



R&D Technical Summary W5A-060/TS

River restoration and habitat improvement techniques

Background to R&D project

Many organisations in the public, non-governmental and private sectors are involved in river management activities. These activities may be carried out for a range of different purposes – for example, improving the flood discharge capacity of a river and flood plain reach. In most cases, the opportunity or the need for river restoration or habitat improvement will arise. River restoration copies natural features and a river environment that is appropriate to the river concerned. Habitat improvement provides features that enable an appropriate ecosystem and/or species to be established or sustained.

Practitioners who want to consider or apply river restoration or habitat improvement need to be able to refer to guidance on the aspects involved and to learn from the successes and failures of others. In particular, they need to be able to access this information over the internet. Phase 1 of the R&D project on “Application of river restoration and habitat improvement guidance” addressed two issues to improve this availability of information – (a) carrying out a scoping study on the development of an internet toolkit, and (b) drawing together new information from recent river restoration work carried out in the UK.

Results of R&D project

The Technical Report on the scoping study considers the steps needed to develop an internet toolkit for river restoration. It gives a coarse estimate of the number of potentially useful web sites available on the internet and includes hyperlinks to a number of sample sites associated with river restoration. The next steps in the project to develop the toolkit are described.

The second issue has involved updating the UK River Restoration Centre’s Manual of Techniques for River Restoration. The earlier manual, produced in 1999, focused on techniques applied in the river restoration schemes on the River Skerne and River Cole during an EU Life demonstration project. The Environment Agency commissioned this new edition under this R&D Project. The second edition draws together information from 17 different river restoration sites. The new manual comprises 46 separate files – each on a specific river restoration site demonstrating a practical river restoration technique. Access to the files is through a main contents page. The aspects of river restoration covered in the manual are: Restoring meanders to straightened rivers; Enhancing redundant river channels; Revetting and supporting river banks; Controlling river bed levels, Water levels and flows; Managing overland floodwaters; Creating floodplain wetland features; Providing public, private and livestock access; Enhancing outfalls; Utilising spoil excavated from rivers; River diversions.

R&D Outputs and their Use

The Technical Report on the scoping study provides guidance to those involved in the next steps of the development of the internet toolkit for river restoration. It provides information on design and/or evaluation of river restoration web sites. The hyperlinks to sample sites will be valuable in their own right to practitioners looking for information on river restoration on the web.

The updated Manual of techniques for river restoration will be of direct use to practitioners involved in different aspects of river restoration.

This R&D Technical Summary relates to Phase 1 of R&D Project W5A-060 and the following R&D

outputs:

- **R&D Technical Report W5A-060 / TR - *Development of a river restoration internet toolkit, Scoping study.*** Published August 2002
- **R&D Manual W5A-060 / M - *Manual of techniques for river restoration, 2nd Edition.*** Published by the River Restoration centre April 2002

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Project Manager: Mark Diamond, North West Region, Environment Agency

Research Contractors: Edenvale Modelling Services, 32 Victoria Avenue, Redfield, Bristol BS5 9NG;
River Restoration Centre, Silsoe Campus, Silsoe, Bedfordshire, MK45 4DT (for the Manual)
Tel./fax.: +44(0)1525 863341; Web site: www.theRRC.co.uk

The above outputs are available on the Environment Agency web site (www.environment-agency.gov.uk/subjects/flood). Copies are held by all EA Regional Information Centres and can be purchased from the River Restoration Centre (address above)

Environment Agency, Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol, BS32 4UD
Tel: (+44) 1454 624400 Fax: (+44) 1454 624409