

Good Practice Guide for Operating Waterless Composting Toilets

Tasman Resource Management Plan Good Practice Guide No. 4

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Introduction

A waterless composting toilet can be described as a well-ventilated container that provides the best environment for unsaturated, but moist, human excrement for biological and physical decomposition under **sanitary** and controlled **aerobic conditions**.

A waterless composting toilet is one of several alternatives to a flush toilet and septic tank system.

Waterless composting toilets require more operator input than a conventional toilet and they will be a health hazard if poorly maintained.

Waterless composting toilets require a building consent.

Standards for waterless composting toilets and their safe operation is set out in **AS/NZS 1546.2:2008 On-site domestic wastewater treatment units - Waterless composting toilets**.

Any diversion of urine or liquid from the waterless composting toilet will need to go to an onsite wastewater system that meets the standards set out in **AS/NZS 1547:2012**.

Key points

from the AS/NZ 1546.2:2008 standard for waterless composting toilets:

- Discharge to the compost pile is for human excrement **ONLY**.

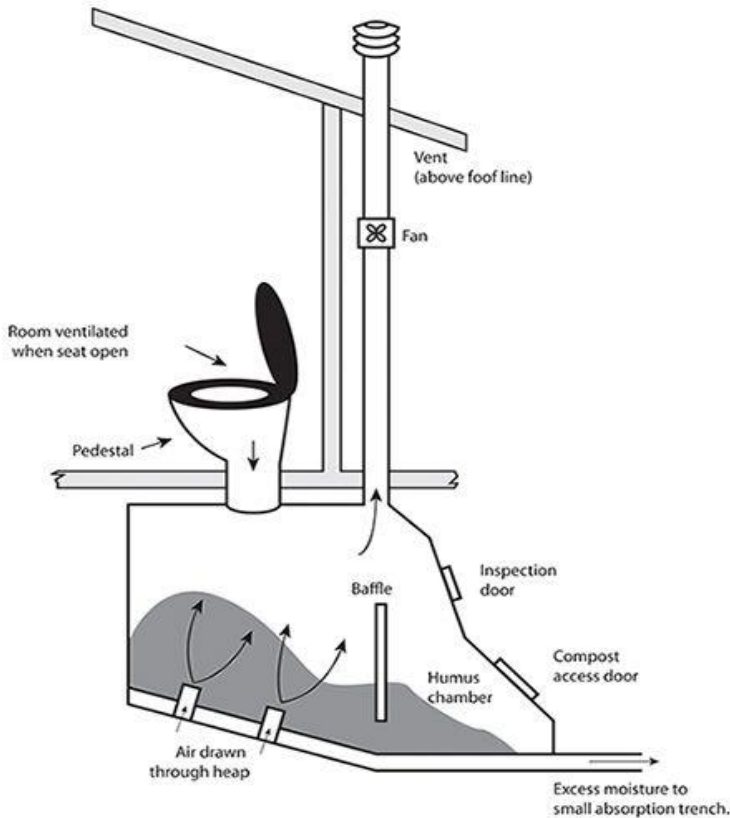


- The compost will need to undergo aerobic decomposition for a minimum of 12 months from the last addition of raw human excrement.
- Before burial of end product, compost needs to be tested to ensure that it meets the standards set out in AS/NZS 1546.2:2008.
- The discharge of final composted end product is to be worked into or buried under a minimum clean soil cover of 100mm after appropriate decomposition.
- A property considering the use of a waterless composting toilet needs sufficient area to manage the end product via burial and/or discharge to land.

Essential factors

for the aerobic breakdown (composting) of human excrement will include:

- Maintaining sufficient moisture in the composting pile.
- Adding a fibrous bulking agent to the compost pile to create air spaces. (Aerobic means circulation of air with oxygen.)
Bulking material can be straw, fibre, vegetable matter or sawdust (untreated).



A building consent application for the installation of a waterless composting toilet will need to:

- Provide setback distance from boundaries and watercourses - a site plan with dimensions.
- Define the area on the property that is suitable for disposal of decomposed end product that will need burying and potentially discharge fluids to land.
- Provide a report from a suitably qualified person showing how the toilet will meet the standards set out in AS/NZS 1546.2:2008. This report will also show how the discharge field for urine and greywater meets the standards set out in AS/NZS 1547.
- Provide the BRANZ Appraisal Certificate or manufacturer Producer Statement if you are using a pre-packaged unit.
- For on-site built units, a suitably qualified person will demonstrate how the system meets the design elements of the Building Code and AS/NZS 1546.2:2008 performance requirements.
- Demonstrate how the requirements of the permitted activity TRMP rule 36.1.2.4 'Discharge of Domestic Wastewater' are met.

If permitted standards are met then a resource consent is not required.

For example, if the composting pile is in direct contact with the ground, a resource consent application will be needed.

Other factors to manage:

- Exclude insects and vermin from the compost pile.
- Ensure no foul odours are detectable across boundaries.
- Secure the compost pile from accidental human contact.
- Prevent rainfall entering the compost pile.