

PIPE JACKING CASE STUDY

Aldergrove Trunk Sewer



www.pipejacking.org

PROJECT Aldergrove Trunk Sewer

CLIENT Northern Ireland Water

CONTRACTOR Terra Solutions Limited

TUNNELLING MACHINE Herrenknecht AVN600



PROJECT OVERVIEW

The project aims were to upgrade the existing gravity foul sewerage network which transfers flows from the Aldergrove catchment area to a new pumping station located within the grounds of the Antrim Forum.

The contract as a whole required the installation of 3.7km of 600mm sewer and some 80 manholes primarily through residential areas, main roads, Masserane championship golf course, and the main emergency services route to Belfast International airport.

DESCRIPTION OF WORKS

Terra Solutions, working on behalf of Dawson WAM, installed 290m of 600mm diameter sewer through the golf course using their Herrenknecht AVN600 tunnel boring machine. In addition, 9 shafts were installed using smoothbore caissons in 2.4m and 3.6m diameters and at depths between 7m and 11m. As tunnelling was taking place during winter, site access could be particularly difficult given the surface conditions and extreme weather.

The company's custom made gantry crane system ensured materials could be delivered safely and efficiently during difficult spells when these ground conditions may have caused problems for large tracked machines.

CO₂ SAVINGS

CO₂ savings of the pipe jacking element compared to open cut construction were 64% for the 600mm diameter drive. Source: pipejackingco2calculator.com

FURTHER INFORMATION: www.terrasolutions.co.uk

