



# AS 1546.3:2017 Compliance testing of on-site domestic wastewater Secondary Treatment Systems

FACT SHEET

Arris Pty Ltd is a South Australian agricultural, environmental and water treatment consultancy organisation established in 2000. Arris works for a range of clients from small business and research organisations, to government departments, peak industry bodies and large corporations.

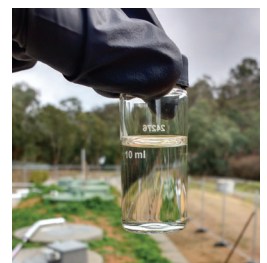
Arris has constructed and is operating a state-of-the-art compliance testing facility at SA Water's Hahndorf wastewater treatment plant in South Australia for undertaking AS 1546.3:2017 compliance testing according of on-site domestic wastewater treatment Secondary Treatment Systems (STs) with design hydraulic treatment capacities of between 1,200 and 5,000 L/d. Compliance testing according to AS 1546.3:2017 comprises a 42 week long combined commissioning and testing period (minimum testing period 34 weeks) conducted under specified conditions in order to demonstrate the performance and reliability of STs under normal 'steady-state' design operations and also challenge 'stress testing' conditions.

## HAHNDORF STS TESTING FACILITY OVERVIEW

The STS testing facility is located in Hahndorf, South Australia and has continuous 24/7 access to the raw sewage flow for uninterrupted compliance testing activities. The Hahndorf facility is located in climate zone 6, offering STS providers the capacity for full cold climate winter testing to verify low temperature performance as per AS 1546.3:2017. The facility has a 40 m long concrete bunker with nominal depth of 2.1 m which allows STS systems to be installed and backfilled with sand to simulate fully in-ground in situ operating conditions during testing. The facility has capacity to accommodate up to 10 domestic treatment units concurrently and the first round of STS compliance testing commenced June 2019.

STS units are supplied with macerated raw sewage from a 5,000 L balance tank which receives unscreened sewage from the Hahndorf sewer

main at the head of the wastewater treatment plant. Sewage dosing and influent plus effluent sampling are fully automated and SCADA controlled. Automated refrigerated autosamplers are housed in the control sheds adjacent to the STS bunker, allowing for programmable and automated grab and composite sampling from influent and effluent lines as per the requirements of AS 1546.3:2017. All samples are analysed by our local NATA-accredited laboratory service provider (Envirolab Services). A suite of parameter data are monitored and logged by control shed instrumentation, including STS sewage dosing volumes and flow rates; feed pipeline pressure; water and ambient air temperature; electricity consumption; system alarms etc. The facility is also covered 24 hours by full-span CCTV cameras, with data recorded and stored in the on-site facility control centre.



**Manufacturers of all existing and new STS are required to test and accredit their systems against the Australian Standards in order to sell them in Australia.**



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### CUSTOMER TESTIMONIALS

The below testimonials are from STS providers with units currently under test at the Hahndorf facility.

*"All of us at Ri-Industries are extremely pleased with the progress of the compliance testing at the Hahndorf wastewater treatment plant. Testing commenced in June, and we are updated on a weekly basis on the performance of both our 1,500 L/d and 5,000 L/d units.*

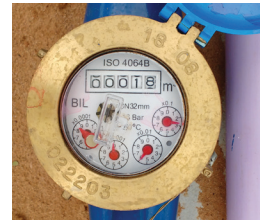
*The testing facility was built from the ground up, and all credit goes to the teams from Arris and Hydroscape for achieving a fantastic outcome. Any manufacturer considering having their units tested, I would highly recommend using the Hahndorf testing facility."*

**Craig Ainslie**  
Sales Manager, Ri-Industries

*"OzziKleen chose the Arris Hahndorf test site for testing one of our residential waste water treatment plants. As the National Residential Service Manager, I naturally have spent time dealing with Arris staff and have always been impressed at how professional their conduct has been.*

*Being based in QLD the distance has always been a challenge, but, Arris and especially Michael Short, have been extremely helpful during the initial set-up and testing period, and provided all the assistance we required."*

**Scott Humberstone**  
National Domestic Service Manager, OzziKleen



### COST SCHEDULE

The schedule below outlines the cost of STS compliance testing for the various effluent quality criteria and treatment levels assuming no STS unit failures and no additional testing is required during the 42 week testing period. NB. Costs associated with the transportation, installation, maintenance servicing and decommissioning of the units are at the expense of the STS providers.

	STS testing for secondary effluent compliance	STS testing for advanced secondary effluent compliance
Deposit to secure STS testing (per unit, non-refundable)	\$20,000 plus GST	\$20,000 plus GST
Monthly charge while STS unit is on-site (post-installation and pre-decommissioning)	\$3,500 plus GST per month	\$3,750 plus GST per month
× 10 months (no STS failures)	\$35,000 plus GST	\$37,500 plus GST
Compliance reporting	\$5,000 plus GST	\$5,000 plus GST
TOTAL base cost	\$60,000 plus GST	\$62,500 plus GST
Optional / Alternate testing		
STS nutrient reduction testing (total N and P)	\$5,000 plus GST	
STS disinfection unit testing (E. coli and free available chlorine)	\$5,000 plus GST	
Alternative disinfection system testing only (9 week duration; 41 samples)	\$7,500 plus GST	

NOTE: All prices quoted are in AUD.

## Further information

Manufacturers of all existing and new STS are required to test and accredit their systems against the Australian Standards in order to sell them in South Australia. Secondary Treatment Systems (STS) include all aerated wastewater systems, reed beds and aerated sand filters.



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