



Life on the Verge
Biosphere

Wildflower Verges Getting Started



Life on the Verge – Biosphere project 2016-2020

www.tarkacountrytrust.org.uk



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Introduction

This guide is based on observation and learning over the three years of the Life on the Verge – Biosphere project (2016 – 2019), working with communities across the North Devon Biosphere Reserve. It is a summary built on the questions asked and information required by those involved with the project, enabling communities, Parish Councils and landowners to identify, adopt and manage their verges for the benefit of wildlife and people, with a specific focus on wildflowers.



Map of North Devon's Biosphere Reserve



Why Grow Wildflowers On The Verges?

Since the Second World War, 97% of the UK's wildflower-rich grasslands have been wiped out due to modern farming practices and urban development. During this time the number of pollinator species including the wild bee has fallen.



With less agricultural demand on verges than the meadows they can be a vital refuge for British wildlife, from insects to reptiles, mammals and birds. Verges provide a valuable space that can be put to use, creating much needed wildlife habitat. There are nearly ½ million kilometres of rural road verge in the UK, this is equal to ½ of our remaining flower-rich grasslands and meadows. Across the UK verges are home to over 700 species of wild flower and are home to many familiar wild flowers that are now becoming threatened.

Verges are also important to for people:

For the 23 million people commuting to work by road every day, road verges can be their only daily contact with nature. The procession of colour through the year keeps us in touch with the changing seasons and provides us with a sense of place.

Have you noticed that insects are disappearing?

Have you noticed there are very few insects stuck on the car windscreens after a drive in the country, compared with a few years ago? The population of insects is collapsing right in front of our eyes.

The decline is a worrying trend as insects are the cornerstone of all terrestrial ecosystems, they are a vital part of the food chains for both wildlife and humans. The knock-on effects of the insect population collapse, flows up through the food chain, wiping out higher animals. And without healthy ecosystems, there is no clean air and water. Insects are indispensable to our food production, they are also critical for creating the beauty of our parks, gardens and countryside, which would otherwise be drab places.



Insects and verges:

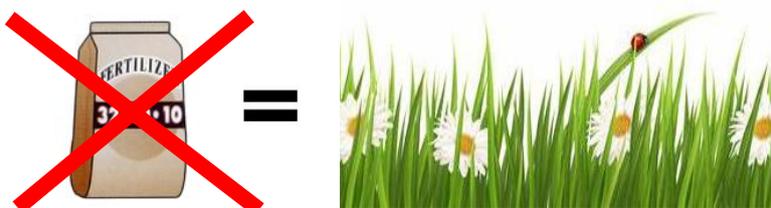
There are more than a 20,000 species of insect across the UK, many of which would benefit from the natural habitat of a wildflower verge. Among these insects there are at least 1,500 species of pollinating insects, they range from honey bees to wild bumble bees, moths, butterflies, wasps, beetles and hoverflies, just to mention a few. A good verge will supply a diverse source of nectar and pollen from the first **celandines** in February to the last **Devil's-bit scabious** in September. **Bird's-foot trefoil** alone is a food plant for over 130 species of invertebrate.



Creating a Wildflower Verge

The key factor required for wildflowers is maintaining low soil nutrients (ie. low levels of phosphates and nitrogen), this is the opposite to growing cereals, silage or vegetable crops. 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 doc grow at a much slower rate.

Fertile soil = monocultures of strong grass



Low nutrient soil = wildflowers and biodiversity

Before starting to create a wildflower verge:

1. **Choosing the best location.**
2. **Find out who owns the verge and who (if anyone) cuts it,** talk to them about what management has taken place in the past (if any) and seek permission to work on the land. You will need to agree with the land owner what you plan to do, when and how. They may be keen to help. If it is Parish Council land you may need to talk to grass cutting contractors or local people who cut the grass. Many verges are owned by Devon County Council, contact the Neighbourhood Highway Officer to find out: customer@devon.gov.uk or Tel: 0345 1551004. They will inform you if the verge is already managed to maintain visibility or access.
3. **Check the verge is safe to work on** – preferably it will be next to a paved area or on a 30mph road with good visibility.



Northam Special Verge – the pavement and mown verge create a safe gap between the volunteers and the carriageway.



CAUTION!

You must keep a minimum distance from the carriageway when working on roadside verges:

Roads with a 40mph and over speed limit = you must stay 1.2m from the edge of the carriageway.

Roads with a less than 40mph speed limit = you must stay 0.5m from the edge of the carriageway.

Safety Summary - Working On Verges.

For further details and to carryout Devon County Council's Highways Safety eLearning course, visit the Life on the Verge project: www.tarkacountrytrust.org.uk



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.

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)

A high visibility vest must be worn whilst carrying out the survey

Do not work on the verge in poor weather or at dusk or in the dark.

Work in small groups if possible. If lone working, ensure someone knows where you are and when you are due to return

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

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

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. 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.

Be alert to other road users and their needs

If there is maintenance work or activity, decide whether it is safe for you to continue working that day.

Take special care when working adjacent to deep water or steep slopes.

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.

Take a charged mobile phone and basic first aid kit with you.

Avoid working alongside roads that have been recently surfaced (with loose chippings)

4. Decide which of the following three approaches you intend to follow...

Approach 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)
- If 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 intention 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. You may choose to create a compost area on site, under a hedge or nearby trees. (ensure cuttings will not blow into the road or block visibility).

Approach 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
- If there isn't much evidence at present of plants other than grass.

What to do:

This approach requires grass verges to be cut and arisings collected 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.

If desired seed could also be sown after the first year as they are less likely to be outcompeted by the stronger grasses the following spring and therefore this gives a better success rate.



Approach 3 - Creating a wildflower verge from scratch

Often people feel the need to sow seed for quick results. This method does come with risk, occasionally seed does not germinate or it gets eaten by hungry birds! Try to find a local seed source/supplier as the success rate will be greatly improved.

Use this approach if:

- The verge shows little sign of diversity ie the area is pure grass
- If you want quick results, or want to create a good seed supply to be used elsewhere the following year.
- If it is a new verge on a building site or new road.

What to do:

Ground preparation and time of year are essential for this approach to work.

Seed sowing is most successful when carried out in the autumn (September – October) Or in early spring, 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 your British wildflower seed mix 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.



Georgeham wildflower seed sowing event

Where to Acquire 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.
- Devon Wildlife Trust, Working Wetlands project www.devonwildlifetrust.org
- Grow Wild www.growwilduk.com – a communities wildflower seed project run by Kew
- Goren Farm www.goren.co.uk – a Devon native wildflower seed supplier
- Meadow Mania www.meadowmania.co.uk – native wildflower seeds and plugs plant supplier

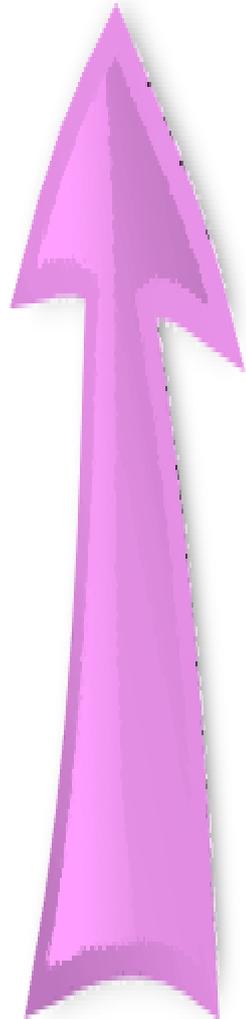
Maintenance of Verges

There are several methods used to manage verges around the Biosphere area, some provide better results for wildflowers and biodiversity than others. Sadly, some are detrimental to biodiversity and are even responsible for the disappearance of the wildflowers. The table summarises the methods observed in the area:



Verge maintenance methods - good or bad?

Good for
wildflowers



Bad for
wildflowers



Methods used:	What is involved?	How does it affect the flowers?
Autumn cut and remove arisings.	This is the perfect management for an established wildflower verge. It mimics the management of traditional hay meadows where the vegetation is cut in the late summer and then removed. The area can be cut or grazed until the end of the year with no harm to spring flowers.	This method keeps soil nutrients low which favours wildflowers and prevents strong grasses, bramble and scrub taking over.
Autumn cut and leave the arisings	This has worked on some established wildflower verges around the Biosphere – it is usually used when farmers are responsible for cutting the verge, they cut hedges and verges in the autumn.	This method is favoured over not cutting at all as it prevents bramble and saplings from taking over the verges which would prevent the growth of many meadow flowers. Over time soil nutrients will increase with this method, favouring spring and woodland fringe species.
Regular cut and remove arisings	Mowing and removal of cuttings can be advantageous to low growing species such as clover and daisy. Arisings must be removed. This method is also useful in the early stages of trying to establish a wildflower verge or around the edges/on paths of wildflower verges.	By removing the cuttings, soil nutrients become lower over time (this mimics grazing). A lower soil nutrient allows wildflowers to compete with the grasses and other plants such as dock and nettle.
Leave uncut for several years	No intervention will allow nature to follow its natural succession. Bramble and scrub will take over and eventually trees will form.	Initially leaving a verge to its own devices might feel like a good thing to do, there's no doubt that some wildlife will favour the scrub and bramble. However, the rich diverse wildflower verges which host many species essential for pollinators that support the food chain, will soon be lost indefinitely if the area is not managed.
Cut several times a year and leave arisings on the ground	Cutting and dropping the arisings is a method used from many years – since the invention of the motorised mower. Many councils adopt this method to keep the vegetation short. It is often seen in villages and towns where people want to trim the grass on a regular basis.	By leaving the cuttings on the ground they rot into the soil, increasing soil nutrients (it feeds the ground). This in turn speeds up the growth of the grass and favours the stronger species. These grasses out compete the wildflowers, over time the flowers will be lost altogether. Leaving the cuttings on the ground also smothers seedlings and flowers, preventing pollinators reaching them and preventing seed forming.

Recommended Annual Management for a Wildflower Verge A Yearly Guide:

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

Monitor and record which species are present. Submit your records to the Life on the Verge – Biosphere project coordinator or Devon Biodiversity Records Centre.

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 it is a small enough patch you might even get by with a pair of garden shears.

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. Patients 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.



Survey volunteers

Key factors:

- **Only cut once the majority of the seed has set**
- **Always remove arisings after cutting**



Autumn work party – cutting and removing arisings, Hatherleigh

Cost and Savings

It has been shown in other areas of the country that by managing a verge for wildlife it can reduce cutting costs as ultimately the verges require fewer visits from contractors or ground maintenance staff.

Changing Mind-Sets

Since the mechanical mower and the relative ease of cutting grass people have become accustomed to 'tidy' looking verges. You may come up against those who like to see everything manicured. To help make the wildflower verge appear to be 'in control' and therefore more acceptable to those who wish to see tidy edges it is advisable to regularly cut a strip (up to a 1m) around the edge of ,or through, the verge. Again, removing the arisings is preferable. It may also be necessary for highways to cut a 1m strip for visibility and safety reasons.

Create a mini verge in your garden

Even the smallest patch of lawn left uncut will benefit wildlife. A strip along the edge of the garden or a 1m² patch can produce fantastic results.

Many lawns still hold the original plants that once grew there as a meadow, very few have encountered weed killers or fertilisers. The so called 'weeds' if considered differently, will become pretty wildflowers benefiting many pollinating insects. Daisies, speedwell, self-heal, buttercups and clovers are often found in our lawns but rarely allowed to flower and set seed.



To make a mini verge in your garden:

Choose a section of lawn and leave it to its own devices during spring and summer, use the management guidance above to decide when you might cut your mini verge. Remove and compost all the cuttings when you do cut the mini verge.

Useful Websites and Documents

Life on the Verge – Biosphere: www.tarkacountrytrust.org.uk/love-b

Life on the Verge in Devon (DCC) : www.devon.gov.uk/environment/wildlife/managing-verges-for-wildlife

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



Project funders and partner organisations 2016-2020



Tarka Country Trust – www.tarkacountrytrust.org.uk

Host to the Life on the Verge – Biosphere project this not for profit organisation has primary objectives to preserve for the benefit of the public the natural features of northern Devon and to advance the education of the public about conservation and the protection of the environment in northern Devon.



Heritage Lottery Fund (HLF) - www.hlf.org.uk.

Life on the Verge - Biosphere was supported with a grant from the Heritage Lottery Fund 2016 -2019. Thanks to National Lottery players, we have been able to help communities to manage roadside verges for wildlife.



Garfield Weston Foundation – www.garfieldweston.org

Life on the Verge – Biosphere has been supported with a grant from the Garfield Weston Foundation, 2019 - 2020. This grant has been used to support community groups in the area to manage their verges for wildlife.



North Devon AONB - northdevon-aonb.org.uk

This project has been part funded by a grant from the Sustainable Development Fund (SDF) which supports projects that bring environmental, social and economic benefits to the North Devon Coast Areas of Outstanding Natural Beauty (AONB).



North Devon's Biosphere Reserve - www.northdevonbiosphere.org.uk

This first new-style UNESCO Biosphere Reserve exists to inspire a positive future by connecting people and nature. The Biosphere in north Devon is a special place with wonderful wildlife and landscapes, and an economy and social structure still strongly linked to the environment but it is more than that. It is a community of people working together to champion life and the environment, empower people to get involved and explore new ways of living that address local and global challenges.



Devon County Council - www.devon.gov.uk

As project partners they provide support through Local Highways Officers by giving permission for communities to manage verge according to plans, approve verge selection, and provide safety guidance and training for roadside work.



Devon Biodiversity Records Centre (DBRC) - www.dbrc.org.uk

As project partners DBRC collect, manage and make available records of wildlife. They have developed and provided the survey training used during this project and stored on a central database all survey results submitted by volunteers.

