

Prioritising and managing the assessment, easement and removal of barriers to fish passage

Rob Mitchell: rob@rafts.org.uk

What is the problem?

- Legacy of the Industrial Revolution – ‘abandoned’ weirs
- SEPA estimates 1800 dams/weirs unlicensed under CAR in Scotland
- Barriers to upstream/downstream migration of salmonids and other species
- Wider effects – connectivity of river systems and habitat corridors reduced



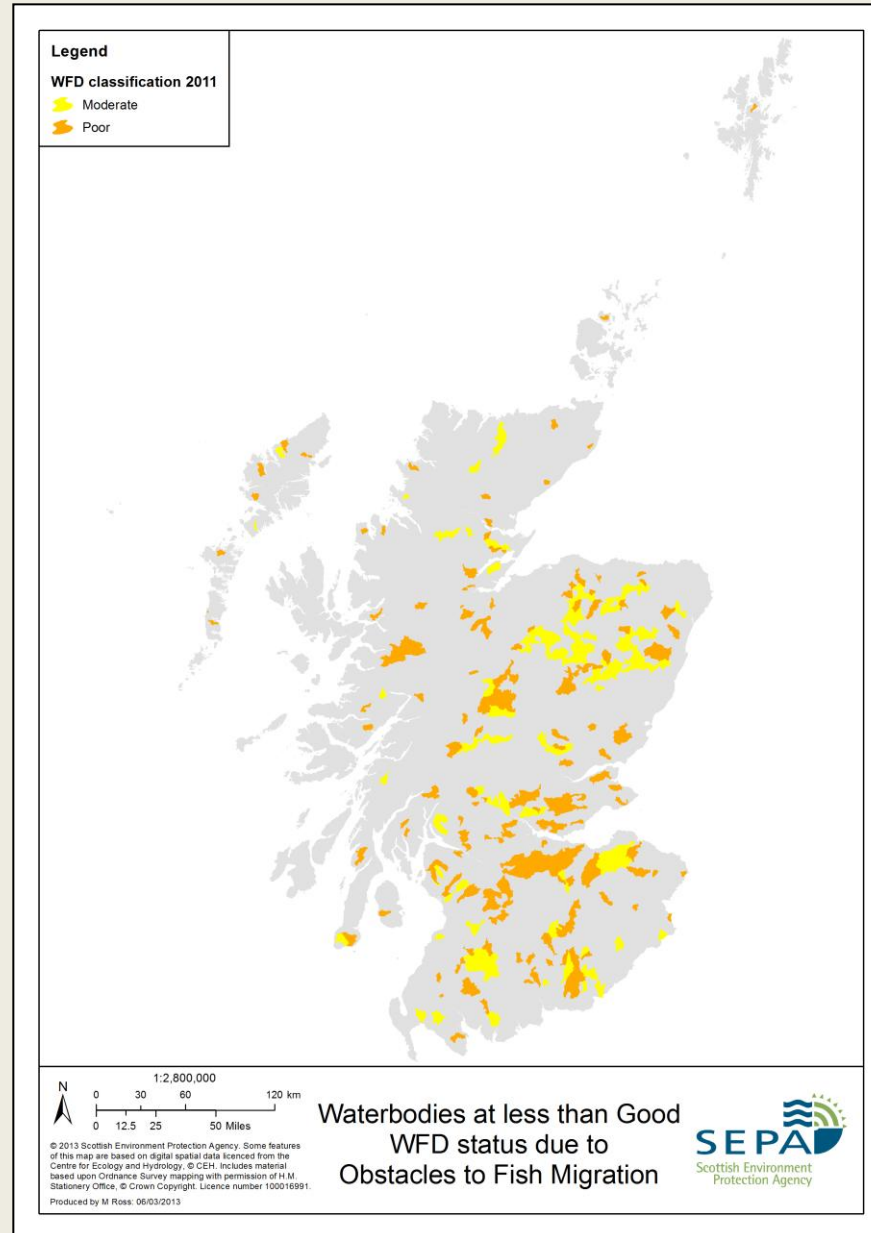
Trib. of the Galloway Tarff (Rowan Armstrong)

Ayrshire Irvine (Alasdair Brewster)



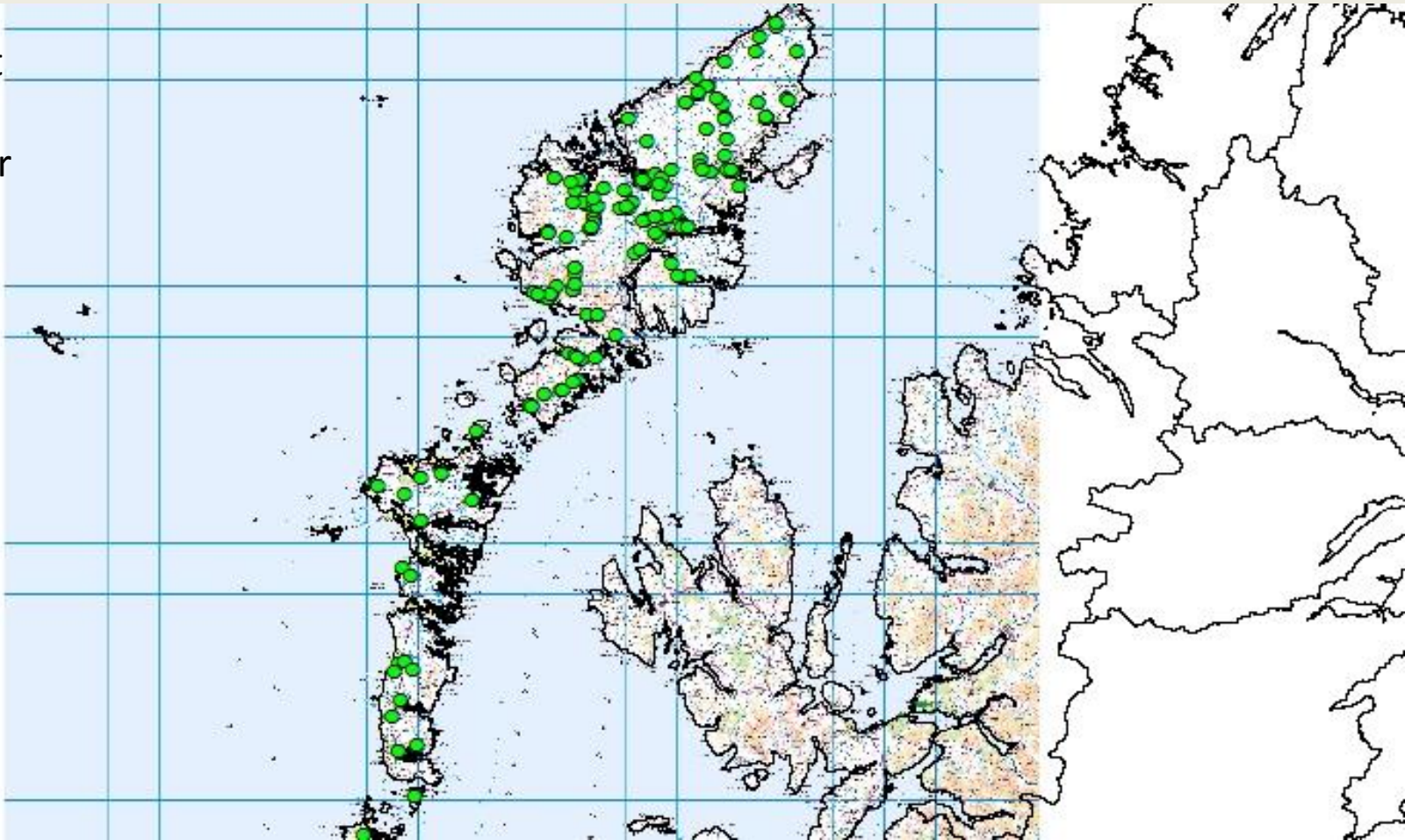
What is the problem?

Map illustrating the effect
of barriers on WFD
Classification (SEPA)



What is the problem?

GIS map output
showing SEPA
barriers data for
Outer Hebrides
Fisheries Trust



Aims of the Programme

- Identify target barriers through evidence-based prioritisation process
- Collate and present evidence in high-quality applications to SEPA Water Environment Fund
- Run tenders, appoint contractors and project manage various stages of engineering process (survey, physical works)
- Collaborate with all parties (fisheries trusts, SEPA, contractors, landowners etc) to achieve agreed goals

What are the options?

- Each barrier has different characteristics. NOT just removal in every case. Other options include easement (i.e. rock ramp) or fish pass installation
- Decisions take place in conjunction with all stakeholders, and rely upon landowner permission
- Optioneering stage of the process identifies preferred options based upon:
 - Size of barrier
 - Composition of sediment build-up (toxins)
 - Flood/erosion risk
 - Heritage value
 - Biosecurity value
 - Hydro applications

How do we prioritise?

- Initial prioritisation is based upon biological factors
- First step is to assign a barrier score. This has two components:

Barrier Passability Score: Habitat Score

- Barrier Passability Score is generated from electrofishing results upstream and downstream of the site, and/or from SNIFFER assessment of the structure itself. Both tools utilised where possible
- Habitat score is generated from walk-over surveys, and combines the quality and extent (availability) of upstream habitat

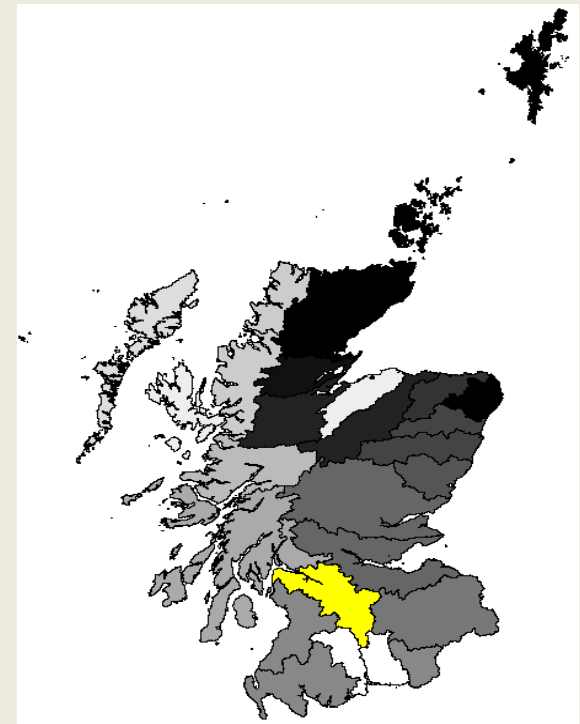
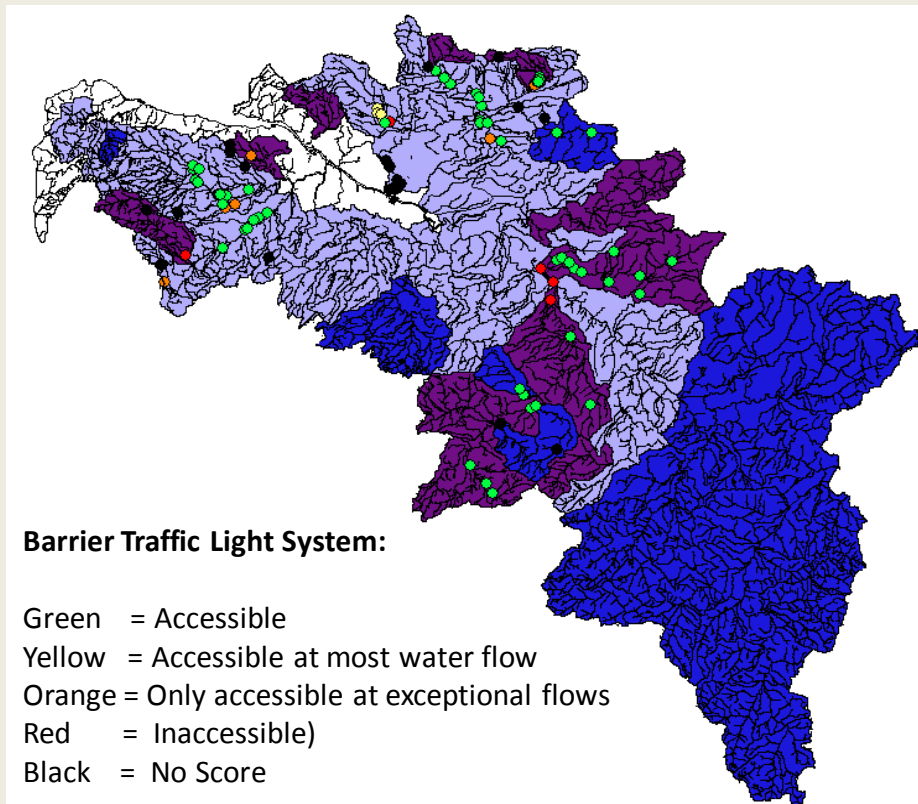
Barrier Mapping

Background SEPA Fish Barrier Classification

Light Blue areas = High - default (no man made barriers)

Dark Blue Areas = High - excluded ($\geq 95\%$ naturally inaccessible)

Purple Areas = Poor ($\geq 20\%$ inaccessible due to man made barrier)



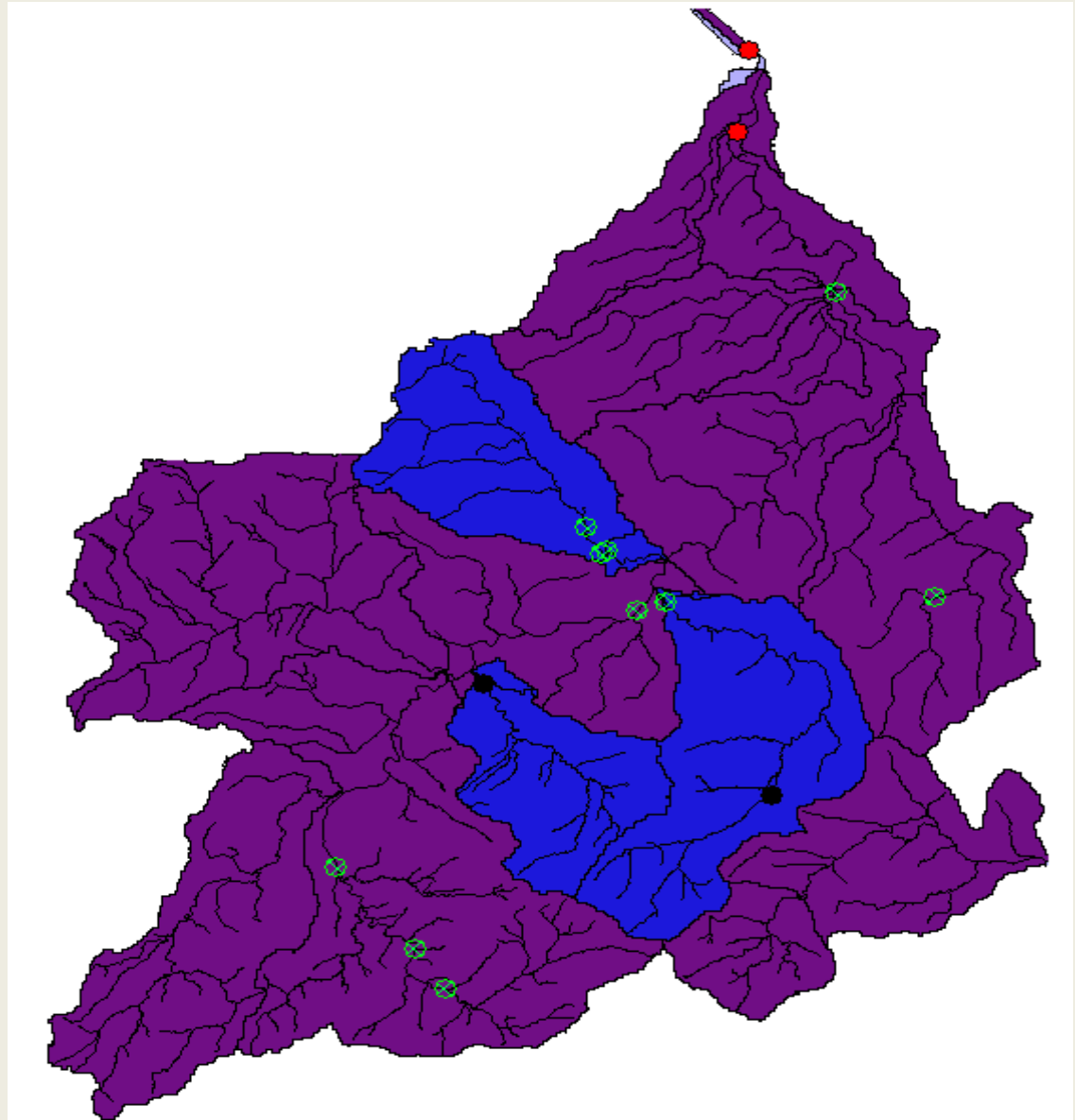
Clyde River Foundation area

Barrier Mapping

Avon Catchment Barriers: Passability

Solid barrier dot indicates
confirmed scoring.

Hatched barrier dot indicates
subject to confirmation.



Outputs of Prioritisation

- National and regional priority:
 - Catchment approach (multiple barriers in one catchment)
 - Single barriers with complex potential issues (flood risk, sediment composition etc)
 - Single or multiple barriers with no complex issues identified (and therefore potential fast-track projects)
- CAR licensed barriers which are obstacles to migration are included and results fed back to SEPA to assist in ongoing schedule of CAR license reviews.

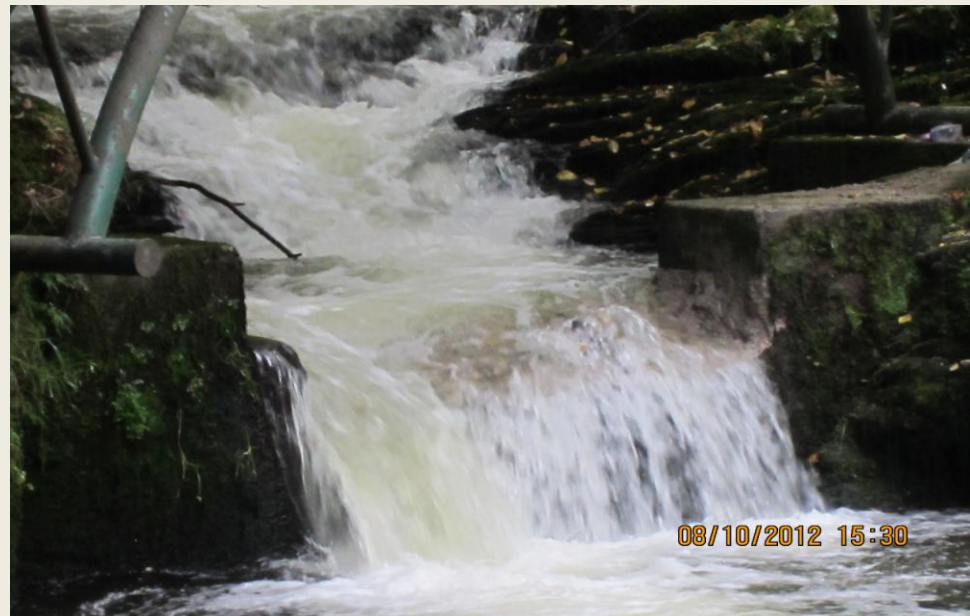
Project Implementation & Management

- Tender deadlines set shortly after SEPA decision. Process is open and transparent. All appropriate firms invited to bid, and independently scored against agreed criteria
- Contractor(s) managed in partnership with SEPA, including site liaison
- RAFTS prepares and submits final claims to SEPA
- Publicity and PR
- Ongoing monitoring by trusts to measure effect of work

Results



Linn Pot (River Isla; Deveron, Isla & Bogie Fisheries Trust) – before, during and after works



Results



Pluscarden (Black Burn; Findhorn, Nairn & Lossie Fisheries Trust) before and after works

Results



Evelix (Kyle of Sutherland Fisheries Trust) before and after works

Current position/next steps

- In 2012 5 barriers removed following successful applications to the SEPA WEF
- Currently 3 catchment projects, 6 complex single barrier projects and 3 'fast-track' projects at various stages within the programme
- Current projections value the programme at c.£7 million over the next 3 years (dependent on available funding)

Contact details

Rob Mitchell

Project Management Officer



24 Canning Street

Edinburgh

EH3 8EG

email: rob@rafts.org.uk

office: 0131 2722797

mobile: 07585 604528

