



# **Johnsons' Meadows SSSI Leicestershire**

**Notification under section 28 of the Wildlife  
and Countryside Act 1981**

**Supporting Information**

## Contact points and further information

This supplement is issued on request by Natural England's East Midlands Area Team and is intended to be read in conjunction with the notification document for owners, occupiers and other notified parties.

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## Summary

Johnsons' Meadows SSSI, is notified under Section 28 of the Wildlife and Countryside Act 1981 (as amended).

Johnsons' Meadows SSSI is considered to be of special interest for its species-rich lowland neutral grassland. The site supports nationally important examples of the National Vegetation Classification (NVC) type MG5 crested dog's-tail *Cynosurus cristatus* – common knapweed *Centaurea nigra* grassland.

## 1. Information used to support the selection of Johnsons' Meadows SSSI

Feature	Data source	Author	Date	Content
Lowland neutral grassland	The changing extent and conservation interest of lowland grasslands in England and Wales: A review of grassland surveys 1930-1984. Biological Conservation 40, 281-300. <a href="https://www.sciencedirect.com/science/article/abs/pii/0006320787901212">https://www.sciencedirect.com/science/article/abs/pii/0006320787901212</a>	Fuller, R.M.	1987	Information on the national status of grassland habitats.
	British Plant Communities. Volume 3: Grasslands and montane communities. Published by Cambridge University Press, Cambridge.	Rodwell, J.S. (ed)	1992	National Vegetation Classification (NVC) for grasslands.
	Monitoring the condition of lowland grassland SSSIs. English Nature Research Report No 315. Published online: <a href="http://publications.naturalengland.org.uk/publication/64033">http://publications.naturalengland.org.uk/publication/64033</a>	Robertson, H.J. & Jefferson, R.G.	2000	Natural England internal guidance on condition assessment of lowland grassland SSSIs.
	The condition of lowland BAP priority grasslands. Results from a sample survey of non-statutory stands in England. English Nature Research Report 636. Published online: <a href="http://publications.naturalengland.org.uk/publication/106007">http://publications.naturalengland.org.uk/publication/106007</a>	Hewins, E.J., Pinches, C., Arnold, J., Lush, M., Robertson, H. & Escott, S.	2005	Information on the national status of grassland habitats.
	Soil sampling for habitat recreation and restoration. Natural England Technical Information Note TIN035. <a href="http://publications.naturalengland.org.uk/publication/31015">http://publications.naturalengland.org.uk/publication/31015</a>	Tytherleigh, A., Peel, S., Shaw, G. & Rochford, G.	2008	Guidance on how to take soil samples.
	Soil and agri-environment schemes: interpretation of soil analysis. Natural England Technical Information Note TIN036 <a href="http://adlib.everysite.co.uk/resources/000/245/878/TIN036.pdf">http://adlib.everysite.co.uk/resources/000/245/878/TIN036.pdf</a>	Peel, S.	2008	Guidance on the interpretation of soil analysis results.

Feature	Data source	Author	Date	Content
	Revised Guidelines for the Selection of Biological SSSIs. Part 1: Rationale, Operational Approach and Criteria for Site Selection. JNCC, Peterborough. Published online: <a href="https://hub.jncc.gov.uk/assets/dc6466a6-1c27-46a0-96c5-b9022774f292">https://hub.jncc.gov.uk/assets/dc6466a6-1c27-46a0-96c5-b9022774f292</a>	Bainbridge, I, Brown, A, Burnett, N, Corbett, P, Cork, C, Ferris, R, Howe, M, Maddock, A, Mountford, E, & Pritchard, S (eds)	2013	National selection guidelines for biological SSSIs.
	NVC survey. Long Close, Woodhouse Eaves, Leicestershire. June 2014. Unpublished report to Natural England.	Frith, J.	2014	Grassland survey of Long Close Meadows.
	Fate of semi-natural grasslands in England between 1960 and 2013: A test of national conservation policy. Global Ecology and Conservation 4: 516-525. <a href="https://www.sciencedirect.com/science/article/pii/S2351989415300184">https://www.sciencedirect.com/science/article/pii/S2351989415300184</a>	Ridding, L.E. Redhead, J.W and Pywell, R.F.	2015	National study on loss rates of semi-natural grasslands within and outside protected sites.
	Space for Wildlife: Leicester, Leicestershire and Rutland Biodiversity Action Plan 2016 – 2026.  Leicestershire and Rutland Environmental Records Centre, Leicester. Published online: <a href="https://www.leicestershire.gov.uk/sites/default/files/field/pdf/2017/1/25/LLR_BAP_Space_for_Wildlife_2016-26_part_1.pdf">https://www.leicestershire.gov.uk/sites/default/files/field/pdf/2017/1/25/LLR_BAP_Space_for_Wildlife_2016-26_part_1.pdf</a>	Tims, S. 2 <sup>nd</sup> Edition	2016	Information on the status of lowland neutral grassland in Leicestershire.
	Soil analysis results.	NRM Laboratories	2016	Soil analysis results.
	Guidelines for the Selection of Biological SSSIs. Part 2: Detailed Guidelines for Habitats and Species Groups. Chapter 3 Lowland Grasslands. JNCC, Peterborough. Published online: <a href="http://jncc.defra.gov.uk/pdf/SSSI_Chptr03_revision_2017(v2.0).pdf">http://jncc.defra.gov.uk/pdf/SSSI_Chptr03_revision_2017(v2.0).pdf</a>	Jefferson, R.G., Smith, S.L.N. & MacKintosh, E.J.	2019	Guidelines for selecting lowland grasslands for SSSI notification.
	State of Nature 2019. Published online: <a href="https://nbn.org.uk/wp-content/uploads/2019/09/State-of-Nature-2019-UK-full-report.pdf">https://nbn.org.uk/wp-content/uploads/2019/09/State-of-Nature-2019-UK-full-report.pdf</a>	National Biodiversity Network	2019	Report on the state of England's natural environment.

Feature	Data source	Author	Date	Content
	NVC survey & Condition Assessment of Long Close Meadows, Woodhouse Eaves, Leicestershire. June 2018.	Evans, I	2019	Grassland survey and condition assessment of Long Close Meadows.
	Specialist support for notification of Johnsons' Meadows as a SSSI.	Pinches, C.	2019	Support for notifying the site from Natural England's senior grassland specialist.

## 2. Explanation of how Johnsons' Meadows meets the SSSI selection guidelines

This section explains how the information listed in Section 1 has informed the decision to notify the SSSI, according to the *Guidelines for the selection of Biological SSSIs. Part 1: Rationale, Operational Approach and Criteria for Site Selection* (Bainbridge et al. 2013) and *Part 2: Detailed Guidelines for Habitats and Species Groups. Chapter 3 Lowland Grasslands* (Jefferson et al. 2019), hereafter referred to as 'the Guidelines'.

### 2.1 Species-rich lowland neutral grassland

Johnsons' Meadows is of special interest for its species-rich grassland characterised by the nationally rare National Vegetation Classification (NVC) type MG5 crested dog's-tail *Cynosurus cristatus* – common knapweed *Centaurea nigra* grassland (see photographs 2-6 in section 6). This grassland vegetation community forms part of the 'lowland meadows' priority habitat, which is included on the list of habitats and species which are of principal importance for the conservation of biodiversity in England, as required under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006.

Historically the area of semi-natural grassland in the UK (including MG5) has undergone a severe decline as a consequence of post-war agricultural intensification. It is estimated that by 1984 in lowland England and Wales, semi-natural grassland had declined by 97% over the previous 50 years (Fuller 1987). More recently a 47% loss has been reported between 1960 and 2013 on sites known to have supported species-rich grassland. SSSIs were found to have retained more grassland (91%), compared with non-protected sites (27%), thus highlighting their effectiveness as a means of protecting semi-natural grasslands (Ridding, Redhead & Pywell 2015). Such widespread loss has led to extensive fragmentation, with remaining grasslands often isolated within the landscape. The extent of semi-natural grassland in Leicestershire has mirrored national trends. The Leicestershire and Rutland Biodiversity Action Plan (2016 to 2026) references serious declines particularly outside protected sites.

In addition to loss of habitat, the quality of semi-natural grasslands has also declined. An assessment of the condition of these grasslands on non-statutory sites in England in 2002/2003 found that only 16% of lowland hay meadows were considered to be in good condition, with many lacking positive indicators in sufficient number and frequency due to neglect or agricultural intensification (Hewins et al. 2005). In England the remaining extent of MG5 grassland is estimated to be less than 6,000 ha (Robertson & Jefferson, 2000).

Reflecting the historical decline in semi-natural grasslands, the Guidelines (Part 2, Chapter 3, Section 1.1.1, p.2) state that:

'...individual areas [of lowland neutral grassland] are now small in extent, seldom exceeding 10ha, and are highly fragmented'.

In order to help conserve the remaining resource the Guidelines (Part 2, Chapter 3, Section 4.10, p.7) specify that:

‘For those grassland communities that are now rare (less than 10,000 ha in Great Britain or less than 10,000 ha in the British lowlands, as shown in section A of Annex 1) the presumption is that all examples which are at least 0.5 ha should be selected for notification, singly or in combination.’

MG5 grassland is listed in Section A of Annex 1 of the Guidelines; accordingly all examples of at least 0.5 ha should be selected. Johnsons’ Meadows supports at least 5.2 ha of MG5 grassland (Frith 2014 and Evans 2018) across the six fields which comprise the site.

The antiquity of the grassland within the site varies. Units 4 and 5 are ancient meadows, supporting medieval ridge and furrow earthworks and a medieval settlement and have not been subject to any form of agricultural improvement. In contrast prior to the 1970s, the grassland within units 1, 2 and 3 was agriculturally improved and unit 6 was in arable cultivation. During the 1970s/1980s, all fields came into new ownership and have been managed sympathetically for nature conservation up to the present time. The fields were first entered into an agri-environment scheme in 1995 and have remained under agreements which continue to support and steer the appropriate management of the species-rich grassland through options requiring no fertiliser inputs and seasonal hay cropping followed by aftermath grazing by livestock or horses. This management together with some sward enhancements of unit 6, by the occasional spreading of green hay from units 4 and 5 has enabled restoration and reversion of species rich MG5 grassland across all fields within the site. The current Countryside Stewardship agreement (management of species rich grassland prescription and haymaking supplement) expires in 2021.

The Guidelines (Part 2, Chapter 3, Section 4.16, p.9) state:

‘Grasslands that have undergone restoration from semi-improved grassland or have been created on former arable land (by introduction of seed or green hay or by natural colonisation) or are the result of translocation of existing semi-natural grassland may key out as NVC communities listed in section A of Annex 1. These grasslands will generally be of lower quality when criteria such as species richness, number of character or indicator species (e.g. Robertson & Jefferson 2000; JNCC 2004) and overall environmental heterogeneity are assessed. They would also be rated less highly against the naturalness criterion, where less modified types or forms which occur in a semi-natural context are generally rated more highly. In such cases, generic advice is inappropriate; each case needs to be considered on its merits and specialist advice should be sought.’

In the case of Johnsons’ Meadows all restoration fields are long standing and established. They have been under agreement since 1995. Despite their differences in age the grassland plant communities within the six fields can each individually be described as an MG5 grassland (Frith 2014 and Evans, 2019) with a good diversity and frequency of lowland neutral grassland indicators. Soil samples were taken in July 2016 (NRM Laboratories). These show that all fields have a comparable low nutrient status (phosphorus index 0) as would be expected for soils supporting lowland neutral grassland. Since all units are directly contiguous to one another and linked by gateways inclusion of Units 1, 2, 3 and 6 alongside the old meadows of Units 4 and 5 makes sound ecological sense in best protecting the existing interest whilst also ensuring the site represents a viable prospect for appropriate grazing and cutting management now and in the future.

## **2.2 Site boundary determination**

Johnsons’ Meadows comprises six fields (see photograph 1 in section 6), which support MG5 grassland. Additional plant communities which are distinct from the MG5 grassland are associated with the hedgerows, ditches and woodland edges. These are confined to the field margins. The Guidelines (Part 2, Chapter 3, Section 5.1) state:

‘SSSI boundaries should be drawn to encompass the special features of the site and all land necessary to ensure the protection and sustainability of those features. Consideration should be given to the inclusion of whole management units, entire ecological units and land required for supporting processes, such as hydrology. Thus, for example, this may require the inclusion within a site boundary of areas of land supporting grassland

communities of lower botanical interest (section B of Annex 1), or non-grassland vegetation.'

The plant communities associated with the hedgerows, ditches and woodland edges are an integral part of the management units and fall within identifiable boundaries.

### 3. Assessment of the current condition of Johnsons' Meadows

Unit No	Interest feature	Reported condition**	Assessment Date
1	Lowland neutral grassland	Unfavourable – recovering	15 June 2018
2			
3			
4		Favourable	
5			
6		Unfavourable – recovering	

\* **Site units** are divisions used by Natural England for administrative purposes only. The map of the site in Section 5 shows the location of these units.

#### \*\* Reported condition

SSSIs are notified because they support biological or geological features which are of special interest. When these features are being managed so that the special interest is being maintained they are said to be in favourable condition. This is a United Kingdom standard and the terminology and definitions are more fully described in '[A Statement on Common Standards Monitoring \(CSM\)](#)', produced by the Joint Nature Conservation Committee in 2019.

Condition assessments were carried out using [English Nature Research Report No 315](#).

### 4. Selection of 'operations requiring Natural England's consent'

Natural England selects operations from a master list when determining the list of operations requiring consent for individual SSSIs. The selection is based on the likelihood that the operations may cause damage to the special features that are the reasons for notification of the SSSI. As well as selecting operations from the master list, the precise wording of each operation may be tailored to suit the particular circumstances at the site.

It is not possible to predict every eventuality that may arise on a site but the aim is to identify all operations where it is reasonably foreseeable that, if carried out at certain times or in a particular manner somewhere within the SSSI, they are likely to damage the special interest features. The table below records at least one reason justifying the inclusion of each operation in the list for Johnsons' Meadows SSSI. It is not intended to be exhaustive and in most cases there will be other ways in which the specified operation is likely to cause damage.

Standard reference number	Type of operation	At least one reason for listing
1.	Cultivation, including ploughing, rotovating, harrowing and re-seeding.	Grassland could be destroyed.
2.	Grazing and alterations to the grazing regime including type of stock, intensity or seasonal pattern of grazing.	Grassland is sensitive to over or under grazing, which could lead to changes in community composition.
3.	Stock feeding and alterations to stock feeding practice.	Could lead to localised nutrient enrichment or poaching which would damage grassland.
4.	Mowing or cutting vegetation and alterations to the mowing or cutting regime, such as from haymaking to silage.	Grassland is sensitive to cutting or mowing, which could lead to changes in community composition if carried out inappropriately.

<b>Standard reference number</b>	<b>Type of operation</b>	<b>At least one reason for listing</b>
5.	Application of manure, slurry, silage liquor, fertilisers and lime.	Grassland is sensitive to nutrient enrichment, which could lead to dominance by competitive species.
6.	Application of pesticides, including herbicides (weedkillers) whether terrestrial or aquatic, and veterinary products.	Grassland and associated flora/fauna are sensitive to these, both through direct loss and changes to community composition.
7.	Dumping, spreading or discharging of any materials.	Risk of obscuring/smothering grassland.
8.	Burning.	Grassland is sensitive to burning, both through direct loss and changes to community composition.
9.	Release into the site of any wild, feral, captive-bred or domestic animal, plant, seed or micro-organism including genetically modified organisms.	Could lead to unforeseen interactions with indigenous species and changes in community composition.
10.	Killing, injuring, taking or removal of any wild animal including dead animals or parts thereof, or their eggs and nests, including pest control and disturbing them in their places of shelter.	Could lead to unforeseen changes in community composition, for instance if key herbivores, pollinators or predators are affected, Direct damage to the sward could result from some methods.
11.	Destruction, displacement, removal or cutting of any plant or plant remains, including tree, shrub, herb, hedge, dead or decaying wood, moss, lichen, fungus, leaf-mould or turf.	Damage to grassland and constituent species.
12.	Tree and/or woodland management and alterations to tree and/or woodland management including, planting, felling, pruning and tree surgery, thinning, coppicing, changes in species composition, removal of fallen timber.	Risk of incidental damage to grassland, direct loss and changes in community composition due to shading.
13a.	Draining including the use of mole, tile, tunnel or other artificial drains.	Risk of incidental damage to and direct loss of grassland.
13b.	Modification to the structure of water courses including their banks and beds, by realignment, re-grading, damming or dredging.	Risk of incidental damage to and direct loss of grassland.
13c.	Management of aquatic and bank vegetation for drainage purposes.	Risk of incidental damage to and direct loss of grassland.
14.	Alterations to water levels and tables and water utilisation including irrigation, storage and abstraction from existing water bodies and through boreholes. Also the modification of current drainage operations.	Grassland sward is sensitive to changes in hydrology. Direct damage to grassland in the immediate vicinity.
15.	Infilling or digging of ditches, drains, ponds, pools, marshes or pits	Direct damage to grassland.
20.	Extraction of minerals including hard rock, topsoil, subsoil and spoil.	Direct loss of grassland.

Standard reference number	Type of operation	At least one reason for listing
21.	Destruction, construction, removal, rerouting, or regrading of roads, tracks, walls, fences, hardstands, banks, ditches or other earthworks, including soil and soft rock exposures or the laying, maintenance or removal of pipelines and cables, above or below ground.	Direct loss of, or incidental damage to grassland.
22.	Storage of materials.	Risk of obscuring/smothering grassland.
23.	Erection of permanent or temporary structures or the undertaking of engineering works, including drilling.	Direct loss of grassland.
26.	Use of vehicles or craft.	Risk of damage to grassland, for instance from soil compaction or wheel-rutting.
27.	Recreational or other activities likely to damage or disturb the features of special interest.	Risk of damage to grassland, for instance due to excessive trampling.
28a.	Game and waterfowl management and hunting practices and alterations to game and waterfowl management and hunting practice.	Inappropriate location and types could damage grassland, for instance through nutrient enrichment around feeders.

## **5. Site Unit Map**

The map on the following page shows the provisional boundaries of the site units which are divisions used by Natural England for administrative purposes only.

Insert site unit map here



## 6. Photographs



**Photograph 1**

**Johnsons' Meadows SSSI  
boundary shown in red**



**Scale (at A3): 1:1,535**

Map produced by Denise Rose,  
Landscape, Biodiversity & Designation Team  
Date flown: 07/06/2016.

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**Photograph 2:** MG5 grassland in unit 2 showing an abundance of yellow rattle *Rhinanthus minor*. Unit 1 can also be seen on the left hand side.



**Photograph 3:** A drift of southern marsh-orchids in unit 1.



**Photograph 4:** Lowland neutral grassland in unit 3; one of the former agriculturally improved meadows now supporting a range of grassland species.



**Photograph 5:** View across unit 5 with Great burnet *Sanguisorba officinalis* clearly present.



**Photograph 6:** Long standing arable reversion to MG5 grassland in unit 6.

