

Fact Sheet

On-site Wastewater Management

Household Sewerage Treatment Plants - Aerated Systems

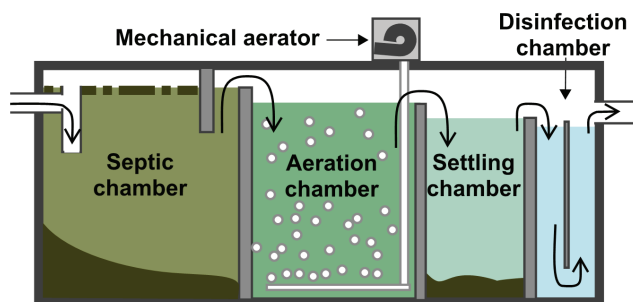
All Household Sewerage Treatment Plants (HSTP's) use biological, mechanical, filtration and chemical methods to treat effluent to a secondary or higher level. This higher level of initial treatment allows greater flexibility for effluent (treated wastewater) disposal.

Aerated Wastewater Treatment Systems

In an Aerated Wastewater Treatment System (AWTS) wastewater is progressively treated through a series of tanks or chambers.

The first chamber is similar to a conventional septic tank where larger solids will sink (sludge) or float (scum). The partially clarified wastewater continues to the next chamber where it is aerated to promote bacterial breakdown of organic matter.

The next chamber allows the wastewater to settle/clarify before chemical (e.g. chlorine tablets) or ultraviolet disinfection is applied.



The resultant effluent contains substantially reduced levels of pollutants, disease causing pathogens and nutrients. However final treatment of the effluent still occurs within the natural soil after on-site effluent disposal.

Effluent disposal

After initial treatment, effluent is discharged via an underground pipe to an approved on-site disposal location, known as the land application area (LAA).

The design of the LAA and the effluent disposal method are influenced by a number of factors, including:

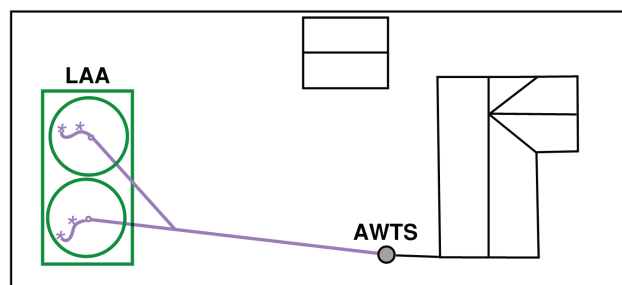
- Level of initial treatment
- Topography and soil composition of the site
- Property dimensions
- Exiting/proposed building locations
- Proximity to waterways or stormwater corridors

Statutory setbacks to property boundaries, buildings and waterways must be achieved. Suitable soil profiles and ground covering, such as grasses or particular vegetation, must be maintained to facilitate absorption and treatment of effluent. Maximum sun exposure should also be provided to assist absorption.

Disposal method 1 - Surface irrigation

Within the defined LAA, a series of relocatable sprinklers are used to disperse the effluent over the ground.

The sprinklers must emit a heavy droplet, as opposed to a spray or mist, and be regularly moved by the owner/occupier to ensure the entire design area is irrigated to avoid ponding or runoff of effluent.



Disposal method 2 – Subsurface disposal

Where environmental factors or site constraints prevent above ground disposal, a shallow subsurface system, absorption trench or mound may be installed to dispose of effluent below ground.

If a shallow subsurface system is chosen, additional filters may be required to prevent solids from blocking the fine emitters that are used. Refer to your system installer for further instructions on use.

Council approvals

For any on-site sewerage facility, Council approval is required prior to initial installation and subsequent alterations to ensure compliance with relevant legislation and codes in the interest of personal and environmental health.

The owner is responsible for ensuring approval conditions, such as boundary and building clearances, fencing or land application area constraints and ground coverings, are adhered to at all times.

Maintenance obligations

Under the *Plumbing and Drainage Act*, all Household Sewerage Treatment Plants (HSTP's) must be serviced at manufacturer prescribed service intervals, either quarterly or annually.

A licenced service agent is required to complete the work and prepare a service report. Copies of the report must be given to the owner and Council.



Penalties apply to owners who fail to have their HSTP appropriately maintained with service reports submitted to Council in accordance with the legislation.

General usage and care tips

Certain products, chemicals and foreign matter may affect the balance of helpful bacteria within your septic tank or cause blockages. To get the best out of your system, follow these general usage and care tips:

- Only use biodegradable products (e.g. cleaning products and toilet paper) and avoid chemicals like ammonia, disinfectants, bleach or pesticide.
- Prevent items like baby wipes, hygiene products, bones, glass or coffee granules from entering the system.
- Don't pour oil or fats down the sink and use strainers or colanders to trap food scraps.
- Use water saving devices and stagger the discharge from washing machines, baths etc. Excessive water may temporarily overload the facility.
- Protect the disposal area from vehicles and avoid using the disposal area for personal recreation, growing of edible plants or containment of pets.
- Keep the grass within the disposal area mowed and maintain surrounding plants to avoid shading.

Signs of an unhealthy system

Early detection of system faults will ensure appropriate steps can be taken to prevent system failure. The following signs may indicate your system needs attention.

- Toilets and drains become slow draining and/or wastewater is regularly backing up.
- The air near the system or disposal area has an unusually bad smell, like that of rotten eggs.
- Water is pooling within or near the disposal area.
- The disposal area has poor vegetation growth or an unusual amount of darker green grass.
- If any system alarms are triggered, refer to your alarm panel and contact your service agent promptly.

Further information

Refer to the Plumbing page on Councils website for further information and useful links lpswich.qld.gov.au/residents/plumbing

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