Maximise onsite wastewater system performance, avoid environmental contamination.





A typical evapo-transpiration bed under construction.



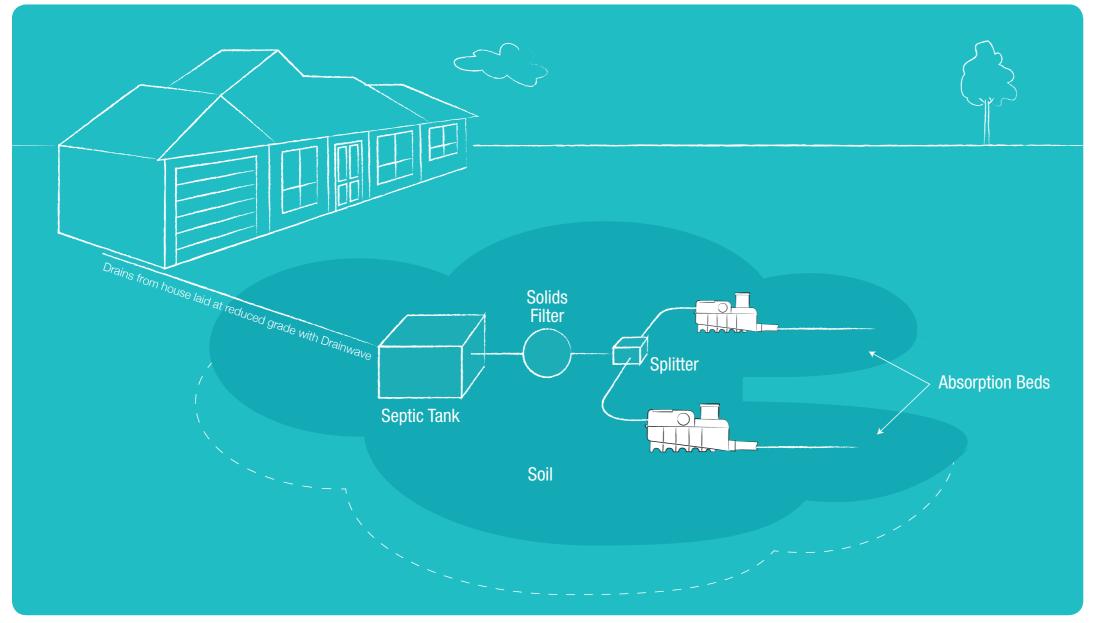
Installation at the head of evapo-transpiration bed for even waste water distribution.

Protected internationally under International Patent Application PCT/AU2007/001838 + registered designs.

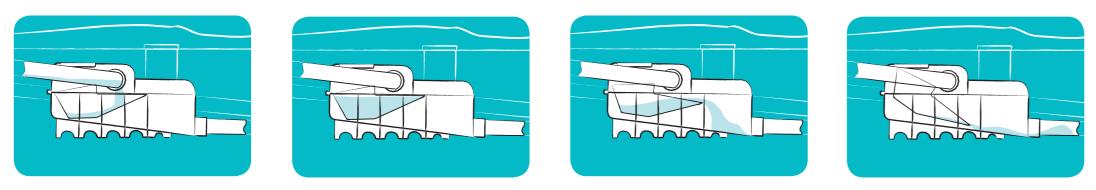




Drainwave® prevents waste concentration at the head of the absorption trench.



Units are installed at the head of each trench to ensure even distribution throughout the trench. Best results are achieved using pipes with 8mm holes drilled 500mm apart, rather than slotted pipes.



Drainwave temporarily retains this water, and when a certain amount is collected, a tipping bucket inside Drainwave tips by gravity, and sends a pulse wave through the absorption trench.



Isolated overloading of absorption trenches

A major limitation of an absorption trench, fed continuously by gravity flow from the septic tank, is that the effluent always saturates the first portion of the trench, while distant sections receive little or no effluent. This leads to system failure resulting in ground water contamination in coarser, granular soils or rapid clogging in finer textured soils. Crusting at the interface of the seepage bed and the underlying soil is another consequence, further inhibiting the capacity of the absorption field to perform its function.

Dosing as a solution

The problems associated with traditional gravity fed systems can be avoided by the periodic dosing of septic tank effluent into the soil absorption field. With this method, wastewater is allowed to flow by gravity into the absorption field as it is discharged from the septic tank. Investigations have shown that dosing results in better trench performance:

- Effluent is distributed over a larger portion of the absorption area
- The rest period between doses allows the infiltration surface to drain
- The exposure of the soil seepage bed interface to air between doses, results in a reduction of crust resistance and build up
- Soil clogging is not as severe as with the gravity fed method

Drainwave as the preferred solution

Drainwave is a cost effective simple solution to dose septic absorption trenches and avoid creeping clogging. Drainwave consists of a tipping bucket with a volume of 9.5 litres, which fills from the septic tank outflow and discharges its content with a sudden flush immediately after it reaches full capacity. Drainwave can be installed without significant excavation and requires no electricity and little or no maintenance.

Drainwave® ensures even distribution of effluent throughout the absorption trench.