



the River Restoration Centre

Working to restore and enhance our rivers

Delivering River Restoration: Recipes for Success

13TH ANNUAL NETWORK CONFERENCE



Restoring Europe's Rivers



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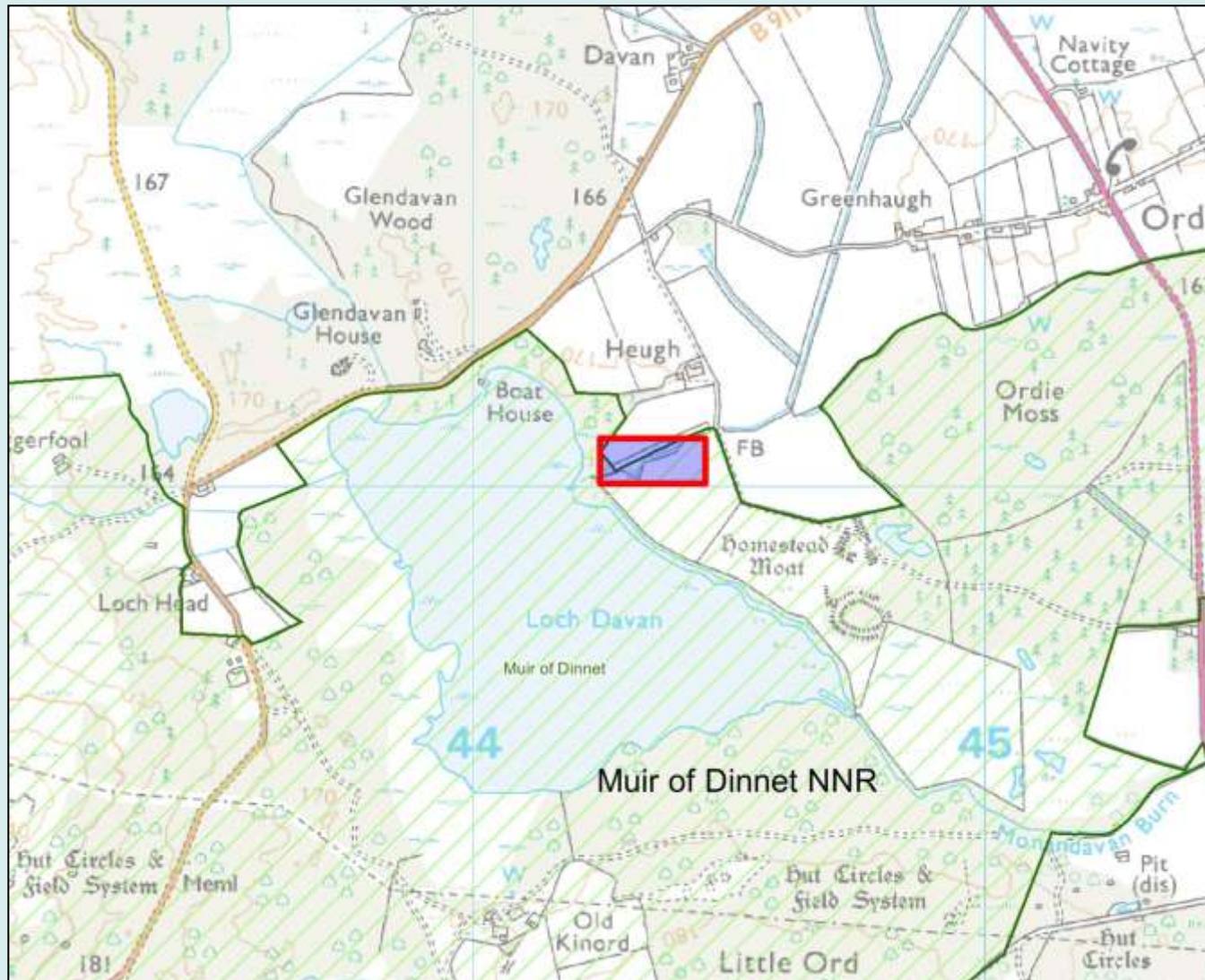


The Logie Burn Restoration Project

Dr Estelle Gill, Dr Susan Cooksley, Mr Martin Janes and Ms Catriona Reid



Project location



Why restore meanders on the Logie Burn?

- Improve habitat quality in the National Nature Reserve.
- Improve water quality and reduce sedimentation in loch Davan.
- Demonstration of meander restoration.
- A Dee Catchment Plan priority.

Project preparation

- Preliminary work done by 3 Dee Vision.
- Catchment-wide work e.g. salmon LIFE project, SNH Natural Care, Dee Catchment Management plan.
- Funding from Scottish Environment Protection Agency & Scottish Natural Heritage.
- Controlled Activities Regulations licence.
- Method statement & design.

Monitoring

- Monitor the morphological adjustment of the river and changes in sediment transport.
- Determine the benefit to habitats and species.
- Assess how well re-meandering functions as 'Natural Flood Management' i.e. storing and slowing water flow.

Main channel before work started



Old meanders



Burn before restoration



Burn after restoration



Precautions to protect natural heritage

- Otters present, but no resting places or holts.
- No freshwater pearl mussels.
- Fish spawning, 15th October deadline.
- No water voles.
- General pollution prevention measures.

























Habitat enhancement

- Wader scrapes
- Deadwood & reedmace (*Typha latifolia*) in back waters
- Bank re-profiling
- Willow planting in plugs and bare banks.
- Buffer strips
- More varied habitats.

Preliminary results: changes in flow types and substrates

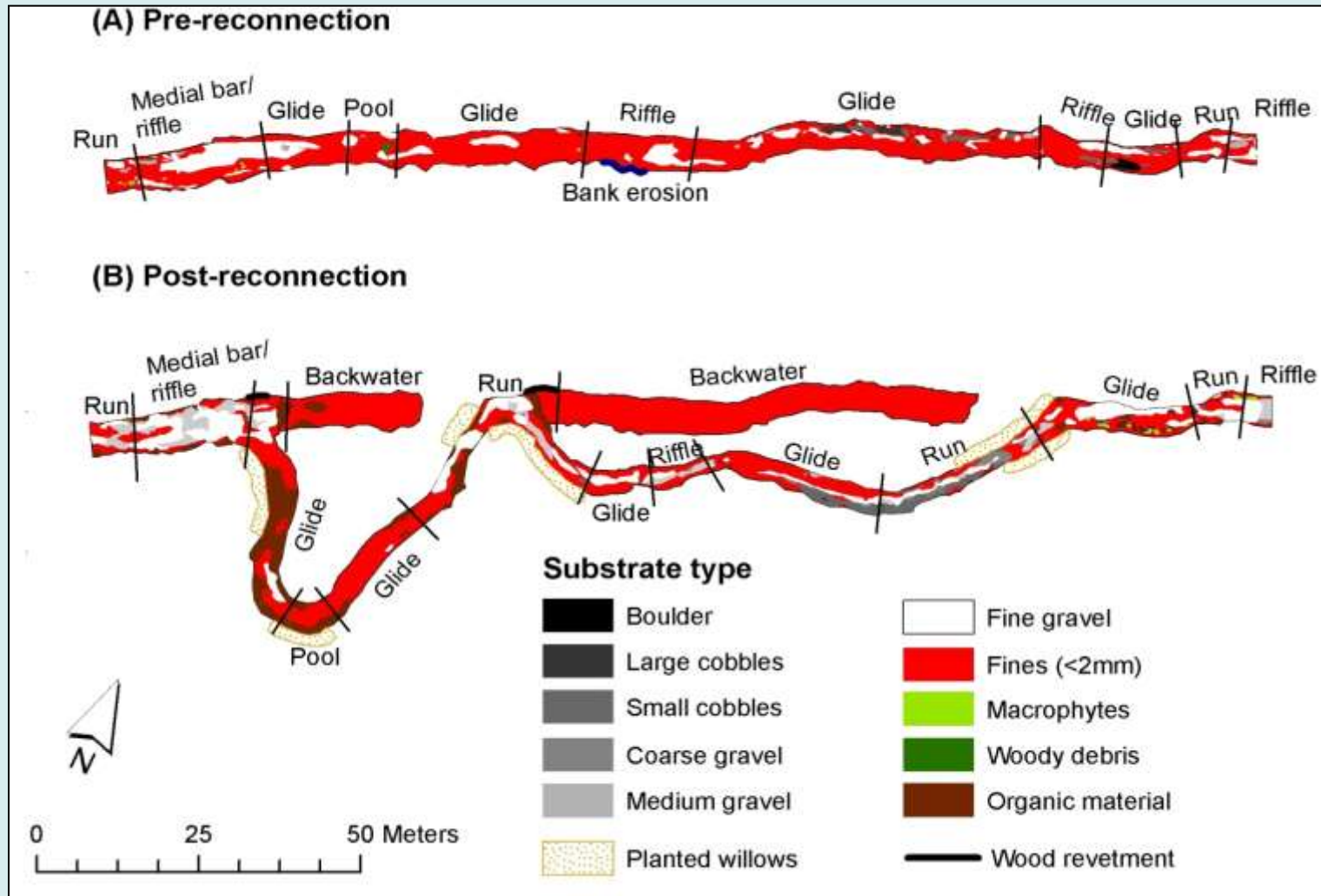


Diagram: Dr Stephen Addy, James Hutton Institute.

Preliminary results

- Meanders have a lower capacity than straight channel, could lead to more inundation of southern floodplain wet grassland?
- Lower sediment transport capacity, may reduce sediment transport to Loch Davan.

Dr Stephen Addy, James Hutton Institute - British Hydrological Society Symposium, Dundee, July 2012

River restoration: some things to consider

- Do protected species surveys early
- Differences in bed levels can be problematic.
- Make observations of river at high and low flows.
- Get estimates from contractors before applying for funding.
- Channel capacity and changes in catchment.
- Is it OK for the river to spill onto the floodplain in some places?
- Where are the new pressure points?

Thanks

Catriona Reid, Susan Cooksley & Dee Catchment Partnership, Castle Plant, River Dee Trust, 3 Dee Vision, River Restoration Centre, SEPA, The James Hutton Institute, Dinnet & Kinord Estate.

