

# Great Ryburgh Common Meander Loop Re-connection

## Techniques: Rural river restoration – channel re-meandering and narrowing

**Project location:** Fakenham

**River:** River Wensum

**County:** Norfolk

**Project start date:** October 2010

**Project end date:** December 2010

**Length:** 600m

**Cost:** £105,000

**Upstream grid reference:** TF937292



The old meander channel has been re-connected to the main river.

### Site background

The River Wensum is a chalk SSSI and SAC river currently stated as being in unfavourable condition. The form and function of the river has historically been changed due to land drainage and flood defence purposes. Located to the southeast of the Norfolk town of Fakenham the meander loop at Great Ryburgh Common was bypassed in the 1950's when the River Wensum was straightened, widened and deepened as part of a land drainage improvement scheme.

### Objectives

- To re-instate the natural river form and function by re-connecting the old meander. It was designed so that at normal flows all the flow would go down the old meander and at high flow, part of the flow would be diverted into the straightened channel.
- To re-connect the old meander by removing the silt layer from the old channel whilst retaining the existing gravel substrate where it still existed.

### Design

The old meander was carefully excavated leaving the riverbed gravels intact where they already existed. In addition new gravels were added to create shallow glides. Deeper pools were dug to provide refuge areas for fish and other aquatic species. The existing straightened channel was plugged such that in normal flow conditions, the river flows around the re-connected meander. The straightened channel therefore acts as a flood relief channel at times of high flow and as a quiet backwater during normal flow. In addition, channel narrowing was achieved by creating a bund along the line of the new bank, and this was covered with coir matting and was planted up with live plants.

### Subsequent performance – RRC's views (2011)

Eighteen months on, the site is fully vegetated and functioning well as a re-connected meander. The original gravel bed was exposed during excavation and the use of adaptive management allowed these original features to be incorporated into the on-the-ground works. The Environment Agency OPS team was used to do the works as they had experience of doing similar work (at Bintree further down the catchment). Prior to re-meandering, the channel was straightened and over-wide. The project has recreated the natural chalk stream habitat, with pool and riffle sequences. The substrate now has macrophytes growing along much of its length. By allowing high flows to pass down the old straightened channel the flood capacity has been increased, and during normal flows the old straightened channel acts as a backwater habitat.



Post works – fully vegetated and functioning well as intended.

### *the River Restoration Centre Case Study Series*

This site was last visited by RRC staff on 25<sup>th</sup> May 2011

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