

FACT SHEET



The Bairnsdale Wastewater Treatment Plant

Background

Construction of the Bairnsdale Wastewater Treatment Plant began in 1936. The plant became operational in 1938 following the completion of the sewerage system, involving gravity sewers, sewerage pumping stations and rising mains.

Today, the Bairnsdale Wastewater Treatment Plant collects wastewater, or sewage, from seven main catchment areas - central Bairnsdale, West Bairnsdale, East Bairnsdale, Wy Yung, Eastwood, Nicholson and Shannon Waters.

Wastewater collection

Wastewater, which is collected via sewers and pumping stations, is fed into the wastewater treatment plant.

There are four stages involved in the treatment process. Throughout this process, the water is treated to a standard where it can be put to beneficial reuse. In fact, East Gippsland Water boasts 100 percent wastewater reuse across its eleven wastewater treatment plants.

Wastewater treatment

Pre Treatment: Wastewater is first screened at the pre-treatment shed to remove larger materials such as rags, paper and coarse materials from the wastewater. The material is then washed, compacted and bagged. The wastewater then flows through a grit chamber where sand, grit and gravel settles out ready for similar disposal, with liquid continuing into the primary sedimentation tank.

Primary Treatment: The remaining wastewater goes through the primary treatment stage, where solid particles are encouraged to settle out, this process removed 100% of settle-able solids and upto 60% of suspended solids. This settled residue, or sludge, is then pumped into the anaerobic digester. The wastewater leaving the primary treatment section of the facility is known as primary effluent.

Secondary Treatment: The primary effluent is then sprayed over the Biological Trickle Filters. These Biological Trickle Filters are made up of stones 100mm in diameter packed to a depth of two meters. On these stones micro organisms live that further treat the passing effluent. The effluent is then passed through a rotating trickle filter before arriving at the final lagoon.

Tertiary Treatment: The final stage of the treatment process is storage of the effluent in the final lagoon, where it is held for a minimum of 20 days for disinfection.

Digester

Inside the digester microscopic bacteria breakdown the sludge. During this process methane gas is produced. This gas is captured and stored. It is then burnt and used to heat the digester and generate green electricity.

Periodically digested sludge is removed from the digester and disposed of in the sludge lagoon. Once the lagoon fills it is desludged. This is where the sludge is removed and dried, tested and reused on East Gippsland Water land.

Beneficial reuse

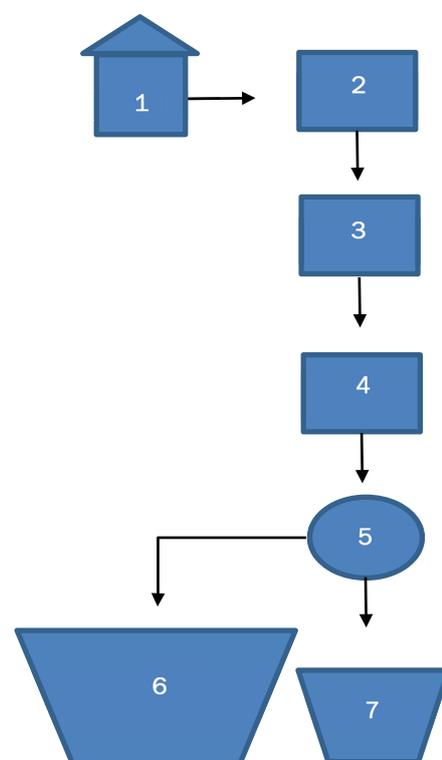
One hundred percent of the reclaimed water produced by the Bairnsdale Wastewater Treatment Plant is put to beneficial reuse.

Ninety-five percent of the reclaimed wastewater from the Bairnsdale Wastewater Treatment Plant is used to maintain freshwater levels at the nearby internationally significant Macleod Morass. This is helping to protect the wetland's flora, fauna and biodiversity. Five percent of the facility's reclaimed water is used on Bairnsdale Racecourse, where it is irrigated on the race track and gardens.

For more information-

Contact East Gippsland Water on 1800 671 841 or by emailing egw@egwater.vic.gov.au

Alternatively visit the Bairnsdale office at 133 Macleod Street, Bairnsdale on weekdays during business hours.



Legend:

1. Wastewater from Bairnsdale and surrounds
2. Pre-treatment stage
3. Primary Treatment stage
4. Secondary Treatment stage
5. Tertiary Treatment stage
6. Macleod Morass
7. Bairnsdale Racecourse



Macleod Morass