

Lowland Meadows and Floodplain Grasslands

Our objectives for this habitat are:

- to maintain the remaining fragments of unimproved neutral grassland through appropriate land management and sensitive riparian management; and
- to restore and enhance degraded semi-natural grassland.



Bishop Monkton (HBC)

Introduction

This action plan covers grasslands that are unimproved or semi-improved neutral grasslands. This incorporates two UK Biodiversity Action Plan (BAP) Priority Habitats: Lowland meadows and Coastal and floodplain marsh.

Lowland meadow comprises most forms of unimproved neutral grassland across the lowland landscapes of the UK, including grasslands cut for hay, and those where livestock grazing is the main land use (pasture) and other grasslands with diverse management regimes such as road verges (Upland hay meadows have a distinctive character and have a separate UK Action Plan. They do occur in parts of the Yorkshire Dales and there may be the potential to recreate or restore some of these in the Nidderdale Area of Outstanding Natural Beauty (AONB)).

The richest hay meadows are traditionally cleared of stock at the beginning of the growing season and are cut, usually in July, for hay which is used as winter feed for stock. They receive only light dressings of manure and occasional liming and are characterised by crested dogs-tail grass and knapweed and a wide variety of other herbs and grasses. Most pastures are less diverse and colourful than hay meadows but those which are less intensively managed may be quite species-rich. Nationally over 400 different species of flowering plants can be seen in the unimproved meadows and pastures.

Floodplain grazing marsh is defined as periodically inundated pasture or meadow. Of five inland types which are recognised to occur in the UK (in 'The wet grassland guide', RSPB), two currently occur in the Harrogate district:

- Semi-natural floodplain grassland where floodplains are subjected to a semi-natural hydrological regime (e.g. Bishop Monkton Ings SSSI).
- Pond and lakeside wet grassland around the margins of lakes and ponds which may be temporarily inundated owing to seasonal water level increases, (SINCs with valuable drawdown grasslands include Salmist Beck Carr and the Marr at Arkendale - see also Standing water HAP).

There may be the opportunity to restore or develop a further two types of floodplain grassland:

- Washlands, which are embanked areas created for the purpose of flood storage (these could potentially be incorporated into flood defence schemes on the rivers Ure and Ouse).
- Wet grassland with intensive water level management on drained soils (this could be developed further on some sites e.g. Bishop Monkton Ings).

Wet grasslands have high nature conservation interest and support a wide range of indigenous plant, bird and invertebrate species, many of which are rare and or declining.

For both lowland meadows and floodplain grasslands, the key to habitat conservation is appropriate (generally traditional) management. Most individual pieces of unimproved grasslands are now small but there may be the potential to restore quite large areas.

These meadows and pastures are often valuable embodiments of agricultural and social history, on a par with the church and manor house.

National status

In lowland England the decline in area of unimproved pasture has been dramatic. From five and a half million hectares in the early 1930s there remains only fragments today. Jefferson and Robertson (EN, 1996) estimated the areas of the scarcer, botanically interesting, typical grassland plant communities in England as:

NVC Community Type	Area (ha)
MG4 - Flood meadows	< 1,500
MG5 - Old grazed hay meadow	< 5,000
MG8 - Water meadows	< 500
MG11 & MG13 - Inundation grassland	< 3,000?

The main reason for the severe decline in quality and area of these rich and diverse habitats is changes in agricultural practices, including:

- The switch from pastoral to arable farming.

- The switch from hay to silage production.
- Increasing use of herbicides.
- Increasing use of insecticides.
- Increasing use of inorganic fertilisers.
- Increased stocking rates.
- Loss of wetlands through drainage.

Regional status

According to the Yorkshire and Humberside Biodiversity Audit (Selman, Dodd and Bayes, 1999), there are around 10,000 ha of neutral grassland of high conservation interest and around 41,000 ha of some conservation interest in the region. Most of this occurs in the national parks and adjacent districts of Ryedale, Scarborough, Harrogate and Richmond.

In the Yorkshire and Humberside region, the majority of floodplain grassland habitat survives in the lower Derwent Valley, on the Humberhead Levels and along the river Hull. However, there are huge areas of improved grassland and arable floodplain in the area associated with the rivers Swale, Ouse and Wharfe, where there may be potential for restoration.

Local status

The Harrogate Phase 1 Habitat Survey report (1995) gives a figure of 2,343 ha (or 1.8 per cent of the land surface) for neutral grassland. Much of this is assumed to occur in the Dales Fringe Natural Area but most of this will be pasture, improved to varying degrees.

Some of the high quality neutral grassland sites have developed from previous non-agricultural uses and have thus avoided improvement. These include SINCs at Middleton Hospital and Roecliffe Meadows.

Much of what remains of unimproved grassland on the low ground has been designated as SSSI, e.g. Aubert Ings. On other SSSIs floodplain grassland occurs in association with fen (e.g. Bishop Monkton Ings and Upper Dunsforth Carrs). Many of the better quality semi-improved grassland sites have been designated as Sites of Importance for Nature Conservation (SINCs). These include floodplain grasslands such as at Ousegill Beck and Little Studley Meadows.

Local priority species:

- **Thistle broomrape** (see SAP)
- **Wild tulip** *Tulipa sylvestris*
- **Harvest mouse** *Micromys minutus*
- **Snipe** *Gallinago gallinago*
- **Lapwing** *Vanellus vanellus*
- **Redshank** *Tringa totanus*
- **Barn owl** *Tyto alba*
- **Yellow wagtail** *Motacilla flava*
- **Grass snake** *Natrix natrix*

Status of priority species

Thistle broomrape is a nationally rare species of parasitic plant confined in Britain almost entirely to an area corresponding to the Magnesian limestone between Masham and an area south of Wetherby (see SAP).

Wild tulip - is only found at one site in the district, Aubert Ings SSSI. Said to be anciently introduced to Britain and naturalised in a few wooded gardens, meadows and parkland.

Harvest mouse - Deaton (1986) states that the species was to be found "*scattered in low lying areas but quite common near Bishop Monkton and east of Knaresborough.*" Areas of tall grasses within the flood plain are the species' stronghold in the district.

Snipe - the national decline of this species, especially in the lowlands, is mirrored within the district. Mather (2001) states that, "*as a breeding bird, it is much less numerous than it was two decades ago.*" Away from the high ground, it is now only found as a breeding bird at Bishop Monkton Ings. Wintering flocks can be found at any permanent or ephemeral wet grassland, but again in much reduced numbers than two or three decades ago. Favoured wintering sites are Bishop Monkton Ings, Little Studley Meadow and Staveley Nature Reserve.

Lapwing - prefers wet short turf and bare ground for both breeding and wintering. The species remains widespread, despite an ongoing decline first noted in the early sixties. Mather (2001) documents the decline of the species within the district and points out that as a breeding bird, away from such sites as reinstated gravel quarries, permanent grass and set-aside land, the stronghold for the species is now the moorland edge. During the winter, however, huge numbers may still gather on river floodplains.

Redshank - a bird of wet grassland requiring a more structured sward for breeding than lapwing. Mather (2001) states that "*the present status of the Common Redshank needs little amendment from that assessed by Walker (1977 and 1991) as a summer resident, mainly on the high ground but breeding also around lowland aquatic habitats, and a passage migrant at both seasons, small numbers staying throughout the winter.*"

Barn owl *Tyto alba* - sparse in the district. Its main, albeit scattered, breeding area was and still is in the south



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east corner of the district around Moor Monkton, Wilstrop, Little and Great Ouseburn and Dunsforth parishes. Mather (2001) indicated that the species was a regular but declining breeding bird. During the 1990s Harrogate Borough Council (HBC) and the Barn Owl Trust took the lead in promoting a Barn owl nest box scheme in the Ainsty area, with some success, so that the species is now probably again a regular breeding bird. Another nest box scheme is being developed along the eastern edge of the Nidderdale AONB.

Yellow wagtail - Mather (2001) stated that this bird "has suffered the most obvious reduction in numbers of any species in the district". This is a sad reflection on a bird that traditionally bred so numerous in traditional hay meadows, especially in the dales, up until the early seventies. Without doubt, the cause of the decline has been the shift from traditional hay meadow management to more intensive silage crops. The species is now almost extinct in the dales and can only now be described as a summer visitor in small numbers, breeding sparingly, mainly on the low ground.

Grass snake - historically, scattered records have occurred across the district but are now only very occasional. Grass snakes were observed every year between 1985 and 1989 (1990) at one site near Wilstrop, in the Vale of York, with a maximum of eight exhibiting breeding behaviour. It may still occur at this and possibly other sites but be overlooked.

Requirements

All remaining unimproved and richer semi-improved grasslands are worthy of conservation. This entails achieving appropriate stocking levels and/or mowing dates, as well as a reduction in fertilizer applications and prevention of the other damaging practice such as herbicide treatment.



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For hay meadows:

- Late cutting of hay to allow ground-nesting birds to fledge and late-flowering plants to seed.
- Sheep-grazing in early spring followed by aftermath grazing by cattle.
- Avoid cultivation or reseeding of unimproved meadows.
- If appropriate, apply well-rotted farmyard manure at low rates.
- Avoid applying artificial fertilizers to hay meadows.

This type of low intensity management is not economically viable in the absence of agri-environment grants. Therefore, an ongoing commitment to financing stewardship schemes is essential if these habitats are to be sustained in the long term.

Threats

- Continued agricultural improvement e.g. agricultural intensification still driven by policies which force farmers to improve pastures and produce silage or leave stock farming and go into high input arable.
- Eutrophication through direct fertilisation or, for flood meadows, diffuse agricultural pollution and point source pollution e.g. sewage discharge through storm surge overflow.
- Neglect of grassland can lead to it becoming invaded by scrub through ecological succession.
- Recreational disturbance including uncontrolled dogs disturbing nesting birds and the increasing use of quad bikes either for stock-checking or night-lamping for foxes and rabbits.

Current local action

- The Environment Agency (EA), water companies, internal drainage boards and local authorities have a statutory duty to further conservation, where this is consistent with their functions as set out in the Water Resources Act 1991 and the Land Drainage Act 1991.
- Defra's High Level Targets for flood defence schemes which include 'no net loss of BAP habitats'.
- A number of sites with managed grassland are in conservation management at Yorkshire Wildlife Trust (YWT) reserves at Staveley and Upper Dunsforth Carrs. HBC manages two floodplain grasslands just north of Ripon at Little Studley Meadow and Ure Bank Bottom. The YWT manage The Loop Reserve and Ainsty Conservation Society manage a small site at Tockwith Ings.
- A number of neutral grasslands are currently being managed in accordance with Environmental Stewardship Schemes in the Dales Fringe and in the lowlands. These include a number of hay meadow restoration schemes.

- The North Yorkshire SINC Panel is working to identify species-rich grasslands as Sites of Importance for Nature Conservation (SINC) and to work with landowners to bring them into favourable conservation status.
- North Yorkshire County Council, Nidderdale AONB and the YWT are working to identify, protect and manage species-rich road verges in the district.
- Nidderdale AONB, with funding from SITA Trust and the Natural England (NE) Higher Level Stewardship Scheme, aim to survey up to 90 ha of species rich meadow habitat and survey and restore 62 ha of degraded hay meadow habitat between 2012 and 2014. Meadows will be restored using wildflower seed sourced from local sites which have been traditionally managed and which still retain a high number of wildflowers. Using locally sourced seed ensures that the species mix of the restored meadows is appropriate to recreate the local habitat type.
- Yorkshire Water and the Washburn Wildlife Group manage wet grassland along the Washburn valley below Thruscross.
- Barn owl nest box schemes operate with some success in the Ainsty area and along the eastern edge of the Nidderdale AONB.

Opportunities

- Defra's new Environmental Stewardship Scheme, includes options in the Entry Level Scheme for the maintenance of species-rich grasslands through the promotion of low-input regimes etc. The Higher Level Scheme, which is targeted at SSSIs and Nidderdale AONB (and which may also be applicable to SINC and BAP habitats and species), includes options for capital works and restoration as well as protection of natural resources.
- The European Water Framework Directive provides the opportunity for the Environment Agency (EA) to develop the benefits of wetland creation such as improvements in water quality through natural purification functions, water resource benefits such as improved aquifer recharge and fewer associated problems with low river

flows and floodwater and sediment storage in floodplain/washland areas and to work to protect and restore the status of aquatic and related eco-systems, including floodplain grasslands through reducing pollution and restoring river floodplain habitats.

- The EA-led 'SPROUT' initiative has identified regional strategic opportunities for integrating flood defence and floodwater retention schemes with habitat creation (including wet grassland), especially on the Ure/Ouse and lower Nidd.
- Work with the Farming and Wildlife Advisory Group, Natural England and the EA to identify any remnant riparian meadow grassland and advise landowners on management and sources of funding for biodiversity.
- Potential for incorporation of wet grassland and hay meadows in gravel pit restoration projects.
- The potential for restoration/recreation of floodplain grasslands is greatest in five blocks of Landscape Character Areas highlighted in the Harrogate district Landscape Character Assessment (HBC, 2004). Those areas are LCAs 63 and 64 alongside the Wharfe; LCAs 97 and 98 alongside the Nidd; LCAs 92, 93 and 94 alongside the Ure/Ouse; LCAs 72, 73 and 75 between Boroughbridge and Ripon along the Ure, taking in Bishop Monkton Ings, Givendale and the Ripon Race course complex of wetlands and alongside the Ure north of Ripon to West Tanfield, in LCA 78.
- There may be an opportunity to develop an East Nidderdale Grazing Animals Project which could help bring these lowland grasslands into an optimum conservation management regime.
- There may be an opportunity to explore the possibility of developing a commercial market for small bale organic herb-rich hay.

LINKS WITH OTHER HDBAP PLANS:

Thistle broomrape SAP
Standing water HAP



The UKBAP Links:

Lowland Meadows HAP and Coastal & Floodplain Grazing Marsh HAP
UK HAP definition <http://jncc.defra.gov.uk/page-5706>