

# Working with nature to restore the water environment: Policy briefing on Nature-Based Solutions

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This briefing is on behalf of nature coalition Wildlife and Countryside Link ([Link](#)).

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## Context

Freshwater systems are the backbone of the environment, intrinsically connected to the health of habitats and wildlife. Yet the [combined impacts](#) of [agricultural](#) and [wastewater pollution](#), [chemical cocktails](#), and [unsustainable abstraction](#) mean that not a single English waterbody is in good overall health. Even waterbodies of international rarity and importance to nature, such as our nationally treasured chalk streams, are in a critical state. Freshwater biodiversity is declining and many species face extinction.

As habitats and wildlife suffer, so do people, with water shortages and ill health from polluted water becoming more common across the UK. In urban areas the problem is particularly acute, with [climate change warming cities faster](#), exacerbated by a lack of green and blue spaces to cool them down. Additionally, [1 in 3 people](#) do not have access to nature within a 15-minute walk, with the most disadvantaged communities having little or no access to nature at all. The current Government [has committed](#) to ensuring that everyone has access to green and blue spaces within a 15 minute walk, but there is currently no plan to deliver this.

Compliance with environmental regulations intended to protect the water environment is low across all sectors. Under-funded and under-resourced regulators are struggling to detect and respond meaningfully to these breaches. The combined effects of climate change, population growth, and a historic lack of investment in both the resilience of our water infrastructure and the wider environment means that these issues have been left to grow whilst the health of rivers, lakes, ponds and wetlands only worsens. The action now needed to address these issues, and to restore the health of the water environment in line with national and [international targets](#), creates significant challenges for affordability and deliverability.

## The solution

Alongside a robust monitoring and enforcement regime, to ensure that environmental regulations are being upheld, and that instances of non-compliance are detected and addressed swiftly, we need to **work with nature at catchment scales** to address the multiple stressors acting on the water environment efficiently and effectively.

Examples of nature-based solutions include:

- Natural flood management techniques, such as wetland restoration and tree planting across catchments, to [build resilience to flooding](#).
- The construction of treatment wetlands and reedbeds to [treat wastewater and improve water quality](#).
- The creation and restoration of ponds and ‘pondscapes’ for [climate mitigation and adaptation](#), and to build resilience to drought.

Working with nature to tackle issues such as poor water quality, or to build resilience against flooding and drought, is often cheaper than traditional, concrete-based approaches. A [2021 study](#) by the Institute for Sustainable Development found that nature-based infrastructure can be up to 50% cheaper and can provide 28% better value for money than traditional ‘grey’ infrastructure. These approaches can also deliver multiple wider benefits for people and nature, compared with traditional ‘grey’ solutions.

For example, restoring and creating freshwater and coastal habitats such as wetlands will help [capture carbon](#), provide quality habitat for wildlife, [improve water quality](#), [build resilience](#) to both flooding and drought, and increase access to and engagement with natural spaces for local communities. Working with nature can also protect built infrastructure; for example, restoring offshore reefs, or adding texture to sea walls to encourage colonisation by seaweeds, reduces wave energy and prolongs the life of engineered sea defences, whilst also enhancing coastal habitats. Farmers and landowners working with nature will benefit from increased soil health, improved yields, and a reduction in erosion and loss of nutrients. As temperatures rise with climate change, blue spaces in cities such as urban wetlands, wildlife ponds, and restored lakes and streams [help cool down urban areas](#) while boosting wellbeing and mental health, providing flood resilience and improving water quality.

The multiple benefits delivered by working with nature also create opportunities for blended finance, by drawing in private investors or gaining income from buyers of ecosystem services. This further increases taxpayer value for money. At a time when the delivery burden on the

water industry – and therefore customer bills – is [at a record high](#), investment in nature-based solutions will help ensure that water industry spending supports delivery of the maximum environmental and social benefits.

### **Policy levers to increase deployment of nature-based solutions**

Despite the multiple benefits that working with nature can bring, their uptake and use across sectors – including the water industry – remains limited. Opportunities for efficient and effective investment in catchment and nature-based solutions are being missed. For example, current drafts of water industry PR24 business plans have limited evidence of using nature-based solutions. The same appears to be true for the Water Industry National Environment Programme (WINEP).

The next Government can unlock barriers to nature-based solutions deployment by:

- Setting a clear, strategic regulatory framework that will drive all regulators towards facilitating the uptake and use of NBS, and provide investors with the framework and incentive to invest.
- Adequately funding regulators and local authorities to ensure they have sufficient expertise, training and resources to facilitate NBS projects.
- Setting clear, comprehensive national guidance to ensure consistent, high quality NBS projects are delivered. This should include a nutrient offsetting code to ensure high quality wetlands and genuine environmental benefits.<sup>1</sup>
- Providing more funding for NBS, for example, through CaBA partnerships, a dedicated pot in the flood grant-in-aid fund, and through [better rewards and incentives for farmers under ELMS](#) to work with nature to deliver catchment-sensitive farming and tackle water pollution.
- Making Natural England's green and blue infrastructure standards (which currently function as voluntary guidance) compulsory for all new developments. This will provide a new planning route for NBS creation.

This clearer, strategic steer from Government will drive regulators and regulated industries towards greater use of nature-based solutions, and will enable Defra and environmental regulators such as the Environment Agency and Ofwat to take a more consistent, aligned

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<sup>1</sup> [https://www.wcl.org.uk/docs/Reforming\\_environmental\\_markets\\_Link\\_report\\_March\\_2023.pdf](https://www.wcl.org.uk/docs/Reforming_environmental_markets_Link_report_March_2023.pdf)

approach. Facilitation of NBS by regulators, enabled by the policies set out above, could include:

- Adopting joint, ambitious targets to accept NBS schemes when these are preferred by water companies and customers. For example, through setting an aspirational sector-wide target of [10% of WINEP investment](#) going towards NBS.
- Setting a ‘nature first’ commitment that would require water companies to always explore NBS options before progressing with more traditional solutions.
- Stronger incorporation of natural capital accounting into decision-making processes, so that ‘best value’ assessments by the regulators fully incorporate environmental and social benefits.

## Case study examples

### The Petteril-Calthwaite Catchment Nutrient Balancing Scheme

The River Petteril is a tributary of the River Eden in Cumbria, and faces multiple environmental pressures from the surrounding agricultural land and small wastewater treatment works, particularly phosphorus pollution, exacerbated by flood and storm events. The [Catchment Nutrient Balancing \(CNB\) Scheme trial](#) – piloted in partnership with United Utilities, the Environment Agency, Eden Rivers Trust and others – allowed the water company to work with other sectors across the catchment to reduce pollution. For example, through delivering hedges, buffer strips, and sediment ponds throughout the catchment. This CNB scheme has delivered up to 7 times more phosphorus reduction than could have been achieved through wastewater treatment work interventions alone and had an additional £1.7 million in natural capital benefits compared to conventional solutions.

### Yorkshire Water Clifton Treatment Works Integrated Constructed Wetland

[Clifton Wetlands](#) are an Integrated Constructed Wetland, created in 2022 at Yorkshire Water’s Clifton Treatment Works near Doncaster. The wetlands are a natural, sustainable, low-carbon alternative to conventional wastewater treatment, meeting the treatment requirements for around 180 people. The wetland was delivered at 35% lower cost than building a conventional treatment solution, and the operational costs are 40% lower. The wetland also has an operational carbon saving of 79%, and an embodied carbon saving of 50%. The wetland also achieves biodiversity net gain, and delivers engagement opportunities for the local community.

Blueprint for Water members responsible for projects and partnerships working with nature to improve the water environment would welcome the opportunity to showcase nature-based solutions in action through site visits.

Further information and expertise from Wildlife and Countryside Link members can also be found in the below:

- WWT's [route maps for Blue Recovery](#).
- The Rivers Trust '[Mainstreaming Nature-Based Solutions](#)' project.
- Wildlife and Countryside Link's briefing on '[Working with nature to build resilience to flooding and drought](#)'.

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Wildlife and Countryside Link (Link) is the largest nature coalition in England, bringing together 82 organisations to use their joint voice for the protection of the natural world and animals.

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