

Macarthur Project - NSW

Macarthur Project Guarantees Quality Water to Sydney



Objectives:

Water consumers in Sydney were presented with some good news in the form of a new pipeline. A new treatment plant and associated pipelines have now been provided in the Macarthur region to supply treated water to Southern Sydney.

The region's water was previously supplied from the Upper Canal, a 65km open channel and tunnel which linked Broughton Pass Weir, on the cataract River, to Prospect Reservoir. In unfavourable conditions the water quality could deteriorate to unacceptable levels in the Upper Canal. The Macarthur project was one of four water treatment plants which Sydney Water (formerly Sydney Water Board) awarded as BOOT schemes. The scheme involves pumping water from Broughton Pass Weir to the new filtration plant, then conveying it in a 18.5 kilometre pressure pipeline to the existing distribution mains at Mount Sugarloaf.

Solution

The pressure pipeline had to be laid in hilly terrain with numerous crossings of creeks and gullies. The whole route was also subject to mine subsidence. The challenge of mine subsidence meant that the rubber ring joints on the pipelines had to be able to accommodate significant soil movement. Steel Mains designed a special deep entry SINTAJOINT® to allow for the movement. The time frame for the construction of the project was also critical.

Achievement

To facilitate construction, Steel Mains worked closely with Transfield and Connell Wagner to manufacture and deliver each pipeline component in sequence. A Transfield initiative meant that many of the pipeline appurtenances were prefabricated in the factory, eliminating site welding and speeding up the construction process.

Macarthur Project

Client	Sydney Water
Operator	North West Water Australia
Turnkey Contractor	Transfield Construction
Designer	Connell Wagner
Construction	A J Lucas & Lockyer Civil
Project	Macarthur Boot Scheme
Pipeline	16 km of 12830D x 8mm WT SINTAJOINT MSCL Pipe
	2 km of 12830D x 10mm WT SINTAJOINT MSCL Pipe
	464m of 14400D x 10mm WT SINTAJOINT MSCL Pipe
	216m of 15750D x 12mm WT B&S MSCL Pipe
Construction Period:	April 1994 – February 1995