

# A guide to onsite effluent disposal applications

## Submission of applications

All applications are to be submitted to the Shire of Toodyay.

The installation and construction of onsite effluent disposal systems within the Shire of Toodyay is regulated by the *Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974*.

The Shire can only approve applications for a single effluent disposal system on a single lot for a residence or other development producing no more than 540L of effluent per day. For all other applications approval will be required from the Department of Health. Where Department of Health approval is required, application is still made to the Shire. The Shire will assess the application, produce a Local Government report and forward the application to the Department for processing.

Lodgement can be made to the Shire in person, by mail or by email.

*Note: It is an offence under Section 107(2) of the Health (Miscellaneous Provisions) Act 1911 to start work on the construction or installation of an onsite effluent disposal system without approval.*

## Application requirements

### Required application form

Applications are to be submitted using the Shire's Application form – *Application to Construct or Install an Apparatus for the Treatment of Sewage*.

### Required fees

Each application must be accompanied by payment of the required fees.

### Required drawings

Each application must be accompanied by two sets of plans where Shire approval is required, and three sets of plans where approval from the Department is required. Drawings are to include the following:

- Scale of drawing either 1:100 or 1:200
- Location of effluent disposal system and all drains and pipework
- Distance of the system from all buildings, boundaries, bores, waterway or waterbodies
- Distance of system from all trafficable areas
- Site plan to have contour lines indicating the slope of the land

### Aerobic Treatment Systems

If the application is for an Aerobic Treatment Unit, a copy of the maintenance agreement between the owner and the authorised service company must also be included.

## Application fees

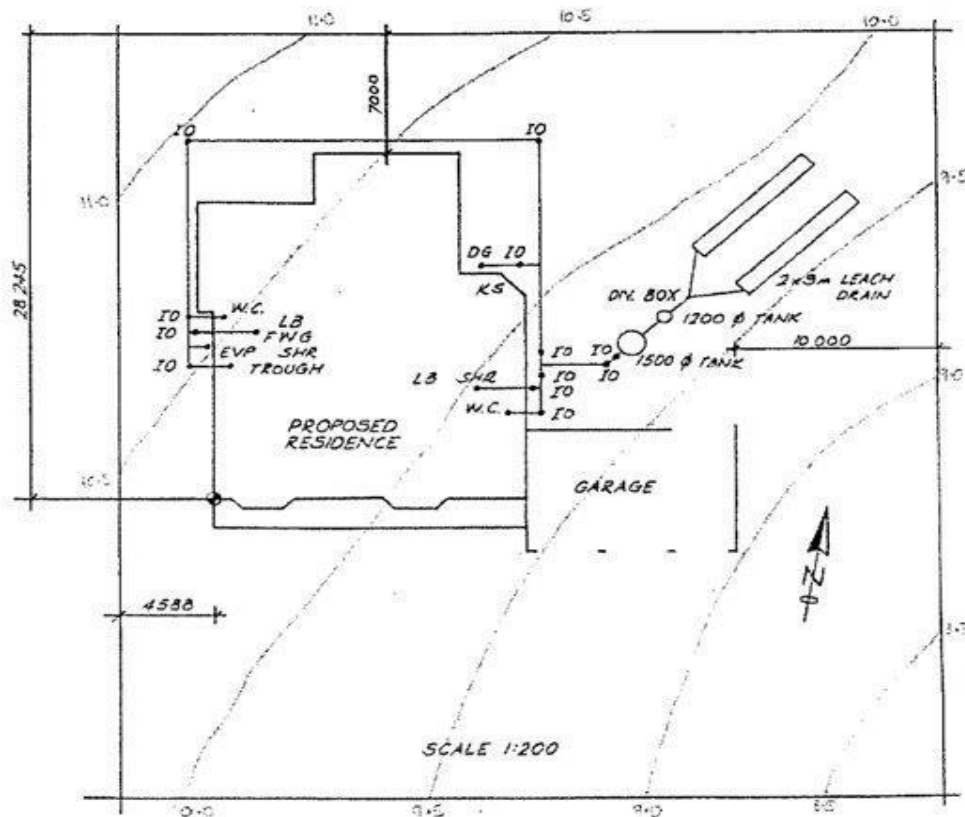
The application fee is set by legislation and varies each financial year. For the current fee please refer to the application form. The fee is designed to cover costs associated with the following activities:

- Preliminary site inspection by an Environmental Health Officer from the Shire
- Application processing and approval
- Site meeting with an Environmental Health Officer prior to commencement of work (if applicable)
- Final inspection of the installed system by an Environmental Health Officer
- Issuing of 'Permit to Use'

Payment to the Shire of Toodyay can be made either via cash, cheque, money order or credit card. Applications requiring Department of Health approval are required to pay an additional fee.

## Example site plan

The following is an example of the typical information and level of detail required



## Processing and approval

The Shire endeavours to process onsite effluent disposal applications within 14 days of receipt of the application. However this is dependent on the application being complete, a sufficient level of detail being provided, and access to the subject property. Once assessed, the approved plans and associated conditions will be returned to the applicant along with a copy being sent to the owner.

Applications requiring approval from the Department of Health will be subject to the Department's time constraints which are beyond the control of the City.

*Note: Any change from what has been approved must be supported by the Shire's Environmental Health Officer before installation which may require the submission of amended plans.*

## Site assessment

**The Shire will require the applicant to demonstrate the properties suitability for on-site effluent and liquid waste treatment.** This is normally by having a site soil assessment or geotech investigation undertaken by a suitably qualified consultant. This may also be by providing bore holes or trench excavations for viewing by the Shire in cases with no specific land concerns.

In order to determine if what is being proposed is suitable, the Shire will usually undertake a site inspection and conduct it's own assessment.

## Final inspection and Permit to Use

Upon completion of the installation of the system, prior to it being used it must be inspected and passed by the Shire. To arrange an inspection please contact the Shire to make an appointment.

If the system has not been installed exactly in accordance with the approved plans then an 'As Constructed' plan must be provided to the Shire. Where the system in question is an Aerobic Treatment Unit a 'Certificate of Installation' is also required to be submitted.

Once the system has been inspected and passed, the 'As Constructed' plan submitted and if required the 'Certificate of Installation' then the Shire will issue a 'Permit to Use'.

*Note: It is an offence to use a system without a permit to use.*

## Spas

Spas over a 350L capacity shall be connected to a separate disposal system consisting of a single 1200mm diameter sedimentation tank and a single 5m leach drain.

## Reduced size system

Where sewer is intended to be available within three years to the property, a reduced sized system may be considered. This is dependent upon site conditions, confirmation from Water Corporation that sewer will be available and sufficient space remaining on the property to upgrade to a full size system is required.

## Sump and pump

Where a sump and pump are also required the sump tank shall have a minimum capacity of 1000L for residential premises or estimated wastewater use for a 24 hour period for commercial premises but regardless not less than 2000L. It shall be sealed to prevent the escape of odours and have both a visual and audible warning device. The audible alarm must be fitted with a mute switch.

## Conventional septic systems

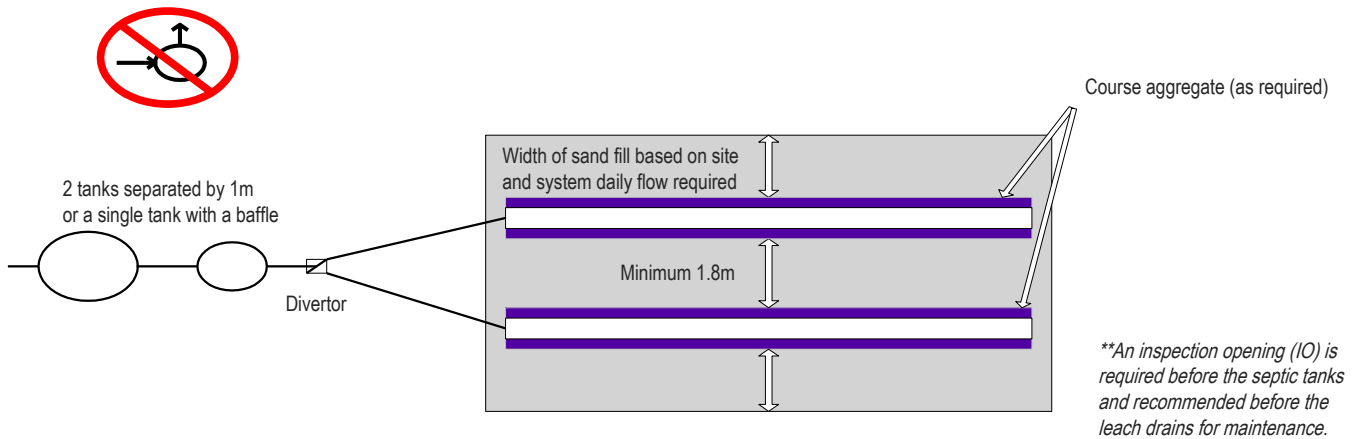
The most common type of effluent disposal system are the precast concrete septic tanks connected to two precast concrete leach drains or four soak wells. The septic tanks are designed to digest solid and liquid waste into an effluent which is then discharged into the ground via leach drains or soak wells. There are however a range of new products using new materials which have also been approved for use by the Department of Health WA. The length of the leach drains is dependent on a number of factors including soil type and size of the house.

**\*\*Minimum requirements only**

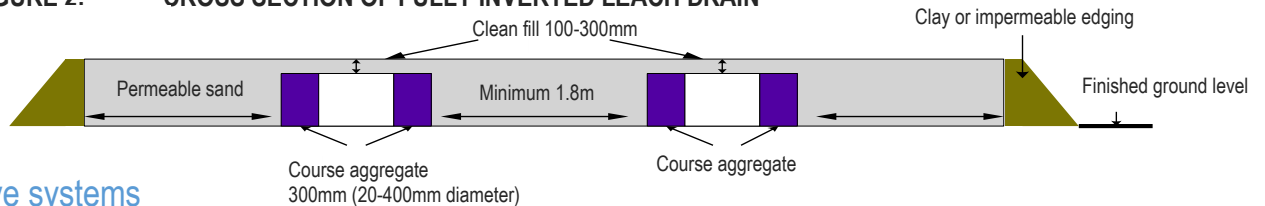
Number of bedrooms	Soil Classification			
	Sand		Loam or Gravel	
	Minimum infiltrative area (m <sup>2</sup> )	Leach drain (number x minimum length)	Minimum infiltrative area (m <sup>2</sup> )	Leach drain (number x minimum length)
2 or less	18.8	2 x 6m	28.2	2 x 9m
3	25.4	2 x 8m	38.1	2 x 12m
4 – 5	27.6	2 x 9m	41.5	2 x 13m

Where clay soils or a high water table are encountered semi or fully inverted leach drains may be required.

**FIGURE 1: TYPICAL LEACH DRAIN LAYOUT**



**FIGURE 2: CROSS SECTION OF FULLY INVERTED LEACH DRAIN**



## Alternative systems

Where conventional systems are unsuitable, usually due to environmental constraints, an alternative system may be required. These usually fall within the two main categories of Aerobic Treatment Units or Nutrient Removal Systems and ETA trenches.

### Aerobic Treatment Units

These function like small treatment plants with their own mechanical aeration, recirculation and disinfection stages. The quality of effluent at the point of discharge is higher than that from a conventional septic system and is disposed of through an irrigation area. The irrigation area is usually subsoil drippers but can be surface irrigation (sprinklers). Flexibility in the irrigation disposal area shape allows it to be used to supplement garden watering requirements. As it is a mechanical system it is required to be serviced regularly by an authorised service technician and a copy of this maintenance agreement is required to be submitted with the application.

More information on Aerobic Treatment Units, including approved systems and authorised service technicians, can be found on the Department of Health website at [https://ww2.health.wa.gov.au/Articles/A\\_E/Aerobic-treatment-units](https://ww2.health.wa.gov.au/Articles/A_E/Aerobic-treatment-units)

### Nutrient Removal System / ETA Trenches

These systems function similar to a conventional system except that the leach drain is modified to form a cell, usually by having a plastic lining, whereby the effluent is forced to pass through a modified soil. The modified soil strips the effluent of Phosphorus before being discharged into the environment. An advantage they have over Aerobic Treatment Units is they do not require regular servicing however irrigation is less flexible in its design. Evapo-transpiration-absorption (ETA) trench systems can also be used. These trenches comprise a pipe distribution system, sand and aggregate, and a suitable soil based on AS 1547:2012 to create a disposal area for sites that would otherwise be unsuitable for a primary treatment system such as clay soils.

## Greywater systems

There are two main greywater sources which are bathroom greywater (bath, basin, and shower) and laundry greywater. Kitchen wastewater can potentially be a source of greywater however it is usually heavily polluted with food, oils, detergents etc. The reuse of greywater for garden and lawn irrigation can reduce pressure on drinking water supplies as well as reduce house-hold bills. Greywater reuse systems must be approved by the Department of Health and must irrigate the wastewater below ground unless treated and disinfected. For more information, please read the Code of Practise for the Reuse of Greywater in Western Australia [http://ww2.health.wa.gov.au/Articles/F\\_I/Greywater](http://ww2.health.wa.gov.au/Articles/F_I/Greywater)