

Composting Toilets

Goal:

Our goal was to minimise the load placed on mains water, sewer and waste-water systems. We opted for composting toilets on the first and second floors because they use no water, almost no electricity, and have minimal contribution to the municipal sewer system.

The toilets feed large Clivus Multrum composting units on the ground floor. They are located against the north wall to help keep the composting tanks warm for optimal, odourless functioning. External access to the tank room makes servicing easy, including emptying about once every six months.

How do composting toilets work?

They work on the same principle as an ordinary garden compost bin. Waste is collected in the composting chamber that has carbon rich material added, such as wood shavings and garden clippings. The organic materials gradually decompose in the chamber's aerated environment. The composting process is entirely natural.

Is the compost safe?

The compost is clean, safe and fully health compliant. The toilets meet both the Australian Standard for Composting Toilets and the New Zealand Standard for Wastewater. The compost can go straight onto the surrounding gardens.

Ground floor conventional toilets

Composting toilets were not suitable for the ground floor because the composting units would have been below flood level and because a considerable depth of basalt would have required excavation to house those units.

Rainwater for flushing

Rainwater (collected and stored on site) is used for flushing ground floor toilets plus the urinals on all floors. The water is pumped from the collection tank back up to the roof header tank using electricity supplied by our small wind turbine near the glasshouses.

Hand basins

Hand basins have low-volume, water-saving taps. Water is heated to 45°C using waste heat from the refrigeration / freezer systems.

What goes into the sewer system?

Liquid waste from the composting tanks drains to the sewer system, as do the urinals and hand basin wastewater.

The load entering the sewer system is well within its potential capacity and markedly smaller than for a conventional building of similar size and function.

