



Create new areas of flower-rich grassland

Spaces that have very low value for nature, such as concrete, asphalt, and bare soil or rubble can be transformed into flower-rich grasslands. Turning grey to green is an amazing step in bringing nature into your site.

You may also have other habitats you wish to change into grassland – perhaps ‘weedy’ patches of tall plants like nettles or willowherb. All habitats have some value, and a range of different habitats on a site is best for wildlife, so think carefully before changing an existing natural habitat into grassland.

What do we need to do?

- Identify a suitable area to convert to flower-rich grassland
- Remove hard surfacing, if needed
- Prepare your ground
- Choose and buy grassland seeds and/or plug plants
- Sow the seed or plant plug plants
- Care for your newly planted seeds and plants until they are established
- Don't mow from April to August

Cost

£-£££

Season

Autumn

Impact for nature

High

Key vocabulary

Grey spaces

Spaces that have no, or very few, plants e.g. playgrounds, paths, car parks, tarmac and asphalt

Green spaces

Spaces that have some plants already

Plug plants

Small young plants grown in very small plant pots, ready to be planted direct into the soil.

Perennial

Plants that come back year after year

Annual

Plants that grow from seed and only last one year



Here's some more detailed advice on each of those steps

Choose the area you want to enhance

Areas you may wish to enhance could include areas of hard standing, gravel/rubble, bare soil or 'weedy' patches of tall plants like thistles or willowherbs.

You probably don't want to convert an existing high quality habitat such as woodland or flower borders into grassland – all habitats have their own value for nature so make a judgement on whether conversion to flower-rich grassland would enhance your site for nature and provide something different to what's already on offer. A diversity of habitats across a site is best for nature. Do a wildlife survey such as the [Pollinator Count](#) to understand what's currently using the area before you decide to change it.

Select an area that's in the sun for at least part of the day, as grasslands will not thrive in shaded areas. Use the [Shade Mapping](#) activity to involve learners in examining and mapping areas of shade on your site.

When looking at potential sites, consider how much effort it will take to prepare the ground, and ensure you have the time and resources to do it.

Get creative and involve learners in designing the space.



Prepare the ground

Hard standing e.g. concrete or asphalt

Creating grassland on areas that were previously covered by concrete, paving, gravel or other human-made surfaces enhances climate resilience as well as biodiversity. Removing paving unlocks previously inaccessible habitat, expanding natural areas and improving carbon storage and rainwater drainage to mitigate flooding.

You must check that there are no pipes or underground utilities beneath the area. Consult your site / building manager and check any site plans before starting. To save on waste removal costs and encourage reuse of materials on site, you may be able to use some of the old paving material to bring structural diversity to your new grassland (a bit like a rockery area amongst the grass). You are likely to need a contractor to help with this.

More guidance on removing paving can be found here: [Grey to Green Guide \(PDF 14.4MB\)](#)

Once paving is removed, the soil will need some care before its ready to be planted. It will be highly compacted, so dig it over to a depth of at least 25cm. For small sites, hand tools or garden forks will do the job. For larger areas, you may need professional help from a gardening company.

Ensure the surface is fine and crumbly, raked over and watered, ready for planting.



Other habitats such as bare soil or 'weedy' areas

'Weeds' are often flowering plants and of high value to insects, so try to keep these but you can enhance the diversity and visual appeal of the area by sowing flowering grassland seed amongst it.

If you wish to check your soil type before buying plants or seed, this [RHS guide](#) shows you how. You can then buy a seed mix that's tailored for your soil type.

Seed needs to be sown onto bare ground, or the seedlings will fail due to competition with established plants. Plug plants can be planted amongst existing plants, but again will be more successful if you clear a small area for them first.

If the soil is very fertile, you may want to remove some topsoil or dig in some sand and gravel. Dig over the ground to a depth of 10cm to reduce compaction. For small areas, hand tools or garden forks will do the job. For larger areas, you may need professional help from a gardening company.

Ensure the bare soil surface is fine and crumbly, raked over and watered, ready for planting.

If you have space, you can keep any removed topsoil on site and create a grassy bank ideal for butterflies and moths. More information on how to create a butterfly bank can be found in this [Butterfly Conservation guide \(PDF 12.7MB\)](#).

Grassland in a container

If your site is very small and you can't remove paving in order to create grassland, making a new flower-rich grassland in a raised bed is a compact way to add colour and greenery to your site. Raised beds will need more maintenance than planting in the ground, and you'll need the biggest raised bed you can fit in your space.

Flower-rich grasslands flourish in soil with low nutrient levels. So rather than filling the raised beds with compost, you will need a low-fertility topsoil. Adding sand or gravel will help dry grassland plants to grow. Sow seed or plant up in Autumn, as raised beds are prone to drying out during summer and the plants will need time to establish.

Watering during dry spells is vital; whenever possible, rely on collected rainwater instead of mains water. Springtime weeding may be needed to remove larger plants such as docks and thistles that could overwhelm small spaces.



Choosing plants

Seeds are cheaper but take longer to establish so you may wish to do a combination of sowing seed for fast growing species and annuals and plug plants for slower growing species.

Grassland seed mixes

The simplest option is to choose a seed mix that's suitable for all soil types. If you've tested your soil, you can then buy a seed mix that's suited to the type of soil you have.

Searching online for 'perennial native grassland mixes' (seed, plug plants or turf) will bring up a range of suppliers who offer general purpose 'native flowering grassland' or 'native meadow' seed mixes as well as mixes tailored to different soil types and various combinations of grasses and wildflowers. Look for seed of wild species, not garden varieties.

The [Plantlife Meadows' Hub](#) gives advice on buying native grassland seed and lists of suitable suppliers. Although brightly coloured flowers are appealing, a flowering native grassland mix with lots of perennial plants (ones that come back every year) will be much easier to maintain for the long-term than annual wildflowers that will need re-sowing every year. In small spaces, prioritise seed mixes with fine-leaved grasses like Red Fescue (*Festuca rubra*) and Common Bent Grass (*Agrostis capillaris*) over larger species.



You can also encourage local native plants by spreading 'green hay' - fresh clippings from a local grassland collected in late summer.

Plug plants

Buy plants that are grown in peat-free compost, and look for plants of wild, native species, not garden varieties. Plants grown in 9cm diameter pots are harder to find and more expensive than small 'plug' plants but are easier to establish. If you have the space, time and equipment, you could also involve learners in growing their own plants from seed.



Sowing seed

Scatter 1-2 g of seed per square metre over the bare soil. You can mix the seeds with sand to make this easier. Don't cover it but press it in with a roller or by treading/walking on it. This is a great group activity for a class! Autumn is the best time to sow, so the seed is watered naturally by the rain and you don't need to do anything more.

Planting container-grown plants

Dig a hole to match the shape of the root ball, but slightly deeper, so that the base of the shoot is slightly buried. Creating a cup-shaped depression around the plant to hold water will mean less watering is needed. Autumn is the best time to plant.

Looking after your newly created grassland

Once sown, seed can usually be left to grow. Keep a watch on plug plants, and water if they are wilting. If you have animals such as rabbits, pigeons or pheasants on your site that might eat them you may have to temporarily protect them with wire cages.

Add Yellow-rattle

Once your grassland is established and plenty of grass is growing, plant Yellow-rattle (*Rhinanthus minor*), a pretty plant known as the 'meadow-maker'. It weakens dominant grass species and promotes a more diverse plant community. Yellow-rattle is semi-parasitic, feeding on grass roots, so it requires established grass to thrive. Yellow-rattle seed must be sown when it is fresh, where there is grass already growing, and in the Autumn as it needs a period of cold weather to stimulate it to grow. You can read more on the [Plantlife website](#).





Mowing

Leave the grass to grow long from April to August. From late August through to October, mow the grass once and remove the cuttings (the cut grass) a few days later. By removing the cuttings, you will reduce the fertility of the soil which is key to encouraging a wider variety of grassland plants to grow. Leaving it for a few days will allow any seeds and invertebrates in the cuttings to escape. You can mow again through the winter and early spring if you wish but do the final mow of the spring in March.



Connection to surrounding habitats

Grasslands can be created in the smallest spaces and can form useful corridors or stepping stones for wild species to move between natural areas, even if you only have space for a thin strip of grass. Connecting your new grassland to existing natural areas will help species to move in and use the area.

Success in an education setting

Mowing and collecting clippings is the only maintenance needed, so this is a really easy option. Make sure to involve your grounds maintenance teams, so they know you are deliberately growing the grass long - the last thing you want is your area to be accidentally mown! This fits in with the Nature Park whole school approach.

Adding signage can also help to remind grounds staff that you are letting the area grow for nature and communicates your goals to parents and others too – involve learners in designing and creating this signage.

Grasslands thrive when they are not walked on too much. Plant grasses and wildflowers adjacent to paths so they are easy to access and observe. In larger areas, consider mowing paths in curved lines or interesting patterns through the long grass, to provide access for exploration and play whilst leaving other areas un-trampled. You could put a low fence or rope around the outside of the area if you want to indicate that people should not enter a particular area.



Measure and celebrate your achievements!

- Mapping your site before you change a habitat means you'll be able to visualise and monitor the changes you've made.
- Study what insects you are currently hosting with the Pollinator Count survey before you enhance your grassland.
- Add your new area of long grass onto the Nature Park map using the Mapping Change tool. You can upload before and after photos and monitor the impact you are achieving for nature. Your new grassland will then be part of nationwide science research into nature recovery. This tool enables you to see a timeline of change on your site and to start a wildlife survey relevant to the habitat you've created.
- Do the Pollinator Count again once you've grown your grass long, to see the incredible impact you've made.



Health and safety

If you would like to know about any potential health risks associated with garden plants, please see the RHS guide. If you are in a very rural area or have natural habitats nearby that might be home to livestock or deer, there may be ticks present. If so, please read this UK Health Security Agency article for advice.

What costs are involved?

The main cost is preparing the ground, especially if you are removing paving / hard standing where you will probably need to bring in a contractor to do this for you. There may also be a cost associated with removing topsoil if you are working on a large area and/or need a contractor to help. The plants themselves are low cost – seed can be as little as £10 for 20m². Plug plants cost £0.80p-£1.50 per plug plant (the more you buy, the cheaper it is) and these can often only be purchased in the spring. If you really can't wait to see the results, preseeded wildflower lawns or rolls are also available (but are much more expensive at £500 or more to cover 20m² and it must be laid very soon after delivery)!

This guidance has been put together by reviewing academic research and best practice for grassland creation and management, and making sure it is functional for educational settings.



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