

On the verge: a quiet roadside revolution is boosting wildflowers

Projects to reduce grass cutting and increase the diversity of plants and wildlife along Britain's roads are having dramatic results

by Patrick Greenfield

Main image: Traffic passing pyramidal orchids and other wildflowers along the A354, near Weymouth, Dorset. Photograph: www.pqpictures.co.uk/Alamy

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roadsides.

“[The machinery] wouldn't go through it,” says Nicholson, recalling the overspilling verges.

But the chaos of that summer would prove an unlikely turning point for wildflowers and biodiversity in the English county. Vast stretches of roadside have been transformed. Where there were thick clumps of grass, there are low-growing wildflowers such as black medic, birds-foot trefoil and red clover. The verges are cut two or three times a year, not 12, saving the council tens of thousands of pounds. Butterflies and other invertebrates have returned in their droves.

The reasons behind this unlikely mini-revolution for biodiversity are simple. When the worst of the 2014 growing season was over, ecologist Philip Sterling was brought in to oversee the council's service team. He and Nicholson, Dorset council's countryside and greenspace manager, set about applying the centuries-old principles of hay making to the management of verges, cul-de-sacs and urban grass patches across the county. It is a practice that has now been adopted by other counties in the UK, including in Lincolnshire.



In Sandford, Wareham, wildflowers are part of an initiative to provide an attractive habitat for butterflies and insects, while helping to cut the costs of roadside mowing. Photograph: Eva Worobiec/Alamy

The process is simple: cut infrequently, ideally, just twice a year in spring and then late summer once plants have bloomed and seeded; remove the clippings to gradually reduce the fertility of the soil and prevent a buildup of mulch; repeat, wait, and enjoy the resurgent wildlife and flowers.

“It will not fail,” says Sterling, who, as programme manager for charity Butterfly Conservation’s building sites for butterflies project, has taken his roadside revolution around the country to any local authority that will listen. “As fertility declines in a soil, biodiversity increases. At first that seems a little counterintuitive because you imagine the more you pour into a soil, the more plants that can grow. That’s not how it works in the natural system. In more fertile systems, a few species dominate and they swamp and smother everything else.”



Wildflowers on roadsides are a haven for butterflies and insects. Photograph: Lincolnshire Wildlife Trust

Grass cuttings are almost always left where they fall along the thousands of miles of road verges that are maintained by law in the UK. Over time, the resulting mulch increases the

fertility of the soil, meaning the grass grows with increasing vigour and needs to be cut more frequently. The cut and collect method breaks the cycle.

The before and after photos of otherwise ordinary roadsides across Dorset show the dramatic effects of Nicholson and Sterling's maintenance regime, as suffocated seed banks have been allowed to spring back into life. Yarrow and yellow flashes of lady's bedstraw punctuate roadsides and roundabouts throughout summer. Magenta pyramidal orchids linger outside a branch of Tesco.

The cost savings of managing roadsides this way are equally stunning for the council's accounting department. The annual budget for highway verge management dropped from nearly £1m to £650k in five years under the cut and collect, low fertility approach. London boroughs, councils from across the country and European governments are paying attention.

“For the last 40 years we've been doing entirely the wrong thing,” says Sterling, impatient with the possibilities for roadsides across the UK and beyond.



Wildflower meadows, ancient British ecosystems that are crucial for wildlife, thrived for centuries with the help of traditional farming methods and livestock husbandry, but have largely vanished in the post-war era. Industrialised use of nitrogen fertilisers and poor land management have diminished the crucial wildlife habitat by 97% since the 1930s. But road verges have become an unlikely source of hope.

Last September, the wildlife charity Plantlife produced new guidelines for transforming the management of the UK's roadsides that incorporate some of Nicholson and Sterling's practices. Crucially, the plan to turn verges into wildlife corridors is also backed by the country's highways authorities and construction and services businesses such as Kier and Skanska.

If adopted nationwide, an area the size of Nottinghamshire could see 700 species of wildflowers thriving along the road network in Great Britain, equivalent to around 40% of the government's land restoration targets for 2040. A petition backing Plantlife's campaign has more than 85,000 signatures.



Botanical surveyors inspect roadside verges in Lincolnshire. Photograph: Matthew Roberts/Lincolnshire Wildlife Trust

“It’s about bringing colour back to the countryside and to our roadsides. If we have that colour there, then we’ll have lots of other wildlife there as well,” says Plantlife botanist Trevor Dines.

“Plants are the powerhouses of our food chains. They are the only things that are collecting energy from the sun and pumping it into the food chain. Without that diversity of plants there, you don’t get the diversity of other wildlife,” he adds.

One 4.5-mile stretch in Dorset shows what is possible: the Weymouth relief road. Opened in 2011 ahead of sailing events at the Olympics, the seven hectares (17 acres) of verges that line one of the busiest roads in the county have become a crucial site for biodiversity.

Yellow clusters of kidney vetch, the only wildflower where the small blue, Britain’s smallest butterfly, will lay its eggs, dominate the roadsides in the spring and summer. But the medicinal pea-like flowers, whose seeds can cost more than £2,000 a kilo from commercial providers, are not an extravagant token of the region’s Olympic legacy.

“I harvested the seeds for that myself,” says Sterling, recounting the painstaking task of growing enough kidney vetch at recycling centres and flood bunds since the early 90s. “Now look how much there is.”

Since the road opened, more than half of the species of butterfly known to inhabit Britain have been recorded on the grasslands lining the road, including the Adonis blue and Chalkhill blue. Sterling has 10kg of kidney vetch seed ready in his office for when the Stonehenge tunnel gets approval .



A Holly blue butterfly rests on a yellow kidney vetch. Photograph: MusicalJoe/Getty Images/iStockphoto

“If you think about the species of butterfly that Weymouth relief road supports on seven hectares, what would it be like on a hundred hectares?” says Nicholson excitedly.

“There’s a huge opportunity here in the UK to change what we’ve currently got,” says Sterling. “We can put back much of what we’ve lost. It’s not impossible to do. We haven’t gone beyond that tipping point where there is so little left that there’s no point.

“If half the species of butterfly in the UK can turn up on a road verge created less than 10 years ago, then we do have the capabilities to do this, don’t we?”

But such enthusiasm for Britain’s wildflowers are not apparent everywhere. Opposite a burger van in a ditch near Ely lies one of England’s rarest plants, the only known native fenland ragwort plant.

The critically endangered wildflower, which is supposedly protected by being on a Site of Special Scientific Interest, is surrounded by faded McDonald’s packaging and beer tins. The plant was only discovered when a French botanist from a nearby Cambridge research centre identified it while relieving himself in a layby in the 1960s, so the story goes.

“It was the first sighting of fen ragwort since the mid to late 19th century, so getting on for 100 years, more or less,” says Tim Pankhurst, Plantlife’s conservation manager for the east of England, as lorries storm pass on the road that links Ely and Newmarket.

“That’s it for fen ragwort. This is the sole native site in Britain. A lonely roadside ditch at the back of a verge near Ely.”

The tall plant is a relic of how the fens, in Cambridgeshire, Lincolnshire and Norfolk, used to be: a vast expanse of marshland full of native birds and wildlife. Fen ragwort would have been torn up and moved around by flood waters, but since the region was drained in the 18th century, there’s now only one known native site.

Restoring wildflower meadows in the agricultural heartlands of the UK by creating a network of wildlife corridors has become a particular focus for conservationists. The widest road verges in the country are in East Anglia, on the former drovers’ roads once used to transport livestock to London and other major cities. Small stretches in Lincolnshire have been managed as roadside nature reserves since the 1960s.



Seated around a table in a rural pub near Spalding in Lincolnshire is an unlikely trio of wildflower revolutionaries taking Plantlife's maintenance guidelines one step further. Derek Scott, an agricultural equipment manufacturer, Henry Dymoke, a local farmer and landowner, and Mark Schofield, a conservation officer at Lincolnshire Wildlife Trust, have developed a machine that could spread the cut and collect method around the country.

Scott's company manufactures industry-standard machinery for vegetable washing, which is exported to every major agricultural economy. In 2018, Schofield convinced him to apply his engineering prowess to a pioneering tender by Lincolnshire County Council to create machinery that would allow the local authority to use the cut and collect method on hundreds of miles of road in the county.

Crucially, the machinery had to be able to deliver the cuttings to an anaerobic digestion plant that could convert the grass into biogas, which is found at Dymoke's farm, Scrivelsby Estate.

The Vergenair 5.5 verge harvesting system is a JCB tractor, an Italian suction flail and a Larrington trailer. The bespoke machinery trundles along the roadsides, cutting the grass and sucking it into the trailer which can take up to 10,000kg to the anaerobic digestion plant.

"We're replacing a natural process. We see fossil records of the auroch, the ancestor of the modern-day cow in cave paintings. Predators would drive them on from place to place, they'd have routes to get to water and they'd be moving from one bit of grazing to another bit of grazing," says Schofield.



A suction flail is used to cut grass verges in Lincolnshire. Photograph: Lincolnshire Wildlife Trust

“Hay cutting is our replacement for the wild auroch, the tarpan, the horse, the red deer. You can’t unleash the auroch on the A158 but you can have an artificial beast that’s a lot more manageable.”

The contraption allows the council to use the cut and collect, low fertility method across Lincolnshire and could go nationwide. But the project has come to an abrupt halt. The Environment Agency (EA) did not renew the permit for Lincolnshire to continue the trial due to concerns about waste codes and regulations.

Because roadside verges are not being managed as a crop, they are formally classified as waste. To continue the project, Dymoke would have to purchase expensive new permits from the EA and invest thousands of pounds in upgrades to the anaerobic digestion plants.

For now, Dorset and Lincolnshire lead an increasing number of councils in the quest to turn UK roadsides into the backbone of a nature recovery network where native plants and wildlife are free to re-emerge.

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