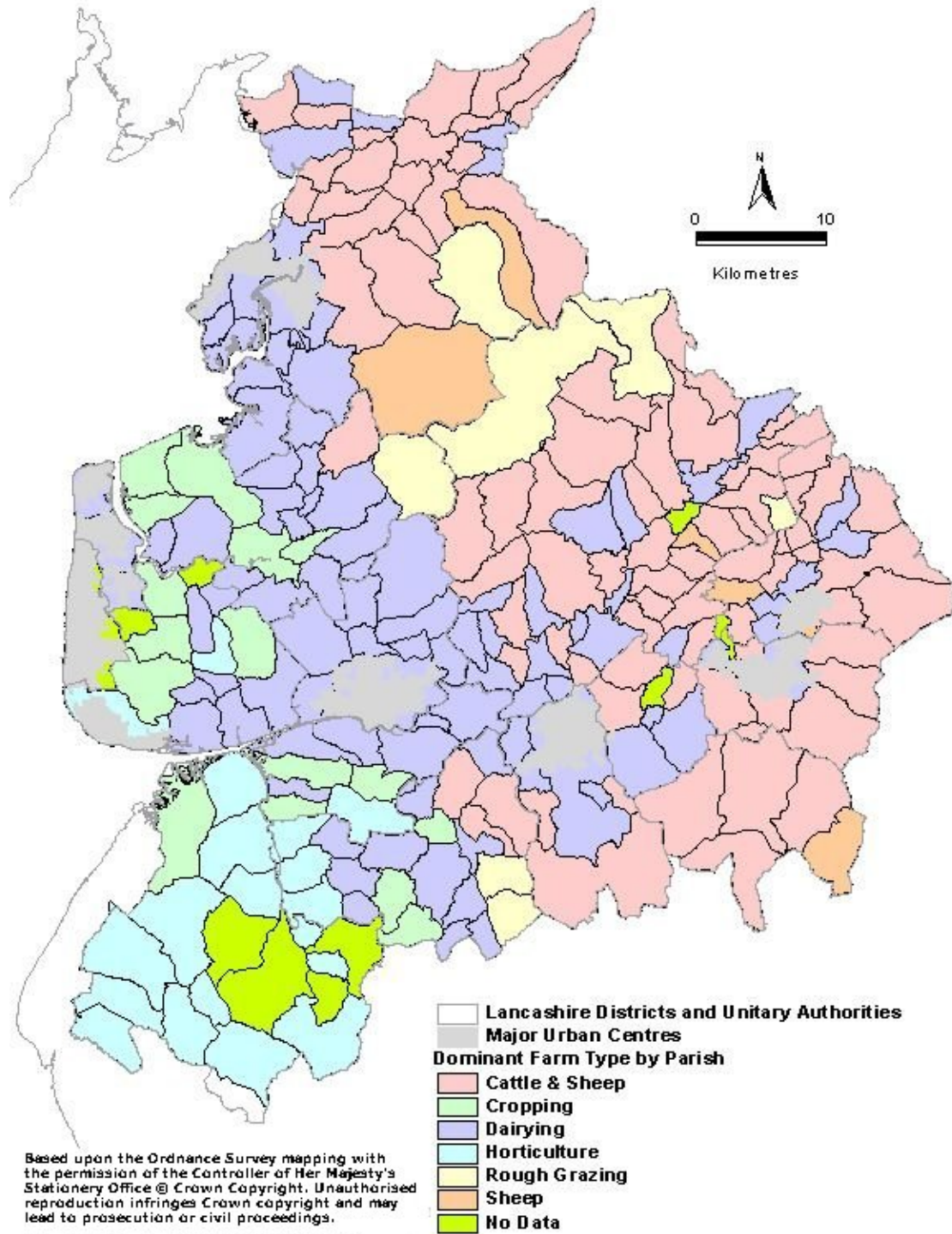


## Arable Farmland



Arable Farmland - Corn Marigolds growing in cereal field near Rufford, West Lancashire  
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## Predominant Types of Farming by Parish in Lancashire



## Habitat Description

This plan encompasses all cultivated land in agricultural or horticultural production. This includes bare fallow and grassland leys that are regularly ploughed and re-seeded. It also addresses field margins and boundary features such as hedges and ditches in arable fields.

A range of crops is grown in arable production including vegetables and winter cereals. Because of intensive use of pesticides and fertilisers the biodiversity interest of most arable fields is very limited. However, a number of lowland bird species and opportunistic plants (the so-called 'arable weeds') are well-established in this type of habitat.

**High densities of several UK BAP priority species occur in the arable farmland areas of Lancashire. Arable land in Lancashire and Cornwall is the last stronghold of one plant, endemic to the UK (Purple rampion-fumitory). The numbers of overwintering Pink-footed Geese that use this habitat in the county represents a significant proportion of the global population of this species (14%).**

Numbers of many once-common lowland farmland birds have declined over the last 25 years to the extent that several species are included in the UK BAP

## National status

10% of the UK's land area is in arable production according to the definition used here. In Lancashire, arable land and agriculturally improved grassland *together* cover an estimated 76,901 ha (about one quarter of the county) according to the County Council's Green Audit (9). The peaty soils of former areas of mossland in West Lancashire support some of the best areas of arable farmland in the UK.

## Regional status

Arable farming is particularly important in lowland areas of north west England especially in west Lancashire and on the Fylde but also in north Cheshire, parts of Merseyside, the western parts of Greater Manchester and the Solway plain in Cumbria.

## Local status

The districts of Wyre, Fylde, West Lancashire, South Ribble and Chorley contain the largest concentrations of arable and horticultural land in the county.

The overall area of this habitat is probably stable but there have been changes in cropping regimes, most notably a fall in the amount of cereal growing in the upland fringes. There have also been changes from the sowing of wheat in the spring to sowing in autumn or winter in the lowlands. The lack of accessible historical data makes it difficult to quantify the changes, although these are thought to be linked with declines in some moorland fringe species (in particular, wite) and skylark and lapwing in the lowlands. The lack of winter stubbles in the lowlands has also affected populations of linnets and other seed-eating birds as a result of changes in the sowing/cropping regime.

## Important Sites

A number of county Biological Heritage Sites have been designated in West Lancashire and on the Fylde under BHS Guidelines relating to birds and vascular plants.

## Current factors affecting the Habitat

It is predominantly economic factors that determine the manner in which arable farmland is managed. Such factors include the market value of different crops and government subsidy

levels (both heavily influenced by the Common Agricultural Policy). The overall effect of economic factors during recent decades has been to encourage intensification at the expense of biodiversity. The main changes that have led to a reduction in the wildlife value of arable land are addressed below.

The increased use of herbicides and pesticides have not only badly affected the 'arable weeds' but also, in turn, the birds that rely upon seeds from this source (e.g. linnet, turtle dove). Other birds whose young rely on invertebrates as an early food source (e.g. grey partridge, yellowhammer) have also suffered.

A shift to winter cropping has occurred with an associated loss of winter stubbles and a reduction in the area of undersown crops. The loss of winter stubbles are implicated in the fall in numbers of a range of lowland farmland birds including skylark, grey partridge, corn bunting and linnet. Undersown cereal crops are important for overwintering invertebrates (e.g. sawflies) that are an invaluable food source to certain bird species.

Mixed farming which entails the rotation of root or cereal crops with other land uses, such as grazing has become less common in recent years. This type of land-use ensures that the requirements of certain species (e.g. brown hare, lapwing) can be met more easily at different times during their breeding cycle. Mixed farming removes the need for them to move vulnerable young over large distances.

A reduction in area or total removal of field boundaries to create larger fields has tended to occur. This practice has had the effect of reducing the amount of suitable nesting, shelter and feeding habitat for a wide range of species including tree sparrow and has severed links to other habitats.

More efficient harvesting techniques affect those species that profit from seed wastage (e.g. linnet, corn bunting).

More efficient seed screening techniques have hastened the eradication of many of the rarer arable plants from the county's flora

### **Current Action / Mechanisms**

There is a costed UK Habitat Action Plan for Cereal Field Margins but not for arable land as a whole.

The Food and Environment Protection Act 1985 makes it illegal to use certain pesticides within 6m of water courses and/or uncropped habitats.

Three principal methods are open to farmers who wish to improve the margins of their arable holdings for wildlife: 'Conservation Headlands', 'Wildlife Strips' and 'Expanded Field margins'. Conservation Headlands are 6 or 12m wide strips that receive reduced levels of pesticide and herbicide to encourage arable plants and invertebrates. Wildlife Strips are 6m wide margins that are cultivated each year but left uncropped. Expanded Field Margins are 6 -12m wide permanent grass strips. The latter will be of little benefit to arable weeds but, if managed properly, can buffer watercourses and provide habitat for species such as barn owl and partridge.

Financial incentives currently available to Lancashire farmers to pursue options like these include Countryside Stewardship and Set-Aside. An Arable Stewardship Scheme has been piloted in Shropshire and Cambridgeshire. It is hoped that an agri-environment scheme based on this experience will be launched in due course.

Sources of advice include the Farming & Wildlife Advisory Group (FWAG) which advises farmers in Lancashire and the Biological Heritage Sites Project that advises owners of BHS sites. The Game Conservancy Trust also offers advice to farmers about how to encourage

game species. The habitat improvements for these species can benefit others. MAFF can provide advice about Stewardship and other agri-environmental grant schemes.

With respect to research and monitoring, Liverpool John Moores University has conducted research into the factors affecting numbers of lapwing in the Southport/Altcar area. The Game Conservancy Trust promotes systematic recording of grey partridge numbers in the Halsall area as part of the national Species Action Plan for this bird.

A national survey of Brown Hares included 10 km survey squares in Lancashire. A database of local Hare sightings is maintained at Fleetwood Museum.

The BTO Farmland Bird Survey involves volunteers in intensive monitoring of 1 km squares chosen annually at random (usually including some coverage from Lancashire).

Data collected for the Lancashire Breeding Bird Atlas (due for publication in 2001) will provide a baseline for assessing changes in breeding bird distribution.

Regular monthly counts of pink-footed geese and wild swans (whooper and bewick) have been carried out for the past twenty years. Much information has been gathered on the feeding behaviour of these birds, particularly about their use of arable farmland and pastures.

**Table 1: Some notable species associated with arable farmland in Lancashire**

<b>Birds</b>		
Skylark	<i>Alauda arvensis</i>	UK & L SAP
Corn bunting	<i>Miliaria calandra</i>	UK SAP
Tree sparrow	<i>Passer montanus</i>	UK SAP
Grey partridge	<i>Perdix perdix</i>	UK SAP
Twite	<i>Carduelis flavirostris</i>	L SAP
Reed bunting	<i>Emberiza schoeniclus</i>	UK & L SAP
Song thrush	<i>Turdus philomelos</i>	UK & LSAP
Pink-footed goose	<i>Anser brachyrhynchus</i>	Bi3
Turtle dove	<i>Streptopelia turtur</i>	UK SAP
Yellow wagtail	<i>Motacilla flava</i>	Bi2b
Barn owl	<i>Tyto alba</i>	Bi2c
Bewick swan	<i>Cygnus bewickii</i>	Bi3
Whooper swan	<i>Cygnus cygnus</i>	Bi3
<b>Mammals</b>		
Brown hare	<i>Lepus europaeus</i>	UK & L SAP

Water vole	Arvicola terrestris	UK & L SAP
<b>Amphibians</b>		
Great crested newt	Triturus cristatus	UK & L SAP
<b>Vascular plants</b>		
Purple ramping-fumitory	Fumaria purpurea	UK & L SAP
Tall ramping-fumitory	Fumaria bastardii	Ff4a
Corn marigold	Chysanthemum segetum	
Field woundwort	Stachys arvensis	
Field pansy	Viola arvensis	
Wild pansy	Viola tricolor	
Large-flowered hemp-nettle	Galeopsis speciosa	

### Objectives, targets and proposed actions for arable farmland in Lancashire

<b>Broad Objective:</b>	<b>A. Identify biodiversity-rich arable areas</b>			
Operational Objective	Action Required (Priority)	Partners	Time-scale	Type
1. Identify those areas that retain good numbers of key species.	1. Establish a database of arable biodiversity using bird, brown hare, water vole, newt and botanical data. (High)	LCC, WT EN, BTO, Bird clubs, GCT, RSPB	S	RM
	2. Annually review BHS series and add/delete sites on database as appropriate (High)	LCC, WT, EN	O	RM
	3. By 2005 re-survey arable BHS sites to identify the scale of any losses within the county since 1984. (High)	BHS P/ship, WT, EN, LCC	L	RM
<b>Broad Objective:</b>	<b>B. Halt and seek to reverse by 2010 declines in farmland birds, brown hare and other species by the appropriate management of whole fields.</b>			

Operational Objective	Action Required (Priority)	Partners	Time-scale	Type
1. Encourage the retention and extension of wildlife-friendly habitat/farming practices by owners and managers.	1. By 2005 liaise with all arable BHS landowners and land managers to promote the importance of species-rich arable land. (High)	BHSP, FWAG, MAFF, EN	O	A, LM
	2. Lobby for reform of CAP and for more competitive rates on agri-environment schemes. (High)	WT, RSPB, EN, NFU, CLA, FWAG	O	PR
	3. Lobby for extension of arable stewardship scheme to Lancashire. (High)	WT, RSPB, EN, NFU, CLA	O	PR
	4. Take advantage of increased flexibility of set-aside to allow more specific conservation management. (High)	MAFF, WT, RSPB, EN, NFU, CLA	O	A, LM
2. Prevent loss of biodiversity-rich arable land through inappropriate development.	1. Ensure that all relevant planning authorities are aware of important sites (including barn owl nest sites) and have development policies that take account of these (Medium)	LCC, LAs, EN, BHS P/ship	O	SS
	2. Where permission is granted for development, ensure that conditions require appropriate measures to be taken to enhance habitats and opportunities for wildlife. (Medium)	LAs	O	P
<b>Broad Objective:</b>	<b>C. Maintain, improve or restore by management the biodiversity of 300 Km of field margins by 2005</b>			
Operational Objective	Action Required (Priority)	Partners	Time-scale	Type
1. Promote incentives to enhance biodiversity of field	1. Promote the uptake of Countryside Stewardship by landowners / managers (High)	MAFF, BHSP, FWAG	M	A, LM

margins..	2. Monitor uptake of Stewardship and assess extent of improvements to margins. (Medium)	MAFF	O	RM
	3. Ensure that any relevant results and recommendations from future monitoring of arable margins are incorporated into Stewardship targeting and the setting up of new agreements. (Medium)	MAFF	O	A, LM

<b>Broad Objective:</b>	<b>D. Promote the importance of arable farmland to the County's biodiversity</b>			
Operational Objective	Action Required (Priority)	Partners	Time-scale	Type
1. Promote arable farmland as a 'flagship' habitat to highlight the decline in certain key species.	1. Work with community-based groups to raise awareness of farm conservation issues amongst the general public and landowners. (Medium)	WT, EN, RSPB	O	PR
	2. Encourage public participation in monitoring certain sites. (Medium)	WT, EN, RSPB, BTO, GCT	O	PR, RM
	3. Include information about arable farmland in press releases, newsletters and leaflets. (Low)	WT, EN	O	PR, RM

Other Action Plans:

- Twite SAP
- Skylark SAP
- Brown hare SAP
- Water vole SAP
- Great crested newt SAP
- Purple rampion-fumitory SAP.

References & additional reading:

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