

# Technical guidelines

# Toilets in orchards

**With more and more people being employed in Bay of Plenty orchards, orchardists are reminded that it is a requirement that they must provide toilets for workers as per the GLOBAL Good Agricultural Practice (GAP) code. Regional Rules require that the toilets are safe to use and don't pollute the environment.**

**It is important that no more non-complying systems are installed. All non-complying systems will need to be replaced. Systems commonly called 'Flush to ground' must be replaced by 1 December 2020 and pit latrines must be replaced by 1 December 2022.**

In this guideline we outline the rules for Bay of Plenty, Building Act requirements, options available and upcoming deadlines.

## The issue

Some orchard toilets do not meet current environmental and public health standards. The toilets in question are pit latrines or flush to ground systems. Pit latrines are a dry vault in which waste accumulates and are commonly referred to as 'long drops'. Flush to ground systems use a water closet and cistern

which flush waste direct to a hole in the ground without any form of treatment. There is a risk these systems will contaminate soil and water, potentially impacting those people who live near or work on the orchard as well as those who access water from this area.

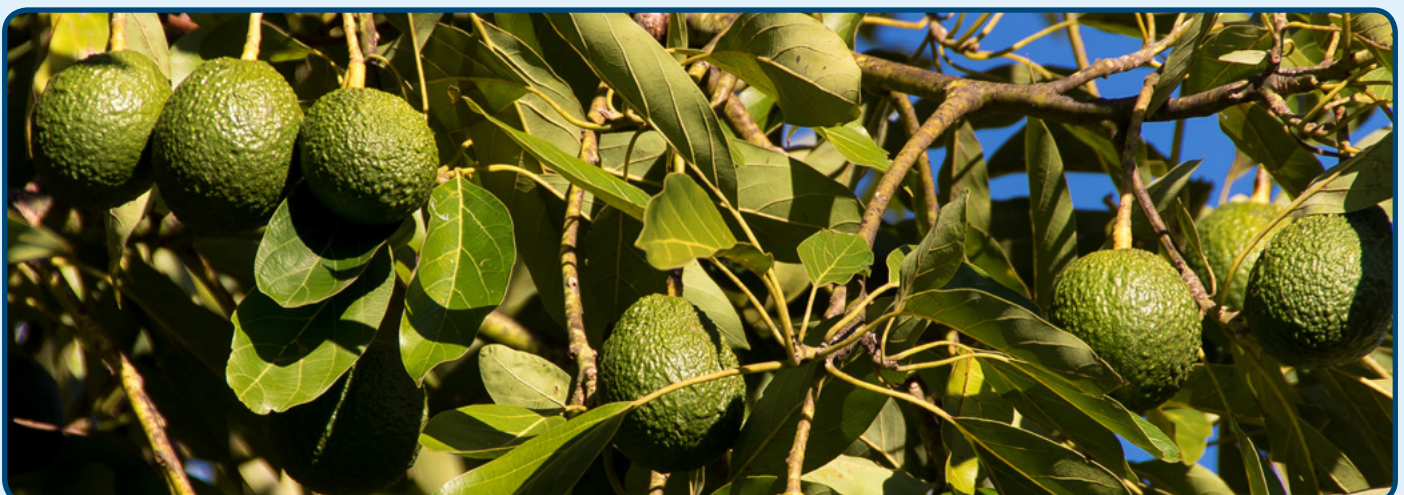
## Rules

*Note - These guidelines do not apply to Rotorua Lakes catchments.*

The Resource Management Act 1991 (RMA) promotes the sustainable management of natural and physical resources. Section 15 of the

RMA addresses the discharge of contaminants into the environment, including wastewater.

These discharges are either authorised through Regional Rules or by a Resource Consent. If an orchard toilet meets these technical guidelines and the design has been completed by an approved designer, no Resource Consent will be required. Where the details of the orchard toilet are assessed as complying or have only minor or temporary non-compliance the toilets will be deemed to be 'permitted activities' and you will be granted a notice.



## Building Act

Under the Building Act, the installation of toilets and wash basins require Building Consent from your local City or District Council (not Regional Council). Here we outline what's required to apply for a Building Consent.

1. Firstly you need to engage an approved designer. They will visit your site to determine soil type, depth to groundwater and the required setback distances from boundaries, water abstraction points and potential access to surface water. We've compiled a list of approved designers at [www.boprc.govt.nz/approveddesigners](http://www.boprc.govt.nz/approveddesigners)
2. Based on this information the designer will provide you with a Site and Soil Evaluation and wastewater system design. These are both required as part of your Building Consent application. You will also need to attach the 'deemed permitted' notice.
3. Once you have applied for and been granted consent the system can be installed by a contractor.
4. On completion of the work it will be checked by the Building Inspector from the local authority. The designer will then be able to issue a 'loading certificate' for display so that it can be checked by the GLOBAL GAP auditor.

*Note - Eventually it may be possible for each of the Building Consent Authorities (BCA) to develop processes which will remove the need to obtain a Building Consent. Under this system a design would still be required but details would be lodged with the BCA on completion of the work.*

## Options for orchards

There are no specific design standards for orchard toilets. The New Zealand Standards used for the design of wastewater systems for dwellings can be scaled accordingly for use in orchards. The following design parameters are consistent with NZ Standards and are based on teams of up to 30 workers being on an orchard for about 20 days per year.

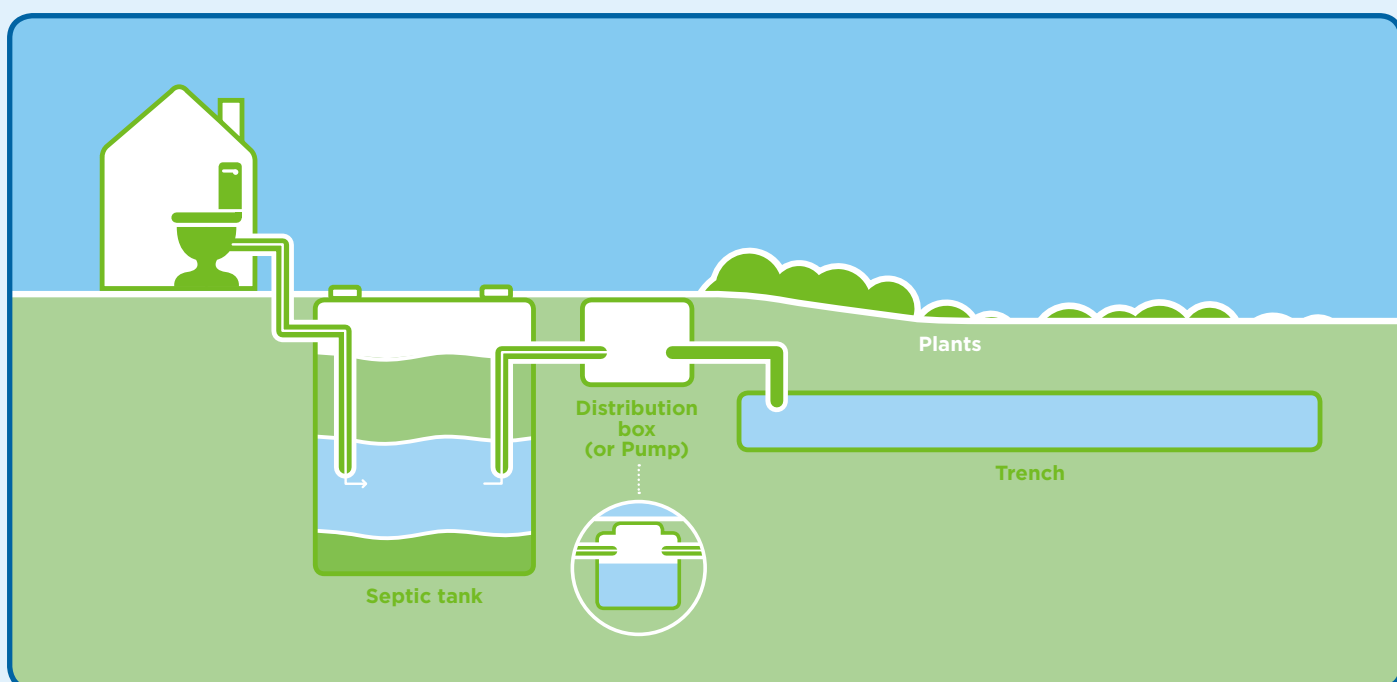
*Note - these options do not provide for showers or laundry facilities. If these facilities are required the design must be adjusted and a Resource Consent may be required.*

## Septic tank

This option is suitable where a permanent water supply is available. A dual flush or low flush toilet suite will discharge to a septic tank with a volume of at least 1000 litres. A precast septic tank or a moulded plastic tank can be purchased from a local drainage equipment supplier.

For soils with moderate drainage (categories 3 and 4), the waste will discharge into 2 x 18 m long conventional trenches. For other soil categories the designer will need to develop a suitable solution. The trenches must be kept shallow (approx. 450 mm deep) and must be laid on a level contour.

Depending on usage and septic tank size it will need to be emptied every 3 – 6 years.



## Septic closet

This option is suitable where a permanent water supply is available. A septic closet is a rectangular or round chamber built on site. It is made so that it can have a toilet cubicle built directly on top of it.

This should allow some savings over a septic tank and reduce space requirements. The chamber size and trenches are the same as those provided above for septic tanks.

## Composting toilet

This option is suitable where no water supply is available. Water for handwashing would still need to be transported to the site each day. A composting toilet can operate effectively provided that;

- a carbon source such as sawdust is added after each use
- there are clear instructions
- no bulk liquids are discharged into the toilet
- the composting toilet complies with the principles set out in New Zealand Standards 1546.2:2008, and
- the composting chamber has a capacity of at least 400 litres.

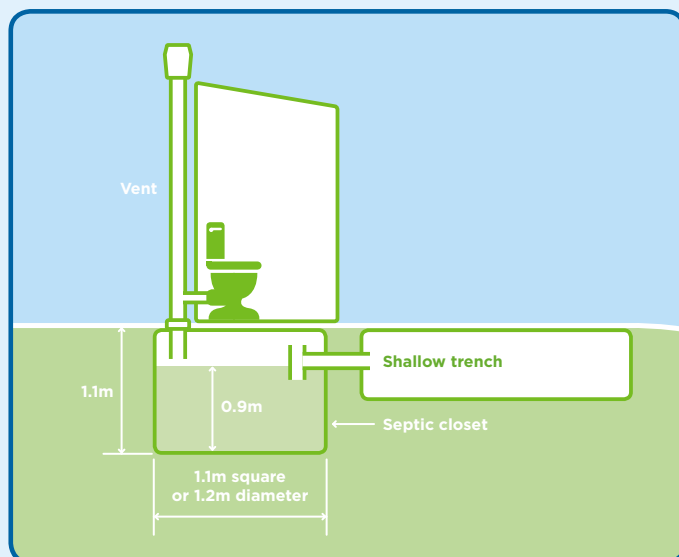
After two years of operation half of the compost must be removed. There must be an area of at least 40m<sup>2</sup> where the compost can be applied and dug into the ground. Each year about half of the compost needs to be removed from the compost chamber and incorporated into the soil in a different location from previous years. The location of the area to dispose of the compost must be away from surface waterbodies, property boundaries and groundwater. The area must also meet the requirements of the GLOBAL GAP.

## Holding tank

This option is suitable where a permanent water supply is available. All of the toilet wastes and wastewater would be directed to a tank of at least 3000 litres which would need to be pumped out regularly. The frequency of pump outs would be related to the frequency of use and the size of the tank.

It is most important that the tank never overflows. In order to ensure the pump out can be arranged before there is an overflow there needs to be a signal or alarm which shows when the tank is 80% full. This will then provide sufficient time for a contractor to be called to empty the tank.

It is important that the pump out truck is able to enter and manoeuvre in the orchard easily. The holding tank should be within 30m of the truck hard stand area.





## Other solutions

An orchardist may be able to develop a solution which is not listed in these guidelines. One example would be where the wastewater could be pumped to an existing wastewater system on the site. This would need an approval and possibly a Resource Consent from Bay of Plenty Regional Council.

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**These rules aim to keep orchard workers safe and protect our regions waterways. If you have any questions about these guidelines, the rules or how they apply to your orchard please get in touch with our Duty Consents Officer on the details below.**

## Important contacts for Building Consents

Tauranga City Council	07 577 7000
Western Bay of Plenty District Council	07 571 8008
Whakatāne District Council	07 306 0500
Ōpōtiki District Council	07 315 3030