



Catchment Restoration Fund (CRF) Project Briefing Note

Welland for People and Wildlife

Welland for People and Wildlife is a partnership project that will use CRF funds to restore 2.3km of the River Welland and its tributary the River Jordan, as they run through Market Harborough, Leicestershire, in largely trapezoidal channels that were constructed in the 1970s.

The low flows were almost non-existent in such a poor quality channel so small low-flow weirs were constructed to impound water in the summer. These weirs lack hydrological function and the ponded water behind them fills with rubbish, scum and attracts supermarket trolleys.

The Welland in Market Harborough is thus a typical urban river with minimal ecological value and little connection with the community. Both the Welland and the Jordan are of 'poor' Ecological Status under WFD, failing on diatoms, macrophytes, fish and phosphate.

Yet the Welland runs for 1.5 km through parks with walkways, upgraded as a Millennium Path, whilst bridges cross the Jordan and a church and school border it. Hence, both watercourses are potentially seen by many of the inhabitants of the town and surrounding villages, when shopping, walking or playing.

The opportunity now exists to turn eyesores into a central cultural feature, to improve water quality & fish populations and to improve biodiversity and WFD status at the same time.

Through restoration work the Project will seek to correct issues the most important being:

- Uniform, monotonous trapezoid channels, constructed in the 70s.
- Uniform channel banks, overgrown with nettles and invasive species.
- Almost non-existent summer low flows due to over-widened channels.
- The weirs, each of which presents a significant barrier to fish migration and cumulatively are a major limiting factor for migratory fish stocks (including eels and sea trout) in the River Welland.
- The loss of river habitats, riffles and pools as a result of straightening and over-widening the channels.

Description of Works

To address the issues faced by the Welland as it runs through Market Harborough, the following activities will be implemented:

- The removal of all weirs and the design and creation of a new 2-stage channel, with correctly-sized meander spacing and habitat mosaics (riffle, pool, runs, bars) in the low flow channel, without compromising the flood defence capabilities of the high flow channel.

Key facts	
District	Anglian River Basin District
Catchment	Welland
Outcomes	<p>Natural flow regimes - riffles and pools alternating in a new low flow channel.</p> <p>Habitat improvements - a natural mosaic of biotopes in riffles, pools, runs and bars.</p> <p>Biodiversity improvements - increase in species as a result of improved habitat diversity.</p> <p>Social / cultural benefits - a recreational and educational environment for people of the town.</p> <p>Improved water quality - biotope diversity will increase the ecological processes of the river, such as nutrient uptake.</p> <p>Improved ecosystem services - as a consequence of all the above.</p>
Start Date	September 2012
End Date	March 2015
Budget	£628,000 (£518,000 from CRF)
Project Partners	Environment Agency; Defra; University of Leicester; Harborough District Council; Welland Valley Partnership

- Riparian improvements, connected with the low-flow channel through lower bank gradient, which allow planting with appropriate wild flower mixes.
- Designs that are tested against the existing channel capacity using the EA's flood defence model to ensure that flood defence capacity remains or is enhanced.

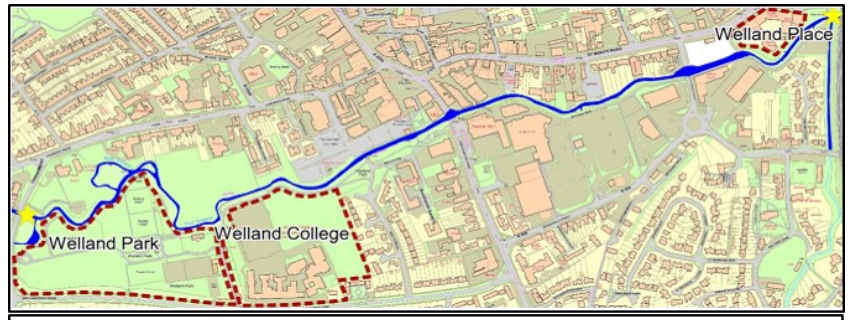


Figure 1: The rivers Welland and Jordan in Market Harborough with landmarks identified by red dotted lines.

- Each weir and impoundment replaced by a pattern of riffles, pools, bars that will build up the mosaic of habitats that will enable a) improved fish spawning on more, cleaner gravels b) improved fish feeding on more invertebrate food, b) more diverse macrophyte growth in pools and c) increased diatom diversity colonizing stones in fast-flowing water. As a consequence, this 2km stretch of channels when re-evaluated for WFD after the project will increase its status on these 3 criteria.
- Biodiversity will be enhanced through the increased ecological activity created by the greater physical diversity.
- The impacts of this project improvement, taken together with the EA's planned construction of a fish pass to the Market Harborough gauging station, mean that a 20 km long stretch of the upper Welland/Jordan will be opened to fish movements, so that the potential benefits, both to biodiversity, fish and the improvement of WFD status, will extend upstream of Harborough for the first time.
- The river upstream of Harborough has good physical diversity, which will support fish populations, subject to its size constraints as a headwater stream, once Harborough ceases to be a barrier.
- Restructuring of the low-flow channel and linked increase in physical diversity of the riparian banks, leading to an increase in biodiversity of aquatic and semi-aquatic plants.
- Creation of fast-flowing, stony riffles through the Harborough section, where they do not now exist, will increase habitat for diatoms and many invertebrates rare in or absent from the section.
- Community involvement before and during the project will ensure that the citizens are aware of the river, enhanced by information boards along the Millennium Way and the involvement of local schools and societies.
- Post-project monitoring will demonstrate, quantify and publish this biodiversity and social improvement of the rivers' status in Market Harborough.

What will success look like?

Success will be apparent when sightings of otters and kingfishers are too frequent for the newspapers and radio to bother with the reports; when unusual damselflies such as the white-legged, known from the rural river both upstream and downstream of the town are seen patrolling territories along the banks in the summer and peoples' idea of a good summer afternoon is to walk along the river bank watching children paddling in the gravels and shrieking with delight.

The Welland Rivers Trust is a charitable organisation, which works with all relevant stakeholders and partner organisations to ensure that our restoration project provides benefits both people and wildlife in the whole river basin. Whilst it is leading restoration of the rivers in Market Harborough, It is striving to give the project community ownership in order to ensure longevity and long-term monitoring. In this way, the Trust will ensure that existing and new volunteers are committed to work on a river that is more than just helping solve the town's litter problem.

About the team

Project Manager: Peter Barham

Other contacts: David Harper (Ecological Scientist) Sean Avery (Hydrologist), Victoria Robinson (Community Engagement and Comms), Lisa Smallwood (Ecologist), Nick Coombs (Hydrology and GIS), Sam Gandy (Biodiversity).

Other contacts

Environment Agency: Simon Bonney



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