

Hanleyhabitats

Guidelines for creating and maintaining wildflower verges



Contents

Introduction	2
Why Grow Wildflowers on Verges?	3
Guiding Principles	4
How to grow wildflowers	5
Management methods	6
Recommended Annual Management for a Wildflower Verge	
– A Yearly Guide	9
Working Safely	10
Useful Websites and Documents	11



Introduction

This guide is a summary based on Plantlife's *Best Practice Guide for Managing Grassland Road Verges* and is designed to help anyone involved with maintaining verges to identify, adopt and manage their verges for the benefit of wildlife and people, with a specific focus on wildflowers.

Why Grow Wildflowers on Verges?



Since the 1930s, 97% of our wildflower-rich grasslands have been wiped out due to modern farming practices and urban development. With less agricultural demand on verges than meadows they can be a **vital refuge** for wildlife and provide a much-needed wildlife habitat. Across the UK verges are home to over 700 species of wildflower, including many familiar wildflowers that are now becoming threatened.

Road verges also provide **wildlife corridors**, linking habitats and allowing wildlife to re-colonise landscapes fragmented by modern agriculture. In this way, they facilitate the migration of species and increasing their resilience to climate change. Cars and other vehicles are also hugely important in dispersal, carrying plant seeds and smaller invertebrates across Britain in their slipstreams.

Road verges are one of the **most viewed habitats in the country**, giving millions of people direct contact with the changing seasons and colours of the countryside every day. For many, the flower-filled verges seen on their daily commute or trip to the shops are their only contact with nature.

Insects and verges

There are more than a 20,000 species of insect across the UK, many of which depend on wildflower verges. Among these there are at least 1,500 species of pollinating insects, ranging from honeybees to wild bumble bees, moths, butterflies, wasps, beetles and hoverflies.

Many of these species are in decline due to habitat loss and this is potentially devastating for food production; three-quarters of the crop types we produce for food depend on insect pollination – that's equivalent to every third mouthful that we eat. In this context, allowing our verges to support insect populations is not just for their benefit, but a simple and effective way to benefit us too.



Guiding principles

Creating wildflower habitats does not mean stopping management of verges. In fact, **regular management is essential**. Without regular management, most grassland flowers rapidly disappear as verges become dominated by coarse vegetation and ultimately turn into scrub and woodland. Changes in vegetation can become apparent after just one or two years without grass being cut.



Grassy verges also become rapidly depleted of flowering plant species following poor management, so the **number one priority is to get the management right**. This will allow flowers to return over time as they will spread naturally from neighbouring areas. Many perennial flowers, such as cowslips and knapweeds, will spread quickly once allowed to flower and set seed. Over time, good management will encourage the

appearance of many species at very little extra cost.

Timing is everything: cutting too early and too frequently swiftly eliminates many species, reducing diversity and the value of the road verge.

- ⇒ Cutting after flowers have set seed in late summer allows visually striking displays of wildflowers and a rich source of pollen and nectar for pollinators. Plants need to complete their full life cycle – i.e. to grow, flower and set seed – in order to thrive. Generally, flowers take roughly 6 to 8 weeks from flowering to successfully set and shed viable seed. Cutting plants when flowering or shortly afterward deprives invertebrates of nectar and pollen and stops plants reproducing from seed.
- ⇒ Too frequent and early cutting can quickly eliminate some important grassland species, such as yellow rattle.

Remove cuttings: although time-consuming, removal of grass clippings is the ideal way to maintain the most species-rich vegetation on verges. It mimics traditional hay meadow practices, curbing the growth of vigorous plants that smother their neighbours, and can gradually reduce soil nutrient levels.

It also removes the thatch of dead vegetation, exposing underlying soils and encouraging germination from seed. In places where the vegetation is naturally thin, such as on a steep slope, a cut alone may be enough to maintain the open conditions needed for seedling establishment.

Create a variety of habitats: different plants, insects and animals require different ecological conditions. Verges with a good diversity of open habitat, scrub and woodland conditions will favour the greatest number of species, and a wide diversity of long and short grass will benefit both plants and invertebrates. Leaving a strip of longer grass at the back of the verge can encourage wildlife, as long as it's also cut every 2-3 years.

How to grow wildflowers

The key factor required for wildflowers is maintaining low soil nutrients (ie. low levels of phosphates and nitrogen). Fertile soils favour lush green grass, dock and nettle; these are fast growing tall plants that out compete the delicate wildflowers for space and light. They prevent pollinators from finding the flowers and will eventually swamp them entirely.

Wildflowers thrive in low nutrient soils where grasses, nettles and dock grow at a much slower rate.

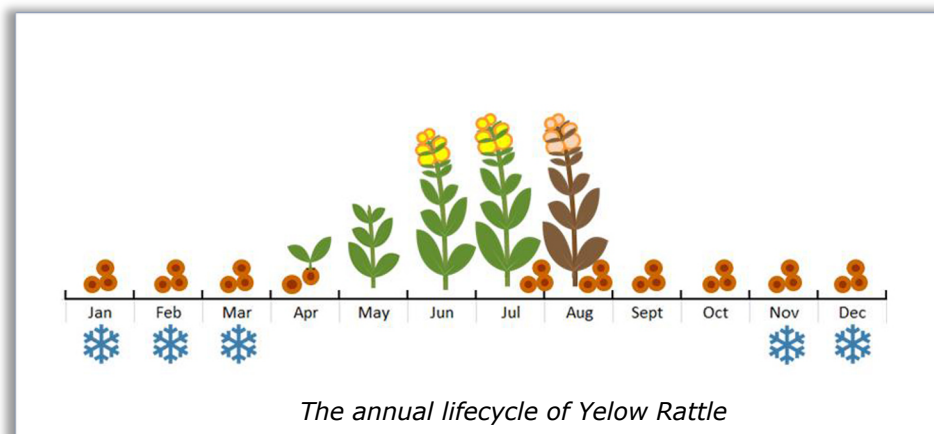
Fertile soil = monocultures of strong grass

Low nutrient soil = wildflowers and biodiversity



Yellow Rattle (*Rhinanthus minor*) is annual plant that plays an important role in wildflower establishment as it suppresses the growth of competitive grasses. In early spring the seeds germinate and grow quickly. As their roots develop underground, they seek out the roots of plants growing nearby, especially grasses. Once contact is made the yellow rattle draws water and nutrients from them, suppressing the growth of grasses by as much as 60%. In the resulting space, other flowers have room to grow.

Seed collected from local sources can be hand sown in late summer after the first grass cut. Once a verge has been inoculated with yellow rattle, it will spread rapidly as long as verges remain uncut until seed has been set. The flowers of yellow rattle are pollinated by large bees (especially bumblebees) and are followed by large, inflated seed pods. When these ripen and dry, the seed inside rattles around; in former times, farmers used this sound as their cue to cut the hay.



Management Methods

There are three main approaches to creating and maintaining good wildflower habitats; which is appropriate depends on the condition of the verge.

Method 1:

Working to enhance wildflowers already on site

This is the desirable approach to shaping a wildflower verge as it tends to be less labour intensive and works with the natural flora already in place. It can often throw up pleasant surprises that lay dormant in the soil.

Use this approach if:

- ⇒ there are already a mix of plants (not just grasses);
- ⇒ you are planning to enhance an existing wildflower verge and plan to get it back into good management.

What to do:

In the autumn (mid to late September up until the end of December), check to see that the majority of seeds have matured and fallen. Then cut the vegetation at ground level. The idea is to remove all the cuttings which you may do at the same time as cutting or leave to dry out for a day or two to make the work lighter (you are mimicking a hay meadow cut).

If you have done an early autumn cut, you can continue to cut the verge until the end of December, ensure all arisings are removed.

Method 2:

Lowering soil nutrients to give wildflowers a chance in the future

This approach is useful if you have large areas to manage and you want to enhance the verge for wildflowers. It requires a long-term outlook as it works over several years.

Use this approach if:

- ⇒ the verges have vigorous grass growth;
- ⇒ the verges have been cut regularly for many years and the cuttings left to rot into the ground;
- ⇒ there isn't much evidence at present of plants other than grass.

What to do:

Cut the grass verges and collect the arisings at least three times during the growing season in the first year (possibly two years on very fertile soils). Ideally cut in April, July and September or once the grass reaches a height of 15-20cm. In

the long run this significantly reduces the fertility of the soil so slows the grass growth rate and stunts the grass height, this in turn allows wildflowers (often there is seed in the soil already) to grow.

Additional seed can be sown after the first year as it is less likely to be outcompeted by the stronger grasses the following spring and therefore this gives a better success rate.

Method 3

Creating a wildflower verge from scratch

Use this approach if:

- ⇒ the verge shows little sign of diversity i.e. the area is pure grass
- ⇒ you need quick results or want to create a good seed supply to be used elsewhere the following year;
- ⇒ it is a new verge on a building site or new road.

If there really is nothing in the verge to work with and seeding is the only option, then timing and ground preparation is essential. Use a native seed mix – artificial seed mixes which include non-native species look pretty but aren't the best for our wildlife. Often the resulting verge vegetation bears little resemblance to naturally occurring communities, has a uniform structure that results from the even distribution of species within sown mixes, and ultimately does not reflect the local character of vegetation that develops naturally.

Do bear in mind that establishing wildflowers from scratch is notoriously difficult and prone to failure. This is because the soil is often too rich for the seed, or there is not enough bare earth on which the seeds can germinate. Even if the soil conditions are right, birds steal the seed, or it can get washed away in heavy rain. If there are weeds in the soil these are likely to grow away more vigorously than the wildflower seeds and will out compete them for light and space.

A better option is to use either green hay or seed collected from local verges or meadows when cut. This way the local character and genetic diversity of verges can be preserved, and more species will become established more quickly than if using a commercial seed mixture.

What to do:

Seed sowing is most successful when carried out in the autumn (September – October), or in early spring, in March.

Cut the grass back as low as you can and rake the ground to break up the soil and bring bare patches to the surface. If the soil is deep or the grass thick, you may decide to turf the grass and remove it, then break up the soil ready for sowing.

Mix the wildflower seed with coarse sand, then scatter over the area, once on the ground lightly tread in the seed. You can also plant bulbs or plug plants.

Once flowering is over wait until the seed has set and falls to the ground ready for next year, usually this will be late summer/ early autumn, then cutting and removing the arisings.

Other considerations

Verge hedgerows, scrub and woodland

On larger verges, leave areas of woodland and scrub at the back of the verge, as these will support birds and other wildlife. These should be managed by cutting on a rotation of up to 10 years.

Hedgerows also provide important shelter and should be maintained on a rotational basis. Remove any cut material should from the verge.

Herbicides

Wherever possible, don't use herbicides. They can have a role to play, however, in the control of invasive species and notifiable weeds, and for treating cut scrub and tree stumps where alternative techniques are ineffective.

Ditches

These are important components of the verge, providing both essential drainage and opportunities for wildlife. They should be maintained regularly; putting excavated spoil on the verge is generally not a problem and can be beneficial, providing bare soil for germination

Cutting Methods

Wildflower verges can become quite tall and bulky will need to be cut down before mowing, ideally using a hand scythe or strimmer/motorised 'Allen' scythe. They are easy to use and have a reciprocating knife blade which cuts all vegetation just above ground level.

Once cut the grass is then raked up and taken away. This leaves a stubble which can then be mown close with a rotary mower to tidy up the sward.



Annual Management: A Yearly Guide

Management Option	Jan	Feb	Mar	April	May	June	July	Aug	Sep	Oct	Nov	Dec
If only one cut possible								full cut				
Two cuts	Summer and autumn cutting							partial cut		full cut		
	Late winter and autumn cutting		full cut						full cut			
	Dry verges (short vegetation)	regular cuts								regular cuts		
	Species-rich verges with mown edge		1m strip							full cut		

January to March

If the verge has spring flowers do not cut during this period. If the verge is a summer flowering verge you can cut and remove arisings up until March.

April – September

Spring flowering verges can be cut, and arisings removed, from July onwards. Ensure seed has set (ripened and fallen), the exact timing of the first cut depends on the year and the weather. You might need a scythe or a strimmer for the first cut, but after that a standard mower will be fine.

If you have both spring and summer flowers on the verge or you are unsure when to cut, wait until October.

Do not cut summer flowering verges until October – avoid the desire to ‘tidy up’ the long straggly vegetation. If it is a hot year and the seed has set, then a late September cut is possible. Patience will be rewarded with flowers in subsequent years.

October to the end December

Cut and remove all arisings. This can be done just once or several times during these months. This basic regime of cutting and removing the grass mimics the traditional pattern of hay-cutting followed by grazing, to which many meadow flowers are adapted.

If cuttings are left to rot the debris will fertilise the ground, encouraging tough grasses to take over at the expense of the wildflowers you are trying to encourage. Grass clippings left lying will also smother germinating wildflower seeds that are trying to get a foothold during the autumn.

Large verges

For visibility and safety reasons, during February and March mow and regularly maintain a strip short grass of up to 1m around the edge of the verge. Removing the arisings is preferable. This also allows grass at the back of the verge to grow longer, providing a diversity of habitat that is especially important for invertebrates.

Small Verges

On small verges of a width less than 1m, leave some sections uncut, for example 100m sections every 200m. In both cases, cut the full width of the verge during September and October.

Safety Guidelines for Working on Verges

Do's	Don'ts
<p>Where a verge is generally of sufficient width with occasional thinning, cease working / surveying while navigating narrow sections and only do so during times of adequate visibility and low traffic flows.</p> <p>A high visibility vest must be worn whilst carrying out the survey.</p> <p>Work in small groups if possible. If lone working, ensure someone knows where you are and when you are due to return.</p> <p>Be especially careful on busy roads, especially A-roads. When walking along the carriageway adhere to the Highway Code; typically walking on the right-hand-side to face on-coming traffic but adapting your road position as necessary to factor in bends and other situations.</p> <p>Be alert to other road users and their needs</p> <p>Take special care when working adjacent to deep water or steep slopes.</p> <p>Take a charged mobile phone and basic first aid kit with you.</p>	<p>Do not work on a verge where you are unable to keep the minimum safety distance from the carriageway- 1.2m (for roads >40mph) or 0.5m (for roads <40mph)</p> <p>Do not work on the verge in poor weather or at dusk or in the dark.</p> <p>Avoid working in large groups on verges of busy roads. It can be distracting for drivers to see lots of people in high visibility clothing. The crossings of major high-speed (>50mph) roads, such as key 'A' roads and dual carriageways is not recommended especially where traffic counts are in excess of 20 cars per minute.</p> <p>When crossing any road, volunteers are called upon to use their judgement and risk assesses the situation to ensure the safety of themselves and others. If there is maintenance work or activity, decide whether it is safe for you to continue working that day.</p> <p>Flying debris from moving machinery and noise can be particularly hazardous. Keep at least 15m from any vegetation strimming and wait for the operator to see you and stop before getting any nearer.</p> <p>Avoid working alongside roads that have been recently surfaced (with loose chippings)</p>

Useful Websites and Documents




Plantlife: Good Verge Guide: www.plantlife.org.uk/uk/our-work/publications/good-verge-guide-different-approach-managing-our-waysides-and-verges

<https://www.plantlife.org.uk/uk/our-work/publications/road-verge-management-guide>

Wildlife Trust : <https://www.wildlifetrusts.org/wildlife/managing-land-wildlife/how-manage-road-verge-wildlife>

Where to find wildflower seed

If you can find a local supply of seed, it is more likely to be a success. Here are a few options for wildflower seed:

-  Find a local landowner and collect seed from their land.
-  Grow Wild www.growwilduk.com – a communities wildflower seed project run by Kew
-  Meadow Mania www.meadowmania.co.uk – native wildflower seeds and plugs plant supplier