

Ash Environmental is a niche company providing wastewater soil infiltration systems and percolation areas in unsewered areas for homes and commercial properties.

We specialise in pressurised wastewater soil infiltration systems for schools, housing and industrial projects. We work with engineers, architects, site assessors and contractors providing sub-contracting services on rural projects incl. design, supply, installation, project management and certification with ongoing servicing.

We can provide system inspections and audits of wastewater systems for properties being sold for estate agents, solicitors and homeowners in surrounding counties.

Free site visits are available in many counties.

<p><b>Pressurised Percolation -ideal for small sites, remediation and extensions to schools, housing and commercial projects.</b></p> <ul style="list-style-type: none"> <li>• <b>Pumped Percolation packages</b> for Polishing filters and Sand filters -plus quality sand and soil</li> <li>• <b>Drip Infiltration Systems</b>-design, supply, installation and servicing of Geoflow drip systems.</li> <li>• <b>NOW Complete supply, installation and certification</b> of sand filters and mounds in local areas.</li> <li>• <b>Pumps, Pump Tanks, &amp; Controls</b></li> </ul> <p><u>System certification under new Building Control regulations 2014. Fully insured for design and installation services.</u></p>	 <p>Drip system under installation</p>	 <p>Design and supply of pumped percolation package featured in EcoEye</p>  <p>Indexing valve pumping to multiple outlets with one pump</p>
<p><b>Property Sale, Audits and Consultancy</b></p> <ul style="list-style-type: none"> <li>• Training and consultancy projects</li> <li>• System inspections and Audits</li> <li>• Property sale inspections for estate agents, solicitors, owners etc.</li> </ul>	 <p>Stainless steel Submersible Pumps</p>	 <p>A range of Pump tanks is supplied</p>  <p>Plug in pump basins - adjustable height</p>
<p><b>For Septic Tank Remediation ...</b></p> <ul style="list-style-type: none"> <li>▪ <b>PVC Distribution Boxes &amp; adjustable weirs</b> - control and adjust flows to 6 percolation trenches</li> <li>▪ <b>Effluent Filter Screens</b> -protect percolation areas</li> <li>▪ <b>Pre-assembled filter screens in basins</b></li> <li>▪ <b>Easy Access Tank Risers, Lids &amp; Seals</b></li> <li>▪ <b>PVC 4 hole distribution boxes.</b></li> </ul>	 <p>Distribution Box + adj. weirs</p>  <p>4 hole -3 outlet Distribution boxes and drop boxes</p>	 <p>Filter screen in basin</p>  <p>Filter screen in tank outlet also available in stand alone basin</p>

## 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.

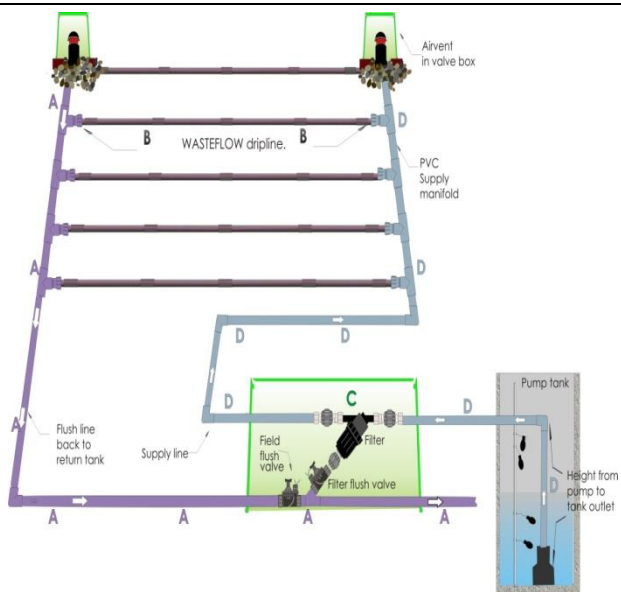
It is suitable for single house and large commercial projects with design, fit and servicing provided in-house by Ash Environmental.

### 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.



## Pumped Polishing Filters

We provide complete pressure pipe systems for commercial systems down to single house systems. Pressure distribution using PVC pipes is a more efficient method than gravity of distributing effluent onto sand and soil polishing filters (mounds and sub-surface systems) and so requires a considerably smaller area.

We can arrange installation or oversight of the pipe network, with certification of the system and suitability of pump and pump dosing arrangements.

We can provide project management of larger commercial systems.

Our suggested designs are based on the US EPA design manual and on the Irish Environmental Protection Agency (EPA) Code of Practice 2009. (The EPA has confirmed that site specific designs are required for each site and the design specification in the 2009 Code of Practice is one example.)



Valve box with riser



Orifice shield option keeps soil off outlet holes

### Features

- Packaged systems for small and large systems
- Simple assembly and installation.
- Less land area compared to a gravity system
- Pipes are rigid PVC so no coiling or bending
- Pre-drilled holes so no drilling at the site.
- 90 degree turn-ups allow cleaning access.
- Ball valves at ends of each lateral allows for flushing of solids maintenance to ensure a long system life and no costly filter replacements.
- Ball valves at the start of each lateral allow flow control and better pressurisation.
- Pressure right to the end of each lateral.
- All components are included and pipes cut ready for on-site assembly with PVC solvent.
- Installation guidelines with photos of typical installed systems are available.
- Peace of mind during system compliance sign-off.

Email us your filter dimensions and flow details or site assessment and we will suggest a design with pump details.

Free site visits are available in many counties



Ash Environmental system design featured on Eco Eye

### Optional extra components:

- Concrete pump tanks with lightweight or traffic rated covers.
- Stainless steel pumps with float switches or control panels.
- High water alarms for indoor or outdoor.
- Indexing valve for single pump to multiple zones.
- Pressure filters to provide extra screening.
- Orifice shields to keep soil from blocking holes
- Sand and soil for filter media.
- System installation, certification & servicing.

New state of the art **Drip distribution systems** are also available which may eliminate the need for fill material in a mound system. See our website for more information.