

## Introduction

If you live in or rent a house that is not connected to the main sewer then chances are that your yard contains an on-site sewage management system. If this is the case you have a special responsibility to ensure that it is working well.

The aim of this pamphlet is to introduce you to some of the most popular types of on-site sewage management systems and provide some general information to help you maintain your system effectively. You should find out what type of system you have and how it works. More specific information can be obtained in additional fact sheets. You can get a copy of these fact sheets from Council.

Council is primarily responsible for approving the installation of domestic septic tank systems, composting toilets and aerated wastewater treatment systems (AWTS's). Council is also responsible for approving land areas where the effluent from such systems is finally applied or discharged.

The design and installation of on-site sewage management systems, including plumbing and drainage, should only be carried out by suitably qualified or experienced people. Care is needed to ensure correct design in the sizing of the treatment system and application area.

It is the responsibility of each owner to ensure the system is working efficiently and does not pose any threat to community health nor the local environment.

## What is an on-Site Sewage Management System?

A domestic on-site sewage management system is made up of various components which, if properly designed, installed and maintained, allow the treatment and disposal of wastewater from a house, completely within the boundary of the property. It is important to keep in mind that maintenance needs to be performed properly and regularly.

Wastewater may be "blackwater" (Toilet waste), or "greywater" (water from showers, sinks and washing machines), or a combination of both.

Partial on-site systems eg, pump out systems also exist. These usually involve the preliminary on-site treatment and storage of wastewater in a septic tank and collection well from which the treated wastewater is pumped out and transported to an off-site management facility. Pump out systems use contracted road tankers to transport the effluent.

There are two main processes in systems which dispose of the effluent on the site, namely:

- 1 Treatment of wastewater to a certain standard; and
- 2 Its application to a dedicated area of land on the site.

The type of application permitted depends on the quality of treatment, the type of soil and specific site features.

## Types of Systems

Treatment and application can be carried out using various methods but subject to Council approval for each individual property. Some of the treatment methods include:

### *Septic Tanks*

Septic tanks treat both greywater and blackwater, but they provide only limited treatment through the settling of solids and the flotation of fats and greases. Bacteria in the tank break down the solids over a period of time. Wastewater that has been treated in a septic tank can only be applied to land through an inground soil absorption system, as the effluent contains contaminants which can raise health concerns if applied above ground or near surface irrigation.

## *Aerated Wastewater Treatment Systems (AWTS)*

Aerated Wastewater Treatment Systems (AWTS) treat all household wastewater, like septic tanks but have several treatment compartments. The first is like a septic tank, but in the second compartment air is mixed with the wastewater to assist bacteria to break down solids. A third compartment allows settling of more solids and a final chlorinisation contact chamber allows disinfection. Some AWTS are constructed with all the compartments inside a single tank. The effluent produced may be surface or sub-surface irrigated in a dedicated area. This type of system requires regular maintenance to be carried out by contractors to ensure the treatment compartments are performing as designed.

## *Composting Toilets*

Composting toilets collect and treat toilet waste only. Water from the shower, sinks and washing machines needs to be treated separately (for example in a septic tank or AWTS as above). The compost produced by a composting toilet has special requirements but is usually finally disposed of by burial on-site.

These are just some of the treatment and application methods available, there are many other types such as sand filter beds, wetlands, and amended earth mounds.

## **Keeping your On-Site Sewage Management System Operating Well**

What you put down your drains and toilets has a lot to do with how well your system performs. Maintenance of your sewage management system also needs to be effective and regular. The following is a guide to the types of things you should do with your system:

- ✓ Learn how your sewage management system works and its operational and maintenance requirements.
- ✓ Learn the location and layout of your sewage management system.
- ✓ Keep a record of desludgings, inspections and other maintenance.
- ✓ Conservative water use around the house will reduce the amount of wastewater which is produced and needs to be treated.
- ✓ Don't put large quantities of bleaches, disinfectants, whiteners, chemicals, nappy soakers and spot removers into your system via the sink, washing machine or toilet.

## **Conclusion**

Poorly maintained sewage management systems are a serious source of water pollution and may present health risks, cause odours and attract vermin and insects. By looking after your treatment system you can do your part in helping to protect the environment and the health of you, your family and the local community.

## **Disclaimers**

This Fact Sheet was believed to be correct at the date of its publication.

This Fact Sheet is for general information purposes only and should not be relied upon for legal advice.