

Huntington WTW Intake Fish Screens, Chester

Contract No: C879

Client: GCA JV

Location: Huntington, Chester

Value: Approximately £600,000.00

Summary: Design, supply, installation of steel sheet piles to form 2No. temporary earth retaining cofferdams and permanent scour protection together with 2No. permanent wing walls and 8No. permanent CHS fender piles within the River Dee . The cofferdams facilitated the excavation and construction of the proposed intake fish screens. Each cofferdam was rectangular and had approx. internal dimension of 20Lin.m. x 10Lin.m (90no. piles). The landside sheet piles were anchored using temporary ground anchors and riverside piles supported using an internal steel bracing frame fixed back to the landside piles.

Drawing Ref: Sheet Piling Cofferdams General Arrangement

Sheet Piling UK Ltd were employed by GCA JV for the design and construction of 2No. temporary steel sheet pile cofferdams of 20Lin.m. x 10.0Lin.m. internal dimensions, to allow excavation to a depth of approximately 6.0m such that an RC concrete fish screen and apron could be constructed either side of the existing river intake. SPUK were responsible for the temporary works design only whilst also maintaining the client specified minimum design toe levels to give scour protection to the newly constructed RC apron.

The 116 no. Arcelor AZ28/AZ37 sheet piles at max 16.5m long and 406.4mm CHS 12.0m long fender piles were installed using a crane suspended PVE 25M vibratory hammer and back-driven to final pile toe level using a BSP 357 hydraulic impact hammer.

The general soil profile consisted of Loose Sand over weathered Sandstone. The cofferdam was designed for a "flood event" hydrostatic head of water.

Due to the position of the landside sheet piles within the river bank a temporary ground anchor platform needed to be fabricated so ground anchoring rig could get access over the inside line of sheets using the installed piles as support.

SPUK were able to offer the Client significant cost savings by supplying 2nd hand Arcelor sheet piles with mill certification which were approved by the Engineer.

All works were undertaken with the up most consideration for the environment given that the piling and ground anchors were installed in the environmentally sensitive River Dee.

Project Images





Downloads

 [Sheet Piling Cofferdams General Arrangement](#)

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