



Ancient and/or Species-Rich

Hedgerows

In Cumbria there are two very different traditional styles of hedge laying: Westmorland and Cumberland. In Cumberland all but the main stems are cut away, while in Westmorland many minor stems are retained.

Current status

As defined in the UK national Biodiversity Action Plan, ancient hedgerows are those that were in existence before the Enclosure Acts (1720 to 1840) and tend to be those which support the greatest diversity of plants and animals. Species-rich hedgerows in northern England (and hence Cumbria) may be taken as those which contain four or more native woody species on average in a 30 metre length and include recently planted examples. Hedges which contain fewer woody species but have a rich basal flora of herbaceous plants are also included. Many of the thin, straight hawthorn hedges which characterise later parliamentary enclosures, as well as most hedges which consist mainly of beech, or non-native trees, are excluded. Features associated with hedgerows, such as banks, ditches, trees or verges, are considered to form part of the hedgerow.

The EC Habitats Directive requires member states to encourage the management of hedges in their land use planning and development policies with a view to improving the ecological coherence of the Natura 2000 network. This is reflected in The Conservation (Natural Habitats, etc) Regulations,

1994, which recognises that such linear features are essential for the migration, dispersal and genetic exchange of wild species, and PPG9 (Nature Conservation, 1994).

Ancient and species-rich hedgerows are found throughout Cumbria, from the flat plains of the Solway coast to the tracks and byways of the lower fells. They also occur on a wide range of rock and soil types, giving a great deal of regional variation in hedgerow composition and form.

Estimates of the extent of hedgerows in Cumbria suggest that the current total hedgerow length in the county is between 16,500 and 22,500km. It is not known what percentage of these are ancient or species-rich but, nationally, figures of 40% are suggested. Estimates for hedgerow loss in Cumbria suggest that 25% of the total Cumbrian hedgerow length was lost between the 1940s and 1970s (NCC 1987) and that between 1976 and 1996 there has been a 3.4% loss (Metcalf unpublished). Figures for losses should be viewed in the light of recent new planting and restoration. For example, agri-environment schemes agreements with farmers and landowners in Cumbria made between 1994-98 account for approximately 100 km of new

hedge planting and for the restoration/management of approximately 500 km of hedgerows. The greatest concentrations of hedgerows are, as might be expected, in the lowland parts of the county, particularly the Solway Basin, West Cumbria Coastal Plain and the southern part of the Cumbria Fells and Dales Natural Areas.

Characteristic wildlife

Hedgerows are important habitats in their own right and, although linear, they constitute large areas of habitat, distributed over many areas of Britain, including Cumbria. The status of hedgerows as wildlife habitats in Cumbria has not been assessed; however, nationally, hedgerows are a primary habitat for at least 47 species of conservation concern, including 13 globally threatened or rapidly declining ones, more than for most other key habitats. Nationally, over 600 plant species, 1500 insects, 65 birds and 20 mammals have been recorded at some time living or feeding in hedgerows.

In Cumbria, typical native, woody hedge species include hawthorn, hazel, blackthorn, crab apple, dog rose, ash, oak, holly, wild cherry, bird cherry, bramble and guelder rose. The more diverse hedges frequently include a variety of typical woodland and woodland edge plants, such as honeysuckle, dog's mercury, red campion, wood anemone, violets, primrose and bluebell.

Hedgerows are important for invertebrates, including butterflies and moths, and farmland birds such as grey partridge, tree sparrow and song thrush. They are particularly important as foraging areas for barn owls. Bats hunt for insects along hedgerows, use them as commuting routes and roost in holes in old hedgerow trees.

Older and more diverse hedgerows are likely to be more valuable as wildlife habitats and provide an essential refuge for a great many woodland and farmland birds, plants and animals. Hedgerows adjacent to roads, green lanes, tracks and wooded ground tend to be particularly species-rich.

Hedgerows may also act as wildlife corridors for many species, including reptiles and amphibians, allowing dispersal and movement between other habitats.

Hedgerow trees, especially veteran trees, provide significant ecological variation in the landscape and are important habitats in their own right.

Key species

The following rare or threatened species are associated with ancient and/or species-rich hedgerows in Cumbria. Species were selected on the basis that they are UK BAP Priority Species (marked P) or species of County importance in Cumbria. Where species of County importance are also UK BAP Species of Conservation Concern, they are marked C.

dormouse	<i>Muscardinus avellanarius</i>	P
brown hare	<i>Lepus europaeus</i>	P
pipistrelle bat	<i>Pipistrellus pipistrellus</i>	P
red squirrel	<i>Sciurus vulgaris</i>	P
linnet	<i>Carduelis cannabina</i>	P
reed bunting	<i>Emberiza schoeniclus</i>	P
spotted flycatcher	<i>Muscicapa striata</i>	P
tree sparrow	<i>Passer montanus</i>	P
grey partridge	<i>Perdix perdix</i>	P
bullfinch	<i>Pyrrhula pyrrhula</i>	P
song thrush	<i>Turdus philomelos</i>	P
barn owl	<i>Tyto alba</i>	C
great crested newt	<i>Triturus cristatus</i>	P
dark bush-cricket	<i>Pholidoptera griseoptera</i>	
speckled bush-cricket	<i>Leptophyes punctatissima</i>	
small eggar moth	<i>Eriogaster lanestris</i>	C
square spotted clay	<i>Xestia rhomboidea</i>	P
a phalloid fungus	<i>Battarraea phalloides</i>	P
bur chervil	<i>Anthriscus caucalis</i>	
knotted hedge-parsley	<i>Torilis nodosa</i>	
wood bitter-vetch	<i>Vicia orobus</i>	

Best management practice

There is no universally agreed best practice for ancient and/or species-rich hedgerows. However, it is generally agreed that the following are important considerations when managing any hedgerow for biodiversity:

- as a rough guide hedgerows should be trimmed on a 2-3 year rotation and laid every 10 to 30 years.
- hedgerows should be continuous (any break in the hedgerow should be gapped-up, not simply filled with a fence).
- a variety of hedgerow conditions (in different stages of management) is desirable in any landscape unit (e.g. farm).

- notwithstanding the above, hedgerows should be large (in volume), wide, dense, and vertically continuous from ground level to top (as well as horizontally continuous).
- trimming/cutting should be carried out at times of least disturbance to nesting birds and to avoid removal of food sources, and should not be carried out every year.
- hedgerows should provide a connected network, as far as is possible, in any landscape and should link other habitats.
- associated features (such as banks, ditches, trees) should be maintained to provide habitat diversity. While hedgerow trees should be maintained and replaced if lost, too many trees in a hedge may deter some species such as grey partridge, lapwing and yellowhammer.

Current issues

Much of the “loss” of hedgerow that has occurred is in fact due to hedgerows becoming overgrown to the point where they are no longer manageable as hedgerows (e.g. they become lines of trees) or they are over-trimmed and become scattered lines of shrubs.

The quality of Cumbrian hedgerows for wildlife has not been assessed but, typically in England, some management practices are not sympathetic to hedgerows (and hedgerow trees) as wildlife habitats. These include:

- Enlargement of fields and removal of hedgerows for agricultural and development purposes.
- Neglect (no trimming or laying) leading to hedgerows changing into lines of trees and the development of gaps. This reflects the fact that many field boundaries are no longer needed for modern farming, together with the lower level of employment on farms, higher labour costs and loss of traditional skills.
- Too frequent and badly timed cutting leading to poor habitat conditions, the development of gaps and probable species changes.
- Loss of hedgerow trees, especially veteran trees, through senescence and felling, without encouraging replacements.
- Use of herbicides, pesticides and fertilisers right up to the bases of hedgerows, leading to nutrient enrichment and a decline in species diversity. Occasionally, when wet weather prevents tractors from entering fields to spray slurry, spraying may be done over the hedge with unintentional ‘drift’ of slurry into the hedge.
- Ploughing up to the field edge which has severed the roots of hedgerow shrubs and trees.
- 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 outright removal of hedgerows and the abandonment of management are the two most important issues.

Current action

- The Environment Act 1995 introduced an enabling power to protect important hedgerows in Britain (Hedgerow Regulation 1997). Land managers are required to seek the permission of local authorities before hedgerows can be removed.
- MAFF provides incentives under the Countryside Stewardship Scheme (CSS) for the restoration and sympathetic management of hedgerows. Since 1992 30km of hedgerow have been planted and over 400km restored by laying, coppicing or gapping under CSS.
- In the Lake District ESA, 186 km of hedge has been laid, planted or coppiced under Conservation Plan grant since 1993. Monitoring of linear features over the period 1993-1996 suggested that less deterioration of hedges and more new planting took place on ESA agreement land than on non-agreement land. The Pennine Dales ESA offers similar incentives in parts of east Cumbria. The LDNPA also give grants for hedgerow work within the National Park.
- Guidance on hedgerow management is available from a wide range of organisations, including FWAG, ADAS and ECCP. The Forestry Commission has published guidance on the establishment of trees in hedgerows. Both the Forestry Commission and the LDNPA favour grant-aid to new woodlands adjacent to ancient hedgerows and other features which act as relict woodland habitats.
- Training in hedgerow management is offered in formal courses run by Lantra (leading to NVQs) and by other organisations such as FWAG, BTCV and Newton Rigg.
- An extensive hedgerow planting and laying programme has been carried out on the National

Trust's Lake District Estate over the past 15 years.

Context in relation to other plans:

UK Habitat Action Plans

There is a UK Biodiversity Action Plan for ancient and/or species-rich hedgerows in *Biodiversity: the UK Steering Group Report* (1995), which sets the following UK objectives and targets:

- Halt the net loss of species-rich hedgerows through neglect and removal by the year 2000, and all loss of hedgerows which are both ancient and species-rich by 2005.
- Achieve the favourable management of 25% (c.47,500 km) of species-rich and ancient hedges by the year 2000, and of 50% (c. 95,000) by 2005.
- Maintain overall numbers of hedgerow trees within each county or district at least at current levels, through ensuring a balanced age structure.

National Lead Agency

The national lead agency for ancient and/or species-rich hedgerows is MAFF, whose nominated officer is based at the central London office.

Local contacts

Ian Wrigley and Paul Arkle at FWAG, Anderson Court, Sullart Street, Cockermouth. 01900 828684, e-mail cumbria@fwag.org.uk
Colin Barr at CEH Merlewood (Status and Research) 015395 32264

Associated plans in the Cumbria BAP

The following Cumbria species/habitat action plans are of relevance to ancient and/or species-rich hedgerows:

Phase I

- calcareous grassland
- hay meadows and lowland pastures
- purple moor grass and rush pasture
- cities, towns and villages
- bats
- barn owl
- song thrush
- great crested newt

Phase II

- dormouse
- least minor moth

References

Nature Conservancy Council. (1987). Changes in the Cumbrian countryside. First report of the National Countryside Monitoring Scheme. NCC Peterborough.

Metcalf, J (unpublished) A survey of hedgerows in Cumbria. Student report to Institute of Terrestrial Ecology, Grange over Sands.

Objectives, targets and proposed actions for ancient and/or species-rich hedgerows in Cumbria

Broad Objective A	Halt the loss of ancient and/or species-rich hedgerows in Cumbria by 2005			
Operational Objective	Action Required	Suggested organisational involvement	Time-scale	Type
1 Determine current extent, condition and distribution of ancient and/or species-rich hedgerows and monitor future trends	1 Carry out a systematic survey of ancient and/or species-rich hedgerows to identify priority areas for conservation action (including hedges that can be protected under current legislation and those that link otherwise isolated patches of wildlife habitat, especially those that form an integral part of, enhance, or link Natura 2000 and other designated sites of wildlife importance), by 2002. Produce project specification by end 2001.	CEH, CCC, MAFF, CWT, RSPB, CLA, NFU, NT, LDNPA, EN, NWW	S	RM
	2 Carry out sample surveys at 10 year intervals in regions throughout the county. Consider use of voluntary sector and produce project specification by 2001.	CEH, EN, CWT	S	RM
	3 Following nationally commissioned research on the effects of different hedge management regimes, consider the need to modify existing regimes in Cumbria in the light of these results.	MAFF	M	RM
2 Ensure that agri-environment schemes or other forms of grant aid are in place and appropriately funded and promoted by 2001	1 Ensure ancient and/or species-rich hedgerows are considered in the setting up of new agri-environment agreements and in any revision of existing agreements to ensure that, where possible, the habitat is brought into favourable management to contribute to national BAP and local Natural Area targets for the habitat.	MAFF, EN	M/L	PL/SS
	2 Review and modify if necessary the promotion of ESA, Countryside Stewardship and other forms of grant aid for the management and restoration of ancient and/or species-rich hedgerows, for the planting of new hedgerows and for the establishment of hedgerow trees. By 2001.	FWAG, CLA, NFU, MAFF, LDNPA, ECCP, ADAS	S	CP

Broad Objective A		Halt the loss of ancient and/or species-rich hedgerows in Cumbria by 2005		
Operational Objective	Action Required	Suggested organisational involvement	Time-scale	Type
3 Ensure that legislation relating to hedgerows is fully implemented in Cumbria	1 Consider the practicality of establishing registers of ancient and of species-rich hedgerows, using the information gathered in A1.1 above and presented in a useful format such as GIS. By 2001.	LAs	S	RM
	2 Disseminate the DETR leaflet on hedgerow legislation and protection to appropriate bodies and target groups. By 2001 and ongoing thereafter.	DETR, EN, LAs, CWT, MAFF, FWAG	S	A/C P
	3 Provide a training day for Local Authorities on their role in hedgerow protection. By 2001.	LAs	S	A
Broad Objective B		Achieve the favourable management of 50% of Cumbria's ancient and/or species-rich hedgerows by 2005		
Operational Objective	Action Required	Suggested organisational involvement	Time-scale	Type
1 Promote an awareness among the public, land managers and contractors of the importance of hedgerows and of the need for their management to maintain biodiversity	1 Encourage favourable management of ancient and/or species-rich hedges, especially favourable cutting practices, using among other mechanisms FWAG's hedgerow leaflets/technical information.	FWAG, CLA, NFU, MAFF, ADAS, LDNPA, ECCP	O	CP
	2 Consider the development of hedge management skills through training, especially for contractors.	FWAG, CA, MAFF, ADAS	O	A/C P
	3 Encourage the retention and favourable management of ancient and/or species-rich hedgerows that form an integral part of, enhance, or link Natura 2000 and other designated sites, through LA planning policies, EN Natural Area initiative and other county-wide strategies.	EN, LAs, FWAG, CLA, MAFF, ECCP	O	SS

Broad Objective C Maintain overall numbers of hedgerow trees, through ensuring a balanced age structure that includes veteran trees and traditional practices

Operational Objective	Action Required	Suggested organisational involvement	Time-scale	Type
1 Ensure no further loss of hedgerow trees through inappropriate tree surgery or felling	1 Draw up guidelines on the management of hedgerow trees and distribute as widely as possible to individuals and organisations with involvement in hedgerow management by 2001 and advertise its availability in farming and forestry literature.	FC, FWAG, NFU, CLA	S	A/ CP
	2 Arrange relevant training to coincide with the publication of the above guidelines. During 2001.	FWAG	S	A/ CP
	3 Encourage the effective use of existing legislation for the protection of hedgerow trees (Tree Preservation Orders and Hedgerow Regulations) by providing advice notes to Local Authorities by 2002.	FC, DCs, LDNPA, YDNPA	M	A
2 Ensure lost hedgerow trees are replaced with appropriate species	1 Ensure hedgerow trees within ancient and/or species-rich hedgerows are considered in the setting up of new agri-environment agreements and in any revision of existing agreements to ensure that, where possible, the habitat is brought into favourable management.	MAFF	M/L	PL/ SS
	2 Provide a guidance note on the availability of grants for tree planting in hedgerows and make it widely available by advertising in farming and forestry literature by 2002.	FWAG, LDNPA, MAFF, FC, ADAS, ECCP	M	A/ CP

Key to Tables

Suggested organisational involvement: Key Deliverers in bold type; Partners in plain type.

ADAS = Agricultural Development and Advisory Service; CA = Countryside Agency; CCC = Cumbria County Council; CEH = Centre for Ecology and Hydrology; CLA = Country Landowners Association; CWT = Cumbria Wildlife Trust; EN = English Nature; EA = Environment Agency; ECCP = East Cumbria Countryside Project; FC = Forestry Commission; FWAG = Farming and Wildlife Advisory Group; LAs = Local Authorities; LDNPA = Lake District National Park Authority; MAFF = Ministry for Agriculture, Fisheries and Food; NFU = National Farmers Union; NT = National Trust; NWW = North West Water; RSPB = Royal Society for the Protection of Birds; YDNPA = Yorkshire Dales National Park Authority.

Timescale: O=ongoing; S=short term (2000-2001); M=medium (2002-2005); L=long (2006-2010).

Type: Type of action; PL=Policy & Legislation; SS=Site Safeguard & Management; SP=Species Management and Protection (species plans only); A=Advisory; RM=Research & Monitoring; CP=Communications and Publicity.