Policy

Backflow Prevention

Approved by Council: 20/10/2021

To outline Council's commitment to appropriate levels of backflow prevention, cross-connection control in the protection of the Rous County Council water supply.

Safety Teamwork Accountability Respect

Background

Backflow presents a public health risk to potable water supplies by allowing pathogens, chemical contaminants or organic matter to enter the water supply network. This risk is exacerbated within Council's bulk water supply network due to several factors, such as:

(a) Reliance on gravity to move water through Council's water supply network increases the likelihood of backflow occurring due to occasional differences in water pressure within a water main as compared to that within the Customer's private water pipeline; and

(b) The prevalence of retail water service connections directly to Council's water main in areas used for rural, commercial or industrial purposes.

Council recognises strong preventative measures are required to lower the risk posed by backflow to acceptable levels and to preserve community confidence in the quality and safety of the water Council supplies for drinking.

Purpose

This policy applies to all retail water service connections to Council's bulk water supply network without exception and will:

A). Ensure compliance with the legislative and regulatory requirements of providing clean, safe, drinking water that protects public health for all customers.

B). Ensure the methods for the prevention of contamination of the drinking water within the water network are known, implemented, and appropriate levels of backflow and cross connection prevention are applied for the protection of the water supply.

C). Provide clear guidelines to assist Council staff in making determinations relating to protecting the potable water supply via backflow prevention.

D). Provide clear information to members of the public, plumbers, and other stakeholders about the selection and installation of backflow prevention devices and Council's role in backflow prevention.

Policy statement

Council adopts the multiple barrier approach as set out within the Australian Drinking Water Guidelines as best practice in the management of drinking water supplies.

The installation of a Backflow Prevention Device on all retail water service connections to Council's water supply network is a critical risk control and element of the multiple barrier approach.

1.0 Installation

1.1 Council will install and maintain a Backflow Prevention Device on all retail water service connections to its bulk water supply network. This will occur in accordance with the requirements of the applicable Plumbing Code of Australia, Australian Standards and such other legislation as may be relevant in the circumstances.

1.2 Backflow Prevention Devices will be owned by Council and installed as part of the meter assembly (low hazard installation) or before the water meter as depicted in *Figure 1* below for medium and high hazard installations:

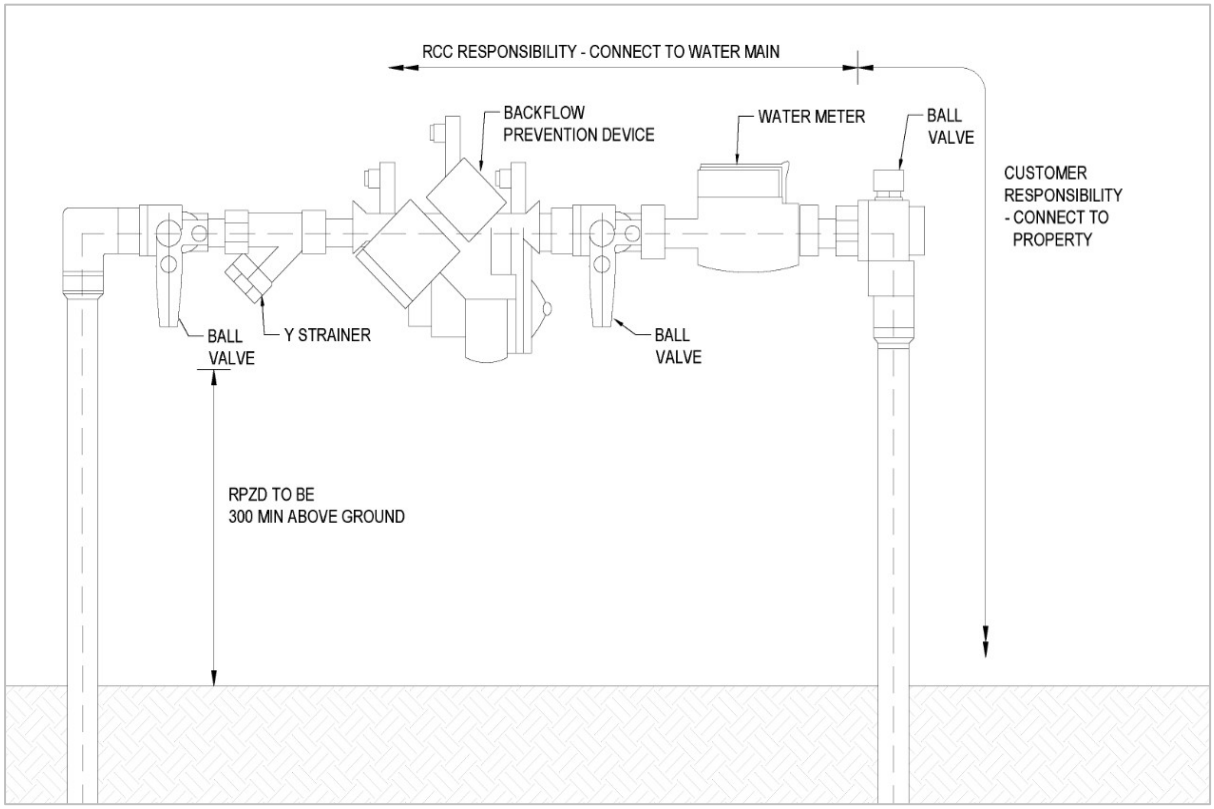

Figure 1 – Typical backflow installation

2.0 Testable Backflow Prevention Device

2.1 Properties classified with a medium to high hazard rating must have a Testable Backflow Prevention Device installed at the retail water service connection point for containment purposes or alternative solution approved by Council, in accordance with Australian Standard 3500 Part 1: Plumbing and drainage Section 4. Testable Backflow Prevention Devices

3.0 Non-testable Backflow Prevention Device

3.1 Properties classified with a low hazard rating must have a non-testable Backflow Prevention Device (as a minimum). A non-testable Backflow Prevention Device is built into Council supplied water meters for 20mm and 25mm water meters.

4.0 Determining hazard rating

4.1 Land Zoned 'Rural (RU1 – RU6)', 'Commercial (B1 – B8)' or 'Industrial (IN1 – IN4 & SP1 – SP3)' are, for the purpose of this policy, classified as medium to high hazard properties for backflow and cross contamination. These zones have been classified as medium to high risk of cross contamination due to the potential of hazardous chemicals, onsite sewage management systems and livestock allowed on properties due to the land zoning and must have a Testable Backflow Prevention Device installed.

4.2 All other Land Zones will be assessed using site specific information. In the absence of any site-specific information, Council will assign a hazard rating to a property based on Council's assessment of the primary activities being undertaken on site. Council may ask customers to certify their hazard rating periodically. If the customer has more site-specific information and requests a review of the hazard rating, then Council will review the hazard and may determine that a different hazard rating is more appropriate and amend its records accordingly.

5.0 Annual testing

5.1 Testable Backflow Prevention Devices will be tested annually by a Qualified Person engaged by Council.

6.0 Cost

6.1 All costs of implementing the requirements of this policy are to be borne by customers requiring a Testable Backflow Prevention Device. This includes the cost of the Device, labour charges for installation, replacement, repairs, annual testing, ongoing maintenance and administration costs as applicable.

6.2 The recovery of the Testable Backflow Prevention Device costs will be spread over the lifetime of the device (typically ten years) and will appear as a charge (backflow charge) on the customer's quarterly water account. The backflow charge is calculated by summing all Testable Backflow Prevention Device costs over a 10-year period and evenly allocating those costs to the customer's quarterly water account. CPI and/or other price fluctuations relating to the backflow charge are to be managed through adjustments to Council's Fees and Charges policy on an annual basis.

6.3 During the transition to implementation of the revised Backflow Prevention policy and Council-owned backflow devices, customers with an existing, operable and testable backflow device, will have the option to 'transfer' their backflow device to Council. Devices that are 10 years or older will not be considered for 'transfer', as they have reached their serviceable life. If this option is taken, Council will apply a credit to the customer's water bill based on the depreciated value (assuming a 10-year life) of the backflow device installed. Following application of the credit, the backflow device will become the property of Council.

7.0 Council responsibilities

7.1 Council will install, maintain, service, test, repair and renew Testable Backflow Prevention Device as required up to and including 32mm in size. Larger devices will be managed under a separate agreement between Council and the customer.

7.2 Council staff will maintain a backflow register and keep records of all property backflow hazard ratings, registration of backflow devices and annual test results.

7.3 Council staff will provide information to customers regarding backflow, cross connections and backflow prevention from time-to-time and upon request.

Definitions

Australian Standards means:

AS/NZS 3500:1, namely the current version of the Australian Standard/New Zealand Standard for Plumbing and Drainage. AS/NZS 3500:1 refers to Part 1 (Water Services) of this standard.

AS/NZS 2845:1, namely the current version of the Australian Standard/New Zealand Standard for Water Supply. AS/NZS 2845:1 refers to Part 1 (Backflow Prevention Devices) of this standard.

Backflow means the unintended reversal of flow in a water pipeline whereby water that has already passed beyond the meter assembly into the customer's pipeline system returns to the Council's water supply.

Backflow Prevention Device means a mechanical device that will prevent the reverse flow of water from a potentially polluted source into a potable water supply system.

Council means Rous County Council, being the organisation responsible for the supply of bulk drinking water to the Ballina, Byron, Lismore and Richmond Valley local government areas.

Customer means the owner of the property that has a direct retail water service connection with Council.

Cross-connection means any connection or arrangement between the potable water supply system connected to water main or any fixture, which may under certain conditions enable water unsuitable for drinking or other substances to enter the potable water supply.

Hazard Ratings (as defined in AS/NZS 3500:1) means:

- High Hazard – any condition, device or practice which in connection with the water supply system has the potential to cause death.
- Medium Hazard – any condition, device or practice which in connection with the water supply system could endanger death.
- Low Hazard – any condition, device or practice that in connection with the drinking water supply system constitutes a nuisance but does not endanger health or cause injury.

Land Zone means the land zone classification as determined by Ballina, Byron, Lismore and Richmond Valley councils and their relevant Local Environmental Plans, as determined by the NSW State Government.

Testable Backflow Prevention Device (TBPD) means any backflow device that is provided with test taps for the purpose of testing its operation, and a registered break tank; or a registered air gap.

Plumbing Code of Australia means the technical provisions for the design, construction, installation, replacement, repair, alteration and maintenance of water services, sanitary, plumbing and drainage systems.

Potable water means drinking quality water.

Retail water service connection(s) means all water connections to Council's bulk water supply network other than connections to another local council.

Qualified Person means a licensed plumber who has undertaken accredited backflow training from a registered training organisation in accordance with the *Plumbing and Drainage Act 2011 (NSW*).

Contact officer
Group Manager Operations

Related documents

Policies
Risk Management
Land Management

Procedures
Backflow prevention and cross connection control procedure.

Legislation
Local Government Act 1993 (NSW)
Public Health Act 2010 (NSW)
Water Management Act 2000 (NSW)
Plumbing and Drainage Act 2011 (NSW)

Other
Things You Need to Know - terms and conditions for connection
Rous County Council's Drinking Water Quality Management System
Australia Drinking Water Guidelines
Plumbing Code of Australia (Volume 3 of the National Construction Code)
AS/NZS 3500:1 Plumbing and Drainage Part 1: Water Services
AS/NZS 2845:1 Water Supply – Backflow Prevention Devices.

Office use only		Next review date: [2 years] (2023)	
Version	Purpose and description	Date adopted by Council	Resolution no.
1.0	Policy: Backflow prevention and cross connection control	20/03/2013	24/13
2.0	To outline Council's commitment to appropriate levels of backflow prevention, cross-connection control in the protection of the Rous County Council water supply.	20/10/2021	52/21