

A case study for UK landscape restoration

# The Working Wetlands project

## The story

The lowlands of the UK's western regions were once characterised by florally-rich, unimproved grasslands known in Devon and Cornwall as Culm grasslands, and more widely as Rhôs pasture. As recently as the 1950s they covered 40,000 ha of the South West. Due to the intensification of agriculture only 10 per cent of these grasslands survive. They are the definition of a fragmented ecosystem. Yet, these landscapes have the potential to store significant amounts of water as they are not drained, unlike their intensively-managed counterparts; they yield high water quality as they are not exposed to fertilisers, pesticides or herbicides; they store soil carbon as they are not tilled or limed to improve productivity; they support one of the ten most endangered species in the EU – The Marsh Fritillary

**“The project has demonstrated that farming for environmental benefit, alongside food production, could be the most economically viable way to restore landscape function, whilst also producing food, particularly in wetter parts of the UK.”**

Professor Richard Brazier, University of Exeter.

butterfly. Despite these multiple benefits, they were forgotten, too wet to farm for high yields and offering little financial incentive to manage.

## The restoration strategy

Some landowners are now paid to manage existing Culm grasslands for their conservation value, removing scrub and grazing lightly with appropriate livestock. But there are no direct financial incentives for landowners to manage landscapes for water storage, improved downstream water quality or carbon storage. These are three environmental benefits that could reap economic gains for farmers, alongside food production. Devon Wildlife Trust is reversing Culm decline by supporting landowners in restoration projects. It has built close relationships with more than 500 landowners, offering free advice on farming, wildlife and water management practices. Professor Brazier and his University of Exeter team have monitored six sites across the Culm area to quantify their response to rainfall compared to intensively managed grasslands.

## The impact

Studies show Culm grasslands can store up to five times as much water as intensively

**“Work in the Culm over the past five years shows a clear win-win. We can have sustainable farming; we can have a reliable and high quality water supply; and we can restore a stunning landscape and wildlife resource, which is what draws so many people to Devon”.**

Harry Barton, CEO, Devon Wildlife Trust.

managed grasslands, reducing downstream flooding. Culm grasslands store twice as much soil organic carbon as intensively managed grasslands. And their water quality is significantly better in terms of nitrogen, phosphorus and sediment levels, suggesting that Culm sites can act as natural filters to provide clean water downstream. According to Professor Brazier, the research offers farmers a way forward to manage their land for multiple benefits in a sector - particularly the dairy industry - that is only marginally profitable at the best of times.

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