

# PIPE JACKING CASE STUDY

## Cross Lane, Warrington



[www.pipejacking.org](http://www.pipejacking.org)

PROJECT	Cross Lane, Warrington
CLIENT	United Utilities/BBUSL
CONTRACTOR	A E Yates Trenchless Solutions Ltd
PIPE SUPPLIER	F P McCann and Naylor Industries
TUNNELLING MACHINE	Slurry TBM and guided auger
VALUE	£2,750,000



### PROJECT OVERVIEW

It was necessary for United Utilities to address the issue of sewer overloads, which had caused flooding in Cross Lane, Middlewich, by installing new gravity sewers, a storage tank and pumping station.

### DESCRIPTION OF WORKS

The majority of the new pipes were to be installed below existing carriageways in residential areas with depths to invert ranging from 5 to 12 metres. To minimise disruption to local residents, avoid contact with the considerable existing services that crossed the proposed route, and to reduce surface damage, trenchless installation was selected.

Drive and reception pits were constructed in a combination of 3000mm and 5000mm diameter shafts and sheeted pits. The pipeline lengths consisted of 600 metres at 1000mm diameter, 700 metres at 900mm diameter and 325 metres at 450mm diameter. Lengths between manholes ranged from 50m to 150m.

Ground conditions were firm to stiff clay and a range of machines were used: a Soltau RVS400 tbm at 1000mm diameter; a Bohrtec BM600 LSC guided auger at 900mm diameter and a Perforator PB85V guided auger at 450mm diameter.

### CO<sub>2</sub> SAVINGS

CO<sub>2</sub> savings of the pipe jacking element compared to open cut construction were around 60% for the 900mm and 325mm diameter drives.

Source: [pipejackingco2calculator.com](http://pipejackingco2calculator.com)

FURTHER INFORMATION: [www.aeyates.co.uk](http://www.aeyates.co.uk)

