

# AERATED WASTEWATER TREATMENT SYSTEM

In unsewered areas, choosing an appropriate method for the treatment and reuse of household wastewater is critical in preserving the health of the public and the environment. Aerated Wastewater Treatment Systems (AWTS) are one alternative that has been developed as a way of achieving sustainable sewage management on residential properties.

## WHAT IS AN AWTS?

An Aerated Wastewater Treatment System (AWTS) is essentially a small-scale sewage treatment plant that services a single household. Through a series of treatment and disinfectant processes, household wastewater is transformed into non-potable water that can be distributed on lawns and gardens.

## HOW DOES AN AWTS WORK?

An AWTS consists of one or two wastewater tanks, which contain a series of chambers. Wastewater enters the first chamber and solids settle to the bottom to form a sludge layer. The scum layer, containing fats and greases, collects at the top of the chamber and the clarified wastewater flows from between the two layers to the second chamber. In the second chamber, this clarified wastewater is aerated and broken down further by biological activity. A third chamber also allows further clarification of the wastewater through the settling of any remaining solids. The treated effluent is finally disinfected in a chlorination or UV chamber and irrigated through hoses across lawns or gardens.

## HOW TO MAINTAIN YOUR AWTS

The effective operation of your AWTS is dependent on regular maintenance. At present, all AWTS are required to be maintained and serviced by a qualified service technician on a quarterly basis at the cost of the owner. It is essential that the irrigation area of your AWTS is well maintained. The area must be correctly sized to allow effective disposal of treated effluent on your property. Treated effluent must not run to or be sprayed onto neighbouring properties.



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## APPROVAL TO OPERATE

All owners of sewage management systems are required to apply to Council for an Approval to Install and an Approval to Operate. The Approval also ensures that property owners are aware of their responsibility to efficiently operate and regularly maintain their system.

## HOW TO MAINTAIN YOUR AWTS

Whilst Council will consider the site constraints of each individual property, there are setback distance guidelines which should be adhered to in line with AS1547: 2012 or as follows:

- 100m from permanent surface waters
- 250m from any domestic ground water well
- 40m from any other waters
- 6m if area is up-gradient or 3m if area is down-gradient from driveways and property boundaries
- 15m from a dwelling
- 3m from pathways
- 6m from a swimming pool
- 20m from natural bushland

Additionally, Hornsby Shire Council requires a minimum of 1 sprinkler per 20m<sup>2</sup> of land approved for irrigation, or subsurface irrigation lines installed at 1.5m spacings.

## OWNER'S RESPONSIBILITY

The owner of an AWTS is responsible for:

- Ensuring that the tank/s do not leak
- Promptly fixing the system when problems are detected
- Ensuring that the system is inspected quarterly by a qualified service technician
- Desludging the system when solid levels become too high
- Ensuring a valid Approval to Operate is in place for the system

## FURTHER INFORMATION

*Local Government (General) Regulation 2005*

[legislation.nsw.gov.au](http://legislation.nsw.gov.au)

*Approval to Install and Operate Application Forms*

[hornsby.nsw.gov.au/wastewater](http://hornsby.nsw.gov.au/wastewater)

