December 2025

Grassland restoration in the Malvern Hills National Landscape

Introduction

Permanent grassland is the most common land cover type found in the Malvern Hills National Landscape, accounting for just over 36% of the area (see https://www.malvernhills-nl.org.uk/wp-content/uploads/2025/09/250910-Table-Data-release-dates-and-definitions.pdf). Whilst the National Landscape is fortunate to retain a significant amount of unimproved or species-rich grassland[1] the majority of the grassland has been 'improved' for agriculture in previous decades, for example, through the input of herbicides and artificial fertilisers or through ploughing and reseeding, interventions which were often backed by public policy and funding at the time. The charity Plantlife states that 97% of all lowland hay meadow[2] – one form of permanent grassland - has disappeared from England in the last 100 years as a result. These various changes have led to the creation and subsequent management of a very large number of species-poor grasslands containing swards dominated by a small number of grass varieties which are faster-growing and/or more protein-rich, such as rye. Such grasslands can be good for fattening livestock but are often poor at providing the multiple benefits associated with species-rich grasslands, which include supporting biodiversity, improving soil structure, absorbing water and storing carbon.

In 2021 when we consulted with landowners and managers over the development of a Nature Recovery Plan for the Malvern Hills National Landscape it was clear that the vast majority did not favour 'rewilding' or the wholesale change of the landscapes that they have grown to cherish. However, many of them were enthusiastic about improving the habitats which currently exist. Discussions revealed that many owners and managers of grassland had ceased to apply inputs such as artificial fertilisers many years and sometimes even decades previously. However, surveys on the ground revealed that this had only gone so far to restoring grasslands which had been previously damaged. The recolonisation of native grasses and flowering plants under such a regime is often very, very slow. More dynamic interventions were needed to achieve significant restoration aims and so we began work to improve the value of grasslands for nature and their resilience to the changing climate whilst retaining them as a valued part of the farmed landscape. The Malvern Hills National Landscape Team was very ably supported in this work by the Countryside greenspace team | Worcestershire County Council and more recently by Welcome to Herefordshire Meadows - Herefordshire Meadows.

[1] A species-rich grassland is one which contains many species of grass and flowering plant. One definition of species-rich is at least 15 plant species per square metre and more than 30% cover of wildflowers and sedges (excluding white clover, creeping buttercup and injurious weeds)

[2] Technically lowland meadow is classified as "MG5" grassland in the National Vegetation Community (NVC) meaning they contain grasses such as Crested Dog's Tail (Cynosurus cristatus), Yorkshire Fog (Holcus lanatus) and Cocksfoot (Dactylis glomerata)and wildflowers such as Meadow Vetchling (Lathyrus pratensis), Birdsfoot Trefoil (Lotus corniculatus) and Knapweed (Cenaurea nigra).

Process

There are a number of steps involved in restoring species-richness to grasslands once full support from landowners and managers is in place. Table 1 contains a summary of work within the MHNL along with some locally specific comments. More detailed information on the process is available from organisations such as https://www.herefordshiremeadows.org.uk/

Table 1

No.	Step	Comments
1.	Conduct a baseline botanical survey of grassland to be restored (recipient site)	It's important not to attempt to restore sites which already have a good botanical diversity and abundance. Sites which have significant populations of injurious weeds present should also be avoided
2.	Conduct a soil survey of the recipient site.	Most wildflower and grass seed will not flourish in soils which have high levels of nutrients such as phosphorous or potassium so understanding soil chemistry is crucial.
3.	Undertake any necessary heritage assessments and gain permission for work as appropriate.	Some sites may have particular heritage interest, for example, ridge and furrow or below ground archaeology.
4.	Buy or harvest wildflower and grass seed.	In 2021 the Malvern Hills NL Team bought a brush seed harvester to collect seed from existing species-rich grasslands (donor sites) in the local area. Ideally surveys should reveal a similarity in the key characteristics of the soils between donor and recipient sites. Seed harvested from local donor sites in the summer is stored and dried until it is needed.
5.	Prepare the recipient site by grass cutting/mowing and/or hard grazing followed by power harrowing which aims to create approximately 50% bare earth.	
6.	Broadcast wildflower and grass seed at a rate of approximately 1:3. Tread or roll the seed in afterwards.	This usually takes place in September/early October. Seed can be broadcast by hand or through a mechanical spinner which has been designed or adapted for this purpose.
7.	Ensure that grass regrowth is controlled prior to the first Spring after seed-sowing, this is usually done by grazing in the winter.	Good communication and buy-in from the local grazier is essential to achieving this.
8.	Continue long term management by cutting for hay each summer, ideally as late as possible, and then aftermath grazing.	

9.	Conduct a post-restoration botanical survey of the recipient site in the years after.	This can be done as soon as 1 year after restoration in order to track change but if resources are limited it is suggested that 3 years after might be preferable. The post -restoration survey should use the same methodology as for the baseline survey.

Achievements to date

Almost 550 ha of grassland across 53 land holdings in the MHNL were surveyed between 2020 and 2025.

The first meadow in the National Landscape was restored at Old Colwall, Herefordshire in September 2021.

Between 2021 and 2025 just over 50ha of grassland have been restored across 20 different land holdings, largely funded by Farming in Protected Landscapes – Malvern Hills National Landscape.

Botanical surveys conducted 3 years after restoration have shown that some sites have gone from species-poor to species-rich (of sufficient quality to be added to the Priority Habitat Inventory for lowland meadows) within this time period. See https://naturalengland-defra.opendata.arcgis.com/datasets/Defra::priority-habitats-inventory-england/about

Soil survey

Power harrowing soil prior to reseeding

Seed spreading by hand

Aftermath grazing in Autumn/Winter

A lowland meadow in flower