

# Valley Brook

## Catchment Action Plan



A plan to improve Valley Brook in Crewe town centre to achieve good ecological potential; developed in partnership through the Cheshire Hub

We are the Environment Agency. We protect and improve the environment.

We help people and wildlife adapt to climate change and reduce its impacts, including flooding, drought, sea level rise and coastal erosion.

We improve the quality of our water, land and air by tackling pollution. We work with businesses to help them comply with environmental regulations. A healthy and diverse environment enhances people's lives and contributes to economic growth.

We can't do this alone. We work as part of the Defra group (Department for Environment, Food & Rural Affairs), with the rest of government, local councils, businesses, civil society groups and local communities to create a better place for people and wildlife.

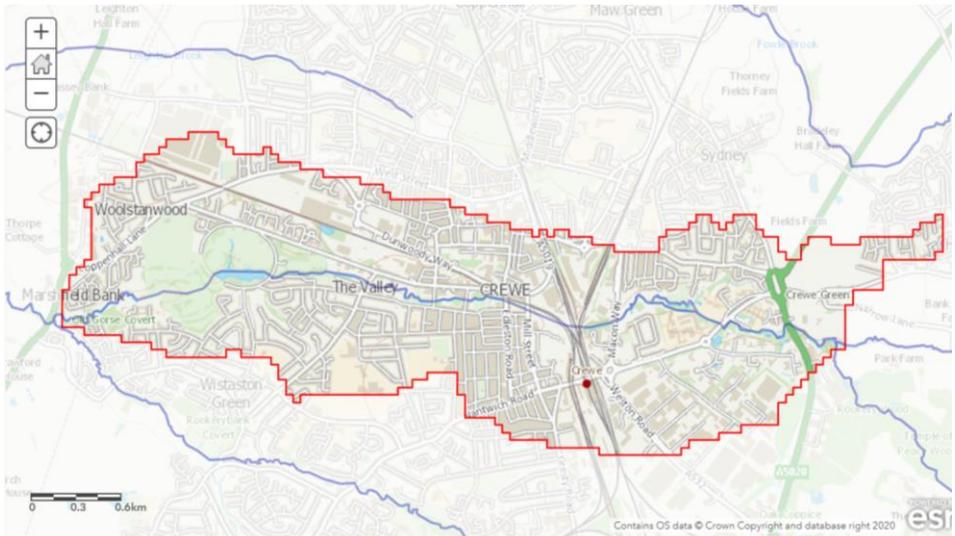
Published by:  
Environment Agency  
Richard Fairclough House, Knutsford Road,  
Warrington, Cheshire, WA4 1HT  
Email: [enquiries@environment-agency.gov.uk](mailto:enquiries@environment-agency.gov.uk)  
[www.gov.uk/environment-agency](http://www.gov.uk/environment-agency)

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Contact: Josie Martin, Catchment  
Director  
Email: [josie.martin@environment-agency.gov.uk](mailto:josie.martin@environment-agency.gov.uk)

# Introduction

Valley Brook forms a natural corridor across Crewe from Crewe Green in the east to the Rising Sun Inn at Wistaston in the west before joining the River Weaver. The upstream catchment of Valley Brook and its two significant tributaries (Englesea and Wistaston brooks) are predominantly agricultural.



Defra's 25 year environment plan sets a target for 75% of watercourses to be at 'near natural state' as soon as possible. Currently Valley Brook does not meet this standard due to elevated phosphate levels and because it is significantly impacted by culverts, straightening and hard banking.

This plan describes the actions we all need to take to restore Valley Brook to a near natural state.

## Pressures on Valley Brook

There are four major pressures in the Valley Brook catchment that prevent the brook achieving a near natural state - these impact on brook's ability to support plants and animals and how the brook responds to extreme rainfall events.

### Point source pollution

Sewage Treatment Works at Audley and Betley are due to be improved before 2025 which will see a significant improvement in water quality in the brook. There are also eight combined sewer overflows; these overflows operate after heavy rain to reduce the risk of sewage backing up.

### Diffuse pollution

Diffuse inputs from agriculture upstream of Crewe are impacting on the ecology of the brook introducing high levels of sediment, which blanket the bed, and phosphate resulting in excessive plant growth. Urban drainage contains oils, chemicals and plastics which impact on the ecology of the watercourse.

### Physical modifications

As Crewe developed Valley Brook became more encroached by urban development. The river has been culverted, and hard banks installed. These changes have altered the way the river flows and responds to changes in water levels, and the brook has become disconnected from the flood plain.

### Invasive species

Himalayan Balsam is present on the banks of Valley Brook. This plant quickly dominates, spreading over large areas and excludes other native plants reducing the overall biodiversity of a location. In the winter months, the plant dies back, leaving the banks bare and more susceptible to erosion.

## Solutions for phosphate

The main sources of phosphate in Valley Brook: sewage treatment works (36%); agriculture (34%) and 20% is from urban sources.

Investment in sewage treatments works will significantly reduce phosphates by 2025.

New farming rules for water give the Environment Agency powers to regulate farms to reduce diffuse sources of pollution. The Environment Agency will be carrying inspections at farms in the Valley Brook catchment to assess compliance with regulations.

Farmers need to significantly reduce phosphate losses to rivers and ensure that all fertilisers they apply are for crop needs.

We will look to work with partners to influence changes in farming practice, beyond regulation, to bring about the changes we need to see. Mersey Rivers Trust have been working with farmers in the catchment to influence change.

Phosphate from urban sources could be reduced by the use of Sustainable urban drainage systems, which offer multiple benefits of reducing flows during rainfall and increasing biodiversity.



# Restoration of Valley Brook

Specialists from the Environment Agency have identified opportunities to restore the river to a more natural state. The river restoration plan, sets out the opportunities where the river could be reconnected to the flood plain, de-culverted or hard banks could be removed.



We need to engage with landowners and developers to influence change and put the river at the heart of development in Crewe.



## Valley Brook Restoration Plan, Crewe

A plan to restore Valley Brook and contribute to the achievement of 'good ecological potential' under the Water Framework Directive by 2027.



## Engagement and partnership working

We want to work with stakeholders in the area to understand how our ambition for Valley Brook supports their policies and objectives and to understand how we can fund and deliver the required improvements.

“Valley Brook Partnership” group includes representatives from Cheshire East Council, Crewe Town Council, Cheshire Wildlife Trust, Environment Agency, United Utilities, Groundwork, Mersey Rivers Trust and Stormwater Shepherds.

The partnership aims to secure funding to deliver the improvements needed on Valley Brook and promote liaison and encourage collaborative working between organisations, interest groups and projects to deliver environmental benefits.

Partners have already successfully bid for funds to from the Town Investment Plan (TIP). The bid is to develop a green, natural corridor along Valley Brook, delivering a walking and cycling route connecting Tipkinder Park to the town centre and re-naturalisation of the river in Valley Park.



# Achieving the vision for Valley Brook

To achieve our vision we need to restore a more natural function to the river, enhance its ability to support biodiversity, reduce flooding occurrences and promote wellbeing for the people that live and work near the brook. To do this, we need to:

Work with farmers and landowners in the upstream stretches of the brook, to reduce phosphate entering the brook.

Promote the use of SuDS in the town: We need to look for opportunities to manage the rainwater close to where it falls, put in place systems that slow the movement of water to the watercourses down or store it, and offer additional benefits to the environment.

Restore the natural state of the brook:

- Alter the straight channel. Allow the brook to connect with the surrounding land and floodplain
- Remove, or make passable, any constraints in and along the brook, such as stone walls and culverts
- Replace hard banks with more natural solutions and look for ways to increase the biodiversity.

Control invasive species Invasive species control: an appropriate, long term strategy for the control of invasive species needs to be agreed. The native species need to be given the space and light to thrive, and the dominance of Himalayan Balsam avoided. The brook needs to be accessible and visible for people to enjoy.

# Valley Brook Partnership

**Our vision is Valley Brook becomes a thriving healthy river valley connecting people of Crewe with safe, green spaces to enjoy**

## **Connecting people to nature**

Valley Brook is a busy social place loved by local people and visitors alike. Better, more connected green spaces, with improved access provide new spaces for people to enjoy the benefits of nature safely.

## **Economic growth**

Re-thinking the value of the river restores its place as part of the town's identity and puts it at the heart of the town's economic regeneration. An enhanced townscape is more attractive and more accessible to residents, businesses and visitors and makes Crewe a nicer place to live.

## **Clean, natural water**

A more natural Valley Brook absorbs the pressures of urban water-courses, leading to improvement in water quality. Reducing harmful discharges within the community and addressing misconceptions creates water fit for life.

## **Green transport**

New cycling and walking routes promote improved, convenience and sustainability travel connections to and from places of work and Crewe town. Connections to Queens Park allow quiet and safe green transport links to be extended to Nantwich.

## **A place for wildlife**

More spaces for nature increase urban biodiversity and bringing more wildlife into local neighbourhoods. Invasive species are controlled and connecting people to nature provides increased health and wellbeing to build social resilience post-Covid.

## **Climate resilience**

Valley Brook is better able to adapt to the climate crisis. The impact of flooding is reduced by new SuDS schemes, and reconnecting the river to its floodplain. Tree planting schemes help absorb carbon and cool the town.



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