

WUNGONG WATER DISTRIBUTION MAIN

Stockland WA / Water Corporation

Location

Wungong, WA

Commencement

Sept 2011

Completion

July 2012

Contract Value

\$2.04 million

Client

Stockland WA



Zero Harm

The project is 100% complete and there have been no lost time injuries.

LTIs: 0

MTIs: 0

Overview

The Wungong Water Distribution Main is located near Armadale in the eastern suburbs of Perth. The project, which consisted of DN600 to DN400 MSCL pipelines, enables new subdivision development to proceed to cater for Perth's growing population.

Contract Supervision

The contract was managed by a Design Consultant with Cobey as Main Contractor.

Scope

Cobey was awarded the contract to construct 2.4km of DN600 to DN400 below ground MSCL pipeline.

The works required were:

- Locate/Protect existing services
- Excavation & Backfill works
- Dewatering
- Acid Sulfate Soils Management
- Microtunnelling of DN800 sleeve under Neerigen Brook
- Microtunnelling of DN800 sleeve under Armadale Rd.
- Connection to the existing DN760 transfer main
- Pipe handling & installation
- Supply of MSCL pipe fittings
- Site welding of pipe joints
- Traffic Management
- Hydrostatic Pressure Testing
- Pipe Disinfection

Project challenges

Delays of several months were encountered as a result of the Local Council's planning requirements for the water main location.

The pipeline construction under Neerigen Brook had to be undertaken without disturbing the river or its banks in accordance with the Aboriginal Heritage Agreement.

Pipeline construction across Armadale Rd required MainRoads WA approval.

Work was also required to be constrained to a minimal working width in other parts of the heritage area to minimise impact on the local environment and maintain traffic flows.

The designed pipe route alignment was close to, and parallel to, overhead power lines.

Managing the challenge

We managed the job successfully by working closely with the design consultant and Client using experienced project management and site personnel.

Thrust bore microtunnelling was used for the crossing under Neerigen Brook & Armadale Rd without disturbing the brook or its banks in accordance with the Heritage Agreement and Bed and Banks permit. Well-point dewatering was used in deeper sections together with treatment and monitoring in accordance with an Acid Sulphate Soils Management Plan.

Traffic Management was controlled by a Local Council and Mainroads WA approved TMP.

A trench shoring design was submitted by Cobey and approved by Western Power to allow trenching near power poles.

Adding Value

During the delays incurred as a result of Local Council approvals, Cobey continued manufacturing MSCL fittings in the workshop for a quick start up.

MSCL fittings were fabricated by Cobey at their workshop and combined with valves or other combination bends and transported to site. This maximised workshop fabrication and minimised site welding, reducing time and safety risks.

Cobey also worked with the Design Consultant & Client on the alignment relocation of the pipeline. This resulted in a saving to the Client of approximately \$450k and made for a safer work site.

Cobey also offered specialist advice on installation of the water main under Armadale Rd, which led to a change of open trenching to microtunnelling.

