Burgowan
WATER TREATMENT PLANT

The Burgowan Water Treatment Plant was officially opened in 2006. The Burgowan WTP is located approximately 20km north west of the city of Hervey Bay. The property is approximately 2,860ha in area; however, the water treatment facility occupies a very small part of this area. In a first for Australia the plant features a sophisticated series of filters and an Ozone/Biological Activated Carbon (BAC) process which eliminates the effects of harmful organisms, including Cryptosporidium, and any trace of contamination.

BURGOWAN WTP FACTS

- A revolutionary treatment plant with the capability to treat any quality of untreated water to the highest possible standards.
- Purifies up to 30 megalitres of water every day for the city of Hervey Bay.
- An innovative first, the plant applies a sequence of treatment technologies, using high rate and packed bed clarifiers prior to ozone and biological activated carbon filters, eliminating conventional filtration and interstage pumping.
- Able to be remotely monitored and controlled from off-site locations using the automated control system.

waterwise

Burgowan
WATER TREATMENT PLANT PROCESS

1. Raw water is drawn from Cassava Dam or Burrum Weir No.1.

2. This water initially enters a series of rapid mixing/ retention tanks, where it is chemically dosed with hydrated lime, carbon dioxide, aluminium chlorohydrate and a polyelectrolyte.

3. The chemically dosed water then enters a series of tanks, which include an an Actifo® high-rate sand ballasted clarifier, up-flow clarifier, ozone contact tank and Biologically Activated Carbon (BAC) filters; these processes remove solids from the water and other impurities.

4. The filtered water flows to the non-chlorinated clear water tank; from there it is pH corrected using sodium hydroxide and disinfected with sodium hypochlorite, and sent to the treated water storage.

5. BAC filters and clarifiers require periodic cleaning. This is performed by flushing these units with water. This is called backwashing.

6. Backwash water from clarifiers and BAC filters is dosed with a polyelectrolyte and sent to the dewatering lagoons.

7. The supernatant (clear water) from the lagoons is returned to the raw water storage.

8. The dewatering lagoons have a drying capacity of six months, after this time there will be a 0.5m dried sludge cake that can be removed and sent to (at this point in time) Toogoom landfill.

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