

PROVEN PERFORMANCE

RADYR-WEIR HYDRO-SCHEME

TOPROC ES

Product Toproc ES
Client Cardiff Council
Main contractor Dawnus Construction Ltd
Location Radyr Weir, Cardiff
Date of completion 02/2016

Dawnus Civil Engineering were commissioned by Cardiff C.C to construct a hydro electric power station at Radyr Weir. The £2.6m scheme comprised of damming the section of works from the River Taff and constructing the structure to house the Archimedes turbine screws.

THE CHALLENGE

The deadline was tight and Dawnus had to work 24 hour days 7 days a week to enable them to have a chance of being ready for the date when the turbine screws were being delivered. Despite the busy schedule the team were working to, they struggled to get the soffit constructed in time to gain the strength required to bear the weight of the 2 huge turbine screws. Dawnus required a concrete that could take the weight of the screws 3 days after pouring and asked for a 3 day strength of 50N.

OUR SOLUTION

Tarmac suggested Toproc ES which is a high performance readymix concrete suitable for use in industrial, commercial and infrastructure construction where high early strength is required. Toproc ES is a very cohesive concrete with a dense micro structure and improved bond between paste and aggregate imparting benefits including high, early and ultimate strength, reduced permeability and increased durability. This ideal solution allowed Dawnus to strip the shuttering and prepare the area for the transfer of load from the screws with confidence that the product would be fit for purpose.

RESULTS AND BENEFITS

85m³ of Toproc ES which achieved in excess of 50N at 2 days was supplied. Stripping early for maximum use of the shuttering was another benefit that enabled the contractor to have the area ready to accept the colossal Archimedes turbines. These were off loaded, crane lifted and seated onto the Toproc ES which performed in the exact way it was intended.

For more details contact toproc@tarmac.com or call **0800 1 218 218**

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