tmsMaritime

Project Case Study

TMS Maritime is a leading UK specialist in marine civil engineering, ancillary floating plant and diving services

Client: Buckfast Abbey

Value: £372,000

Project: Buckfast Abbey Fish Pass - Spring 2022

Description:

Located in South Devon within the grounds of the historic Buckfast Abbey on the River Dart, where a monastic community has been present for over 1000 years, an old existing weir on the river had begun to collapse and full failure of the structure was imminent. At the same site on the river, an old pool and historic traverse fish pass were also dilapidated and presented too great a leap for fish to successfully make their way upstream for feeding and reproduction in the spawning grounds. The River Dart is known to support numerous species of fish including populations of trout, Atlantic salmon, lamprey as well as the critically-endangers European eel and the project was therefore essential to preserve the integrity of the river's ecosystem. Buckfast Abbey weir was the last remaining significant barrier on the River Dart without a modern day fish pass.

TMS were engaged to construct a new fish pass, undertaken in two phases. The main structure of the fish pass was constructed from reinforced concrete, off line from the main river channel. Elaborate water control methods were employed by TMS to prevent the fast-flowing river water percolating through the existing and highly permeable pitched stone weir.

Other challenges to the site team resulted from the logistics of undertaking such a project in the grounds of an ancient monastery accessed via protected woodland and required skillful planning and delivery in close partnership with the Environment Agency, the client and the designers, Fishtek Consulting. Once the reinforced concrete structure for the Larinier fish pass system had been constructed, it was faced with stone reclaimed from the site to maintain the aesthetic of the environment whilst minimising the carbon footprint of the scheme. The bottom of the pass was then fitted with a a herringbone-shaped bottom baffle pass, far less prone to blocking that other baffle-type passes. The project was completed successfully and not only nominated for the ICE South West Engineering Award 2022, but was winner of this prestigious award.