size that they will shade out the hedgerow plants. **Oaks** are one of the more common trees seen in hedgerows and because they have been in the landscape for so long they are associated with an extraordinary diversity of wildlife. **English elm** is another important hedgerow tree. Although mature specimens have all but disappeared due to Dutch elm disease, younger trees are still prevalent and provide a food source for the larval stage of the white letter hairstreak. **Elder** is a contentious hedgerow shrub because although it provides an abundant food source through its white flowers and purple-black berries in summer, it is generally associated with gappy hedges in poor condition. **Other important tree species** to encourage or plant include ash, crab apple, holly, oak, rowan, wild cherry and wild service trees.

hedgerows

y act as wildlife corridors allowing dispersal between isolated habitats, as well as being an important habitat in their own nore species than non-native plants such as garden privet, leylandii and sycamore. The more kinds of tree and shrub a pport due to different flowering and fruiting times.

Plants

A hedgerow is essentially a linear wood and hence many of the associated plants are woodland species. However certain common plants such as hedge bedstraw, hedge mustard, garlic mustard, also known as Jack-by-the-hedge, and hedge woundwort are considered to have a closer association with hedges.

Invertebrates

Species-rich hedgerows can provide an important habitat for invertebrates. They supply food, shelter and breeding sites for pollinators such as bees and for pest predators such as scorpion flies. Stag beetles can sometimes be found among decaying stumps at the base of a hedge. Holly blue butterfly caterpillars will only be found in hedges containing holly or ivy, whilst the brown hairstreak butterfly will only lay its eggs on the young shoots of blackthorn in a hedgerow.

Birds

Many species of birds are associated with hedgerows. Woodland birds such as blue tit, great tit, wren, blackbird, robin and chaffinch are more common in taller, wider hedges. Birds that favour scrubby or open woodland, such as dunnock, yellow hammer and whitethroat, also use hedgerows. A taller hedge provides more habitat and is therefore more likely to have more birds nesting in them. The hedge plants also provide songposts and perches for territorial and breeding birds. The nests, as they age, may then support populations of invertebrates. The hedge base is important for ground-nesting species like the grey partridge.

Mammals

Bats are known to use linear features within the landscape to navigate between their roosting sites and feeding grounds and will follow tree lines, rivers or hedgerows. The base of the hedge provides shelter for wood mice, shrews and the bank vole, which gets its name because of its association with hedge banks. Larger mammals such as hedgehogs, stoats and badgers will also use hedges for food and shelter.

Dead wood

Older hedgerows often contain a large amount of dead wood and plant litter within the structure of the hedge. Most of this dead wood is generated from the management practice of hedge laying, where the layed stems die off as the new shoots grow. This dead wood can provide a valuable habitat for many invertebrates and cover for small mammals.




simple steps fo

Cutting/ trimming A layed hedge will need cutting to prevent it becoming 'leggy' and to encourage growth. Cutting on a three year cycle (one side, top, other side) will allow time for flowering and fruiting shrubs to develop throughout the length of the hedge and is the most beneficial for wildlife, although it is not always practical. Planting, laying and cutting should be carried out between October and March where possible to ensure that birds are not nesting and ideally in January and February to ensure that the fruiting berries are not lost. If a hedge must be trimmed during the fruiting season it is essential to only cut one side so that plenty of food remains. Use a flail if the wood is not too thick or a circular saw attachment for bigger material. A healthy hedge can normally recover well from severe cutting, but repeated cutting at the same height can gradually cause whole hedges to die off. One major problem associated with mechanized hedge cutting is the decline in the number of saplings left in hedges to grow into mature trees. Mark these with tree tags from The Tree Council or use fluorescent tape to prevent them being lost.

Gapping up hedges Over time hedges can become gappy as a result of stock pushing their way through the hedge, roots being ploughed up, spray drift or just old age. Gaps should either be planted with new plants, which is an opportunity to increase the botanical diversity of the hedge or add trees to the hedge line, or be left to regenerate naturally if possible. Any new planting will need to be protected from stock, rabbits and deer for approximately 3-4 years. Initially the surrounding hedge may need cutting back to ensure the new plants receive sufficient light. Regular trimming in the early years of a hedgerow's life will help make it dense

Laying hedges Intermittant laying is used as a renovation and wildlife-friendly management technique. As hedges grow, they gradually become more tree-like; gaps tend to appear lower down and the stems cease to provide an effective barrier. At this point, the hedge should be allowed to grow sufficiently tall (3-5m high) so that it can be layed, both to fill in the gaps and to ensure the long-term viability of the hedge by promoting vigorous regrowth from the base. Laying involves partially cutting stems, so that they will bend without breaking, at ground level and laying them at an angle of between 35 degrees to the ground and horizontal. These cut stems, known as pleachers, are laid parallel to each other and tucked tightly together, protecting the new growth from livestock grazing. Vertical stakes and binders are usually used to strengthen and thicken the hedge, depending on regional variation. The aim should be to manage the hedgerow through cutting so that it is not necessary to lay more often than at least every 20 years, and perhaps even 40 years. Pleachers will eventually die but this wood should be retained within a hedge as an important habitat for a wide range of invertebrates and fungi. The costs for laying a hedge vary but

or biodiversity

on average are £12-15 per metre - equivalent to the cost of putting in a barbed wire fence which has a similar longevity. If the hedge is in very poor condition coppicing may be the best solution. The cut stimulates the production of new growth at the base of the hedge.

Coppicing Coppicing a hedge - cutting it off completely at just above ground level - works in a similar way to coppicing a woodland and will revitalize a hedge by increasing the density and productivity of the plants. Coppicing will often take place in conjunction with gapping up and is the best treatment for hedges damaged by over flailing. It is a traditional rejuvenation technique in some parts (e.g. Suffolk) and is commonly used where the trees are too big for laying, or where the aim is to achieve a substantive firewood crop.

Hedge margins Hedge bases are an important habitat for all wildlife and a buffer zone of at least 1m should be maintained on both sides if possible, being cut no more frequently than every three years. Shrubs and trees have roots within the topsoil and continued ploughing close to the hedge can damage these roots and weaken or kill parts of the hedgerow so cutting the base vegetation, particularly in autumn, should be avoided where possible. Similarly spray drift from fields can have a detrimental effect on the shrubs and invertebrates living within it. Farmers in receipt of Environmental Stewardship payments cannot cultivate, spray or fertilise within 2m of the centre line. Leaf litter should be allowed to accumulate at the base of a hedge as this provides an excellent habitat for a variety of invertebrates and nutrients for wildflowers. Although they are a food resource for a wide range of insects including the larvae of many of our favourite butterflies, large stands of stinging nettle, goosegrass and docks may be indicative of excess soil enrichment. Eutrophication is one of the major causes of unfavourable condition in England's hedgerows.

Protection Newly planted, coppiced or layed hedge plants are vulnerable to browsing and grazing. Large diameter spiral rabbit guards are only good for short periods as they can prevent air circulating, allowing mould infection, and producing spindly plants. Plastic mesh guards are better but more expensive. For larger guards, chicken wire fencing (600mm high, with maximum 30mm mesh size, fixed top and bottom by high tensile wire, with stakes at 8- 10m intervals) is more economical, and makes for a healthier hedge than spirals. Tree guards should be used to prevent deer browsing on the leading shoots of trees; these also speed growth of trees in their early years. A large proportion of trees and shrubs die due to lack of water or from weed encroachment. Mulching with horticultural plastic, newspaper covered with earth, grass cuttings or straw works well. This is particularly important to enable any new trees to get a good start. It is possible to buy mulch mats made of plastic or bitumen (which degrades).

hazel dormouse

Hazel dormice are one of our rarest small mammals. There are still native populations as far north as the Lake District, Cumbria and Northumberland but they have been lost in other northern and central counties. Their current stronghold is in southern England and Wales.

They are one of Britain's few mammals that hibernate. In November they make tightly woven nest on the ground amongst tree roots and log piles and disappear for the winter. They emerge in spring and in the following months they generally spend all their time in the trees and scrub. In April they feed on blackthorn and hawthorn flowers to replace body fat used in hibernation. In early summer they feed on ash keys, honeysuckle flowers and insects such as aphids. Later in the year they rely on blackberries and hazelnuts to provide the food resource to build fat reserves for the coming winter.

They usually breed in June or July and the females will generally have one litter of approximately four young. Some animals have another litter later in the autumn but their overwinter survival depends heavily on the weather and whether they have enough time and food to build up sufficient energy stores to hibernate. Hazel dormice often live more than four years in the wild which is unusual for such a small animal. Longevity and low breeding rates means the species is vulnerable to change. The fragmentation of the countryside isolates local populations which may not be self-sustaining.

Hedgerows play an important role for dormice. They used as dispersal corridors and are an important link between small copses that are too small to support a viable dormouse population on their own. Crucially they also support breeding populations independent of other habitats.
The huge loss of hedges has led to isolated populations and local extinctions. Research carried out by Royal Holloway, University of London, has shown that hedgerows support as high numbers of dormice as woodlands do, so their removal will have significantly reduced dormouse populations nationally.

If you would like further information about dormice or think that you may have them in your woodland or elsewhere please contact PTES.

hedge construction - useful tips

DO

Encourage mixed species hedges when planting or gapping up
Protect plant roots from drying out by mulching
Mark newly planted trees with tape to ensure they don't get flailed
Leave some trees within a hedgerow
Cut the hedge higher each time so that it is able to grow taller
Use locally grown plants of known provenance
Leave a buffer strip in fields to limit root damage and soil compaction
If necessary erect a fence 1m from the hedge to prevent over grazing
Cut less than a third of the hedge in any year
Only cut each hedge every two or three years, except where necessary for H&S, access etc
If possible only trim one side of the hedge in any year
Plant a north/south hedge if you are worried about shading

DON'T

Trim all hedges in the same year
Cut your hedge too narrowly
Flail during nesting season, where possible, or when there are seeds on the hedge
Flail established trees
Apply herbicides, pesticides or fertilisers within 2m of a hedgerow
Plant during very dry, windy or frosty periods

Hedgerows are not only a significant feature of our countryside but they are one of the most important farmland habitats. They provide food and shelter for numerous birds, mammals and invertebrates and are often used as a wildlife corridor between isolated woodlands and areas of scrub. Hedgerows can also act as windbreaks to protect crops, reduce soil erosion and can harbour beneficial insects such as pollinators and predators of pest species.

useful information

National Hedgelaying Society
Really useful for training, contractors, local groups and competitions.
www.hedgelaying.org.uk

The English Hedgerow Trust
It was established to reduce the destruction of hedgerows in the British countryside and can provide contacts, technical expertise, labour and materials.
www.hedgerows.co.uk

Natural England
Delivers an agri-environment scheme which provides funding to farmers and other land managers in England.
www.naturalengland.org.uk

Defra
Useful surveying and management handbook available.
www.defra.gov.uk/farm/environment/landscape/documents/hedgerow-survey-handbook.pdf

The Green Wood Centre
Runs around 60 courses a year teaching woodland management and coppice craft skills.
www.greenwoodcentre.org.uk

BTCV
Pools information and expertise from around the country and provides information of national interest. Excellent guide (not free) about hedges, planting, maintenance and laying.
www2.btcv.org.uk

Small Woods Association
This is Britain's leading organisation in supporting and promoting the work done by the owners and carers of small woodlands.
www.smallwoods.org.uk

Isle of Wight Hedgerow Group
The Isle of Wight Hedgerow Group organises an annual hedgelaying competition
www.iwhg.org

The Kingcombe Trust West Dorset
Practical hedge laying skills courses.
www.kingcombecentre.org.uk

Countryside Jobs Service
Provides details on nationwide training courses and events.
www.countryside-jobs.com/Training/short_cons.htm

Woodnet
A partnership established to help timber growers and wood users make the most of our local timber resources in SE England
www.woodnet.org.uk

Other useful links

http://store.ashridgetrees.co.uk

www.durham.gov.uk/durhamcc/usp.nsf/Lookup/HedgeLayingPlanting03

www.agroecol.co.uk

www.cpre.org.uk/campaigns/landscape/hedgerows

www.rspb.org.uk Provides advice on planting , gardening and hedges

http://www.nhm.ac.uk/nature-online/life/plants-fungi/postcode-plants/

www.naturenet.net/trees/hedgerow

www.englishplants.co.uk/

www.acorn-p-p.co.uk

www.ukbap.org.uk

www.somerset-hedgegroup.org.uk

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