

# AquaticEngineering

Working Above Water, On Water & Under Water

## Case Study : River Avon – Deflector Plate Installation



Client: Network Rail

Contractor: Dyer and Butler

Duration: 2012 - 14 weeks

### Royalty Fishery Scour Protection

Due to the excessive rainfalls during the second half of 2012 and the resulting rise in river levels & flow rates, it proved impossible to install the proposed grout mattresses on site. These were to be placed around a pier supporting the bridge crossing the River Avon carrying the London Waterloo to Weymouth line operated by South West Trains.

The grout mattresses were to be placed in situ by divers and then filled with cement. As a temporary solution, rock armour was installed and woven together; this was attached to the bridge pier.



Being one of the premier fisheries in the UK, the Royalty Fishery has a long and distinguished history, popular with both coarse and game fishermen. It lies within the Avon Valley SSSI and is an integral part of that designation, being at the lower end of one of Southern England's best chalk streams.

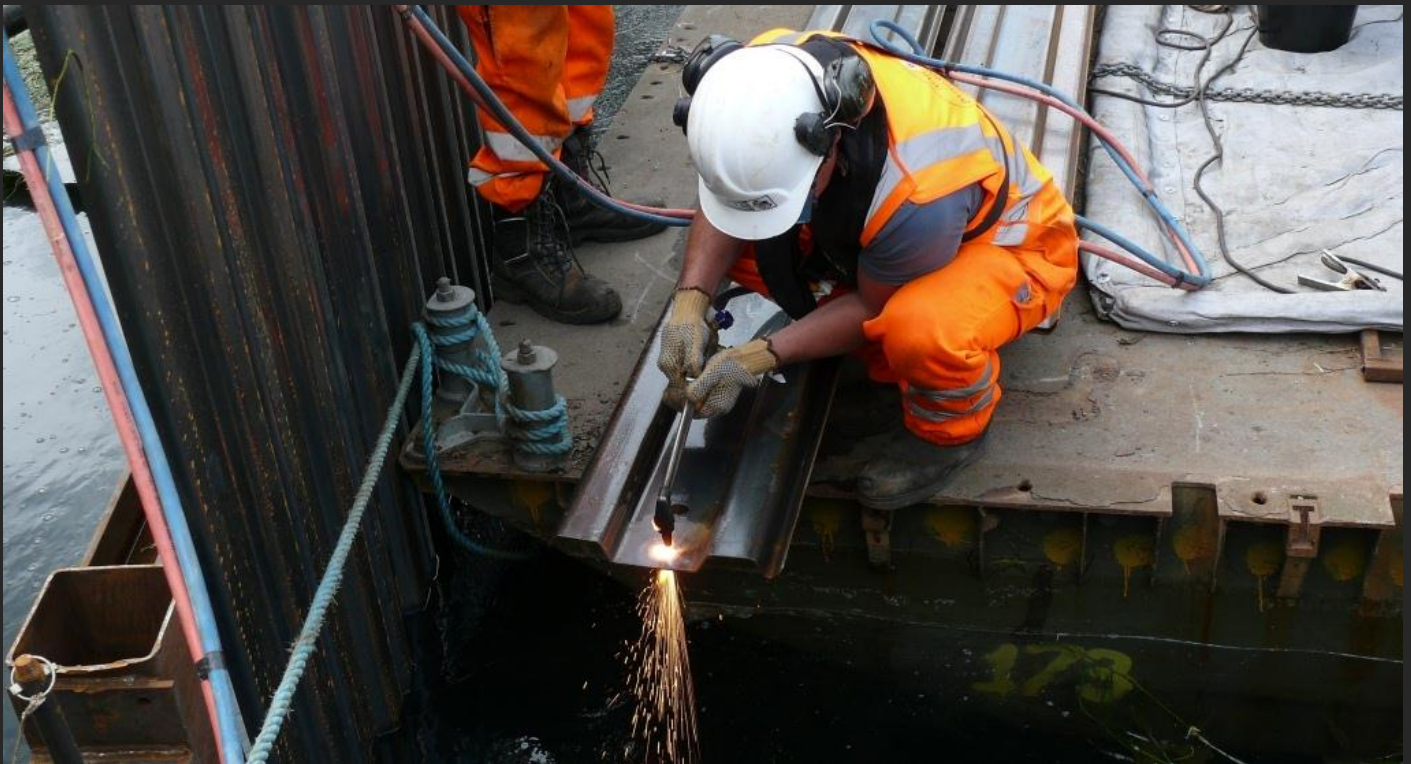


The AquaticEngineering team designed a containment curtain to encapsulate the works, also a deflector plate to divert 2,500 tonnes/second of river flow away from the working area, to enable safe diving to be undertaken.





Working from a pontoon the AquaticEngineering team attached the deflector plate to the existing steel work protecting the bank, which included subsurface welding and cutting by the dive team using Broco®. Once in position the deflector plate was clad with sheet piles.





With the deflector plate installed, the silt curtain could be attached and work commence



The silt curtain was held in place on the river bed by the dive team driving 4 Platypus Anchors deep into the benthic zone in addition to the curtains integral ballast chain.

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