

HABITAT ACTION PLAN FOR LOWLAND NEUTRAL GRASSLAND (UKBAP EQUIVALENT: LOWLAND MEADOWS)

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NOTE: the name of this HAP was changed from Unimproved Neutral Grassland in 2010

HABITAT DEFINITION

Lowland Neutral Grassland includes most forms of unimproved neutral grassland across the enclosed lowland landscapes of the UK. They include grasslands which are cut for hay, pastures where livestock grazing is the main land use, and are associated with low-input nutrient regimes. Such grasslands may also be found on roadside verges, disused railway lines, golf courses, in church-yards and in a variety of other localities. Neutral grasslands lack any pronounced calcicole or calcifuge element.

In Nottinghamshire, neutral grasslands are found on circum-neutral substrates across the county, with particular concentrations on the central claylands and the coal measures in the west. A significant resource exists in the verges of the county's roads.

Neutral grasslands in Nottinghamshire include the National Vegetation Classification communities MG1, MG4, MG5, MG6 and MG11. They can be diverse habitats, supporting a range of widespread herbs such as common knapweed *Centaurea nigra*, meadow vetchling *Lathyrus pratensis*, lady's-bedstraw *Galium verum*, ox-eye daisy *Leucanthemum vulgare* and agrimony *Agrimonia eupatoria* and other more notable plant species including Dyer's greenweed *Genista tinctoria*, green-winged orchid *Orchis morio*, pepper saxifrage *Silaum silaus* and adder's-tongue *Ophioglossum vulgatum*.

Agricultural intensification has led to the extensive development of nutrient-demanding, productive MG7 *Lolium perenne* grasslands, and these now make up the vast majority of Nottinghamshire's grasslands. These are managed for grazing and also silage production, which has widely replaced traditional hay-making. Where fertiliser input is relaxed or in swards which have been partially improved, MG6 *Lolium - Cynosurus* grassland is common; in many respects this is intermediate between improved and unimproved lowland neutral grasslands but has few uncommon species and is generally of low botanical value.

Scrub is often present in neutral grassland, especially where management has been relaxed or has ceased, and at appropriate levels provides an important habitat, providing scrub edge conditions and shelter for invertebrates and thereby increasing the diversity

of species found. Neutral grasslands provide suitable habitat for a wide variety of animals including small mammals, moths and butterflies such as harvest mouse *Micromys miutus*, green hairstreak butterfly *Callophrys rubi* and small yellow underwing moth *Panemeria tenebrata*. These grasslands also provide feeding or breeding habitat for a number of scarce or declining farmland birds, such as skylark *Alauda arvensis*.

When looking at the extensive floodplain grasslands of the river valleys, especially the Trent and Idle Valleys, this plan should be looked at in conjunction with the Lowland Wet Grassland HAP, as there may be some overlap in these two habitat types.

CURRENT STATUS

Between 1930 and 1984, unimproved lowland grassland of all types in England and Wales decreased by an estimated 97% as a result of agricultural intensification. Losses continued during the 1980s and 90s, and were recorded at 2-10% per annum in some counties. The East Midlands has had a particularly high rate of loss, and although the current extent is not accurately known, it is estimated that Nottinghamshire's unimproved grassland has declined by 97-99% since 1930.

Recent estimates of habitat cover in England and Wales indicate that there is approximately 15,000 ha of species-rich neutral grassland surviving today in the UK as a whole, of which between 5000-10,000 ha is MG5 *Cynosurus - Centaurea* grassland (although much of this is now highly localised, fragmented and in small stands) and less than 1500 ha is MG4 *Alopecurus - Sanguisorba* grassland (although there are still a few quite large stands).

In Nottinghamshire, lowland neutral grasslands generally survive as isolated sites in otherwise intensively farmed landscapes, although there are important concentrations of traditionally-managed habitat around Bagthorpe, Eakring, Giltbrook and Laxton. The total extent of the resource in the county is approximately 1380 hectares, with the distribution shown in Annex 1.

THREATS

The main factors currently affecting Nottinghamshire's lowland neutral grassland are:

- Agricultural improvement through drainage, ploughing, re-seeding and fertiliser treatment.
- The shift from hay making to silage production, with more frequent and often earlier annual cutting, reducing seeding opportunities for plants and hence eventually species richness.
- Lack of management, leading to bracken and scrub encroachment.
- Lack of aftermath grazing following cutting, leading to a loss of species richness.
- Supplementary stock feeding, which introduces more nutrients than are removed, leading to fertilisation.

- Application of herbicides and pesticides.
- Atmospheric nutrient input.
- Loss of species due to heavy grazing pressure.

CURRENT INITIATIVES - EXAMPLES

- A UK Habitat Action Plan for Lowland Meadows has been prepared, which covers the same habitat types as this plan.
- Natural England has compiled a lowland grassland inventory, and the County's most important sites are designated as SSSIs.
- Road verges of value for biodiversity are designated as Notified Road Verges by the County Council.
- Many private landowners manage areas of unimproved neutral grassland, and have a vital part to play in its conservation.
- Some local authorities are now able to manage their grassland in a more sensitive way.
- Nottinghamshire Wildlife Trust manages 75ha of unimproved neutral grassland in its Nature Reserves.
- Newark and Sherwood District Council manages 2ha of unimproved neutral grassland within Devon Park Pastures Local Nature Reserve.
- Areas of unimproved neutral grassland designated as Local Wildlife Sites are given a degree of protection under the planning system.
- Funding is available through the Trent Vale Landscape Partnership for management and recreation of lowland grassland.
- Nottinghamshire Wildlife Trust's Mini Meadow Scheme aims to provide 10,000 people with enough seed to create their own 'mini meadow' of approximately 1 metre square in their gardens in order to increase grassland habitat across the County and create stepping stones of grassland for wildlife between larger natural green spaces.
- Advice on grassland management is available from a variety of sources.

TARGETS

The following targets were agreed by the HAP target review group.

Target Type	Target Text	Units	2005 Baseline	2010 Target	2015 Target
Maintain Extent	Maintain the extent of all existing unimproved neutral grassland.	Ha	688	688	1488
Achieve Condition	Maintain and improve by management existing unimproved neutral grassland.	Ha	193 (28% of existing habitat in favourable condition)	482 (70% of total habitat resource)	688 (100% of 2005 baseline resource)
Restoration	Improve the condition of relict habitat so that it qualifies as unimproved neutral grassland.	Ha		800	1264
Expansion	Encourage the re-establishment and increase the area of unimproved neutral grassland.	Ha			

(N.B. these figures will be updated as new targets are set during 2011)

UK Priority Habitat, Lowland Meadows are taken to include most forms of unimproved neutral grassland across the enclosed lowland landscapes of the UK, and not restricted to grasslands cut for hay, but also takes into account unimproved neutral pastures where livestock grazing is the main land use. In non-agricultural settings additional examples may be found in recreational sites, church-yards, roadside verges and a variety of other localities. These grasslands are typical of areas such as the mid-Nottinghamshire Farmlands, with neutral soils. This plan does not cover the extensive flood plain grasslands of the river valleys, which fall under the Lowland Wet Grassland.

Baseline data was based on a survey of grassland sites of SINC status by the Nottinghamshire Biological and Geological Record Centre (NBGRC), a survey of SSSI data by Natural England, and an estimate of unaccounted for sites. There is potential that some of the neutral grassland resource will be found on farmland and therefore the greatest potential to increase the resource through the ELS and HLS agri-environment schemes. The breakdown of baseline data is as follows:

(in ha)	Favourable Condition	Unfavourable Condition	Resource Total
SSSI Sites	58	0	58
Non SSSI Sites and SFT sites	123	393	515
Unaccounted for sites	12	102	115
Total	193 (28%)	495 (72%)	688

This is a locally specific habitat that falls within the UK Broad habitat of Neutral Grassland and has similarities with the UK Priority habitat of Lowland Meadows. UK Broad classification is taken as unimproved grassland occurring on circum-neutral soils. It includes enclosed and managed grassland such as hay meadows and pastures.

The restoration/expansion target (again combined for this habitat type) were agreed upon to be fairly optimistic, due to the potential to increase this habitat type through the agri-environment schemes.

PROPOSED ACTION

Policy and legislation

1. Ensure the incorporation of relevant (inter-)national law, policies and guidance into all plans and policies relating to the protection, enhancement and management of unimproved neutral grassland habitat.

ACTION: Government Agencies, Local Authorities, NGO's.

2. Through planning control or other land use consultation processes, allow no further loss of areas of unimproved neutral grassland habitat and seek opportunities to enhance existing areas and create new areas through approved development.

ACTION: Government Agencies, Local Authorities, NGO's.

3. Ensure agri-environment, forestry and other funding schemes include appropriate management options and design measures to suit local nature conservation needs.

ACTION: Government Agencies.

Site safeguard and management

4. Review the extent of SSSI coverage of grassland habitat and consider notifying further sites as necessary.

ACTION: Government Agencies.

5. Designate SINC's and declare Local Nature Reserves on appropriate areas of habitat or instigate other appropriate measures for their protection.

ACTION: Government Agencies, Local Authorities, NGO's.

6. Promote the uptake of positive management with owners of SSSIs, LNRs, SINC's and any other areas of unimproved neutral grassland habitat.

ACTION: Government Agencies, Local Authorities, NGO's.

7. Carry out appropriate habitat management on sites controlled by BAP partners.

ACTION: Government Agencies, Local Authorities, NGO's.

8. Ensure sites containing unimproved neutral grassland habitat have appropriate management plans that are working towards improving site management and condition

ACTION: Government Agencies, Local Authorities, NGO's.

9. Acquire land to ensure good habitat management or to create habitat.

ACTION: NGO's.

Advisory

10. Provide formal or informal training in management techniques for unimproved neutral grassland habitat to land managers, site wardens, volunteers, etc.

ACTION: Government Agencies, Local Authorities, NGO's.

11. Establish demonstration sites or projects to demonstrate/publicise good habitat management techniques.

ACTION: Government Agencies, Local Authorities, NGO's.

Future research and monitoring

12. Establish and maintain a monitoring programme (a site register) to determine progress towards county HAP targets.

ACTION: Government Agencies, Local Authorities, NGO's.

13. Ensure that areas of unimproved neutral grassland habitat are periodically resurveyed to establish extent and condition. Update resulting habitat inventory every 5 years and revise targets and HAPs if necessary.

ACTION: Government Agencies, Local Authorities, NGO's.

Communications and publicity

14. Improve public awareness and appreciation of unimproved neutral grassland habitat by providing appropriate interpretation, education and access (where appropriate).

ACTION: Government Agencies, Local Authorities, NGO's.

15. Improve awareness of the value of, and appropriate management techniques for unimproved neutral grassland habitat among site owners and occupiers.

ACTION: Government Agencies, Local Authorities, NGO's.

WHAT YOU CAN DO

- Create a wildflower 'meadow' in your garden by planting with wildflowers and grasses, and then cutting only after flowering has finished. Advice is available from Nottinghamshire Wildlife Trust.

Nottinghamshire Local Biodiversity Action Plan

- Encourage those responsible for managing your local churchyard or park to set aside an area to be managed for wildflowers. Encourage your Parish Council to be sympathetic to the management needs of Notified Road Verges.

SPECIES LIST

The following are examples of Species of Conservation Concern (Appendix A) which are likely to benefit from this action plan:

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|-------------------------------|----------------------------|
| ➤ Brown hare | <i>Lepus europaeus</i> |
| ➤ Harvest mouse | <i>Micromys miutus</i> |
| ➤ Stoat | <i>Mustela erminea</i> |
| ➤ Barn owl | <i>Tyto alba</i> |
| ➤ Meadow pipit | <i>Anthus pratensis</i> |
| ➤ Skylark | <i>Alauda arvensis</i> |
| ➤ Yellow wagtail | <i>Motacilla flava</i> |
| ➤ Grass snake | <i>Natrix natrix</i> |
| ➤ Barred rivulet moth | <i>Perizoma bifaciata</i> |
| ➤ Green hairstreak butterfly | <i>Callophrys rubi</i> |
| ➤ Small yellow underwing moth | <i>Panemeria tenebrata</i> |
| ➤ Common broomrape | <i>Orobanche minor</i> |
| ➤ Cowslip | <i>Primula veris</i> |
| ➤ Green winged orchid | <i>Orchis morio</i> |
| ➤ Meadow cranesbill | <i>Geranium pratense</i> |
| ➤ Meadow saxifrage | <i>Saxifraga granulata</i> |

The SoCC is currently under review and when this process is complete it will influence all the Habitat Action Plan species lists.

ANNEX 1 – distribution of Lowland Neutral Grassland in Nottinghamshire

[map to be inserted when available]