

# PIPE JACKING CASE STUDY

## Hodder Aqueduct Large Diameter Trunk Main Diversion



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PROJECT	<b>Hodder Aqueduct Large Diameter Trunk Main Diversion</b>
CLIENT	<b>United Utilities Water PLC</b>
CONTRACTOR	<b>Ward &amp; Burke</b>
PIPE SUPPLIER	<b>Tracey Concrete</b>
TUNNELLING MACHINE	<b>Herrenknecht AVN</b>
VALUE	<b>£3.2million</b>



### PROJECT OVERVIEW

The Hodder Aqueduct is a critical UU asset supplying the demand of 91ml/d of potable water to 200,000 properties on the Fylde. It consists of two mains, a 33" diameter Cast Iron (CI) pipe and a 560mm outside diameter Polyethylene (PE) pipe that delivers 75% of Blackpool and the Fylde coast's potable water supply.

The scope of works included the design and build of 1.5m diameter tunnel under the M55 motorway to facilitate the offline diversion of the existing 33" CI and 560mm PE trunk mains. Other works included the installation of 2.1km of 500, 600 and 700mm diameter ductile iron mains. 4no. under pressure tapping on the 560PE main and 4no. under pressure tapping on the 33" Cast iron main. The final live connections were facilitated by 4No. Line stops, 2 on the 33" main and 2No. on the 560mm PE main.

### DESCRIPTION OF WORKS

- Design of all Temporary and Permanent Works under the Contract in conjunction with United Utilities SO1 Standard Specifications for large diameter trunk mains.
- M55 Tunnel design submission to Highways England in line with CD622 Managing geotechnical risk standard for Highways.
- Compliance with the planning discharge consents within LCC's project planning approval.
- The diverted mains were to be replaced with 3 new mains in a single trench laid @ 1.76m c/c within a predetermined easement and maintain the same head loss across the system.
- Land liaison with all landowners and key stakeholders e.g., Costain.
- PE under pressure tees in compliance with BS 8561, mechanical under pressure tees for installation on cast iron to conform to BS EN 10025 S275JR.

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

