

Preserve and improve water's edge and bank side habitats

Project Summary

Title: Cottenham Lode bank repairs

Location: Rampton, Cambridgeshire, England

Technique: Bank reprofiling

Cost of technique: £££

Overall cost of scheme: £££

Benefits: ££££

Dates: April 2013

Mitigation Measure(s)

Preserve and improve water's edge and bank side habitats

Use green engineering techniques instead of hard bank protection

How it was delivered

Delivered by: Environment Agency



Bank reprofiling at Cottenham Lode

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Background / Issues

The left bank in the Cottenham Lode was failing the required asset condition. The Environment Agency's Asset Performance and Operations team were therefore tasked with identifying suitable measures to reinstate the bank (approximately 60 m in length) to its correct asset condition to provide adequate flood protection.

While hard revetment techniques were initially considered, these were subsequently dismissed given the ecologically sensitive nature of the site. A solution was required that could meet the vital engineering criteria but also enhance the marginal habitats for the water voles and contribute towards achieving Water Framework Directive (WFD) objectives. The Environment Agency opted to implement a solution that included bank reprofiling and soft engineering techniques as to not compromise the quality of bankside habitats.



Overview of straightened and impounded project site

Step-by-step

The implementation of the Cottenham Lode bank repairs was achieved through:

- Reprofilng of river banks.
- Creation of a new berm along the left bank.
- Use of soft engineering techniques, namely a combination of pre-established coir rolls and matting.
- Installation of piping to allow water voles to gain access to burrow entrance.



1) Failing bank at Cottenham, before scheme implementation
2) Installation of "soft" bank protection

Benefits

- Return of the bank to good condition, in compliance with WFD-defined measures for this water body.
- Reinstatement of flood defence protection level.
- Decrease in bank erosion potential, given the vegetation capacity to slow down flows in proximity to the bank.
- Creation of water vole suitable habitat.



Overview of reprofiled bank and coir roll staking

Lessons Learnt

- Soft banks may require some vegetation management in the future – this needs to be considered at design stage.

Project contact: Fisheries and Biodiversity team, Anglian Region, Environment Agency