Government of Western Australia
Department of Mines, Industry Regulation and Safety
Plumbers Licensing Board

Technical Note

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

The Plumbing Code of Australia

The National Construction Code (NCC) consists of three volumes, one and two contain the technical requirements for the construction of all classes of buildings in Australia. Volume three is the Plumbing Code of Australia (PCA) that sets the technical requirements for the construction of plumbing and drainage systems in Australia. The PCA was adopted as the plumbing standards that apply in Western Australia (WA) on 1 May 2015 through regulation 48 of the Plumbers Licensing and Plumbing Standards Regulations 2000.

How does the PCA fit into plumbing legislation in WA?

The lists below show how the PCA fits into the hierarchy of plumbing regulation, with the legislation on top overriding those underneath:

Prior to 1 May 2015

- The Plumbers Licensing Act 1995.
- The Plumbers Licensing and Plumbing Standards Regulations 2000 (the Regulations).
- The AS/NZS 3500, parts 0, 1, 2 and 4.

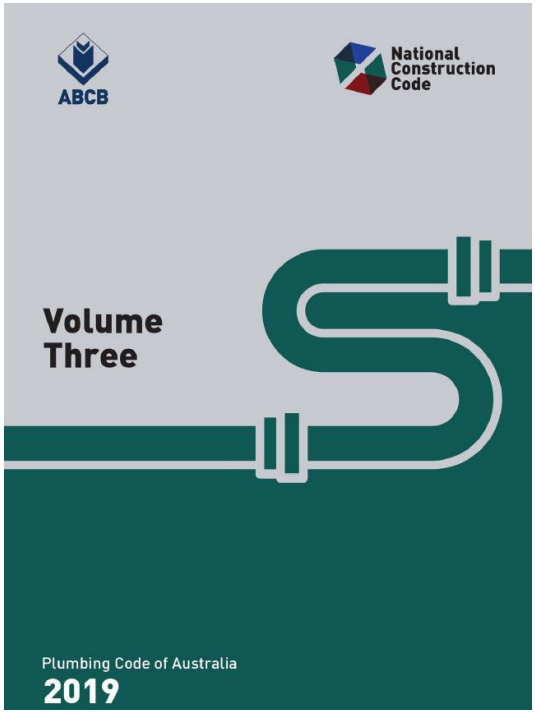
After 1 May 2015

- The Plumbers Licensing Act 1995.
- The Plumbers Licensing and Plumbing Standards Regulations 2000 (the Regulations).
- **The Plumbing Code of Australia.**
- The AS/NZS 3500, parts 0, 1, 2 and 4.

Why was the PCA adopted in WA?

The PCA was adopted to achieve a nationally consistent set of technical requirements for plumbing systems and to provide a performance-based plumbing code in WA.

The PCA allows licensed plumbing contractors to construct plumbing systems that perform to acceptable performance requirements. This can now be done by using either traditional deemed-to-satisfy standards, the AS/NZS 3500 series or by using a performance solution.



What parts of the PCA are regulated plumbing work in WA?

The Regulations tell us that only water supply, sanitary and drainage plumbing work is currently regulated in WA. Regulation 48 tells us which parts of the PCA relate to plumbing work in WA, as shown below:

- Section A.
- Parts B1, B2 (other than Part B2.4), B3, B4 and B5.
- Section C.

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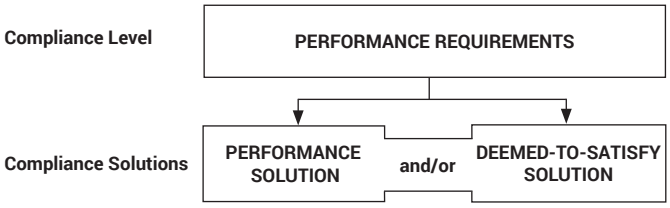
What are performance requirements?

Performance requirements in the PCA tell licensed plumbing contractors how a plumbing system must perform to be compliant.

They must be met to ensure plumbing systems will be fit for their intended purpose.

As shown in the diagram, either a deemed-to-satisfy, a performance solution or a combination of both may be used as compliance solutions to meet the overarching performance requirements.



An example of a performance requirement is listed below, taken from part B of the PCA for cold water services:

BP1.1 Water supply

(1) A cold water service must be connected to a drinking water supply.

BP1.2 Design, construction and installation

(1) A cold water service must ensure the following:

(a) Water is provided at required flow rates and pressures for the correct functioning of fixtures and appliances.

(b) Access for maintenance of mechanical components and operational controls.

(c) The system, appliances and devices can be isolated for testing and maintenance.

(d) The efficient use of drinking water.

(2) A cold water service must avoid failure or uncontrolled discharge.

A cold water service installed in accordance with AS/NZS 3500.1:2018 will be deemed-to-satisfy these performance requirements.

What is deemed-to-satisfy?

Deemed-to-satisfy (DTS) provisions are mostly contained within Australian standards that are listed in the PCA.

Licensed plumbing contractors are mostly familiar with the traditional DTS provisions in the AS/NZS 3500 series as they tell us what to do. However there are many other DTS standards referenced in both AS/NZS 3500 and the PCA.

In addition, DTS provisions are written within some parts of the PCA like the new mandatory provisions for backflow devices in B5.2 for cross-connection control.

What is a performance solution?

The majority of plumbing installations in WA have been and will be constructed under DTS provisions. However, that does not mean that a solution outside these provisions will fail.

By using a performance-based code such as the PCA, flexibility is provided while ensuring acceptable plumbing and drainage solutions are achieved within a licensed and regulated trade such as the plumbing industry.

Performance solutions are often designs that current DTS standards may not have foreseen. Alternatively, a designer or manufacturer may have a new or innovative way to design a plumbing or drainage solution that provides important benefits while still meeting the performance requirements.

Some solutions may form only a part of a complete plumbing system or incorporate some DTS standards within the solution.

Additional information and resources can be found on the ABCB website using the following link:

www.abcb.gov.au/Resources/Publications/Education-Training/Supporting-the-performance-based-code

How do licensed plumbing contractors certify performance solutions in WA?

Prior to installing a performance solution, the licensed plumbing contractor must be satisfied that the solution has been assessed in accordance with the methods set out in the PCA.

This may be reports or certificates signed off by a technical expert with the skills and knowledge to determine whether the performance solution meets the performance requirements of the PCA.

If a licensed plumbing contractor has any concerns that a performance solution does not or will not meet the performance requirements of the PCA, they should not carry out the plumbing work.

Regulation 45A sets out the requirements that the licensed plumbing contractor who is responsible for the installation must meet.

The licensed plumbing contractor must submit a notice of intention to install a performance solution, together with sufficient evidence, to the Plumbers Licensing Board at least 5 working days prior to commencing the work.

More information on performance solutions, including application details and a case study for a drainage performance solution can be found on the Building and Energy website using the following link.

www.commerce.wa.gov.au/building-and-energy/plumbing-performance-solutions

Sections of the PCA

The PCA consists of five sections and seven schedules. Each section covers a common topic and each topic is separated into many parts as shown below:

NCC Volume Three contains the following Sections:

- Section A – Governing Requirements, common across the NCC
- Section B – Water services
- Section C – Sanitary plumbing and drainage systems
- Section D – Excessive noise
- Section E – Facilities
- Schedules –
  - State and Territory Appendices
  - Abbreviation and symbols
  - NCC defined terms
  - Referenced documents
  - Fire-resistance of building elements
  - Fire hazard properties
  - Fire Safety Verification Method.

Section A has requirements and information on how to use and interpret each volume of the NCC. The applications of the WaterMark Certification Scheme are in part A5.3 that cover all materials and products used in plumbing systems.

Section B has requirements for cold, heated, non-drinking, fire-fighting water services, cross-connection control and rainwater harvesting and use.

Section C covers sanitary and drainage systems.

Sections D and E contain requirements for avoiding excessive noise and construction of facilities for people with disabilities. These two sections are not picked up in WA.

Schedules of the PCA

Schedule 1 contains variations and additions that are laws that must be followed when plumbing work is carried out in a particular State or Territory. A variation is when a provision in the PCA is changed, an addition is when a provision is inserted into the PCA.

WA has 12 modifications to AS/NZS 3500:2018 that sit outside the PCA under regulation 49 that must also be complied with.

Schedules 2-7 contain information that is generic to all volumes of the NCC.

Why does PCA 2019 look different inside?

PCA 2019 has a different look from previous versions with some scopes of plumbing work, not regulated by the majority of States and Territories, removed.

Information that is common to all volumes of the NCC has been added for consistency and wording has been changed to improve readability. It is planned to convert all three volumes into a fully digital platform.

A digital platform will allow for many innovative and interactive features including access by portable electronic devices.

The PCA is now in a three year amendment cycle and the next version will be published in 2022.

All defined terms in the PCA are in italics and can be accessed by clicking on the term in an electronic version.

Notes

The technical note series is issued by the Plumbers Licensing Board 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) and the deemed to satisfy provisions of AS/NZS 3500:2018, parts 0, 1, 2 and 4 but modified in certain matters to suit the State's building approach and other local conditions.

Copies

Technical notes are published at www.commerce.wa.gov.au/building-and-energy/plumbers-technical-notes-0. Printed copies may be made available on request by telephone (08) 6251 1377 or email: plumbers.admin@dmirs.wa.gov.au

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