RECONNECTING RIVERS: FISH PASS INSTALLATION








Stonbury constructed a new fish and eel pass on the River Blackwater to connect two rivers which were separated over 100 years ago.

The Environment Agency's Water Industry National Environment Programme (WINEP) aims to resolve barriers to fish migration by requiring water companies to install passes at barrier assets. To assist a client, Stonbury constructed a fish and eel pass at a weir on the River Blackwater. The project reconnected two rivers which were separated over 100 years ago by a water powered corn mill.

Prior to Stonbury's involvement, a river analysis and species survey were completed to determine the species within the area and inform a design for the type and positioning of the pass. Species data revealed high numbers of fish and eels, informing a unique design containing fish baffles, multi-size eel tiles and a resting area for larger fish.

Preparation work included sound monitoring and a dilapidation survey. Initial excavations were supervised by the client's archeologist due to the age of the weir and the proximity of several important archeological features including the possibility of Roman and medieval remains.

The working area was constricted by two water courses and proximity to several protected trees. Safe access routes were created by installing timber bog mats. The team mobilised specialist suppliers for the removal of two large tree stumps and a temporary dam system was implemented to enable drying of the site.

A mass-fill concrete pour took place to provide a solid base to begin construction of the steel-reinforced concrete fish pass. Bespoke steelwork was constructed on site before a low-carbon concrete pour was carried out to form two separate fish and eel channels.

The team lined the pass structure with bespoke Larinier fish baffles and tiles suitable for eels, elver and other aquatic species. Experimental flow restrictors were installed to control flows on the eel channel. Stonbury worked with specialist suppliers to fabricate a bespoke waterproof camera box to monitor the number and diversity of fish using the pass.

The team's dedication achieved delivery within the programmed timeframe despite the site constraints and unprecedented wet weather. The project has enhanced biodiversity and connected previously isolated populations; several aquatic species are reported to have used the pass, including eels and sea trout.