

PIPE JACKING CASE STUDY

Tullamore Wastewater Treatment Works



www.pipejacking.org

PROJECT	Tullamore WWT Expansion
CLIENT	Offaly County Council
CONTRACTOR	Terra Solutions Limited/SIAC JV
TUNNELLING MACHINE	Herrenknecht 1200 TBM
VALUE	€210,000



PROJECT OVERVIEW

The Dublin to Galway Intercity rail required a 1200mm hard-rock rail crossing as part of the Tullamore Wastewater Treatment Works expansion. The sewerage treatment plant upgrade entailed the expansion of the plant from 16,000 PE to 45,000 PE and construction of a county sludge hub-centre for 80,000 PE.

Works included the construction of new large diameter inlet sewers. Improvements made to the inlet sewers were in order to upgrade the influent entry system for the plant and required trenchless construction of a single sewer inlet under a railway embankment.

DESCRIPTION OF WORKS

Terra employed a 1200mm Herrenknecht TBM with a Bauer BE250 separation unit to install a 35 metre drive. The TBM cutterhead was fitted with appropriate rock cutter discs to excavate the very strong 165 MPa limestone rock. At times the penetration rate of the TBM was as low as 10mm/min due to rock strength.

The access area to the launch shaft of the tunnel was severely restricted with a low bridge and height constraints. The road leading to the bridge was also very narrow. A detailed access and lifting plan was devised to suit the five loads of heavy equipment that were to pass under the tunnel and be set-up at the launch position just past the bridge. Especially low carriers were sourced locally as well as series of rollers for the taller, more awkward, items of equipment.

FURTHER INFORMATION: www.terrasolutions.co.uk

