INSTALLATION AND MAINTENANCE MANUAL

SEPTIC SYSTEMS, HOLDING TANKS, COLLECTION WELLS AND STORMWATER DETENTION TANKS

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How does a septic tank work?

A septic tank an underground, watertight receptacle. Our septic tanks are constructed from heavy duty fibreglass and are divided into at least 2 compartments. The septic tank receives wastewater from your home and separates any solids from liquids. The liquid portion (effluent) either flows or is pumped to your drainage field.

There are 3 functions of a septic tank:

1. It serves as a settlement chamber for solids.
2. It allows some bacterial breakdown of organic solids to occur.
3. It stores undigested solids which must be pumped out at least every 4 years.

Contents of a healthy septic tank

There are 3 layers to a healthy septic tank

1. A layer of fats, called scum, which floats to the surface.
2. A clear layer, called effluent.
3. A layer of solids, called sludge, which sinks to the bottom of the tank.

Your responsibilities

As an owner of a septic system, you are responsible for making sure your septic system is safe and in good working order. Not only is a failing septic system a health risk, it can harm the environment.

Your responsibilities include:

- Complying with all council requirements and paying any fees associated with installation, maintenance and operation.
- Keeping your system well maintained and checking it regularly.
- Ensure your septic tank is pumped out at least every 4 years.
- Getting things fixed by a licenced plumber if they are not working properly.

Maintaining your septic system

Your septic system must be installed according to SA Health Onsite Wastewater Systems Code regulations. This includes any alterations or changes to an existing system.

If you plan your septic system properly, this can substantially reduce your maintenance costs. The following tips will help you conserve resources, reduce expenses and limit pollution.

1. **Plan your landscaping carefully**
    - Plant grass near the drainage field, (roots from larger plants such as trees and shrubs may damage the drainage field) and mow the area regularly.
    - Choose nutrient tolerant plants for the drainage field.

2. **Use household detergents and bleaches sensibly**
    - Where possible use low phosphorus or phosphorus free detergents. Try using baking soda, vinegar, mild soap solutions or septic safe cleaning products. If you have any questions about the safety of the product/s you are using contact the product manufacturer.

3. **Do not dispose of chemicals, oils, fats or other dangerous items into your system**
    - Do not put chemicals or medicines into your septic system. These products can cause the tank to malfunction.
    - Do not pour fats or oils down the sink. These can solidify, block the system and build up in the tank.
    - Use a sink strainer to prevent food particles from getting into the tank. Food scraps can slow the digestion process and make solids build up more quickly – meaning you will need to pump out the tank more often.
    - Instead of caustic soda or drain cleaners, use boiling water or a drain eel to clear a blockage.
    - Do not flush things down the toilet that could clog the system, such as tampons, condoms, paper towel, grease, plastics or cat litter.

4. **Remove accumulated sludge from the septic tank**
    - Built up solids can affect the performance of your septic system. Household drain pipes may back up with sewage and your drainage field can become clogged. This can cause effluent to come to the surface, pool and smell. This can endanger the environment and is a public health risk.
    - Accumulated solids in the septic tank must be pumped out at least every 4 years.

5. **Reduce and monitor the amount of water entering the septic system**
    - Divert roof water away from the drainage field and make sure that water from the roof downpipes does not enter the septic tank.
    - Check plumbing fixtures regularly for leaks and immediately repair any problems.
    - Avoid large flows of water into the septic tank at once, for example operate your dishwasher and washing machine at different times and spread large washing loads over several days.
    - Install water saving devices such as low flow shower heads.
    - Do not leave taps running eg. When brushing your teeth.
    - If your land slopes down towards your drainage field, install a diversion trench to ensure that surface water runoff is diverted around the drainage field.

6. **Protect your septic tank and drainage field**
    - Do not allow vehicles to drive over the septic tank or drainage field, this could cause damage and result in expensive repairs.

7. **Prevent mosquito breeding**
    - Fit all system vents with mosquito proof mesh.

Checking your septic system

Septic tanks use bacteria to help digest waste, therefor they are a living ecosystem. Excess water, chemicals or a lack of care can quickly make your septic tank unhealthy.

Your septic system may need attention if you notice any of the following

- The toilet or household drains are slow or they back up.
- You notice the air around the tank smells of rotten eggs.
- You see dark green grass growing on or around the drainage field.
- Lots of weeds begin to grow downhill from the drainage field, in nearby drainage channels or alongside a nearby waterway.
- The ground around the drainage field becomes soggy
- The tank has not been inspected for over 12 months.

The most common cause of problems is not de-sludging the septic tank regularly – you must pump your septic tank at least every 4 years.

What to do

If you are concerned, it is important to act quickly. We recommend you contact a licenced plumber or septic system specialist.

There are things you can do yourself to stop the problems before they arise, make sure you do the following at least once a year.

1. **Check the fluid level at the outlet of the tank**
   Carefully open the inspection opening. Check the fluid level in the outlet baffle. The fluid level should not be higher than the outlet pipe at the wall of the tank. Remember to always wear protective gloves and wash your hands afterwards.

2. **Make sure your effluent filter is working, if you have one**
   If you have a septic tank with an integrated pump chamber you will have a stainless steel filter fitted on the outlet baffle before the pump chamber. Carefully open the 150mm inspection opening. Remove the stainless steel filter and rinse with a hose and place back in the tank. Remember to always wear protective gloves and wash your hands afterwards.

3. **Check the drainage field**
   Check your drainage field carefully, it should not be soaked or smell and there shouldn't be abundant grass growth. Mow grass regularly and remove the cuttings. If the area soggy, smelly or overgrown there may be too much water flowing into your septic system or the drainage field may be exhausted. Call a licenced plumber or septic system specialist.

4. **Make sure all drains and toilets are working properly**
   If drains and toilets are slow to empty the septic tank may be full, the drains may be blocked or the drainage field may be clogged or exhausted. Call a licenced plumber or septic system specialist.

   When doing any work on your septic system please note the following

   - Septic tanks can be hazardous, so plan carefully and take proper safety precautions.
   - Approach the opening only after the lid has been left open for a little while.
   - Wear gloves and wash your hands immediately after checking the system.
   - Beware of flammable and toxic gases and ensure the site is well ventilated.
   - Never smoke or use any exposed flame near an open septic tank.
   - Have a second person available to watch you and to call for assistance if necessary.
   - Let your doctor know if you suffer any injuries during checking.

     If you have any concerns or doubts contact a licenced plumber or septic system specialist.

Installation Manual

1. Check the tank size before excavating the hole, this can be found on the inlet end of the tank.
2. When excavating make the hole 200mm-300mm bigger than the tank for easy installation and backfill.
3. Ensure the base is level, we recommend using 100mm of 10-12mm screenings for the base.
4. Once the tank is in position, backfill with clean fill, sand or 6 - 10mm screenings–NO ROCKS.
5. Immediately fill the tank with water. This will prevent the tank from floating due to ground water or rain water.
6. Our tanks come with the saddle pre-installed. The saddle and lid will give you an overall height of 260mm above the top of the tank. A 400mm turret is supplied standard with the tank, this will give you an overall height of 630mm above the top of the tank. If required the turret can be easily trimmed to size using an angle grinder with a diamond blade (Remember to always wear a mask when cutting). To get the correct measurement of the turret measure from the top of the tank to the finished level required then subtract 230mm.
   eg. Finished level 500mm – 230mm = 270mm (turret height)
   If a taller turret is required they are available in additional 100mm increments.
7. Using the polyurethane adhesive supplied run a bead in the lower rebate of the saddle. Place the turret onto the saddle and turn slightly to seal. Then run a bead in the rebate on the underside of the lid, place the lid on the turret and turn slightly to seal.

*If only using the saddle and lid run a bead of the adhesive on the top rebate of the saddle, place the lid on the saddle and turn slightly to seal.

8. Raise all inspection openings to the required height.
9. If installing a tank with an integrated pump chamber make sure the stainless steel filter supplied is installed on the outlet baffle located in the 150mm inspection opening.
10. Finish backfilling, job complete.

Glossary

Drainage field

A designated area where effluent gets released into the soil. Natural soil processes, organisms and plants in the drainage field help to further purify the effluent before it enters the larger environment.

Effluent

The liquid that is discharged from a septic tank or sewage treatment facility.

Greywater

Wastewater that comes from domestic laundry and or other washing areas (and sometimes kitchen sinks), but not from toilets or bidets (which is known as blackwater).

Septic system

Any type of sewage management system that stores, treats and/or discharges sewage on or adjacent to the premises on which it was generated.

Sewage

The waste matter from a premises that is normally discharged to a sewer.

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