



# BACKFLOW PREVENTION: WILLIAMTOWN INVESTIGATION AREA

BACKFLOW PREVENTION PROTECTS  
THE QUALITY OF WATER IN THE WATER  
SUPPLY SYSTEM



## WHY IS BACKFLOW PREVENTION REQUIRED?

Hunter Water has a responsibility to manage the quality of water within the water supply system. Part of this responsibility includes ensuring water from a customer's property does not flow back into the water supply system.

Backflow prevention is a requirement of Australian Standard AS/NZS 3500 Plumbing and Drainage, which is recognised by all Australian water utilities, and Hunter Water's Site Containment Backflow Standard.

## HOW MIGHT A BACKFLOW OCCUR?

Backflow may occur when the water pressure within the customer's plumbing system is greater than that within Hunter Water's supply system. It allows water that is untreated, and/or potentially harmful, to flow back from a customer's property into the drinking water supply.

Backflow may occur due to back-siphonage or back pressure.

Back-siphonage may occur if there is a water main break or low water main pressure due to maintenance. Examples of back-siphonage include:

- A garden hose submerged in a swimming pool, water tank, pond, or stock watering trough
- Below ground irrigation sprinklers (pop-ups) in low-lying areas where surface water ponding occurs which may enter the irrigation system

Back pressure may occur with the use of a domestic tank or bore pump. The pump creates water pressure in the customer's plumbing system that is higher than in Hunter Water's water main.

## DO I NEED A BACKFLOW PREVENTION DEVICE?

Yes. As per Australian Standards and Hunter Water's Site Containment Backflow Standard, all connections to Hunter Water's water supply system are required to have a site containment backflow prevention device which is located at the property water meter.

A standard backflow prevention device, suitable for typical residential (low hazard) situations, is included in 20mm and 25mm water meters. Residential properties are typically fitted with a 20mm or 25mm water meter. Property owners may need an additional, specific backflow prevention device if the property has any, or a combination of, the factors listed in Hunter Water's Site Containment Backflow Prevention Standard. These factors may include:

- A pressure pump connected to a bore or below ground rainwater tank, or other alternative water source
- Stock watering troughs
- Dams
- Below ground sprinklers
- A water meter larger than 25mm in diameter\*

The need for a backflow prevention device additional to that within a standard water meter depends upon the property's hazard rating. Factors that may increase a property's hazard rating include the presence of animal watering troughs (which could be fouled by animals and animal waste), and the possibility of groundwater or bore water flowing back into the water supply.

Please note that the assessment to determine the level of backflow prevention device required is based

on what is physically connected to the property at the time of assessment AND the hazards that can pose a risk in the future. For example a bore water system could be intentionally or unintentionally cross connected with the system from Hunter Water's supply in the future. This is consistent with Australian Standard AS/NZS 3500 Plumbing and Drainage.

If properties may have more than one hazard the backflow prevention device must be suitable for the highest rating hazard.

If circumstances that may affect the hazard rating of the property change, the property owner must engage a licensed and accredited plumber to certify the change and inform Hunter Water.

\*Most residential properties have a standard 20mm or 25mm water meter, which contains a backflow prevention device suitable for typical residential situations. Larger sized water meters (32mm and larger) require an additional backflow prevention device. Larger size meters may be required to provide adequate water pressure/flow in different situations such as when there are multiple-dwellings on a property; on larger rural-residential properties where the dwelling is set back more than 20m from the street; and for some commercial situations.

### **HOW IS BACKFLOW PREVENTED?**

A mechanical device is installed with the water meter that prevents water flowing backwards into Hunter Water's water supply system. You may be familiar with a 'Non Return Valve' or 'Non-Return Flap'. A backflow prevention device operates in a similar way.

A variety of backflow prevention devices are available and the most suitable will be determined on a case by case basis for each property.

### **DO PROPERTIES OUTSIDE OF THE EPA INVESTIGATION AREA REQUIRE BACKFLOW PREVENTION?**

Yes. All connections to Hunter Water's water supply system need to have an appropriate backflow prevention device as required by AS/NZS3500 and Hunter Water's Site Containment Backflow Prevention Standard. The requirement to manage backflow potential in the Williamstown Contamination Investigation Area is the same as in all other areas of Hunter Water's area of operations.

### **INSTALLING A BACKFLOW PREVENTION DEVICE**

Backflow prevention devices are located at the boundary of the property at the outlet of the water meter. It must not be below ground level.

Specific to new property connections within the Williamstown Contamination Investigation Zone, which are being funded by the NSW State Government, Hunter Water will install the backflow prevention device and conduct the initial certification when the property's water service and meter is connected.

### **WHY IS ANNUAL TESTING REQUIRED?**

Backflow devices have internal seals, springs and moving parts that may foul, wear or fatigue. Annual testing is required for medium or high hazard backflow prevention devices as per AS/NZS 3500 and AS/NZS 2845. For these devices the customer will annually engage a certified licensed plumber to test the device and submit the report to Hunter Water confirming the device is operating correctly. Should the device fail a test the customer will arrange repair and have the device re-tested. Failure to provide test results to Hunter Water may result in the property being disconnected from the water supply.

### **WHO IS RESPONSIBLE FOR BACKFLOW PREVENTION?**

Hunter Water's responsibility to protect the drinking water supply and safeguard public health is set out in the Hunter Water Act, Hunter Water's Operating Licence and the Customer Contract. This responsibility includes ensuring adequate site containment backflow prevention is in place.

Hunter Water maintains a register of installed testable site containment backflow prevention devices and annual reports.

The property owner will be responsible for arranging a plumber accredited to test backflow devices to annually test (and maintain and repair when required) the backflow prevention device on their property, according to all relevant standards (AS/NZS 2845 and AS/NZS 3500) and regulations. The backflow device will be due for testing 12 months after Hunter Water's installation and initial certification.

### **HOW CAN I FIND OUT MORE INFORMATION?**

To find out if your property is likely to require a site containment backflow device, or for more information about connecting your property to the water supply contact Hunter Water on

1300 657 657 during business hours, or by email on [williamstown@hunterwater.com.au](mailto:williamstown@hunterwater.com.au)

Hunter Water

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Customer enquiries: 1300 657 657

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For after hours emergencies call 1300 657 000.