River Wensum at Bintree, Norfolk

Techniques: reconnect floodplain, narrowing, increase sinuosity, gravel bed reinstatement, gravel glides, novel approach to bankside support

Project location: Between Bintree and North Elmham
River: Wensum
County: Norfolk
Project start date: September 2008 / November 2009 (Works)
Project end date: December 2009
Length: 700m
Cost: £200,000
Up/downstream grid references: TF 9909 2326/TF 9923 2275

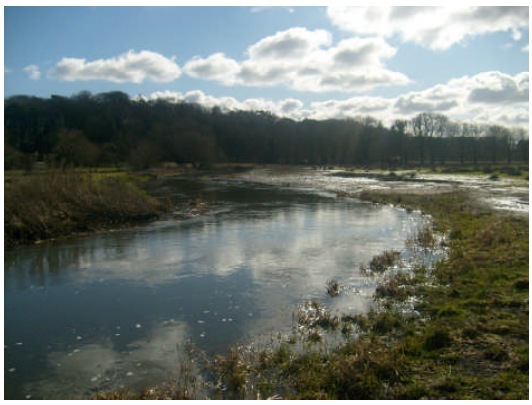

Fig 1: Diversification of the channel & flow. © RRC.

Site background

The River Wensum Restoration Strategy (RWRS) is perhaps the first holistic river catchment restoration project in Europe across all 71 kilometres of the Wensum SSSI. Implementation of the RWRS began in September 2008, and the river is split into ten manageable units. The project is led by the Environment Agency (EA) and Natural England, but involves anglers, landowners and interested stakeholders. The main project driver is the UK Government's Public Service Agreement (PSA) national target that 95% of SSSIs be in favourable or unfavourable recovering condition by December 2010.

Objectives

A key emphasis was on changing present river form and flow processes to help the river develop conditions more typical of its chalk river type. It was not undertaken in isolation to wider issues and constraints of the catchment. There was a desire to provide multiple benefits in terms of;

- reducing flood risk and reconnecting the floodplain to the river,
- reducing the need for regular extensive maintenance by creating a self-sustaining system,
- creating managed h*otspots for ta*rgeted maintenance,
- improving amenity value and
- improving habitat condition and diversity for a variety of flora and fauna (fig 1).

Design

An extensive feasibility and environmental scoping assessment concluded that using the existing form and function of the river to 'kick start' natural geomorphological process was the best overarching philosophy to take. Works carried out by an EA workforce included the reinstatement of the gravel bed, removal of spoil banks to reconnect the river with its floodplain, selective channel narrowing, the creation of gravel glides, the raising of the bed and improvements to create varied flow conditions (fig 2). A novel biodegradable mattress was used to stabilise the new river bank to allow the river restoration features to become fully established.

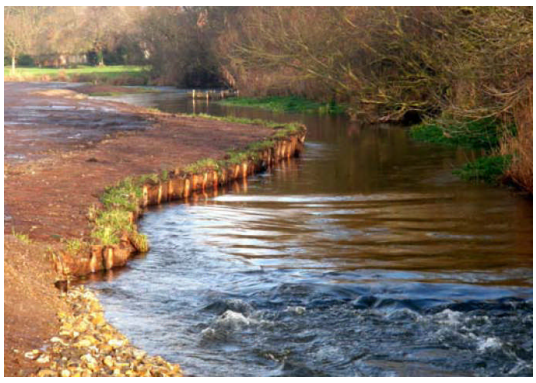

Fig 2: Restoration completed. © John Abraham (EA).

Subsequent performance – RRC's views (March 2010)

The project was delivered within budget and to a high standard and improved habitat will prove beneficial to local ecology and Bintry Mill Trout Fishery alike. So pleased with the EA effort, the team has been put forward for the National Excellence awards. Collaboratively the EA and Atkins will monitor the site in 2010 as a priority and it will be interesting to consider the chosen management strategy of bankside and in-stream vegetation in particular as it matures in the coming months given expected funding constraints. RWRS is a fine example of strategic restoration.

the **River Restoration Centre Case Study Series**
This site was last visited by Nick Elbourne, the RRC Information Officer on 4th March 2010

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