

## Science and Monitoring Underpinning River Restoration: A Case Study

**Authors :** Geoffrey Gilfillan, Peter Barham, Lisa Smallwood, David Harper

**Abstract :** The 'Welland for People and Wildlife' project aimed to improve the River Welland's ecology and water quality, and to make it more accessible to the community of Market Harborough. A joint monitoring project by the Welland Rivers Trust & University of Leicester was incorporated into the design. The techniques that have been used to measure its success are hydrological, geomorphological, and water quality monitoring, species and habitat surveys, and community engagement. Early results show improvements to flow and habitat diversity, water quality and biodiversity of the river environment. Barrier removal has increased stickleback mating activity, and decreased parasitically infected fish in sample catches. The habitats provided by the berms now boast over 25 native plant species, and the river is clearer, cleaner and with better-oxygenated water.

**Keywords :** community engagement, ecological monitoring, river restoration, water quality

**Conference Title :** ICSWRM 2018 : International Conference on Sustainable Water Resources Management

**Conference Location :** London, United Kingdom

**Conference Dates :** February 15-16, 2018