

# Transforming biosolids and wastewater into a sustainable product



TRILITY operates and maintains Australia's largest thermal drying biosolids facility in Geelong, Victoria, and plays a vital role in delivering on Barwon Water's long-term goal to operate a 'no waste' sewerage system.



# The facility places TRILITY, Plenary Environment and Barwon Water at the forefront of responsible biosolids management in Australia.

The award-winning Barwon Water Biosolids Management Project provides an environmentally sustainable, long-term solution for 100 per cent reuse of the biosolids produced at Barwon Water's Black Rock Water Reclamation Plant and its other regional water reclamation plants.

At the heart of the project is a thermal drying facility that can treat 60,000 tonnes of biosolids a year. The facility is the first of its kind in Australia and the largest of its type in the southern hemisphere.

Barwon Water provides quality water and sewerage services to 250,000 people in an 8,100km<sup>2</sup> region in southwest Victoria. The region produces 54,000 tonnes of biosolids each year.

The plant recycles 100 per cent of the biosolids from Barwon Water's water reclamation plants and reduces greenhouse gas emissions by up to 40 per cent compared with alternative treatment methods.

Using a proven drying technology, the facility provides the means to safely receive, store and treat Barwon Water's biosolids in a manner that is sympathetic to the local environment and the surrounding community. A biofilter biologically treats odours air extracted from the building and storage vessels. Trained operators manage the 24-hour treatment plant.

The thermal drying facility treats biosolids to T1 C2 Grade, the treatment grade applicable for broadacre farming applications. The biosolids are then processed to produce pellets to maximise the potential for sustainable beneficial use as a fossil fuel replacement or fertiliser. Other benefits include fewer truck movements to and from the Black Rock Water Reclamation Plant and an 80 per cent reduction in land area required for biosolids processing.

The facility places operations and maintenance manager TRILITY, asset owner Plenary Environment and client Barwon Water at the forefront of responsible biosolids management in Australia.



## Who

Barwon Region Water Corporation and Plenary Environment

## What

Australia's largest thermal drying biosolids facility.

## Where

The Barwon Water biosolids drying facility is located approximately 15 kilometres south of Geelong directly adjacent to Barwon Water's Black Rock Water Reclamation Plant.

## Why

The Barwon Water Biosolids Management Project was created to deliver a sustainable programme for the treatment and beneficial use of biosolids.

## Awards

**2014** Environmental Protection category at the Premier's Sustainability Awards.

**2014** Sustainable Water Management category at the Banksia Sustainability Awards.

## Snapshot

<b>Client</b>	Plenary Environment
<b>Type of Contract</b>	Build, Operate and Maintain (BOM)
<b>Facilities</b>	Biosolids process plant
<b>Technology</b>	A fully enclosed thermal drying process with no dust or odour released to the outside environment
<b>Design Capacity</b>	60,000 tonnes of biosolids a year
<b>Term</b>	20 years
<b>Capital Cost</b>	N/A
<b>Project Value</b>	c.\$76m



## For further information

TRILITY Communications  
TRILITY Pty Ltd  
Level 10, 115 Grenfell Street  
Adelaide SA 5000  
T: +61 8 8408 6500  
E: adloffice@trility.com.au

Visit us online at:  
[www.trility.com.au](http://www.trility.com.au)

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