



WHAT IS AN ON-SITE SEWAGE MANAGEMENT SYSTEM?

An On-Site Sewage Management (OSSM) system is used to manage wastewater on a property that is not connected to the town sewer network. These systems collect, treat, and dispose of wastewater safely on the property where it is generated.

Types of wastewater includes blackwater and greywater, which is wastewater generated from toilets, hand wash sinks, kitchen sinks, showers and laundries.

The most common OSSM systems in the Muswellbrook area are:

Septic tanks (conventional systems) which typically use absorption trenches or evapotranspiration beds to dispose of treated wastewater; and

Aerated Wastewater Treatment Systems (AWTS) which provide a higher level of treatment and may use subsurface or surface irrigation lines. Only AWTS are permitted to use surface irrigation due to their advanced treatment process.

However Muswellbrook Council considers all OSSM systems supported by NSW Health Accreditations for install and operation.

When properly operated, these systems store, treat, and dispose of wastewater in a way that protects public health and minimises environmental impacts.

All OSSM systems must be approved by NSW Health and supported by Council for installation and operation. Property owners are responsible for ensuring their system is operated and maintained correctly to meet health and safety requirements.

To keep your system working safely and effectively, you must:

- Arrange regular servicing as required.
- Ensure septic tanks are pumped out when necessary.
- Keep disposal areas clear of traffic, animals, and structures.
- Prevent strong chemicals, fats, oils, and non-biodegradable items entering the system.
- Report and action any faults, smells, or system failures promptly.

ON-SITE SEWAGE MANAGEMENT SYSTEM

What is an OSSM?

CONVENTIONAL SYSTEMS

In a conventional septic system, all wastewater flows into the septic tank. Heavy solids settle to the bottom of the tank forming a **sludge** layer. Lighter solids such as fats and greases collect at the surface, forming a **scum** layer.

Micro-organisms slowly break down the matter in both the scum and sludge layers.

Materials that cannot be broken down build up over time. This is why septic tanks must be pumped out periodically by an accredited waste service provider.

The primary treated wastewater then flows (or is pumped) to a sub-soil bed or trench for disposal.

Pipes distribute the wastewater along the trench, where it is absorbed by the surrounding soil and plant roots.

Aerated Wastewater Treatment Systems (AWTS)

An AWTS treats wastewater to a higher standard by moving it through a series of chambers.

Wastewater enters the **primary chamber** where heavy solids settle to form a **sludge** the bottom and lighter solids form a **scum** layer at the top of the chamber.

The clarified liquid between these layers flows to the **aeration chamber**.

In the **aeration chamber**, air is pumped into the wastewater to encourage biological activity to further breakdown solids.

The wastewater then passes through to the **settling chamber** where any remaining solids settle. These are then **returned** back into the **primary chamber**.

The wastewater is **disinfected** in a **chamber** using either chlorination or ultraviolet light. The treated water is then disposed of through surface or sub-surface irrigation.

Figure 1 - Conventional System

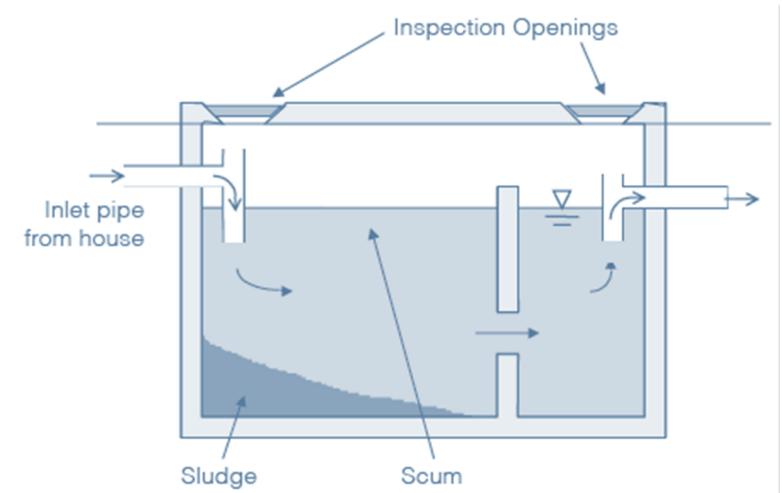
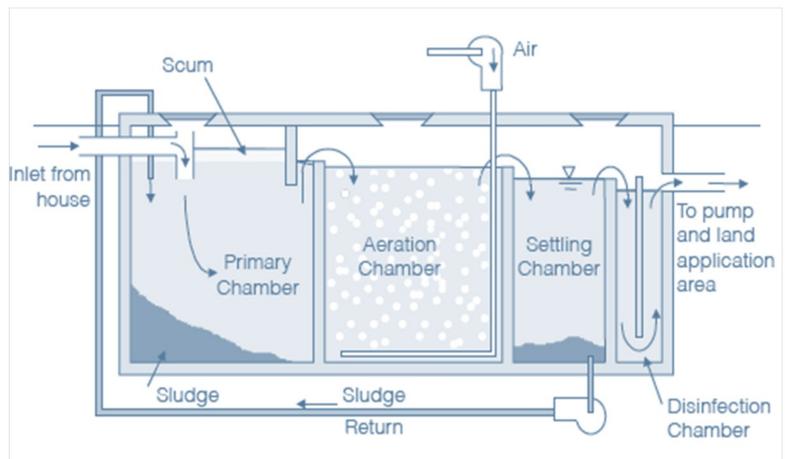


Figure 2 - AWTS



AWTS must be regularly serviced and maintained as per their manufacturer's specifications to operate correctly.