

# Federation Walk Recycled Water Project



Australian Government Water Fund  
Community Water Grants

**Federation Walk Coastal Reserve Sea World Dve, The Spit.**

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Federation Walk is a 92 hectare Coastal Reserve located on The Spit, Gold Coast. The area is actively managed with the objective of preserving and enhancing this unique coastal site. A major component of this enhancement program is the revegetation works that are undertaken on site. Prior to these works beginning nearly ten years ago, diversity on site was minimal. Sandmined throughout the 1970's, the reserve was replanted by the Beach Protection Authority with two species, Coastal Wattle (*Acacia sophorae*) and Horsetail She-Oak (*Casuarina equisetifolia*). Revegetation tubestock seed are sourced and propagated locally and plants installed are all local native species, with an emphasis on littoral rainforest species.

Survival of stems planted in a coastal environment requires good quality, well-hardened stock, best practice site preparation and planting methodology and a timely watering in and maintenance regime. The Federation Walk Coastal Reserve has been subject to drought conditions and devastating bushfires have swept through the Reserve destroying many of the revegetation sites. The development of a reliable, waterwise irrigation system has been a major contributor to the long-term success of the revegetation project at Federation Walk.



The site is unique in that a sub-surface recycled water pipe runs parallel to Sea World Dve and flanking the length of the Federation Reserve. The recycled water is used as part of the sand pumping by-pass operations on the northern end of the Spit. This valuable resource was utilised from 2002 when Gold Coast City Council installed outlets from the recycled water line and a water tank on site to gravity feed tertiary treated effluent water onto revegetation sites. The receipt of a Community Benefit Gambling Fund grant, purchased the installation of a recycled effluent water irrigation system above ground throughout a southern section (Cells 1,2 and 3) of the reserve in June 2004 (Stage 1). This system was comprised of 50mm black poly layed on site with outlet points in strategic points. Purpose made manifolds were fabricated to attach to outlets and up to three 18mm hoses connected to deliver water to stems, powered by a 'firefighter' pump. Fires on site damaged the above ground irrigation line and plans were made to repair the lines and install sub-surface.



A successful grant from the Federal Government Community Water Grants Scheme funded Stage 2 of the Recycled Water Project. Initial works in 2007 included the extension of the irrigation line through Cell 4 and replacement of damaged irrigation lines to a sub-surface depth of 400mm, in a large loop throughout site areas. Upright outlet points are marked by white stakes and are approximately 40-50 metres apart. Watering hoses are 20m in length, with the capacity to connect hoses to a length of 40m.



The final stage of the Community Water Grants Recycled Water Project for 2008 was the supply and installation of fixed lockable pump covers on concrete slabs with quick connection fittings to minimise the need for pump movement on site. Solar panels to recharge a new 6.5 HP electric start firefighter pump have been installed at fixed pump sites. Another 1 km of sub-surface irrigation line throughout Cells 5 and 6 including upright take off points have been installed. In addition another 1 km of line extends roadside on the northern end of the reserve. Maps of the sub-surface irrigation line, take off points and outlet connections have also been updated in the continual development of the irrigation project to make the most of the valuable recycled water resource on site.



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