

Regulatory Framework RF 01| Plumbing Regulatory Framework – NCC 2019

Audience

The audience/s for this Practice Note include/s:

- | | |
|--|---|
| <input checked="" type="checkbox"/> Architects/ Designers | <input checked="" type="checkbox"/> Owner Builders |
| <input checked="" type="checkbox"/> Builders | <input checked="" type="checkbox"/> Plumbers |
| <input checked="" type="checkbox"/> Building Surveyors/ Inspectors | <input checked="" type="checkbox"/> Real estate management agents |
| <input checked="" type="checkbox"/> Engineers | <input type="checkbox"/> Trades and Maintenance (inc. Electricians) |
| <input type="checkbox"/> Home Owners / Residential Tenants | |

This Practice Note provides guidance on the regulatory framework for plumbing work regulated under the National Construction Code (NCC) 2019 Volume Three – Plumbing Code of Australia.

The content below provides guidance on:

- Building Act 1993
- Plumbing Regulations 2018
- Plumbing Code of Australia 2019



This practice note provides guidance on plumbing work that is regulated through the 2019 edition of the NCC. Not all plumbing work is regulated under the NCC, for example there may be requirements regulated under other legislation such as the Gas Safety Act 1997.

Abbreviations & Definitions

The abbreviations and definitions set out below are for guidance only. They are not intended to vary those set out in the Building Act 1993, the Plumbing Regulations 2018 or the National Construction Code.

- **ABCB** – Australian Building Codes Board
- **Act** – Building Act 1993
- **BCA** – Building Code of Australia
- **Building Regulations** – Building Regulations 2018
- **DtS** – Deemed-to-Satisfy
- **NCC** – National Construction Code 2019, amendment 1
- **PCA** – Plumbing Code of Australia 2019
- **Regulations** – Plumbing Regulations 2018

- **WELS** – Water efficiency labelling and standards scheme

Regulatory Framework

Plumbing work in Victoria is regulated through a State based system which includes the Building Act 1993, Plumbing Regulations 2018, the National Construction Code, and referenced documents.

Figure 1 shows a schematic of the regulatory framework.

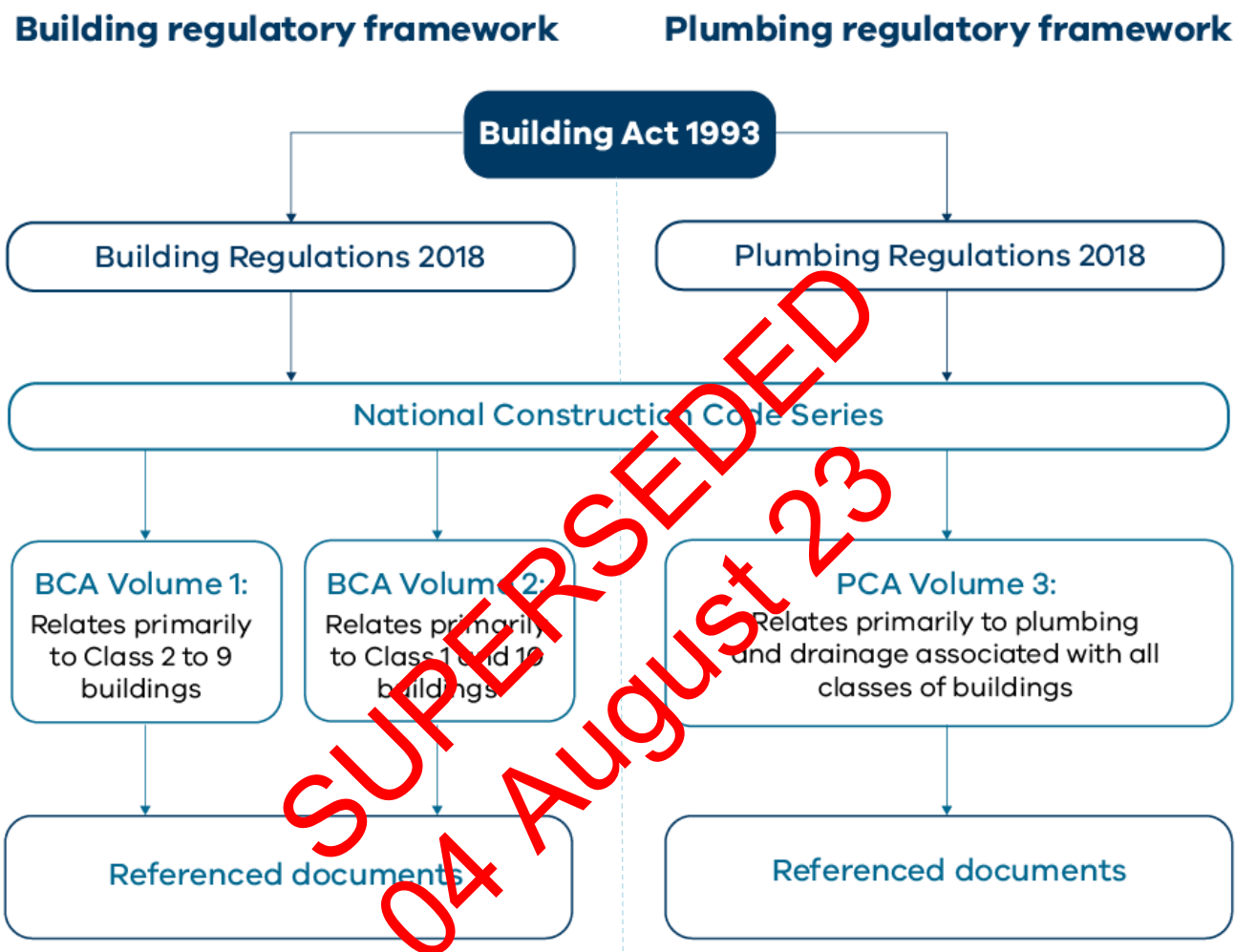


Figure1: Regulatory Framework

Building Act 1993

The Act is the primary legislation that regulates plumbing work in Victoria. Part 12A of the Act sets out the legal framework for the regulation of plumbing work and plumbers.

This establishes the broader framework for plumbing and includes matters such as:

- licensing and registration of plumbers
- restrictions concerning the carrying out of plumbing work
- licensing and registration of plumbers
- compliance certificates
- provisions applying to particular plumbing work (e.g. inspection requirements for sanitary drainage work)
- insurance orders
- rectification of defective plumbing work



- inspection requirements for sanitary drainage work
- modification of plumbing regulations
- enforcement
- plumbing infringements
- plumbing inquiries and disciplinary action

There are two important sections of the Act that enable the PCA to form part of the overarching framework. These provide the required linkage, and are:

- Section 221ZZZV – enables the creation of the Regulations.
- Section 221ZZZW – enables the incorporation of the PCA into the Regulations, and confirms the PCA edition in force.

Plumbing Regulations 2018

The Regulations provide a greater degree of detail to support the function of the Act. Key functions of the Regulations include:

- To specify what is plumbing work
- To define the scope of work for the main classes of plumbing work and specialised classes of plumbing work
- To set out the qualification and experience eligibility requirements for registration and licensing in each class of plumbing work and specialised plumbing work
- To adopt the PCA and modify where necessary
- To prescribe standards of work and other requirements that a licensed or registered plumber must comply with when carrying out plumbing work.

The PCA is linked to the Regulations via the function of regulation 7, which states:

The PCA is adopted by and forms part of these Regulations, as modified by these Regulations.

This means that the PCA should be viewed as a regulation, and that it may also be modified by the Regulations as required. Regulation 9 is an example of how the Regulations can modify the PCA, in that it specifies what version of reference documents need to be used in place of what is specified under Schedule 4.

National Construction Code Series

The NCC series is produced and maintained by the ABCB, which is a joint initiative of federal, state and local governments, and provides the primary set of technical design and construction provisions for buildings in Australia. Legal effect is given through references in relevant State and Territory building and plumbing legislation, hence why the NCC is referenced within the Act and Regulations.

The NCC combines building and plumbing construction requirements into a single code consisting of three volumes. These include:

- BCA Volume One: primarily for Class 2 to 9 buildings
- BCA Volume Two: primarily for Class 1 and 10 buildings
- PCA Volume Three: primarily for plumbing and drainage for all classes of buildings.



Plumbing Code of Australia (NCC Volume Three - PCA)

The PCA sets out the technical requirements for the design and construction of plumbing and drainage systems in new and existing buildings. It applies to:

- all classes of buildings
- sites where water services are constructed independent of buildings
- whenever specified plumbing work is carried out.

The PCA sets out the requirements for different types of plumbing work in the general sections and parts of the document. For Victoria, these include:

- Section B - Water services
- Section C - Sanitary plumbing and drainage systems
- Section D - Excessive noise
- Section E - Facilities
- Vic Section F - Stormwater drainage systems
- Vic Section G - Heating, ventilation, and air-conditioning systems
- Vic Section H – Low risk on-site liquid trade waste systems

Note that some PCA requirements are overridden by the Victorian variations, additions and deletions. These must be complied with as part of the PCA, and are typically indicated in blue text preceding the clause, with the details contained in Schedule 1.



When designing and constructing plumbing and drainage systems, changes to the PCA must be carefully considered. These could be:

- a modification by the Regulations; or
- a variation, addition, or deletion within the NCC itself.

For some types of plumbing, the requirements are a Victorian addition to the PCA, and are only contained in the Victorian section of Schedule 1. An example is Vic Section F for stormwater drainage systems where there is not a national section F, and the details are only included within Schedule 1.

The PCA does not cover all regulated plumbing work. It **does not** apply to certain work such as:

- gasfitting work
- medical gas pipelines
- the installation of roofing (except for roofing drainage design)

Modifications to the Regulations

The VBA has power under section 221ZZO of the Act to make a declaration modifying the application of the plumbing regulations. This includes anything covered under the Regulations, the PCA or a reference standard (e.g. an Australian Standard).

A modification should only be utilised when all reasonable compliance options have been exhausted. For example, if a performance solution under the PCA is available, this established process should be utilised instead of a modification. The VBA will only exercise this power if:

- the application of the plumbing regulations to the specified plumbing work is not appropriate in the circumstances, and
- if it is reasonable and in the public interest to modify their application in the specified circumstances.



For more information on plumbing modifications including how to apply, see Plumbing modifications | Victorian Building Authority (vba.vic.gov.au).

Relationship between Building and Plumbing Requirements

Many of the Building and Plumbing requirements can be complimentary to each other due to the shared framework of the Act and the NCC series. However, this does not establish a precedence between the building and plumbing frameworks, and both must be complied with when applicable.

An example of this could be a roof drainage system. The Regulations and PCA specify compliance requirements (e.g. through clause 5 of Schedule 2 in the Regulations, and PCA Vic Section F), and the BCA also specifies requirements (e.g. through BCA Volume 2 P2.2.1, part 3.5.3, AS/NZS 3500.3). In this situation the plumbing work would need to satisfy both the building and plumbing requirements, including the associated administrative processes such as compliance certificates or building permits

Examples of areas that may have complimentary building and plumbing requirements include:

- Surface water drainage, including roof drainage systems
- Energy efficiency, including rainwater tanks, hot water systems
- Swimming pool drainage

NCC Requirements

Compliance with the NCC

Compliance with each volume of the NCC is achieved by complying with Part A2.0. For compliance with the PCA, this means the following must be satisfied:

- the Governing Requirements – as set out in section A of the PCA; and
- the Performance Requirements – as set out under each section (B – H) of the PCA

By complying with Part A2.0, the PCA as a whole can link back within the legislative framework as the PCA forms part of the Regulations (through regulation 7). Figure 2 illustrates the overarching compliance for the PCA.



Figure 2: NCC 2019 Part A2.0

Governing Requirements

The Governing Requirements provide the rules and instructions for using the PCA and must be complied with, these include:

- Interpreting the NCC, including definitions
- Complying with the NCC
- Victorian variations, additions and deletions
- Referenced documents, including Australian standards



- Evidence of suitability, such as WaterMark
- Building classifications and use

These governing requirements cannot be modified through functions of the PCA itself, such as the use of performance solutions. They must be complied with unless otherwise modified by the Act or Regulations.

Victorian variations are an example of the governing requirements, where it is mandatory to comply with the variation under Part A3.0.

Performance Requirements

Performance Requirements set the minimum necessary level of performance that plumbing work must achieve. These are the only NCC technical provision that must be satisfied, and are satisfied by one of the following approaches:

- a Performance Solution;
- a Deemed-to-Satisfy Solution (DtS); or
- a combination of performance solution and DtS solutions.

It is important to note that the commonly used DtS approach is the optional mechanism used to satisfy the performance requirement and is not the level for overall PCA compliance. Figure 3 provides a diagram for how the performance requirements can be satisfied.



Figure 3: NCC 2019 Part A2.1 (ABCB, 2019)

Performance Solutions

A Performance Solution is a method of complying with the Performance Requirements other than by a DtS solution and is unique for each individual situation and is set out under part A2.2 of the PCA.

Performance solutions involve a process of consultation between the relevant stakeholders, as well as analysis against acceptance criteria. These can offer more flexibility in the methods used to achieve the PCA outcomes and encourages innovative design and technology use.

A Performance Solution can demonstrate compliance by:

- directly assessing the proposed solution against the relevant Performance Requirement(s); or
- demonstrating the solution is at least equivalent to the DtS provisions.



A Performance Solution must:

- demonstrate compliance using one or more of the Assessment Methods under A2.2(2); and
- follow the mandatory process set out under A2.2(4).

It is important that Performance Solutions are well documented to show how compliance with the PCA is achieved for the particular situation.

Deemed to Satisfy Solutions

A DtS solution is a method used to satisfy the Performance Requirements and is set out under part A2.3 of the PCA. The DtS provisions are prescriptive based requirements in which the DtS solution must comply with.

The DtS Provisions are contained in each of the relative sections of the PCA, and may provide direct detail of the necessary requirements, or provide a reference to another document (e.g. an Australian Standard).

Any determination of DtS compliance must use one or both of the following assessment methods under A2.3(2) as applicable:

- Evidence of suitability under Part A5; or
- Expert Judgement

Evidence of Suitability

Evidence of suitability is an assessment method used to determine compliance of a performance solution (under A2.2(2)) or a DtS solution (under A2.3(2)). Where evidence of suitability is used, it must comply with the detail contained within part A5 of the PCA, and as a governing requirement, it cannot be varied by a Performance Solution.

Part A5 of the PCA outlines the evidence of suitability requirements, and explains the evidence needed to show that a plumbing material, product, form of construction or design is fit for their intended purpose to achieve compliance. For a plumbing installation, clauses A5.0, A5.1, and A5.3 are particularly relevant.

To ensure a plumbing product or form of design is fit for purpose, evidence is required under A5.3. For any product intended for use in contact with drinking water, compliance with AS/NZS 4020 must be demonstrated through:

- Compliance with the WaterMark Certification Scheme; or
- A test report provided by a certification body or accredited testing laboratory

Or for a plumbing design or system more broadly:

- A form of documentary evidence that demonstrates compliance with the PCA, such as certificates, reports, calculations or other documents

WaterMark Certification Scheme

WaterMark Certification Scheme is an ABCB scheme for certifying and authorising plumbing and drainage products (includes materials, fixtures, components, appliances and equipment used in plumbing) to ensure that they are fit-for-purpose. The scheme is administered by the ABCB and involves WaterMark Conformity Assessment Bodies (WMCAB) that have been authorised to issue a WaterMark Licence.



When using WaterMark through the evidence of suitability requirements of A5.3, there are particular definitions to be aware of when interpreting the provisions:

WaterMark Schedule of Products means the list maintained by the administering body of products included in the WaterMark Certification Scheme, and the specifications to which the products can be certified.

WaterMark Schedule of Excluded Products means the list maintained by the administering body of products excluded from the WaterMark Certification Scheme.

WaterMark Schedule Licence means a licence issued by a WaterMark Conformity Assessment Body



The WaterMark Schedule of Products and the WaterMark Schedule of Excluded Products can be viewed on the ABCB website.

Where a product has been issued a WaterMark licence it must display the WaterMark symbol (Figure 4) and licence number in accordance with the specific marking requirements set out in the scheme rules.



Figure 4: Watermark Certification Trademark (ABCB)

NCC Referenced Documents

The NCC does not contain details of every design and construction requirement for a building or plumbing or drainage system, and calls up references to other documents for this information. Both the Regulations and the PCA contain a list of referenced documents.

Part A4 of the PCA details how documents referenced in the NCC are adopted and applied. It specifies matters such as:

- where and when the use of a reference document is mandatory
- when the NCC takes precedent, and
- when the NCC does not require compliance with requirements or a referenced document.

Part A4 also specifies which version of a standard applies through Schedule 4, however this part should be read in conjunction with the Regulations as the PCA is modified through regulation 9(2) and Schedule 4 does not apply in most cases.

Automatic adoption of primary referenced standards

The Regulations provide for the latest version of a referenced standard to be adopted on the date that they are issued, published or remade. This is done through the definitions within regulation 5 and relates any document referenced within the Regulations.

In addition, the Regulations also modify the PCA through the use of regulation 9(2) stating that

any document that is referenced in the PCA is a reference to the latest edition of that document as issued, published or remade from time to time.



This means that the Regulations effectively vary the date and title requirement of Schedule 4 of the PCA, and requires the most recent edition of the standard to be used rather than what is listed in the PCA. There is an exception to this, where regulation 9(3) lists a number of standards that are excluded from automatic adoption, including:

- AS/NZS 3500.1;
- AS/NZS 3500.2;
- AS/NZS 3500.3;
- AS/NZS 3500.4;
- AS/NZS 4234.

When the above standards are referenced, the edition used must be in accordance with Schedule 4 of the PCA.

Secondary referenced standards are not automatically adopted

As the automatic adoption of standards in the Regulations and PCA only applies to those that are specifically listed, secondary referenced standards are not automatically adopted (as they are not listed), unless the secondary referenced standard is also a primary referenced standard.

In these situations, the secondary reference standard should be considered as per the PCA part A4.0(5). This states that a secondary reference standard should be considered as a reference to the document as it existed at the time of publication of the primary referenced document.

An updated (amended, published or remade) secondary referenced standard only comes into effect when the primary reference standard that references it is updated (provided it is still referenced in the updated primary standard).

Water efficiency labelling and standards scheme

WELS is an Australian scheme that helps businesses and consumers make decisions to reduce water consumption. Manufacturers, suppliers, retailers, plumbers, builders, developers and real estate agents all have important obligations under the Water Efficiency Labelling and Standards (WELS) Act 2005. Complying with the scheme is mandatory.

The scheme is not directly regulated through the Act, Regulations or PCA.



Further information on WELS can be found on the VBA [website](#).

Related Documentation

- Building Act 1993
- Plumbing Regulations 2018
- National Construction Code 2019, Amendment 1



Document history

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