



Backflow Prevention

To document Council's process for the registration and for the monitoring of maintenance and testing of backflow prevention devices installed in premises connected to Council's reticulated potable water supply or to any private water supply system.

Category	Infrastructure Services - Water	Policy number: IS010
Related forms, policies and procedures	Backflow Prevention Management Plan	
Key words	Backflow, prevention, plumbing, water mains, valve	
Relevant legislation	<ul style="list-style-type: none"> • <i>Plumbing and Drainage Act 2018</i> • <i>Plumbing and Drainage Regulations</i> 	
References and resources	<p>AS/NZS 3500.1 - National Plumbing and Drainage Standard - Specifies the requirements and methods for the prevention of potential contamination of drinking water within the water service and the water main and provides for the selection and installation of backflow prevention devices.</p> <p>AS/NZS2845.3 - Water Supply Backflow - Specifies requirements for the design, performance and testing of backflow prevention devices used for the protection of the water supply.</p>	

Review due by	Manager Water	Date: Within 5 years from adoption by Council
Approved by	Council Resolution	Date:

1. Purpose

This policy and the associated Backflow Prevention Management Plan establish the processes to ensure testable backflow prevention devices are registered with Council and that such devices are being properly maintained by property owners. Backflow prevention devices, in particular risk environments, are critical mechanisms to prevent the contamination of Council's reticulated water supply and any private supply systems. The contamination of potable water in some hazardous environments has the potential to endanger health or cause death. This policy focuses on backflow prevention of testable devices related to medium to high hazard environments.

2. Scope

Council has responsibilities under the Plumbing and Drainage Act to maintain a register of the testable backflow prevention devices in its local government area. Council also has responsibilities to monitor the maintenance of testing devices.

Testable backflow prevention devices are installed, maintained and tested by licenced plumbers with backflow accreditation in accordance with the Australian Plumbing Standards.

Owners of premises or their licensee are responsible to ensure testable backflow devices are registered with Council and that devices are being tested annually and maintained.

This Policy establishes the processes Council will use to monitor and ensure compliance by owners and licensees with their obligations on testable backflow devices in relation to registration, testing and maintenance.

3. Definitions and Principles

What is Backflow?

Backflow is defined as the un-intended flow of water from a potentially polluted source into a potable water supply or flow in direction contrary to the normal direction.

How does backflow occur?

The water supply system is designed to ensure that water flows to the property under pressure. If this pressure is less than the pressure at the property, there is a high probability that water could be drawn back into the potable water supply system. Water pressure can be affected when:

- there is a break in the water main
- water is being pumped from the main water supply during a fire
- a customer is using water at a higher pressure than the pressure supplied
- heavy water use on site reduces water pressure within the water's supply network
- the water outlet on the property is substantially higher than the water main

Why is backflow important?

All water supply systems intended for human consumption, food preparation, utensil washing or oral hygiene should be safeguarded from contact with contaminated water.

There is a risk to public health if there is a cross connection between the potable water supply and a contaminated source.

Types of Backflow Device

There are different backflow prevention devices which can be installed depending on the hazard(s) within the premises and their hazard rating. Australian Standard AS 3500 defines three degrees of hazard associated with cross-connection and backflow, namely:

High Hazard : “Any condition, device or practice that, in connection with the water supply system, has the potential to cause death.”

Medium Hazard: “Any condition, device or practice that, in connection with the water supply system, has the potential to endanger health.”

Low Hazard: “Any condition, device or practice that, in connection with the water supply system, constitutes a nuisance but does not endanger health or cause injury.”

AS 3500.1 Appendix F outlines the hazard rating for individual facilities within a premises and the hazard rating of different uses within a premises or the hazard rating of different types of premises. Based on the type of facility or premises type, the standard prescribes different forms of backflow prevention device.

Backflow prevention devices have one of the following elements to stop water flowing backwards:

- a valve that only lets water go in one direction
- an air gap
- a break tank.

Which Types of Devices Need to Be Registered and Tested at Least Annually?

Property owners (or their licensee) are only required to register testable backflow devices with Council. Irrespective of whether or not the property is connected to reticulated supply or on private water supply systems such as rainwater or bores all testable backflow devices are still required to be registered.

4. Policy/Procedure

4.1. Establishment Phase of Register of Testable Backflow Devices

Council has limited data on installations with testable backflow devices so the following measures will be introduced to establish the register:

- Create marketing information on backflow prevention and requirements.
- Advise licensed plumbers registered in region of implementation of policy.
- Contact property owners with medium or high risk business uses advising of need for registration of testable backflow devices. Advise of requirements for testing and maintenance. Allow 2 year amnesty for registration of devices from date of initial written notification. For the registration process (form 9) to be deemed complete the backflow test/s must have passed within the 2 year

amnesty. Owners are responsible for ensuring any defective backflow devices are repaired or replaced and retested within the 2 year amnesty. Ensure follow up correspondence is issued.

4.2. Annual Test

All testable backflow devices need to be tested every 12 months as a minimum. Council will contact owners in writing annually prior to the anniversary date of initial registration. A follow up letter will be issued as a reminder if no action is taken by the owner.

4.3. Fees and Charges

4.3.1. Annual Fee

No fee will be charged for the initial registration during the amnesty period or for any new device registered thereafter. Each testable device must be retested as a minimum each 12 months and Council will impose an annual fee for the ongoing maintenance of the register after the 2 year amnesty. The annual fee will be approved by Council on an annual basis and advised in the Fees and Charges Schedule. Multiple testable devices could be on each property and a scaling index on the annual fee may be imposed for multiple devices per property.

4.3.2. Inspection and Test Fee

Private licensed plumbers with backflow accreditation are available in the region to undertake the required testing and maintenance of testable devices. It is preferable private plumbers undertake testing and maintenance of devices. If property owners elect to nominate Council to undertake testing, upon payment of the prescribed fee (as advised in the Fees and Charges Schedule) Council plumbers will assess the device. The fee is not intended to cover the costs of repairs or maintenance. If the device passes the test, Council will undertake the completion and registration of the Form 9 Test Certificate.

If a testable backflow device fails, the property owner will be advised in writing. Notwithstanding the provisions relating to the amnesty period, a period of 60 calendar days will be provided from the date of notification of the test failure for the property owner to rectify any defect.

4.3.3. Penalties

Failure to comply with the written direction to undertake inspection, testing, maintenance and registration of testable backflow prevention devices by the end of the 2 year amnesty period may result in the issuing of a Show Cause notice with a deadline for compliance.

Failure to comply with the written direction to undertake the annual testing, maintenance of testable devices within 60 calendar days of the expiry of the device compliance test certificate (Form 9) will result in the issuing of a Show Cause notice with a deadline for compliance.

An Enforcement Notice (with a penalty up to the prescribed maximum penalty) may be issued if no action has been undertaken by the owner in regards to any written Show Cause direction by Council in relation to testable backflow prevention devices.

For high hazard backflow installations, Council may elect to directly issue an Enforcement Notice and if no action is taken by property owners within 60 days of the notice, Council may take action to rectify any deficient backflow device and recover costs from the property owner.