

# Tregaron Flood Alleviation

Site Location:	>> Tregaron, South Wales
Client:	>> Environment Agency
Contract Value:	>> £385,000
Duration:	>> 14 Weeks



## HISTORY

The Afon Brenig is situated in Tregaron in Ceredigion, mid Wales. The river is an upland tributary of the Afon Teifi, which flows into Cardigan Bay at Cardigan.

The Afon Brenig is located within the Afon Teifi SAC and SSSI which is designated due to the vegetation, fish and mammals communities it supports.

Tregaron previously had a long history of flooding, with up to 133 residential and commercial properties at risk. Those flood defences that were in place prior to this scheme formed part of buildings or property boundaries and were not specifically intended to be flood defence assets.

## SCOPE OF WORKS

The flood defence scheme was designed to withstand a 1 in 100 year flood event.

As part of the flood alleviation scheme, the defences through the town were formalised.

Block stones were placed on a geotextile scour apron along the river banks to prevent scouring out of the proposed wall foundations.

New ready rock walls would be installed to fill in or raise the existing venerable existing flood defence.

The river banks were strengthened by installing and fixing a special ready grown river vegetation turf on top of the block stones.

The river bed levels were designed to provide pools and riffles that would better support the fish and animal life in the river.



# Tregaron Flood Alleviation



A 200m length of the river was diverted through flume pipes to allow works to the river banks to be carried out. This would also minimise the amount of sediment that could have entered the river during construction.

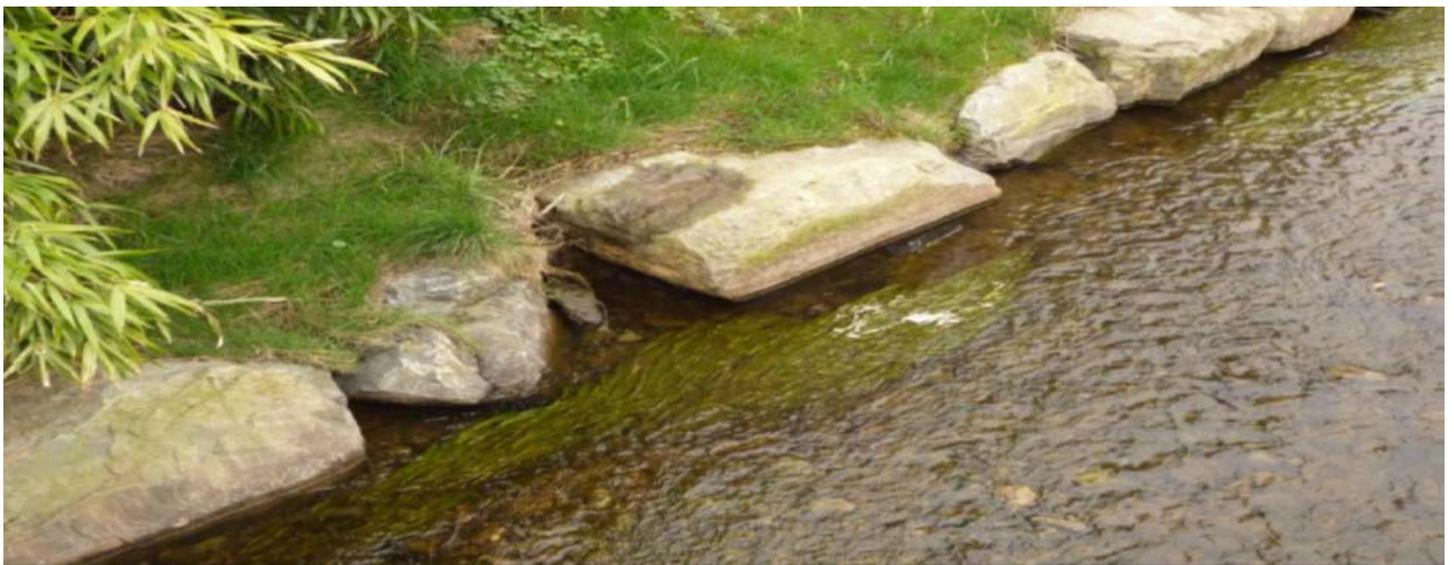
The dry river bed, enabling the block stone bank protection to be installed. The footbridge in the background had to be raised 1.5m to afford access for the excavators.

The sections of ready rock walling helped to secure the flume pipes before being used in the walls.

Although the scheme now provides protection for the 133 properties and buildings in Tregaron, the regrading of the river bed and deepening of the bed levels in the reaches through the centre of the town has created a series of riffles and pools, with lateral gravel bars at the channel margins.

This has created a range of physical conditions that can support a variety of ecological niches.

The installation of rock revetments on either side of the river has successfully narrowed the channel and created riparian habitats in a reach that previously had entirely artificial banks.



Lewis Civil Engineering Ltd, Mwyndy Cross Industries, Cardiff Road, Pontyclun, Rhondda Cynon Taff. CF72 8PN

Telephone: 01443 449 200 Fax: 01443 449 201

Website: [www.lewis-ltd.co.uk](http://www.lewis-ltd.co.uk) E-mail: [enquiries@lewis-ltd.co.uk](mailto:enquiries@lewis-ltd.co.uk)