

## Boundary Features

Boundary features include hedgerows, walls and ditches. These features can be very diverse, contain rare protected species, and provide opportunities for species dispersal. The UKBAP Habitat Statement for Boundary Features states that all boundary features have at least some value as a wildlife corridor, and recommends their protection.

Hedgerows resemble woodland edge and may contain relics of ancient woodland vegetation. Dry stone walls provide a substrate for uncommon lower and higher plants typical of rock face habitats. They also provide a habitat for invertebrates, amphibians and reptiles. Ditches are often used as a further stock-proof addition to hedges or walls. Wet ditches provide an important habitat for aquatic plants and invertebrates such as dragonflies, and this habitat is included within the Water Features HAP.

Ancient and/or species rich hedgerows are a UK Priority Habitat. Ancient hedgerows may be defined as those which were in existence before the Enclosure Acts (1720-1840). Species-rich hedgerows are those which contain five or more native woody species on average in a 30 metre length or those which contain fewer woody species but a rich basal flora of herbaceous plants.

### Current status

#### *General*

Ancient and/or species-rich hedgerows may be designated individually or at a county or local level. Important hedgerows are protected under the 1997 Hedgerow Regulations. Linear features are protected under Article 10 of the EC Habitats Directive (in particular with a view to improving the ecological coherence of the Natura 2000 network) and the Conservation (Natural Habitats &c.) Regulations (1994). A number of species which inhabit hedges are themselves protected by the Wildlife and Countryside Act (1981, as amended), including protection for all nesting birds.

Since 1945 there has been a significant loss of hedgerows throughout the UK. Between 1984 and 1990, the net loss of hedgerow length in England was estimated at 21%. National figures indicate that there is currently a loss of 10% of hedgerows each year. It has been estimated that about 10% of hedgerows are currently under favourable conservation management.

Walls are in decline as they are removed or fall into disrepair or are replaced by fencing. Of the estimated 112,600 km of dry stone walls in England, half are described as derelict. It is estimated that 40,000 km of dry stone wall have been lost in England and Wales in the last 20 years.

Owing to the frequency of their occurrence, boundary features represent a prevalent and important element of the ecological resource of the soft estate. The majority of boundary hedges and drystone walls alongside trunk roads belong to owners of the adjoining land and so are not under HA control. The majority of motorway boundary hedges, which are the responsibility of the HA, are of single species composition planted in the last 40 years.

#### *UKBAP habitats*

Ancient and/or species rich hedgerows were the second most frequently recorded UKBAP Priority Habitat in the network information (38 sites), and they exist in all network regions.



Hedgerows are an important habitat supporting a high proportion of the British flora and fauna, including over 600 species of vascular plant, and they also provide food and shelter for many species of butterflies, birds, bats and small mammals.

### Current factors affecting the habitat

#### *Habitat loss and deterioration*

Road widening and re-alignment has resulted in the loss of many traditional boundaries. Other direct threats include disturbance of roadsides to lay and maintain services such as gas, electricity and telecommunications and replacement of hedgerows and walls with fences or walls constructed of non-local stone. Walls may also be damaged by traffic. Both the loss of standing trees within the hedgerow and fragmentation of hedgerows reduce the ecological value of this habitat type.

#### *Inappropriate or unfavourable management*

Poor management threatens boundary features, as well as the species which occur within them. Too frequent or badly-timed cutting, neglect (no cutting or laying), the use of herbicides, pesticides and fertilisers leading to nutrient enrichment, and re-planting with a low species diversity and plants of non-local stock, all represent threats to boundary features.

### Current action

The Highways Agency is exempt from the Hedgerow Regulations 1997; however policy within the TRMM states that where hedgerows are affected by work, they should be protected. In addition, where a hedgerow or part of a hedgerow has to be removed (i.e. as part of new infrastructure works), it should be replaced and those which would qualify as "important" under the Hedgerow Regulations should be replaced as essential mitigation.

Nationally, guidance is available from ADAS and the ITE who have produced a range of reports for MAFF and DETR on the status, management and wildlife of hedgerows in Britain. The Forestry Commission has published guidance on the establishment of trees in hedgerows.

There has been a revival in interest in stone walling and an increase in contractors available to repair or rebuild walls.

As part of the Biodiversity Action Plan process across the country, it is likely that boundary features of value for conservation at a local, county and regional level will be identified and management regimes advised.

### Objectives

The plan aims to protect and enhance boundary features of conservation value associated with the existing road network, and to ensure that impacts of future road building schemes on valuable areas of habitat and associated species are kept to a minimum and appropriate mitigation put in place where losses are unavoidable.

	Objective	Proposed actions
A	To ensure that new road developments avoid causing damage to boundary features, wherever possible.	7
B	To mitigate unavoidable impacts of new road schemes on boundary features.	8
C	To record the distribution of existing valuable boundary features on the soft estate and ensure their protection and enhancement.	2, 3, 4, 6, 9, 11
D	To raise awareness of HA staff, Managing Agents and consultants regarding the importance of boundary features on the network, and to provide detailed advice to contractors on beneficial management.	1, 12

	Objective ( <i>continued</i> )	Proposed actions
E	To create valuable boundary features as part of new roads and road improvement schemes, wherever possible.	6, 8, 10, 11
F	To increase connectivity between areas of semi-natural habitat and/or other areas of high biodiversity.	5, 10
G	To target the species composition of new hedges to be of local relevance for biodiversity.	10, 11

### Proposed action

The following table lists the actions required to achieve the objectives set out in this Plan. For some of the actions, potential partners have

been assigned as likely sources of cooperation. Targets are provided to give an indication of the timescale for the proposed action.

	Action	Potential partners	Target
	<i>Policy, guidance and advice</i>		
1	Provide detailed information in DRMB/TRMM on the management of the soft estate to avoid adverse impacts on boundary features, in particular ancient and/or species-rich hedgerows.	-	2005
	<i>Surveying</i>		
2	Carry out further surveys to ensure that all boundary features (in particular UKBAP habitats and associated Priority Species such as Western Ramping-fumitory) that fall within the soft estate are recorded on the HA Environmental Database.	-	2010
3	Identify ancient and/or species-rich hedgerows that support Priority Species across the network, and ensure their favourable management. (For example, where dormice are present, manage to support a diverse range of flowering and fruiting shrubs).	EN, WTs	2007
4	Identify walls supporting important lichen and fern populations, and ensure they are maintained.	EN, WTs	2007
5	During routine network ecological surveys record gaps between existing lengths of species-rich hedge to identify opportunities for creating new linkages.	-	2006
	<i>Research and monitoring</i>		
6	Monitor the success of all ancient and/or species-rich hedgerow translocation schemes.	-	Ongoing

	<b>Action</b> <i>(continued)</i>	<b>Potential partners</b>	<b>Target</b>
	<i>Mitigation and Management</i>		
7	For all new road schemes and road improvements, include search for records of valuable boundary features in desk study at stage 1 and in surveys at stage 2. Early identification of this constraint may allow impacts to be avoided.	-	Ongoing
8	Where impacts of new roads and road improvement schemes on valuable boundary features are unavoidable, consider the options for habitat translocation, recreation and enhancement.	-	Ongoing
9	Ensure the favourable management of roadside hedges for which the HA is responsible, in particular through appropriate cutting regimes, retention of standing trees and planting-up with native species of local provenance.	-	Ongoing
10	Target the creation of 100km of species-rich hedgerows within new road schemes towards known biodiversity needs in the local area (e.g. fruit- and nut-bearing trees of value to dormice or badgers; linking existing features affected by severance; encouraging commuting or foraging bats away from, rather than onto, the carriageway).	-	2012
11	Protect all existing sites of the Western Ramping-fumitory, and ensure that suitable habitat is created at nearby sites to allow for natural colonisation of new areas.	-	5 sites by 2012
	<i>Communications and publicity</i>		
12	Information on boundary features should be included in environmental training for HA staff and Managing Agents.	-	2003

### Links with other plans

This plan should be read in conjunction with the SAPs for barn owl, bats, dormouse, great crested newt, badgers and reptiles.

Boundary features are priority habitats in a number of LBAPs, and ancient and/or species-rich hedgerows are Regional Biodiversity Indicators in English Nature's West Midlands, East Midlands and North West regions.

### Lead partner

The lead partner for this habitat in the UKBAP is DEFRA.