

# Casuarina Grove aged care facility

RainVault® harvesting systems and HumeGard® GPTs

Case study



# Green living aged care facility uses RainVault® and HumeGard® systems

Humes Water Solutions have played an integral part in the implementation of a Water Sensitive Urban Design (WSUD) strategy for a new community village in New South Wales. Casuarina Grove at Hamlyn Terrace on the Central Coast, is the first village for ageing people with intellectual disabilities to be built in the state.

This state-of-the-art 100 bed community village opened in February 2011, and incorporates 10 new houses which provide modern amenities, in close proximity to Wyong Hospital. It replaces aged facilities at Peat Island, near Brooklyn. The project's consulting engineer, Woolacotts, incorporated both, RainVault® water-harvesting solutions, to meet the WSUD goals and HumeGard® Gross Pollutant Traps (GPTs) for stormwater pre-treatment.

Twelve below-ground RainVault® systems, providing a capacity of 240 kL, were installed across the site to allow capture and storage of roof run-off. The harvested stormwater is re-used for garden irrigation and toilet flushing. These systems have **flexible storage configuration options** and can be extended in the future with additional RainVault® system segments to increase storage capacity. The two HumeGard® GPTs provide stormwater pre-treatment, significantly reducing the amount of sediments, litter and vegetative waste which would otherwise be discharged into local waterways. The HumeGard® systems were purposely selected for their ability to **capture and retain 100% of gross pollutants**, prior to bypass.

HumeGard® GPTs are designed for residential and commercial developments where litter and sediment are the predominant pollutants. They are particularly **useful in retrofit applications** or drainage systems on flat grades, where low head loss requirements are critical. The ultimate result of the Casuarina Grove WSUD strategy is the treatment, retention and recycling of the on-site rainwater and stormwater, minimising the facility's impact on the ecology of the downstream Bingarra Channel and nearby floodplain. Woolacotts director, Stephen Branch, said the HumeGard® GPTs were selected for their **strong performance**, which is backed by **extensive field and lab test data** from Melbourne's Swinburne University of Technology. "It was important to us to ensure we selected the right system to achieve the stormwater quality requirements of Wyong Shire Council. The RainVault® system was ideal as it achieved optimal below-ground volumes for water harvesting."

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## Project

Casuarina Grove aged care facility, Central Coast NSW

## Client

North Constructions

## Consulting engineer

Woolacotts Consulting Engineers

## Products supplied

RainVault® harvesting systems, HumeGard® GPTs

