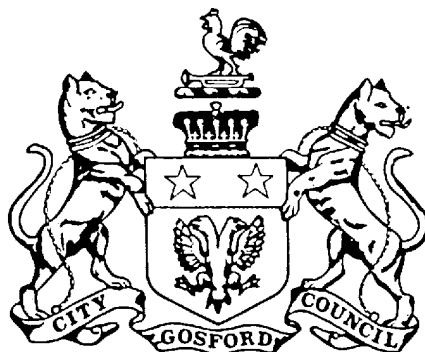




# **BACKFLOW PREVENTION CONTAINMENT**



# **BACKFLOW PREVENTION CONTAINMENT**

## **GOVERNANCE AND PLANNING - DEVELOPMENT & COMPLIANCE**

### **POLICY INTRODUCTION**

This Backflow Prevention Containment Policy applies to all customers connected to Gosford City Council's water supply. This policy replaces Gosford City Council's Containment Backflow Prevention Practice adopted in 1998.

The purpose of the policy is to improve the safety of Gosford City Council's water supply by reducing the risk of backflow contamination from connections to the water supply system.

This policy identifies the type of backflow prevention required for customer connections with low, medium or high hazards as defined in Australian Standard/New Zealand Standard (AS/NZS) 3500, Part 1 Water Services (AS/NZS 3500:1) and the conditions with which customers must comply, for continued connection to the water supply system.

The policy applies to all water connections other than 20mm and 25mm connections providing potable water to a single, low hazard, residential dwelling.

### **POLICY OBJECTIVES**

The objectives of the policy are:

- to assure the quality of Gosford City Council's drinking and non-drinking water supply by minimising the risk of backflow contamination from connections to the supply system.
- to set out Gosford City Council's requirements for the installation and maintenance of containment backflow prevention devices on high, medium and low hazard properties.
- to identify when testable backflow prevention devices are required to protect the water supply from contamination back through a customer's water service.
- to identify backflow prevention containment requirements for customers with multiple water supplies that include drinking water and non drinking water supplies.

### **POLICY STATEMENT**

All customers must comply with the requirements of the Plumbing Code of Australia and AS/NZS 3500:1. All customers with a water connection must assess the potential hazard and shall install appropriate backflow prevention at the boundary for containment purposes. The installation of a backflow prevention containment device is necessary to ensure the public water supply system is protected from backflow of contaminants.

## CONDITIONS OF INSTALLATION

### 1. Operational principles

- a. The customer is responsible for the full cost of complying with this policy.
- b. All backflow prevention containment devices installed to comply with this policy are the responsibility of the customer; this may include but is not limited to installation, maintenance and annual testing.
- c. Gosford City Council will maintain a register of testable device installations, annual maintenance records and will conduct sample audits of installations to ensure ongoing compliance with AS/NZS 3500:1.
- d. Existing customers connected to the water supply must install a backflow prevention containment device within three months of a notice to install issued by Gosford City Council.
- e. If Gosford City Council determines that the backflow prevention device is unsatisfactory and issues a notice requiring the customer to repair, maintain, test, replace or install a backflow prevention device, the customer shall comply with the notice within the time specified in the notice.
- f. If the customer fails to install, repair, maintain, replace or test a backflow prevention device as required by a notice issued by Gosford City Council, Gosford City Council may disconnect (in the case of a non-residential property) or restrict (in the case of a residential property or mixed development) the customer from the water supply system until such time as the customer has complied with the notice so to prevent contamination of the water supply. Gosford City Council may also impose a fee or charge for administering non-compliance with the policy.
- g. Gosford Council, the plumbing regulator in the Gosford local government area reserves the right to take appropriate regulatory action against the licence plumber for any incorrect installation that does not meet the requirements of AS/NZS 3500:1.
- h. If the process at a property changes, resulting in a reduced hazard rating, the property owner must have an accredited backflow prevention plumber certify the change in hazard rating and then inform Gosford City Council. Gosford City Council may conduct a site audit to verify the new hazard rating.

### 2. All properties connected to Gosford City Council's water supply system are to have appropriate backflow prevention containment devices installed

- a. The type of device installed shall be in accordance with the hazard rating of the processes conducted, or the water supply installations present on site.
- b. If the hazard rating varies due to multiple processes, the highest hazard rating shall be applied.
- c. Properties identified as having high or medium hazards must install a testable backflow prevention device.
- d. Where hazards are unknown for a commercial, industrial or a mixed development, the hazard rating will default to high and the installation of a testable device will be required.
- e. High hazards require the installation of a Registered Break Tank, Reduced Pressure Zone Device or Registered Air Gap.
- f. Medium hazards require the installation of a testable double check valve as a minimum.

- g. Low hazards require the installation of a non-testable dual check valve as a minimum.
- h. Metered standpipes require a testable double check valve.
- i. Fire services require the installation of a double check detector assembly as a minimum.
- j. Independent fire drencher sprinkler systems require the installation of a dual check valve.
- k. Properties that have both drinking and non drinking water supplies are required to install an appropriate level of backflow prevention containment on both supply systems. The installed device shall be the same on both the drinking and non-drinking services. These properties include mixed developments and areas serviced by a decentralised wastewater treatment system.

### **3. All backflow prevention containment devices shall be installed in accordance with AS/NZS 3500:1**

- a. A backflow prevention containment device must be fitted to all water supplies entering the property regardless of the supply type or metering arrangement. All devices must be installed on the outlet side of the master water meter(s) supplying the property to achieve site containment. In circumstances where there is no master water meter, the containment device shall be installed on the water supply where it enters the property boundary. There must be no connections bypassing the containment device or water meter.
- b. A backflow containment device must be installed so that the underside of the valve is a minimum of 300mm above the surrounding surface unless otherwise specified in the Plumbing Code of Australia.
- c. Where a fire booster service is installed, the device must be installed so that the underside of the valve is a minimum of 750mm above the surrounding surface.
- d. On a metered standpipe, the device shall be integrated into the design of the standpipe.
- e. On a separate hydrant and/or sprinkler fire service, the device shall be installed close to where the water service crosses the property boundary, upstream of any booster assembly on, or offtake from the fire service.

### **4. Customer compliance and reporting requirements**

- a. All backflow prevention devices must be installed by a licensed plumber. Only a licensed plumber with backflow prevention accreditation may commission and test the device.
- b. Registered Break Tanks and Registered Air Gaps must be installed and certified by a licensed plumber.
- c. Customers are responsible for the installation, maintenance and annual testing of all backflow prevention devices in accordance with AS/NZS 3500:1 and ensuring that the associated documentation (Backflow Prevention Application, Inspection and Maintenance Report) and any prescribed fee is forwarded to Gosford City Council.
- d. The customer's licensed and backflow accredited plumber is responsible for completing the Backflow Prevention Application (required on installation of the device) and the Backflow Prevention Device Inspection and Maintenance Report (required on commissioning or testing the device).

- e. For low hazard connections, Gosford City Council requires the registration of the backflow device. Completion of the Inspection and Maintenance Report is not mandatory for low hazard connections.
- f. The device installation and commissioning test must be registered with Gosford City Council within two days of completion of the work.
- g. Customers are also responsible for the provision of zone and individual backflow protection from hazards within their property as specified in AS/NZS 3500:1.

## DEFINITIONS

- a. A property, for the purposes of this policy, includes all properties other than domestic single dwelling low hazard residential properties serviced by a 20mm or 25mm water connection.
- b. AS/NZS 3500 is the Australian Standard/New Zealand Standard for plumbing and drainage. AS/NZS 3500:1 refers to Part 1 (Water Services) of this standard.
- c. Backflow is defined as
  - i. flow in the direction contrary to the normal or intended direction of flow.
  - ii. the unintended flow of water from a potentially polluted source into a potable water supply system.
- d. A backflow prevention device is a mechanical device that will prevent the reverse flow of water from a potentially polluted source into the potable water supply system.
- e. Connections are all connections to a Gosford City Council water main, including those from customers' premises or from standpipes.
- f. Containment protection is defined as the installation of a backflow prevention device on the water service at the property boundary, to prevent backflow from within the property entering the potable water supply system.
- g. Cross connection is defined as any connection or arrangement between the potable water supply system connected to the water main or any fixture, which may under certain conditions enable non-drinking water or other substances to enter the potable water supply system.
- h. Customer is defined as the property owner.
- i. Decentralised wastewater treatment system is defined as a privately owned, non potable water supply system, including treated greywater.
- j. Fire drencher sprinkler systems are defined as heat activated fire suppression systems, which spray water on the outside surface of a building or structure, to prevent the spread of fire from an adjacent building or structure.
- k. Fire services are defined as services comprising water pipes, fire hydrants, fire hose reels, fittings, and including water storage or pumping facilities, which are installed solely for fire fighting and extinguishing purposes in and around a building or property. Under certain conditions part of a fire sprinkler system may be included.
- l. Hazard ratings are defined in AS/NZS 3500 as follows:
  - i. High Hazard - Any condition, device or practice, which in connection with the water supply system has the potential to cause death.
  - ii. Medium Hazard - Any condition, device or practice, which in connection with the water supply system could endanger health.

- iii. 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.
- m. Individual protection is defined as the installation of a backflow prevention device at the water connection point of piping to a fixture or appliance.
- n. Mixed development is defined as a property with both commercial and residential practices on site.
- o. Zone protection is defined as the installation of a backflow prevention device at the connection point of specified sections of a plumbing system within a building or facility.

(Min No 2008/711 - 4 November 2008 - Backflow Prevention Containment Policy)  
(Min No 2009/311 - 5 May 2009 - Review of Policies)  
(Min No 2013/388 - 16 July 2013 - Review of Policies)