

# FARMLAND HABITAT ACTION PLAN



## Introduction



Autumn ploughing: Graham Megson

Farmland is the main land use in the district of Hambleton in terms of both land coverage and economics. It is the most crucial habitat in the Biodiversity Action Plan. The Farmland Action Plan covers the following key habitats and species:

- Cereal field margins
- Boundary and linear features
- Arable weeds
- Farmland birds

- **Bumblebees**

Farmland includes a mosaic of habitats including arable fields, improved grassland, copses, ponds, hedgerows and land under set-a-side or conservation management.

Many farms include areas of good wildlife habitat, the best of which are notified as Sites of Importance for Nature Conservation (SINC).

Production-orientated agricultural policies and technological advances led to profound changes in agriculture in the years after 1945, with a decline in biological value.

Since the 1980's major habitat and species benefits have accrued through farming. Chemical use on farmland is falling and the net loss of hedgerows has been reversed.

'Cereal field margins' and 'Boundary and linear features' are UK Biodiversity Action Plan (BAP) Priority Habitats.

## Status

### National

Farmland is a major land use in Great Britain, producing cereals, root crops and livestock.

### Regional

The regional audit gives figures on lengths of arable field margins in the Countryside Stewardship (CS) scheme in 1998, for North Yorkshire (excluding the National Parks). This gives 72.7km of 'uncropped arable margins' and

207km of '2m grass margins and beetle banks'. This gives a total of 279.7km of the UK BAP priority habitat cereal field margins.

### Local

Hambleton is the most arable of the seven North Yorkshire districts. Phase I Habitat Survey results give a total for arable of 69,192 hectares or 63% of the total land area. Farming is a major industry in the District due to high

fertility in the Vale of Mowbray and Vale of York.

Baseline figures for the amount of Cereal field margin and Boundary and

linear features are not available.

Breeding bird data is available for a few sites, including Nosterfield Local Nature Reserve, where many of the target species breed.

## Hambleton Priority Species

- Farmland birds
- Arable weeds
- Bumblebees

## Other Species

- Brown hare (UK BAP)
- Harvest mouse
- Bats
- Redshank
- Snipe
- Barn owl
- Kestrel
- Cuckoo
- Quail
- Golden Plover

## Status of Priority Species

**Farmland Birds** - a wide range of farmland birds, have seen a severe decline in the UK over the last 50 years. These changes have led to conservation agencies agreeing two bird priority lists, referred to as red and amber. The British Trust for Ornithology researches changes in the population of wild birds through national recording schemes and has published the following national declines for the period 1973 - 1998:



Tree sparrow: Dr Peter Evans

Species	National % decline
Tree sparrow	94%
Corn bunting	86%
Grey partridge	83%
Yellow wagtail	81%
Turtle dove	69%
Starling	61%
Reed bunting	61%
Yellowhammer	56%
Bullfinch	56%
Linnet	55%
Skylark	54%
House sparrow	51%
Lapwing	40%

Baseline figures for the status of farmland birds in Hambleton and regional changes in wild bird populations are not known.

The following species are UK BAP priorities: grey partridge, turtle dove, bullfinch, skylark, linnet, tree sparrow, reed bunting and corn bunting. The

turtle dove is particularly associated with the band of Magnesian Limestone.

Hambleton is also important for large numbers of wintering golden plover and lapwing (see targets 1-3, 7-14, 17 & 18).

**Arable 'weeds'** – these are species of wild flower that thrive in regularly disturbed soil in an arable environment. Many have suffered a sharp decline.



Lapwing: Dr Peter Evans

Some have medicinal or other beneficial properties and all perform an ecological role at the base of the food chain. Weed seeds are an important food source for birds in winter.

Hambleton District has lost many vascular plants in the past 120 years, including eight UK BAP priority species.

Losses from arable habitats (especially light sandy or calcareous soils) are most striking and the BAP aims to re-introduce some or all of the following:

- Cornflower (*Centaurea cyanus*) (UK BAP)
- Spreading hedge-parsley (*Torilis arvensis*) (UK BAP)
- Small-flowered catchfly (*Silene gallica*) (UK BAP)
- Shepherd's-needle (*Scandix pecten-veneris*) (UK BAP)
- Loose silky-bent (*Apera spica-venti*)
- Broad-fruited cornsalad (*Valerianella dentata*)
- Night-flowering catchfly (*Silene noctiflora*)
- Corn buttercup (*Ranunculus arvensis*)
- Small-flowered buttercup (*Ranunculus parviflorus*)
- Broad-leaved spurge (*Euphorbia platyphyllos*)
- Yellow vetchling (*Lathyrus aphaca*)
- Rough poppy (*Papaver hybridum*)
- Prickly poppy (*Papaver agremone*)

Arable weeds will benefit from targets 1,3 & 4. Monitoring will be based on a presence or absence basis.

**Bumblebees** - both abundance and variety of these economically important pollinators of crops and garden flowers, has declined, with extinction of some species, including brown-banded carder bee and shrill carder bee. Bumblebees will not be monitored at the local BAP level (see targets 1 & 3).

## Requirements

- Agri-environment schemes. CS is one of the best mechanisms for delivering targets for farmland.
- Options for arable farmers are available through CS.
- National monitoring of CS to assess the conservation benefits of options and to improve upon the prescriptions that would benefit wildlife.
- Care and maintenance visits undertaken by Rural Development Service staff to farms with CS agreements.

- Although conservation advice is available to farmers, it is often based upon national prescriptions and national specifications, e.g. for grass seed mix. Opportunities for schemes of local value should be encouraged.
- Appropriate conservation management is required for every site.
- Use of targeted pesticides.
- Planted trees should be of guaranteed local provenance.
- Revision of the criteria by which hedges are eligible for protection under the 1997 Hedgerow Regulations.
- Hedge management, including laying if there is a history of this.
- Development plan policies that promote the management of wildlife corridors and 'stepping stones' of semi-natural habitat.
- Making training available to farmers.
- Making training available to agronomists.
- Demonstration farms.



Arable flowers: Cliff Megson

- Differential management of arable margins to include some tussocks and some tall herbage.
- Turtle doves favour hedges ten years after they have been laid.
- Turtle doves favour areas of scrub (especially hawthorn (*Crataegus monogyna*), elder (*Sambucus nigra*), honeysuckle (*Lonicera periclymenum*), dog rose (*Rosa canina*) and bramble (*Rubus fruticosus*)).
- Retention of gorse (*Ulex europaeus*) benefits breeding linnets.
- A diversity of habitats and sub-habitats with a range of management for each, e.g. different hedge heights.

## Current Action

- Local training organised by Farming and Wildlife Advisory Group.
- Oneholmes, Linking Environment and Farming, demonstration farm.
- Manor Farm, Linking Environment and Farming, demonstration farm.
- Options are available in various agri-environmental schemes.
- The CS Targeting Statement highlights the creation of arable field margins and hedgerows in Hambleton.
- CS options include field margins, beetle banks, winter stubble, wildlife mixtures and buffer strips along watercourses.
- A number of farmers are farming organically.
- Wildlife benefits from work undertaken by many farmers not in agri-environmental schemes.
- The Royal Society for the Protection of Birds has piloted a Farmer Volunteer Alliance, to survey breeding birds on farmland.
- Advice on the management of farmland can be sought from Farming and Wildlife Advisory Group and Rural Development Service.
- Research is undertaken by agencies such as the Royal Society for the Protection of Birds, Department for Environment, Food and Rural Affairs, British Association for Shooting and Conservation, the Game Conservancy Trust and others.
- Hambleton District Council implement the 1997 Hedgerow Regulations.

## Threats

### Arable Management

Field management is greatly influenced by European Agricultural policy through the Common Agriculture Policy. Farmers are therefore advised on how they can crop their land.

The proportion of farms that are mixed, having both livestock and arable land, has declined due to economic pressures to specialise. This has reduced habitat diversity on much farmland.

A change in arable cropping patterns has led to a switch from spring sown to autumn sown crops. This produces a

higher yield crop that is ready for harvesting earlier in the summer. A shift to winter cropping has resulted in the loss of winter stubble with weeds – a major source of food for wintering finches.

Bare ground is available for less time, as autumn sown crops germinate during the winter. By springtime when some birds are looking to nest on sparsely vegetated fields, the autumn sown crops have developed thick ground cover. This also prevents arable weeds from germinating.

## Loss of Hedgerows

The loss of hedgerows through grubbing out, neglect or over-tidying has reduced this resource. Felling of old hedgerow trees removes holes, song perches and specific ecological niches for wildlife.

## Grassland Management

By improving grassland with applications of fertilizer, the frequency of cutting in intensive silage production is increased, often to below the ten week threshold required by ground nesting birds such as skylark to successfully rear a brood.

## Chemical use

Pesticides (including herbicides, fungicides and insecticides) and inorganic fertilizers impact upon farmland wildlife. Nationally rare plants have become extinct and the abundance of weed seeds and invertebrates available to wildlife has decreased. Spray drift during pesticide application adversely affects features such as ponds and hedges. Veterinary medicines for livestock can be both toxic and persistent (e.g. worming drugs).

## Drainage

Drainage occurs on different scales, from individual fields to whole wetlands. This results in the loss of semi-natural habitat and its associated wildlife.

## Isolation

When populations become physically isolated from one another they also become genetically isolated and the overall species gene pool is reduced.

## Dangers faced by migratory birds

Migratory birds face an assortment of natural and human dangers on their long journeys to and from Africa. Spring hunting in southern Europe kills

thousands of birds destined for the British countryside, including BAP priority species such as turtle dove and quail.

## Farmland birds

Threatened by:

- Autumn sowing of cereals, leading to less winter stubble, less bare ground and less choice of vegetation height for nesting in.
- Winter stubble retained but without associated arable 'weeds'.
- Conversion of grassland and other habitats to arable, leading to loss of nesting areas and lower frequency of insect food.
- Increased production of silage.
- Use of pesticides, especially broad-spectrum varieties, leading to loss of weed seeds and insect food.
- Loss of copses, old trees, hedgerows and derelict barns, leading to a loss of nest sites.
- Loss of mixed farming systems, which reduces structural diversity in the countryside, leading to the loss of specialist birds.
- Grey partridge is a game bird. The Game Conservancy Trust advise against shooting, unless steps are also being taken to conserve them.



Buff-tailed bumblebee: Graham Megson

## Arable weeds

Threatened by herbicides, especially broad-spectrum varieties. Autumn

sowing prevents annuals from growing in cereal stubble.

## Other Possible Partners

- British Trust for Ornithology
- Farmers
- Game Conservancy Trust
- Linking Environment and Farming
- National Farmers' Union
- Royal Society for the Protection of Birds
- Ryedale Museum
- Seed Merchants
- Yorkshire Agricultural Society

## Objective

**Increase biodiversity within agricultural holdings.**

## Targets

1. Promote CS agreements, including the establishment of 50 pollen and nectar field options and 50 cereal field margins, to help conserve birds and bumblebees.
2. Increase species-rich hedgerow resource by 50km, using plants of local native provenance.
3. Increase the number of beetle banks by 15km.
4. Re-introduce arable weeds into the district at two sites.
5. Involve ten local community groups in farm projects.
6. Raise public awareness of the natural heritage of farmland.
7. Set up five winter finch feeding projects.
8. Increase the population of all 13 Farmland bird priority species by 5%, based on six targeted farms.
9. Investigate the setting up of a scheme for monitoring breeding farmland birds.
10. One Farmland Habitat Action Plan target to be incorporated as a performance indicator in a Local Authority strategy, such as Local Agenda 21, Community Strategy or Best Value.
11. 80% of SINC's to be under favourable management.
12. Create areas of native scrub on five farms.

# Actions

## FARMLAND

	Partners	Target No.
<b>Policy and Legislation</b>		
Input into CS scheme County Targeting Statement (produced by DEFRA)	DEFRA NYCC	2,3,8
Promote the inclusion of HBAP targets in LA21, and/or Community Strategies.	HDC	10
<b>Site Safeguard and Management</b>		
Promote the Countryside Stewardship scheme and in particular the cereal field margins, hedgerow and the arable options available from 2002, to farmers	FWAG DEFRA	1,4,8,12
Target grant scheme(s) for HBAP projects.	HDC	2-9,11,12
Investigate, with partners, options for 'Special Project' CS scheme agreements based on HBAP targets	DEFRA	7-9,11,12
Work with landowners to bring SINC's into favourable management.	BTCV HH-AONB, NYCC	11
<b>Research and Monitoring</b>		
Instigate a rolling program for re-surveying SINC's.	NEYEDC, NYCC	11
Investigate options for monitoring breeding birds.	NYCC	9
<b>Advisory</b>		
Arrange, with partners, 2 training days on arable field margins, for farmers or agronomists.	FWAG DEFRA	1,3,4,6,8
Advise landowners on grants, schemes and current research, regarding farmland.	FWAG DEFRA	7-9,11,12
<b>Communications and Publicity</b>		
Contribute to existing publications to raise public and landowner awareness of farmland and its heritage.	HDC	6
Contact SINC owners and supply them with up to date site information.	NYCC	6,11
Establish links between farms and schools.	LTL	5,6
Work with local communities such as schools e.g. to secure the planting of fruit and other trees.	BTCV LTL, HDC	5,6
<b>ARABLE 'WEEDS'</b>		
<b>Policy and Legislation</b>		
No action.		

### Site Safeguard and Management

Encourage farmers to take up arable field margin options within CS scheme agreements.	FWAG, HH-AONB, DEFRA	1,3,4,8
Work with local communities such as schools, to set up 'arable weed' projects.	BTCV, LTL, HDC	4-6

### Research and Monitoring

No action.

### Advisory & Communications and Publicity

Arrange, with partners, a training event for farmers on creating arable margins.	FWAG DEFRA	1,3,4,6,8
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## FARMLAND BIRDS (incorporating Cereal field margins and Boundary and linear features)

### Policy and Legislation

No action.

### Site Safeguard and Management

Promote the retention and management of areas of scrubland on farms.	DEFRA SUWP	11,12
Establish five winter feeding projects for finches, on local farms.		7
Encourage arable farmers to enter CS using arable and other options that will favour birds and bumblebees.	FWAG DEFRA	1-4,8, 11,12
Set up community schemes to produce nest boxes to be used for tree sparrows.	BTCV	5,6,8
Undertake the erection of nest boxes on local farms populated by tree sparrows (where few suitable trees are available).	FWAG BTCV SUWP	5,6,8
Promote the beetle bank option under CS to farmers (to benefit invertebrates, grey partridge and quail).	FWAG DEFRA	1,3,8
Promote the planting of new hedgerows, including schemes through CS and grant assistance.	BTCV, FWAG HH-AONB DEFRA, SUWP	2,8
Promote the restoration of hedgerows (including re-instating traditional management), and retention of old hedgerow trees where appropriate, through CS and other incentives.	BTCV FWAG DEFRA	2,8

### Research and Monitoring

Use results of "Swale & Ure Washland Project" turtle dove project to identify future targets.	SUWP LUCT	8,11,12
Investigate options for setting up a farmland birds monitoring project.	FWAG BTCV	9
Monitor success of nest box schemes.		9
Work with interested farmers, to undertake breeding bird surveys as part of the RSPB Farmer Volunteer Alliance.	FWAG	9

### Advisory

Contact owners of large, open grassy spaces (airfields, golf courses) to advise on skylark conservation.		8
Offer advice on importance of scrub in addition to trees, for species such as bullfinch, roosting corn bunting and turtle dove.	SUWP	8,12
Prepare advice note on planting new, and conserving existing ash trees for tree sparrow nesting.		8

### Communications and Publicity

Prepare articles on ecology and conservation of farmland birds.		1-9,11,12
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