

Montford Weir Removal, River Calder Improvement Project

Weir removal, habitat enhancement, bank stabilisation, woodland planting

Tributary and Main River: Pendle Water, River Calder

County: Lancashire

Project start date: June 2010

Project end date: October 2010

Length: 500m

Cost: Unknown

Grid reference: SD840369

Site background and objectives

The River Calder Improvement Project is an ambitious project led by the Ribble Rivers Trust. While there are existing stretches of natural gravels and riverine features along parts of the river, weirs are a major constraint on fish passage. Pendle Water, upstream of the Calder has fantastic potential for spawning grounds and the wider project aims to:

- Ease passage for a number of fish species including trout, to encourage upstream migration.
- Where possible, enhance riverine habitat.

Three projects were completed in mid/late 2010. Montford weir is the focus of this case study but a technical case study on the weir removal project at Padiham Weir is also available online as one of the 'RRC's Manual of River Restoration Techniques' case studies.

Design and Implementation

This project offered a greater opportunity for multiple benefit restoration focusing not only on weir works, but also habitat enhancement, bank stabilisation to combat persistent erosion close to the M65, and park-wide woodland planting. Cobbles from the removal of the structure were left in-stream, offering fish refuge.

Subsequent performance – RRC's views (2010)

Fly fisherman have been seen on site for the first time following works. While there has been erosion on the outer bend upstream, this was anticipated and is being monitored. The backwater effect has been significantly reduced, leaving a diversity of flows. A number of exposed large surface drain pipes which have subsequently fallen into the river are to be removed and reused, and large willow on site is to be cut back and reused as additional bank support. While soft-engineering was considered on the outside of one wide meander bend, a rock wall will be required to prevent further erosive action, due to the river's close proximity to the M65 and a sewer.

The bed upstream is partly concreted along roughly 150 metres, and this will be demolished to return to a more natural channel. The Forestry Commission has secured funding to plant along the river corridor until 2012, and the existing public access footpath is to meander with the river through the wood. The Ribble Rivers Trust has completed and submitted all of the paper work for the landowner to tie it in with the habitat scheme.



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The removal of Montford Weir (above) has transformed the previously impounded section (right). A lowering of the water level upstream following the weir works has uncovered gravels and this section of Pendle Water now has greater flow variation (below).



Accelerated erosion of a meander bend upstream of Montford Weir (left) illustrates the importance of identifying and mitigating risk. Adaptive management continue here.

The RRC's visit to this site and other sites on the River Calder in September 2010 raised other key messages:

- Public consultation is extremely important and should be planned and managed effectively. Local people's livelihoods are very important, and by developing strong relationships and clearly demonstrating the intended benefits, it has been shown that initial anxiety can be overcome.
- Surveying, health and safety and required legislative checks accounted for a large share of the project and as such, it is a very important consideration to make when starting weir related works.
- The importance of timing the works to avoid coincidence with seasonal requirements of species (and the worst of the weather!) should not be underestimated.
- An experienced contractor in the specific nature of river works (e.g. deconstructing weirs), and preferably previous working relations is worth paying for in projects with a higher risk factor.
- The Trust developed a catchment-wide monitoring database to help them prioritise/ deliberate future project work.

Acknowledgement of Project Partners: [Environment Agency](#) and the [Ribble Rivers Trust](#)



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