

CASE STUDY

CLIENT

Northumbrian Water Group

PROJECT

Teeside Pumping Station
Control Panel Replacements

SCOPE OF WORK

- ▶ Replace 4 no. Pump Control Systems
- ▶ Panels to be of a bespoke design that was nonstandard for NWG as an efficiency trial
- ▶ Telemetry outstations to be replaced

DATE

Jan 2015 – Feb 2016

PROJECT VALUE

£100,000



Before



After

TEESSIDE PUMPING STATION

The project entailed replacing 4 no. Pump Control Systems in the Teesside area that were beyond their service life and/or in an unsafe condition. The new panels were of a non-standard design that is not to NWG standard panel design for pumping stations and MCCs. The telemetry outstations at the majority of the pumping stations were to be replaced with new outstations incorporated into the design of the new control panel. A fifth panel was considered not to require replacement, but upgrades to the level controller and telemetry outstation were necessary. The electrical supplies to the Pumping Station were either 3-phase or 2-phase and neutral with capacitor assisted starting for the pump motors.

All stations were upgraded while remaining in service.

Of the pumping stations to be upgraded, 3 no. consisted of individual starters, isolators and telemetry outstations. These were removed and replaced with a single panel incorporating a new telemetry outstation, while maintaining the operability of the pumping station. The fourth was an MCC (Motor Control Centre) past its asset life.

The conductivity probes controlling the pumps were replaced with an ultrasonic level sensor and back-up float switch, while the old telemetry was replaced with a new unit.

Three of the pumping stations were similar brick buildings, while the fourth consisted of a GRP kiosk containing the control equipment. The existing equipment was removed and the new control panels installed, while maintaining the ability to use 1 no. pump at all times to keep the station operable.