

# Partnering with Sydney Water to achieve long term desirable financed water treatment solutions



The scope of the project includes the design, build, finance and 35 year operation and maintenance of the facilities.



# The major municipal water authority Sydney Water identified the need for a privately financed water filtration plant to supply the Camden, Campbelltown and Wollondilly areas of New South Wales.

Wholly owned by TRILITY, the Macarthur Water Filtration Plant (WFP) supplies over 250,000 Sydney Water customers.

Raw water is sourced from Broughton Pass Weir located on the Cataract River. The raw water is transported three km through low and high lift pumps to raw water storage tanks on-site. The raw water then flows by gravity through the plant.

During the process, coagulants and flocculants are added to the raw water so that particles of sediment join together facilitating removal. The sediment is collected and dried on-site to facilitate their removal and can be used for a variety of beneficial reuse purposes.

The water passes through filters containing sand and anthracite coal. Chlorine is dosed for primary disinfection after the filters, and fluoride is added for dental protection. Lime and carbon dioxide are added to the water to correct the pH levels. Chlorine and ammonia are also dosed into the gravity main to form chloramine, a long lasting disinfectant.



## Who

Sydney Water provides drinking water, recycled water, wastewater services and storm water services to more than four million people in Sydney, Illawarra and the Blue Mountains. It is Australia's largest water utility with over 3,000 staff and a coverage area of 12,700km.

## What

A \$123m, 265 ML/day WFP, built to improve water quality and supply water to over 250,000 Sydney Water customers. The plant operates to an exceptionally high standard and is one of the most efficient in Australia.

## Where

The historic town of Appin, 70km southwest of Sydney in the Macarthur region of New South Wales. A relatively small volume of treated water is used locally, with most gravitating to storage reservoirs supplying the fast-growing Campbelltown and Narellan areas.

## Why

The plant was built to improve drinking water quality and overcome variable source water characteristics. During storms, fast flowing creeks which feed local water storages pick up sediments and make the raw water turbid. The filtration process removes sediments and colour, eliminating these as sources of water quality problems.

## Snapshot

Client	Sydney Water
Type of Contract	Design, Build, Finance, Operate (DBFO)
Facilities	Water filtration plant and pumping station
Technology	Direct filtration
Design Capacity	265 ML/d
Term	35 years
Capital Cost	c. \$123m