

# PIPE JACKING CASE STUDY

## Mullingar Improvement Scheme



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

PROJECT	Mullingar Improvement Scheme
CLIENT	Westmeath County Council
CONTRACTOR	Ward & Burke Construction Limited
TUNNELLING MACHINE	Herrenknecht AVN 1200 & 1800
VALUE	€2.5 million



### PROJECT OVERVIEW

The Mullingar Sewage Improvement Scheme required the construction of caissons and tunnel set-up in a confined town centre site and a railway and river crossing. Variable ground conditions included sands and gravels and very fine silts.

### DESCRIPTION OF WORKS

A total of 406 metres of 1200mm diameter microtunnel was installed in the town centre in six drives. Depth to invert was 3-5.75 metres to avoid the services in the urban environment. The drives were launched from three 5 metre diameter caisson chambers and driven to three 3.2 metre caissons.

In addition 333 metres of 1800mm concrete pipe were jacked through an urban location and under a live inter-urban rail line. This section was jacked from two 7 metre diameter caisson chambers to a 6 metre oval caisson chamber where the machine was recovered. The rail line was on a high embankment with the drive and reception shafts at the base of the embankment. Constant monitoring of the groundwater and rail line was undertaken throughout the drive.

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

CO<sub>2</sub> savings of the pipe jacking element compared to open cut construction were 55% for the 1200mm diameter drive, the major portion of the under street works.  
Source: [pipejackingco2calculator.com](http://pipejackingco2calculator.com)

FURTHER INFORMATION: [www.wardandburke.com](http://www.wardandburke.com)

