



Restoring the River Beane; a rare chalk stream

A shared vision for recovery



**River
Beane
Flagship**

Revitalising the river landscape

A Flagship programme

The River Beane is **one of England's globally rare chalk streams** — a distinctive freshwater ecosystem characterised by clear groundwater, stable flows, and exceptional biodiversity.

Around 85% of the world's chalk streams are found in England, making their protection and recovery a national responsibility.

Yet like many chalk streams, the Beane has experienced **decades of pressure** from abstraction, land management, urbanisation, pollution, invasive species, and channel modification. These pressures have altered natural processes and habitats, leaving much of the river **failing to achieve Good Ecological Status** under the Water Framework Directive¹.

Flagship catchments such as the Beane are intended to demonstrate how sustained partnership working can transform chalk stream health and provide a model for restoration across England. Established as part of the national Catchment

Based Approach (CaBA) Chalk Stream Restoration Strategy, the programme brings together partners across the water sector, environmental organisations, regulators, land managers and local communities to restore the Beane through coordinated, long-term action.

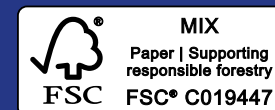
The River Beane Flagship programme represents a **once-in-a-generation opportunity** to reverse this decline.

A new Catchment Delivery Plan sets out a **strategic framework for restoring the River Beane** over the next decade, supported by an initial four-year programme of action. It combines scientific evidence, local knowledge and practical interventions to address the pressures preventing the river from functioning as a healthy chalk stream ecosystem.

The plan focuses on **three interconnected priorities**:

- Improving clean water
- Restoring natural flows
- Rebuilding natural habitats.

These priorities reflect the core pressures affecting the catchment, including nutrient and sediment pollution, altered hydrology linked to historic abstraction, physical modification of the river channel, and the spread of Invasive Non-Native Species (INNS).



Cover image: River Restoration at Woodhall Estate in October 2024.

Above image: A recently-hatched Blue Winged Olive riverfly.

Bottom image: RBRA volunteer pulling up invasive Himalayan Balsam to control its spread.

Right hand page image: A section of restored river through the Woodhall Estate, six years after completion.





“The Flagship offers an exciting opportunity and real step change in pace and investment towards chalk stream catchment recovery in Hertfordshire.”

Herts and Middlesex Wildlife Trust

The good news is that the restoration of the Beane is **already underway**.

Significant reductions in annual average groundwater abstractions at White Hall have improved the resilience of the aquatic ecology against drought conditions. River restoration projects have begun to reconnect the channel with its floodplain and improve habitat structure.

In 2022, Water Voles were successfully reintroduced to the catchment after an absence of two decades — an important milestone that demonstrates the potential for ecological recovery when conditions improve.

Citizen science monitoring and volunteer action have also become an important part of the catchment's recovery, strengthening local stewardship and knowledge of the river.

Building on this momentum, the Catchment Delivery Plan sets out a scaled-up, coordinated **programme of measures across the catchment to accelerate recovery including:**

- Restoring natural channel processes
- Removing or modifying barriers to fish passage
- Improving riparian habitats
- Reducing nutrient and sediment inputs from land use
- Delivering nature-based solutions across the wider catchment
- Collaborating with key stakeholders to maximise delivery

- Enthusing and equipping landowners and land managers to act
- Engaging and supporting communities to take action for the River Beane in their neighbourhood.

Measures such as floodplain reconnection, wetland creation, improved soil management and targeted planting will help restore ecological function while also strengthening resilience to climate change, drought and flooding.

The programme depends on the continued participation of farmers, landowners, local communities and volunteers who manage and care for much of the river and its surrounding landscape. Stakeholder engagement will help to scale-up effort, whilst fostering ownership by communities is key to delivering ongoing benefits.

The plan is being delivered through the **River Beane Flagship Core Group**; a partnership between Affinity Water, the Environment Agency, Hertfordshire and Middlesex Wildlife Trust, and the River Beane Restoration Association, supported by the wider Catchment Partnership. This collaboration brings together regulatory authority, scientific expertise, conservation practice and strong local stewardship.

Initial funding for the Flagship programme has been secured by Affinity Water through the Water Industry National Environment Programme ('WINEP'), with nearly £2.4m million committed for the period 2025–2030.

This funding is establishing programme coordination, delivery of priority restoration projects, and support for nature-based solutions across the catchment. Additional investment is being drawn in through water company investment cycles, environmental grant programmes and philanthropic support to scale up restoration efforts over the coming decade.

Ecological resilience

restoring natural processes and native species to support long-term ecosystem health



Heritage value

celebrating historic landscapes, mills and traditions that shape local identity and sense of place



Community connection

strengthening access, engagement, stewardship and wellbeing through closer relationships with the river





Freshly-hatched Mayfly.



Water Voles ahead of their reintroduction.

“We are excited to be working in partnership to restore the River Beane, a rare and precious chalk stream, on a catchment scale for the benefit of people and wildlife.”

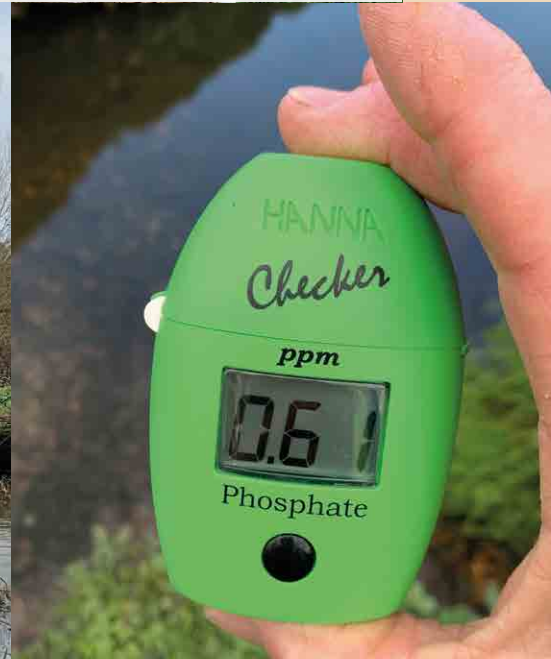
The Environment Agency



Volunteer sorting through a riverfly survey of invertebrate life from the river.



Removal of ecologically-harmful concrete revetments during restoration at Waterford Marsh in 2023.



Hanna tester to measure phosphate levels in the river.



Volunteers and experts at a Bioblitz event at Waterford Marsh.

Restoring the River Beane will deliver benefits far beyond the river channel itself. A healthier chalk stream will support wider riparian and catchment biodiversity, improve water quality, strengthen climate resilience, reduce flood risk, and enhance opportunities for recreation and wellbeing. It will also safeguard the Beane's cultural and historic legacy — a river that has shaped the landscape and communities of the valley for centuries.

The River Beane Flagship programme therefore represents more than a river restoration project. It is a **long-term commitment to restoring a globally important habitat through collaboration, innovation and local stewardship**. By demonstrating what sustained, catchment-scale restoration can achieve, the Beane can become a leading example of how England's chalk streams can be recovered for nature and people.

Our collective impact

The River Beane Flagship programme aims to demonstrate measurable ecological recovery and strengthened stewardship of the catchment. Progress will be tracked through a combination of statutory monitoring, citizen science, and project-level evaluation.

By 2035-6 the River Beane will be on a clear trajectory towards ecological recovery, with measurable improvements in water quality, habitat condition, wildlife populations and community stewardship including:

River Restoration

- 30% of river channel restored or enhanced through in-channel works, floodplain reconnection or habitat improvements
- Make 20 weirs in the Beane catchment passable by fish to improve fish passage and ecological connectivity
- 100 new or restored wetland features.

Catchment Interventions

- 30% of land in management schemes to reduce nutrient, sediment and runoff pressures
- Targeting nature-based solutions such as wetlands, buffer strips, leaky dams and riparian planting to slow the river flow, hold more water on the land, reduce pollution into the river and improve infiltration into groundwater.

Wildlife Recovery

- Expansion of Water Vole populations across priority reaches of the catchment
- Measurable improvements in average riverfly monitoring scores and key fish populations.

Invasive Species Control

- Hotspots for Invasive Non-Native Species such as Himalayan Balsam and Giant Hogweed identified along the

river corridor and prioritised for treatment.

Community Stewardship

- Increase number of volunteers engaged in citizen science, restoration and stewardship activities to expand water quality monitoring, habitat assessments, and species tracking — bridging gaps in statutory data and influence local environmental decisions
- Regular community events or engagement activities delivered each year.

Investment

- Match £ for £ core programme funding with additional external funding secured to support catchment restoration.



Water Vole.

Making it happen

The River Beane Flagship Catchment Delivery Plan provides a shared roadmap for restoring the river, bringing together environmental organisations, statutory agencies, water companies, local authorities, landowners, farmers, community groups and volunteers under the Catchment Based Approach.

By working collaboratively, partners can combine expertise, resources and local knowledge to deliver practical restoration, improve water quality, enhance habitats, strengthen climate resilience and reconnect people with the river.

Achieving this vision will depend on broad support and shared action. **Funders and supporters have an opportunity to play a vital role in helping secure the future of the River Beane**, investing in a programme that delivers lasting benefits for both people and nature while contributing directly to nationally important chalk stream recovery. Support will help unlock practical restoration projects, community engagement, volunteering, education, monitoring and long-term stewardship of the catchment.

There are also many ways for others to get involved:

- **Local people can volunteer, participate in citizen science, attend events and help champion the river in their communities**
- **Landowners and farmers (including the River Beane Farm Cluster) are custodians of the catchment. River- and nature-positive land and water management will play a crucial role**
- **Businesses, organisations and local institutions can contribute expertise, resources, partnerships and advocacy**
- **Funders can provide the investment needed to restore the River Beane for people, nature and environment.**

Together, these actions can help create a healthier, more resilient River Beane for future generations — a river that supports wildlife, celebrates heritage, improves wellbeing and remains a valued part of local life.

“We’ve been championing improvements to the Beane since 1991. This ambitious flagship project will take things to a whole, exciting, new level.”

River Beane Restoration Association (RBRA)

Creating brash build-outs to narrow an over-wide section of river, providing habitat for spawning fish and allow marginal vegetation to establish.



All images ©RBRA unless otherwise stated.

Above: RBRA volunteers clearing Himalayan Balsam.

“Restoring the Beane will require a collective effort — every positive action we can achieve upstream will support a healthy river downstream.”

Affinity Water

Uniting to revive this rare chalk stream for people and wildlife.

AffinityWater
Taking care of your water



riverbeane.co.uk



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