



**Thames-Coromandel District Council
Boundary Backflow Prevention Backflow
February 2021**

Thames-Coromandel District Council

Boundary Backflow Prevention Protocol

1.0 Introduction

Thames-Coromandel District Council (TCDC) has an obligation to supply water that is safe for human consumption. Much of this obligation comes from needing to meet the requirements of Part 2A of the Health Act 1956. Section 69ZZZ within Part 2A of this Act stipulates the requirements for protection of water supplies from risk of backflow.

As part of satisfying the above legislative requirement, Section 14 the TCDC Water Supply Bylaw refers to the provision of backflow prevention.

This Boundary Backflow Prevention Protocol document outlines the protocol for implementing backflow prevention under the above Bylaw and must be read in conjunction with the Water Supply Bylaw and other references listed under Section 7.0 (References) of this document.

This protocol outlines *Council's* commitment to the protection of the *public water supplies* by ensuring appropriate protection is provided at the *point of supply* to prevent the backflow of contaminated water into the network.

Therefore, to minimise the risk of contamination to the *public water supply*, this protocol requires an appropriate level of backflow protection is provided at the *point of supply* on all connections to water supplies, including water takes from fire hydrants.

2.0 Definitions

Air gap	is a <i>backflow prevention method</i> that uses an air gap between the lowest point of the supply outlet and the highest level of water in the receiving device (usually a tank). For the purpose of this protocol, the air gap must be recorded in the <i>Council's Boundary Backflow Protection Register</i> and the air gap must comply with the requirements of section 3.5 of <i>G12 Water Supplies</i> .
Auxiliary water supply	means any water supply on or available to a property other than a <i>public water supply</i> .
Backflow	Backflow is the unplanned reversal of flow of water or mixtures of water and contaminants into the water supply system.
Backflow prevention device	means a device to prevent backflow as defined in the standard AS/NZS 2845.1. These include: <ul style="list-style-type: none">• dual check valves [non-testable]• double check valves [testable]• reduced pressure zone valves (RPZ) [testable] Note: Vacuum breaker backflow prevention devices, also defined in AS/NZS 2845.1, are not suitable as <i>boundary devices</i> .
Backflow prevention method	means a method to prevent backflow. Acceptable methods for <i>boundary protection</i> under this protocol are: <ul style="list-style-type: none">• air gap [verifiable] Refer to <i>air gap</i> for the definition of, and requirements for, this method.
Boundary backflow protection register	refer to the section headed <i>6.0 Boundary Backflow Protection Device Register</i> .
Boundary device	is a <i>backflow prevention device</i> fitted on a <i>service pipe</i> to provide <i>boundary protection</i> .
Boundary protection	is the <i>backflow prevention device</i> or <i>backflow prevention method</i> provided or required at the <i>point of supply</i> to prevent the flow of water and/or contaminants back into the <i>public water supply</i> .
Council	means the Thames-Coromandel District Council.
Customer	means the person who has or will use the water supplied. In this context person includes a natural person and a partnership, a body of persons, company or organisation.
G12 Water Supplies	means New Zealand Building Code: Clause G12 Water Supplies, which is contained in the First Schedule of the Building Regulation 1992.

Hazard category	means the level of hazard the type of premise or activity poses to the <i>public water supply</i> . This protocol has adopted the definitions as described in sections 3.3.1 to 3.3.3 of <i>G12 Water Supplies</i> .
Point of supply	The point of supply for <i>service pipes</i> is defined in the <i>Council's Water Supply Bylaw</i> . Water and/or other substances must not pass the point of supply from the customers' side to the <i>Council's</i> side.
Public water supply	means a networked reticulation system operated by the <i>Council</i> with the primary purpose to supply water to properties by <i>service pipe</i> . Water may be provided for other uses such as for supply by tanker, firefighting etc.
Service pipe	means the section of water pipe between a <i>Council</i> water main and the <i>point of supply</i> . This section of pipe is owned and maintained by the <i>Council</i> .

3.0 Protocol

Section 14 of the Water Supply Bylaw describes the requirements for Backflow Prevention.

The backflow protocol is provided below.

1. *Boundary protection* shall be provided on all *service pipes*.
2. The minimum level of *boundary protection* required for each connection to the *public water supply* shall be in accordance with Clause 3.4 of *G12 Water Supplies*.
3. Ownership and annual testing and maintenance of *boundary devices* installed after this protocol comes into effect shall be the responsibility of *Council*. This shall include replacements for existing privately-owned devices.
4. Where *boundary protection* is provided by a *backflow protection method*, *Council* shall only be responsible for the annual verification of the method, unless the assets used to provide the method belong to *Council*, in which case responsibilities shall be as for *boundary devices*.
5. For existing *boundary devices*, *Council* will negotiate with the owner to have ownership vested with *Council*. Where the owner is unwilling to transfer ownership, *Council* will enter into an agreement with the owner to ensure the device is properly maintained, tested annually and records sent to *Council* in a timely manner.
6. *Council* will develop and maintain a register of all *boundary protections* to, among other things, ensure all devices are tested at least once per year in accordance with the requirements of 69ZZZ of the Health Act 1956.

4.0 Implementation

This protocol will be implemented by doing the following:

1. A register of *boundary protections* will be maintained by *Council* along with the results of inspections and testing, and maintenance records – refer to section: *6.0 Boundary Backflow Protection Device Register*.
2. All new connections to the *public water supply* shall have appropriate *boundary protection*.
3. Not all existing *service pipes* will currently be fitted with appropriate *boundary protection*. *Council* will conduct an on-going investigation programme to assess all exiting connections and where required, have the appropriate boundary protection installed. This work will be undertaken using a risk-based approach.

4. Backflow prevention devices shall be installed, maintained and tested in accordance with Water NZ's *Boundary Backflow Prevention for Drinking Water Supplies 2019*
5. Installation, maintenance, testing and replacement of *boundary devices* shall be undertaken only by people approved by *Council* for such work
6. *Council* may develop and maintain its own IQP register or rely on a suitable collective register such as that maintained by Waikato LASS
7. The Water Supply Bylaw will be the legal means by which *Council* puts into effect the requirements of this protocol and carries out any enforcement action necessary to ensure its effective implementation.

5.0 Hazard Categories

This protocol uses the *hazard categories* as defined in section 3.3 of *G12 Water Supplies*. Refer to this document for more details.

6.0 Boundary Backflow Protection Device Register

The Water Services division *Council* will maintain a record all *boundary protection devices on a register*. Attributes recorded against each *boundary device* will be:

- Make
- Model
- Type
- Size
- Serial number
- Device owner¹.
- Date of installation (if available)
- Date of checking
- Checked by
- Next check due

7.0 References

TCDC Water Supply Bylaw

Health Act 1956

AS/NZS 2845.1 2010

Clause G12 Water Supplies - New Zealand Building Code

Water New Zealand *Boundary Backflow Prevention for Drinking Water Supplies 2019* guideline

TCDC Long Term Plan

TCDC Code of Practice for Subdivision

¹ Required for special cases where, due to the nature of the site or other circumstances and, by agreement, the property owner maintains ownership and maintenance responsibility for the *boundary protection*.