

# Dove Weir Removal, Dovedale

Techniques: Weir removal, Re-wilding techniques using large wood and trees

**Project location:** Dovedale, near Thorpe and Ashbourne

**River:** Dove

**County:** Derbyshire

**Project start date:** July 2010

**Project end date:** Aug 2010

**Length:** ~1km

**Cost:** £2,000 (tree works only as weir removal through volunteers)

**U/S grid reference:** SK140534



*In the reach adjacent to the LDFFA, a series of weirs at frequent intervals are constraints, preventing connectivity of the Dove upstream.*



*Following removal of the weir, turbidity of the flow reduced significantly and in-stream gravels and vegetation established very soon after works.*

## Site background

The valley of Dovedale, a Site of Specific Scientific Interest (SSSI), popular with both tourists and anglers, lies at the south of the Peak District National Park, and is home to the River Dove. Historically, the Dove has been heavily modified with weirs constructed throughout the valley roughly every seventy metres. Weirs were and remain popular with the public, for their visual impact and aesthetic beauty. They were installed initially to provide deep slow pools for stocked fish but modern anglers have moved away from this practice to one that is more naturally balanced. The weirs restrict sediment transportation, leading to the accumulation of sediment behind the weirs. This restricts downstream sediment supply and impacts the flow conditions upstream.

## Objectives

The Leek & District Fly Fishing Association (LDFFA) undertook work to:

- Remove one artificial weir to restore a more natural river flow.
- 'Re-wild' the river to enhance habitat for fish using large wood and trees.

## Design

1) **Weir:** The works involved the removal of one weir along the stretch of the river. Following deconstruction, care was taken to leave the removal looking 'complete' to avoid public attempts to rebuild the weir - an interesting point to take away!

2) **'Re-wilding':** Trees were felled and wood wired into place in-stream to allow material accumulation and to create a diversity of depths, flow patterns and substrates. New habitats (aquatic and riparian) have formed and river sinuosity has increased. Remaining woody debris was intentionally placed in piles on the bankside along with a sign explaining its ecological purpose. It was hoped that this would make the public think twice about removing it. The tree drops were up to 60ft, but small wood arranged around it has enabled the creation of a range of features.



*A 60ft tree felled as part of the Dove's 're-wilding'. The photo demonstrates the extent of the vegetation development in only 6-12 months following the works.*

## Subsequent performance - RRC's views (2011)

1) **Weir:** Twenty metres upstream of the weir, there has been a significant drop in water level and pool and riffle sequences have established naturally as a result of increased sediment transportation, creating a range of flow conditions in-stream. New plant species have begun to establish at the start of the riparian zone. Water clarity has visibly improved both up and downstream.

As an SSSI and a National park, access was limited to equipment that could be transported by hand. Parts of the weir could not be removed with this equipment and were left as features in the river, highlighting the significance of access.

2) **'Re-wilding':** A year on from felling, the trees have created a range of structures in the river that have increased plant establishment and created a variety of flow conditions.

A fish population study has been carried out in 2010 and 2011 to assess the project's success and monitoring is ongoing.



**the River Restoration Centre Case Study Series**

This site was last visited by RRC staff on 3<sup>rd</sup> August 2011

Tel/fax: 01234 752979 Email: rrc@therrc.co.uk <http://www.therrc.co.uk>