

# Nar SSSI at Narborough Trout Fishery

## Techniques: In-channel pools and berm creation using existing deflectors

**Project location:** Downstream of The Maltings, Narborough

**River:** Nar

**County:** Norfolk

**Project start date:** 28<sup>th</sup> February 2011

**Project end date:** 4<sup>th</sup> March 2011

**Length:** 1,000 m

**Cost:** £2,500 (capital works)

**Upstream grid reference:** TF74241311



The river pre-project: wide, with slow and uniform flow.  
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### Site background

Around Narborough, the character of the Nar changes from chalk stream to fen drain. This dual identity is one of the key reasons it was designated a SSSI river. At this site, the river is an artificial, wide and high-capacity channel within high and steep flood banks, and is contained slightly above the floodplain. There is virtually no gradient, and the wooden flow deflectors installed between 2002 and 2003 were not substantial enough in their existing form to enhance flow diversity.

### Objectives

- Narrow the channel by creating 'shoulders' mimicking berms on one or both banks
- Excavate sustainable pools downstream of berm features
- Leave flood banks unmodified
- Maintain high channel capacity in peak flows
- Do not adversely impact potential Water Vole habitat

### Design

Material for the shoulders was taken from the bed of the river immediately downstream, and used to build out from the bank at just above average water level. This was compacted and capped with material scraped off the bank top, which contained a much *Phalaris* sp. Most berms were constructed around existing deflectors, which, together with the anticipated growth of the Canarygrass, helped secure the features - particularly when the bed material turned out to be peat, rather than chalky clay. A gap between the existing bank and the shoulder was maintained to avoid blocking vole burrows. The narrowing was designed to maintain a scouring flow to sustain the downstream pools. In most cases, the bed was raised slightly between the shoulders and topped off with gravel. The work was carried out over just a few days using the Environment Agency's in-house team.



Double shoulders under construction (left, with far bank berm yet to be capped), and 4 months later (right).  
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### Subsequent performance - RRC's views (2011)

Though early days, it seems that this has been a successful low-cost 'quick win' in a constrained site, creating both shallow, high-velocity and pool areas with very little gradient.



**the River Restoration Centre Case Study Series**

This site was last visited on 13<sup>th</sup> of July 2011

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