

Looking to install a pressure sewer system?

Why use a pressure sewer system?

Pressure sewer systems are the best option to provide a sewer service to properties, in instances where a conventional gravity system is not practical or cost-effective.

This may be because:

- the number of properties served is low
- the terrain is hilly, so the gravity flow of sewage might not be possible, or
- there might be a high risk of groundwater contamination or tough terrain (such as bedrock), which would make construction of a conventional system very difficult.

A pressure sewer system can be installed economically at any site, regardless of the terrain. It requires only shallow trenches and relatively small 40mm diameter piping within the property boundary, increasing up to 100mm diameter in the street.



Example of a pressure sewer tank and pumping unit

This system has been used extensively throughout the USA and Europe for around 30 years. It is now being utilised in Australia, including at a number of locations in East Gippsland.

How does it work?

At the heart of the system is a prefabricated poly tank that provides wastewater storage, grinding and pumping in a single, self-contained unit, located in the ground. This is called a pressure sewer tank.

All wastewater generated by the property (ie. from toilets, baths, sinks, showers, a washing machine and dishwasher) is fed into the tank. The pumping unit inside contains a grinder that breaks up the organic solids and other soft material, reducing this to a liquid (slurry).

The level of wastewater in the tank rises until it reaches the “pump on” point. The pump then switches on and discharges the wastewater off the property under pressure to an East Gippsland Water pump station and on to a wastewater treatment plant.

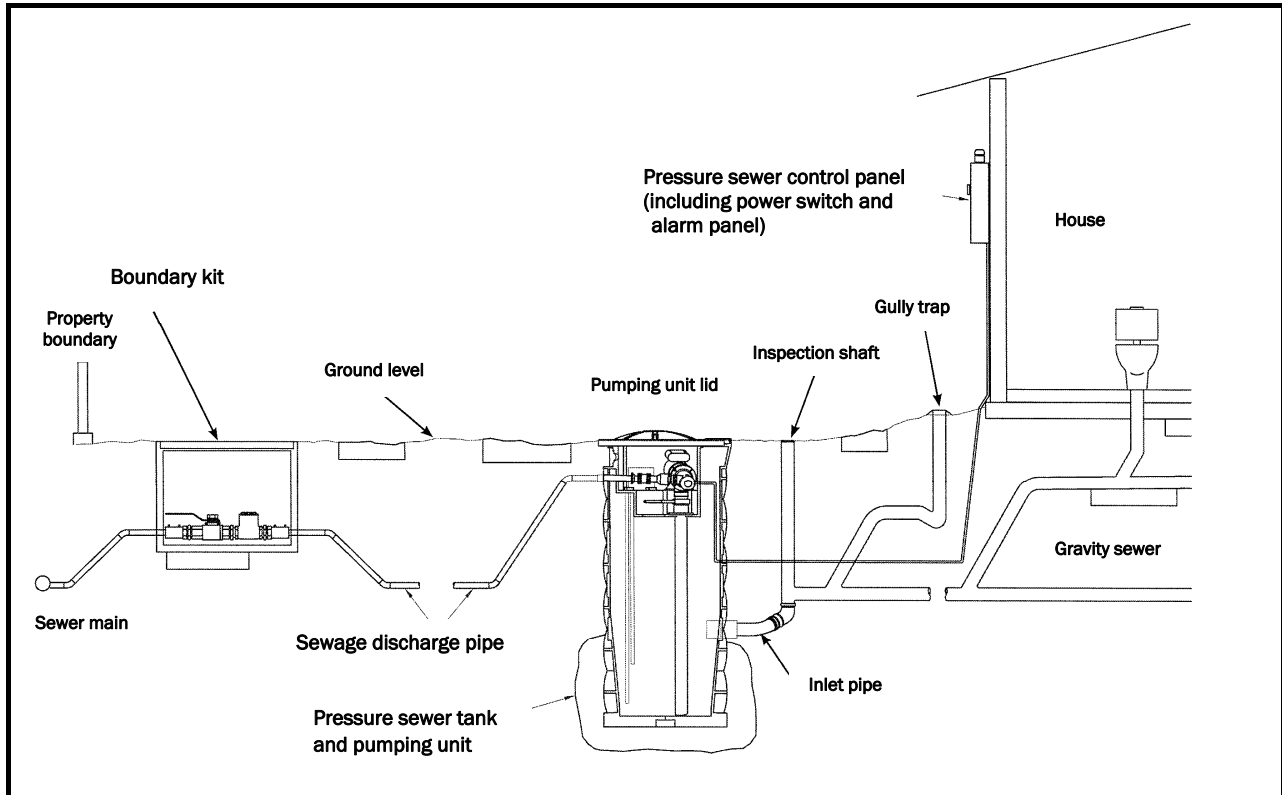
The frequency of pump operation varies in line with the flow of wastewater generated and is generally greater in the peak morning and evening periods. Typically each pumping session will last up to two minutes and could occur several times a day.

The house plumbing is connected directly into the pressure sewer tank. A small diameter sewer discharge pipe runs from the unit to the pressure sewer pipe in the street. A small box (boundary kit) is located just inside the property on the discharge pipe, and includes a non-return valve (to prevent backflow from East Gippsland Water’s sewerage system) and an isolation valve.

The pressure sewer tank is connected to the household power supply and managed via a control panel located nearby on a wall, fence or pole.

There is also an alarm which will sound and flash in the event of a malfunction.

Pressure sewer system components



What is involved with the installation?

The installation of a pressure sewer system first requires approval from East Gippsland Water and payment of an application and pump fee by the property owner.

The installation must be carried out by a licensed plumber and an electrical contractor; both accredited with East Gippsland Water.

As part of the installation process, consideration must be given to:

- the system's precise location – which East Gippsland Water will discuss and confirm with the property owner. This will include an on-site inspection involving East Gippsland Water
- installation of a 40mm poly pipe connecting the sewer pressure tank and pumping unit to East Gippsland Water's pressured sewerage system (usually located under the street)
- provision of a direct power supply from the meter box to the system control panel

Once installed, the licensed plumber will arrange an inspection by East Gippsland Water to commission and approve the sewer system for use. The plumber will also provide a plan of the system, including pipe location, to East Gippsland Water and the property owner.



All that is visible of the pressure sewer tank once installed

East Gippsland Water will then take full responsibility for the maintenance of the system for its lifetime. This responsibility will commence on the inlet pipe, one meter upstream (on the house side) of the pressure sewer tank.

East Gippsland Water’s responsibility will also include the power supply cabling from the control panel to the pumping unit in the sewer tank. It will not include the power supply cabling running between the house meter box and the control panel.

Frequently asked questions

<p>What level of odour/noise can be expected from the pump unit?</p>	<p>Noise and odour levels associated with the unit should be negligible and similar to those associated with a conventional sewer system. Minor odour may be noticed for a short period in instances where a house/holiday house is occupied following a lengthy period where it has been left vacant.</p>
<p>What is the likelihood of blockages in the smaller pipes?</p>	<p>As all the solids in the wastewater are ground to a slurry there is very little likelihood of a blockage, unless inappropriate items are disposed of in the system such as hard objects or nappies (for a full list of inappropriate items see <i>Your pressure sewer system (householder’s guide)</i>).</p>
<p>How much input can the property owner have in the location of the pressure sewer tank and pumping unit?</p>	<p>East Gippsland Water will work closely with the property owner and plumber on the precise location. Allowance will need to be made for the gravity connection and ensuring easy access to the unit for maintenance and repairs.</p>
<p>What is the guarantee that the pump parts will be available well into the future?</p>	<p>This is the responsibility of East Gippsland Water who will always be responsible for maintaining the pump.</p>
<p>What happens during a power outage?</p>	<p>The unit has in-built excess storage available that allows for continued, restricted use of the sewer system during a power outage. Wastewater generating appliances such as washing machines and dishwashers should not be used for the duration of the outage.</p> <p>In the worst case scenario where the power outage occurs just as the “pump on” level is reached, approximately 400 litres of storage will still be available. This should be sufficient for approximately one day of average household use of the sewer system, or for up to two days with modified water use.</p>

What happens when the property is left unattended for long periods of time?

It is recommended that the power to the pressure sewer system be left on during long periods when the property is vacant. Turning the power off would deactivate the alarm and could lead to any subsequent problem with the system going undetected.

A separate mains switch means power for the system can remain on whilst power to the rest of the property can be turned off.

It is also recommended that the system be flushed before vacating the property (such as with half a laundry tub of water) to reduce the potential for odours to develop while the property is unattended.

For more information

To find out more, including details of charges, please contact East Gippsland Water's Technical Officer Property Connections on **1800 671 841**.

Alternatively, send an email to **egw@egwater.vic.gov.au**

Pressure sewer applications should be sent to:

Technical Officer Property Connections
East Gippsland Water
PO Box 52
Bairnsdale
Vic 3875

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