

Client: The Sandgate WWTP is located on Paperbark Drive at Sandgate. It is bordered by residential properties on the northern side of Cabbage Tree Creek in the north Brisbane suburbs of (BWEA Shorncliffe and Deagon. Sandgate WWTP Alliance upgrade was delivered as part of the Brisbane Water Enviro Alliance in which Aquatec Maxcon was a partner. The programme also included upgrades to Oxley Creek, Wynnum and Wacol WWTPs.

Location: The plant discharges treated wastewater into Cabbage Tree Creek. The upgrade to the Sandgate WWTP involved heavily brown fields replacement of out-dated infrastructure and mechanical equipment with new state of the art technology. These works have improved wastewater treatment quality, increased plant capacity, reduced odour and improved the quality of water in Cabbage Tree Creek.

Value: Features of the upgrade included:

AUD \$130 M

Completion Date: 2006

- Increased capacity from 18mega litres per day to 25 megalitres per day, servicing an ultimate population of 110,000 persons;
- Nitrogen reduced from 30 milligrams per litre to less than 5 milligrams per litre;
- Odour mitigation works between December 2004 and March 2005;
- Replacement of existing trickling filters with bioreactors to improve nitrogen and phosphorus removal using fine bubble aeration oxidation ditch process;
- New final settling tanks;
- New sludge dewatering and handling facilities;
- Installation of ultra violet (UV) disinfection equipment to replace

- existing chlorine disinfection;
- Decommissioning of primary settling tanks and digesters;
- Upgrade fully constructed inside plant fence line; and
- Effluent quality achieved.