

1. Purpose

The purpose of this practice note is to outline consenting and maintenance requirements for private on-site stormwater tanks and owner responsibilities. As Auckland's population increases, new developments are on the rise. This can place strain on existing stormwater infrastructure and the use of private on-site stormwater tanks to mitigate this pressure is becoming increasingly common.

Under the Auckland Council Stormwater Bylaw 2014 the owner, occupier or manager of a premises that has a stormwater management device installed, must ensure that the system is maintained in a good operating condition; and does not cause or contribute to nuisance.

2. Types of tanks

Detention tank: Detention tanks work by temporarily storing stormwater runoff during a rainfall event and then slowly releases the water into the public stormwater system. These can be located either above or below ground.

Retention tank: A retention tank is used to permanently hold rainwater, which can then be re-used for hose taps, toilet use and laundry purposes. *Also known as a single purpose rain tank.*

Dual purpose tank: Dual purpose tanks both retain and detain rainwater. The bottom third of the tank is used to store rainwater permanently (*retains*) for non-drinking water supply and the upper two thirds of the tank temporarily holds (*detains*) rainwater and slowly releases it until it reaches the retaining level.

Water supply rain tank: These tanks store rainwater collected from roof areas and provide the main water supply to a household, this includes drinking water. This practice note does not address potable water supply requirements; for further information refer to Clause G12 of the NZ Building Code, which can be found at www.mbie.govt.nz

3. Building / resource consent requirements

Detention and retention tanks are considered drainage work and as such will require a building consent. An as-built plan showing the location of the tank must be provided on completion of the work.

Dual purpose tanks require a building consent if a public potable supply exists and the water is intended to be used for laundering, WC or gardening purposes as there is a potential for backflow. An as-built plan showing the location of the tank must be provided on completion of the work.

If water is to be used for sanitary plumbing system (as opposed to simple retention and discharge) then a primary screening (leaf catcher) and a first flush device is required, and depending on final use may also require additional filtration.

If the public water supply is used as a back-up or alternate supply, approved medium hazard testable backflow prevention complying with G12 is required

Dual purpose or rainwater tanks require an approved method of silt removal, either a sloped base with draining valve or automatic syphon system.

If a dual purpose or retention tank is put in as a result of a **condition of resource consent**, an encumbrance is registered on the certificate of title to ensure the tank is retained and maintained on the site. If an owner chooses to **voluntarily** install a dual purpose or retention tank an encumbrance will not be required.

Water tanks may require a building consent depending upon the capacity of the water tank and it's height above ground. Please refer to *AC1821 Water supply tanks* for further information and guidance on this topic.

4. Maintenance

The owner / occupier is responsible for regularly maintaining their stormwater tanks to ensure that they operate as intended and that water quality is satisfactory. All tanks come with an operation and maintenance manual. One copy must be held on site and another copy given to Council which will be included in the property file along with as-built drawings. It is important to read the operation and maintenance manual carefully and be familiar with its requirements. If in doubt contact the professional who installed the system.

Table 1 (in this document) outlines the recommended inspection requirements for most stormwater tank systems; the inspection regime will determine what maintenance is required. This table is a guide only, the operation and maintenance manual must be followed as it is tank-specific. Records of maintaining the device must be kept by the owner / occupier and can be requested by Council if required.

5. Reference material

Auckland Council Stormwater Bylaw 2015.

Auckland Council Code of Practice for Land Development and Subdivision Chapter 4 – Stormwater

Auckland Council TP10 Stormwater Management Devices: Design Guidelines Manual 2003

ARC Technical Report No. 045 (December 2008)

Table 1: Maintenance requirements

Component	Device ¹	Recommended actions	Who	Frequency
Back-up water supply	RT, DP	Inspect all pipes and valves for leaks.	Owner ²	Monthly
	RT, DP	Float controlled top-up valves are prone to leakage which may result in constant filling of the tank to overflow which may go unnoticed until the next water meter reading. Check these valves regularly to ensure that they are closing properly and not leaking. Seek professional assistance if necessary.	Owner	
	RT, DP	Check solenoid valve is not switched off	Owner	
Tank hatches and covers	All	Inspect for correct fit and seal. Particularly important for underground tanks to prevent ingress of contaminated surface water and entry by	Owner	
In-line filter	WS, RT, DP	It is advisable to keep a spare filter cartridge. Swap filter cartridge and clean the old one ready for the next replacement.	Owner	3-monthly
First flush device	WS, RT, DP	Inspect and remove any debris and accumulated sediment. Refer to the manufacturers instructions.	Owner	
Overflow, outlet pipes & orifices	All	Inspect for blockage and clean of necessary. Check flap valves and / or vector screens.	Owner	
In-line leaf & debris diverters	WS, RT, DP	Inspect and clear away any accumulated leaves or debris	Owner	
Roof, gutters, down pipes & gutter screens	All	Inspect and remove debris and accumulated sediment. Prune any overhanging branches. If the roof and gutters need to be cleaned, the flow into the rainwater tank should be temporarily diverted to prevent ingress of dirty water to the tank.	Owner	6-monthly
Tank	All	Inspect the tank for leaks, sediment build up and structural integrity. A professional tank cleaning contractor should be employed to clean out the tank when the sludge level gets close to the pump inlet. Most rainwater tanks have a design life of 25 years or more. Tanks older than 25 years should be regularly assessed and replaced if necessary.	Owner / Professional	Annually
			Professional	
Backflow prevention valve	RT, DP	Inspection must be carried out by a certified inspector and repaired if necessary. If an air-gap is used to provide backflow prevention, no inspection is required.	Professional	
Pump	WS, RT, DP	Pumps should be professionally inspected and/or serviced every few years. Refer to the pump service manual or contact a local service provider.	Professional	2-5 yearly
Non-return valve	WS, RT, DP	Check operation when pump is serviced	Professional	

¹ **WS** = Water Supply; **R T** = Retention Tank; **D P** = Dual-purpose; **DT** = Detention Tank

² In all cases, reference to an owner *means* owner, occupier or manager of premises