

ACCIONA Agua also delivers more than 80 separate operation and management contracts for conventional water treatment plants with a total combined production capacity of more than 4.2 million cubic metres per day.

ACCIONA Agua Water Technology Centre specialises in technological research, development and innovation. The research team is engaged in more than 20 projects and the centre features pilot plants dedicated to the energy optimisation of treatment plants and services. Thanks to this intense research activity, ACCIONA Agua has filed more than 14 patents related to desalination, membranes, reuse bioreactors and water technologies. ACCIONA Agua has developed the most advanced control system for water plants in order to increase the energy efficiency; minimising pre-treatment chemical consumption, improving pre-treated water quality through coagulation chemistry optimisation, minimising plant downtime and making operational flexibility to changing flow production rates as demand changes.

In Australia, ACCIONA Agua is in a consortium that has designed, is building and will operate South Australia's first major desalination plant at Port Stanvac near Adelaide. Additionally, ACCIONA Agua is shortlisted for the Mundaring Water Treatment Plant Public Private Partnership (Water Corporation of Western Australia, Perth) and the Metropolitan Adelaide Service Delivery Project Alliance (for SA Water, Adelaide). In the pursuit of growth, ACCIONA Agua is engaging with governments across Australia to promote all forms of water treatment and system management solutions.

ACCIONA has been operating in Australia for seven years and in that time has directly invested A\$630 million and employed more than 500 people locally. The company is actively extending its Australian footprint with renewable energy, water and infrastructure projects valued at more than A\$2 billion planned for development over the next four years.

For more information about ACCIONA Agua or the broader ACCIONA group, visit www.acciona.com.au.

ABERGELDIE HELPS BRISBANE TRANSPORT RECYCLE WATER

Abergeldie Complex Infrastructure™ has custom designed and installed six water recycling units in bus depots around Brisbane. Bowen Hills, Virginia, Carina, Garden City, Richlands and Toowong



depots each received a unit. Each unit recycles approximately 453,600 litres of wastewater created weekly from the cleaning and maintenance of buses. Water recycled through these units totals about 2.7ML per week.

As well as saving potable water the units are working hard to save Brisbane Transport money via reduced operating and maintenance costs. Bowen Hills bus depot in particular has a separate tank that holds particularly dirty wastewater collected from cleaning the undersides and engines of the buses. Innovation in Abergeldie's water recycling units allows the system to cut the frequency of tank pump outs from weekly to quarterly and improves safety by reducing man hours in confined space.

To meet Brisbane Transport's requirements, the units had to meet stringent water quality targets to ensure excess amounts of water could be discarded via the stormwater drain facility when required. Each unit has a very small footprint (no greater than 1.5m long x 1.5m wide x 2.3m high) and the versatile design allows the system to be easily retrofitted into existing installations. The units can also be installed indoors or onsite anywhere there is a 3-phase power point available.

The innovative design combines four processes into one system. First, oil and grease are removed from the wastewater to a level below the 5ppm using a high capacity oil separation system. Secondly the water is filtered removing any solid matter above 10µm in size. The filtration system does not rely on operator intervention to remain effective. Next the pH of the water is checked and corrected

using an appropriate acid or caustic solution. This ensures that the water is safe and within regulatory requirements to either be reused in the bus wash facility or discharged out of the system. Finally ozone is injected into the cleaned water to ensure that harmful pathogenic bacteria and odour are kept under control.

While at rest, each unit enters a cleaning mode. This reduces maintenance by employing a mechanical well washing system to wash down the walls of the collection tank and reduce hydrocarbons build-up.

Other applications for these units would include pH correction of acid sulfate groundwater and treatment of site water for discharge to stormwater.

Abergeldie Complex Infrastructure™ is able to provide complete turn-key water treatment facilities such as wastewater treatment plants and water recycling facilities. They have expertise in all associated civil, processing and mechanical works, steel structure fabrication, and supply and installation of aeration and dewatering equipment.

To enquire about Abergeldie's services please contact head office, Ph: (02) 8717 7777 or visit www.abergeldie.com.

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