River Restoration NEWS

Issue 13
November 2002

NEWSLETTER of the RIVER RESTORATION CENTRE

RRC Network Conference 2003

April 28th and 29th - Bristol at the Marriot Royal Hotel

The 4th Annual RRC Network Conference will encompass the themes of *Applied river research, Project appraisal, and Setting sound objectives to ensure sustainable river restoration.* The aim of this conference is to inform all those with an interest in rivers and river management about how current research is being applied to river restoration. Papers will include topics that are of interest to a wide audience that can then stimulate discussion from a range of backgrounds.

This is the first call for papers, the usual length being 15-20 minutes. We wish to attract a diverse range of papers and are especially interested in hearing from consultancies, agencies or academic institutions that are addressing current river restoration issues by applying sound research. Examples might include the importance of gravel sizing in chalk streams, assessment of the success of improvement works for fishery initiatives, or how ecological indicators can be used to set project objectives.

If you wish to present a paper or poster at the conference, or participate as a delegate, please register your interest with Jenny Mant at the Centre to receive further details. Presenters need only initially provide a suggested title. A programme will be prepared and circulated in the New Year along with details of the exact costs that are expected to be around £200-250 for a residential participant.

Wild Trout Trust Award

Once again the Wild Trout Trust annual award for habitat enhancement and conservation of wild brown trout encouraged entries from a range of excellent projects - with a prize pot of £4000 from Classic Malts it is also well worth entering!

The relationship between good wild trout habitat, biodiversity improvements, best practice, land management and public enjoyment of rivers were at the heart of all of this year's finalists.

Patrick Bowden-Smith's farm, a haven of wildlife and elusive brown trout

The Winners

Winner of the 'individual' category: Patrick Bowden-Smith, has spent the past 10 years pouring his efforts and enthusiasm into his farm in Fife. The result is a mosaic of wetlands, ponds and a much enhanced burn praised by FWAG, Scottish Natural Heritage and the Scottish Wildlife Trust. At a time when profitable farming is becoming increasingly difficult the enthusiasm on this farm never seems to wane.

At a different scale, the works on the River Witham by the Grantham Angling Association Fly Fishing Section stood out enough to take the 'Partnership' category award. This Lincolnshire "drain" has been transformed back into a 'real river' again. Working with landowners has helped banish the previous 'crew-cut' bank vista. Carefully placed riffles and diverse bankside and marginal growth benefit the trout and also the native white clawed crayfish. Easy public access also ensures the works can be appreciated by the wider community.

The Runners-up

The two other finalists also deserve an honourable mention. Mark Huntsman for his back-breaking work on the River Granta, and the Coldstream and District Angling Association, together with the Tweed foundation for their enhancement project on the Leet water.

To enter your project in next year's competition write to: Wild Trout Trust, PO BOX 120, Waterlooville PO8 0WG.

River Witham with shallow gravels, overhanging trees and reedy margins - in Lincolnshire!

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Reconnecting People with Rivers

The renaissance of the UK's rivers and canals in the last twenty years has been remarkable and is well known amongst water management practitioners. Water quality continues to improve year on year. Some of the rivers that were choked by flood defence schemes in the seventies are being restored. New habitats have been created and existing ones protected. Public access, information and recreation facilities are better than they have ever been. And yet the man and woman on the street remain largely unaware of this transformation and are failing to derive any benefit from it. Many water management practitioners are not taking advantage of the enthusiasm, skills and free manual labour that volunteers have to offer. It is surely time for us to think again and engage wholeheartedly with local communities.

Involving volunteers in river restoration and clean-ups is not simple. It requires substantial time, effort and genuine commitment. But to do it successfully adds enormous benefit to projects and safeguards their long term stewardship. Community involvement has inherently human qualities. Local people can act as eyes and ears to prevent and report pollution and crime. They can lend their hands to help deliver and maintain a scheme that would otherwise not be viable. They can use their voices to communicate messages to their friends and neighbours much more convincingly than a leaflet or web site. Above all, they can demonstrate affection and ownership of a place that can make all the difference between a scheme that looks good on paper and one that actually benefits society in the long term.

Two years ago I took a three month sabbatical, funded by the Winston Churchill Memorial Trust, to study community involvement in river management in two contrasting contexts of the USA and Brazil. I realised that we in the UK have a lot to learn, particularly from North America.

Despite the fact that the USA tops the global pollution league table, or perhaps because of it, Americans care deeply about their rivers.

100,000 people worship the Ganges every day in Varanasi

Community groups are very well informed and professional in their approach. They are ably supported with practical guidance from River Network, based in Portland, Oregon (www.rivernetwork.org). The EPA also seems to have embraced them and has built a marvellous web site at www.epa.gov/adopt, which will provide chapter and verse on every river catchment, including a directory of active community groups.

www.epa.gov/adopt

The catchment (or watershed) approach runs through the heart of policy and practice; one voluntary group leader I visited had even changed her number plate to H20SHED… The Stream Team initiative in Missouri (www.mostreamteam.org) now boasts 30,000 volunteers a year, clearing litter from streams and monitoring water quality and is being replicated in several other states.

There are drawbacks, of course, and Professors Matt Kondolf and Louise Mozingo in the Department of Landscape Architecture at Berkeley, California, gave me plenty of examples of community-led restoration for the wrong reasons. Limited funding, as the RRC's research last year showed, tends to focus resources on implementation rather than planning and appraisal.

Community involvement in Brazil tends to have more of a campaigning agenda, but NGOs have made a genuine effort to adopt the principles of Local Agenda 21 which, of course, has its origins in the Rio Earth Summit of 1992. Organisations like Rios Vivos (www.riosvivos.org.br) and Conservation International (www.conservation.org.br) are helping communities – over which the Government has ridden roughshod – have a say about the future of their rivers.

Thames21 initial aim was to both prevent and clear pollution from London's rivers. Through this it became evident that local community groups could be encouraged to participate.

Mark Lloyd the Director of Thames21 provides some examples of how volunteer groups world-wide are working to enhance water quality.

More recently my organisation, Thames21, has forged links with the Clean Ganges Campaign in Varanasi (www.cleanganga.com). The campaign, among other things, is engaging with local people to clean-up unique non-point source pollutants such as animal carcasses, religious offerings and human corpses. Up to 100,000 people worship the River Goddess on the banks of this river every day and several million attended the Kumbh Mela festival last year. These communities are genuinely connected with their river, but suffer terribly from waterborne diseases carried in the sewage that pours largely untreated into the middle of the religious bathing areas. Working with the campaign has helped Thames21 deliver a new project to work with the Asian community in west London on the Grand Union canal.

Volunteers on Crayford marshes make a real difference

Thames21 is a programme that started out with the aim of preventing and cleaning up pollution from litter in London's rivers. From the beginning, we have been committed to the concept of involving communities and encouraging local 'ownership' of waterways through the Adopt-a-River scheme that now involves 60 active groups and 5,000 volunteers a year. One of the key lessons that we have learnt has been that groups do not need to be formed from scratch; there are communities of interest throughout society that can be encouraged to do something a bit different. It is not all about amenity societies and residents' associations, valuable though they are. Adopt-a-River groups range from COBRA (a black motorbikers' gang) to bank staff from HSBC.

Much of this effort has involved clearing litter but the more established groups are keen to get stuck into habitat enhancements and riverside artwork. They have boundless enthusiasm, many unexpected skills and unique local knowledge.

I believe that only by engaging with local communities can the excellent work that is being carried out to restore our nation's rivers be truly justified. People must value increased biodiversity and improved water quality for the Government and other funders to take notice. People must have a role in habitat enhancements and restoration works to ensure that they value, protect and maintain them in the future. If not, people will say "what have they done to our river?" They should be glowingly proclaiming "look what we have done to make our river better!" It is a subtle, yet fundamental difference.

Mark Lloyd
Director, Thames21

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A mural made by a local youth group entirely out of litter from the Grand Union canal

The Politics of River Restoration

Jean Venables from Crane Environmental, shares her thoughts about the benefits of incorporating River Restoration into government legislation both in the UK and worldwide.

River restoration is widely acknowledged to be a good thing and as a concept it fits well into policies on sustainable development and regeneration. So why is not more done? World wide there is mounting concern about climate change and the Johannesburg summit (2002) has focused attention on the subject of sustainable development which will increase the political pressure on governments to reflect these issues in new legislation and the development of their policies.

Flooding. . . .

The catastrophic 2002 summer flooding in Europe followed by early autumn intense rainfall in the UK has caused misery to many and kept flood risk management high on the political agenda. Whilst river restoration projects are able to reduce the effects of smaller events, they are unlikely to be the solution to these extreme events emphasising the urgent need to consider the catchment as a whole and put in place a range of measures to manage the rainwater before it reaches the drainage systems. The developing Catchment Flood Management Plans have a potential to be a useful tool but flood risk is only one aspect of water management and the CFMPs will also have to link with the Water Framework Directive objectives, water resource management and development planning.

It could be argued that there is sufficient legislation in this area and what is needed is the ability and vision to plan, fund and implement schemes more quickly than now. Can the planning system be speeded up whilst retaining adequate consultation? Current discussion is exploring this issue. One of the difficulties in the UK seems to be the large number of decision-making bodies, interest groups and riparian owners who each have their own priorities, funding restrictions and timescales. With so many organisations involved – funding bodies, all layers of government, NGOs, charities, local businesses, land owners and residents associations – it is imperative that effective partnerships are formed locally to promote a project.

Policies. . . .

The policies set by the UK Government on sustainable development, biodiversity action plans and regeneration concepts have been carried through into planning guidance documents such as PPG7 The Countryside Environmental Quality and Economic and Social Development and PPG25 Development and Flood Risk. Reflecting these policies the departments of government have been changed to bring together various functions in DEFRA which has the potential to create synergies between agricultural policies, land use, water resources and flood risk management who all are likely to gain from a river restoration scheme. Can the current debate about the reform of payments to farmers be used to positively benefit the restoration not only of the river but also its associated washlands?

In urban areas the rivers, under previous policies, have become extensively culverted and often flow through steep sided channels. As it is government policy to encourage more people to live as well as work in cities to reduce commuting

The Jubilee River creation and flood alleviation scheme

Wetlands at Putra Jaya, Malaysia

traffic and to meet targets for density of development, their Urban Task Force initiative stresses the need for public open spaces that provide recreational and reflective oases for residents. Rivers in towns should be regarded as a blue ribbon threading through the urban area providing a wildlife corridor, footpaths and safe cycle routes in addition to its natural drainage function.

The Jubilee River, completed in 2002, is an example of a flood channel built to resemble, as far as possible, a natural river. Although its primary function is to reduce the flood risk to people and property in Maidenhead, Windsor and Eton, the environmental features such as islands, scrapes, reed beds and recreational provision of paths and cycle ways shows a sustainable approach which will not need to be subject to a river restoration scheme in the future!

Another question that needs to be addressed is: what do we mean by river restoration? A river is a dynamic, developing system. So what features should be re-introduced to suit current objectives together with adopting appropriate land use policies in the catchment? Reducing adverse consequences of previous work does not always meet peoples' interpretation of restoration but can make a significant contribution to the amenity value and improve local biodiversity.

In 2001 I was fortunate to have the opportunity to travel with my husband, Roger, who was giving the Institution of Civil Engineers' International Brunel Lecture on Delivering Sustainable Development and this gave us the opportunity to visit the wetlands that have been created at Putra Jaya, Malaysia. These extensive wetlands have been built to remove pollution, caused by oil from palm trees, from the river water in order to provide water of suitable quality for recreational and amenity use in a new town development.

Monitoring. . . .

There are now numerous examples of river restoration schemes around the world which are demonstrating techniques that can be used in different circumstances and it is essential that continued monitoring, research and dissemination of information by such bodies as the RRC provides feedback to guide future work. It is also vital that policy and decision makers are made aware of the potential gains to be achieved from river restoration projects and have the vision and political will to include them in their plans.

Joining the River Restoration Centre

If you are not a member of RRC, and wish to continue to receive the Newsletter, know more about the activities and outputs of the Centre, and also contribute to widening the Network of sharing experiences and knowledge, please contact us.

The River Restoration Centre, Silsoe, Beds. MK45 4DT

Tel/Fax: 01525 863341 **Website: www.theRRC.co.uk** **Email: rrc@cranfield.ac.uk**

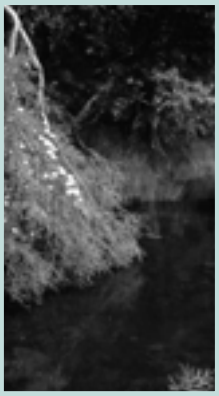
The Water of Leith Enhancement Project

This low cost project won a SEPA Habitat Enhancement Initiative award in 2001 and has become an example of small scale best practice in river habitat management. Tony Seymour from the Farming and Wildlife Advisory Group (FWAG) outlines the work completed that runs through the Buteland and Kirknewton estates near Edinburgh

To enhance a 3km stretch of the Water of Leith was the aim of this project. Its simple objectives were to protect the banks using environmentally-sensitive methods, improve the structure of the watercourse, and develop the diversity of channel and riparian habitats.

House O' Muir

Here a new backwater was created with a shallow lip to the main watercourse providing refuge for young trout including protection from adult fish. It also created an ideal habitat for tadpoles and within a few weeks of the work being completed they had colonised this area.



Small backwater at House 'O' Muir

Further upstream willow and alder were planted on the top of the bank to afford long-term stability. Willow spiling was used to protect an eroding bank by providing a living, flexible buffer against the force of the water.

Heavy spate flows and flooding in the Spring of 2000 and 2001 led to the loss of the downstream half of this structure. Sand martins made the most of this and took-up residence in the bank. Initially this presented a dilemma, to repair or not, since slowly eroding banks are an ideal nesting habitat for these birds. The willow spiling is now, however, showing signs of growth, and we wait to see if natural processes will give sufficient bank protection whilst also preserving the nesting habitat.

A section of the adjacent wooded haughs (banks) was fenced-off from livestock to prevent further erosion by trampling and the gaps were planted-up with native broadleaved trees and shrubs.

Leithhead

A floodplain pond fed by the main stream had been excavated in 1985. Having silted-up, the pond was restored. Livestock were excluded from two sections of the watercourse to stop trampling and riparian woodland was established on the steep banks and dryer upper slopes. The lower, wetter areas were left unplanted to allow the natural re-colonisation of this open wetland habitat by species such as marsh marigold, water mint and branched-burr reed.

Pond at Leithhead one year after restoration

As the section chosen forms the boundary between the Kirknewton Estate in West Lothian and Buteland Farm within the City of Edinburgh, it provided an ideal opportunity to promote a collaborative venture between local land managers, statutory government bodies and private enterprises showing what can be done to ehance our rivers through small scale works on a limited budget. The project has achieved the status of an HEI demonstration site providing a focus for informing other similar groups of the benefits of enhancing riverine habitats.

Bank protection using willow spiling partly washed away by floods that have created an ideal habitat for sand martins

The partnership comprised: Lothian's Farming and Wildlife Advisory Group (FWAG),Cockburn Farming Company, Kirknewton Estate, SEPA's Habitat and Enhancement Initiative, the West Lothian Council, Scottish Natural Heritage 'Boundaries, Banks and Birds' initiative and VIRIDOR through the Edinburgh Local Biodiversity Action Plan Partnership.

For further details contact Tony Seymour at: lothians@fwag.org.uk

Getting out of the Channel

Reprofiling back ditch and improving connectivity with the floodplain, Gwen Finch, Worcestershire

Rob McInnes of the Wildfowl & Wetland Trust discusses the need to think about opportunities for reconnecting the river channel with the floodplain

Traditionally river restoration has focused on enhancing the river channel and its riparian habitats. This has resulted in many improvements within the main channel and the rehabilitation of many degraded river systems. More recently, the need to shift the rehabilitation emphasis to reconnecting rivers with their floodplains has gained impetus (see English Nature Position Statement *Managing Floodplains to Reduce Flood Risk and Enhance Biodiversity* and River Restoration News, Issue 12).

In naturally functioning systems, during times of flooding the floodplain acts as the river bed. This concept is often neglected. River restoration initiatives should consider more fully this continuum. As a consequence, the improvement and rehabilitation of floodplain habitats should be viewed as 'river restoration' even if modifications to the main channel are not required.

Nationally there are several projects where floodplain enhancements have been integrated with river channel rehabilitation. The following demonstrate two approaches to solving the issue of floodplain rehabilitation.

Following a grant from WWF, Worcestershire Wildlife Trust managed to raise additional funds, including a substantive Heritage Lottery Fund bid, in order to rehabilitate 20ha of improved farmland on the River Avon floodplain. Penny Anderson Associates were commissioned to undertake a feasibility study, a detailed design and the site supervision of the works. The feasibility study illustrated the degree to which the connectivity between the river and the floodplain had been severed. Water balance analysis demonstrated the need to increase water delivery to the floodplain in order to maintain the range of desired wetland habitats. As a consequence of river management practices and alterations in the hydrological functioning of the site, wind pumps had to be employed to lift water back onto the floodplain surface to ensure the maintenance of the appropriate hydrological conditions. Works commenced on site in April 1999. The project has created areas of wet grassland, reedbed and wet woodland on the floodplain and over 400m of enhanced streamside marginal habitats. The site now supports one of the largest reedbeds in Worcestershire, boasts breeding redshank, reed bunting and yellow wagtail, and is regularly visited by otters.

The project demonstrates two key issues. First, how nature conservation organisations, working with statutory agencies and applying to available funding bodies, can raise funds to implement projects. Secondly, how, despite several information gaps, an understanding of floodplain hydrology combined with the evaluation of the water demands of wetland communities is essential in order to guarantee success.

An alternative approach is being pursued by Purbeck Heritage Committee in association with DEFRA along the floodplain of the River Frome in Dorset. The Frome has been classified as a SSSI, however much of the neighbouring floodplain has been drained and 'improved'. The Wetlands Advisory Service are investigating the feasibility of restoring approximately 100ha of floodplain using applications through the Countryside Stewardship Scheme (CSS). The study is identifying the ecological and technical potential for floodplain restoration and will identify the mechanism within the CSS for implementation. Restoration objectives will be integrated with agricultural aspirations so that payments such as supplements for raising water levels (£60/ha) or for the installation of simple sluices on ditches (up to £400) can be made to the farmers. Through a careful integration of nature conservation objectives and practical agricultural needs, the CSS is providing the mechanism for floodplain restoration and the enhancement of habitats for waders and other wetland wildlife.

The two schemes, described, demonstrate different approaches to enhancing floodplains. However, the principles remain the same: river restoration should not end at the edge of the main channel and a variety of mechanisms and approaches are available to improve the continuity of hydrology and habitat quality from the channel into the floodplain.

Topsoil stripping and ground surface lowering on the River Avon floodplain, Gwen Finch, Worcestershire

Rob McInnes is Operations Manager of the Wetlands Advisory Service, the consultancy arm of the Wildfowl & Wetlands Trust, and was formerly Senior Wetlands Specialist at Penny Anderson Associates.

News and Events

Jubilee River

On 11th July 2002 the Duke of York officially opened the Jubilee River, as the Maidenhead Windsor and Eton Flood Alleviation Scheme is now called. Apart from providing flood defence the scheme contains extensive areas of wetland with facilities for school children to discover the wildlife that is rapidly colonising the river channel.

(An article about this project will follow in the next newsletter).

Conferences

Symposium of European Freshwater Sciences (SEF3)

University of Edinburgh, UK 13-18 July 2003

This workshop will include four days of scientific discussions with provisional topics to include biodiversity and community ecology, ecosystems, catchments and environmental change, conservation and management of fresh waters in Europe and modelling in freshwater science. The formal call for papers and posters will be in November 2002.

For more information email: sef3@fba.org.uk

International Water Management Course

Switzerland, 5-12 July 2003

If you have some money to spare you could attend this course at the bargain price of 8000 euros! The course is targeted at decision-makers and professionals in the water management and urban infrastructure fields but numbers are limited. Included in the price are 'breathtaking views of Lake Zurich and the Alps'.

For more information: http://www.iwmc.ch

Publications

Aquatic Conservation: Marine and Freshwater Ecosystems, Volume 12 Number 4,

July - August 2002

This special issue is dedicated to Sustainable River Basin Management in the UK and represents the proceedings of a seminar held in London during January 2002

Civil Engineering, Volume 150,

May 2002

This is also a special issue that concentrates on new approaches to floods. It includes, among others, articles about sustainable flood defence, the role of geomorphology and the impact of climatic change.

For further details of how to obtain a copy of this email: journals@thomastelford.com

Feedback

European Centre for River Restoration (ECRR) Study Tour 2002 – The Netherlands.

The 1st ECRR Study Tour, a three day event, was hosted by the New ECRR Secretariat – RIZA (Institute of River Management and Wastewater Treatment in the Netherlands). 18 representatives from 7 countries were shown the 'Dutch Approach' to river restoration by a varied mix of planners, researchers, landscape architects and engineers – centred around visits to streams, rivers and estuaries by bus, boat and *of course* bike.

A real eye-opener for those who want to learn more, and a must for those who think they know it all.

Martin Janes (RRC Centre Manger)

Further information at www.ECRR.org

River restoration- A job for professionals

LWW group have over 40 years of combined experience in fluvial engineering.
We offer specialist contracting services covering all aspects of river restoration.

For initial consultations, please contact:
Land Wood & Water.
Manvers House
Pioneer Close
Wath-upon-Dearne
Rotherham
S63 7JZ
Tel: 01709 761266
Email: office@lwwltd.freeserve.co.uk

LAND WOOD WATER

RRC is most grateful to all those who have contributed text or photos for this Newsletter

The following statutory organisations provide Core Funding for the River Restoration Centre and their Representatives form the Advisory Board who together with RRC's Directors make up the RRC Council.

ENVIRONMENT AGENCY · The Countryside Agency · ENGLISH NATURE · SEPA Scottish Environment Protection Agency · RIVERS Agency · SCOTTISH NATURAL HERITAGE