

Giant gross pollutant trap to keep city clean

A massive Rocla CDS gross pollutant trap is helping fulfil the green ambitions of a satellite city development outside Brisbane. The unit was designed by Rocla, in conjunction with KN Group, using SWATT modelling software.

Rocla's SWATT (StormWater Analysis of Treatment Train) selection software was developed to enhance the selection process of the range of CDS gross pollutant traps and Filternator media filtration system devices. It is able to complement Music water quality modelling software,

as a project based design tool to predict removal rates of target pollutants within stormwater catchments.

The software uses estimates of common pollutant concentrations from *Australian Runoff Quality 2006* to determine optimum sizing and cleaning frequencies to satisfy the water sensitive urban design (WSUD) water quality objectives.

The gross pollutant trap in the satellite city of Brisbane was designed to treat first flush volumes from severe storm events, before draining the treated stormwater

into a bioretention basin. The model indicated that by removing all the gross pollutants and most of the sediment with the CDS3030 unit, the bioretention basin will be protected and its environmental function maintained.

With a footprint of 7m by 5m, it is the largest CDS unit installed by Rocla in Queensland. The 3m diameter continuous deflective screen has an effective screening area of almost 30m² to treat stormwater.

The gross pollutant trap is designed to treat up to 1700L/s of runoff, removing around 99% of gross pollutants and over 70% of sediment, resulting in more than 2.5t of rubbish a year being removed from the catchment.

The CDS unit was installed by Civil Contractors and subcontractor MCQ Group. The large pollution storage provided by the unit ensures that maintenance by the Moreton Bay Regional Council will be minimised to a single annual clean.

Many CDS units have already been installed at North Lakes, treating stormwater runoff from residential and commercial areas. The Rocla CDS3030 unit recently installed is the largest to date, and is located in the North Lakes Business Park, Stage 6, which comprises four large lots covering an area of approximately 22ha, most of which will be hard surfaces. Construction began on the North Lakes Business Park development, 25km north of Brisbane, in 2007 and it is planned to take seven years to fully complete. The \$130 million development by Stockland will ultimately cover 55ha. ■



In North Lakes, the largest gross pollutant trap installed by Rocla in Queensland had a footprint of 7m by 5m and was designed with the assistance of SWATT modelling software.