

# Chichester Trunk Gravity Main – Tarro to Shortland

Pipeline in Hunter Valley NSW, Australia



## Project Need

The Chichester Trunk Gravity Main (CTGM) is an 85km pipeline that conveys water from Chichester Dam to the Lower Hunter, as well as supplying a number of communities along the way. It provides approximately 40% of the water to the major population centers of Newcastle and the Hunter Valley Coalfields.

The existing watermain is approximately 90 years old and comprises jointed 'locking bar' pipe. The Tarro to Shortland section of the (CTGM) starts 100m south of the New England Highway at Tarro, across Hexham Swamp, enters the residential area at Shortland and ends at Shortland Waters Golf Course.

The new pipeline will be laid underground next to the current pipeline route for 3km then follow a new route for 4.4km along the edge of Hexham Swamp. Laying the new 900mm pipeline underground, and changing the route will provide both environmental and operational benefits for the local environment and community.

## Solution

Hunter Water commissioned Diona Pty Ltd to replace a section of the (CTGM) between Tarro and Shortland using Steel Mains' SINTAKOTE® cement mortar lined steel pipe. Steel Mains supplied SINTAJOINT® elastomeric ring joint (RRJ) and SINTALOCK® - Type I joint pipes in 960mm diameter pipe for the pipeline project. The SINTALOCK® - Type I joint incorporates a Rubber Ring joint with an external fillet weld only. The pipeline was constructed with mild steel, Sintakote fusion bonded polyethylene coated, cement lined pipe complying with Australian Standards AS1579, AS4321 and AS1281; manufactured in 13.5 metre overall lengths from 10mm wall thickness, 300 MPa grade steel.

## Achievements

Steel Mains delivered SINTAJOINT® pipe where on-site welding was virtually eliminated. Using the SINTALOCK® Type-I joint for other pipeline sections also meant that Diona Pty Ltd was only required to weld the pipes externally, eliminating the need for confined space access for internal welding or joint reinstatement, thereby improving pipe laying efficiencies and construction safety. Our Sintakote® coated pipes also provided Hunter Water with the confidence that these pipes would provide a service life beyond 100 years, securing water supplied for those in the region.

[www.steelmain.com](http://www.steelmain.com)

**Project:** Chichester Trunk Gravity Main – Tarro to Shortland

**Principal:** Hunter Water Corporation

**Location:** Hunter Valley NSW

**Completion:** 2011

**Supplied:** 7.4km of 960mm SINTAKOTE®, SINTAJOINT® & SINTALOCK® MSCL pipe.