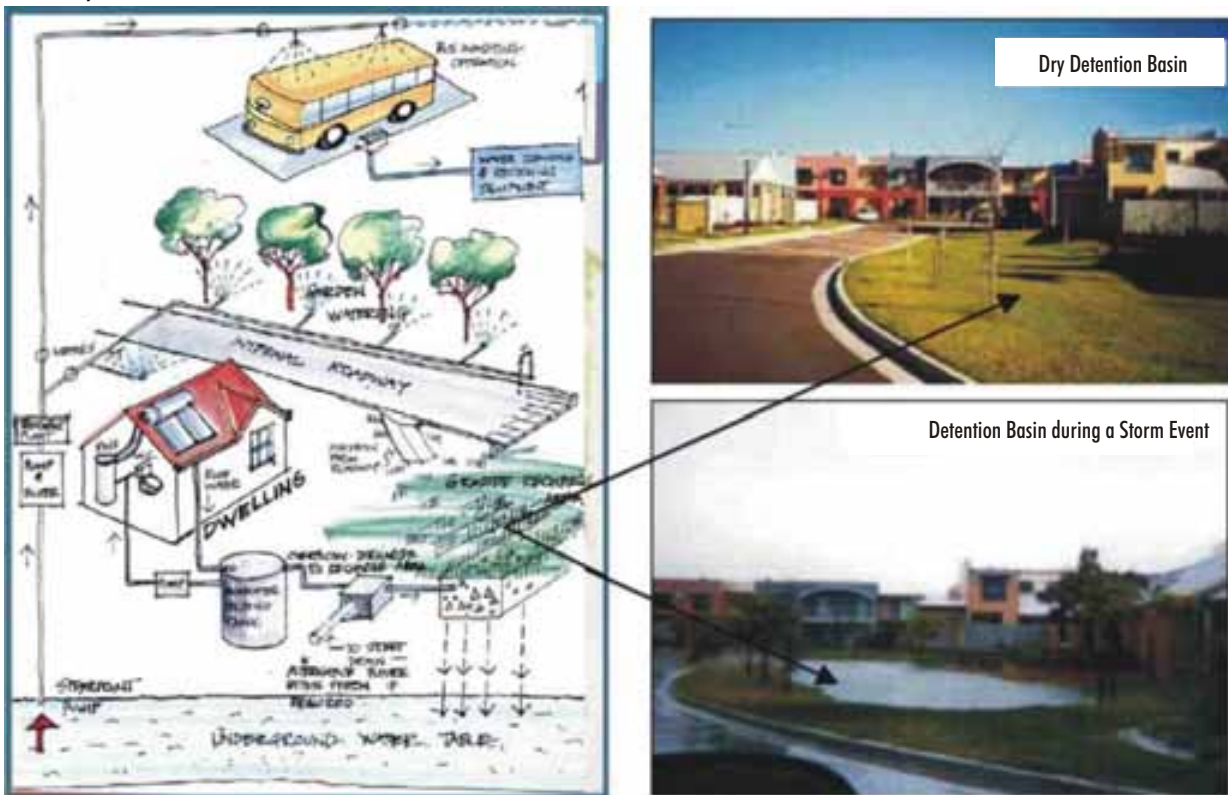


A Case Study in *Water Sensitive Urban Design: Figtree Place, Newcastle, New South Wales, Australia

Figtree Place is a 27-unit community housing development incorporating on-site stormwater harvesting and subsequent storage in rainwater tanks and an aquifer. The WSUD objective is to retain stormwater on-site and reduce potable water consumption. The site is designed to contain all run-off (no site overflows) for all rainfall events up to and including a 1 in 50 year event. The stormwater from roof surfaces is pre-treated in sediment traps prior to storage in underground rainwater tanks. Catchment run-off from roads and other impervious surfaces is infiltrated through the base of a dry detention basin and stored in an underground aquifer.

The stored stormwater is pumped from the aquifer as required and used to irrigate garden beds and open spaces, and wash buses at the adjacent depot. Harvested stormwater is also used to supply hot water to each dwelling ensuring sterilisation of the stormwater for indoor use. Monitoring at the site has shown that the harvested rainwater supplied to the dwellings complies with Australian drinking water standards. Overall the water management scheme reduces high quality mains water demand by approximately 60%.



The Figtree Place Stormwater Harvesting and Supply Scheme

Planning and Design Features of Figtree Place

- On-site infiltration basin is used to treat road/catchment run-off.
- An aquifer storage and recovery system is employed.
- Five centralised rainwater tanks collect roof run-off.
- Harvested stormwater is used for hotwater services, toilet flushing, irrigation and supplements water for washing vehicles in adjacent bus depot.
- A dual pipe system is used for potable and non-potable water supply to each dwelling.
- Water saving appliances are used.

* Water Sensitive Urban Design (WSUD) offers sustainable solutions for integrating land development and the natural water cycle. SuDS are a component of WSUD. Source: Water Sensitive Design in the Australian Context, conference held 30th - 31st August 2000, Melbourne, Australia. For further performance details, please refer to the following websites: <http://www.unisa.edu.au/uwrc/ham.htm>; <http://www.eng.newcastle.edu.au/~cegak/Coombes/FIGTREE%20LAST21.htm>; http://www.greenhouse.gov.au/yourhome/technical/fs26_2.htm