

Drip Distribution Systems for Percolation Areas

Drip systems can be used in many soils where no other options are possible. It functions well in areas with shallow depths of soil and poor permeability and usually without any fill material.

The Irish EPA research (Jan 2016) reported very positively on tests of drip systems designed and supplied by Ash Environmental as a solution for low permeability soils. Drip is also used for tertiary treatment on sites with very shallow soils or gravelly soils or rock outcrops where other percolation systems would not be permitted due to the risk of pollution.

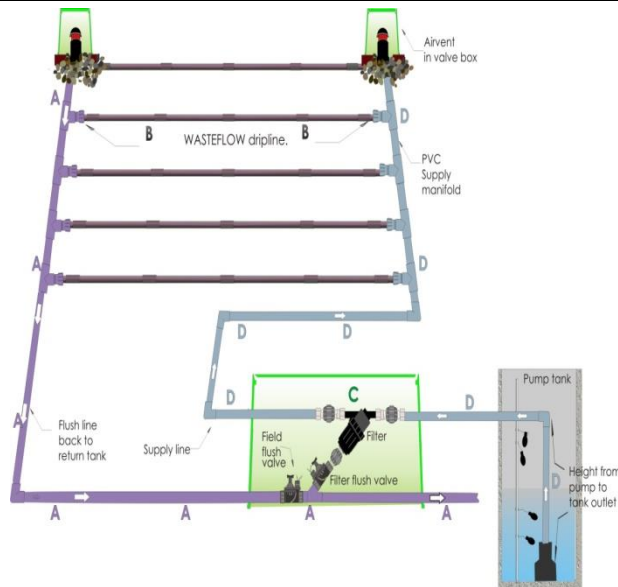
It is suitable for single house and large commercial projects with design, fit and servicing provided in-house by Ash Environmental.

How does it work?

Tiny amounts of water are released from a network of drip irrigation tubing just below the grass surface. The drip tubing is specially designed for wastewater and to repel roots. The water is filtered and pumped in controlled doses day and night.

How is it Installed?

The dripline is typically buried 6 – 9 inches below ground surface by a mole plough on a farm tractor. No gravel is used. The drip lines are spaced 600mm along the site and connected in a network.



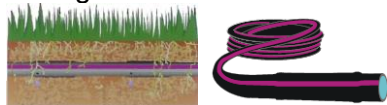
1/2" flexible polyethylene drip tubing with emitters attached to the inside wall are spaced 600mm apart. Driplines are laid approx. 600mm apart in a network.



Mole ploughing driplines

Drip distribution of wastewater (drip-feed) is included in the Irish EPA Code of Practice 2009 under *Other infiltration systems*. Use of the drip technology is becoming more widespread following the 2016 EPA report on its successful use on studies in Ireland.

We supply Geoflow pressure compensating Wasteflow® drip systems as evaluated by Trinity/EPA research in Ireland. The Geoflow drip tubing has been treated to repel roots and to allow its safe use with sewage contaminants.



What are the Benefits of Drip Distribution?

- Drip systems replace the need for an unsightly raised mound.
- Used on difficult sites- high water tables, tight soils, rocky terrain, steep slopes, around existing buildings and trees.
- Installations are invisible and safe to walk or play on.
- Easy to install directly into existing soils by mole plough without gravel.
- Shallow installation maximizes the use of "good" topsoil.
- Most efficient soil based tertiary treatment system
- Consumption of nitrates by the plant material is increased.
- Runoff of phosphorous and nitrogen is eliminated.
- Removal of pathogens and viruses in the aerated soil is maximized.
- 15-year warranty for root intrusion and drip tubing.
- Systems are durable with a long expected life of 30 years.
- Multiple zones can be used
- Uptake of water is maximised by evapotranspiration.
- Easily automated with annual service contracts available.
- Wastewater is recycled in an environmentally sensitive manner.
- Design, installation, commissioning and full servicing is provided.

Drip distribution is "the most efficient method of distributing wastewater" into the soil according to the US Environmental Protection Agency (EPA) 2002 wastewater design manual.