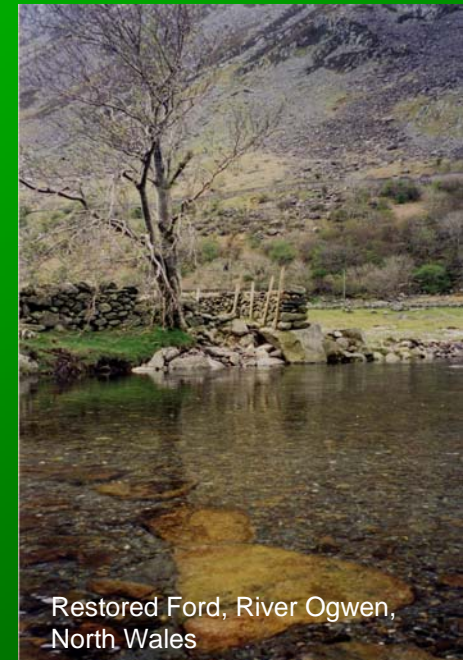


# Urban River Restoration in the UK



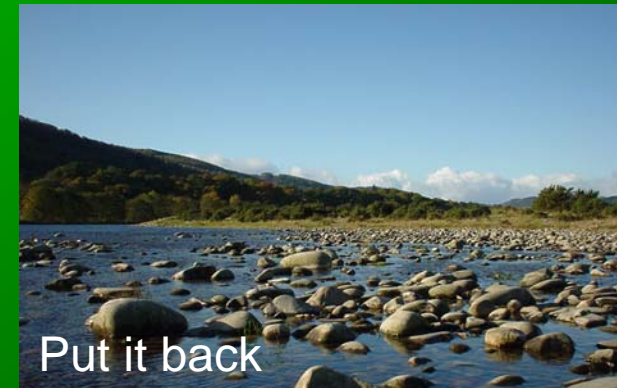
Martin Janes  
RRC Manager  
UK



Restored Ford, River Ogwen,  
North Wales

# UK river management changes

- Past - Flood 'Protection' and Drainage  
Deep channels, walls, culverts, embankments.
- Present - Risk Management (floods, etc)  
Storage, capacity, and more natural rivers.
- Future - Catchment Management?  
Land (soil) management, Sustainable drainage systems, functioning floodplains, integrated planning policies -> river restoration



# River Restoration in the UK



*the River Restoration Project*  
(1990 – 1997)

Rivers Cole and Skerne, UK  
Demonstration Projects

Rural River Cole

Urban River Skerne

Rural River Brede (Denmark)

[1994 - The start of a European  
Centre for River Restoration  
(ECRR)]





# R. Skerne

*the River Restoration Centre*

In  
1994  
Urban  
UK River  
Restoration  
Project. £1M  
Demonstration.





# Multiple benefits for all

*the River Restoration Centre*



- Flood storage
- Fish habitat
- Landscape
- Natural processes
- Bank protection
- Access
- Value for money
- .....
- Demonstration value
  - Encouragement
  - Technical solutions
  - Policy implications



# River Restoration in the UK



*the River Restoration Project*  
(1990 – 1997)

Rivers Cole and Skerne  
Demonstration Projects



*the River Restoration Centre*  
(April 1998 - )

- UK Information and Advisory Service
- Promoting the benefits of river restoration



Aerial view of the restored River Skerne  
Demonstration Project, Darlington

RRC Supporters and Advisors  
Board





# the River Restoration Centre

- Covers the UK, 6 staff + 40 advisers
- Independent and impartial advice
- Supported by the UK environment agencies
- Promotes 'best practice river management' and river restoration.
  - Flooding, ecology, engineering, conservation,....





## River Restoration NEWS

NEWSLETTER of the RIVER RESTORATION CENTRE

Issue 27  
July 2007

Tel/Fax: 01234 752979 Email: rrc@theRRC.co.uk

### Learning from Post-Project Appraisals of California Urban Stream Restoration Projects

*Shannah Anderson, University of California, demonstrates new cost effective measures for addressing post-project appraisal.*

In the United States, the number of restoration projects continues to grow annually. The Pacific coast has the largest number of projects and greatest investment overall<sup>1</sup>. Yet despite the vast number of river restoration projects implemented in California since 1980 (over 4,000)<sup>2</sup>, the effectiveness of the restoration investment has been largely unevaluated<sup>3</sup>.

Currently, there are few means for interested scientists and practitioners to gain insights from existing river restoration projects and to improve understanding of science and field practice issues that need to be considered within the design. Furthermore, access to relevant new scientific information as it emerges remains fragmented. The University of California at Berkeley is conducting 40 post-project appraisals of river restoration projects (PPAs) as part of the National River Restoration Science Synthesis (NRRSS). NRRSS is a national collaboration that aims to analyse the scientific

basis and success of stream river restoration projects to date, and disseminate lessons learned from the data to the greater restoration community.

A post-project appraisal is an evaluation of the effectiveness of restoration projects based on systematic data collection that responds to the following questions<sup>4</sup>:

- 1) Was the project built as designed?
- 2) Did it achieve its objectives?
- 3) Should steps be taken to address unanticipated effects?
- 4) How can we improve future restoration design?

Ideally, baseline surveys, design rationale, design drawings and post-project monitoring surveys are required to carry out PPA and analyse success criteria.

*Lower Codornices Creek in urbanised Berkeley, California - a 300m reach restored from a concrete-lined ditch in 2004. (Photograph taken from a kite by Chris Denton)*

*Continues on Page 2*

#### Inside this issue

	Pages		Pages
California Urban Stream Restoration Projects	1 - 3	River Sediments and Habitats project	6
Date for your diary: RRC Conference 2008	3	Floodplain Forest Milton Keynes	7 - 8
RRC Annual Conference 2007 a review	4 - 5	Quaggy Flood Alleviation Scheme	8

#### River Restoration Centre - Windows Internet Explorer



http://www.therrc.co.uk/index.php



File Edit View Favorites Tools Help



River Restoration Centre



## the River Restoration Centre

*Working to restore and enhance our rivers*

### News & Events



- the Centre
- Membership
- River Projects
- Demonstration Projects
- RRC Case Studies
- Register Your Project
- RRC Manual
- News and Events
- Conferences
- Workshops
- Newsletters
- Professionals List
- Publications
- Links
- Request further info
- Contact Us
- Home
- PROFESIONAL SERVICES



# Urban River Restoration Projects



Replacing hard with 'softer'  
Incorporating habitat potential  
Multi functional restoration  
Physical form & processes vs. constraints  
Strategic planning to link opportunities

# River Colne, Staines, London



*the River Restoration Centre*









# R. Marden, Wiltshire

*the River Restoration Centre*





# Marden design

Designed to physical forms defined by river processes

Include native habitat







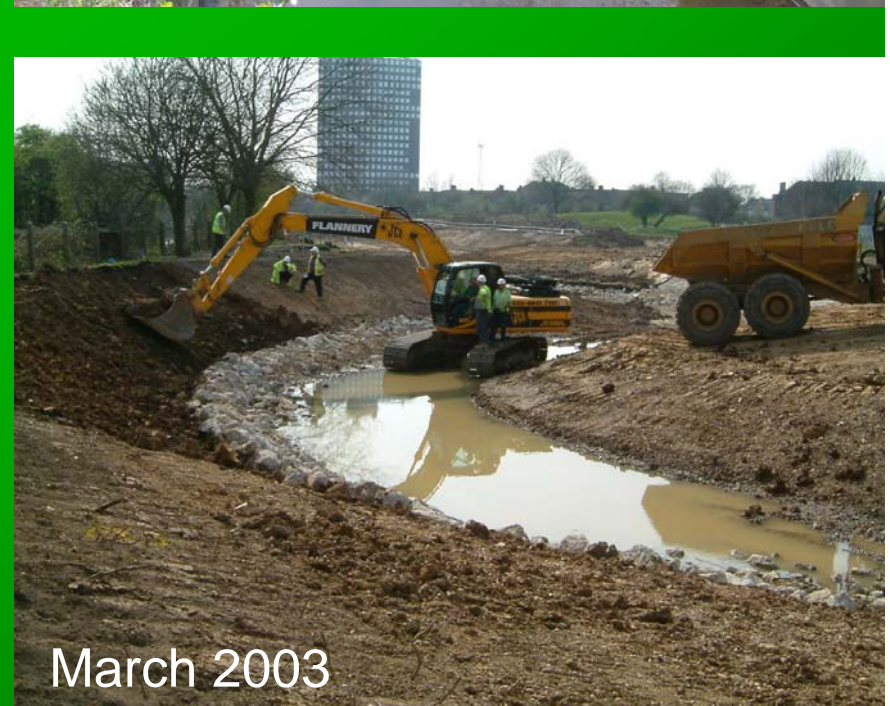
June 2006



May 2005



Concrete 2002



March 2003



# Social impact

storation Centre

Urban space,  
Accessibility,  
Quality of life,  
Ownership,  
Social justice.





# Sustainable Flood Management

*the River Restoration Centre*



## ■ Jubilee River, London

A '2nd River Thames' for Windsor & Maidenhead.

11km of shallow, linked, linear gravel bed pools.

Designed to reflect the habitat lost from the River Thames.

High land and property prices made the project viable at £115,000,000. =£10M per Km.

*Only in London!!*



# North London RR Strategy



Launched 2006 by the Mayor of London's Office.

Targeting strategic planners and local authorities

Promoting the social, economic and environmental benefits of better rivers in the capital

Impetus for a City of London demonstration project and a single whole 'London River Restoration Strategy'.

## 3. The benefits of river restoration

River restoration schemes can provide numerous benefits to both people and wildlife.

### Environmental benefits

Restoring the river's original processes of erosion and a rich variety of aquatic life.

### Improving the river corridor

Given space, rivers meander to create rich and fertile floodplain. This link between the river channel and the floodplain allows rivers to be healthy. For example, deep-water channels are alive during high and low water. A healthy river corridor allows animals to move between floodplains across the city.

### Improving flood storage

Defra's consultation document (2004) emphasises the importance of managing the risk of flood increased by future climate change. Floodplains provides a natural flood storage capacity of the whole river catchment. Flood protection downstream. Flood water during flood events reduces the risk of plants washed away.

### Addressing water quality

The water quality of London's rivers has improved that it was the primary reason for its flourishing. It also discourages rivers for recreation. Over time and money has been spent on improving the water quality of London's rivers.



## bringing your rivers back to life



A strategy for restoring rivers in North London





*the River Restoration*





# Policy Mechanisms 'constraints and opportunities'



From engineering dominated 'flood defence'  
and land drainage

to

ecological river restoration of habitat quality  
balancing the needs of society

# Policies and Directives

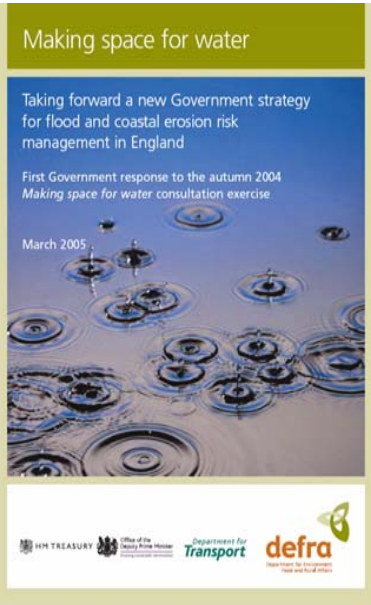


## ■ European Directives

- Habitats and Species Directive (1992)
- Water Framework Directive (2000)
- Floods Directive (2007)

## ■ UK Legislation

- Making Space for Water (E & W)
- Catchment Flood Management Plans (E & W)
- Sustainable Flood Management (S)
- Land drainage consent (E & W)
- Controlled Activity Regulations (S)

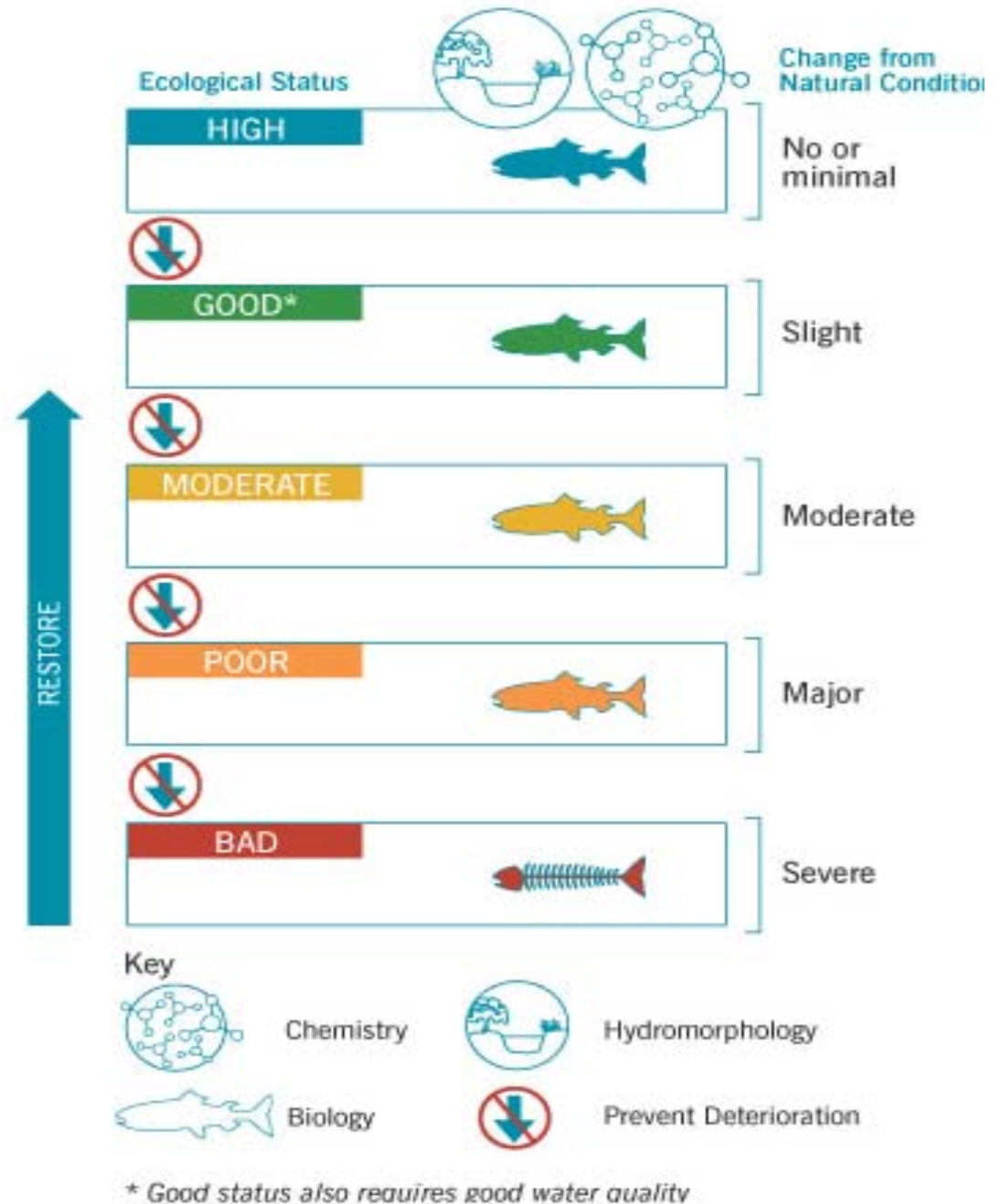




# WF Directive



- Adopted in EU, Dec-2000;
- Targeted at Aquatic Ecosystem Quality;
- Prevents Further 'deterioration';
- Enhance Aquatic Ecosystem Quality through a program of measures;
- Catchment scale river basin planning;
- Implement by 2015, or on 5 year 'cycles'.





# Restore degraded habitats to:



- Good Ecological Status (GES)

For all watercourses not impacted severely, or serving an over-riding economic/public service



- Good Ecological Potential (GEP)

For all watercourses designated 'Heavily Modified', or 'Artificial'  
Best compromise (ecol. vs. needs of society)





# Urban Rivers



- Urban river restoration can deliver sustainable and economic 'ecological' river management, also providing valuable social benefits. Multiple benefits.
- Strategic planning at the catchment scale can maximise opportunities and help minimise the constraints. Long term thinking.
- Engage with the local community at the earliest opportunity to encourage ownership and help secure future success. Public voice.
- Urban re-development can pose the greatest threat to rivers as well as the greatest opportunity.

Rare opportunities, biggest influence





# 4th ECRR RIVER RESTORATION INTERNATIONAL CONFERENCE

16-21 June 2008



Disseminating European and International good practice





the River Restoration Centre

## RRC Conference

Exeter, S. W. England

Apr 16-18<sup>th</sup> 2008

Abstracts by end 2007

Programme at end Jan 08

Bookings until March 08

[Info@theRRC.co.uk](mailto:Info@theRRC.co.uk)



## ECRR Conference

Venice, Italy

16-21<sup>st</sup> June 2008

**1 November 2007:** opening of bookings and abstract submissions

**15 January 2008:** closing of abstracts submissions

**15 February 2008:** final programme

**15 March 2008:** closing of bookings for "early birds" (-20%)

**31 May 2008:** closing of bookings and papers for proceedings

[Info@ecrr.org](mailto:Info@ecrr.org)

Martin Janes, RRC Manager and ECRR Board member

[Martin@theRRC.co.uk](mailto:Martin@theRRC.co.uk), [www.theRRC.co.uk](http://www.theRRC.co.uk), +44 (0) 1234 752979