

SEPTIC TANK SYSTEMS

There are three common types of septic tank systems in Tasmania –

Single purpose septic tank receives toilet wastes (blackwater) or sullage (greywater) only.

Dual purpose (or all-waste) septic tank receives both toilet and greywater such as bath, kitchen and laundry into a single septic tank.

With this type of system a grease trap may be installed on the drain from the kitchen sink prior to the septic tank. A dual purpose septic tank has extra capacity where solids and fats can settle.

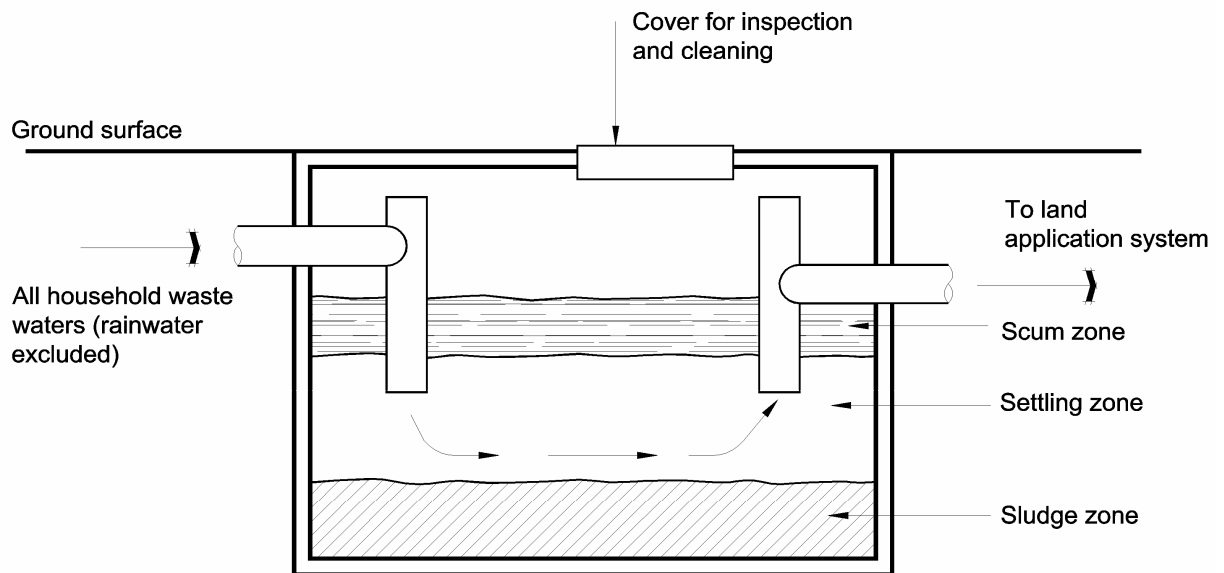
Modified dual purpose septic tank receives toilet and kitchen wastes only.

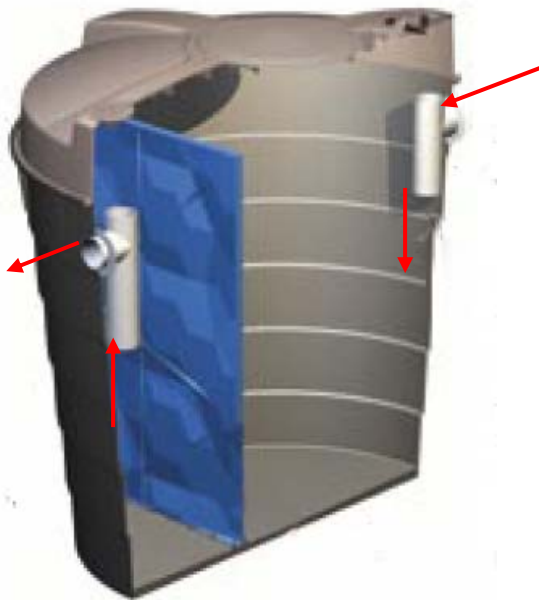
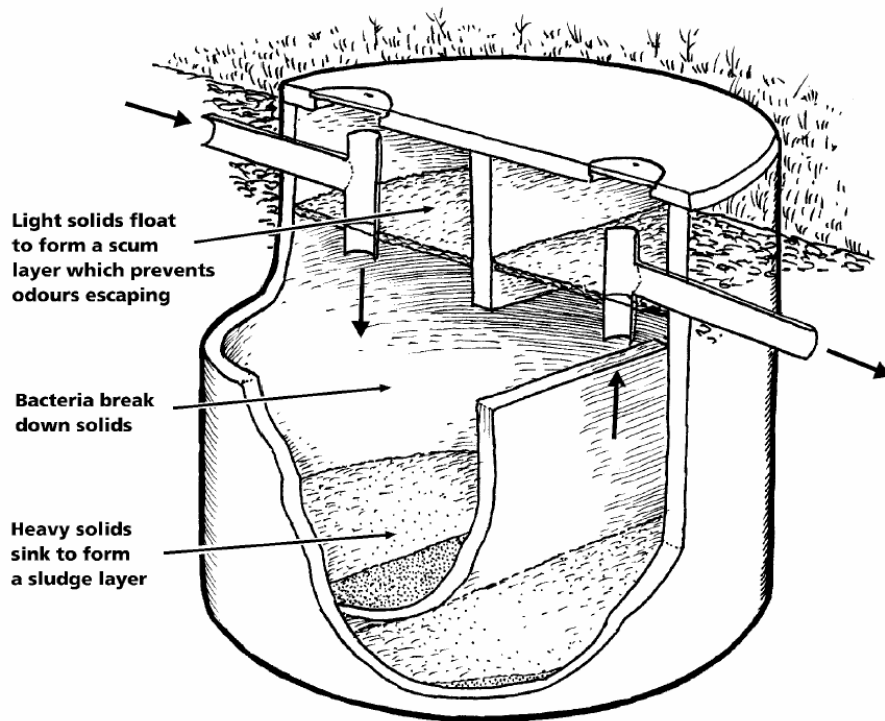
This type of system is adopted in an endeavour to overcome the problems of tanks, which might be undersized in cold climate areas and eliminates the need for grease traps.

For all these systems the primary treated effluent from the tank flows via a distribution device or pump well or directly into a sub-surface **land application system** (e.g. absorption trenches/beds, evapo-transpiration-absorption trenches/beds or a mound) for further treatment. (See **Types of Land Application Systems**)

In some cases the tank outlet may have a filter installed as an added measure to prevent excess solids escaping from the tank.

Septic tanks may be plastic or concrete and come in a range of capacities including 1250 to 4500 litres.





Single purpose (blackwater and sullage only) septic tank systems include a blackwater tank and a separate greywater tank; in these systems the greywater will flow via a distribution device or direct to disposal trenches in the land application area. The tank may be plastic or concrete. The primary treated effluent from the tank flows via a distribution device or directly to sub-soil trenches located in the land application area.

The black water septic tank may be plastic or concrete. The primary treated effluent from the tank flows via a distribution device or directly to sub-soil trenches in the land application area. A grease trap may be installed on the kitchen drain prior to connecting to the septic tank. The grease trap can be plastic or concrete and may be either a circular 45-litre capacity or a rectangular trap with baffles.

Single purpose septic tank with split greywater irrigation system has two tanks, one being the septic tank taking blackwater (toilet waste) and kitchen wastewater only and the other a greywater septic tank or a collection/pump well taking all other household wastewater.

The greywater collection/pump well can be plastic or concrete usually measuring approximately 900 mm in diameter. Inside the collection/pump well is a submersible electric pump that

discharges the untreated greywater onto lawns and gardens via a hose and heavy droplet sprinkler.

NOTE: These systems (split greywater irrigation) are not permitted to be installed anymore but are still in use.

MAINTENANCE

If you don't already, it is strongly recommended that you have an inspection and maintenance schedule in place for your on-site waste water management system (see maintenance record sheet). The purpose of having a schedule is to protect you and the community's health, preserve the environment and prevent costly repairs or replacement of the system.

Septic Tank

- The septic tank should be in good condition with its lid and all inspection openings sealed and at or above ground level so to prevent the ingress of stormwater and allow for maintenance access.
- Both inlet and outlet baffles are to be in place to avoid solid overflow to the land application system (trenches).
- The outlet filter if fitted, should be checked annually.
- Sludge levels should be checked and if found to be above two thirds of the tank capacity will need to be pumped out. The tank is to be desludged by pumping out and refilled with fresh water by an approved biosolids/liquid waste contractor.
- Vent pipes are to have mosquito proof cowls fitted to minimise mosquito breeding in the system.





Grey Water System



- Both the grease trap and grey water pump well should be in good condition with their lids and all inspection openings at or above ground level to prevent the ingress of surface water and stormwater and allow for maintenance access.
- Grease traps and pump wells are to be cleaned on a regular basis to avoid the likelihood of unpleasant odours, blockages and pump failure.
- The pump well's power supply, electric pump and automatic float switch and alarm (where fitted) are to be in good operational condition.
- Pump wells on older style type split greywater disposal/irrigation systems must be connected to a lilac/purple coloured hose and heavy droplet sprinkler.
- Vent pipes are to have mosquito proof cowls fitted to minimize mosquito breeding in the system. Vents must be kept 150 mm above the surrounding surface.

Land Application System/Area

- Inspect the land application system (trenches/mound) to ensure they are still functional and there is no surface ponding or run off of effluent. All effluent is to be discharged in the land application area. Know where the trenches and distribution device (where fitted) are and if possible provide a means of delineation and keep a record on a site plan.
- Surface water and roof water discharge must be kept away from the land application system. Surface water is to be diverted on the high side by diversion mounds, drains or a moisture barrier.
- The greywater sprinkler is to be kept away from the land application system and positioned to prevent discharge entering into or causing a nuisance to neighbouring properties (See **Set Back Distances for Surface Effluent Irrigation**).

OPERATION AND MAINTENANCE TIPS TO HELP PROLONG THE LIFE OF YOUR SEPTIC TANK SYSTEM

 DO	DON'T 
<ul style="list-style-type: none"> • Do keep a maintenance schedule with annual inspections of septic tanks. • Do organise for sludge to be pumped out by a licensed contractor every 3 – 5 years. • Do have your grease trap and greywater pump well cleaned out regularly (grease trap 2 months – pump well 6 months). • Do install an outlet filter on your septic tank and inspect and clean to manufactures recommendations. Outlet filters prevent the smaller solids from flowing out and clogging the absorption trenches and beds. • Do practice water conservation by: installing flow restrictors to all fixtures and dual flush toilet cisterns; wash laundry and use dishwasher in stages over several days to avoid flooding the system; have leaky taps repaired as soon as possible; minimise length of showers; and use showers in preference to baths. • Do use sink strainers and wipe grease and excess food off plates and cooking utensils before washing up. Clean with paper towel and place in compost bin. • Do use cleaning products that are labelled low in phosphates, nitrates, 	<ul style="list-style-type: none"> • Don't flush or allow undesirable matter to enter the system that may cause pump damage or clog trenches and beds (coffee grounds, dental floss, disposable nappies, kitty litter, gauze bandages, sanitary napkins, tampons, condoms, cigarette butts, fats and grease). • Don't flush or allow harsh chemicals to enter the system which will harm the living organisms in the septic tank or cause health and environmental problems when irrigated from a pump-well (paints, varnishes, thinners, photographic solutions, disinfectants, antiseptics, some detergents, cleaning agents and some medications). • Don't install garbage grinders unless the system is designed to have capacity for one. Check with your council first. • Don't concrete, pave or build over your septic tank, pump well or grease trap. This will inhibit the access required for monitoring and maintenance. • Don't cover the land application area with hard surfaces such as concrete or asphalt. Grass is the best cover, because it will prevent erosion and remove excess moisture.

 DO	DON'T 
<p>boron and sodium as these chemicals are harmful to your septic tank, the environment and plants.</p> <ul style="list-style-type: none"> • Do use septic friendly biodegradable products such as toilet paper that disintegrates easily and bicarbonate soda and white vinegar for cleaning toilets, baths, showers and basins. • Do keep the grass well mown in the land application area. • Do keep an area free of structures so that a replacement system can be installed should the existing become unusable. • Do periodically move your greywater sprinkler (where fitted) so as to utilise a larger effluent distribution area in lieu of saturating a concentrated area and possibly causing run off to adjacent properties and stormwater channels. • Do be aware that if you use prescribed medications regularly, it can have an effect on the performance of your septic system. If concerned seek advice from your council or on-site waste water management service agent. 	<ul style="list-style-type: none"> • Don't allow stock or animals to enter the land application area. • Don't allow children to play in the land application area. • Don't plant trees or shrubbery in the evapo-transpiration-absorption trench or evapo-transpiration-absorption bed area, because roots will get in and clog the trenches or beds. They will also prevent sun and wind from taking up excess moisture. Certain trees and shrubs may be planted specific distances away and they may help remove excess moisture (see technical sheet 10). • Don't do clothes washing on days it is raining.