Black & Veatch has extensive knowledge of river restoration works on UK rivers based upon many successfully completed projects, for the Environment Agency and other clients.

We have a highly experienced team of professionals who are well placed to offer a full scope of services on river restoration works.

Black & Veatch also has capabilities in delivering the following services:
- Fluvial and geomorphological assessments and audits
- Hydromorphology studies
- Ecological and environmental studies
- Geotechnical investigations
- Hydraulic and hydrological investigations
- Legislation & policy advice

Whatever your requirements, Black & Veatch can identify, evaluate, design and install the right solution to meet your needs at the right price.

SELECTED PROJECT EXAMPLES

RIVER AVON RESTORATION STRATEGY | Environment Agency
Black & Veatch was appointed to implement the River Avon Restoration Strategy, the largest strategy of its kind in the South West. Consultation with a variety of landowners, land agents and fishing clubs was undertaken to obtain access to over 130km of river corridor, the majority of which is internationally designated for its nature conservation interest. The site visits, combined with review of the Water Framework Directive (WFD), designated site objectives and assessment of technical information including Lidar data and existing structure operations informed the re-prioritisation of reaches and the feasibility assessment of the Strategy options. Appraisal reports were produced and used as a basis for consultation with key stakeholders including Natural England to agree the focus of the Strategy implementation and initial restoration proposals. Detailed consultation with landowners and other interested stakeholders is now ongoing to inform detailed design of agreed reaches across the catchment.

CHAFFORD SLUICE & ASHURST WEIR | Environment Agency
This project was to identify and evaluate options for fish passage at flow control structures on the River Medway in Kent that currently obstruct upstream fish migration. The options considered included partial and full removal of the obstructions, Larinier type fish passes on the modified structures and semi-natural bypass channels. The options were appraised and the preferred options identified by means of RAG matrices. The project culminated with a formal option appraisal report and artistic impression drawings to facilitate stakeholder engagement prior to detailed design.
**BECTON BUNNY RIVER RESTORATION | Environment Agency**

Becton Bunny, to the east of Christchurch in Hampshire, is designated as a heavily modified watercourse due to urbanisation. The failure of the stream to meet WFD standards is assumed to be due to channel straightening and deepening. On behalf of the South East Region of the Environment Agency, Black & Veatch was appointed to carry out a study into the feasibility of carrying out river restoration works, which included re-creation of meanders; rep칭물 of the channel; creation of pools and riffles; removal of obstructions and addressing diffuse pollution issues. The project culminated with an option appraisal report that included artistic impression drawings of the preferred options to facilitate stakeholder engagement.

**HOGSMILL RIVER REHABILITATION | Environment Agency**

This project was funded by the Thames Region of the Environment Agency as part of a larger local authority scheme. The objective was to restore a 750m length of the river to include new meanders, to create backwater habitat, to establish a pool and riffle sequence and to remove a concrete weir and channel section. Flow enhancements included reducing the width of the low flow channel, with the use of timber flow deflectors. We provided engineering and environmental services for the project from feasibility through to construction.

**RIVER NADDER APPRAISAL & DESIGN | Environment Agency**

As part of the initial implementation of the River Avon Restoration Strategy, Black & Veatch was appointed to review the proposed Strategic restoration options for 17 reaches along the River Nadder; to assess their feasibility and re-prioritise for outline design. Extensive consultation with landowners and other interested stakeholders has been used to inform the outline design process. Currently 8 reaches are being taken from outline through to detailed design. Restoration works include hatch modification, channel narrowing, bed raising using gravel and extensive use of locally sourced material such as large woody debris (LWD).

**EASTROP PARK PRE-FEASIBILITY | Environment Agency Biodiversity and Fisheries Team**

Black & Veatch undertook a study into the restoration of the River Loddon through an urban park in Basingstoke. The main drivers were the WFD objective to achieve good ecological potential, to establish coherent corridor in line with the 2020 Biodiversity Strategy whilst considering flood risk benefits. We worked with a project steering group and designs were reviewed in stakeholders engagement workshops and presentations. Three options were identified, appraised and used to promote public participation and seek funding.

**RIVER MEDLOCK REHABILITATION | Environment Agency**

Black & Veatch was appointed by the North West Region of the Environment Agency to carry out detailed design and supervision of construction of restoration and habitat creation works over 1.5km of the River Medlock in Greater Manchester. The project included improvement of the watercourse by the introduction of pool and riffle sequences, shrub and tree planting to improve the terrestrial habitat and encourage a greater diversity of flora and fauna, and modifications to an existing weir to improve fish passage. An EIA and an HRA was undertaken for the proposed breakwater in an area of rapidly eroding saltmarsh, located on the edge of the New Forest National Park.

For more information contact
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