



Avon
Wildlife Trust

How to Manage Grasslands for Wildlife

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 Heritage
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MY WILD CITY

About My Wild City

'Imagine a city where whole streets and communities get together to transform gardens and open spaces. From planting for pollinators in our gardens to influencing the space around us, we can all help to make a city better for people and wildlife.

With support from The National Lottery Heritage Fund, we've been working over three years with Bristol City Council to focus on eight Local Wildlife Sites across the city, making improvements for wildlife and visitors, and encouraging everyone to get involved in enjoying and caring for these special wild spaces.'

Each Summer in 2022 and 2023 we met with local residents, groups, council ground staff and land carers at Stockwood Open Space, a special My Wild City site which is a rich mosaic of grasslands, ponds, orchard, scrub and ancient woodland. Guided by ecologist Neill Talbot from Avellana Ecology, we toured the site investigating the varied grasslands, the species hidden within them, and how they are managed for wildlife. We also discussed how we could all take action to protect, enhance and restore wildflower and grass areas in our own patch.

This document is a summary of the 'Managing Grasslands for Wildlife' training session and a series of next steps and resources to help you to create, enhance and maintain your own meadow.





Why manage grasslands for wildlife?

Grasslands are wonderful places for wildlife: take a walk through the My Wild City sites in Summer and you'll be rewarded with swathes of wildflowers and grasses, bees, butterflies, beetles, grasshoppers and birds such as green woodpeckers feeding on towering anthills. Even in the winter months, these grasslands can provide hunting grounds for birds of prey and hibernation sites for insects and reptiles. Travelling through the species rich grasslands in Stockwood Open Space in June and July is a feast for the senses - marbled white butterflies dance around the froths of wild marjoram, yellow-rattle and field scabious, burnet moths cling onto purple knapweed heads, and several orchid species pop up sporadically in the small glades. If you're very lucky you might even spot a purple hairstreak butterfly cruising the oak canopy which surrounds one of the smaller species-rich grassland pockets. Look closely to spot delicate flowers like grass vetchling, gently leaning amongst the sward. Visit at night on a summer's evening and look out for the glow of a bioluminescent bottomed beetle – as female glow-worms light up the edges of the grasslands.



Burnet moth on creeping thistle



Thick-legged flower beetle
on greater knapweed



Common blue butterfly on
Bird's-foot trefoil



Female glow-worm



Black-and-yellow longhorn beetle
on hedge bindweed



Common Spotted Orchid

Photo credits in order from left to right: C. Mark Veale, C. Mark Veale, C. Mark Veale, C. Andy Parsons, C. Mark Veale, C. Teresa Chard all taken at Stockwood Open Space





Meadows rich in wild plants have often evolved over hundreds of years of careful and deliberate management, as they were grazed by livestock or cut for hay for winter fodder. And even further back in time (10,000 years ago) grasslands would have been grazed by large herbivores such as aurochs - extinct large wild cattle and heavyweight grazers of vegetation, they prevented landscapes from becoming intensely forested. Sadly, many such meadows and pastures have been lost in the last century as they ceased to be so important to the agricultural economy; sites have been lost to ploughing for arable use, to development and to agricultural improvements as fields are re-seeded to produce better hay, grazing or silage. The biggest single cause of loss may well be neglect, as sites ceased to be grazed or cut for hay and have become covered in scrub and woodland. The care of meadows and pastures is one of the biggest conservation priorities for lowland England and all of the threats to grassland sites, especially neglect, continue to affect grasslands in our region.

A natural solution to the climate crisis - UK grasslands store two billion tonnes of carbon in their soils, but this is vulnerable to disturbance. Between 1990-2006, conversion from grassland to arable production (such as ploughing to grow crops) released 14 million tonnes of CO₂. Species-rich grasslands are huge carbon stores and when managed carefully they lock in carbon and boost biodiversity.

Grasslands have a huge potential for locking up carbon, not only due to the plants we can see on the surface, but also due to the relationships between the plants, fungi, bacteria and many other species which help enrich the soil with carbon.

“The plants in a typical meadow can support nearly 1,400 species of invertebrates, that’s an army of bugs, beetles, flies, spiders, grasshoppers, crickets, butterflies and moths.”

“At peak nectar flow at the beginning of August, the flowers in a three-acre meadow can produce nearly 6kg of nectar sugar per day, enough to feed over half a million bees.”

Plantlife - ‘The Good Meadow Guide’





My Wild City - Managing Grasslands for Wildlife at Stockwood Open Space. 2023

Why manage grasslands?

Left alone, grasslands will eventually turn to scrub and woodland, a process known as ecological succession. Grasslands need regular management to survive and to maintain their open character and species diversity. The timing and extent of management activities such as grazing and cutting will determine the character of the sward and how effective the grassland is as a habitat for small mammals, invertebrates and other wildlife. Management will always be specific to a site and seeking advice is recommended to ensure the very best for wildlife. Grasslands can be managed as traditional hay meadows with cutting and grazing by cutting only, or as traditional pasture, rough grassland, wet grassland and improved grassland for hay and silage.

How to manage grasslands for wildlife?

Caring for wildlife meadows often requires careful thought and planning; with this in mind, we recommend that owners and managers seek advice on management, especially for unimproved grasslands. Management usually involves implementing a cutting or grazing regime geared towards retaining the species found in the sward, but it may also be necessary to control the development of scrub on the site. Information sheets available at the end of this tool kit cover meadow management and weed control, but here are few do's and don'ts.





Do

- Seek advice on appropriate management
- Remove cuttings after mowing – leaving them in situ causes enrichment of the soil, which will discourage wildflowers. Use hay cutting equipment, flail collectors, forage harvesters or strimmers rather than rotary cutters or “toppers”. Smaller compartments can be cut by scythe.
- If your field has short turf – leave a bit uncut or ungrazed for a summer and see what comes up, especially if the site has not been treated with fertilisers or herbicides for years.
- Avoid overgrazing – this can lead to poaching and bare ground that will just encourage thistles, nettles and docks to become established.
- Avoid undergrazing – this leads to dominance by more vigorous grasses at the expense of more fragile plants and can allow scrub or bramble to develop.

Don't

- Plant trees or shrubs – these will shade out wildflowers
- Create new ponds or scrapes without advice on a good location
- Clean out old ditches without advice – water levels have changed in recent decades and draining a site could have a detrimental effect on wild plants.
- Apply fertilisers or broad-spectrum herbicides





How are grasslands categorised?

Meadows and pastures in our region basically fall into 3 broad categories:

Unimproved grasslands are the richest grasslands for wildlife and have been managed in a traditional way for decades. They can contain 50 or more different plant species, including some that are scarce; for neutral (those not on very acidic soil or chalky soil) look out for: ox eye daisy, cowslip, ragged robin, dyer's greenweed, orchids, sweet vernal grass, crested dog's tail, lady's bedstraw and bulbous buttercup. Also look for ant hills.

Semi-improved grasslands may have been ploughed, sometimes many years ago or had a few applications of artificial fertiliser. However, they still retain some wildflowers and native grasses; for neutral meadows this might include: knapweed, yarrow, germander speedwell and Yorkshire fog grass.

Improved grasslands contain very few native grasses and occasionally some robust wildflowers, such as creeping or meadow buttercups and hogweed. These meadows can be enhanced for wildlife.

Semi-improved grasslands can be enhanced for wildlife, often with only minor changes to the current management. We recommend that advice is sought before enhancing these grasslands, as many will be of value for wildlife in their current state and drastic changes should be avoided.

Improved grasslands can also be enhanced for wildlife. Wildflower meadows can be created on former arable land, although this is a long process and sometimes difficult owing to the build up of nutrients in the soil, left from when the site was used to grow crops.

The aims of grassland management should prevent the growth or spread of scrub, to remove the year's growth or grass and to control rank areas (such as large patches of nettles) or undesirable species, such as bracken. Managing meadows allows wildflower plants to flower and set seed and provides capacity for invertebrates or birds to breed, feed and overwinter; bumblebees and butterflies will benefit from leaving areas uncut. Uncut areas should be rotated annually to prevent rank grass or scrub.

This text has been adapted from Norfolk Wildlife Trust's Magical Meadows Project - Action for grasslands for wildlife. Thank you to NWT. Find out more [here](#).





My Wild City grassland management examples

During the My Wild City project we have enhanced grasslands across the sites, whether by working with contractors to cut large grassland compartments such as the wet meadows at Lawrence Weston Moor, working with the Wild City Action Team volunteers, a.k.a The Wild Cats to scythe meadows, or by using a bar mower - also known as a sickle bar mower or power scythe. This is a heavy duty cutter with two reciprocating blades, ideal for cutting wild flower meadows. Some people prefer using a traditional scythe to enjoy working amongst nature's sounds without the fumes and noise from powered machinery. Scything and making hay is part of our cultural heritage and there are scything competitions across the country up to this day. In February 2023 we welcomed some new nature conservation recruits to Hengrove Mounds - goats!



Goats at Hengrove Mounds, C. Georgie Cath

The mounds is a fantastic site for wildflowers and rare bees - the doughnut shape of the site, created by capped landfill, provides wildflowers with the low-nutrient space they need to thrive. Over recent years scrub and secondary woodland developed over parts of the site, encroaching into the species-rich grassland, by allowing animals' natural grazing habits to manage the area, Bristol City Council, with the help of Street Goat and the local community, should be able to maintain this land for the benefit of wildlife through natural processes, without having to resort to expensive and environmentally costly machinery.

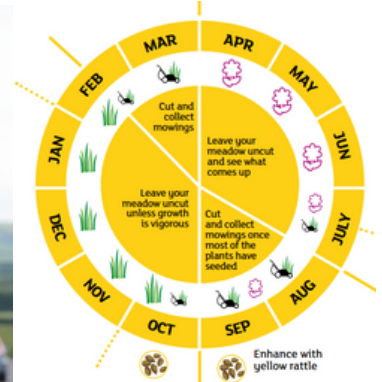
The goat's hardy nature and ability to forage in scrubby bramble patches make them excellent conservation grazing animals. Nibbling the bramble patches will help limit the spread of scrub across the site, enabling wildflowers to flourish and the wildlife that depends on these flowers and grasses to thrive. Goats are also able to climb low branches of trees, by chomping new shoots and leaves they clip trees such as hawthorn into dense balls, which provide brilliant habitats for nesting birds.





Next Steps - Links and Resources

There is a wealth of information on the [Plantlife](#) website, here are some of their handy guides:



[Download the good meadow guide here](#)

[Download the plants of wildflower meadows here](#)

[Download the good verge guide here](#)

[Download how to make or enhance a wildflower meadow here](#)

Other useful websites:

FSC www.field-studies-council.org - great for ID sheets!

BSBI Plant Crib <https://bsbi.org/identification>

How to use Wildflower keys Facebook group

<https://www.facebook.com/groups/Howtouseyourwildflowerfieldguide>

The Scythe Association <http://scytheassociation.org/>

Downloadable conservation grazing tool kit - [Choosing livestock for conservation grazing Grassland creation, restoration and management video](#) with Somerset Wildlife Trust

Books:

The Wildflower Key by Francis Rose – updated edition revised by Clare O'Reilly from 2006 recommended

Domino Guide – Wild Flowers of Britain and Ireland by Fitter, Fitter and Blamey (includes grasses, sedges, rushes and ferns)

Pocket Guide to Wildflower Families by Faith Anstey

Wildflower Flowcharts – Species ID the easy way by Faith Anstey

A Field Guide to Grasses, Sedges and Rushes by Dominic Price (good beginners photo guide)

Wild Guide - Britain's habitats – A field guide to the wildlife habitats of Great Britain and Ireland by Lake, Liley, Still and Swash