

INLET WORKS UPGRADE

GLENELG WASTEWATER TREATMENT PLANT - SOUTH AUSTRALIA



APPLICATION DETAILS

The Glenelg Wastewater Treatment Plant was originally built in 1932 with a number of subsequent capacity upgrades to accommodate increasing demand. This treatment plant is part of the key infrastructure required to provide a reliable and secure wastewater service to the southwest region of metropolitan Adelaide. The plant receives sewage from a drainage area of over 9,200 hectares and is designed for annual average flows of 60 megalitres per day and serves an equivalent population in excess of 200,000 people.

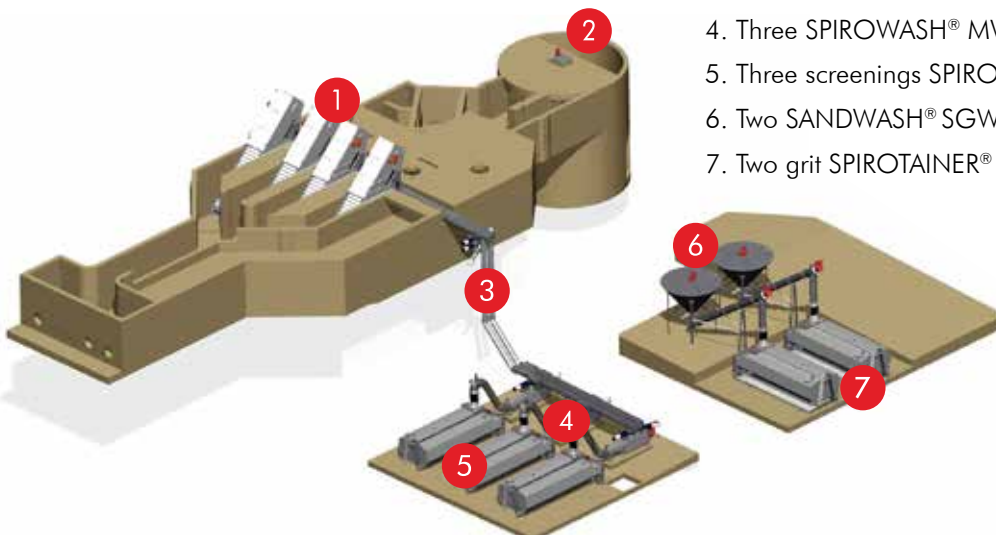
The Anderson Avenue Wastewater Pump Station and Glenelg Inlet Works are critical infrastructure that transfer the sewage from the network to the treatment

plant. All wastewater from the network is pumped into the Glenelg Inlet Works from the Anderson Ave Wastewater Pumping Station. Removal of larger solid inorganic material such as paper, plastic, grit and silt, which are abrasive and damage plant equipment, also occur at these preliminary stages.

The aim of this upgrade was to minimise the risk of a wastewater overflow and in addition significantly improve the odour control as per Environmental Assessment Policy guidelines.

SPIRAC PRODUCTS USED

1. Four Traveling Fine Screens
2. SPIRAC Grit Vortex
3. Launder System
4. Three SPIROWASH[®] MW-Q280
5. Three screenings SPIROTAINER[®] 10m³
6. Two SANDWASH[®] SGW30
7. Two grit SPIROTAINER[®] 10m³



THE SOLUTION

SPIRAC was asked to update the pretreatment area for the Glenelg WWTP. To handle up to 2100 L/sec four traveling fine screens were installed. The screens work in an on and off-line configuration to prevent grit settlement upstream of the screens.



Traveling Fine Screens

The screenings get transferred from the screens via launder system to three SPIROWASH® units our screenings treatment units. The SPIROWASH® units wash out the organic material, reduce the volume and weight of the screenings and compacts them. SPIROWASH® pushes the screenings through a press tube and drops the material into SPIROTAINERS®. The screenings handling system is able to continue to handle the maximum screenings loading should a SPIROWASH® be out of service. SPIROTAINER® units are capable of containment and road transport and therefore are a durable and efficient solution for wastewater treatment and materials handling. Retractable chutes between the press tubes and the SPIROTAINER® units reduce the chances of spills and leaks. Given the proximity of the Glenelg WWTP to metropolitan areas, the entire system was designed to contain foul air.



SPIROWASH® and SPIROTAINER®: Screenings washing and storing

SANDWASH™ our grit washer and SPIROTAINER® our disposal unit was combined to treat and store the grit provided by a vortex grit cyclone. Two SANDWASH™ units make sure that the grit is cleaned prior to being deposited into SPIROTAINERS®. The washed and classified grit is directed to SPIROTAINERS® for disposal off site. SPIROTAINERS® have a nominal capacity of 10 m³ and two bins have been provided with weight cells for the grit treatment area.



SANDWASH™ and SPIROTAINER®: Grit washing and storing