

Technical Solution Sheet 5.08

5: Cold Water Plumbing

[Duplicate solution of 99.01 (Rainwater tank installation)]

Rainwater Supply for Water Closet Cisterns

AIM

The aim of this technical solution is to inform practitioners about the requirements for rainwater supply to water closet cisterns.

PLUMBING REGULATIONS 2008

The *Plumbing Code of Australia* (PCA) is adopted by and forms part of the *Plumbing Regulations 2008*. Part B1 of the PCA specifies the objectives and performance requirements related to the installation of cold water services. [AS/NZS 3500.1: Plumbing and drainage Part 1: Water services](#), is a “deemed to satisfy” document listed in Part B1 of the PCA and contains a section on “Installation of water supply system from rainwater tanks”.

BACKGROUND

Plumbing Regulations 2008 states that:

1. If a reticulated water supply from a network utility operator is connected, or proposed to be connected to a building where a rainwater tank is installed for the purpose of sanitary flushing, an automatic or manual interchange device that allows alternate use of water from the rainwater tank or the reticulated water supply must be installed to ensure that there is a continual supply of water for sanitary flushing.
2. A rainwater tank installed in a new Class 1 building in order to comply with the requirements of the building regulations must:
 - be installed in such a way that it receives the rainfall from a minimum catchment area of 50 square metres; and

- have a minimum capacity of 2000 litres; and
- be connected to all toilets in the building for the purpose of sanitary flushing.

CONNECTION METHODS AND BACKFLOW PREVENTION

Where it is necessary to connect both rainwater and drinking water for flushing purposes, the drinking water supply must be protected against backflow, either by providing an air gap or installing a backflow prevention device.

Where a backflow prevention device is to be installed, the type of device required will depend upon whether the rainwater tank is above ground or buried. If the rainwater tank is above ground, the risk classification will usually be **LOW** and a dual check valve will be satisfactory. If the rainwater tank is buried, the risk classification will be at least **MEDIUM** and a testable device is required. (Refer to [AS/NZS 3500.1](#) Table 14.1)

The installation must comply with [AS/NZS 3500.1](#) using WaterMark approved materials. A compliance certificate is required if the total cost of the installation, including the cost of the storage tank, is \$750 or more. Typical installation options are shown in Figures 1 to 4.

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FIGURE 1 - TYPICAL CONNECTIONS AT OR NEAR A WATER CLOSET CISTERN

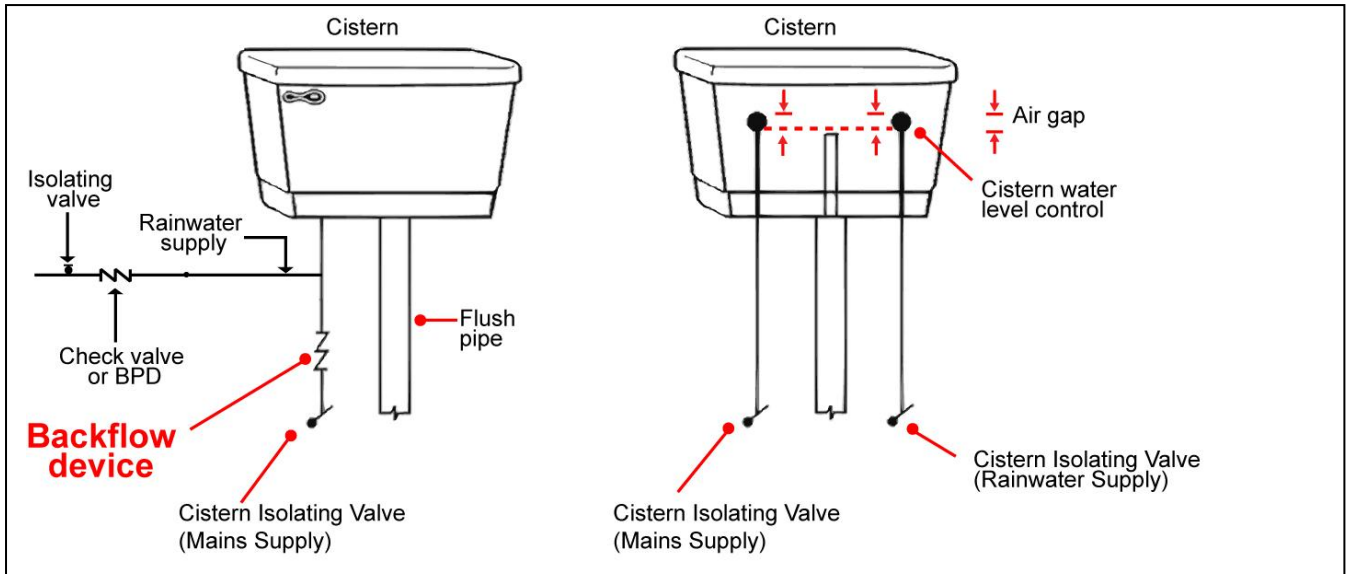
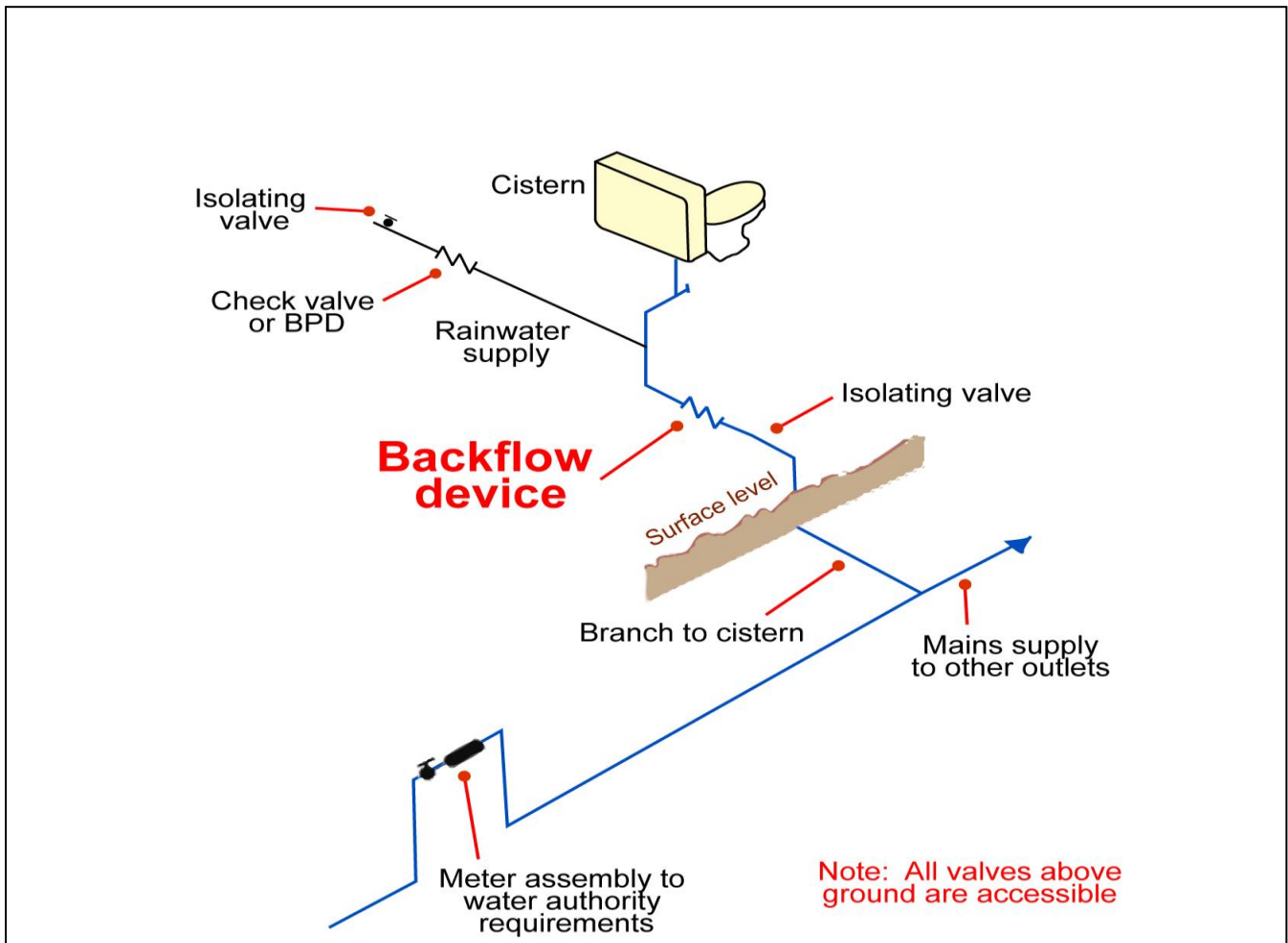


FIGURE 2 - TYPICAL CONNECTIONS NEAR A WATER CLOSET CISTERN



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FIGURE 3 - TYPICAL SCHEMATIC LAYOUT WITH AN ELEVATED RAINWATER TANK

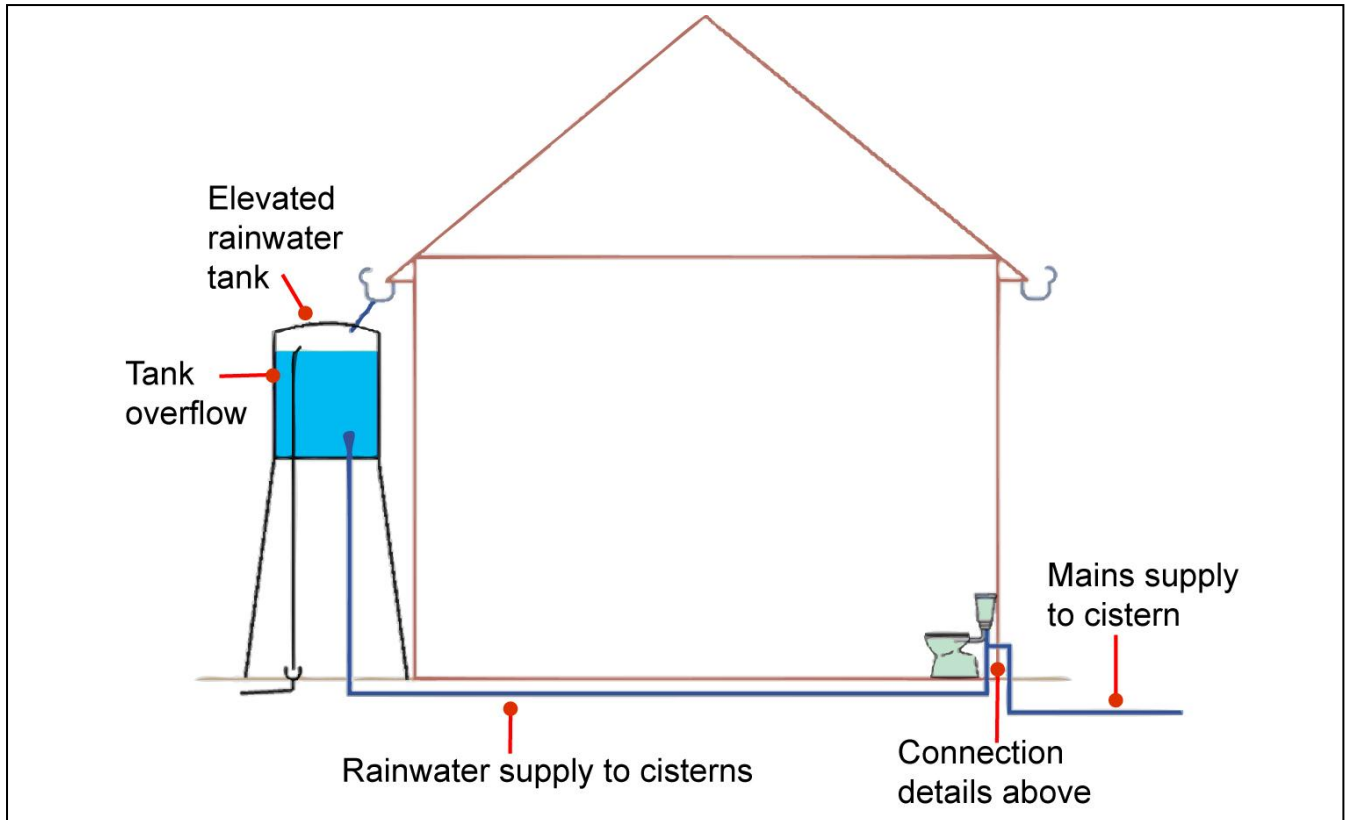


FIGURE 4 - TYPICAL SCHEMATIC LAYOUT WITH A GROUND MOUNTED RAINWATER TANK

