

# Macarthur Pipeline

Water Main adjacent to cathodically protected high pressure gas main

**tyco**  
Water

The Upper Canal had supplied the Macarthur region in Southern Sydney with their water needs for years, however to control and maintain the water quality to today's standards, Sydney Water decided to replace it with a water filtration plant and new pipelines.



## The Problem

Two significant challenges confronted the designer and constructor. Firstly the pipe route traversed land subject to mine subsidence and secondly it followed a gas transmission pipeline which was cathodically protected. Both these issues would suggest that a fully welded steel pipeline should be used, however this would add significantly to the construction costs of the project.



## The Solution

Deep-entry SINTAJOINT® steel pipe with CP attachment lugs fitted was the chosen system. The CP lugs were required as SINTAJOINT is a very effective electrical insulator and therefore an electrical connection across the pipe ends via copper cable is required for the cathodic protection of the entire pipeline.

Pipelines in mine subsidence areas must be checked to ensure the joint used is able to accommodate the required amount of spigot withdrawal. In this instance, the expected withdrawal was more than that possible with a normal SINTAJOINT. No problems - a socket with a deeper throat was designed to match the project's requirements.

## The Result

The pipeline system supplied by Tyco Water overcame both of these project specific problems, without any added cost and without affecting construction. In addition to this, by working with the pipeline constructor Transfield, Tyco Water was able to supply all the branches and bends that were required, fitted to pipes at our factory. On-site welding was in this way virtually eliminated and the maximum advantages of constructing with SINTAJOINT pipe were realised.