Suttle Projects

Project Profile No 11/17

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IFORD WEIR HYDRO SCHEME

Client: **Potential Energy**

Value: **£122,083.85**

Duration: **19 weeks**

Project Detail

This project was for the installation of a concrete channel structure for a new Archimedes Screw Turbine at Iford Weir, near Iford Manor in Wiltshire.

Suttle Projects were contracted to carry out the access and full package civil engineering works, including the installation of a concrete channel structure, an eel pass and repairs to the existing weir.

Initially, timber mat protection was laid to enable access for machinery across pasture areas. Two steel beam component bridges were then assembled, spanning the mill stream at two points, either side of an existing eel trap, forming the site for the new turbine channel. A new reinforced concrete weir crest was constructed, and scour holes in the downstream weir face were repaired.

During the works to the weir, precautions were put in place to minimise any risk of pollution to the watercourse. These included all plant using bio-degradable hydraulic oil, and a pollution boom being deployed downstream of the weir, to protect against the small risk of unforeseen fuel or oil leaks.

Around 40 L603 clutch sealed sheet piles were installed to form an enclosed watertight cofferdam around the permanent works area before proceeding with the excavation. Cut off walls up and downstream of the eel trap structure eliminated the possibility of watercourse contamination, during the excavation, and accelerated the construction by creating a dry, safe, working area for personnel.

In order for the concrete channel construction to go ahead, spoil was extracted and removed. Once complete, a reinforced concrete construction was put in place to form a new turbine and bypass channel, and the new turbine was lifted into place. Backfill of the concrete structure was then undertaken and the sheet pile cofferdam was withdrawn. The temporary plant bridges and timber protection mats were also removed.


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