



Filtrex Alternative Treatment System (ATS) Owners Guide



Your septic system has been designed to give you many years of trouble free service. The life span of your septic system will be greatly enhanced by following the simple recommendations in this manual





The Do's & Don'ts to help maintain your septic system.

- ✓ DO Plant Grass and maintain grass cover over the absorption field.
- ✓ DO ensure that **if** planting trees or shrubs, they are kept away from drain lines.
- ✓ DO Keep surface waters and any subsoil drainage (eg. Leach Drains/ Soakwells) away from the Septic Tanks and absorption field.
- ✓ DO Keep building additions, pools, driveways, or other construction work away from the septic system. Setback requirements as per Local Government Approval conditions should be adhered to.
- ✓ DO Use water conservatively. This septic system has been designed based on information provided at time of sizing system and utilisation of excessive wastewater could cause system failure.
- ✓ DO put **ONLY** domestic wastewater into the system. Adding other materials (special additives, chemicals, sanitary napkins, and so on) may harm the system.
- ✓ Do have solids pumped out of septic tanks to ensure scum does not accumulate. As a guide: every 4 years for a 4 person household or every 8 years for a 2 person household.
- ✓ DO regularly switch the drain in use if you have an alternating system.
- ✓ DO ensure the cells are stabilized after installation with lawn.
- ✓ **DO NOT allow cars, motorbikes and heavy equipment on the system. This includes livestock.**
- ✓ **DO NOT exceeded 200mm cover over the top of septic tanks and cells.**
- ✓ **DO NOT pour grease or cooking oils down the sink drain.**
- ✓ **DO NOT dispose of non-biodegradable materials down the drain into your septic system eg plastics.**
- ✓ **DO NOT dispose of old medicines, large amounts of disinfectant (biocides) or other chemicals into the septic tank. These chemicals kill the normal bacteria levels and interfere with the functioning of the septic system.**
- ✓ **DO NOT ALLOW ANY STORMWATER TO ENTER THE SEPTIC SYSTEM (TANKS OR CELL IRRIGATION AREA)**



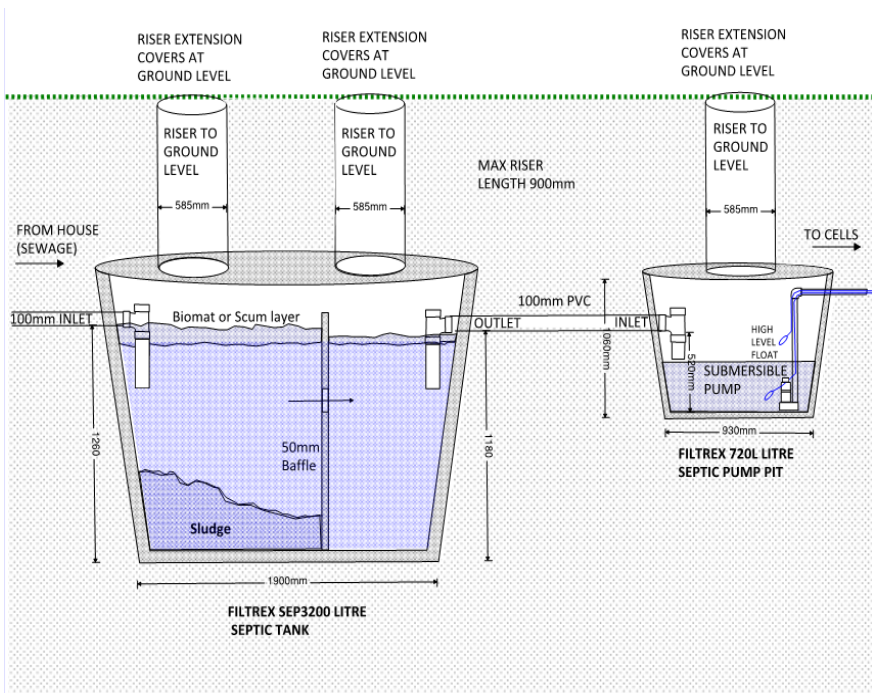
Septic Tank: Primary Treatment

How the Tank Works:

With time, the contents of the septic tank separate by density into three layers:

- Floating scum layer - soaps, greases, toilet paper etc, from the top layer
- Liquid layer - liquid and suspended solids are in the centre of the tank
- Sludge - heavy organic and inorganic materials sink to the bottom of the tank

Solids separate in the tank by gravity - lightweight materials float to the top and heavy materials sink to the bottom. Naturally occurring bacteria in the sewage begin to break down the organic materials. This often referred to as **primary treatment**. Pathogens in the sewage are NOT destroyed in the septic tank. Anaerobic bacteria that live with very limited oxygen in the septic tank prepare the sewage for final treatment in the soil treatment area. Liquid leaving the septic tank is referred to as septic tank **effluent**.





Wastewater Source

The wastewater source is the domestic wastewater from homes, schools or businesses that the treatment system serves. Domestic wastewater is water discharged from plumbing fixtures, appliances, toilets, bath, laundry and dishwashers. Owners of on-site wastewater treatment systems should understand that anything they put in their sinks or drains may pass through their system and into their groundwater and surface water supplies.

- ✓ Do not treat an on-site wastewater treatment system as if it were a normal centralized sewer system. Items flushed down the toilet do not disappear. They must be treated by the on-site wastewater treatment system.
- ✓ Leaking toilets and dripping taps should be fixed immediately. If such problems persist, your wastewater treatment system could be hydraulically overloaded.
- ✓ Do not dispose of cleaning tissues, cigarette butts, nappies or other trash in the toilet. This wastes water and loads too many solids into the treatment system.

System Maintenance

On-site wastewater treatment systems come in many types and sizes. When a house is being planned, the size of its on-site wastewater treatment system is based on the following:

- ✓ Number of bedrooms
- ✓ Overall site and soil considerations

The most appropriate system is one that will handle the greatest volume and strength (concentration of contaminants) of wastewater for that size of house. Your water use habits affect how well your wastewater treatment system works. If you use more water than average for the size of your house, your system can be overloaded with water and may fail. If you want to be able to use more water than average, you may need to install a larger than minimum size system.

- ✓ Soaps, detergents, and other household cleaning materials seldom affect the operation of the system. However, use them in moderation. Excessive use of cleaning materials, disinfecting or antimicrobial soaps and detergents, or using continuous disinfectants in the toilet bowl, may leave wastewater untreated by killing the microbes in the on-site wastewater treatment system.
- ✓ **Excessive wastewater flows can overload the on-site wastewater treatment system.** This causes water to pond on the ground surface. Excessive wastewater can also flush too much water through the septic tank, which can carry solids through the pre-treatment component. Eg. **If you wash all your clothes at once, you could overload the soil treatment area, it is far better to stagger washing loads and baths.**





Pre-treatment, final treatment and dispersal

- ✓ Natural bacteria in the wastewater decomposes the waste. Chemical additives are not necessary for a septic tank to operate. Some additives may even harm the tank's operation. Remember that the septic tank is supposed to collect solids. If you flush solids out of the tank and into the final treatment and dispersal component by adding chemicals, the solids will plug the soil. Then you'll have to replace the soil treatment component, usually the most expensive part of a system.
- ✓ Have the septic tank cleaned before sludge or scum accumulates to the bottom of the tank's outlet device. If too much sludge accumulates, solids will leave the tank with the liquid and possibly clog the soil. Sewage will then surface or back up into the house through the plumbing fixtures. The large holding tank can take up to six months to form a crust which helps lock the vapours inside the tank.
- ✓ Do not build driveways, storage buildings or other structures over the pre-treatment or final treatment and dispersal components. These solid surfaces prevent access to the system for maintenance, reduce the ability of water to evaporate from the soil and restrict air movement into the soil.
- ✓ Do not drive heavy equipment over the components of a wastewater treatment system. The equipment can crush them. The components are designed to support the soil over the top of the system—not equipment driving over it. Driving on the cell areas will compact the soil and prevent permeability of the soil.
- ✓ **Maintain a grass cover over the final treatment and dispersal component. Plant warm- season grasses that use more water and over-seed with cool-season grasses during the winter. Grasses remove a significant portion of the water from a system, and the grass cover must be maintained.** Trees also remove water and may be planted at 5m from the system perimeter. However extensive consideration must be undertaken of the tree root characteristics as vigorous and fibrous root systems can invade and block distribution pipes.
- ✓ **Divert any rainwater or stormwater running off driveways, the roof and other hard surfaces away from the cell irrigation area. The cell irrigation area is designed to manage a specific amount of water. Rainwater & Stormwater could fill the system, leaving no room for household wastewater. Design landscaping to carry runoff around or away from Treatment Area.**



Responsibilities of the homeowner

- ✓ *Curbing the use of drain cleaners.* Products aimed at unclogging indoor wastewater pipes contain strong acids or alkalis as the active ingredient. Used according to the label directions, they can be effective in removing clogs of organic matter in indoor drainpipes. Most product labels warn, however, that the product is caustic or corrosive to pipes and can be hazardous to the user if applied improperly. A controlled study concluded that as little as 25ml of a name brand drain cleaner could destroy the bacteria population in a 3,000lt septic tank. This amount is within the general range of normal usage for some people.
- ✓ Bacteria populations in the tank will recover in a few days if the system inputs return to normal levels.
- ✓ **The Septic System is designed to process wastewater and sizing of system is based on Department of Health WA approval.**

829lt/24 hours—4 Bedroom 2 Bathroom

1099lt/24 hours—5 Bedroom 2 Bathroom

1369lt/24 hours—6 Bedroom 2 Bathroom

Excessive Wastewater flow can potentially overload the system.

- ✓ **No Stormwater is to enter the Filtrex septic system (Tanks or cell irrigation area) as per your shire conditional approval.**

The client is to ensure that drainage is compliant to the conditions of approval and no entry of water other than from the premise will enter the Filtrex septic system.

Entry of water other than from the house into the system will void warranty.





WARRANTY INFORMATION

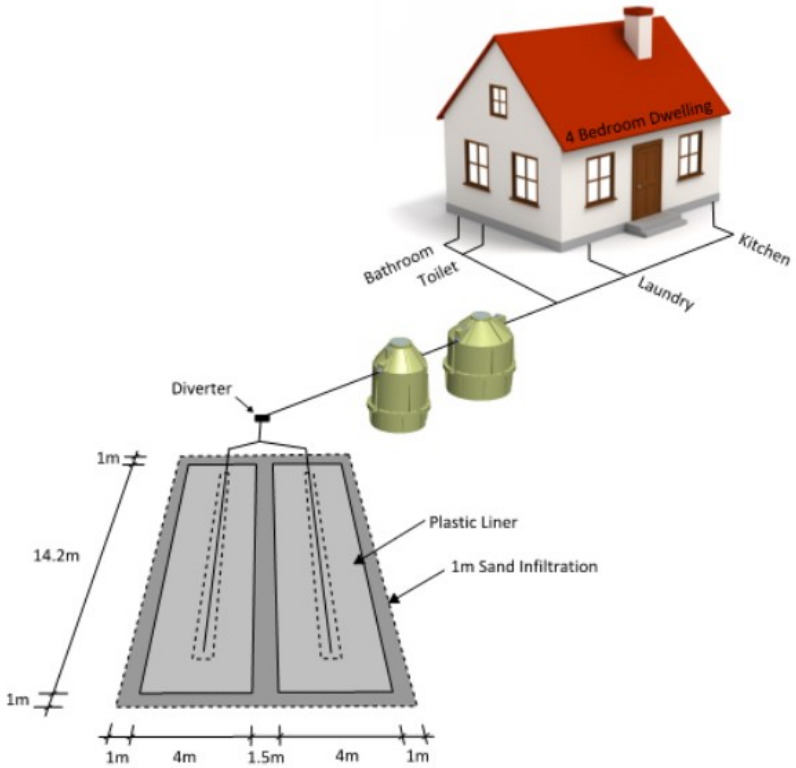
Significant technical endeavour has gone into the design, development and testing of your septic system.

This has resulted in a high quality product which is simple, cost effective, low maintenance and energy efficient.

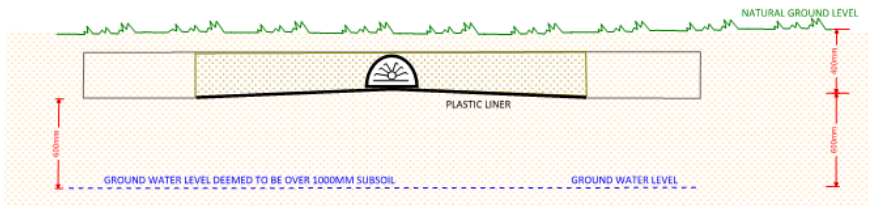
The service life for Plastic Tanks and associated fittings and components is 3 years provided the Tank has been installed and maintained in accordance with Filtrex recommendations.

The Septic System has a warranty of 5 years.





"IN GROUND" INSTALLATION





WARNING !

Should your system have been installed with a Pump Pit, Pump and Audio Visual Alarm and the Alarm be activated, this is to Alert you that potentially the pump has failed.

Step 1 : Check power source to Pump is in operation

Step 2 : If Power source is not working and has “tripped” remove Lid from Pump Pit (Refer to As Constructed Plans for location) and ascertain if water level has risen and has activated the High Level Float causing Alarm to Sound.

Step 3: Once confirmed that Pump has in actual fact failed, make contact with Filtrex to source a new Pump and have the Faulty Pump replaced.

Note : It is recommended to act as soon as practicably possible as continual use of system once Alarm is activated could cause a back up of wastewater.



TROUBLE SHOOTING

My new FILTREX wastewater system smells, what does this mean?

Your new effluent disposal system has naturally occurring anaerobic bacteria within the tanks, and they work hard to break down the solids in wastewater.

It may take up to 3 months for this bacterial colony to form and homeowners may experience some odour until this has occurred.

My alarm is sounding, what does this mean?

Your Filtrex “Pumped” wastewater system has a high level “float” switch located within the pump tank. It is wired directly into the Audio Visual Alarm box.

Together they serve as an alert to the homeowner that something may be wrong.

In the event of a pump failure, power outage or a blockage in pipes, it is possible for effluent to rise beyond normal operational levels within the pump tank.

If this occurs the alarm will sound.

Audio will sound for approximately 1 hour and a flashing light thereafter.

It is possible to mute the audio by pressing the button on the Filtrex alarm box (reset by switching off and back on).

1—Ensure that the pump has power

Check the possibility of a removed plug by a third party?

Check the possibility of a faulty power outlet—1 socket or both.

2—Check the Effluent Level in Pump tank

Carefully assess effluent levels within the pump tank.

A: High effluent will be within 500mm of the lid and no pump visible.

B: Low (Normal) Effluent will be 1000mm below lid and pump should be partially visible.

3—Ensure that both the “High Level Float” and “Pump float” have not become fouled

The high level float should be firmly attached to the “pipe upstand” well above the effluent level. It needs to have a free range of motion so that it cannot become fouled by cables in any way or become detached (Float fallen into effluent).

If all of the above can be confirmed as correct and normal, it is possible the pump may have failed and require replacement.



Contact us to discuss customising a solution to meet your wastewater requirements.

Other Products

TANKS

- ✓ SEP2200— SEPRON 2200 LITRE SEPTIC TANK
- ✓ SEP1500— SEPRON 1500 LITRE SEPTIC TANK
- ✓ SEP1000— SEPRON 1000 LITRE PUMP TANK
- ✓ SEP500— SEPRON 500 LITRE PUMP TANK

ALTERNATIVE TREATMENT SYSTEMS

FILTREX NUTRIENT (PHOSPHATE) REMOVAL

- ✓ *Filtrex ATS2™*
- ✓ *Filtrex ATS4™*
- ✓ *Filtrex ATS5™*
- ✓ *Filtrex ATS6™*
- ✓ *Filtrex GENX-ATU™*

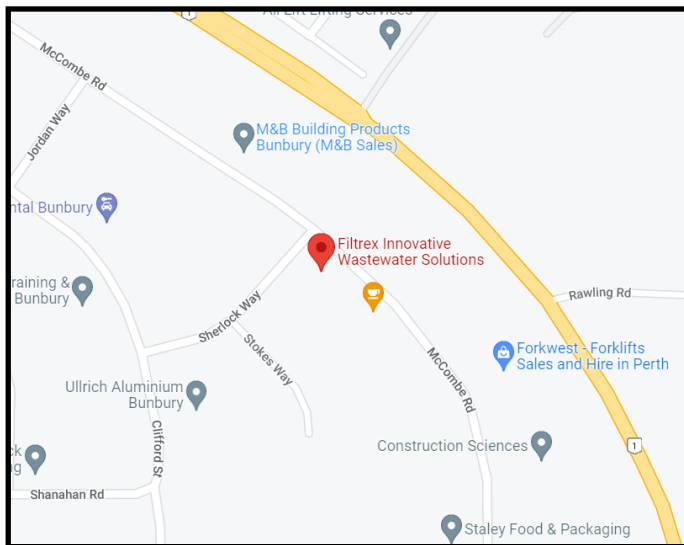
CONVENTIONAL SEPTICS

- ✓ MK2 LEACH DRAINS

PUMPS

FLOAT SWITCHES & ALARM BOXES





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