

TOWARDS BETTER ONSITE WASTEWATER MANAGEMENT IN VICTORIA - COMMUNITY EDUCATION SERIES



FACT SHEET 7: COMMON DISPOSAL METHODS (SECONDARY TREATMENT SYSTEMS)

This information will be of interest to you if you are selecting an onsite domestic wastewater management system for your property, or live on a property that is not connected to a town sewerage system and have a secondary treatment system.

This fact sheet focuses only on the common disposal methods for secondary treatments systems and introduces pressure compensated sub-surface drip irrigation and low pressure effluent disposal systems.



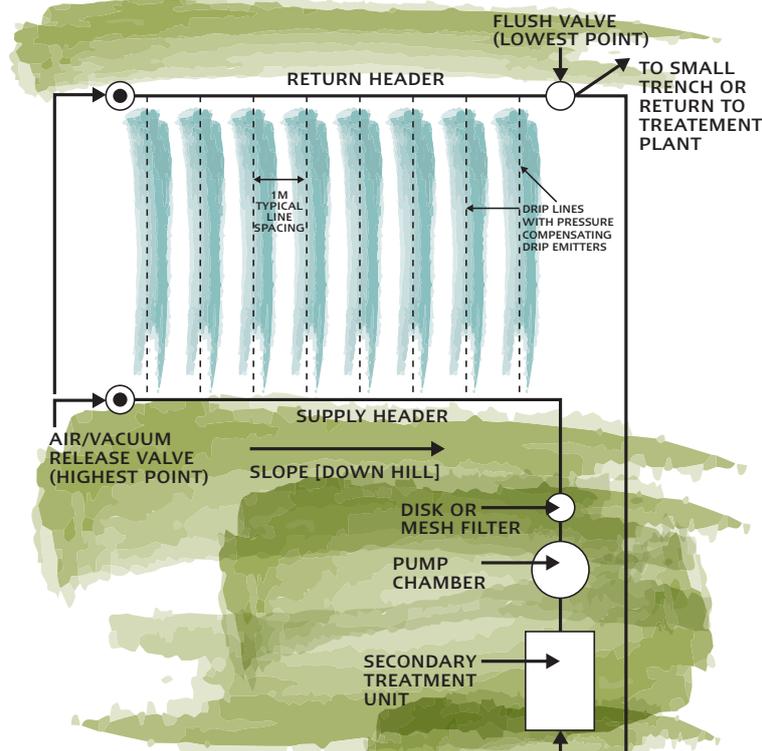
7.1 PRESSURE COMPENSATED SUB-SURFACE DRIP IRRIGATION*

* Not suitable for primary treatment systems

Pressure Compensated Sub-Surface Drip Irrigation is a closed network of small diameter irrigation pipes fitted with low flow drip emitters that are buried below the surface of the ground. The drippers in the irrigation line are designed only to open when a certain pressure is

achieved. This means the treated effluent is spread across the entire field before it is released into the ground. Reducing the chance of overloading any one spot in the field.

DIAGRAM 1: PRESSURE COMPENSATED SUB-SURFACE DRIP IRRIGATION



7.1.1 IMPORTANT COMPONENTS AND DESIGN FEATURES:

Mesh/ Disc filter – an inline filter that removes particles from the wastewater before entering the irrigation network;

Drip line with low flow emitters – specialised irrigation line fitted with low flow emitters that, under pressure, disperse the wastewater at a measured rate;

Vacuum breaker / air inlet valve – this valve acts to overcome air pressure differences within the pipe network during the different phases of pump operation. Primarily it prevents soil from being drawn into the

drip lines at times of negative pressure;

Flush valve – this valve allows for any accumulated particles and bacterial biofilms to be flushed out of the pipe, preventing clogging. These can be automated or manual;

Plant root protection – tree roots can clog up the drip lines so you can protect the lines with physical root barriers or chemical dosing units. Check with your distributor or system installer whether the drip line is fitted with or needs a root barrier.

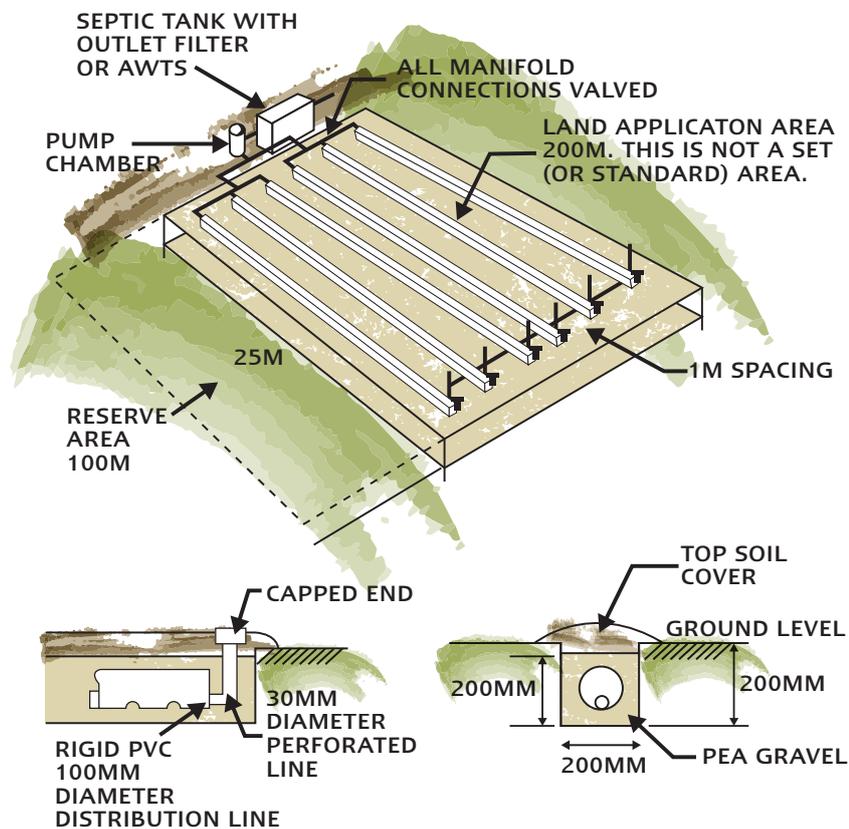
7.2 LOW PRESSURE EFFLUENT DISPOSAL SYSTEMS (LPED)

LPED systems discharge effluent into a series of shallow aggregate filled trenches. In the trenches, lengths of pressure line drilled with squirt holes at regular intervals are laid into larger distribution pipes made from slotted PVC. The ends of the perforated pipes are capped as shown in Diagram 2.

Effluent is pressure dosed into the pipes to spread it out along the whole length of each line, preventing spot loading at each perforation.

With this type of irrigation system, effluent comes in contact with the good bugs living in the aerobic upper layer of the soil providing further treatment, while shallow rooted plants draw water out of the soil.

DIAGRAM 2: LPED SYSTEMS



7.3 SOME SIMPLE TIPS FOR A HEALTH IRRIGATION SYSTEM

- **Protect the field** – effective irrigation systems rely on evaporation, building over the field will significantly impact the function. If you accidentally rupture the irrigation lines you must get it fixed as soon as possible, otherwise effluent will load the field where the leak is and come to the surface.
- **Flushing** – irrigation systems should be flushed to remove sediment that has accumulated in the drainage pipes. Ensure that your servicing agent confirms this is happening each time they service your AWTS.
- **Rotation** – this step only applies if your system has multiple irrigation fields and no automatic rotation device. In this situation you will need to manually rotate the use of each irrigation field and this will alternate fields to 'rest' and prevent saturation from overuse. This will extend the life of your irrigation system. Be sure to follow your licensed plumbing practitioner's instructions when undertaking this task to maintain a suitable load for the system's pump unit.
- **Filter replacement** – to ensure the filter (disc or mesh) continues to adequately protect your irrigation system, it must be regularly cleaned replaced when beginning to wear. Additionally your servicing agent can clean this filter during the servicing of your AWTS.
- **Soil maintenance** – should the soil around your irrigation field begin to crust or tunnel, apply gypsum to the area. The gypsum will help the soil to breakdown from larger clods to finer particles and also helps to make some minerals that have been

7.4 WHO TO CONTACT:



**Baw Baw
Shire Council**

For more information;

Visit: Council's Customer Service Offices at;

33 Young Street Drouin; or
1 Civic Place Warragul

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* ALL WASTEWATER IS TO BE RETAINED ON THE PROPERTY