

Policy

BACKFLOW PREVENTION POLICY

DEPARTMENT:	Assets
RESPONSIBILITY:	Assets Manager
ADOPTED:	28 July 2021
REVIEW:	Every 5 Years (or earlier if required)
CONSULTATION:	Not Applicable
RELATED DOCUMENTS:	Health Act 1956, Taumata Arowai – the Water Services Regulator Act 2020, Building Act 2004, Local Government Act 2002, New Zealand Building Code, Compliance Document for New Zealand Building Code: Clause G12 Water Supplies, AS/NZS 2845, Fees and Charges Schedule, Form 12A, Section 108(3)(C), Building Act 2004, Water Supply Bylaw 2016

Policy Objective

To mitigate and minimise the risk of backflow contamination of the Ashburton District Council drinking water supply networks.

Policy Principles

The following principles underpin the intent and responsibilities of Council regarding backflow prevention:

- Ensuring safety of the public water supply system.
- Ensuring control of cross-connections and minimise backflow risk.
- Ensuring any premises served by the public water system are inspected to determine if cross-connections and/or risk of backflow exist, whenever deemed necessary.
- Ensuring re-inspections are carried out when necessary.
- Ensuring backflow prevention devices installed under the Building Act 2004 and New Zealand Building Code are included within the Building Warrant of Fitness.
- Taking appropriate action to ensure that hazardous conditions are eliminated whenever possible.
- Maintaining records of inspections, testing and maintenance of backflow prevention.

Definitions

Backflow: The unplanned reversal of flow of water or mixtures of water and contaminants into the water supply system.

Backflow prevention device: A device that prevents backflow.

Building Warrant of Fitness: A statement signed by the building owner (or manager) stating that the requirements of the building's compliance schedule have been fully met in the previous 12 months.

Cross-connection: Any actual or potential connection between a potable water supply and a source of contamination or pollution.

Independently Qualified Person (IQP): A person approved by Council as qualified to inspect, maintain and report on certain specified systems. 'Independent' means that the person has no financial interest in the building.

Risk: Risk categories are aligned to the hazard classification of the Compliance Document for New Zealand Building Code Clause G12.

High Risk: Any condition, device or practice which, in connection with the potable water supply system, has the potential to cause death.

Medium Risk: Any condition, device or practice which, in connection with the potable water supply system, has the potential to injure or endanger health.

Low Risk: Any condition, device or practice which, in connection with the potable water supply system, would constitute a nuisance, by colour, odour or taste, but not injure or endanger health.

Policy Statement

1. Risk Categories

Risk categories for backflow prevention are aligned with the degrees of hazard as defined in the New Zealand Building Code. The three categories of risk are high risk, medium risk, and low risk.

2. Level of Protection to be provided

Council requires all high, medium and low risk properties to provide containment at the boundary appropriate to their level of risk. Boundary containment device selection, design and installation must be approved by Council. All backflow prevention devices must be maintained and fully functional.

3. Requirements to Install and Maintain Backflow Prevention Devices

Council will identify premises where backflow prevention devices are required to be installed and notify the property owners of the risk category of the property and the need to install a backflow prevention device.

4. Non-residential Building Consents

Where applicable non-residential building consents will require a risk assessment and backflow protection statement, incorporating a survey, completed in accordance with the compliance schedule requirement for a specified system under the Building Act 2004. The statement will be undertaken by a Council approved backflow surveyor to determine risk category and backflow protection requirement and will be at the property owners' expense. Form 12A, Section 108(3)(C), Building Act 2004 must be completed.

5. Responsibilities of Property Owners

The owner(s) of any premises that contains a cross connection or a potential cross connection with the resulting risk of contamination of the water supply by backflow is responsible for:

- A duty of care to avoid any action which could result in the contamination of drinking water supplies.
- Having suitable arrangements in place so that inspections can be made at any reasonable times by an IQP.
- Obtaining the necessary consents prior to carrying out any plumbing alterations or changes of use.
- Ensuring the testing, installation and maintenance of all backflow prevention devices by an IQP.

6. Prohibition of Cross Connections

No water service connection shall be installed by Council unless the water supply is protected as required by the Health Act 1956, Building Act 2004 and Backflow Prevention Policy.

The supply of water to any premises may be restricted if a backflow prevention device required is not installed, tested and maintained, or if it is found that a backflow prevention device has been removed, or bypassed, or if an unprotected cross-connection exists on the premises. Repairs and replacement of backflow prevention devices shall be completed within a reasonable period notified by Council.

The water supply shall not be fully restored until any such conditions or defects are corrected.

7. Testing of Backflow Prevention Devices

Testing Procedures

All testing will be undertaken by an IQP who has been approved by Council. The testing procedures shall be carried out annually, on or before the 12 -month anniversary, by an IQP in accordance with AS 2845.3. The results of these tests shall be submitted to Council electronically via: certificates.backflow@adc.govt.nz.

High Risk Situations

In some particularly high-risk situations, or for some types of devices, or where there is a history of devices failing test(s), Council may require testing more frequently.

Building Warrant of Fitness

Council requires testing of each backflow prevention device annually. Testing of devices installed under the Building Act 2004 will be carried out annually, or as part of the Building Warrant of Fitness. In certain high-risk applications, or if tests fail, frequent testing may be required by Council.

Maintenance Work

Testing is required after any maintenance work has been carried out. Certified evidence of all maintenance work carried out shall be provided to Council.

8. Costs of Installing and Testing Backflow Prevention Systems

All related costs, annual fees, disconnections, consent and permit costs are decided by Council within its Fees and Charges Schedule.

9. Register and Record Keeping

The backflow preventer records shall be available in accordance with legislative requirements.

Appendix one – hazard types and acceptable devices

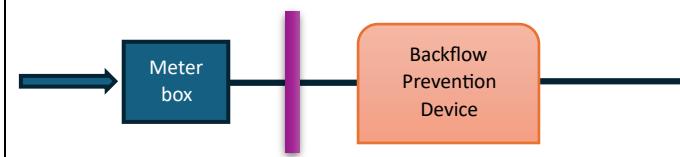
Type of hazard	Examples	Type of device	Examples
High – processes on the property have the potential to cause serious illness or death	Hospitals, mortuaries, laboratories, wastewater treatment plants and pumping stations, chemical plants, beauty and hairdresser salon wash basins and commercial dishwashers, car and factory washing facilities, dental equipment	Reduced pressure zone backflow device (RPZ) Two independent action non-return valves arranged to be force loaded to the closed position, with a relief valve positioned between the non-return valves arranged to be force-loaded to open to the atmosphere.	
Medium - processes on the property have the potential to cause sickness and endanger health	Commercial laundries, garden irrigation systems, drink dispensers with carbonators and rainwater tanks connect to household plumbing, swimming pools, spas and fountains	Testable double check valve backflow device (DCV) Two independent action non-return valves arranged to be force loaded to the closed position.	
Low - processes on the property have the potential to constitute a nuisance by colour, odour or taste	Residential properties Drink dispensers (except carbonators)	Non-testable dual check valve backflow device (DuCV) Dual check valves in a manifold for services up to 25mm. Connections larger than 25 mm to have standalone non-testable dual check valve backflow prevention containment devices	

Note - the examples given are not an exhaustive list. Where there is doubt comparison must be made to the hazard definitions

Installation Schematic

Installation in the property

Within 1m of the Boundary



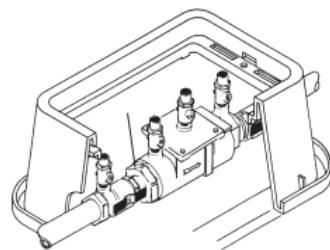
Point of Supply/Boundary

Installation before the boundary

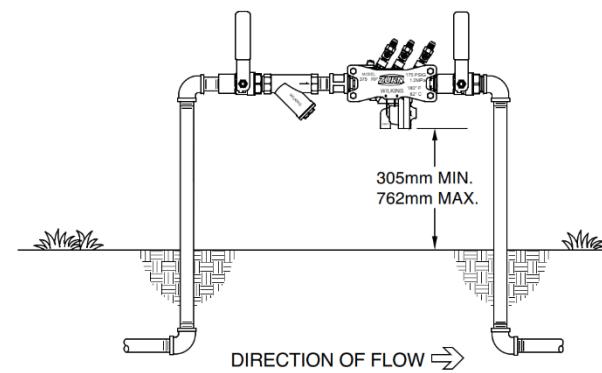
Point of Supply/Boundary



Typical DCV installation



Typical RPZ installation (excluding cage)



Example of an RPZ Cage



Example of an RPZ Case

