



WESTMOOR SIPHON

Pipeline

STOCKTON DRILLING LTD CONTRACT NO. C21624

PROCESS ABI TM 13/16SL TELESCOPIC LEADER RIG

Westmoor Reservoir is situated approximately 2km southwest from the town of Langport in Somerset and between the River Parrett and River Isle.

The site comprises West Moor and South Moor Reservoirs. The two reservoirs are hydraulically connected by a siphon and collectively are known as Westmoor Reservoir. Both provide flood storage, with water only being stored following high rainfall events.

Kier Group on behalf of the Environment Agency were tasked with the delivery of reservoir improvement works following an inspection between November 2018 and February 2019, under Section 10 of the Reservoirs Act 1975.

The inspection highlighted that the "River Isle siphon culvert structure and the West Moor gravity outfall structure and control gates should both be renovated or replaced". Atkins are the permanent works designers and the preferred option for detailed design is for the replacement of the Midelney Siphon consists of 2No. directionally drilled pipes utilising a Direct Pipe methodology.

The EA have instructed that Early Supplier Engagement (ESE) is undertaken to provide specialist support in the developments detailed design. Stockton Drilling Limited have been engaged in this role due to their range of installation techniques and ability to identify the correct construction methodology based on project requirements rather than business requirements.

The detailed design shall therefore consist of the detailed design of 2No. Direct Pipes to form minimum 1300mm I.D. siphons below the River Isle close to the Midelney Pumping Station of approximately 216m length.

Stockton Drilling Ltd, working on behalf of Kier Group and the Environment agency designed the trenchless crossing utilising the direct pipe technique to facilitate the installation of the siphon pipes, the relatively new technique in Britain will be installed using Stockton's own direct pipe tunnelling equipment. The site itself, due to its location was prone to flooding, and therefore a trenchless solution was required. Also, during the works, the works must not render the existing flood protection useless by allowing an easier path for water to follow, in the event of such a flood.

SPI Piling Ltd installed a steel sheet piled cofferdam to facilitate the installation of a directional pipe jacking rig, and direct pipes as described above, we also installed 138nr U Profile Sheet piles using a telescopic leader rig and mobile crane along as well as returning to install an insitu welded steel frame.

















