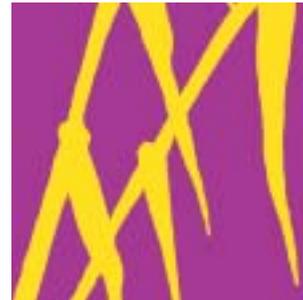


# H A B I T A T *a c t i o n p l a n s*



MAGNESIAN LIMESTONE GRASSLAND



REEDBED



LOWLAND WET GRASSLAND



HEDGEROW AND  
FIELD MARGIN



### Magnesian Limestone Grassland

#### CURRENT STATUS

##### Importance

Magnesian limestone grassland is a type of calcareous grassland which occurs in England on the narrow band of magnesian limestone stretching from Nottinghamshire to the River Tyne. Unimproved grasslands found on magnesian limestone are similar to those on chalks and other limestone, being rich in plant and invertebrate species.

Laid down during the Permian period (about 255 million years ago) when shallow seas covered the UK, the magnesian limestone outcrop has a long north-south axis and today lies on the climatic transition between the chalks and limestones of southern England and the Carboniferous limestones of the north and west. The intermediate climatic conditions are reflected in the habitats and species found on the magnesian limestone, which themselves differ between the southerly and the more northerly parts of the outcrop. Consequently, southern and northern species combine on the magnesian limestone to form an unusual assemblage; many species are at or near the limit of their ranges in Britain and many are nationally scarce or uncommon.

##### Trends

Unimproved magnesian limestone grassland is nationally scarce. Like other forms of lowland calcareous grassland, it has suffered a sharp decline in extent over the last 50 years. Agricultural intensification has been the main cause of loss, with remaining grasslands often restricted to steeper slopes that are less easily ploughed or improved for agriculture. Some magnesian limestone grassland also survives in and around old quarry workings, railway embankments, road verges and even as lawns within country estates.

The total amount of lowland calcareous grassland (of any type) in the UK has been estimated at 33,000-41,000 ha. The majority of this is chalk grassland found in southern and eastern England (some 25,000-32,000 ha) with much of the remainder being carboniferous limestone grassland. In contrast, there are probably no more than a few hundred hectares of magnesian limestone grassland, nationally.

#### Distribution and Habitat Area

This unique type of grassland is only found in a narrow band between Nottinghamshire and the River Tyne.

Within the Leeds district, there are approximately 34 ha of semi-improved magnesian limestone grassland, known from 15 sites, of which 12 are less than 3 ha in extent. Not only are most of the sites small, but they are generally isolated from each other, being scattered over a distance of more than 18 km north to south.



**Table : magnesian limestone grasslands in Leeds (greater than 0.2 ha)**

SITE	DESIGNATION	AREA (ha)
Kippax Hills		0.21
Thorpe Arch Disused Railway	SEGI	0.25
Lotherton Hall		0.34
Aberford Almhouses		0.40
Linton Common	SSSI	0.70
Wendel Hill Bank	SEGI	0.70
Kippax Meadows	SEGI	0.72
Hetchell Wood	SSSI	1.50
Madbanks *	SSSI	1.70
Roach Lime Hills	SSSI	2.00
Preston Hills	SEGI	2.19
Bramham Park	SEGI	2.31
Townclose Hills	SSSI	3.95
Ledsham Vale*	SSSI	4.50
Thorpe Arch Trading Estate	SEGI	12.15
<b>TOTAL AREA</b>		<b>33.62</b>

\* both parts of Madbanks and Ledsham Banks Site of Special Scientific Interest

#### CURRENT FACTORS CAUSING LOSS OR DECLINE

##### **Undergrazing**

The decline of livestock farming is closely linked with the demise of magnesian limestone grasslands. The conversion of large areas of former pasture to arable use has been widespread, with many of the remaining grasslands being small sites on steep slopes with difficult access. Although cattle and sheep grazing remain the ideal form of management, horse grazing and hay cutting are important alternatives at some sites.

##### **Development**

Both direct and indirect development pressures affect magnesian limestone grassland. The direct pressures are from loss of grassland areas to built development such as housing, industrial or retail use. Where landowners may have long-term development aspirations, deliberate neglect of sites can occur with the intention of letting the grassland deteriorate to the extent that key species and habitat types are lost. Indirect pressures can include changing patterns of landuse (to the extent where agricultural holdings are no longer viable) and the impacts of increased recreational use.

#### **Site management costs**

Because remaining sites are small, and often on steep slopes with difficult terrain, site management tends to be labour intensive and relatively costly: recreational pressures can cause problems for the welfare of livestock and small-scale machinery and the manual collection and removal of grass is often the only option.

#### **The loss of rare and scarce species**

Certain sites have rare or scarce species in such small populations that only the slightest change in management or conditions may lead to their total disappearance. The small areas of sites and their isolation from each other limits the scope for the natural spread of species and heightens the importance of maintaining the remaining semi-improved grasslands in optimum condition.

#### **Impacts of site use and misuse**

Erosion from unmanaged access and the illegal use of motorbikes can have a significant impact on the small areas of grassland. Vandalism, arson, tipping and extensive dog-fouling can also damage sites significantly as well as increasing the costs of site management.

### Inadequate financial incentives

The combination of the above factors makes the unit cost of conservation management for magnesian limestone sites considerably higher than for many other habitat types, especially those which remain more extensive, such as other types of calcareous grassland. Thus, schemes such as Countryside Stewardship alone do not always provide sufficient financial incentive for many landowners to commit themselves to long-term conservation management of magnesian limestone grassland sites.

### CURRENT ACTION

#### Protection

There are five Sites of Special Scientific Interest in Leeds (including one Local Nature Reserve) which include magnesian limestone grassland, plus six Sites of Ecological or Geological Importance.

#### Management

Site Management Statements have been agreed for 4 of the SSSI. Three of the SEGI receive some conservation management.

Magnesian limestone grassland is a key Countryside Stewardship objective for West Yorkshire.

### Action plans objectives and targets

Maintain and safeguard the current extent of magnesian limestone grassland.

Achieve favourable conservation status of all SSSI sites by 2003 and all non-SSSI sites with magnesian limestone grassland by 2005.

Increase the existing area of magnesian limestone grassland in Leeds by 50% by 2005, placing particular emphasis on linking and buffering existing sites to reduce fragmentation.

Ensure sustainable populations of key species on magnesian limestone grassland by 2008.

### LINKS

Pasqueflower SAP



*Townclose Hills Nature Reserve*

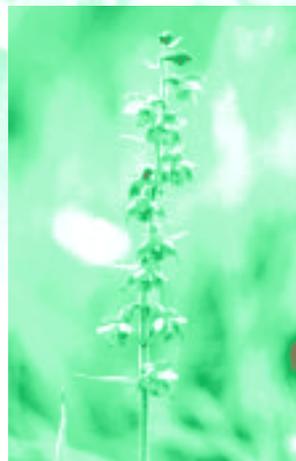
PROPOSED ACTION		
<b>Policy</b>	<b>Lead Agencies</b>	<b>Target Date</b>
Promote increased incentives for the magnesian limestone grasslands through schemes such as Countryside Stewardship	LCC; EN; FWAG	2001
Target funds for grassland restoration at key sites	EN; MAFF/FRCA; LCC	On-going
<b>Site safeguard</b>		
Review the coverage of SSSI designation to ensure that all existing calcareous grasslands over 0.5ha are designated SSSI.	EN	2002
Ensure the protection of all unimproved or semi-improved magnesian limestone grassland sites through the planning system, including through the close scrutiny of development which might have indirect impacts	LCC; EN	On-going
Support the acquisition of neglected magnesian grassland sites by organisations which will carry out necessary conservation management	LCC; EN	On-going
Ensure that all magnesian grassland sites are designated as statutory or non-statutory nature conservation sites	LCC	2001
<b>Habitat management</b>		
Ensure that all magnesian limestone grassland sites are managed appropriately to retain or restore their natural community diversity.	LCC, EN, FWAG, Landowners	2002
Ensure that management of magnesian grasslands incorporates consideration of key species.	LCC, EN, FWAG, Landowners	On-going
Identify opportunities for habitat restoration/creation, placing emphasis on linking existing primary grassland and integrating with mosaics of other habitats such as scrub, woodland and wetland/flushes/ponds.	LCC, EN, FWAG,	2002
<b>Advisory</b>		
Draw-up management prescriptions for all sites	EN; FWAG; LCC	2001
Organise demonstration training days.	FWAG; MAFF/ FRCA; landowners	Annually

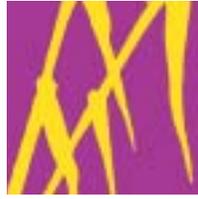
PROPOSED ACTION (contined)

<b>Future research and monitoring</b>	<b>Lead Agencies</b>	<b>Target Date</b>
Identify key sites for targeting restoration work	MAFF/FRCA; LCC; EN	2002
Establish qualitative and quantitative monitoring of grassland at all key sites	EN; LCC	2002
<b>Communications and publicity</b>		
Raise public awareness of magnesian limestone grassland and the importance of this special habitat in the Leeds area.	LCC; EN; FWAG;	2000
Raise awareness of magnesian limestone grassland management and restoration issues among planners, landowners and managers.	LCC; EN; FWAG; MAFF/FRCA	2000
Promote interpretation and appropriate access.	EN; MAFF/FRCA; FWAG; LCC	On-going

Key to abbreviations

EN	English Nature
FWAG	Farming and Wildlife Advisory Group
LCC	Leeds City Council
MAFF/FRCA	Ministry of Agriculture, Fisheries and Food/ Farming and Rural Conservation Agency





### Reedbed

#### CURRENT STATUS

##### Importance

Reedbeds are a scarce habitat in the UK. They support a large and distinctive breeding bird assemblage including three 'red-listed species' (bittern, marsh harrier and reed bunting) and eight 'amber-listed' species (Birds of Conservation Concern, 1996). For many of these species the UK is a stronghold. Reedbeds also support many passage, migrant and wintering bird species.

Reedbeds are important for mammals, especially the harvest mouse which uses its prehensile tail to move within the aerial zone of standing reed. High densities of water shrew can occur in reedbeds too, and sometimes water vole. Larger sites can be important for otter and deer also frequently use reedbeds, particularly when in close proximity to woodland.

Seven hundred invertebrate species have been found to be associated with reedbeds in the UK, of which 40 insect species are entirely dependent and 64 are partially dependent on reeds. All stages of succession of a reedbed support important invertebrate communities although diversity decreases with pure stands of wet reed. Moths are a particularly good example, with at least 9 species specific to reed and many more on either reed or other reedbed plants. Many species of beetle which are dependent on reeds too. Of those invertebrates dependent on reedbeds, five are Red Data Book species.

##### Trends

An unknown proportion of the reedbed resource has been left to 'succeed' to dry reedbed and scrub with the loss of important wet reedbed areas.

Many of the red and amber-listed breeding bird species dependent on reedbeds have declined by up to 50% over the last 25 years.

##### Distribution and Habitat Area

Nationally, there was an estimated total resource of only 5000 ha in 1994, with only around 50 sites covering 20 ha or more.

The Yorkshire and Humber Region accounts for about 400 ha of the national total. Within Leeds there is just 7 ha of reedbed, most of which is at Mickletown Ings SSSI.

#### CURRENT FACTORS CAUSING LOSS OR DECLINE

##### Water quality

The industrial and urban nature of the Leeds area has historically caused a reduction in water quality in most river catchments and floodplains. Whilst reed will grow well in nutrient-rich water and can tolerate high levels of other pollution, the aquatic environment of the reedbed in such conditions is species-poor.

##### Water quantity

Demand for water for domestic, agricultural and industrial uses has caused water deficits on many wetlands in the UK. The natural seral succession of reedbeds which results in their drying out, is accelerated by long-term water shortages arising from drainage and abstraction.



## **Flood defence**

The flood embankments on rivers have reduced the frequency of flooding which has had an adverse impact on floodplain habitats such as reedbeds which are dependent on regular water inputs. In addition, the use of areas of floodplain for statutory flood storage can have detrimental affects on reedbed wildlife because of the lack of control on the timing and extent of flooding.

## **Neglect**

Management is essential in order to retain the characteristic assemblages and diversity of a reedbed. Through lack of management, many existing reedbeds have dried out, which has in turn led to scrub encroachment and succession to woodland.

## **Habitat loss**

The current, limited extent area of reedbeds is responsible to a large degree for the critically small populations of several reedbed-dependent species. Habitat loss is less of a threat than in the past but any further loss of habitat would have devastating effect.

## **Water-course management**

Less of a threat than in the past, the drive to drain land and reduce flood risk can result in the loss of reedbeds.

## **CURRENT ACTION**

### **Protection**

Nationally, most of the more significant reedbeds are notified as SSSI's and many are notified as Wetlands of International Importance under the Ramsar Convention and as Special Protection Areas under the EC Birds Directive. Several of the larger reedbeds are managed as nature reserves by English Nature, the RSPB and the Wildlife Trusts.

Locally, Mickletown Ings, the largest existing area of reedbed in the Leeds district with just over 6 ha, is designated a SSSI.

### **Management**

Conservation organisations throughout the UK, both statutory and non-statutory, have during the past five years been working to rehabilitate degraded reedbeds and to create new ones.

## **OBJECTIVES AND TARGETS**

### **Local**

Achieve a target of 100 ha of reedbed in good ecological condition, with at least 75% of this comprising blocks of at least 20 ha by 2020.

## **LINKS WITH OTHER ACTION PLANS**

Harvest mouse SAP



*Reedbed at Dolphin Beck Marsh*

PROPOSED ACTION

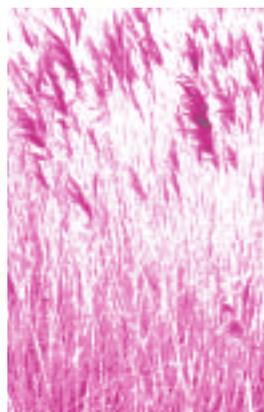
<b>Policy</b>	<b>Lead Agency</b>	<b>Target Date</b>
Reedbeds should be a preferred afteruse for mineral extraction sites in the Lower Aire Valley, especially between St Aidan's and Fairburn Ings.	LCC	On-going
Incorporate the restoration of floodplain habitats into the catchment management plans along with reedbed protection, management and creation	EA	2002
<b>Site safeguard</b>		
Ensure that the water quality is of a standard that will not adversely affect species diversity.	EA; Yorkshire Water; LCC	On-going
<b>Habitat management</b>		
Establish management regimes for reedbeds which have been restored or which require management.	EA; RSPB; FWAG; LCC	2001
Complete the establishment of a 5 ha reedbed at Fairburn Ings	RSPB; EA	2001
Establish a reedbed of at least 50 ha as part of the St Aidan's restoration scheme	RJB Mining; LCC	2008
Establish new reedbed as part of Rodley Nature	Rodley Nature Reserve Trust	2001
Dolphin Beck Marsh - rejuvenate existing reedbeds	LCC; EA	2002
<b>Advisory</b>		
Advise farmers and landowners as to the benefits of reedbeds to wildlife, appropriate management techniques and available grant schemes.	FWAG	On-going
Provide advice on reedbed treatment systems	EA; LCC	On-going
<b>Future research and monitoring</b>		
Assess the potential in terms of rehabilitation of existing reedbeds with a view to extending the area of reedbed where feasible.	LCC; EA	2001
Monitor the effects of changes in management on the flora and fauna, silt levels etc.	RSPB; LCC; EN	2001 and on-going

PROPOSED ACTION (Continued)

<b>Policy</b>	<b>Lead Agency</b>	<b>Target Date</b>
Investigate opportunities to create reedbeds to contribute to the national target for new reedbeds on land currently of low nature conservation interest of 1200ha by 2010 e.g.:		
a) Derelict industrial land in low-lying areas close to water supply	LCC; EA	2001
b) Open-cast and quarrying sites in floodplains where a reedbed could be created with an operating water table below that of the river to enable optimum water level conditions to be maintained.	LCC; EA	2000 and on-going
Monitor the effects of changes in management on the flora and fauna, silt levels etc.	RSPB; LCC; EN	2001 and on-going
<b>Communications and publicity</b>		
Any data from monitoring efforts should be made available at the national and European level to note the effectiveness of reedbed restoration overall, and the relative effectiveness of different techniques used.	LCC; EN; RSPB	2003 and on-going
Promote the importance of reedbeds to the local public through talks and local conservation interest groups.	RSPB; FWAG; EN; LCC	2000 and on-going
Liaise with other projects occurring throughout the country with regards reedbed restoration, creation and management.	RSPB; FWAG; LCC; EN	On-going

Key to abbreviations

EA	Environment Agency
EN	English Nature
FWAG	Farming and Wildlife Advisory Group
LCC	Leeds City Council
RSPB	Royal Society for the Protection of Birds





## Lowland wet grassland

### CURRENT STATUS

#### Importance

Lowland wet grassland is seasonally flooded grassland found in lowland river valleys and is important for the flower-rich hay meadows which were once widespread and wintering and breeding populations of wildfowl and wading birds.

Nationally, most of the more significant wet grasslands are notified as Sites of Special Scientific Interest and many are notified as Wetland of International Importance under the Ramsar Convention and as SPAs under the EC Birds Directive. Several of the larger wet grasslands are managed as nature reserves by English Nature, the RSPB and the Wildlife Trusts. The RSPB's Lowland Wet Grassland Habitat Action Plan lists 13 top sites in the UK for breeding waders totalling 68,873 ha. All have statutory nature conservation designations conferred to them, eleven being of international importance. Such is the significance of the habitat in biodiversity terms that the UK Government has produced a costed action plan for coastal and floodplain grazing marsh in Biodiversity: The UK Steering Group Report (Volume 2: Action Plans).

#### Birds

Lowland wet grassland supports a diverse range of birds, both breeding and wintering. However, few species could be said to be truly characteristic of or dependent

on the habitat, although, in the UK, certain species have a strong association with the habitat: (see table)

#### Plants

Lowland wet grassland is critically important for the species-rich *Alopecurus pratensis* - *Sanguisorba officinalis* MG4 grassland community. This is characteristic of seasonally flooded land with alluvial soils which has received traditional hay-meadow management. Because of extensive drainage and almost universal agricultural improvement of grasslands, this formally widespread plant community is now very localised and restricted in its distribution. Accordingly, this plant community is of national importance is listed in Appendix 1 of the EC Habitats Directive. Fairburn Ings supports a small area of 'remnant' MG4 which has potential for restoration.

#### Mammals

Wet grasslands are important for otter, water vole and for feeding bats such as pipistrelle and noctule, all of which are recorded in the Leeds district.

#### Invertebrates

Over a thousand nationally notable species have been recorded in wet grassland, about a quarter of which are Red Data species. Although the majority of invertebrates found in wet grassland can be found in other wetland habitats, wet grasslands are the stronghold for a number of species. The aquatic environment, mainly ditches, supports the majority of species. Fairburn Ings has more than 700 species of invertebrate, many associated with the wet grassland and related habitats.

Species	BoCC*	Criteria
Wintering		
Bewick's swan	Amber	>20% NW European population in UK
Whooper swan	Amber	>20% NW European population in UK
Shoveler	Amber	>20% NW European population in UK
Wigeon	Amber	>20% NW European population in UK
Teal	Amber	>20% NW European population in UK
Breeding		
Black-tailed godwit	Red	Five-year mean 0.2-300 breeding pairs
Garganey	Amber	Five-year mean 0.2-300 breeding pairs
Ruff	Amber	Five-year mean 0.2-300 breeding pairs
Snipe	Amber	25-49% decline in 25 years
Lapwing	Amber	>20% East Atlantic Flyway
Redshank	Amber	>20% East Atlantic Flyway
Curlew	Amber	>20% European breeding population in UK

\*BoCC - status given in 'Birds of Conservation Concern'

## Fish, amphibians and reptiles

Fish species generally associated with lowland mesotrophic water bodies may be found in most wet-grassland sites e.g. pike, roach, tench, bream, and eel. Common frog and toad may use ditches and pools for spawning and, where water quality is suitable, smooth newt may be found. Grass snake is associated with wet grassland although it is rare in Leeds.

## Trends

Lowland wet grassland is a habitat that has decreased markedly in extent, more than 40% since 1930. This has been primarily as a result of drainage and other agricultural improvements. The dramatic outright loss of wet grassland has now largely ceased. It has been replaced by a gradual decline in the quality of the remaining wet grassland habitat, as evidenced by declines in breeding waders. For example, in lowland England and Wales, snipe have disappeared from 60% and redshank from 40% of the area in which they once bred. Only 220,000 ha of lowland wet grassland remain in England and Wales from a historical resource of 1,200,000 ha.

Whilst 190,000 ha currently support breeding waders, only 20,000 ha are thought to be agriculturally 'unimproved',

## Local status

No detailed survey of wet grassland has been undertaken in the Leeds area. However, there are known to be several areas with grassland in river floodplains, notably the Lower Aire Valley and the River Wharfe floodplain in north of the district. The Ings and flashes of the Lower Aire Valley support small numbers of breeding waders and there is evidence of remnant *Alopecurus pratensis*-*Sanguisorba officinalis* grassland (MG4 in the National Vegetation Classification) at Fairburn Ings Nature Reserve, which is managed by the RSPB and covers most of Fairburn and Newton Ings SSSI.

## Table: designated nature conservation sites in Leeds

Site	Status
Fairburn and Newton Ings	SSSI
Mickletown Ings	SSSI
Allerton Bywater	SEGI
Allerton/Ledston Ings	SEGI
Newton Ings	SEGI
Swillington Park Lakes/Cockpit Round	SEGI
Lowther North	SEGI
Knotford Nook	SEGI
Junction and Island Oxbows	SEGI
St Aidan's North-West Lake	LNA
Leventhorpe Lagoon and Ings	LNA
Moseley Beck	LNA
Otley Sand and Gravel Pit	LNA



## CURRENT FACTORS CAUSING LOSS OR DECLINE

**Water quality** - the industrial and urban nature of the Leeds area has historically, and to a lesser extent currently, caused a reduction in water quality in most river catchments and floodplains. Nutrient-rich water is species poor and will result in the diminution of species diversity. Conversely it can support a large invertebrate biomass which is often important as a food source for breeding wader chicks. Water quality remains a cause for concern in the Aire catchment

**Water quantity** - demand for water for domestic, agricultural and industrial use has caused water deficits on many wetlands in the UK. Low soil water tables at critical times may provide unsuitable conditions for breeding waders, invertebrates and some wetland plants. Ultimately, dry grassland communities develop which no longer support the characteristic wildlife of floodplain grassland. Low flows and the impacts of abstraction remain an issue of concern in the Wharfe catchment.



**Flood defence** - the flood embankments on rivers has reduced the frequency of flooding which has had an adverse impact on floodplain habitats such as wet grasslands which are dependent on regular water inputs. MG4 grassland is particularly sensitive to this. In addition, the use of areas of floodplain for statutory flood storage can have detrimental affects on wet grassland wildlife because of the lack of control on timing and extent of flooding.

**Habitat loss** - although less of a threat than in the past, drainage and the conversion of permanent grassland to arable remains a potential threat. Lowland wet grassland is also subject to loss to sports pitches, golf courses and fishing ponds.

**Neglect** - many existing wet grasslands are deteriorating because of lack of management . In order to retain the characteristic assemblages and diversity of a wet grassland, management is essential.

### CURRENT ACTION

#### **Protection**

There are two SSSI in Leeds which contain lowland wet grassland and Site Management Statements and Water Level Management Plans have been agreed for both.

In addition, a further 11 designated nature conservation sites also include areas of lowland wet grassland

#### **Management**

There are 86.26 ha of land managed in Leeds under the Countryside Stewardship Waterside Land category. However, changes in the coding of Stewardship agreements means that some wet grasslands may be coded a broader grassland category (totalling 225.98 ha)

### OBJECTIVES AND TARGETS

#### **Local**

Maintain and safeguard existing areas of lowland wet grassland and ensure their effective management.

Enhance the floristic interest of any remnant areas or formerly species-rich grassland within designated sites

Survey the extent, quality and distribution of lowland wet grassland to derive an accurate baseline and set quantitative and qualitative targets for the HAP.



PROPOSED ACTION

<b>Policy</b>	<b>Lead agencies</b>	<b>Target Date</b>
Ensure that lowland wet grassland is given due regard in the implementation and review of the Local Environment Agency Plans for the Aire, Calder and Wharfe	EA	On-going
Promote lowland wet grassland as a preferred afteruse for the restoration of river valley minerals workings	LCC; EA; RSPB; EN	2000 and on-going
Identify opportunities for lowland wet grassland restoration within LEAPs or floodplain strategies	EA	
<b>Site safeguard</b>		
Ensure any impacts of development, abstraction and flood defence/storage schemes do not adversely affect the lowland wet grassland within any designated sites	LCC; EA; EN	On-going
Ensure that all significant areas of lowland wet grassland are designated as statutory or non-statutory nature conservation sites.	LCC; EN	2001 and on-going
<b>Habitat management</b>		
Explore and implement techniques to enhance the ecological interest of the remnant MG4 grassland at Fairburn Ings	RSPB; EN; EA; LCC	2002
Ensure a minimum of 20 ha of lowland wet grassland within the St Aidan's restoration scheme is realised	LCC; RJB Mining; RSPB; EA	2008
<b>Advisory</b>		
Provide advice to landowners on the management of lowland wet grassland, including through demonstration days	FWAG; RSPB; MAFF/FRCA	On-going
<b>Future research and monitoring</b>		
Establish better baseline information on the quality, extent and distribution of lowland wet grassland in Leeds	LCC; EA; EN	2002
Identify potential areas for the restoration of lowland wet grassland	LCC; EA	2003
Review the conflicts and opportunities for the conservation and restoration of lowland wet grassland within flood storage areas	EA; EN; RSPB; LCC	2002

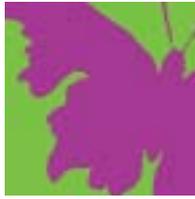
## PROPOSED ACTION (continued)

<b>Policy</b>	<b>Lead agencies</b>	<b>Target Date</b>
<b>Communications and publicity</b>		
Promote greater awareness of lowland wet grassland and its ecological importance among planners, land owners and drainage engineers.	LCC; EA; EN; RSPB; FWAG	2000 and on-going
Promote the value of lowland wet grassland as a component of sustainable catchment management	LCC; EA; EN	2000 and on-going

## Key to abbreviations

EA	Environment Agency
EN	English Nature
FWAG	Farming and Wildlife Advisory Group
LCC	Leeds City Council
MAFF/FRCA	Ministry of Agriculture, Fisheries and Food/ Farming and Rural Conservation Agency





## Hedgerow and Field Margins

### CURRENT STATUS

#### Importance

Although hedges vary enormously around the country, they generally consist of a line of shrubs, sometimes with trees and usually with a layer of herbaceous vegetation beneath. The field margin is that area at the edge of the cultivated field. It provides a transitional of 'buffer' zone between the crop and the hedge or field boundary, as well being of value to wildlife itself.

Hedges are still widely distributed in the UK and are home to a wide variety of wildlife, much of which is dependent on the mosaics of farmland habitats of which hedgerows are a vital part.

#### Plants

Ancient hedges often consist of a rich variety of shrub and tree species and may originate from early woodland clearances. Consequently they may also support a field layer of herbaceous plants that are associated with woodland. In Leeds, locally rare shrubs such as spindle and buckthorn are primarily found in hedges.

Field margins provide an important refuge for species that were once regarded as common weeds of arable crops, such as cornflower

#### Birds

A significant number of British birds, particularly many well-known farmland species, are dependent on hedgerows and field margins for food, shelter and nesting. These include linnet, song thrush and grey partridge.

#### Mammals

Hedges provide important habitat for many of our commoner small mammals, but also more locally distributed species such as harvest mouse. They also provide cover for larger species such as hare. Bats, such as pipistrelle, hunt their insect prey along hedges which effectively act as corridors, guiding their flight patterns across the landscape.

#### Invertebrates

Hedges with a wide range of woody and herbaceous species will support a greater variety of invertebrates than those which are dominated by a few species. However, even species-poor hedges can be important;

the blossom of shrubs such a hawthorn provide a major source of food for nectar-feeding insects such as a hoverflies. This biomass will support other predatory species of invertebrate and vertebrate alike.

#### Local Status

There is little detailed recorded information about hedges in the Leeds district. Although hedges were recorded as part of the Phase I Habitat Surveys of Leeds carried out in 1978/9 and 1986/7, these did not include any qualitative information and no measurements or totals of hedgerow length were derived.

Through its work in implementing the Hedgerow Regulations, LCC's Department of Planning and Environment does carry out some survey work, although this is by its nature reactive and piecemeal. Undoubtedly, a large number of hedges will have been planted as part of Enclosure Acts, within the last 250 years. Most of these comprise a single or few shrub species and are usually dominated by hawthorn. In contrast, other hedges with more ancient origins often have a greater diversity of shrubs and other species.

In very broad terms, the upland fringes in the west of the district have a greater proportion of walls as field boundaries. Although hedges were once widespread in the east of the district, the productive, friable soils on the magnesian limestone favoured agricultural intensification and led to large-scale removal of hedges. Some of those which remain support field maple and other locally scarce shrubs such as buckthorn and spindle, whilst clematis, a climber found on calcareous soils, is near the northern edge of its range.

Hedges have also been engulfed by the growth of urban areas and can be found within pockets of encapsulated countryside. Survey work is essential to determine the extent, quality and distribution of hedges within the district.

### CURRENT FACTORS CAUSING LOSS OR DECLINE

The reduction in the number and quality of hedges and field margins is considered to be one of the major causes of decline in many bird populations including the barn owl, grey partridge and skylark.

#### Hedgerow removal

Due to the increase in the size of machinery and

increasing financial pressures, many farmers have rationalised their hedgerow networks by removing a proportion of them to make the fields larger and more convenient to work.

Road construction and building developments have also played a significant role in the loss of hedges through removal.

### **Stock pressure and lack of management**

Field drainage, the increased use of fertilisers and the development of higher yielding grass varieties has enabled farmers to support higher numbers of stock on their farms. Hedges and hedge bottoms are subject to higher grazing pressure as a consequence, which in turn



has led to many hedges becoming open and bare at the base. This reduces the value of hedges for shelter and feeding. The reduction of farm labour and the increased use of barbed wire often means that hedges are not managed to keep them stock proof. Hedges are rarely layed or gapped-up as part of the day to day management of farms. Consequently, there has been a general decline in the habitat quality of hedges.

### **Hedge trimming regime**

Nowadays, hedge trimming tends to take place in the late summer, just after harvest, when the tractor can run on the stubbles and the land is dry so that it does not create ruts. Trimming in late summer removes berries before the winter when they are needed for food particularly by birds and small mammals. Hedges are often trimmed annually as that the twigs are fairly young and easy to cut. Unfortunately, because hawthorn only flowers and berries on two-year old wood, this greatly reduces the amount of blossom and fruit that the hedge is able to produce.

### **Cultivating to the hedge bottom**

To maximise the cropped area of the farm there has been a tendency in recent years to plough right up to the hedge, removing the valuable grass margin at the base of the hedge and making the hedge itself more vulnerable to spray and fertiliser drift.

### **Fertilisers and sprays**

Fertiliser drift into hedges and field margins encourages the growth of the more common, vigorous weeds which can out-compete other, rarer species. These vigorous weeds can potentially invade the crop and, in turn, require control.

Herbicides remove the broad-leaved plants which many insects use as a larval food source and insecticides kill the insects themselves. These factors are thought to be the major cause in the reduction of grey partridge populations, which rely on the dense cover of margins as a nesting site and the insect larvae for feeding young chicks. Because of the widespread loss of hedgerows, the Hedgerow Regulations, 1997, were introduced, with the intention of protecting important hedgerows. Whilst they do confer a degree of protection to hedges falling within the scope of the Regulations, and meeting one or more of the criteria, they do not provide comprehensive protection, nor do they address the key issues of neglect or over-intensive management. Many hedgerows in Leeds, including most within the urban environment, fall outside of the scope of the Regulations.

As a result there is still a need to prepare and implement this action plan.

OBJECTIVES AND TARGETS

To establish reliable estimates of hedgerow length in Leeds, together with information about their species composition and structure.

To identify areas with ancient and species rich hedges

Set targets for the replanting and renovation of hedges and lengths and areas of field margins

Improve hedgerow and field margin management

LINKS WITH OTHER ACTION PLANS

Harvest Mouse SAP

Pipistrelle SAP



PROPOSED ACTION

**Policy**

Enforce Hedgerow Regulations 1997 and press for changes to provide effective protection for locally important hedgerows

**Lead agencies**

RSPB; FWAG; EN

**Target Date**

On-going/2000

Ensure the protection of hedgerows, wherever possible, through the planning system; where hedges are retained or created as a result of development ensure that provision is made for long term sympathetic management

LCC

On-going

**Site Safeguard**

Seek to protect local hedgerows through the use of the Hedgerow Regulations by pursuing and collating records of relevant species

LCC; local naturalists

2001 and on-going

**Habitat management**

Promote the conservation management of hedgerows across farm holdings through the promotion of Whole Farm Plans

FWAG

On-going

Promote biennial trimming of hedges in late winter

FWAG

On-going

**Advisory**

Provide advice on good hedgerow management practice

FWAG

On-going

Organise demonstration days

FWAG;  
farmers and landowners;  
MAFF/FRCA

Annually

**Future research and monitoring**

Identify areas of the district where ancient or species-rich hedges can be found

LCC

2002

Investigate options for monitoring hedge loss

LCC; EN

2002

**Communications and publicity**

Publicise sources of advice and grant aid for hedgerow management, including Countryside Stewardship

FWAG; MAFF/FRCA;  
EN; LCC

On-going

Develop a local 'best hedge' award

LCC; FWAG

2002

**Key to abbreviations**

EN	English Nature	FWAG	Farming and Wildlife Advisory Group
LCC	Leeds City Council	MAFF/FRCA	Ministry of Agriculture, Fisheries and Food/ Farming and Rural Conservation Agency
		RSPB	Royal Society for the Protection of Birds