

Upper River Nairn Restoration Project

The Aberarder Estate

Project completed in April 2018 with monitoring still ongoing

Restoration of channel and floodplain processes at Aberarder in the upper Nairn catchment were conducted at a catchment scale, extending across 60% of the length of the river at the downstream limit of the site. Following a 'process-based' approach, an 'assisted recovery' design strategy was adopted, permitting the river to self-adjust towards a quasi-stable 'dynamic equilibrium' morphological condition. The aim was to reinstate a greater potential for the development of lateral channel variability (through the evolution of alluvial bar forms and associated bank erosion processes) and connectivity with wetland/ floodplain environments.



Key objectives:

- Reducing localised sediment accumulation
- Improving flooding/ land drainage
- Increased physical variability and biodiversity
- Improving the WFD classification status of the River Nairn

Design components:

- >1 km channel realignment
- >3 km embankment removal
- Implementation of large wood structures
- Connection of three online wetland features
- Riparian tree planting



Outcomes:

The work has resulted in rapid evolution of the site to a condition of a naturally self-sustaining and physically diverse river environment with associated ecological responses. Removal of embankments and wetland establishment has increased floodplain inundation within the river corridor, providing direct benefits to physical and ecological processes but also improvements to agriculture through reduced flooding and improved drainage. There has been a marked response to the works in freshwater biota, including fish (salmonids) and invertebrates.

