Installing an on-site wastewater system

Are you building a new home in an unsewered area? Do you need to upgrade your failing wastewater system? If so, this fact sheet is designed to provide you with information on what is involved and the different options you need to consider when choosing your wastewater system.

First steps
We recommend checking the City of Onkaparinga Wastewater management page to confirm what wastewater management options are available for your suburb—sewer, on-site, or CWMS. Where more than one option is listed you may need to call council to confirm which option is required for your site.

- **SEWER**: The sewer system is operated by SA Water. All wastewater generated from the home is piped off-site to a wastewater treatment plant.

- **ON-SITE**: All of the wastewater generated in the home is disposed of on the site. The wastewater is collected in a septic tank or aerobic system*. The solids settle and remain in the septic tank. They need to be pumped out by a licensed liquid waste contractor on average every 4 years. The wastewater flows from the septic tank into an approved land application measure such as a soakage trench or irrigation area (explained below).

- **CWMS**: A Community Wastewater Management System (CWMS) is operated in some suburbs, such as Willunga, McLaren Vale, McLaren Flat, Clarendon, Maslin Beach and parts of Sellicks Beach. With CWMS the wastewater generated on each site is collected into a septic tank. The solids settle and remain in the septic tank. They need to be pumped out by a licensed liquid waste contractor on average every 4 years. The wastewater is piped off-site through the CWMS network to a treatment plant.

* An aerobic system is officially called an Aerated Wastewater Treatment System (AWTS). It is a secondary treatment system.

The installation or alteration of any wastewater system that is not covered by SA Water must be approved by Council and a wastewater works application needs to be submitted.

Types of on-site wastewater systems
The type of on-site wastewater system you choose to install will impact how you can use your land. The two most commonly used on-site wastewater systems are:

1. **a) A septic tank with subsurface disposal**—where the wastewater is disposed of underground into a soakage trench or bed, which is often located under a grassed area.

2. **b) A septic tank with CWMS**—where the wastewater is disposed of off-site to a treatment plant.

2. **a) A secondary treatment system (e.g. aerobic) with above ground irrigation area**—which treats the wastewater to a level suitable for disposal above ground in an irrigation area, which is a dedicated, mulched, garden bed containing salt and nutrient tolerant plants (usually not native plants).

Please note that this wastewater is not suitable to use for watering lawns or vegetable gardens. It is not suitable for human contact/consumption.

**b) A secondary treatment system (e.g. aerobic) with subsurface disposal**—where the wastewater is disposed of through a buried dripper system that waters your lawn from underneath OR a soakage trench or bed, which is often located deeper underneath a grassed area.

How do I decide which system is best for my site?
This will depend on many factors including the characteristics of your site (soil type, block size, slope), your preferences and costs.

You will need to engage a wastewater engineer to assess, design and certify a wastewater system for your site. They will arrange for soil samples to be taken and produce a wastewater engineer’s report detailing key issues for your site.

The wastewater engineer will recommend what they believe is the most suitable wastewater system for your site. If you would prefer a different system you can discuss this with them and they will alter the design to both meet your needs and comply with the legal requirements.

Below are a range of factors relating to each type of on-site wastewater system. You should consider these when choosing what system you wish to install.

**A septic tank with subsurface disposal**
- A ‘pump out’ by a licensed liquid waste contractor is required on average every 4 years to removed the solids from the septic tank.
- **Failure to 'pump out' the septic tank can result in solids flowing into your soakage trench or bed causing it to fail.**
- As wastewater is disposed of underground there is very little risk to health.
- You can use the land above the soakage trench or soakage bed as a grassed recreational area.
- If your site has soil with poor permeability the wastewater will not soak away effectively into the ground. Therefore a soakage trench or bed will not be suitable unless the water has first undergone secondary treatment.
- If your site is overdeveloped (i.e. filled with sheds, pergolas or other structures) or your site is small you may not have the space needed to install a soakage trench or bed. Subsurface disposal areas (i.e. trenches, beds, ETA) are required to be setback 2.5m from allotment boundaries and 3m from buildings. This means that you need to have the space for your subsurface disposal area and the space for the setbacks. The setback reduces the risk that the wastewater could reach, and adversely affect, your buildings or migrate off your site into neighbouring sites.
The SA Health ‘Wastewater Management’ webpage contains links to the wastewater regulations and codes. You can access an electronic copy of the SA Health On-Site Wastewater Systems Code (April 2013), which provides information on the requirements for design of on-site wastewater systems.

The City of Onkaparinga ‘Wastewater Management’ webpage contains resources to assist you including the Wastewater Works Application form.

If you would like to discuss your situation with the City of Onkaparinga Environmental Health Team they can be contacted on phone 08 8384 0666 or communitysafetygeneral@onkaparinga.sa.gov.au.

Installation of your on-site wastewater system

A licensed plumber will be required to install your on-site wastewater system. Under the SA Health ‘On-Site Wastewater Systems Code’ (April 2013) it is no longer permissible for homeowners to setup their own irrigation areas. **THE IRRIGATION AREA HAS TO BE INSTALLED BY A LICENSED PLUMBER.**

Some building companies ask applicants to sign a contract that states ‘homeowner is responsible for installation of the irrigation area’. This means you will need to then hire a licensed plumber to install the irrigation area at additional cost.

Want to learn more?

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