



CLIENT:
BRISTOL WATER

CONTRACT VALUE:
£800K

CONTRACT TYPE:
**NITRATE REDUCTION
SCHEME**

SECTOR:
WATER

Construction of a reinforced concrete pumping station within an existing operational Water Treatment Works operated by Bristol Water.

The pumping station houses four pumps which are used to blend water from two separate sources to balance nitrate content. The hydraulics necessitated a pumping station structure set some 4.8 metres below ground level in variable ground conditions and immediately adjacent to a Victorian brick built water storage reservoir. This required the specialist design and construction of a temporary shoring system involving sheet pile installation in pre-augered 600 mm diameter overlapping holes taken down to just below the new structure's formation level. A "no toe" solution was then adopted for the shoring system, necessitating the phased use of heavy duty hydraulic support frames.

PROJECT HIGHLIGHTS

The resulting box structure was capped off with a ground level RC slab, containing maintenance openings for the pumps and openings for the ventilation system.

The electrical panels for control and power for the pumps and ventilation system were housed in a single storey rendered block construction control house which was partially supported by the pumping station slab and allowed staircase access into the lower pump areas for maintenance.



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