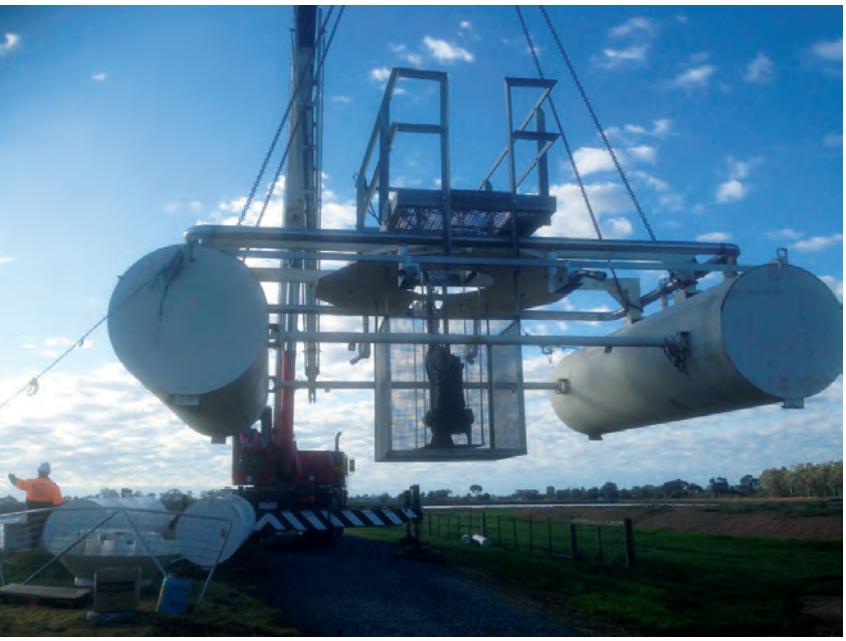
Andzac continues to develop its aeration and mixing technology

After moving into new premises and constructing a new 40,000 L testing tank, Andzac Water Treatment (AWT) is now able to improve efficiency further by 'tuning' the venturis of its aeration technology. AWT is also adding an additional source of air injection into the pre-pump stage, including flash mixing, which will allow the introduction of chemicals to be added into the jet venturi stream.

AWT has also developed a new 1.5 kW, lower cost, smaller unit that will be suitable for applications such as wineries, breweries, local councils, dairy farmers, golf courses and the like, and may enable smaller businesses to take advantage of the ATO's instant asset write-off.

Wait! Don't get rid of that old infrastructure!

AWT was recently commissioned by Goulburn Valley Water to build a custom aerator using its proven technology on an old pontoon platform that had been lying out of action on the side of the lagoon for some time. This was a good way to recycle old equipment that otherwise had no further use. The unit is a 6.8 kW model at the Kyabram WWTP which was installed in July this year.



Further testing

Case study 1: South Gippsland Water (SGW), Wonthaggi wastewater treatment plant.

The chosen lagoon was extremely polluted as it had no screen in place to stop debris infiltrating the main body of water; however, a baffle zone was in place to prevent as much debris as possible getting through. This baffle zone, which is an extremely high-ragging area, currently uses a 37 kW low speed mechanical (LSM) surface aerator, along with a 12 kW diffuser system.

A 22 kW LSM surface aerator was being used in the main body of water, outside of the baffle zone. The Andzac Aerator was installed in this area to conduct the trial. After the trial period, the conclusion was that the Andzac Aerator was able to maintain the required DO levels at around 2.0 ppm. Also, good to note that once the trial unit was pulled from the pond, the well screen was as clean as it was the day it was installed. The well screen is doing a good job of keeping debris away from the pump intake and thus avoiding breakdowns and downtime. No cleaning whatsoever was required from the operators on-site.

SGW has now purchased its first aerator from AWT to replace the incumbent 22 kW LSM surface aerator. It will be 12 months before tangible data on actual power consumption savings will be available.

AWT has since been asked by SGW to conduct a trial in the high-ragging baffle zone at their Inverloch wastewater treatment plant. AWT is looking forward to this as it also currently has another unit located in a very high ragging environment at Goulburn Valley Water's Mansfield water treatment plant.

Case study 2: Goulburn Valley Water, Mansfield wastewater treatment plant.

Andzac Water Treatment is currently trialling a 2.2 kW aerator at Mansfield WWTP in one of its highly polluted lagoons. The incumbent aerator was a 22 kW LSM model. The Andzac Aerator was installed on 1 July 2015 and has been running trouble-free, maintaining the required DO levels and continuing to operate seamlessly without any blockages or downtime.

Further trials

Further trials are scheduled at a dairy farm and also at a large food manufacturing facility in rural Victoria, which currently operate 16 aerators and face massive power bills each year. Andzac Water Treatment is looking at replacing these power-hungry machines with a number of Andzac Aerators, which will save them money and substantially reduce their carbon emissions. AWT's goal and challenge is to provide a payback time within two years.

Andzac Water Treatment
www.andzac.com