

# River Restoration

- Researcher & Stakeholder perspectives on the assessment & valuation jigsaw puzzle



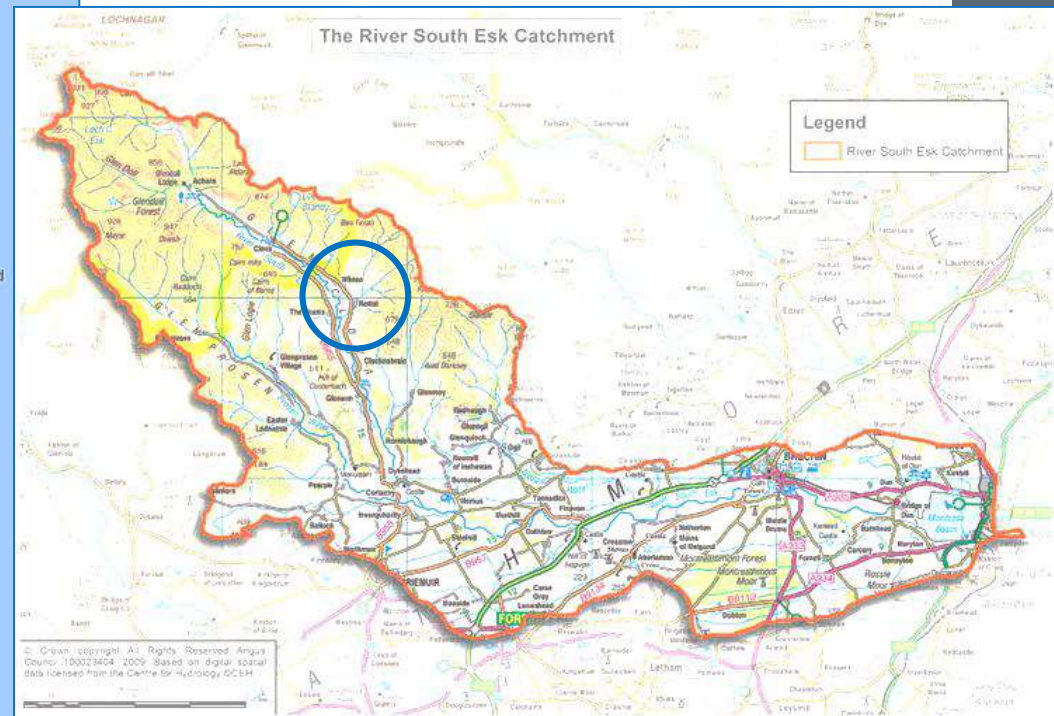
Kelly Ann Dempsey & Rebecca Wade



Edinburgh, 18-19<sup>th</sup> October 2017

# A case study - the Rottal Burn Restored River - Glen Clova, Scotland

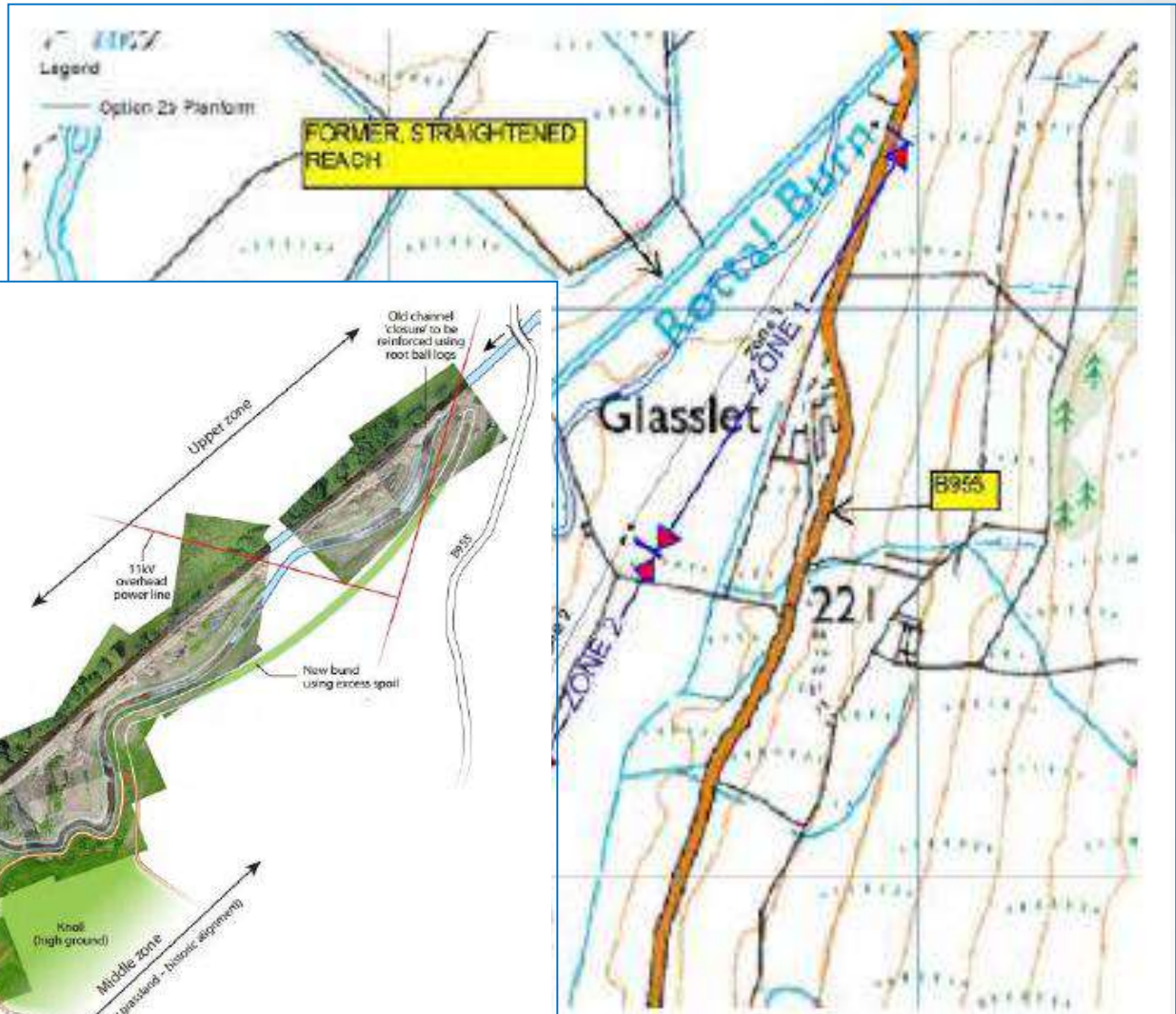
Collaborations, partnerships & multiple small projects have helped us to gain an interdisciplinary assessment of VN benefits.



## River South Esk and Rottal Burn

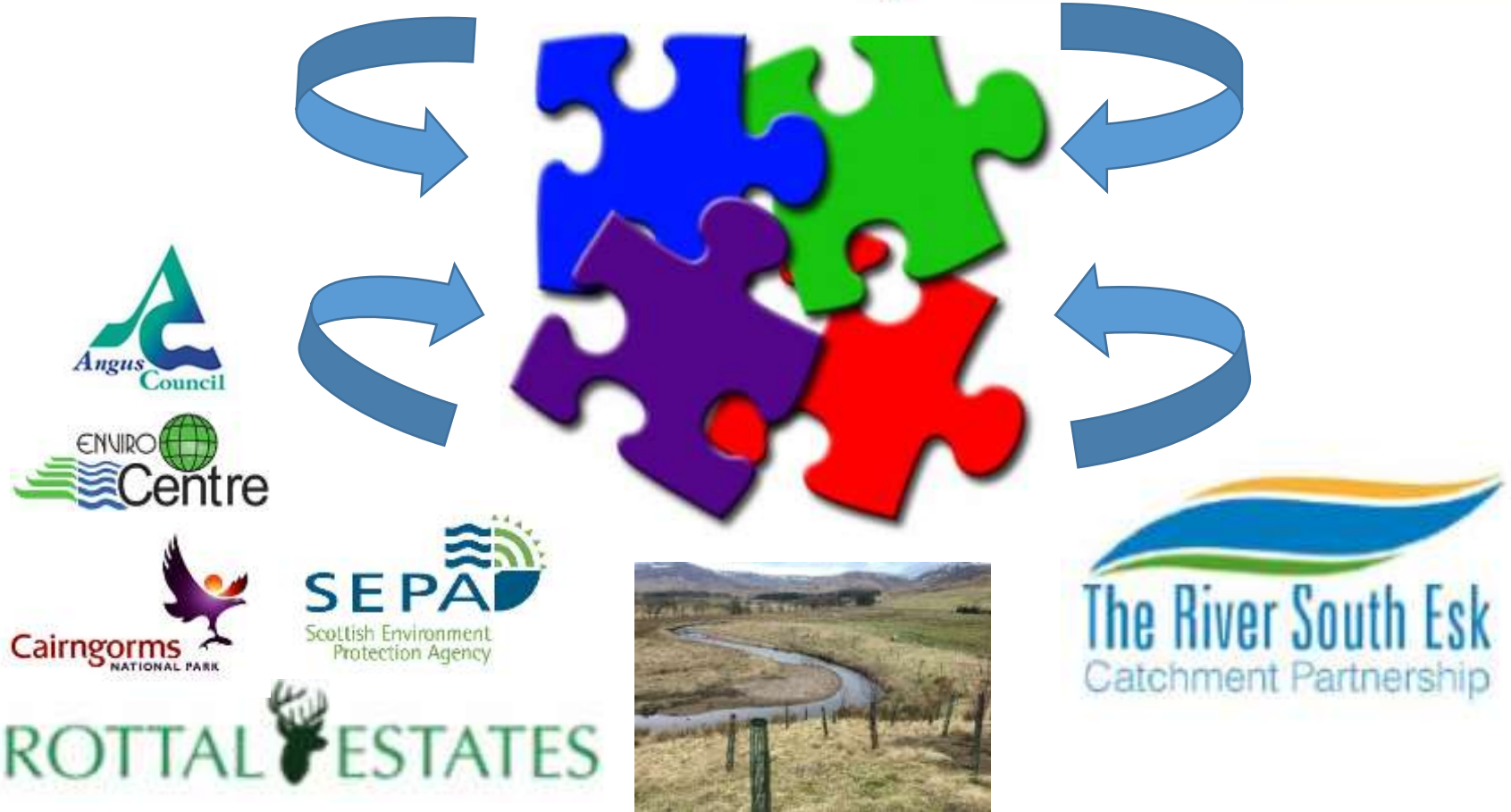
(image refs: Google, 2017; and CEH, 2013)

# A New Channel



**River South Esk and Rottal Burn**  
(image refs: Envirocentre, 2012 & 2014)

# Evidence and Data Jigsaw puzzle approach



# Student projects 2012-2017



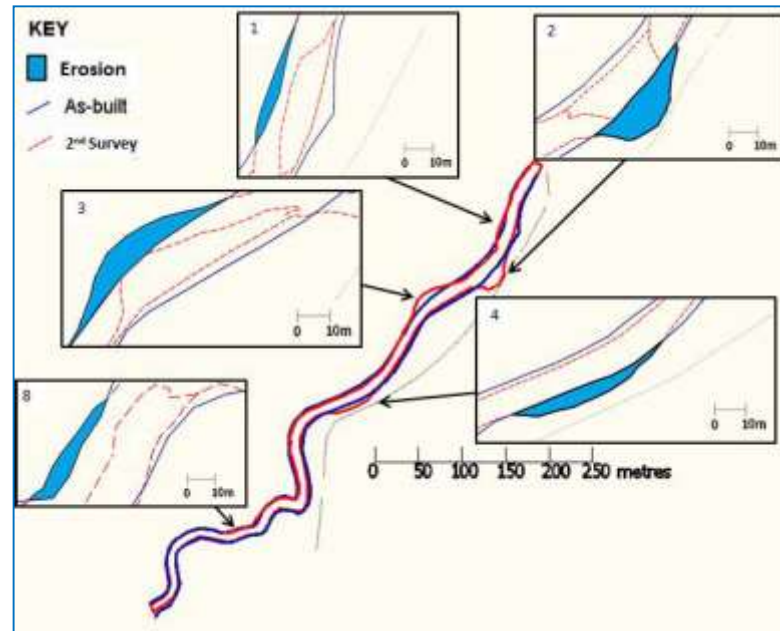
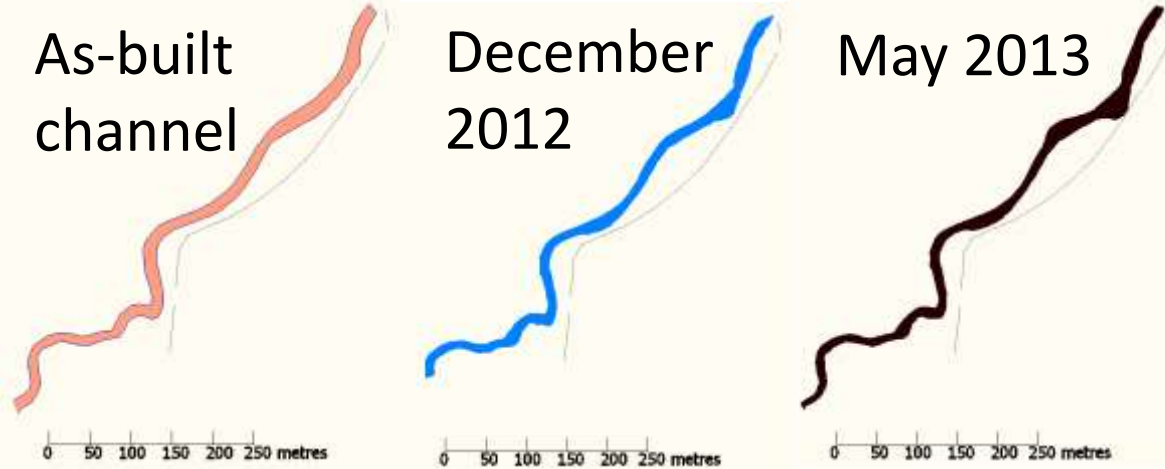
Nicola Day, Andrew Braid,  
Alex Graf von der Phalen,  
Ross Grant, Carina Gaertner,  
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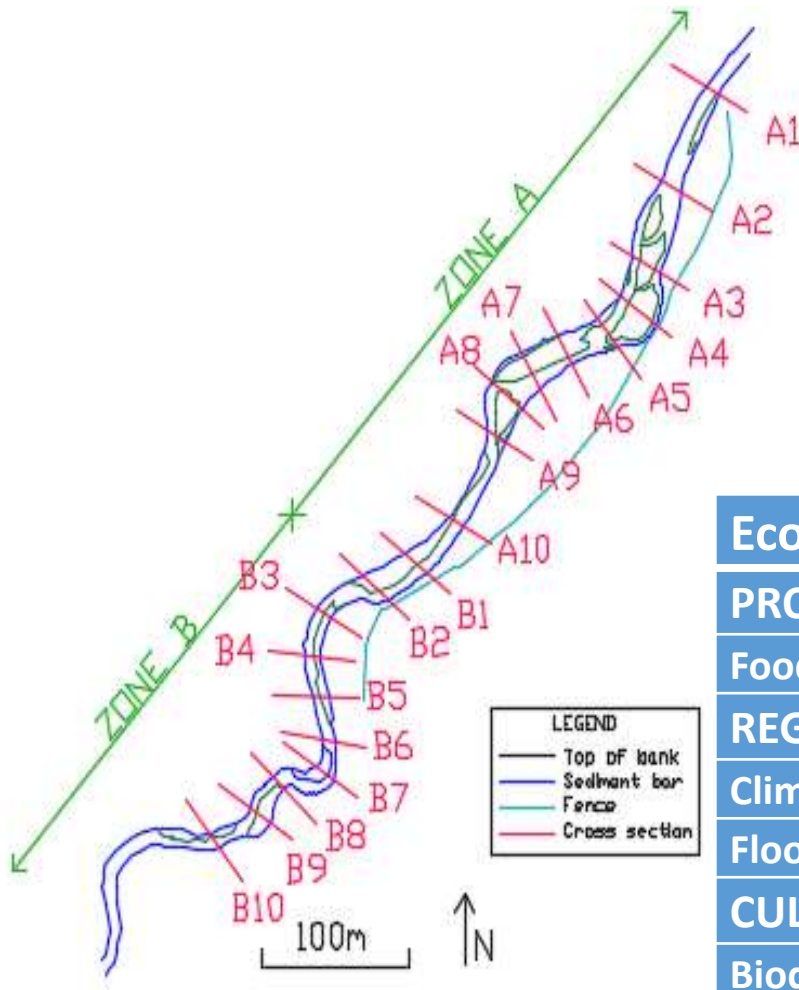


- Channel change
- Bend migration (before and after reinforcement)
- Sediment and flow characteristics
- River Habitat Surveys and Ecosystem Service assessment
- Natural Flood Management appraisals
- Stakeholder Perception interviews



# Morphological change





Ecosystem Service	Final service & value
<b>PROVISIONING:</b>	
Food:	Salmon / Fish £148,492
<b>REGULATING:</b>	
Climate:	Equable Climate £30,149
Flood protection:	Flood control £83,313
<b>CULTURAL:</b>	
Biodiversity:	Aesthetics/Inspiration £115,310
<b>TOTAL</b>	<b>£384,087</b>





# Catchment Partnership Approach



**Kelly Ann Dempsey**  
**River South Esk Catchment Partnership**



# Finding solutions together

**65 Actions**

**17 Catchment Objectives**

**7 Action Cards**

% in progress or complete

**Water quality - 88% (7/8)**

**Water resources 100% (4/4)**

**Flood management 100% (4/4)**

**River engineering 88% (7/8)**

**Habitats and species 95% (18/19)**

**Socio-economic 89% (8/9)**

**CMP delivery 86% (12/14)**



**What does this really mean?**

River South Esk Catchment Partnership



@southesknews

# Delivering solutions together



# 1 project = Multiple Benefits

## Integrated Catchment Management in Practice

The River South Esk Catchment Partnership leads in the delivery of ecosystem-scale environmental and improvement projects in the Angus area. One of only a handful of river catchment partnerships in Scotland, the partnership has implemented innovative work in this relatively unexplored, pioneering approach.

Years since its formation have been inspiring, demonstrating success in the real world. The various nature and traditional grassland fields and wetlands are being improved, leading to the return of the typical of watercourse habitats, including aquatic invertebrates, Great Oystercatchers, Golden Plovers and other species.

Other innovative projects in aid to local initiatives, for example, include work on bridges, recreation, and

allowing sustainable development of the river catchment area. The partnership, however, works to ensure that the catchment, including the watercourse, is managed in a way that is in the best interests of the partnership.

The partnership can be seen to be successful through the delivery of its initiatives and increasing levels of community participation. Local initiatives and activities include: planting native trees, creating new habitats and installing water saving devices. The work of a few partners has made a difference to the Angus area and for all of its residents.



## Collaborating to restore the River South Esk for Biodiversity and environmental benefits

### The River South Esk Catchment Partnership

The Esk Rivers and Fisheries Trust (ERFT) developed and led this project to restore the Rottal Burn to a more naturalised state, with a key role played by Angus Council, which was involved through the Catchment Partnership Officer (the only one in Scotland housed by a local authority), the Environmental Strategy Project Officer (LBAP reporting and biodiversity), the Development Standards planning team (EIA process), the landowner, SEPA, and SNH. This ambitious project was the largest delivered by the SEPA River Restoration Fund at the time.

The Catchment Partnership leads in the delivery of ecosystem-scale environmental improvement initiatives in the Angus area and helps to deliver Water Framework Directive objectives, and projects that specifically aim to improve biodiversity, SNH control, and generate socio-economic gains.



Monitoring the Rottal Burn 2017 - Graily Ann 2  
This image shows the ever changing course of carry out regular monitoring and the image also updated measurements. The tree line running once straightened water course followed.

## Scotland's Geodiversity Charter

Scottish GEODIVERSITY Forum  
2012-2017

www.scottishgeodiversityforum.org

## Climate Change Strategy & Action Plan



Angus Council 2012-2016



## Brechin & Montrose Locality Plan 2017

10th August 2017

Economy  
People  
Place



## Statutory Biodiversity Duty REPORT ON DELIVERY

1 January 2012 to 31 December 2014

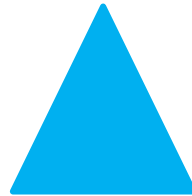
# Working together in the future

## New Catchment Management Plan



### Consultation:

- Has the 1<sup>st</sup> plan made a difference?
- Partners, stakeholders and communities - What's important?
- Engagement tools traditional v new?



### Align strategies:

- National, Regional and Local
- Multiple benefits - Feed back into action plans/strategies:

Tayside LBAP

Flood Risk Management Plans

NE Scotland SECAT

Land use Strategy

Scottish Biodiversity Strategy

### Focus on:

- Climate Change adaptation
- Community resilience
- Ecological coherence
- Woodland creation
- Volunteering & citizen science
- Economic development:

Farm diversification

Angling & wildlife tourism,

EU LEADER

# Thank you



## Get in touch



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River South Esk Catchment Partnership

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