

HURUNUI DISTRICT COUNCIL
POLICY
Backflow Prevention Policy



CONTENTS

BF1.1 Reason for Policy.....2
BF1.2 Background.....2
BF1.3 Purpose.....2
BF1.4 Scope.....3
BF1.5 Statutory provisions.....3
BF1.6 Council’s approach.....3

TECHNICAL MATTERS

BF2.1 General requirements.....4
BF2.2 Backflow hazard categories.....4
BF2.3 Installation requirements.....8
BF2.4 Council responsibility for existing connections.....8
BF2.5 High hazard risk requirements.....9
BF2.6 Medium hazard risk requirements.....9
BF2.7 Low hazard risk requirements.....10
BF2.8 Timeframe for installation of devices.....10
BF2.9 Costs for installation of backflow devices at the point of supply.....10
BF2.10 Installation of new or replacement manifolds.....11
BF2.11 Responsibility for backflow prevention devices.....11
BF2.12 Testing of backflow prevention devices.....12
BF2.13 Building consent requirements for boundary devices.....12
BF2.14 Managed air gaps & maintenance of private tanks to prevent backflow.....12
BF2.15 Private swimming pools, spa pools and open water (i.e.: fish ponds).....13
BF2.16 Property owned by Council.....13
BF2.17 Fire hydrants.....13
BF2.18 Enforcement and education.....14
BF2.19 Documentation.....14
BF2.20 Policy review.....14

Operative: 1 July 2019
Replaces: Not applicable.
Review date: Three years

**BF1.1
Reason for Policy**

The Council has a responsibility to protect its water supplies from any risks to it that may affect public health. Backflow has been identified as a risk to Council water supplies. This Policy sets out how the Council intends to mitigate and manage that risk.

**BF1.2
Background**

Definition:

Backflow means the unplanned reversal of water into the Water Supply Network. It is caused when water pressure drops in the network causing water to flow in the opposite direction from premises into the network. Contaminants could be back siphoned or injected by back pressure into the Water Supply Network and to our customers.

Ministry of Health requirements:

The Ministry of Health, through the Canterbury District Health Board, requires the Hurunui District Council to develop a Backflow Prevention Policy in accordance with the New Zealand Drinking Water Standard Guidelines and Health (Drinking Water) Amendment Act 2007.

Water Safety Plans:

The Council produces Water Safety Plans for all the Council water supplies. The Water Safety Plans identified backflow as a risk to the supplies, in particular to those that are on demand. The Water Safety Plans specified that a Backflow Prevention Policy will be developed and applied.

Three Waters Services Bylaw:

The Council has adopted a Three Waters Services Bylaw which controls and manages the Three Waters services. While the Backflow Prevention Policy is separate to the Bylaw, the Council intends for them to be complementary and supportive of the objective to protect public health.

**BF1.3
Purpose**

This Policy seeks to:

- Detail what measures the Council will take to reduce the risk of backflow to the water supply networks, thus protecting the supply of potable water.

EXPLANATORY NOTE: The Drinking Water Standards for New Zealand 2005 (revised 2018) defines potable water as drinking water that does not contain or exhibit any determinand to any extent that exceeds the maximum acceptable value.

- Encourage property owners to install appropriate backflow prevention devices at the point of supply.
 - Minimise the risk of contamination to the water supply by ensuring that an appropriate level of backflow prevention is provided on all connections to water supplies.
-

**BF1.4
Scope**

The Policy applies to all properties that are connected to the Council's water supply schemes.

**BF1.5
Statutory provisions**

The Health Act 1956 sets out requirements for the supply of adequate water supplies to communities. The Act provides for the introduction of bylaws to protect public health and states penalties and offences for parties that pollute a public drinking water supply.

Section 69Z of the Health Act requires every drinking water supplier to prepare a Water Safety Plan. The Water Safety Plans produced by the Council for the public supplies managed by the Council stated that a backflow prevention policy would be adopted in due course.

The Health (Drinking Water) Amendment Act 2007 requires the Council to protect drinking water quality for all its customers. Section 69ZZZ of the Health Act specifically provides for the installation of backflow prevention devices.

Section 10 of the Local Government Act 2002 sets out that one of the purposes of the Council is to meet the current and future needs of communities through the provision of good-quality local infrastructure. As a core infrastructure asset service, the provision of a good quality water supply network is essential to the communities of the Hurunui District that rely on them.

**BF1.6
Council's approach**

As per standard practice throughout the country, the Council is opting to manage the risk of backflow by requiring the installation of backflow prevention devices at the point of supply.

TECHNICAL MATTERS

**BF2.1
General requirements**

Backflow prevention devices shall be installed as follows:

- All new connections to the Council's water supply schemes require backflow prevention at the point of supply.
 - Due to the difference in risk profiles of on-demand and restricted connections, the council will manage and be responsible for the cost of one managed air gap per property on restricted supply properties. Any additional managed air gap/s required will be at the property owner's expense. The property owner/s of medium and high risk on-demand connections are responsible for the cost and annual testing requirements of any backflow prevention device on their property.*
 - Existing low risk connections without backflow prevention in place will have a dual check valve or overflow device installed by the Council when the manifold is replaced, or routine maintenance is being completed on the water tank. This will be at no additional cost to the property owner.
 - Existing medium or high risk on-demand connections without adequate backflow prevention in place (as determined by the Council) are required to be upgraded. This upgrading will be prioritised according to potential risk posed (see Table 1).
-

- The Council can arrange for installation and initial testing of the new device for on-demand water connections. All associated work will be at the property owner's agreed expense. The property owner may arrange to have a backflow device installed and tested; this must be completed by a suitably qualified person.**
- *EXPLANATORY NOTE: The costs will be based on those shown in the current Fees and Charges Schedule.*

**The different risk profiles of on-demand and restricted properties generally include, but are not limited to; pipe length between the water main and the property, smaller pipe diameters for restricted supplies. On demand connections are typically in higher density populations, and the higher likelihood of the RPZ or DCV device to fail for on-demand connections.*

***Installations of RPZs and Double Check Valves must be completed by a certified Plumber. Testing of the backflow device must be completed by a registered IQP.*

**BF2.2
Backflow hazard
categories**

The type of backflow prevention device to be used for connections will be decided upon by the Council, based on the risk to the water supply posed by activity on a property.

The Council has adopted the following backflow categories, which are consistent with the New Zealand Drinking Water Standards:

Table 1: Backflow hazard categories

Hazard level*	Description*	Backflow Prevention Device Required as a minimum
High	Any condition, device or practice which, in connection with the potable water supply system, has the potential to cause death.	Reduced Pressure Zone (RPZ) Device or Managed Air Gap
Medium	Any condition or practice which, in connection with the potable water supply system, has the potential to injure or endanger health.	Double Check Valve (Testable) or Managed Air Gap
Low	Any condition, device or practice which, in connection to the potable water supply system, would constitute a nuisance, by odour or taste, but not injure or endanger health.	Dual Check Valve or Managed Air Gap

** For a list of hazard examples, refer to the New Zealand Drinking Water Standards Water Safety Plan Guide Distribution System – Backflow Prevention Version 1, Ref D2.4 Risk Assessment Table. This Table will be taken as a guide by the Council when assessing the risks to the water supply.*

When assessing the hazard level, the following will apply:

- Hazard Level will be determined as detailed in Figure 1 (see page 14).
- If the land use or hazards are unknown for a new commercial, industrial or mixed-use development, the hazard rating will default to high risk.
- Where the use of a premises is proposed to change in such a way that the risk of backflow is likely to change, the property owner is responsible for notifying the Council of that change in use.
- The determination of the hazard level associated with a connection is at the discretion of the Chief Operations Officer of the Hurunui District Council. All properties will be evaluated on-site with a case-by-case risk assessment.
- Property owners on a restricted water supply will have their Managed Air Gaps inspected on a biennial basis as part of the routine maintenance by the Point of Supply Officer. In some instances, a photo of the overflow in place may be suffice. If an overflow device is absent, or installed incorrectly, one will need to be installed by the officer.
- If there is a dispute by the property owner over the determination of the hazard level associated with a connection, they have the right to be heard at a dispute hearing (as specified in the Three Waters Services Policy). To instigate such a hearing the property owner must:
 - Apply in writing for a hearing panel to be convened. Provide appropriate technical information with the application to allow the panel to make a decision on technical grounds (note: affordability will not be a sufficient argument).
 - Council Officers will provide their technical information for consideration by the hearing panel.

EXPLANATORY NOTE: Any issue over affordability will be required to be presented to Finance, Audit & Risk Committee for consideration.

Table 2: Responsibilities for backflow prevention devices – installation and maintenance

Connection Type		ON DEMAND			RESTRICTED	
Backflow Prevention Device		<i>Reduced Pressure Zone (RPZ) Device at point of supply</i>	<i>Testable Double Check Valve at point of supply</i>	<i>Dual Check Valve at point of supply</i>	<i>Managed Air Gap & Overflow at Tank</i>	<i>Dual Check Valve at point of supply^x</i>
HIGH HAZARD	Installation	Council Officer or approved contractor			Property Owner or Council Officer	Council Officer or approved contractor
	Testing/Monitoring	Annually (Council Officer or approved contractor ^{**})*			Biennially (Council Officer, approved contractor or use of nominated technology)	Non-testable
MEDIUM HAZARD	Installation		Council Officer or approved contractor [*]		Property Owner or Council Officer	Council Officer or approved contractor
	Testing/Monitoring		Annually (Council Officer or approved contractor ^{**})*		Biennially (Council Officer, approved contractor, or use of nominated technology)	Non-testable
LOW HAZARD	Installation			Council Officer or approved contractor	Property Owner or Council Officer	Council Officer or approved contractor
	Testing/Monitoring			Non-testable	Biennially (Council Officer, approved contractor, or use of nominated technology)	Non-testable

* Council costs for installation, testing and monitoring of RPZ's and Double Check Valves will be directly charged to the property owner. Note that the cost of the installation of a dual check valve will be subtracted from the installation costs for RPZ or Double Check Valves. Property owners are responsible for the organisation of backflow device testing.

Council inspection of the managed air gap at the water tank will be completed by a Council Officer as part of the water connection process.

^x As stipulated in Sections 2.5 and 2.6 the Council retains the right to require a testable backflow prevention device commensurate to the hazard at the point of supply. In such cases, a RPZ device would be required for High Hazard and a Double Check Valve would be required for Medium Hazard sites. This includes (but is not limited to) if a Managed Air Gap is not maintained or the tank is inaccessible to Council staff.

** Council Officers and approved Council contractors need to be independently qualified persons.

**BF2.3
Installation
requirements**

The following requirements apply to the installation of backflow prevention devices:

- All backflow prevention devices used must be manufactured in accordance with AS/NZS 2845.1 Water Supply: Backflow Prevention Devices: Materials, Design and Performance Requirements.
- Device installation will comply with Part 2 – Code of Practice for Boundary Backflow Prevention within the Water New Zealand document “Boundary Backflow Prevention for Drinking Water Supplies” published by Water New Zealand, Sections 2.1 – 2.2.
- Installation of backflow prevention devices shall be undertaken only by approved Council Officers or Contractors.
- Property owners can organise for the installation of an appropriate backflow prevention device. This must be installed by a qualified person with a Plumbing certification and an IQP must test the device one year after installation.

EXPLANATORY NOTE: Under the Building Act 2004, an independently qualified person means a person –

- (a) who is accepted by a territorial authority as being qualified to—*
 - (i) carry out or supervise all or some of the inspection, maintenance, and reporting procedures required for a specified system stated in a compliance schedule; and*
 - (ii) certify that those procedures have been fully complied with; and*
 - (b) whose acceptance under paragraph (a) has not been withdrawn by the territorial authority.*
- The installation details for new or replacement backflow devices shall be in accordance with Council’s Development Engineering Standards 2017 and be approved by the Council.

Property owners are required to:

- Identify backflow hazards at their property and ensure that an appropriate backflow prevention device or a Managed Air Gap is installed that is consistent with the hazard categories listed in Table 1.
- Install backflow prevention devices at the point of supply, as close as possible to the property boundary to minimise the risk to the water supply.

**BF2.4
Council responsibility
for existing
connections**

Most existing on demand connections have a non-return valve at the meter box and most existing restricted connections are supplied to a tank with a Managed Air Gap which provides backflow protection. For most domestic and some commercial uses a Dual Check Valve at the manifold and/or Managed Air Gap at the tank is appropriate.

Some on demand connections that have been identified as High Hazard Risk have a Reduced Pressure Zone device after the meter.

As per the requirement in the Council’s Water Supply Plans for on demand supplies, the Council will complete a desktop survey to identify properties that are deemed to be High or Medium Hazard Risk for backflow, as per the categories in Table 1. This survey will be conducted as stipulated in Figure 1 with a Council Officer undertaking a desktop assessment. This will be followed by physical site visits to individual properties to identify whether the risk of backflow is being managed and minimised. This will include all dedicated fire connections. The Council will complete this desktop survey within six months of the operative date of this Policy.

Following the survey, the following steps will be carried out:

- If a backflow prevention device (due to High or Medium Hazard Risk) is required to be installed at a property, the owner/occupier will be informed of this by letter stipulating a given period to comply with this request. The letter will specify the proposed works, timeframe, and cost if a Council Officer or approved Council contractor is to undertake the work.
- The letter will specify the risk to the supply, the backflow prevention device required, a timeframe to comply with the request and further information as necessary to comply with it.
- Following the initial survey of all water supplies, regular monitoring of existing connections will be undertaken by the Council to determine any change of use requiring upgrade of the backflow prevention devices in place (refer to Table 2).

**BF2.5
High Hazard Risk
requirements**

On Demand Water Connections:

For properties identified as High Hazard Risk, a Reduced Pressure Zone (RPZ) Device must be installed after the point of supply and monitored and tested as stipulated by Table 2.

Restricted Water Connections:

On restricted water connections for all properties identified as High Hazard Risk:

- The Council will install a Dual Check Valve at the point of supply when the manifold is replaced at the end of its useful life
- For properties identified as High Hazard Risk, the property owner is required to have an overflow device installed to ensure a Managed Air gap is maintained. Where one is absent, or incorrectly installed, a council officer will install an overflow device. The tank and Managed Air Gap will be maintained as specified in Section BF2.12 and monitored and tested as stipulated by Table 2.

If the tank is not accessible for inspection by Council Officers (i.e.: due to height issues) then the Council will require that an RPZ Device is installed at the point of supply at the owner’s expense.

**BF2.6
Medium Hazard Risk
requirements**

On Demand Water Connections:

- For properties identified as Medium Hazard Risk a testable Double Check Valve must be installed after the point of supply and monitored and tested as stipulated by Table 2.

Restricted Water Connections:

- The Council will install a Dual Check Valve at the point of supply.
- For properties identified as Medium Hazard Risk, the property owner is required to have an overflow device installed to ensure a Managed Air Gap is maintained. Where one is absent, or incorrectly installed, a council officer will install an overflow device for one tank per connection, any further overflow installations will be at the cost of the property owner. The property owner is entitled to install the overflow device themselves in accordance with HDC instructions. The tank and Managed Air Gap will be maintained as specified in Section BF2.12 and monitored and tested as stipulated by Table 2.
- If the tank is not accessible for inspection by Council Officers (i.e.: due to height issues) then the Council will require that a Double Check Valve Device is installed at the point of supply at the owner's expense.

**BF2.7
Low Hazard Risk
requirements**

For properties identified as Low Hazard Risk, the Council will install a dual check valve at the point of supply when the manifold is replaced at the end of its useful life. This is relevant to both on demand and restricted water supplies.

However, property owners on restricted supplies will be required to manage the risk via the Managed Air Gap at the tank. The tank and Managed Air Gap must be maintained as specified in Section 2.12 and monitored and tested as stipulated by Table 2.

**BF2.8
Timeframe for
installation of devices**

All new connections will require a backflow prevention device or managed air gap to be installed at the time of connection. The Council is proactively implementing this already, and this will be formally effective once the Policy is in place.

Table 3 below shows the timeframe for installing backflow prevention devices and/or Managed Air Gaps on existing connections.

Table 3: Timeframes for installing backflow prevention devices on existing connections.

Hazard level	Date Required from the operative date of this Policy.
High Hazard Risk Level*	Within one year of the operative date of this Policy (1 July 2019) for on-demand connections. Within two years of the operative date of this Policy (1 July 2019) for restricted connections.
Medium Hazard Risk Level*	Within two years of the operative date of this Policy (1 July 2019) for on-demand connections. Within two years of the operative date of this policy (1 July 2019) for restricted connections.
Low Hazard Risk Level*	As and when manifold or restrictors are replaced by the Council.

**Please note, all properties on a restricted water supply will have an overflow device fit where required on the Point of Supply Officers biennial cycle.*

**BF2.9
Costs for installation
of backflow devices at
the point of supply**

Where a property defined as High or Medium Hazard is required to install a backflow prevention device at the boundary, the Council will subtract the equivalent installation cost of a dual check valve from the installation cost of a RPZ or Double Check Valve. The costs will be based on those shown in the current Fees and Charges Schedule.

**BF2.10
Installation of new or
replacement
manifolds**

The installation details for new or replacement backflow devices shall be in accordance with the Council's Development Engineering Standards 2017 and be approved by the Council.

The following are the minimum acceptable backflow prevention devices that can be installed at the point of supply for Low Hazard Risk properties. Such devices will also be fitted to the point of supply for Medium Hazard Risk properties on restricted supplies where a Managed Air Gap is properly maintained at the tank. These devices are not sufficient for installation at High Hazard Risk properties.

Manifolds (on demand supplies):

- Manifolds are to have a Dual Check Valve.
- The recommended type is AD Riley's manifold with an integral Dual Check Valve or equivalent, as compliant with New Zealand Standard AS/NZ2845 (Water supply – backflow prevention devices).
- All new or replaced meter boxes will be fitted this way.

Restrictors manifold boxes:

- In ground devices are to be consistent with meter manifold boxes (as above).
- Above ground variable flow manifold (VFM) units are to be installed with a Dual Check Valve added downstream of the unit.
- All new or replaced restrictors are to be fitted this way.

If the hazard risk of a property is reduced from High or Medium to Low, then the property owner will be given the choice to remove the installed RPZ or Double Check Valve device at their cost. If the device is left in place then it must still undergo annual testing.

**BF2.11
Responsibility for
backflow prevention
devices**

Table 2 specifies the responsibility for the installation and maintenance of backflow prevention devices.

- All RPZ and Double Check Valve devices installed at the point of supply will be the property of the property owner.
 - Council costs for installation, removal, testing and monitoring will be directly charged to the property owner. These costs will be as per the Council's current Fees and Charges.
 - As part of the water connection process on restricted supplies, a Council Officer will inspect the Managed Air Gap at the water tank to ensure that the ballcock and overflow pipe are installed correctly to maintain the air gap.
 - As stipulated in Sections 2.5 and 2.6 the Council retains the right to require a testable backflow prevention device commensurate to the hazard at the point of supply on a restricted connection.
-

BF2.12
Testing of backflow prevention devices

Table 2 specifies the responsibility for the installation and maintenance of backflow prevention devices. All testable backflow prevention devices for High and Medium Hazard Risk properties at the point of supply will be tested annually (as a minimum). Test results will be held by the Council for audit and administration requirements. All Managed Air Gaps shall also be inspected and verified biennially (as a minimum). At High, Medium and Low Hazard Risk properties these inspections can be performed by the Council.

- The Council will inspect the non-testable devices at Low Hazard Risk properties from time to time as required in response to identification of issues or as a part of its general water supply network maintenance programme.
- All testing of testable backflow prevention devices will be performed by an Independently Qualified Person (IQP) as specified under the Building Act 2004 (see Explanatory Note under section BF2.3). This person must be suitably qualified to test backflow prevention devices, assess hazards and provide written documentation. All testing will be in accordance with Section 2.3 of the Code of Practice for Boundary Backflow Prevention in *Boundary Backflow Prevention for Drinking Water Supplies 2013* published by Water New Zealand, or any subsequent revision to that document.
- The property owner is responsible for all associated costs and organisation of annual testing and maintenance of testable backflow devices.

In addition to the annual testing requirements for RPZ's and Double Check Valves, testing will be undertaken at each of the following times:

- On completion of any installation or maintenance work.
- After a backflow or suspected backflow incident (medium and high hazard devices).
- At the request of a Council Officer.

BF2.13
Building consent requirements for boundary devices

- The purpose of the backflow prevention device for this policy is unrelated to the backflow prevention device installed for compliance with the Building Code. As such, a Building Consent will not normally be required for devices installed under this policy.
 - However, in some instances, the backflow prevention device installed for compliance with the Building Code may be suitable for this policy's requirements (i.e. – will protect the water supply). Council has discretion to determine this and whether a Building Consent will be required.
 - The cost for any building consent related to a backflow prevention device submitted by the Council will be incorporated within any fees charged for the installation by the Council.
 - The backflow prevention device will be included on a Compliance Schedule for annual warrant of fitness purposes.
-

**BF2.14
Managed air gaps &
maintenance of
private tanks to
prevent backflow**

-
- A Managed Air Gap is defined as a minimum 50mm air gap below the level of the ballcock inlet with an overflow pipe to prevent the reduction of that gap.
 - All private tanks on Council water supplies will have a minimum 50mm Managed Air Gap below the level of the ballcock inlet. The Council will install an overflow pipe at existing tanks where one is incorrectly fitted or absent. One overflow installation per connection will be installed at the council's expense, any additional overflow installations will be at the property owner's expense.
 - For clarification, it is noted that the Managed Air Gap will be measured from the base (invert) of the ballcock inlet pipe to the top (soffit) of the overflow pipe. If the inlet pipe is greater than 25mm then the Managed Air Gap must be twice that size (i.e. – 50mm inlet pipe = 100mm Managed Air Gap).
 - The overflow pipe will have sufficient protection in place and be monitored to prevent vermin/bird access to the tank.
 - All private tanks connected to the Council network are required to be separate from any other water source or draw-off prior to the supply tank inlet.
 - Any additional tanks required at a property (especially for firefighting purposes under Hurunui District Plan Rule 3.4.3.23 (a)) will be installed and filled in such a way that no backflow into the network is possible.
-

**BF2.15
Private swimming
pools, spa pools and
open water (i.e.:
fishponds)**

Backflow risk for private swimming pools, spa pools and open water (i.e., fishponds) will be managed as follows:

- a) On Demand Connections: A Dual Check Valve will be installed at the point of supply. A backflow prevention device as required under the Building Code must also be installed on the supply from the building to the pool. These backflow prevention devices will be checked annually by a Council Officer to ensure that the risk is being managed effectively.
- b) Restricted Connections: A Dual Check Valve will be installed at the point of supply. The connection to the swimming pool must be from the supply tank with a Managed Air Gap.

Any hose pipe connections to open water, such as but not limited to fishponds, must have a vacuum-breaker to any tap that is supplied from the Council Water Supply Network. The vacuum breaker will have a break-away screw set fitted to prevent unauthorised removal.

Where a property is connected to the Council Water Supply it will be assumed that the pool is filled using the Council Water Supply unless the property owner can present evidence to prove to the Council that there is no connection.

**BF2.16
Property owned by
Council**

The Council will ensure that any connections to Council property, reserves or parks that are connected to the network will have backflow protection devices that are appropriate for the type of use. Wastewater pump stations and treatment plants are regarded as High Hazard Risk and will be fitted with Reduced Pressure Zone (RPZ) devices where not currently installed. These devices will be captured on the asset register and audited and monitored by Council Officers.

**BF2.17
Fire hydrants**

As stipulated by the Council's Three Waters Services Bylaw, where water is taken from a public main by a contractor or other person, prior written approval must be obtained from the Council except in the case of Fire and Emergency New Zealand when fighting fires or testing hydrants.

When using a fire hydrant a backflow prevention device is required.

The Council will provide a standpipe with backflow prevention for use by contractors once approval has been obtained.

**BF2.18
Enforcement and education**

Section 2.6 of the Three Waters Services Bylaw has measures requiring that:

- No person may contaminate any source of water, including drinking water; and
- The Council has the right to require an assessment of the risk of backflow from a property and for a backflow prevention device to be installed.

While the Bylaw has enforcement provisions that can be used if a consumer does not install a backflow prevention device, the intent of this Policy is to be transparent regarding the Council's requirements. The Council's preference is to work with consumers to help them become compliant within the first 24 months of the Three Waters Services Bylaw being in place.

A programme will be undertaken to advise and educate members of the community, in particular property owners and occupiers, about the risks that backflow can pose to water supplies and their public health protection.

The Council can use enforcement measures when necessary as per the Three Waters Services Bylaw.

**BF2.19
Documentation**

The Council will develop a register of backflow prevention devices/ Managed Air Gaps in place at all High and Medium Hazard Risk properties as a minimum. The register will indicate the type of device, record its location and status of the last inspection.

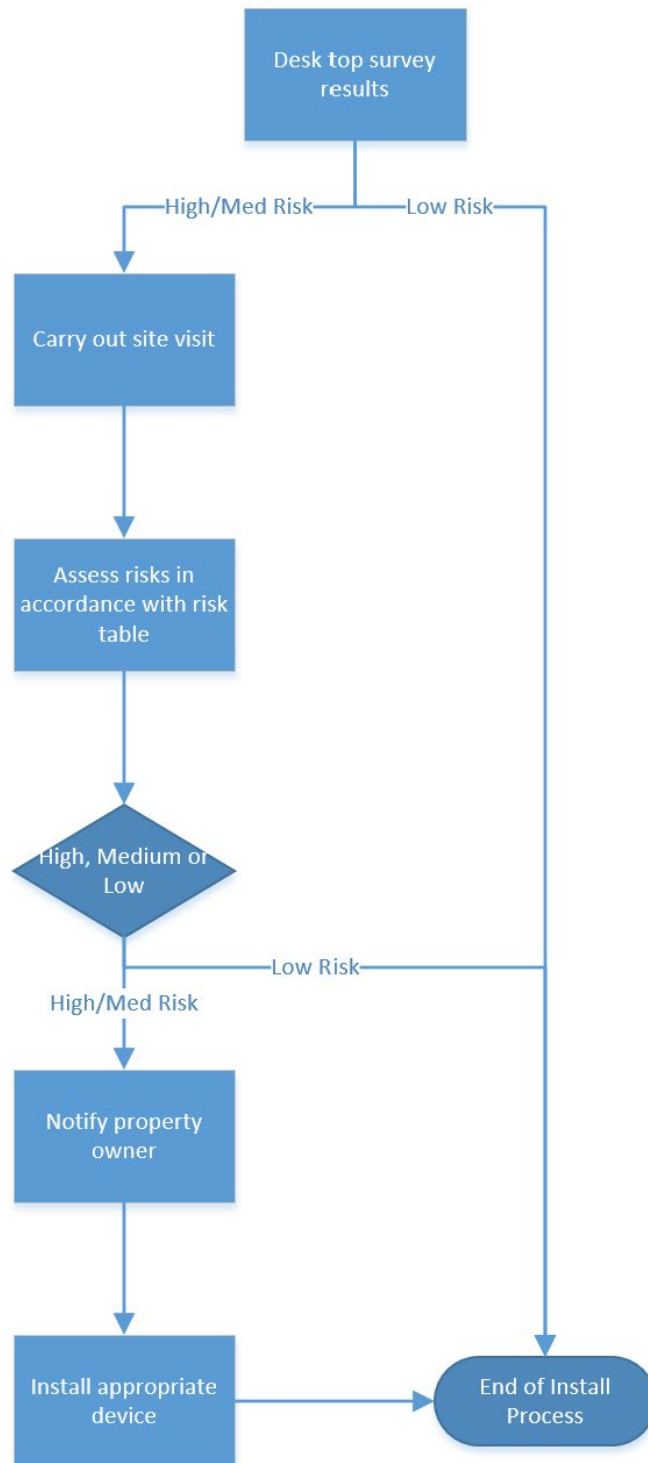
Results of all tests and maintenance undertaken on each device will also be recorded. All test results will be kept for a period of at least seven years.

**BF2.20
Policy review**

This Policy will be reviewed three years after the date of adoption by the Council.

The review of the Policy will be considered by Council.

Figure 1:



* Risk Assessment at discretion of Council Officer.

The flow chart above, Figure 1, aims to clearly show the process council will take to ensure all properties have adequate backflow prevention in place.

The following definitions explain the process as seen in Figure 1 in further detail.

Desktop Survey Results

To determine whether properties should be initially considered low, medium, or high risk, a desktop survey will be completed using information such as, addresses, the property owners contact details, the classification of the property, and what whether the property is on a restricted or on-demand water supply. This information will be obtained from the rates database.

Carry Out Site Visit

Upon completion of the desktop survey, a site visit of high and medium risk properties will be carried out to confirm the risk rating of the property.

Assess Risks in Accordance with Risk Table

The site visit will be carried out and the properties risks assessed under accordance with the risk table under section 2.2 of this policy.

High, Medium or Low Risk

The risk rating assigned to each property will determine what backflow prevention device is required to provide adequate boundary protection from backflow, refer to Table 2.

Notify Property Owner

If the property is determined to be High or Medium Risk, the owner will be notified by a phone call backed up by an email or a letter. The email or letter will confirm the device required and the specific hazards on the property.

Install Appropriate Device

Once the owner has been notified of what device is required, this must be installed and tested within the specified timeframe given by the council. For on-demand customer needing assistance with the installation process, the council can arrange for the appropriate device to be installed, all associated costs are at the responsibility of the property owner. Restricted supply customers will have an overflow device installed by a council officer unless a device is already in place or the property owner would prefer to install the overflow device themselves.

End of Install Process

After the device has been installed there may be a requirement for annual or biennial testing, this will be specified by council through email or letter. For on-demand high and medium risk customers annual testing of the RPZ and DCV devices are required to be carried out by a registered IQP, the results must be given to council. The property owner is responsible for organising this test and all associated costs. For restricted supply customers, the managed air gaps will be checked on a biennial basis by a council officer.

END OF POLICY