



## INDUSTRY CASE STUDIES

# YAAMBA ROAD TRUNK WATER MAIN



### THE PROJECT

This installation of DN600 Ductile Iron trunk main between Yeppoon Rd and Ramsey Creek, Parkhurst is to replace the current above-ground pipe line. It is the first stage in the Bruce Hwy Rockhampton Northern Access Upgrade.

### MATERIAL SELECTION

Originally requested in Mild Steel, Viadux and Saint Gobain PAM in consultation with Fitzroy River Water worked to identify the best possible material that would deliver a long lasting low maintenance solution. The selection needed to be both quick to install and have the ability to cope with any increase in future water demand.

Ductile Iron - With a design life of over 100 years and a proven track record of providing low cost, reliable service in use was hard to ignore. The renowned TYTON system features a quick push fit jointing method and high deflection ability which means speedy installation and less disruption to the community.

An assessment of soil conditions carried out by the manufacturer, Saint Gobain PAM confirmed the DI pipes could be installed "UnWrapped" through the incorporation of their latest coating technology - Zinalium. TYTONHYDROCLASS Ductile Iron Pipes featuring Zinalium technology were finally selected for the following reasons:

- They are made to Australian Standards for Australian conditions
- Sleeving is not required therefore installation is quicker and more cost effective
- A major part of pipe handling is eliminated making the installation process safer
- Corrosion protection is factory applied and tested. It is not reliant on the correct installation of sleeving by others
- The active corrosion protection system is robust and allows for courser bedding and backfill materials to be used without compromising on the coating effectiveness.
- A locally available by-product of road base manufacture, crusher dust, was approved for bedding material with TYTONHYDROCLASS DI Pipe giving further cost saving.

### PROJECT SUMMARY

PROJECT	Yaamba Road Trunk Water Main
CLIENT	Fitzroy River Water
LOCATION	Rockhampton, Queensland
DATE	Deliveries commenced April 2017
SUPPLIED	4km TYTON HYDROCLASS DN600 DICL and 0.2km of PE



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### INSTALLATION

As of 15/5/2017 installation is well underway. Fitzroy River Water representatives report that they are "more comfortable" with installing Ductile Iron pipe without the sleeving.

Quality of product, quality of installation, corrosion protection and pipeline longevity in service go hand in hand and Fitzroy River Water did not want to compromise on this. Taking sleeving out of the equation not only saves time and money, it also means corrosion protection is not in the hands of the installer.

Finally to ensure all bases were covered Fitzroy River Water enlisted all of their installers and supervision staff to attend the Viadux Century Plus Ductile Iron Pipe Handling and Installation workshop. The workshop not only covers all of the necessary information for installation but also provides installers with a Quality Management System for the installation of pipelines to ensure pipes are installed correctly every time.

### THE RESULT

This project is still underway however Fitzroy River Water have estimated a saving in time of approximately 12 - 14min per pipe in avoiding the use of sleeving.

Typically two people are utilised to sleeve the pipe together with mobile lifting equipment and a driver. Conservatively speaking on a project where 600 pipes are to be installed, taking 10min to install the sleeving would result in a total 300 hours based on three people.

For Fitzroy River Water, delivering cost saving together with improved safety and quality outcomes is making this project a success.

### WHY CHOOSE ZINALIUM?

COST	100 year design life with low ongoing service costs
SPEED	Fast installation with TYTON gaskets, push fit joining and high angular deflection
SAFETY	No risky and time-consuming manual handling of suspended loads to install sleeving
EASE	Fast backfilling and compaction in the trench with no need to crush or sieve out sharps <63mm

