

Vision for Essex Hedgerows

Hedges, hedgerow trees and buffers are managed for biodiversity and have been re-created or reestablished where beneficial and sustainable.

Hedgerows and associated linear habitats are encouraged and appropriately managed as biodiversity corridors between fields of crops and alongside roads, drains, rivers and other features.

Arable crops and margins are managed appropriately with techniques to reduce the use of pesticides and other chemicals.

Buffer zones and other measures are adopted to reduce erosion and pollution of the wider environment.



Hedgerows

National Description

A hedgerow is defined as any boundary line of trees or shrubs over 20m long and less than 5m wide, and where any gaps between the trees or shrub species are less than 20m wide (Bickmore, 2002). Any bank, wall, ditch or tree within 2m of the centre of the hedgerow is considered to be part of the hedgerow habitat, as is the herbaceous vegetation within 2m of the centre of the hedgerow. All hedgerows consisting predominantly (i.e. 80% or more cover) of at least one woody UK native species are covered by this priority habitat, where each UK country can define the list of woody species native to their respective country. Climbers such as honeysuckle and bramble are recognised as integral to many hedgerows, however they require other woody plants to be present to form a distinct woody boundary feature, as such they are not included in the definition of woody species. The definition is limited to boundary lines of trees or shrubs, and excludes banks or walls without woody shrubs on top of them.

Based on an analysis of Countryside Survey data, using the threshold of at least 80% cover of any UK native woody species, it is estimated that 84% of countryside hedgerows in GB would be included.

In context:

Today hedgerows are highly valued by people for many reasons. Hedgerows are recognised as an important part of our cultural heritage and historical record, and for their great value to wildlife and the landscape. Increasingly, they are valued too for the major role they have to play in preventing soil loss and reducing pollution, and for their potential to regulate water supply and to reduce flooding.

Hedgerows are the most widespread semi-natural habitat in England, Wales and Northern Ireland. Over large parts of the lowlands they are the main surviving semi-natural habitat, and are critical to the existence of numerous plants and animals. They are particularly important within areas of intensive farming, and for the survival of widespread yet declining species which are dependent on woodland edge, scrub or rough grassland habitats.

Cultural and historical importance

The UK is rightly known throughout the world for its rich and varied patterns of hedgerows, a part of our cultural and landscape heritage which ranks alongside great cathedrals, ancient villages and spectacular coastlines.

Two thirds of England has had a continuously hedged landscape for a thousand years or more. Some hedgerow systems date back to prehistoric times, and most were well established by the Anglo-Saxon period. It is only in the Midlands and part of the North-East that the majority of these early hedgerows were removed in Medieval times to create open field systems, and new hedgerows subsequently planted under the Enclosure Acts between 1750 and 1850. A great many of our hedgerows are ancient and of historical interest in their own right. This is particularly true where they mark parish boundaries, ancient monuments or other such features. Often old veteran trees, their lives prolonged by repeated pollarding over the years, reveal the great age of hedgerows and their importance to our ancestors.

We also have a rich tradition of different hedgerow management techniques, particularly of hedge laying, and this too is an important part of our cultural heritage, one which helps to give both a sense of continuity and one of place to local communities.

Landscape importance

The networks of hedgerows, and in some places dry stone walls, that cover so much of our countryside pick out changes in topography, soils and underlying geology, and define current, and often past, patterns of agriculture and other land use. Together with woods, roads and settlements, they give character to the landscape and impart much local distinctiveness.

Wildlife importance

Hedgerows contain a wealth of different plant and animal species and across large swathes of the countryside are an essential habitat and refuge for the majority of our farmland wildlife. They provide a vital resource for mammals, birds, and insects, as well as being an important habitat in their own right, they act as wildlife corridors allowing dispersal between isolated habitats.

The very high importance of hedgerows for birds alone is clear with no less than 21 priority BAP bird species associated with hedgerows, and 13 of these, using hedgerows as a primary habitat. Similarly, as many as 16 out of the 19 birds used by Government to assess the state of farmland wildlife are associated with hedgerows, with 10 using them as a primary habitat.

Hedgerows are important for a large number of threatened or rare species. These include plants like the Plymouth pear, insects like the brown hairstreak butterfly, birds like the curlew and mammals like the dormouse.

Hedgerow Features Important to Wildlife

Different features of a hedgerow will be important to different species. The more diverse in composition a hedgerow is the more species it is likely to support due to a diversity of flowering and fruiting times. In general, native hedge plants such as blackthorn *Prunus spinosa*, hawthorn *Crataegus monogyna*, hazel *Corylus avellana*, dogwood *Cornus sanguinea* and field maple *Acer campestre* will support many more species than non-native plants such as garden privet, *Ligustrum ovalifolium*, leylandii and sycamore *Acer pseudoplatanus*. Older hedgerows often contain a large amount of dead wood and plant litter within the structure of the hedge and can provide a valuable habitat for many invertebrates (which in turn will attract predators such as bats, shrews and birds) and cover for small mammals. Hedge bases are an important feature and provide a buffer zone to protect root systems and which can be an important habitat in its own right.

Management

Management practices are crucial to the maintenance of a healthy hedge beneficial to wildlife: hedge laying, where the laid stems die off as the new shoots grow provides a source of dead wood. Coppicing, where stems are cut just above the ground, can provide a new lease of life to seriously damaged hedgerows. The timing of management is important to get the best from a hedge and avoid disturbance to animals breeding or over-wintering. The cutting cycle will determine the availability of fruits and flowers in a hedge; typically a cycle of two to three years is most beneficial for wildlife.

UK Biodiversity Action Plan:

The National HAP has been changed from ancient / species rich hedgerows to simply hedgerows. The name of the national partnership is 'Hedgeline'. This now includes all hedgerows with >80% cover of native trees and shrubs. In 2007 targets substantially revised and hedgerow condition is now defined using 6 key attributes. There is now an increased responsibility for associated priority BAP species. Defra remains the lead partner

Hedgeline has selected 12 flagship species against to which to measure the impact of its policies, action and advice. Collectively they represent the requirements of nearly all 130 species. They are: purple rampion fumitory, orange-fruited elm-lichen, large (moss) carder bee, goat moth, brown hairstreak, common lizard, bullfinch, tree sparrow, yellowhammer, soprano pipistrelle, hedgehog and dormouse.

Data collected for Countryside Survey 2000 in 1998 estimates that in the UK there is 814,159-km of hedgerows.

UK Biodiversity Action Plan: Priority species linked to hedgerows

130 priority BAP species identified following the 2007 revised list are known to be significantly associated with hedgerows, including their trees, banks, basal flora and immediate margins. While few of these species are dependent on hedgerows alone, the loss of hedgerows, or a decline in their quality, would be likely to have an adverse affect on their populations.

Hedgerows are of particular importance to the conservation of threatened lichens (10 species), invertebrates (72), reptiles and amphibians (5), birds (20) and mammals (11).

The majority (69%) of associated species are widespread within the UK, including most of the birds and mammals. While still often common, these widespread species are recognised as priorities for conservation action because their populations have declined rapidly in recent decades. Many of them are dependent on the existence of a variety of different habitats in close proximity, so require conservation action to be taken at the landscape scale.

All 130 species occur in England, 104 in Wales, 83 in Scotland and 59 in Northern Ireland. South-West England and South East England are the regions with most priority species.

All major structural components of the hedge are important. Excluding those species for which insufficient is known about their ecological requirements (that is 51 widespread moths), over half (57%) use hedgerow trees, 42% the shrubby component, 41% the base and 34% the margin. Many species use more than one structural component. The high value of hedgerow trees is of particular note given that numbers of such trees are currently falling rapidly.

Ecosystem Services, Importance for soil, pollutant and water management

The considerable value of hedgerows in helping to conserve essential natural resources such as soil and water, and in helping to prevent pollution, has been long recognised over much of the rest of Europe. Only recently in the UK are we too coming to appreciate the highly significant role they can play in these respects, in part because of increasing concerns over climate change.

Hedgerows can be very effective at preventing loss of soil from fields, either through reducing wind erosion or through acting as a barrier to water-borne run-off. This is particularly so in arable areas, both where the land is flat and prone to wind-blow as in the Fens of East Anglia, and in

hilly areas where loss of soil following heavy rain can be a major problem especially in places prone to gully erosion.

Hedgerows also play a valuable role in reducing the amount of polluting fertilisers, pesticides and sediment that reach watercourses, through acting as a physical barrier, through increasing infiltration into the ground, and through being recycled by the trees, shrubs and other plants. For this reason they are often planted along contours above ditches, streams and rivers.

Hedgerows can be very effective at regulating water supply for crops, in several ways. Firstly, through decreasing wind speed over the ground surface, hedgerows reduce water loss through evaporation in areas prone to drought. Secondly, hedges can help to store water for later use. Thus a 1ha field with a 50m hedgerow at the bottom can store between 150 and 375 cubic metres of water during rainy periods for slow release down slope, during dry periods. This effect is greatest in soils rich in clay or organic matter. Thirdly, because of their deep roots, hedgerows remove water faster from the soil than crops during periods of excessive rainfall, through increased evapotranspiration.

Together with woods, hedges reduce the rate of flow of water within catchments, so help to reduce flooding downstream.

Hedgerows may play a significant role in reducing the rate of climate change, through carbon storage, and through the provision of firewood, a renewable fuel. A new hedgerow may store 600 - 800 kg of CO₂ equivalent per year per km, for up to 20 years.

In urban areas hedgerows contribute to services such as climate regulation, sustainable urban drainage, reducing airborne particulates and atmospheric pollution, and providing wildlife habitat. They also improve the aesthetic appearance of the built environment.

A review of the services provided by Environmental Stewardship in England has revealed that hedgerow options provide a greater number of services, 21 in all, than any other group of options.

Fuel supply

Across the UK, hedges were not long ago essential sources of wood for cooking and heating, and were managed accordingly. The use of cloam ovens powered by faggots taken from hedgerows was still commonplace in rural parts of Devon in the first part of the 20th Century. Unlike today, when a hedge was layed or coppiced little was wasted. Now, nearly everything, even larger timber, is burnt in bonfires on site, and the energy and nutrients wasted.

With concerns over climate chaos resulting from global warming, and driven by increasing oil and gas prices, more interest has been shown recently in harvesting the material taken from hedgerows when they are cut, layed or coppiced, for use in heating. The wood can either be used directly in log-burning stoves, or chipped for use in biomass burners and boilers.

Legislation

The Hedgerows Regulations 1997 - made under Section 97 of the Environment Act 1995 came into operation in England and Wales on 1 June 1997. They provide important protection by prohibiting the removal of most countryside hedgerows (or parts of them) without first notifying the local planning authority (LPA). 'Removal' includes acts which could result in the destruction of a hedgerow.

If the hedgerow is 'important' the LPA may prohibit its removal by issuing a retention notice within 42 calendar days from receipt of notification. The LPA can also require replacement of a hedgerow removed in contravention of the Regulations. Contravention of the Regulations is a criminal offence, punishable in some cases in the Magistrates' Court by a fine of up to £5,000. For anyone convicted on indictment in the Crown Court the fine is unlimited.

Important Hedgerows - The criteria relate to the value of the hedgerows from an archaeological, historical, landscape or wildlife perspective. Hedgerows less than 30 years old are excluded. There is considerable local variation, but research suggests that, nationally, over 70% of hedgerows are estimated to be 'important' if assessed according to the criteria in the Regulations.

Tree Preservation Orders

Tree Preservation Orders (TPOs) are made by local planning authorities (LPAs) which have discretionary powers under section 198 of the Town and Country Planning Act 1990, and the Town and Country Planning (Trees) Regulations 1999 to protect selected trees or woodland for public enjoyment. The Order is made for the 'amenity' of the tree or woodland, which can include its nature conservation value, but more often means its visual amenity

TPOs prohibit the cutting down, uprooting, topping, lopping, wilful destruction or damage of trees without LPA consent. Not all trees are protected, and no particular species or size of tree are protected. Orders can be made very quickly and where necessary, councils can make an emergency TPO in less than 24 hours in cases of immediate danger. Where a TPO has been made, the landowner remains responsible for the tree condition and any damage.

TPOs can be placed on any trees including woodland and hedgerow trees, but not hedgerows themselves. In practice, TPOs tend to be most commonly used in urban or semi-urban settings e.g. gardens and parkland.

TPO Types

There are four TPO types although they can contain any number of items or a combination of types:

- Individual: applied to an individual tree.
- Group: applied to a group of individual trees which, together, make up a feature of amenity value, but which separately might not.
- Area: Covers all trees in a defined area at the time the Order was made. This sort of TPO is not commonly used now .
- Woodland: Covers all trees within a woodland area regardless of how old they are.

Details of Orders, applications for work, and decisions are kept by the local authority and should be available for public inspection.

2. STATUS IN ESSEX

Hedgerows can be divided into four categories, some of which are found in all districts:

- Ancient species rich hedgerows found mainly on the chalk and chalky boulder clay soils of north central and north west Essex.
- Ancient species poor hedges, e.g. the elm dominated hedges of the rectilinear field systems of Thurrock and Maldon.
- Enclosure and post enclosure species poor hedges.
- Modern species rich hedges often planted under grant schemes

There is no accurate figure presently available for the length of hedgerows in Essex, nor of the length of green lanes. However, there are 6,502km of footpaths, 800km of bridleways and 194km of byways in Essex, most of which are associated with hedges along long established routes. One fairly typical arable farm of 789 hectares in north Essex, which has been studied in depth, has 39.4km of hedges, all of which are pre-enclosure, and 25% (9.9km) of which are considered to date from the Tudor period or earlier. Extrapolating this data to the whole of Essex (345,619ha) indicates a figure of 17,237km of pre-enclosure hedges, including 4,338km dating from the Tudor period or earlier.

3. CURRENT FACTORS AFFECTING THE HABITAT

Inappropriate/lack of management;

- Removal - Since 1945 there has been a drastic loss of hedgerows through removal and neglect throughout the UK, especially in eastern counties of England. Between 1984 and 1990, the net loss of hedgerow length in England was estimated as 21%, (1.7% per annum).
- Neglect (no cutting or laying) leading to hedgerows changing into lines of trees and the development of gaps. This reflects modern high labour costs and loss of traditional skills. (3.5% pa).
- Loss of hedgerow trees through senescence and felling, without encouraging replacements.
- Too frequent and badly timed cutting leading to poor habitat conditions, the development of gaps and probable species changes.

Agricultural Practices

- Use of herbicides, pesticides and fertilisers right up to the base of hedgerows leads to nutrient enrichment and a decline in species diversity.

- Increased stocking rates, particularly of sheep, leading to hedgerow damage and the need to fence fields. The presence of fences reduces the agricultural necessity for hedge maintenance and so hastens their decline. The modern practice of "ranching" (placing netting around several fields to form a grazing block) also contributes to the deterioration of internal hedges).
- Removal for agricultural and development purposes,

Miscellaneous

- Invasive species such as garden escapees
- Fragmented approach – lack or joint up co-operation
- Lack of funds & resources

Targets

National Targets	Hedgerows	target date
1	Maintain the net extent of hedgerows 817,612km	ongoing
2	Maintain the overall number of individual, isolated hedgerow trees (est. 1.8 million in and the net number of isolated veteran trees	ongoing
3	hedgerows remain, on average, at least as rich in native woody species.	ongoing
4	Achieve favourable condition of 243,000km (35%) of hedgerows	ongoing
5	Reverse the unfavourable condition of over-managed hedgerows across the UK by reducing the proportion of land managers who trim most of their hedges annually	Ongoing
6	Halt further decline in the condition of herbaceous hedgerow flora	Ongoing
7	Improve the condition of the hedgerow tree population by increasing numbers of young trees	ongoing
8	Achieve a net increase in hedgerows of 800km per year	ongoing

East of England Targets	Hedgerows	target date
1	No specific East of England region targets	2015

Essex Targets	Hedgerows	target date
1	Maintain the net extent of hedgerows est. 17237km(x3m = 5171ha)	2020
2	Achieve favourable condition of est. 6032km (35%) of hedgerows	2020
3	Achieve a net increase in hedgerows of 1km per year	2020
4	Maintain the number of isolated hedgerow trees	2020
5	Increase the number of young hedgerow trees to 200 by 2020	2020
6	Maintain hedgerows rich in native woody species	2020