



## TOWARDS BETTER ONSITE WASTEWATER MANAGEMENT IN VICTORIA - COMMUNITY EDUCATION SERIES

### FACT SHEET 3: SEPTIC TANK WITH SAND FILTER

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If you live in a country town, have a septic system that treats your wastewater, and live on a small block, then it is possible that you also have a sand filter. This fact sheet focuses on sand filters, their issues and some ideas to help manage them.



### 3.1 WHAT IS A SAND FILTER?

Sand filters are large, generally subsurface structures filled with sand that treat your wastewater to a higher standard than your septic tank alone. Sand filters are not

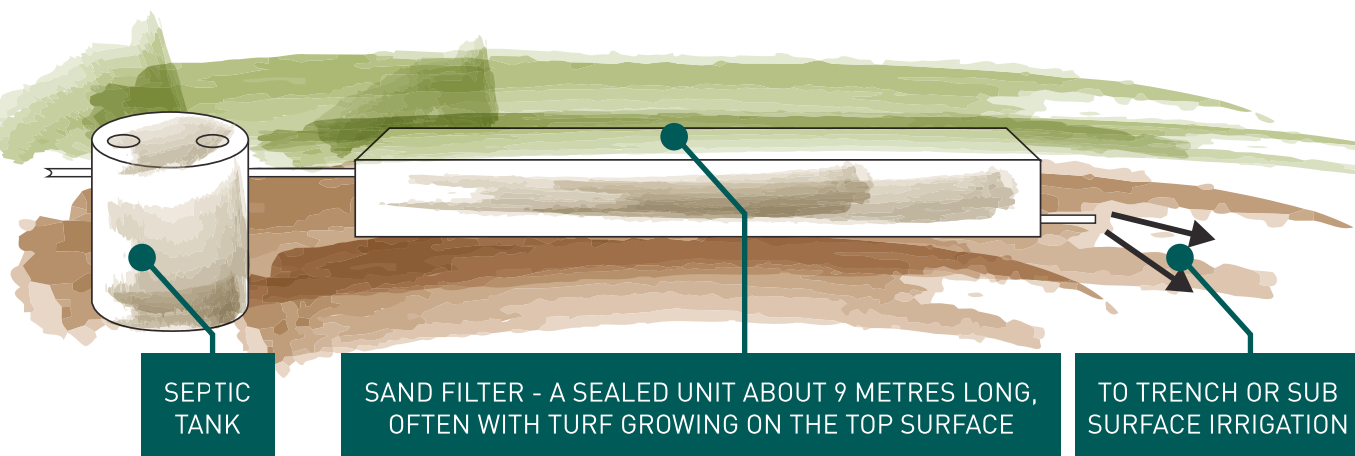
a new technology, but they are an extremely effective method for reducing risks to the environment and for increasing your wastewater disposal options.

### 3.2 HOW DOES IT WORK?

The effluent from the septic tank percolates through the sand in the sand filter. The sand captures any remaining solid material and provides a good environment for good bugs (aerobic bacteria) to digest wastewater and reduce pollution.

Once treated in the sand filter, the effluent is then disposed into underground trenches, or sub-surface irrigation systems or another method approved by your local government environmental health practitioner (EHP or EHO).

### DIAGRAM 1: A BASIC SYSTEM



### 3.3 WHAT ARE THE COMMON ISSUES WITH SAND FILTERS THAT YOU SHOULD BE AWARE OF:

Sand filters, like your septic system, will not last forever. Their major function is to filter particles out of wastewater and facilitate growth of good bugs to treat wastewater to a higher standard. After a few years, these very small particles and bacterial colonies will begin to clog parts of your sand filter and it will not work quite as effectively. Any issues that affect septic tanks and package treatment plants will have an impact on your sand filter.

These issues include:

- Too much sludge. This can result in untreated wastewater heavy with solids leaving the tank and clogging up pipes and absorption trenches;
- Too much water going into the septic tank and trenches. This can also result in solids being pushed out of the tank and clogging up the pipes and the trenches because of poor wastewater flow rate calculations or overuse of the system;
- Toxic chemicals, such as bleach or disinfectants, going into the system. This can result in the good bugs being killed off, halting the digestion process;
- Common signs of a failing septic tank system are the water draining away too slowly; pipes making noises or gurgling when draining; sewage smells; or water ponding above the sand filter.

### 3.4 A FEW SIMPLE STEPS TO A HEALTHY SAND FILTER AND WALLET:

- De-sludge your septic tank every 3 to 5 years, depending on use. Sludge forms a crust on the surface of the sand filter, which blocks the wastewater from moving through the filter;
- Install water saving devices to limit the flow of wastewater through the system;
- At the first sign of pump failure or water ponding on the surface of the sand filter, call a licensed plumbing practitioner;
- You might consider upgrading your sand filter to include a pressurised distribution system, which allows more even distribution of the wastewater across the surface area of the filter and helps it to work more effectively;
- Do not build structures like garages or sheds over the septic system or the sand filter;
- Do not cover the sand filter with concrete or pavers.

### 3.5 KEEP YOUR WASTEWATER ON YOUR BLOCK:

If you have an ageing sand filter on a small block, it is likely that your wastewater management system was designed to discharge treated wastewater offsite. This is an historic method of designing wastewater systems that was frequently employed in townships with small lots. Systems designed in this way commonly discharge to the kerbside gutter.

This method of offsite discharge is no longer permitted due to impacts on the natural environment and the health of the public. However, there is no need to panic just yet. If your system has been designed in this way, it is unlikely that you will be required to change it unless one or more of the following circumstances arise:

- Your system fails and requires repair or replacement;
- The risk of environmental degradation or health impacts becomes too great;

- A reticulated sewer becomes available in your area;
- You alter your house design or any plumbing fixtures attached to your septic tank system;
- Your sand filter no longer meets the water quality standards it is required to achieve; or
- You have been given an order by your local government or other relevant wastewater or environmental protection agency to upgrade the wastewater management system.

Therefore, it is in your interest to maintain your wastewater management system to the highest standard possible in order to protect the natural environment, your community, your family's health and your hip-pocket.

### 3.6 WHO TO CONTACT:

#### South Gippsland Shire Council

Phone: 5662 9200

Email: [council@southgippsland.vic.gov.au](mailto:council@southgippsland.vic.gov.au)

Website: [www.southgippsland.vic.gov.au](http://www.southgippsland.vic.gov.au)

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