

Rain Bank

Urban Stormwater Harvesting and Reuse Centre

Rain Bank is South Bank Corporation's multi award winning urban stormwater harvesting and reuse centre. It provides a sustainable, drought-proof water supply for South Bank by collecting and treating stormwater from a 30 hectare catchment across West End and South Brisbane and redistributing it around the Parklands. Rain Bank provides 85 percent of the Parklands' irrigation and non-potable water needs and is the first large-scale stormwater harvesting project in Australia to be retrofitted in a fully developed mixed use catchment.

How it works

Rain Bank was constructed on an existing stormwater drainage system. When it rains, underground pipes divert the stormwater to Rain Bank. From there, water is treated and redistributed to the Parklands through South Bank's irrigation system. Rain Bank consists of:

Storage tank

Rain Bank has a 2 megalitre below-ground reinforced concrete storage tank that is subdivided into two sections. One section stores up to 1.75 megalitres of storm water and the other section stores up to .25 megalitres of treated water. This tank means that Rain Bank can continue to store and treat water even when it is not raining.

Plant room

Rain Bank has an underground plant room to house and protect the water treatment facilities.

Stormwater Harvesting Interception Pit (SHIP)

The SHIP is where water is redirected from the existing stormwater drainage system to the Rain Bank system. The SHIP pumps water into the storage tank and plant room for treatment.

Treatment facilities

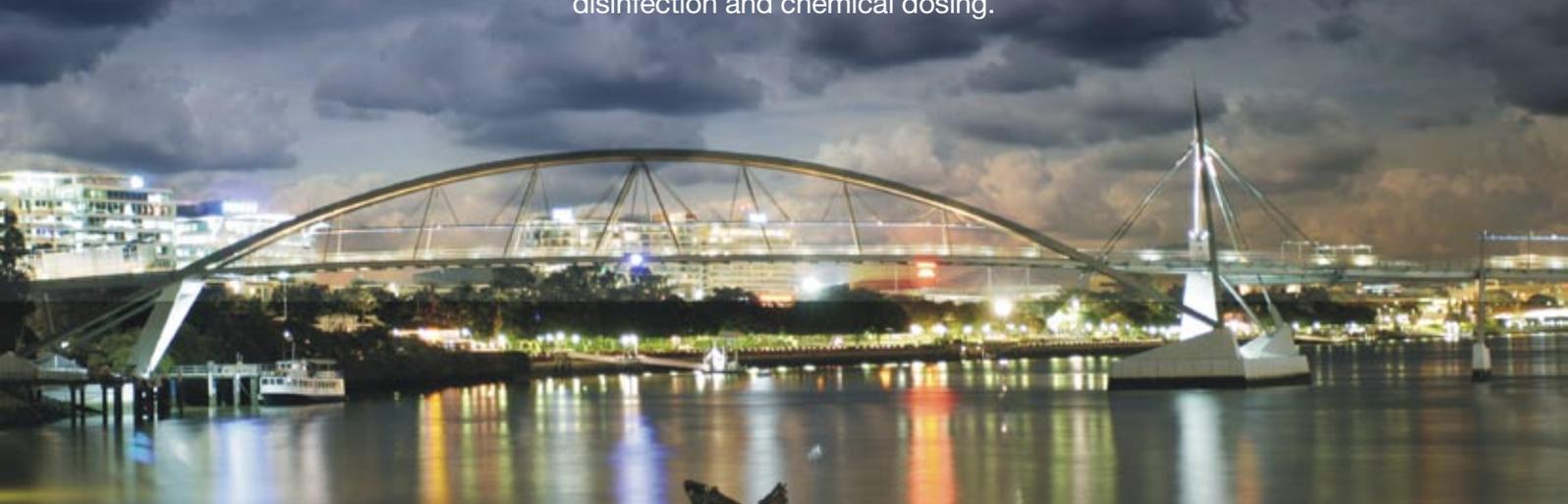
Rain Bank's treatment facilities filter and clean the stormwater extensively to ensure that it is safe for use. This process involves pre-treating it to remove any oil and sediment, then passing it through a five-stage process of pre-filtration, media filtration, carbon filtration, UV disinfection and chemical dosing.

Pipes

A network of underground pipes transport stormwater from the drainage system to Rain Bank's treatment plant and then back out to the Parklands through the irrigation system.

Viewing deck

In order to facilitate ongoing education, Rain Bank has an animated display and viewing deck area, looking into the treatment plant. The viewing deck provides year-round educational opportunities for visitors to learn about the water cycle, stormwater harvesting and water conservation. The information panel explains the urban stormwater story, the treatment process, vital statistics and flow rates.



Key facts and figures

- Rain Bank harvests, stores, treats and reuses approximately 77 megalitres of stormwater per year. This is equivalent to more than 30 Olympic-sized swimming pools
- Rain Bank provides up to 85 percent of the Parklands' estimated irrigation demand. This means the Parklands are almost entirely self sufficient with non-potable water use
- The water treated in Rain Bank is used for irrigation, water features, toilet flushing and general outdoor wash down. Future uses may include swimming pool filter backwashing and top-up water for the pools and lagoons
- Rain Bank eliminates the need to supply tankered, imported water to the Parklands, though it has been configured to receive imported water if required
- Rain Bank will contribute to cleaner, healthier waterways with its ability to capture any accidental spills that occur in the catchment in the pipeline upstream of the SHIP.

Funding

All levels of government joined forces to deliver and fund the project:

- Queensland Government – \$4.65 million
- Australian Government's Water for the Future program – \$3.3 million
- South Bank Corporation – \$1.5million
- Brisbane City Council – access to the Brisbane City Council stormwater systems.

Awards

Rain Bank is the recipient of three renowned industry awards:

- Healthy Waterways Awards 2011 – 'eWater – Water Sensitive Urban Design Award'
- Stormwater Industry Association of Queensland (SIAQ) Awards for Excellence 2011 – 'Excellence in Infrastructure'
- Premier's Sustainability Awards 2012 – 'Business Eco-efficiency Award'.

Consultants

Building Rain Bank was a collaborative process. South Bank Corporation worked with several specialists including principal engineering consultants Bligh Tanner and design and consult constructor, Stirloch Group.

Timeline

Contract awarded
February 2010

Construction
April 2010 to March 2011

Landscaping
July 2010 to April 2011

Testing and commissioning
April 2011 to June 2011

Completion
June 2011.

FOR MORE INFORMATION

If you would like more information about Rain Bank, head to our website www.southbankcorporation.com.au or contact us on info@south-bank.net.au or (07) 3867 2051.

