

## Our sewerage systems

# Port Fairy's sewerage system



**When you flush the toilet, have a shower or wash the dishes, do you know where your wastewater goes?**

**Known as sewage, it has to be correctly treated so it doesn't pose a danger to public health or the environment. And that's where Wannon Water comes in.**

### **Where is the sewage treated?**

Domestic sewage from homes in Port Fairy runs through a network of sewer pipes and 17 pumping stations to reach the Port Fairy Sewerage Treatment Plant (STP).

Sewage actually consists of around 99.6 per cent water. The remainder is made up of mostly biodegradable pollutants and small solid particles.

The STP also accepts and treats trade waste from our important local industry, commerce and hospitality venues, including Sun Pharma. They're required to pre-treat their trade waste before it's discharged to the sewerage network.

The Port Fairy STP is located to the north-west of town and was commissioned in 1998. It has separate tanks and infrastructure to treat the domestic sewage and industrial/trade waste.

### **How does the screening and treatment process work?**

Once it reaches the STP, any larger items, rubbish and grit is screened out of the sewage and sent to landfill.

The sewage is then treated in large tanks where naturally-occurring bacteria and micro-organisms use it as a food source, breaking down any solids and organic material and removing physical, chemical and biological contaminants.

This process uses cycles of aeration to treat the sewage before it settles. The treated water is decanted from the surface of the tank. It then travels through an ultra-violet disinfection process, which helps to eliminate harmful bacteria.

Sludge is removed from the bottom of the tank and excess water is removed. The dried sludge is then stabilised in drying beds for several years before it can be re-used on farms as a soil conditioner known as biosolids.

### **What happens to the treated water?**

Treated water at Port Fairy is released to the ocean through an outfall pipe off the south side of Griffiths Island. This is an area of high wave energy which helps it to mix into the sea water.

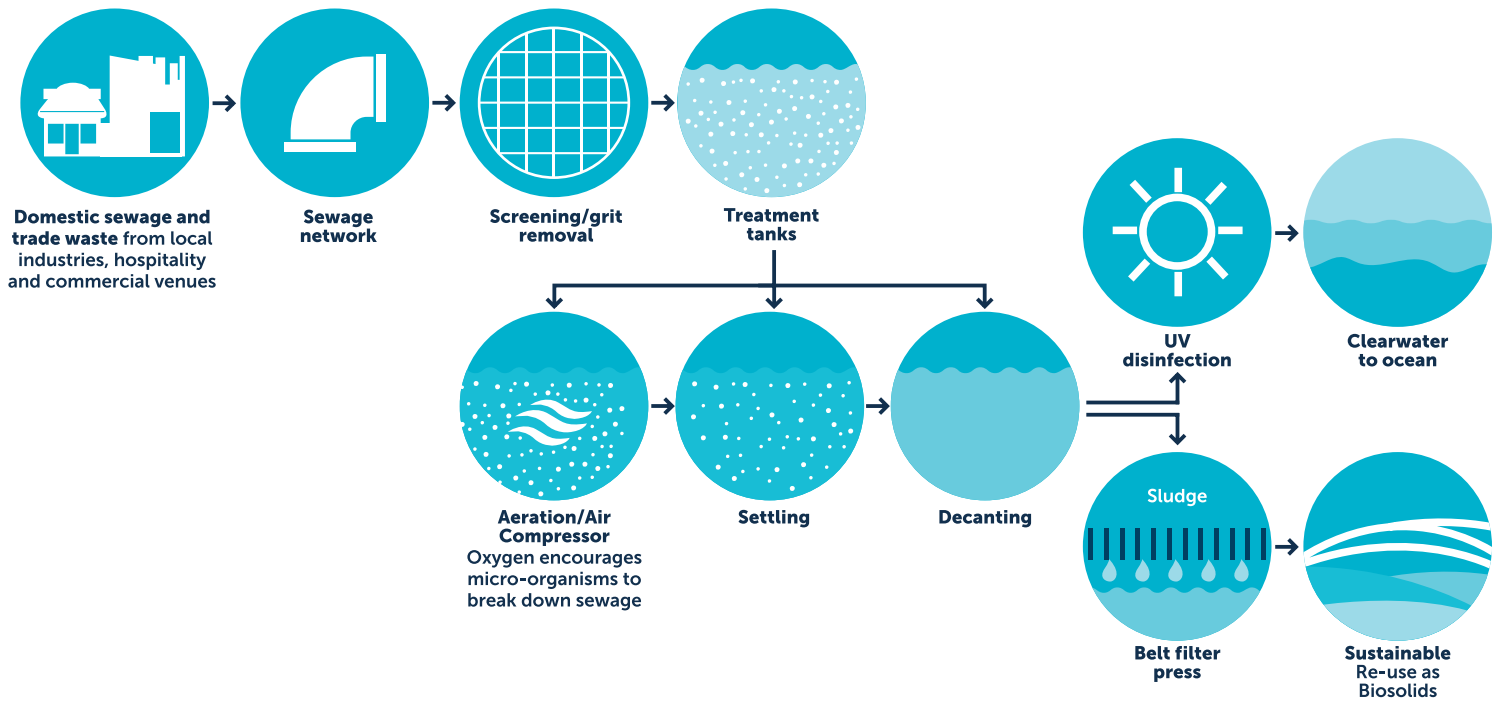
The Environment Protection Authority (EPA) has approved a licence for a 130-metre mixing zone around the outfall pipe. There are 16 conditions in place for the licence and we have complied with all those conditions for the past seven years.

Around 800 million litres of treated water is released into this mixing zone each year.

### **Is sewage discharged to the ocean?**

No. As outlined, sewage is treated at the Port Fairy STP. Only treated water is discharged into the ocean after it has been treated to within EPA licence requirements.

This water is not the brown, untreated water that people might imagine, but a cleaner and clearer treated water.



## How is the water quality monitored around the outfall?

Water quality samples are taken throughout the year and the results are reported publicly in an annual EPA Performance Statement that is available on our [website](#).

There's also a broader environmental monitoring program which includes:

- Collecting ecological data
- Testing the effect of effluent on a selected group of sensitive marine organisms (ecotoxicity testing)
- Assessing the distribution and abundance of 'indicator species'. These are species that show an identifiable increase or decrease in abundance after being exposed to wastewater.

Around 100 samples are tested each year.

## Could the treated water be recycled for other uses?

One of Wannon Water's main functions is to develop and implement programs for the recycling and reuse of treated wastewater. We already recycle around 15 to 20 per cent of all the sewage we treat each year across our region and this is mainly used for irrigating pasture on farms beside our inland treatment plants.

In the past we've investigated opportunities to recycle treated water from Port Fairy, but have not been able to secure any commercial customers.

Our region's reliable rainfall and access to groundwater means there are also very limited markets for its re-use in agriculture.

The wastewater has a high salt content, so expensive and energy-intensive treatment would be required to make the water suitable for any industrial, agricultural or recreational uses.

Using recycled water for drinking purposes is not approved in Victoria.

In short, the costs of recycling treated effluent often outweigh the benefits in our region. We're currently investigating opportunities at our Warrnambool plant, and we hope this might identify new opportunities for Port Fairy.

## How does the plant cope in peak tourist periods?

Port Fairy is a well-known holiday destination and the population fluctuates during the year, particularly over the summer holidays, Folkie and the Easter break.

The design and operation of our STP accommodates these spikes and ensures there is appropriate sewage treatment throughout the entire year.