

PIPE JACKING CASE STUDY

Burham Strategic Water Main



www.pipejacking.org

PROJECT	Burham Strategic Water Main
CLIENT	South East Water/Farrans Construction
CONTRACTOR	Ward & Burke Construction Ltd
TUNNELLING MACHINE	Herrenknecht AVN 1600 AB
VALUE	£2,700,000



PROJECT OVERVIEW

The Burham Strategic Water Main involved the construction of 6.5km of potable water main. The new main is to deliver nine million litres of water a day from Burham WTW to a population of over 19,000 people in the area. Ward and Burke Construction designed and constructed two pipe jacked crossings as part of the works.

DESCRIPTION OF WORKS

The project included a drive under the M20 motorway and the second drive under the River Medway and adjacent Network Rail lines.

Two 8 metre diameter launch shafts were designed and constructed, 11 metre and 20 metres deep and two 7 metre reception shafts 10 and 21 metres deep respectively. All the shafts were constructed as caissons and sunk to formation. The contractor designed and constructed the bulkhead walls and thrust blocks.

300 metres of tunnel was driven using an AVN 1600, 100 metres under the M20 motorway and 200 metres under the River Medway and adjacent Network Rail lines and 1600mm diameter concrete jacking pipes installed.

Following tunnel construction the contractor designed, fabricated and installed a bottom screed and carrier rails along full length of the tunnels to allow installation of twin 600mm diameter ductile iron pipes with use of a hydraulically operated jacking frame. The water main was pressure tested following installation and the annulus between the concrete jacking pipe and ductile iron pipes grouted along the full length of the tunnels.

FURTHER INFORMATION: www.wardandburke.com

