



the River Restoration Centre

Working to restore and enhance our rivers

Technical Advice

Back Burn, Fife Hydromorphological and Restoration Assessment

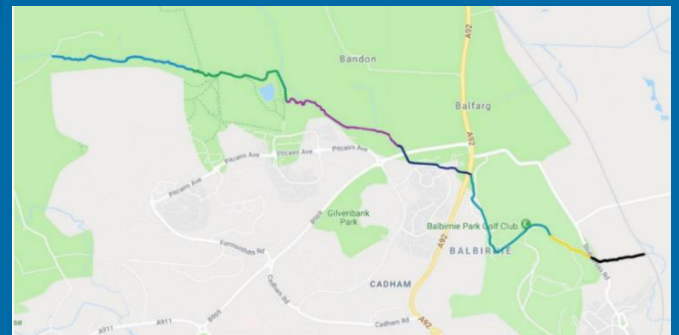
KEY INFO

Date: June 2019

Client: Fife Council and SEPA

Type: Hydromorphological assessment and identification of restoration options

Themes: Hydromorphological enhancement



Back Burn, a tributary of the River Leven, is a small Heavily Modified Waterbody (HMWB) which has Moderate Ecological Potential under the Water Framework Directive due to reprofiling, realignment, impoundment and pollution. Fife Council and SEPA commissioned the RRC to undertake hydromorphological assessments and options appraisals to create a prioritised restoration plan for a 6km section of Back Burn.

The RRC used desk-based assessments and a three-day walkover involving a River Habitat Survey and a Geomorphological Assessment to assess seven reaches of Back Burn for restoration opportunities. Six main problems were identified including disconnected habitats and floodplains, unnatural morphology, poor quality in-channel and riparian habitats, and fine sediment accumulation. Each reach was ranked against these pressures.

The RRC recommended a range of options such as reconnecting the old river course to restore connectivity, removing conifers to open up the canopy and allow riparian species to establish, and increasing buffer sizes to reduce pollution. The removal of weirs was also suggested as a priority to improve connectivity. The suggestions for improvement provide opportunity for further investigation to meet Good Ecological Potential targets.

Reach contribution to catchment impacts						
	Disconnected habitats	Un-natural morphology	Poor quality in-channel habitats	Fine sediment accumulation	Poor quality riparian habitats	Disconnected floodplains
Reach 1	1	0	0	3	1	0
Reach 2	3	3	3	3	3	2
Reach 3	0	2	2	0	1	2
Reach 4	3	3	3	3	3	3
Reach 5	3	3	2	2	2	1
Reach 6	0	2	2	0	3	2
Reach 7	2	3	3	3	3	2