

Valley Brook Catchment Action Plan

Environment Agency



Valley Brook, Crewe

Date carried out

September 2019 - September 2021

Location

Valley Brook, Crewe, Cheshire.

Background

One of the barriers catchment partnerships face is understanding what action needs to be taken to improve rivers to good status.

River Basin Management Plans provide information on why rivers are failing to achieve good and generic actions, but are not specific around how to can close the 'gap to good'.

Valley Brook in Crewe is a small urban watercourse. It is failing water quality standards because of upstream inputs of nutrients, mainly from sewage works and agriculture, and because it has been constrained and altered as Crewe has developed. United Utilities have committed to upstream improvements at Audley sewage treatment works which will lead to significant improvements in water quality before 2024.

Partners

Natural England, United Utilities, Mersey Rivers trust and Weaver Goway Catchment Partnership.

Themes



Evidence & tools



Water quality



Urban



Natural rivers

Project

The aim of this project was to test out the effectiveness of carrying out more detailed environmental planning on one waterbody and understand if this would drive action and improvements.

This involved three stages of work:

Stage 1 - Intelligence report

Stage 2 - Detailed environmental planning

Stage 3 - Production of the plan

Stage 1: Intelligence report

The intelligence report brings all of the information we know about the brook into one place. This allowed us to identify the significant issues on the brook whilst maintaining an overview.

Two main issues were identified for Valley Brook:

- Restoring a more natural flow and function to the river (mitigation measures)
- Reducing the input of phosphate from upstream catchments

Learning point:

It's easy to get lost in the detail at this stage of the process. Concentrate on the major issues – what's going to make the biggest improvements.

Stage 2: Detailed environmental planning

Phosphates

Water quality modelling using SAGIS had already been carried out, so we knew which sectors were responsible for the phosphate and how much phosphate needs to be removed to achieve good status.

The main source of phosphate was sewage treatment works and agriculture. The sewage treatment works is due for improvement before 2024.

Learning point:

SAGIS provides information on the source of phosphate and the percentage reductions required.

Farmscoper was used to model what actions farmers need to take to achieve good status. All farms in the upstream catchments, including Engelsea Brook and the rural section of Valley Brook were included.

Phosphate from agriculture needs to reduce by 88% in the upstream catchments. This will require significant land use change, as well as wide spread uptake of other mitigation measures.

Learning point:

Farmscoper is a decision support tool that can be used to assess diffuse agricultural pollutant loads on a farm and quantify the impacts of farm mitigation methods on these pollutants. You can download it and guidance documents from the ADAS website.

Mitigation measures

These are actions we can take to improve the ecology of a heavily modified river.

Although we had previously identified mitigation measures, we asked the Environment Agency biodiversity and geomorphologist to review those measures and they produced a river restoration report.

Stage 3: Production of the plan

The outcome of the planning, including all of the actions needed to close the gap to good were recorded in the Valley Brook catchment action plan.

Outcomes

The catchment planning led to the development of the Valley Brook Partnership, which involved local authorities, Mersey Rivers Trust, Cheshire Wildlife Trust, Groundwork and many more.

The Environment Agency and Cheshire East Council and Crewe Town Council successfully bid for £2.9m of central government funding (though the town fund, and an additional £250k of Water Environment Investment Fund) recognising the importance of putting the river at the heart of the economic regeneration of Crewe. The funding will restore more natural function to a section of Valley Brook and create a green transport route along Valley Brook corridor.

Funding bids have been submitted to work with farmers in the upstream catchment

Learning point:

The catchment planning for Valley Brook has created a clear narrative around action which has led to partners being able to work together to deliver outcomes and a long term commitment to improve Valley Brook.

Next Steps

Feasibility and design work has been commenced on the river restoration and partners are developing a business case.

Valley Brook partnership members have started discussions with land owners to look at delivering more mitigation measures, along with identifying suitable funding streams.

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