

# River Wensum Rehabilitation Project

## Technique: Bank revetment using bio-engineering methods

**Project location:** Fakenham  
**River:** Wensum  
**County:** Norfolk  
**Project start date:** December 2000  
**Project end date:** February 2001  
**Length:** 130m section  
**Cost:** £20,000  
**Upstream grid reference:** TF 917 293



Coir mattress bank revetment on the Wensum, Fakenham.  
Temporary fencing erected to allow structure to stabilise

### Site background

The River Wensum is a lowland river which rises to the west of Fakenham and flows through predominantly agricultural land joining the River Yare at Norwich. In the centre of Fakenham an area of public open space adjacent to the river Wensum is used by the public for angling and dog walking. Bank erosion has occurred over a 130m section of this reach of the Wensum due to over-grazing and trampling by ducks.

### Objectives

To carry out bank revetment using bio-engineering techniques to prevent further erosion of the bank; and to provide platforms allowing disabled people and anglers to access the river.

### Design

- Coir mattresses were laid side by side extending back 1.5 to 2m from the water's edge.
- A double layer of coir rolls were staked in at the foot of the bank.
- Sediment dredged from the river was used to fill the gap below the mattresses.
- A degradable membrane between the mattress and dredged sediment was used to retain silt.
- The tops of the coir rolls were planted with *Juncus* sp. (rush).
- Timber railing (20 year life) was staked into the base of the river bank to hold the structure together.
- 6 angling platforms were constructed out of timber boards allowing access to the river at selected access points.

### Subsequent performance - RRC's views (2001)

As the bank revetment was only completed in February 2001, vegetation has not yet become fully established. However, 'live' coir rolls and mattresses do provide instant protection against further bank erosion. An alternative approach to the design of the revetment which may have reduced costs could be one layer of coir roll with the mattress covering the top of the roll. By doing this the timber railing which currently shows above water level could be replaced with wooden stakes below water level.



View of coir rolls with coir mattresses behind  
and timber railing at the toe.



*the River Restoration Centre Case Study Series*

This site was last visited by RRC staff on 15<sup>th</sup> February 2001

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