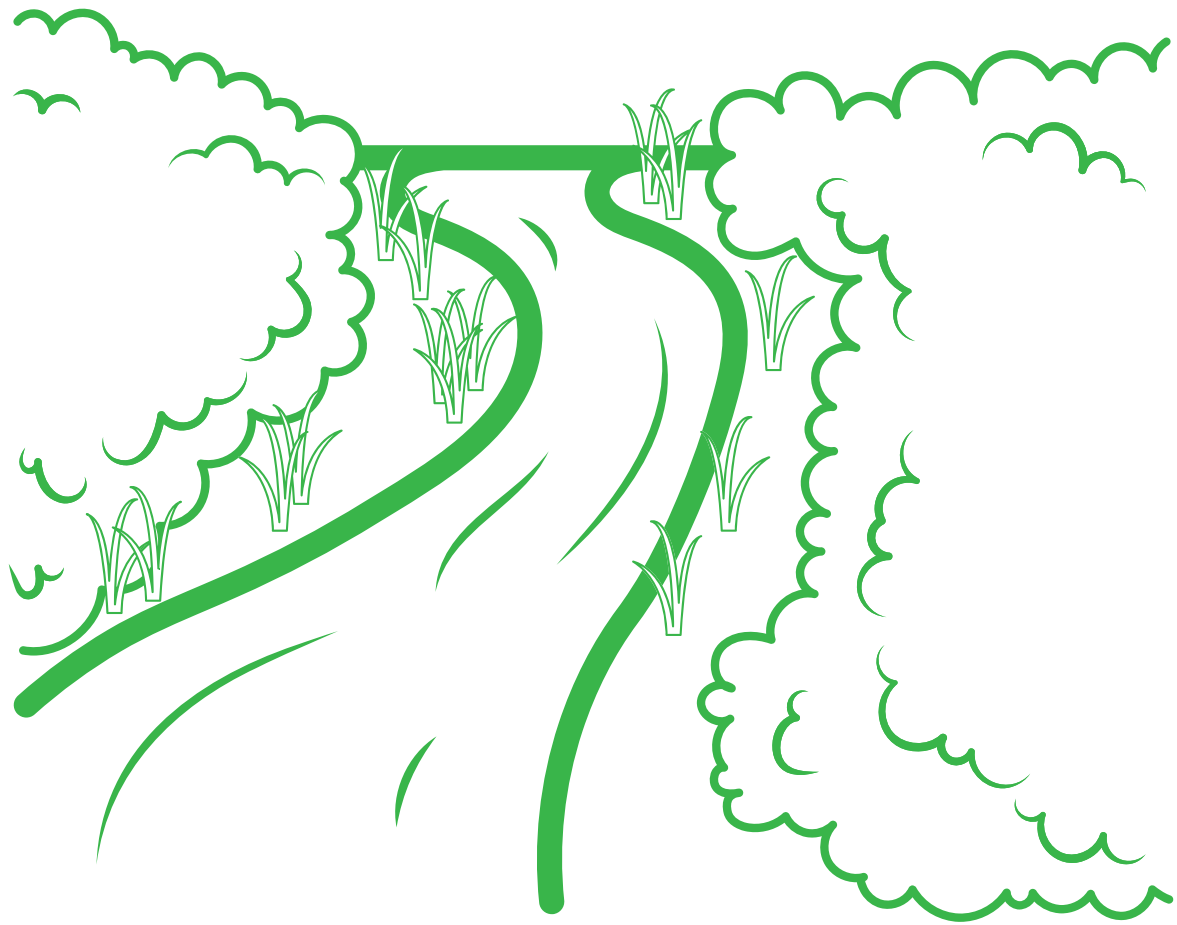


A VISION FOR RIVER BUFFERS

RIVERSIDE BUFFER STRIPS COULD PLAY A KEY ROLE IN PROTECTING RIVERS FROM POLLUTION – BUT ONLY IF THEY ARE MADE FAR BETTER.



Produced for the Labour Party by



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WATER POLLUTION FROM FARMING

Poor water quality affects every single river, lake, estuary and coastal water in England, and the poor state of our waters has become a doorstep issue for voters. Sewage Pollution impacts wildlife and those who swim, fish in or walk along our waterways – yet it is far from the only harm our waters are facing.

In fact, nutrient pollution (from phosphate) remains the single biggest reason that England's waters fail to achieve 'Good Ecological Status'. Farming is a key contributor, through the spreading of chemical fertilisers, manure, slurry and sewage sludge, and through the leaching from, or erosion of, nutrient-

enriched soils, which hold a reserve of 'legacy' phosphate after decades of over-application.¹

This means that agriculture has become the sector responsible for the greatest proportion of 'Reasons for Failure' against WFD targets, and farm pollution contributes to ecological failures in 40% of waterbodies.

In addition, runoff from farmland transports pesticides, veterinary medicines and other agrochemicals to rivers (and on to the sea), placing aquatic life at risk.

A SOLUTION TO RUNOFF

Many agricultural water protection policies around the world recommend uncropped buffers around water bodies, to trap pollutants running off or leaching from fields. Scientific studies have shown that buffers along rivers and streams intercept runoff, reduce nutrient loads, and reduce pesticide contamination. However the effectiveness of these buffers can vary wildly, depending upon the nature of the adjacent land (slope, soil type, compaction), rates of runoff, and the structure and composition of the vegetated strip itself.

In England, it had been a requirement for farmers that receive agri-environment payments to ensure a minimum of 1m green cover on land adjacent to a

watercourse. But with the loss of 'cross compliance' on 31st Dec 2023 this requirement has disappeared, and there is no explicit equivalent in the baseline regulations that remain, the 'Farming Rules for Water'. Instead, farmers are able to secure funding to support more meaningful buffers strips, from 4-12m wide grass buffers under the Sustainable Farming Incentive, to buffers of up to 24m wide under Countryside Stewardship. However, these provisions do not go far enough:

- ✖ They are entirely optional.
- ✖ Even though more ambitious than the basic 1m buffer, they are still significantly under-spec'd.

¹ Scientists release UK roadmap for managing Phosphorus | Agri-Food and Biosciences Institute (afbini.gov.uk)

THE EFFECTIVENESS OF BUFFERS

A 2020 review² found the reported effectiveness of vegetated buffers in reducing the movement of nutrients ranged from 12–100%. The variability in effectiveness was greatest at widths of less than 20m, so whilst some narrow buffers were extremely effective, many had very limited value. Generally, the wider the buffer, the more effective they tended to be.

Structure is the other main component that determines effectiveness. A simple grass buffer will do far less to intercept pollutants than a more 'three-dimensional' strip comprising a variety of herbaceous plants, shrubs and trees – such diverse buffer strips more easily intercept a range of nutrients and other pollutants due to a more complex structure, including deep root networks to encourage sub-surface nutrient processing, a varied topography to enhance run-off capture and taller planting to allow canopy interception. Due to this greater diversity, they are also far more valuable for nature, providing food, shelter and breeding opportunities for a wide range of aquatic and terrestrial species.

How could the Environmental Land Management Scheme support better buffers?

- Include options that encourage buffer strips which deliver against multiple objectives (such as biodiversity and carbon sequestration as well as water quality).
- Provide advice to help farmers plan and deliver the best outcomes for water quality and nature – including where to place buffers and what they should look like.
- Create the scope for top-up payments for better buffers – in the areas of greatest need, allow options for buffers that are 40 or 50m wide, and payments that encourage neighbouring farmers to create a continuous wildlife corridor along the river's edge.
- Incentivise complementary in-field options; buffers will achieve no net benefit if farmers simply intensify in-field activities wherever buffers provide river protection.

Supermarkets, food processors and others in the supply chain should play a role, given their clear reputational interest in ensuring that the farms they work with have a minimal negative impact (or ideally, a positive impact) on nature. Options include:

- Providing top-up payments that take farmers beyond the limited ambition of stewardship scheme options
- Funding advisors that can support farmers in the design of waterside buffers.

This would contribute private finance to nature recovery, in line with Government ambitions to see £1bn invested annually by the private sector, to help narrow the biodiversity funding gap.

These more substantial buffers have the scope to secure not only improvements in water quality, but also a plethora of wider benefits from flood protection to wildlife habitat, thus benefitting downstream communities, and society as a whole.

² Prosser et al (2020). A review of the effectiveness of vegetated buffers to mitigate pesticide and nutrient transport into surface waters from agricultural areas.