

## MAJOR INFRASTRUCTURE PROJECT



### BURWOOD BEACH WASTEWATER TREATMENT WORKS STAGE 2 UPGRADE

WE ARE UPGRADING THE BURWOOD BEACH WASTEWATER TREATMENT WORKS TO ENSURE THE PLANT CONTINUES TO OPERATE RELIABLY AND MEETS THE NEEDS OF EXISTING AND NEW CUSTOMERS WELL INTO THE FUTURE.

THE PROJECT IS BEING DELIVERED BY THE HUNTER TREATMENT ALLIANCE, A TEAM CONSISTING OF HUNTER WATER, ABIGROUP AND CH2M HILL AUSTRALIA.

Burwood Beach WWTW is Hunter Water's largest wastewater treatment facility, providing secondary wastewater treatment services for the Newcastle and Lake Macquarie local government areas, from Dudley in the south to Wallsend in the west and Mayfield in the north. The plant services approximately 180,000 people (25% of Hunter Water customers) and discharges an average of 48 million litres of treated effluent and 2 million litres of biosolids per day.

In November 2009 a new \$4 million odour control system was commissioned at the plant to treat odours from the screenings building and primary pump station. These two locations generate 95% of odours from the site. Odourous air is now ducted to a new biofilter unit for treatment.

#### WHY UPGRADE?

Burwood Beach WWTW had been experiencing process problems and required a substantial upgrade to ensure reliable and sustainable operation into the future. Once complete the Stage 2 upgrade will enable the plant to operate to its original design capacity of 220,000 equivalent persons and reliably meet the current licence conditions.

#### WHAT DOES THE UPGRADE INVOLVE?

The Stage 2 upgrade includes: the construction of a third aeration tank and upgrades to the aeration system; construction of a fourth clarifier;

modifications to the pump stations and pipelines; upgrading of the supply and an automatic control and monitoring system. The screens in the screen house are also being upgraded to ensure greater reliability in the removal of non-biodegradable materials. Further work will include refurbishing the Activated Biofiltration (ABF) tower.

The Stage 2 construction work began in September 2009 and is scheduled for completion in late 2011. The cost of the Stage 2 upgrade is approximately \$44 million.

#### MINIMISING ENVIRONMENTAL AND COMMUNITY IMPACTS

The entire Stage 2 upgrade was planned in consultation with an independently chaired Community Reference Group (CRG), which met regularly since it was established in July 2007. The Stage 2 CRG held its last meeting in March 2010.

Hunter Treatment Alliance partners, CH2M HILL prepared a review of environmental factors (REF) to assess the potential environmental impacts of the Stage 2 upgrade. These investigations have included areas such as water quality, soil disposal, odour and noise impacts, and impacts on vegetation, threatened species, heritage sites and habitat.

To ensure public safety and the safety of our workers Hunter Water has



closed the access road to the WWTW for the duration of construction. Only authorised construction traffic and Hunter Water vehicles are allowed to access the plant.

The Hunter Treatment Alliance issues regular community newsletters and website updates ([www.hunterwater.com.au](http://www.hunterwater.com.au)) to keep local residents informed of progress and key activities on site. There is also a dedicated community information and enquiry line – 02 4913 5644 – for people to find out more about the project or register any concerns.

### NEXT STEPS

Earlier this year Hunter Water released the findings of a Health Risk Assessment, which confirmed that there are negligible health impacts from biosolids released from the Treatment Plant and recommended the minimal potential health impact of effluent disposal could be improved through state-of-the-art UV technology.

On completion of the Stage 2 upgrade Hunter Water will commence trials of UV disinfection. This process uses ultraviolet light to kill bacteria and other microorganisms, further improving water quality for beachgoers.

Hunter Water is currently planning for the Stage 3 Upgrade, which will focus on further works that are required to meet the longer-term needs of the community and other stakeholders. Sustainable effluent and biosolids management will be considered as part of the upgrade. Community consultation will continue throughout the project with a Stage 3 Upgrade Community Reference Group established in mid 2010.

