GOVERNMENT OF WESTERN AUSTRALIA

Department of **Local Government Industry Regulation and Safety**

Building and Energy

Technical Note

Technical Advice Line 1300 360 897 **www.lgirs.wa.gov.au/building-and-energy**

Flexible spray hoses

This technical note provides information on the appropriate backflow prevention requirements when installing flexible spray hoses in close proximity to toilet pans and other potential cross-connection hazards. This may result in contamination of the drinking water supply.

Applicable legislation

AS/NZS 3500.1:2025, clause 4.2.2 states that no device or system that may cause contamination of a water supply shall be connected directly or indirectly to any part of a water service without appropriate cross-connection or backflow prevention control, suitable for the degree of hazard. Additionally AS/NZS 3500.1:2025, clause 4.4.3 requires a hose tap within a zone protected area to have the same level of backflow protection.

This means it is the licensed plumbing contractor's responsibility to assess any potential hazard that may be caused by the installation of hose taps and flexible hoses.

This applies in new and existing buildings as the scope of the plumbing standards covers alterations, additions and repairs to plumbing services.

Definition of high hazard rating

The definition of a high hazard is as follows:

'Any condition, device or practice that, in connection with the water supply system has the potential to cause death'.

Installation

With the increase in flexible hoses with spray heads being fitted adjacent to new and existing toilet pans, there is some confusion regarding the type of backflow device that also needs to be fitted.

If the flexible hose has the capability to enter the toilet pan and remains lodged below the rim of the pan, this constitutes a high hazard cross connection. The danger of cross contamination from this installation shall be removed by means of a backflow protection device appropriate for high hazards.

In the event a licensed plumbing contractor is requested to provide a water point that is capped off for the connection of a flexible hose at a later date, the provisions above shall still apply.

From AS/NZS 3500.1:2025, table 4.4.1 the following testable backflow prevention devices are suitable for the potential high hazard connection with the installation of the flexible spray hose:- reduced pressure zone device (RPZD), registered air gap (RAG) or registered break tank (RBT).

Photo 1: Example of a non-compliant installation

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Testing of backflow devices

Testable backflow prevention devices shall be commissioned and tested after installation and prior to service. They shall be maintained in working order and tested for operational function at intervals not exceeding 12 months.

Although there is no regulatory requirement on the licensed plumbing contractor who installs these devices to perform the yearly test, it is their responsibility to ensure a maintenance program is established. This program may be as simple as setting up a reminder system and administered by either the licensed plumbing contractor, the building owner or strata body.

Notes:

1. Backflow prevention devices must be installed in accordance with AS/NZS 3500.1:2025, clause 4.6.
2. Piping conveying water downstream of a backflow prevention device, installed for high or medium hazard protection, other than a device used for containment, shall be clearly and permanently labelled at every outlet with a prohibition sign conforming to AS/NZS 3500.1:2025, clause 9.7.2.
3. The Plumbing Code of Australia allows performance solutions to determine the hazard level of cross connection through the use of a risk assessment or matrix.
4. Information on potential issues with flexible shower hoses in access facilities can be found in the Accessible sanitary facilities technical note available from the Building and Energy web site below:

   www.lgirs.wa.gov.au/building-and-energy.

5. If the outlet of a flexible hose can fall below the overflow rim of a waste fixture it is considered a low hazard cross-connection. Therefore, the most appropriate backflow protection device would be a dual check valve.

Photo 2: Reduced pressure zone device (RPZD)

Photo 3: Example of a non-drinking warning sign

Notes

The technical note series is issued by the Building and energy to assist the plumbing industry to comply with the Plumbers Licensing and Plumbing Standards Regulations 2000 (the Regulations) applicable to plumbing work in Western Australia.

Each technical note is to be read in conjunction with Part 6 of the Regulations that currently adopt the Plumbing Code of Australia (PCA) as the standards that apply to the carrying out of plumbing work in WA. The PCA contains specific deemed to satisfy provisions and applies AS/NZS 3500:2025, parts 1, 2 and 4 to plumbing work. PCA, schedule 11 applies variations to certain matters to suit the state's building approach and other local conditions.

Copies

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