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MANAGING URBAN GREEN SPACE FOR WILDLIFE

# Creating and managing in flower-rich grassland in parks and green spaces



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## INTRODUCTION

**Public parks and open green spaces provide a breadth of opportunities to vary the ways in which their grasslands may be managed for public and wildlife benefit. Even small modifications in a mowing regime to reduce the number of cuts per year will benefit wildlife. However, more potential can be realised by creating flower-rich grasslands that are both**

**interesting and aesthetically pleasing and of even greater wildlife value.**

Some urban and suburban sites may already have remnant areas of semi-improved, flower-rich grassland. These should be managed sympathetically and appropriately for their floristic content and invertebrate value. For most sites, this is not the case and this is where

green space managers should seek opportunities to enhance their parklands with suitable grassland flower mixes.

A number of techniques and options are available to create flower-rich grassland. With no two sites being identical in their soils and local climatic conditions, some flexibility may be required in the establishment and management described.

## BENEFITS FOR WILDLIFE AND PEOPLE

Long grass in its own right is beneficial for many insects, and for those such as moths and butterflies it is a requisite for completing life cycles, providing refuge for eggs, larvae and pupae to develop and overwinter. It is also used by other wildlife, such as mammals, reptiles and amphibians, to forage for insects and seeds, and as shelter and cover when moving through a site. Where the sward is generally of an open nature, birds will forage in long grass for seeds and insects.

Grass that includes a mix of wild flowers considerably increases the numbers and species of insects using it as a source of pollen and nectar,

as well as somewhere to breed and shelter. Compared to long grass, flower-rich swards contain greater numbers of the insects preferentially taken by birds.

Establishment of flower-rich grasslands benefit from community engagement from the outset. Interpretation is critical to explain what you want to do and its value to people and wildlife. Once established, a well managed flower meadow is generally well received by the public. Table 1 compares the benefits for insects and birds between long grass and wildflower meadows, and the likely public reaction.

**Table 1. Comparison of benefits between long grass and hay meadows.**

Habitat	Benefits		Public reaction
	invertebrates	birds	
Long grass	High	<ul style="list-style-type: none"> <li>Indirect benefits high (through increasing insect numbers)</li> <li>Direct use low, but access may be improved by mowing paths through the sward</li> </ul>	Mixed. Improved with interpretation
Wildflower meadow	Very high	<ul style="list-style-type: none"> <li>Indirect benefits high (through increasing insect numbers and diversity)</li> <li>Direct use low, but bird access may be improved by mowing paths through the sward</li> </ul>	Mixed in year one. Improved with interpretation. Then positive

Source: feedback from park users to partners during the RSPB London House Sparrow Parks project

## HOW CAN I CREATE AND MANAGE A MEADOW FOR WILDLIFE?

It is important from the outset to consult park users about your intentions and explain the long term benefits. Events, talks and presentations, written interpretation both on-site and through newsletters, information sheets and the Internet are among the many tools available to get your messages across.

Ensure the intended site does not already contain a species-rich sward which would respond better to a change in the mowing regime.

Decide on your objectives. In most urban situations this is likely to be something of high aesthetic appearance that increases the wildlife value rapidly rather than attempt to create a semi-natural grassland community which can take several years to achieve. The majority of sites will have moderate to high soil fertility which will limit plant species establishment and diversity.

### CULTIVATION

Autumn preparation and sowing (August–September) is best to avoid the impact of drought and weed competition on germination common with a spring sowing.

Time and effort invested in preparation can minimise competition by weeds growing from root fragments or soil seed banks. A number of preparation techniques have been used, neither being wrong and each have their



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own pros and cons. Those used have included harrowing, rotovating, soil inversion, turf stripping and seeding onto bare ground previously treated with herbicide.

With the additional constraints of soil nutrients and the financial and mechanical resources at the disposal of the site manager, it is impossible to recommend a definitive technique and any one or variant of may be applied on a site-by-site basis.

For more information on techniques, refer to the publication 'Wildflower works' on the Landlife website at [www.wildflower.org.uk/](http://www.wildflower.org.uk/) or visit the 'Restoration library' at [www.floralocale.org](http://www.floralocale.org).

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### SEEDING

It is important to select a reputable supplier who can provide native seeds of local or regional provenance, that are not cultivars (e.g. bird's-foot-trefoil is commonly supplied as a cultivar). The mix should be suitable for the soil type and tailored to suit specific requirements. At [www.floralocale.org](http://www.floralocale.org) one can find a list of approved suppliers.

If your objectives are for an aesthetic appearance that is generally good for wildlife and you are constrained by

budget, choose a mix containing species resilient to a range of conditions and reduce the proportion of grasses in the mix. The species list in Table 2 with its modified proportion of grasses and forbs may establish well in urban situations with relatively high soil fertility. Variation to the mix may be required, depending on soil type and other local site conditions. Additional flower species may be sown in subsequent years to enhance diversity.

Low sowing rates ranging from 2–4 gm/m<sup>2</sup> help establishment of the flowering plants. The upper end of the range may be better in urban areas where seed predation can be high. Mixing the seed with an inert material, such as dry sand, aids even sowing. It may help to divide the mix in half and make two separate sowings, the second at right angles to the first.

Do not increase the sowing rate as this only increases the proportion of grasses with negative effect on the slower growing flowering plants. You MUST avoid the use of any kind of fertiliser as this promotes competition from dominating plants and grasses.

Once seeded, the plot should be rolled. This maximises seed contact with the soil, enabling moisture to be taken up by the germinating seeds. Many native species require light for germination; therefore avoid raking seed into the soil.



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**Table 2. An example urban grassland wildflower mix.**

%	Latin name	Common name	Mix type
10	<i>Agrostis capillaris</i>	Common Bent	EG1 grass
50	<i>Cynosurus cristatus</i>	Crested Dog's-tail	
35	<i>Festuca rubra</i>	Slender-creeping Red-fescue	
5	<i>Phleum bertolonii</i>	Smaller Cat's-tail	
2.5	<i>Achillea millefolium</i>	Yarrow	EM1F forbs
2.5	<i>Centaurea nigra</i>	Common Knapweed	
12.5	<i>Galium verum</i>	Lady's Bedstraw	
10	<i>Leucanthemum vulgare</i>	Oxeye Daisy	
1	<i>Lotus corniculatus</i>	Common Bird's-foot-trefoil	
5	<i>Plantago lanceolata</i>	Ribwort Plantain	
15	<i>Poterium sanguisorba</i>	Salad Burnet	
15	<i>Ranunculus acris</i>	Meadow Buttercup	
4	<i>Rumex acetosa</i>	Common Sorrel	
10	<i>Silene dioica</i>	Red Champion	
10	<i>Silene vulgaris</i>	Bladder Champion	
0.5	<i>Trifolium pratense</i>	Wild Red Clover	

The above example is derived by combining the Emorsgate EG1 grass and EM1F forbs seed mixes.

## MANAGEMENT

In the first year, frequent mowing to a height of 35–50 mm, reduces competition and weed seed production, helping the slower growing target plants to establish. Regular cutting should be sufficient to disperse clippings. If cut less frequently, clippings need removing to avoid smothering the developing plants.

From the second year, the meadow can be allowed to grow, flower and be cut in late summer as hay. Cut to between 50 and 150 mm. The timing of the cut can vary and will be guided by your aims and objectives. An early cut in July can affect insects. It may also prematurely remove some of the aesthetic appeal. Conversely, cutting in August and September, while better for insects and birds,

encourages dominance by stronger plants, reducing plant diversity and nectar resource.

Ideally cut over a protracted period between July and September, alternating where you start each year. Alternatively, vary the cutting time each year. This adds structural and species diversity and increases visual interest. Where possible, allow the hay to dry and turn at least once, before it is removed.

A local farmer may cut and remove hay if it is good quality and not contaminated by undesirable plants or extraneous materials. Failing that, remove the cuttings and compost or, at discrete locations around the site, heap into mounds ('habitat piles') which may be used by

small mammals, reptiles and amphibians.

After the hay cut, mow as required until late autumn. Cut no shorter than 100 to 150 mm and remove clippings. Re-commence mowing as necessary throughout April, initially no shorter than 100 to 150 mm so as not to kill wintering insects. Finish cutting no later than early May to allow flowers to start developing.

Where possible, leaving a proportion of the sward uncut through winter will benefit invertebrates. Ideally such areas will be around the edges of a site, adjacent to shrubs or beneath trees.

Following the hay cut, a short period of grazing would help diversify the structure and open

gaps in the grass to promote germination. In most urban areas this will not be possible. To replicate this, and prevent the grass from becoming matted, harrowing or scarifying can have the same effect. After scarifying, additional flower seeds may be sown to diversify the species mix.

Where meadows abut paths, a 1 to 1.5 m strip may be kept mown, helping people understand the area has not been neglected. Similarly, a path mown through the meadow itself helps people get closer to nature and prevents trampled 'desire lines'. Adjust the route of the path each year. Relax mowing the path through June to allow flowering. These areas provide additional structure and somewhere for wildlife to bask and feed.

## KEY POINTS

- Flower-rich grassland enhances the visual appeal and value of green spaces for people and wildlife, compared to conventionally mown or long grass.
- In most urban scenarios, the likely priority with limited budgets will be a rapid aesthetic appeal, attractive to people and wildlife. Careful choice of seed mixes can help achieve this objective.
- Autumn sowing gives the best results, especially where effort is put into seed bed preparation and regular mowing is undertaken during the first year of establishment.
- Timing of the hay cut can have negative and beneficial impacts on the wildlife, plants and visual appeal. Vary the cutting times annually or cut over a protracted period to minimise the effects.
- Maintain a mown path through the meadow in summer and retain a proportion of long grass over winter.
- Do not add any kind of fertiliser.

### See also the RSPB Advisory Sheet on:

- *Managing urban green space for wildlife* (A2 folded poster sheet)
- *Managing urban green space for wildlife – formal and informal grassland*
- *Managing urban green space for wildlife – formal and informal tree, shrub and flower borders*

- *Managing urban green space for wildlife – wildlife seed mixes for parks and gardens*
- *Managing urban green space for wildlife – House Sparrow*
- *Building space for wildlife* (A2 folded poster sheet RSPB-Kier).



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