Restoring River Connectivity

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RRC’s Vision and Purpose

_The River Restoration Centre_ – UK’s NGO ‘expert adviser and information provider’.

RRC champions the view of ‘better rivers’ and promotes the natural capital and social benefits of restoring our river systems for a sustainable future.

**Vision**

Naturally functioning, wildlife-rich river systems, valued by people

**Purpose**

To actively promote the re-establishment of natural processes, features, habitats and biodiversity of a river system, to support others to achieve this by collating knowledge, information and evidence to share best practice throughout the river and catchment management community.
Implementing the concept

Restoring Rivers
Understanding the catchment characteristics.
How our management impacts on the river and its ecology.
Restoring natural function requires a catchment-wide plan (e.g. England SSSI plans and IUCN report).

Restoration techniques/measures
Tailored and targeted intervention and management changes
• Natural process-focussed.

9 Government agencies
SNH, NE, NIEA, NRW, EA, SEPA, DFI Rivers, IFI, OPW & RRC, IUCN.
UK approach to river connectivity


• **Scotland** – morphology focus with new legislation, barriers and natural function of rivers. Pre-existing salmonid fish passage legislation.

• **England** – WFD & fisheries progress with partnership working & national ‘SSSI rivers’ programme. Also sustainable abstraction, landscape, floods.

• **Wales** – Connectivity addressed if constrains Sustainable Management of Natural Resources (SMNR), fisheries ‘projects’ focus to barriers (removal to passes). Plans for salmon rivers. 90 WFD barriers

• **N. Ireland** – Flood risk and Drainage - interest in barrier removal, but early stages. Fisheries led projects.
Scotland – a focus on morphology

  – RBMP II, morphology supplementary plan: *Improving the physical condition of Scotland's water environment: a supplementary plan for the river basin management plan* – 309 waterbodies.
  – Priority and pilot catchments (morphology, flooding, diffuse agricultural pollution, barriers)

• Policy integration.
  A common understanding to deliver Scotland’s objectives for:
  • the water environment, through the RBMPs;
  • managing flood risk, through the flood risk management strategies and local flood risk management plans;
  • decision-making in the marine environment, through a national marine plan and regional marine plans;
  • sustainable development, through local authority strategic development plans and local development plans;
  • conserving biodiversity through the refreshed biodiversity strategy.
Scotland - fish barriers

Improve access for fish migration in **369 water bodies**. Funds available, support. Migratory salmonids focus.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Action</th>
<th>Responsibility</th>
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</thead>
<tbody>
<tr>
<td>Prioritising action on barriers</td>
<td>Identification and prioritisation of barriers to fish migration and identification of proportionate mitigation options. A report on this methodology will be published during 2013, and the lists will be subject to full consultation.</td>
<td>SEPA / fishery boards and trusts / operators / Fish and Fisheries Advisory Group</td>
</tr>
<tr>
<td>Restoring fish passage at weirs and dams in use</td>
<td>Develop asset to allow fish passage in line with CAR authorisation.</td>
<td>Owner or operator</td>
</tr>
<tr>
<td>Restoring fish passage at weirs and dams not in use</td>
<td>Discussions with landowners about how barriers to fish migration can be addressed. Support landowner with application for CAR licence and applications for funding.</td>
<td>Fishery boards/trusts</td>
</tr>
<tr>
<td>Restoring fish passage at bridges and culverts</td>
<td>Provision of funding to support scoping studies and engineering works required to provide for fish passage. Where voluntary approach has not been successful, SEPA will require the provision of fish passage using restoration notices or licences as appropriate.</td>
<td>SEPA</td>
</tr>
<tr>
<td></td>
<td>Prioritised asset investment by business or organisation responsible for the asset. Where voluntary approach has not been successful, SEPA will require the provision of fish passage using restoration notices or licences as appropriate.</td>
<td>Asset owner / SEPA</td>
</tr>
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**Table 1: Summary of pressures affecting Scotland’s surface water bodies**

<table>
<thead>
<tr>
<th>Surface water bodies in Scotland (excluding groundwater)</th>
<th>3233</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface water bodies at less than good ecological status / potential</td>
<td>1261</td>
</tr>
<tr>
<td>Water bodies at less than good ecological status / potential because of physical changes (including changes to beds and banks, and fish barriers)</td>
<td>830</td>
</tr>
<tr>
<td>Water bodies at less than good ecological status / potential because of changes to physical condition of beds and banks</td>
<td>546</td>
</tr>
<tr>
<td>Water bodies at less than good ecological status / potential because of barriers to fish migration</td>
<td>375</td>
</tr>
</tbody>
</table>
Collating evidence

Page 1 of 3073 pages, displaying 1-10 of 30723 results

Helping to improve the connectivity of our river network
England - SSSI River restoration programme

44 rivers in England (2500 km), legally protected Sites of Special Scientific Interest (SSSI).
The best remaining examples of different river types and associated habitats and species.

- Published physical restoration plans and implementation of projects since 2011.
- Long term (50yrs+) objectives with a catchment focus and SAC/SPA funding.
- Learning from these) to help the wider river network.
- 2011-17 - £23M for £89km of river
England – Wider river network

108 local ‘host’ organisations managing a catchment plan for a wide partnership of stakeholders (Trusts, volunteers, etc).
[Trusted friendly local charitable organisations, not a government body.]

**e.g. River Improvement Fund £6M**

Over 4 years delivered:
- 146 multi-fish species barriers eased, passed or removed
- 87 eel barriers eased, passed or tidal flap valves installed
- 88 riparian habitat improvements
- Over 130 waterbodies with increased ecological potential
- 44 feasibility studies for further improvement work
- 2,800 km of rivers with improved ecological potential
Process and consents

- Weir removal/modification Feasibility Appraisal.
- Planning Permission application (16/0459).
- Impoundment Licence application (NW/076/0006/005).
- Environmental Permit application (EPR/RB3396JX).
- Consultation and formal agreement with weir owners.
- Consultation with local community groups, interest groups and Councillors.
- Consultation with Local Authorities and other relevant statutory agencies.
- Appropriate survey and mitigation for otters, bats, trees, crayfish, fish and invasive species.
- Design and tender of ground works.
- Health and Safety requirements.
- Construction Design and Management Regulations.
- Pollution control measures.
- Archaeological Watching Brief (Carleton Hall only, before and during works).
- Monitoring.
- Publicity – advising people of the planning permission etc.
Drivers and ‘barriers’

For..
- Wider ecosystem benefits.
- Natural flood management.
- Sometimes funding available, but not for all!
- Relinquish maintenance of historic structure (owner’s liability).

Against..
- Ownership and multiple owners, lost owners, cost & liability.
- Hydropower vs removal – 2 Gov’t departments, both with targets...
Guidance

Fish barrier assessment tools
Barrier recording phone Apps
Guide for planning, appraisal, design, construction and maintenance for fish passes, screens, etc.. (draft)
CIRIA *River weirs – Design, maintenance, modification and removal (C763)*

Many good case study examples.
Local ‘champions’ and experienced ‘trusted’ NGO’s.
Summary

Good work progressing at different speeds & effectiveness across the UK countries. Depends on river, designation, funding, priorities & opportunities.

E.g. River Irwell, Manchester – 17 weirs removed in 2 years

Photos - EA

Benefits - Increasingly understood by managers, local authorities (similar duties) and public.

More examples and information, coordinated messages of experts and NGO charity organisations.