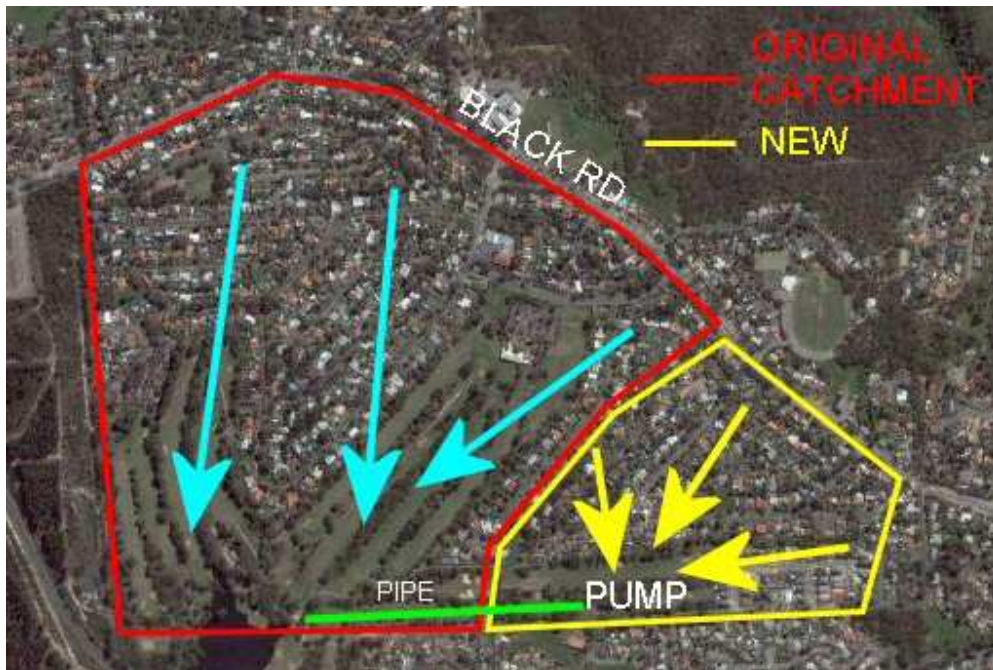


## Stormwater Harvesting Scheme

With the help of a Federal Government Grant under the Community Water Grants Scheme, a stormwater harvesting system been installed to increase the club's stormwater catchment capability by at least 30%. This is illustrated in the aerial photograph below, which shows the original catchment area in red, and the new catchment area, which includes the new subdivision arising from the sale of Golf Course land, in yellow.



The original catchment delivers water from surrounding streets to the dam via the two creeks running through the course. Water from the new catchment area has previously flowed into the course, only to immediately pass through to the stormwater system and out to sea.

The stormwater harvesting system blocks off the original outlet, with a raised outlet providing for overflow, and two submersible pumps installed in concrete pipe wells in the path of the incoming water, in front of the 14th tee.



The intelligent pump controller operates one pump intermittently in low flow periods, based on a 10 level sensor, and in high flow periods, both pumps operate continuously, delivering 40 litres/sec.

In addition, the controller provides statistics such as number of starts and total running time. Based on measured flow rates and total running time, the system has delivered approximately 20 megalitres of water in the first three months of operation.

The water is pumped via a 600 m pipe, 150 mm diameter, discharging to the dam behind the 15th green. A crushed rock buffer prevents soil erosion.





Although the pumps handle 40 litres/sec, heavy rainfall can deliver flows in excess of this. The raised overflow outlet allows temporary storage of some 200,000 litres but may still overflow in heavy rain periods.



At the time of posting this report, the dam is full, ahead of schedule. 20 megalitres represents about 1 metre in depth. With water running over the spillway, the pumps have been turned off, and the plate blocking the original outlet removed, bypassing the system. This avoids wasting energy to pump water over the spillway.



Why is this system so important?

Firstly, the club can be confident that the dam will fill.

Secondly, once watering recommences, significant catchments from summer rains will be obtained. This system will be even more effective than the original catchment via creeks as there is no loss through absorption in the creeks between the stormwater pipes and the dam.

Thirdly, the increased catchment provides confidence that the dam will continue to be filled with the proposed 50% expansion of storage capacity.

In conclusion, the stormwater harvesting scheme recently implemented greatly enhances the club's water supply, and in conjunction with the planned dam storage expansion, is expected to allow the club to maintain the course to a high standard without using any mains water.