

Hayle Sewage Treatment Works Upgrade

Pell Frischmann

South West Water

Under £3m

£3m

Hayle Sewage Treatment Works (STW) is a large STW located just outside Hayle in Cornwall. In 2016, South West Water (SWW) identified a need to upgrade the STW to provide additional treatment capacity to ensure robust treatment up to a 2031 design horizon.

The SWW H50 Engineering Alliance, with Pell Frischmann and Interserve Construction, designed and constructed a new activated sludge process stream at the works, treating 30% of the STW process flow and loads. The project team was challenged with open mineshafts, multiple services running within the footprint of the construction site and tight working conditions on site. The team (SWW, designer, contractor and supply chain) developed close working relationships to provide an innovative design, with sustainability and robust treatment at the core of project delivery.

The design made use of a Design for Manufacture and Assembly (DfMA) approach to tank construction, resulting in construction of the largest post-tensioned final settlement tank in the south-west, at over 34m diameter. This included development of innovative purpose built, combined anoxic and aeration zones within a circular activated sludge plant tank.

The project was successfully completed on time and with offered significant cost savings to the Client. The process is now operational and producing a very high quality effluent, which will help maintain cleaner seas and ensure a high quality bathing water at Hayle, an area reliant on the tourist trade.