



## Bill Mitchell Park Stormwater Harvesting Project

Ms Kylie McMahon<sup>2</sup>, Mr Hugh Williamson<sup>1</sup>, Mr Brian Jacobs<sup>2</sup>, Mr Murray Powell<sup>1</sup>, Mr Omid Sayar<sup>1</sup>

<sup>1</sup>Optimal Stormwater, Chatswood, Australia, <sup>2</sup>City of Ryde, Ryde, Australia

### Overview:

The City of Ryde has identified LGA wide locations suitable to implement stormwater quality and harvesting projects as part of their commitment towards water quality improvement. Works locations were derived utilising findings from their ongoing water quality monitoring program across 5 catchment areas, pollution monitoring, WSUD strategic review studies and involvement as contributing partners in Parramatta River Catchment Group, under the Lane Cove and Parramatta River Coastal Zone Management Plans and Sydney Harbour Catchment Water Quality Improvement Plan.

This paper and presentation focuses on the story of the City of Ryde planning, designing and implementing stormwater quality improvement projects, with a particular focus on the Bill Mitchell Park site which combines stormwater quality and stormwater harvesting.

Bill Mitchell Park is located on Morrison Road, Gladesville and discharges into Glades Bay. The upstream Peel Park was identified for a WSUD system in two previous studies and as a GPT location Parramatta River Estuary Coastal Zone Management Plan to investigate the potential for installing bioretention systems at Peel Park to provide improved treatment of stormwater flows entering the estuary at the site as well as installing irrigation.

It was identified that the downstream Bill Mitchell Park contained a higher catchment area and extremely feasible location for the installation of a high quality SQID followed by a gravity offtake into a large underground stormwater harvesting system and Optimal Stormwater provided designs for these as well as concepts for a stormwater harvesting system for a new irrigation system at the site.

### Objectives:

Optimal Stormwater undertook a feasibility study for the City of Ryde and it was identified with Council, that the Peel Park site would have to operate under a pumped system due to site constraints and the installation of a bio retention system could subject restrictions on the area which was presently used by sports groups as a training area. Subsequently a detailed design for the GPT, water balance and a stormwater harvesting tank at the Bill Mitchell site was undertaken by Optimal Stormwater.

### Method:

The City of Ryde subsequently went out to open tender for the construction of this system and Optimal Stormwater won the construction project. The Bill Mitchell Park Stormwater harvesting project went out for tender in three separate stages and Optimal Stormwater won two of the three stages, with Micon Constructions winning the construction of the treatment shed extension. The Bill Mitchell Park irrigation design was undertaken by Aqueduct

Consulting in coordination with Optimal Stormwater. The Bill Mitchell Park irrigation system construction went out for tender and was won by Neverstop Water Harvesting.

**Results:**

At the time of this abstract there had been approximately 2,000KL of water used through the stormwater harvesting system and 26 tonnes of pollutants removed from the GPT. The stormwater harvesting system was commissioned in time to be utilised to irrigate the new turf during the intensive turf watering stage. Recycled water tanker truck top up has been utilised by the City of Ryde and there is a planned extension to bring the recycled water to Peel Park.

**Conclusion:**

The City of Ryde has a target to reduce pollutants and increase stormwater harvesting around the LGA and this presentation and paper focuses on the stormwater quality management through telling the story of the planning, design, construction and operation and maintenance of the Bill Mitchell Park GPT and Stormwater Harvesting System.