

Plumbing Code of Australia

**Comments on the draft PCA should be
sent to:**

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**All submissions must be received by
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I. INTRODUCTION

I-1 GENERAL

The Plumbing Code of Australia (*Code*) is produced by the National Plumbing Regulators Forum (NPRF) on behalf of the Commonwealth Government and each State and Territory Government. It consists of two parts presented in a single volume.

Part A of the Plumbing Code of Australia is a set of performance based technical provisions for the construction, installation, replacement, repair, alteration and maintenance of plumbing and drainage installations throughout Australia. It allows for variations in climatic and geographic conditions.

Part B defines the processes for the certification of plumbing products that require statutory authorisation.

I-2 THE NATIONAL PLUMBING REGULATORS FORUM

The National Plumbing Regulators Forum (NPRF) was established by agreement between the Commonwealth Government and each State and Territory Government. It is a co-operative arrangement between jurisdictions and has no executive powers. Forum members represent bodies responsible for regulation of on-site plumbing and/or occupational registration.

The Forum was established subsequent to the expiry of the Memorandum of Understanding (MOU) between the Agriculture and Resources Management Council of Australia and New Zealand (ARMCANZ) and Standards Australia for the establishment and maintenance of the Committee for Plumbing Products Authorisation (CPPA).

The Laver Report (2000)¹ supported the establishment of such a Forum.

The National Plumbing Regulators Forum is the national policy advisory body with responsibility for technical matters associated with the Plumbing Code of Australia.

¹ Review of the Australian Building Codes Board, February 2000 – P. Laver, L Butterfield & G Huxley. Published by Department of Industry Science and Resources

The Forum has a mission to provide benefits to Australian Governments, the industry and the public by striving for a consistent, efficient and effective regulatory environment for plumbing activities and for achieving appropriate levels of public health, safety, resource conservation and amenity, in the interest of all consumers throughout Australia.

A principal objective of the National Plumbing Regulators Forum is to develop a national policy framework that encourages and assists coordinated plumbing regulatory arrangements thereby protecting public interest in a cost effective manner.

I-3 THE PLUMBING CODE OF AUSTRALIA

I-3.1 GOALS

The goal of the Plumbing Code of Australia is to enable the achievement of an acceptable standard of installation at all times in order to provide for public health, safety and amenity, resource conservation and protection of public infrastructure for the benefit of the community now and in the future.

The goal is applied so that the requirements in the *Code* extend no further than is necessary in the public interest, are cost effective, easily understood and are not needlessly onerous in their application.

To achieve the above goal, the Plumbing Code of Australia:

- (i) establishes national objectives for plumbing work on a performance basis;
- (ii) fosters water and energy conservation;
- (iii) creates an accountable and transparent system of national standards and product certification and authorisation;
- (iv) encourages best practice;
- (v) references effective solutions;
- (vi) calls up relevant Australian Standards; and
- (vii) is compatible with the Building Code of Australia (*BCA*).

I-3.2 STATE AND TERRITORY VARIATIONS AND ADDITIONS

Each State's and Territory's legislation may adopt the Plumbing Code of Australia subject to the variation or deletion of some of its provisions, or the addition of extra provisions. These variations are provided in Appendix 3 to the *Code*.

I-3.3 DEFINITIONS

Words with special meanings are printed in italics and are defined in Appendix 1 – Definitions or in the part of the *Code* that they appear.

If a word is not defined in this *Code*, the meaning (if any) attributed to it under AS/NZS 3500.0 Glossary of terms should be used unless the contrary intention appears.

I-3.4 LEGISLATIVE ARRANGEMENTS

The Plumbing Code of Australia is given legal effect by plumbing and other relevant legislation in each State and Territory. This legislation consists of an Act and subordinate legislation which empowers the regulation of certain aspects of plumbing or drainage installation and contains the administrative provisions necessary to give effect to the legislation.

Any provision of the *Code* may be overridden by, or subject to, State and Territory legislation. The *Code*, therefore, is to be read in conjunction with that legislation. Any queries on such matters should be referred to the State or Territory authority responsible for on-site plumbing installation matters.

I-3.5 COMPLIANCE WITH THE PLUMBING CODE OF AUSTRALIA

Details relating to compliance with the requirements of the Plumbing Code of Australia are provided in the relevant *Part(s)*.

In summary, the important aspects of the *Code* are that:

- (i) plumbing installations are to meet specified performance requirements; and
- (ii) plumbing products are to be certified and authorised in accordance with the perceived risks they may pose to the community.

I3.5.1 Installation of plumbing services and systems

Subject to I-3.5.3, every part of the plumbing installation is to be constructed in an appropriate manner to achieve the requirements as set out in *Part A* of the Plumbing Code of Australia.

Part A details the *Objectives*, *Functional Statements*, and *Performance Requirements* relating to various plumbing installations. Compliance with the *Performance Requirements* can only be achieved by:

- (i) complying with the *Deemed-to-Satisfy Provisions*; or
 - (ii) formulating an *Alternative Solution* which;
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- (a) complies with the *Performance Requirements*; or
 - (b) is shown to be at least *equivalent* to the *Deemed-to-Satisfy Provisions*; or

(iii) a combination of (i) and (ii).

For situations other than those meeting with *Deemed-to-Satisfy Provisions*, appropriate documentation is to be prepared to verify compliance. Examples of the necessary documentation are provided in I-3.6.

The *Objectives* and the *Functional Statements* are to be used as an aid to the interpretation of the Plumbing Code of Australia and not for determining compliance with the *Code*.

I-3.5.2 Certification and authorisation of plumbing products

Materials used in plumbing installations are to meet with the certification requirements provided in Part B to ensure that they are durable and fit for the purpose for which they are intended. They are to be manufactured, installed and maintained so as to:

- (i) protect public health and safety;
- (ii) maintain and enhance the quality of the environment;
- (iii) maintain and enhance community and individual amenity;
- (iv) meet the requirements of the network utility operator, as appropriate; and
- (v) perform *adequately* with only normal maintenance over their serviceable life.

Part B of the Plumbing Code of Australia specifies the procedures and requirements for the certification of plumbing and drainage products that require statutory authorisation. These procedures and requirements are in accordance with the perceived risks posed by a plumbing product in relation to the above five factors.

In this regard, not all products will need certification and the certification process can vary subject to the perceived risks.

Part B of the Plumbing Code of Australia does not cover special purpose products for which there is very limited usage. Authorisation for the use of these special purpose products, normally as once-off applications, is considered to be in the jurisdiction of the regulatory authority.

Documentation relating to their authorisation or approval is to be in accordance with I-3.7.

I-3.5.3 Application of the Plumbing Code of Australia to a particular State or Territory

For application within a particular State or Territory, the Plumbing Code of Australia comprises;

- (i) sections I, A and B; and
- (ii) the variations, deletions and additions to Sections A and B applicable to that State or Territory specified in the relevant appendices in Appendix 3.

I-3.6 VERIFICATION OF PLUMBING INSTALLATIONS

Examples of the kind of documentation to be prepared include:

- (i) Details of the *Plumbing Solution* including all relevant plans and other supporting documentation.
- (ii) In cases where an *Alternative Solution* has been proposed –
 - (a) details of the relevant *Performance Requirements*;
 - (b) the *Assessment Method* or methods used to establish compliance with the relevant *Performance Requirements*;
 - (c) details of any *Expert Judgment* relied upon including the extent to which the judgment was relied upon and the qualifications and experience of the expert;
 - (d) details of any tests or calculations used to determine compliance with the relevant *Performance Requirements*; and
 - (e) details of any Standards or other information which were relied upon.

I-3.7 CERTIFICATION AND AUTHORISATION OF PLUMBING AND DRAINAGE PRODUCTS

The processes necessary for the certification of plumbing and drainage products that require statutory authorisation are provided in Part B of the Plumbing Code of Australia.

However, in a one-off situation, an application for certification may be made to the particular regulatory authority. This is to include:

- (i) Details of the plumbing product including all relevant plans and other related documents;

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- (ii) *Adequate* documentation supporting such application being made to the individual authority rather than seeking certification through the procedures detailed in Part B;
 - (iii) Assessment details prepared by an approved independent body, e.g., a National Association of Testing Authorities (NATA) accredited laboratory or *technical expert* including:
 - (a) Details of the relevant *Performance Requirements*;
 - (b) outcome of the risk analysis carried out on the product and its intended use;
 - (c) details of any *Expert Judgment* relied upon including the extent to which the judgment was relied upon and the qualifications and experience of the expert;
 - (d) details of any tests or calculations used to determine compliance with the relevant *Performance Requirements*;
 - (e) details of any Standards or other information which were relied upon;
 - (f) the *Assessment Method* or methods used to establish compliance with the relevant *Performance Requirements*;
 - (g) features of the product that are deemed to *adequately* address or mitigate against the perceived risks.

I-3.8 ADOPTION OF STANDARDS AND OTHER REFERENCES

Where a *Deemed-to-Satisfy Provision* adopts a Standard, rule, specification or provision included in any document issued by Standards Australia or other body, that adoption does not include a provision:

- (i) specifying or defining the respective rights, responsibilities or obligations as between themselves of any manufacturer, supplier or purchaser; or
 - (ii) specifying the responsibilities of any trades person or other building operative, architect, engineer, authority, or other person or body; or
 - (iii) requiring the submission for approval of any material, building component, form or method of construction, to any person, authority or body other than a person or body empowered under State or Territory legislation to give that approval; or
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- (iv) specifying that a material, building component, form or method of construction must be submitted to Standards Australia or a committee of Standards Australia for expression of opinion; or
 - (v) permitting a departure from the code, rule, specification or provision at the sole discretion of the manufacturer or purchaser, or by arrangement or agreement between the manufacturer and purchaser.

I-3.8.1 Referenced Standards

A reference in a *Deemed-to-Satisfy Provision* to a document under I-3.8 refers to the edition or issue, together with any amendment listed in Appendix 2 and only so much as is relevant in the context in which the document is quoted.

I-3.8.2 Differences between referenced documents and the Plumbing Code of Australia

The *Code* overrules in any difference arising between it and any Standard, rule, specification or provision in a document listed in Appendix 2.

I-3.9 LANGUAGE

A reference to a plumbing or drainage service, system or product in the *Code* is a reference to an entire service, system or product or part of a service, system or product, as the case requires.

I-3.10 FURTHER REVIEW OF THE PLUMBING CODE OF AUSTRALIA

Regular reviews are planned for the Plumbing Code of Australia to improve clarity of provisions, update references and to reflect the results of research and improved technology.

Later editions may therefore include reviewed *Objectives*, *Functional Statements* and *Performance Requirements*.

I-3.11 COMMENTS

Comments in writing on any matter concerning the text, presentation or further development of the *Code* are invited from plumbing and other authorities, industry organisations, professional operatives and the public generally. These comments should be addressed to:

National Plumbing Regulators Forum
C/O Plumbing Industry Commission
PO Box 360
Caulfield East VIC 3145

PLUMBING CODE OF AUSTRALIA

PART A

PLUMBING SERVICES AND SYSTEMS

- A. Scope & Structure
 - A.1 Water Services
 - A.2 Sanitary Plumbing And Drainage Systems
 - A.3 Stormwater Drainage Systems
 - A.4 Heating, Ventilation And Air Conditioning Systems
 - A.5 On-Site Wastewater Systems

PART A – PLUMBING SERVICES AND SYSTEMS

1 SCOPE

This part of the Plumbing Code of Australia contains the technical requirements for the construction, installation, replacement, repair, alteration and maintenance of:

- (i) water services;
- (ii) sanitary plumbing and drainage systems;
- (iii) stormwater drainage systems;
- (iv) heating, ventilation and air conditioning systems; and
- (v) on-site wastewater treatment systems;

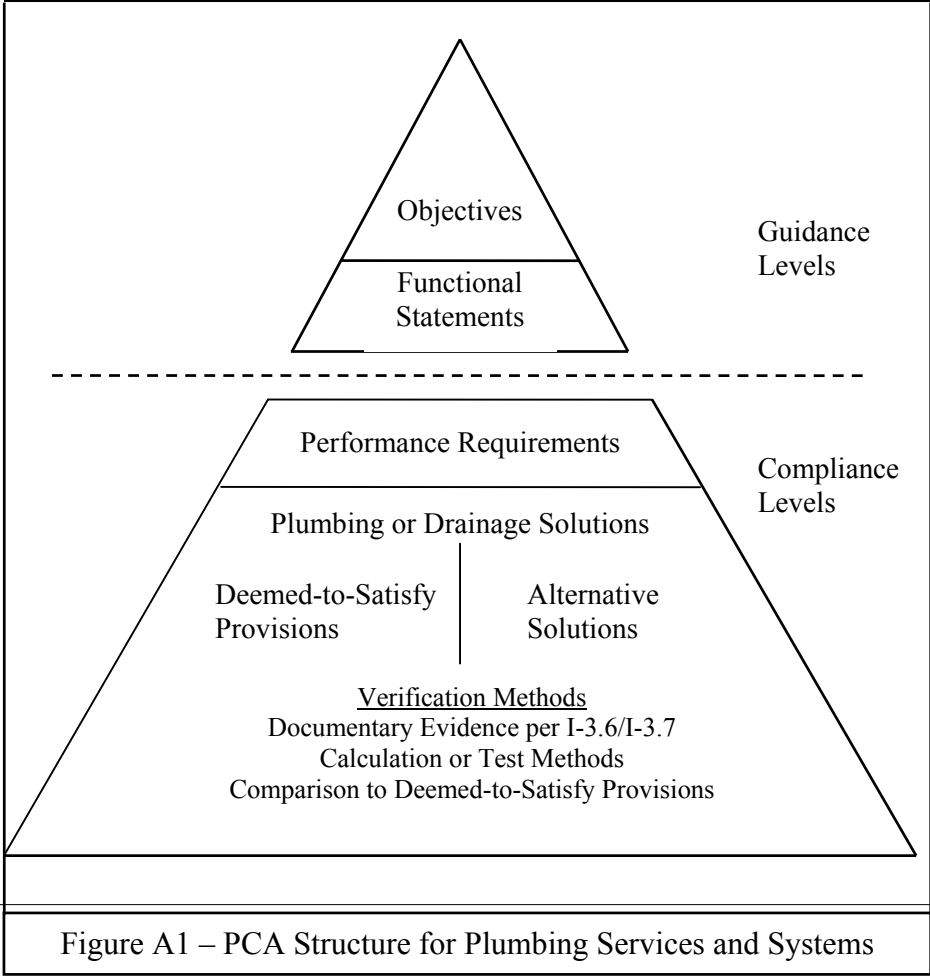
that are associated with human occupancy of buildings.

2 STRUCTURE

The structure of Part A of the Plumbing Code of Australia comprises the following:

- (i) the *Objectives*;
- (ii) the *Functional Statements*;
- (iii) the *Performance Requirements* which all *Plumbing Solutions* are to satisfy; and
- (iv) the *Plumbing Solutions* which includes the *Deemed-to-Satisfy Provisions* and the *Alternative Solutions*.

This is shown diagrammatically in Figure A1.



A.1 – WATER SERVICES

A.1.1 SCOPE

This *Part* sets out the requirements for:

- (i) cold water services,
- (ii) hot water services,
- (iii) non-potable water services, and
- (iv) fire fighting water services.

Parts A.1.1, A.1.2, A.1.3 and A.1.4 detail the requirements for each of the water services listed above.

A.1.1 COLD WATER SERVICES

A.1.1.1 SCOPE

This *Part* sets out the requirements for the construction, installation, replacement, repair, alteration and maintenance of any part of a cold water service of a property that is connected to the drinking water supply, from the *point of connection* to the points of discharge.

A.1.1.2 REFERENCED DOCUMENTS

The following documents are referred to in this *Part*:

AS 1428	Design for access and mobility
Part 1	General requirements for access-New building work
Part 2	Enhanced and additional requirements-Building and facilities
Part 3	Requirements for children and adolescents with physical disabilities
AS/NZS 3500	National plumbing and drainage
Part 1.2	Water supply – Acceptable solutions
Part 5	Domestic installations – Section 2 – Water supply

A.1.1.3 DEFINITIONS

For the purpose of this *Part*, the definitions in documents referenced in I-3.3 and in the documents referenced in A.1.1.2 apply.

A.1.1.4 OBJECTIVES

The objectives of this *Part* are as follows:

- (i) safeguard people from illness due to consumption of or contact with contaminated water;
- (ii) safeguard people from injury or loss of amenity due to the failure of the water service;
- (iii) safeguard people from disturbance or loss of amenity as a result of excessive or undue noise from a cold water service;
- (iv) safeguard people from a water supply that is offensive in appearance, taste or odour;
- (v) ensure that a cold water installation provided for use by people with disabilities is adequate;

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- (vi) conserve water resources;
 - (vii) safeguard property and the environment; and
 - (viii) ensure that the cold water service installation throughout its design life will continue to satisfy the requirements of items (i) to (vii).

A.1.1.5 FUNCTIONAL STATEMENT

Sanitary fixtures, sanitary appliances and supply outlets for drinking water are to have safe and *adequate* piped cold water.

The water is to be conveyed through plumbing installations that minimise any adverse impact on building occupants, the network utility operator's infrastructure, property and the environment.

A.1.1.6 PERFORMANCE REQUIREMENTS

A.1.1.6.1 Cold water service

Cold water for human consumption, food preparation, food utensil washing or personal hygiene is to be potable.

A.1.1.6.2 Cold water service installation

A cold water service is to be installed in such a manner as to:

- (i) avoid the likelihood of drinking water contamination within both the system and the network utility operator's water main;
- (ii) provide water to fixtures and appliances at flow rates and pressures which are adequate for the correct functioning of those fixtures and appliances under normal conditions and in a manner that does not create undue noise;
- (iii) avoid the likelihood of leakage or failure including uncontrolled discharges;
- (iv) facilitate the efficient use of drinking water from network utility operator's supply;
- (v) allow *adequate* access for maintenance of mechanical components; and
- (vi) allow the system, appliances and backflow prevention devices to be isolated for testing and maintenance, where required.

A.1.1.6.3 People with disabilities

Facilities provided for people with disabilities are to have cold water supply taps or other operational controls that are accessible and *adequate* for their use.

A.1.1.7 DEEMED TO SATISFY

Compliance with the following is deemed to satisfy the requirements of this *Part*:

- (i) AS 1428.1, AS 1428.2, AS 1428.3, as appropriate, for access to fixtures for people with disabilities,
- (ii) AS/NZS 3500.1.2 or AS/NZS 3500.5 Section 2, as appropriate, for construction, installation, replacement, repair, alteration and maintenance of the service.

A.1.1.8 MEANS OF VERIFICATION

Verification acceptable to a regulatory authority can be demonstrated either:

- (i) by calculation and certification by persons or organisations with *recognised credentials* in the design or testing of water service systems; or
- (ii) by satisfying the required criteria when tested in accordance with a specified test method endorsed by a *recognised auditing body*.

A.1.1.9 PRODUCT AUTHORISATION

Products used in cold water services are to be certified and authorised as specified in Part B of this *Code*.

A.1.2 HOT WATER SERVICES

A.1.2.1 SCOPE

This *Part* sets out the requirements for the construction, installation, replacement, repair, alteration and maintenance of any part of a hot water service of a property that is connected to the drinking water supply, from the *point of connection* to the points of discharge.

A.1.2.2 REFERENCED DOCUMENTS

The following documents are referred to in this *Part*:

AS 1428	Design for access and mobility
Part 1	General requirements for access-New building work
Part 2	Enhanced and additional requirements-Building and facilities
Part 3	Requirements for children and adolescents with physical disabilities
AS/NZS 3500	National plumbing and drainage
Part 4.2	Hot water supply systems
Part 5	Domestic installations – Section 3 – Hot water supply

A.1.2.3 DEFINITIONS

For the purpose of this *Part*, the definitions in documents referenced in I-3.3 and in the documents referenced in A.1.2.2 apply.

A.1.2.4 OBJECTIVES

The objectives of this *Part* are as follows:

- (i) safeguard people from illness due to consumption of, or contact with, contaminated water;
- (ii) safeguard people from injury due to the failure of a pressure vessel or from contact with excessively hot water;
- (iii) safeguard people from disturbance or loss of amenity as a result of excessive or undue noise from a hot water service;
- (iv) safeguard people from the loss of amenity arising from a lack of hot water for personal hygiene or from a water supply which is offensive in appearance, taste or odour;
- (v) ensure that a hot water installation provided for use by people with disabilities is *adequate*;

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- (vi) reduce wastage of water and energy resources;
 - (vii) safeguard property and the environment; and
 - (viii) ensure that the hot water service installation throughout its design life will continue to satisfy the requirements of items (i) to (vii).

A.1.2.5 FUNCTIONAL STATEMENT

Sanitary fixtures, sanitary appliances and hot water supply outlets are to have a safe and *adequate* piped hot water supply.

The hot water supply is to be conveyed through plumbing installations that minimise any adverse impact on building occupants, the network utility operator's infrastructure, property and the environment.

A.1.2.6 PERFORMANCE REQUIREMENTS

A.1.2.6.1 Hot water service

Hot water for human consumption, food preparation, food utensil washing or personal hygiene is to be potable.

A.1.2.6.2 Hot water temperatures

Hot water supplied by a new hot water service is to be delivered to fixtures and appliances used primarily for personal hygiene at a temperature which reduces the likelihood of scalding.

A.1.2.6.3 Hot water service installation

A hot water service is to be installed in such a manner as to:

- (i) avoid the likelihood of contamination of drinking water within both the on-site service system and the network utility operator's water main;
 - (ii) provide hot water to fixtures and appliances at flow rates and temperatures which are *adequate* for the correct functioning of those fixtures and appliances under normal conditions and in a manner that does not create undue noise;
 - (iii) avoid the likelihood of leakage or failure, including uncontrolled discharges;
 - (iv) use energy efficiently and minimise wastage of water;
 - (v) allow *adequate* access for maintenance of mechanical components; and
 - (vi) allow the system, appliances and backflow prevention devices to be isolated for testing and maintenance, where required.
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A.1.2.6.4 Pressure vessels

Pressure vessels used for producing or storing hot water are to be provided with safety devices which:

- (i) relieve excessive pressure during both normal and abnormal conditions; and
- (ii) limit temperatures to avoid the likelihood of flash steam production in the event of rupture.

A.1.2.6.5 Hot water storage

Heated water is to be stored under conditions which avoid the likelihood of the growth of Legionella bacteria.

A.1.2.6.6 People with disabilities

Facilities provided for people with disabilities are to have hot water supply taps or other operational controls that are accessible and *adequate* for their use.

A.1.2.7 DEEMED TO SATISFY

Compliance with the following is deemed to satisfy the requirements of this *Part*:

- (i) AS 1428.1, AS 1428.2 or AS 1428.3, as appropriate, for access to fixtures for people with disabilities, and
- (ii) AS/NZS 3500.4.2 or AS/NZS 3500.5 Section 3, as appropriate, for construction, installation, replacement, repair, alteration and maintenance of the service.

A.1.2.8 MEANS OF VERIFICATION

Verification acceptable to a regulatory authority can be demonstrated either:

- (i) by calculation and certification by persons or organisations with *recognised credentials* in the design or testing of hot water service systems; or
- (ii) by satisfying the required criteria when tested in accordance with a specified test method endorsed by a *recognised auditing body*.

A.1.2.9 PRODUCT AUTHORISATION

Products used in hot water services are to be certified and authorised as specified in Part B of this *Code*.

A.1.3 NON-POTABLE WATER SERVICES

A.1.3.1 SCOPE

This *Part* sets out the requirements for the construction, installation, replacement, repair, alteration and maintenance of any part of a non-potable cold water service of a property from the *point of connection* to the points of discharge.

The distribution of non-potable water is to be limited to non-potable uses such as:

- (i) garden watering;
- (ii) toilet and urinal flushing;
- (iii) vehicle washing;
- (iv) path/wall washing;
- (v) industrial purposes;
- (vi) fire fighting; and
- (vii) dust suppression.

A.1.3.2 REFERENCED DOCUMENTS

The following documents are referred to in this *Part*:

AS 1428	Design for access and mobility
Part 1	General requirements for access-New building work
Part 2	Enhanced and additional requirements-Building and facilities
Part 3	Requirements for children and adolescents with physical disabilities
AS/NZS 3500	National Plumbing and Drainage
Part 1.2	Water Supply – Acceptable solutions
Part 5	Domestic installations

A.1.3.3 DEFINITIONS

For the purpose of this *Part*, the definitions in documents referenced in I-3.3 and in the documents referenced in A.1.3.2 apply.

A.1.3.4 OBJECTIVES

The objectives of this *Part* are as follows:

- (i) safeguard people from illness due to consumption of or exposure to infection by non-potable water;
- (ii) minimise the likelihood of any inadvertent interconnection or backflow between a drinking water and a non-potable water service system;
- (iii) safeguard people from disturbance or loss of amenity as a result of excessive or undue noise from a non-potable water service;
- (iv) ensure that a non-potable water installation provided for people with disabilities is *adequate* for their use;
- (v) safeguard property and the environment; and
- (vi) ensure that the non-potable water service installation throughout its design life will continue to satisfy the requirements of items (i) to (v).

A.1.3.5 FUNCTIONAL STATEMENT

Sanitary fixtures, sanitary appliances and non-potable water outlets are to have an *adequate* piped non-potable water supply.

Non-potable water is to be supplied through plumbing installations that avoid the likelihood of inadvertent contamination of any drinking water service, minimise any adverse impact on building occupants, the network utility operator's infrastructure, property and the environment.

A.1.3.6 PERFORMANCE REQUIREMENTS

A.1.3.6.1 Non-potable water service

A non-potable water supply can only be connected to outlets clearly identified for non potable use. It is to be for uses as described in A.1.3.1.

A non-potable water service is not to have a cross connection with a drinking water service.

A.1.3.6.2 Identification

Pipe outlets, fittings, storage and holding tanks that are parts of a non-potable water service are to be clearly identified.

A.1.3.6.3 Non-potable water service installations

A non-potable water service is to be installed in such a manner as to:

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- (i) avoid the likelihood of contamination of drinking water in the on-site drinking water service and the network utility operator's drinking water main;
 - (ii) provide non-potable water to fixtures and appliances at flow rates and pressures which are *adequate* for the correct functioning of those fixtures and appliances under normal conditions and in a manner that does not create undue noise;
 - (iii) avoid the likelihood of leakage or failure;
 - (iv) allow reasonable access for maintenance of mechanical components;
 - (v) allow the system, appliances and backflow prevention devices to be isolated for testing and maintenance; and
 - (vi) avoid the likelihood of uncontrolled discharges.

A.1.3.6.4 People with disabilities

Non-potable water services provided for people with disabilities are to have taps or other operational controls that are accessible, convenient and *adequate* for their use.

A.1.3.7 DEEMED TO SATISFY

Compliance with the following is deemed to satisfy the requirements of this *Part*:

- (i) AS 1428.1, AS 1428.2 or AS 1428.3, as appropriate, for access to fixtures; and
- (ii) AS/NZS 3500.1.2 or AS/NZS 3500.5 Section 2, as appropriate, for non-potable water systems.

A.1.3.8 MEANS OF VERIFICATION

Verification acceptable to a regulatory authority can be demonstrated either –

- (i) by calculation and certification by persons or organisations with *recognised credentials* in the design or testing of non-potable water services; or
- (ii) by satisfying the required criteria when tested in accordance with a specified test method endorsed by a *recognised certifying body*.

A.1.3.9 PRODUCT AUTHORISATION

Products used in non-potable water services are to be certified and authorised as specified in Part B of this *Code*.

A.1.4 FIRE FIGHTING WATER SERVICES

A.1.4.1 SCOPE

This *Part* sets out requirements for the construction, installation, replacement, repair, alteration, maintenance of any part of fire fighting water services from the network utility operator's water main or other acceptable sources of supply to the fire fighting equipment, including hydrant, hose reel, sprinkler services and wall drencher systems.

A.1.4.2 REFERENCED DOCUMENTS

The following Documents are referred to in this *Part*:

AS/NZS 1221	Fire hose reels
AS 2118	Automatic fire sprinkler systems
Part 1	General requirements
Part 4	Residential
Part 5	Domestic
Part 6	Combined sprinkler and hydrant
Part 9	Piping support and installation
AS 2419	Fire hydrant installations
Part 1	System design, installation and commissioning
Part 2	Fire hydrant valves
AS 2441	Installation of fire hose reels
AS/NZS 3500	National plumbing and drainage
Part 1.2	Water supply – Acceptable solutions
AS 4118.2.1	Fire sprinkler systems
Part 2.1	Piping general

A.1.4.3 DEFINITIONS

For the purpose of this *Part*, the definitions in documents referenced in I-3.3 and in the documents referenced in A.1.4.2 apply.

A.1.4.4 OBJECTIVES

The objectives of this *Part* are to:

- (i) safeguard people from illness due to consumption of, or contact with, contaminated water;
- (ii) safeguard people from injury or loss due to the failure of the fire fighting water services and equipment;
- (iii) safeguard the network utility operator's infrastructure from damage or contamination due to failure or malfunction of the fire fighting service;
- (iv) ensure that adequate water is available to all fire fighting services and equipment;
- (v) conserve water resources; and
- (vi) ensure that a fire fighting water service installation throughout its design life will continue to satisfy the requirements of items (i) to (v).

A.1.4.5 FUNCTIONAL STATEMENT

All fire fighting equipment are to be provided with *adequate* water for their intended purpose.

A.1.4.6 PERFORMANCE REQUIREMENTS

A fire fighting water service is to be constructed in a manner which:

- (i) avoids the likelihood of the contamination of drinking water within the property boundary as well as that in the water main;
- (ii) provides water to the fire fighting equipment at a flow rate and pressure that is adequate for the correct functioning of the equipment;
- (iii) avoids the likelihood of leakage or failure including uncontrolled discharges;
- (iv) provides adequate access for maintenance of mechanical components; and
- (v) allows the system and backflow prevention devices to be isolated for testing and maintenance.

A.1.4.7 DEEMED TO SATISFY

Compliance with the following, individually or collectively, as appropriate, is deemed to satisfy the requirements of this *Part*.

- (i) installation of fire fighting water services in accordance with AS 2118.1, AS 2118.4, AS 2118.5, AS 2118.9 and AS/NZS 3500.1.2;
- (ii) installation of water services for fire hydrants in accordance with AS 2419.1 and AS 2419.2; and
- (iii) installation of fire hose reel systems in accordance with AS 2441.1 and AS/NZS 1221; and
- (iv) installation of water services for wall drencher systems in accordance with AS/NZS 4118.2.1.

A.1.4.8 MEANS OF VERIFICATION

Verification of fire fighting water service performance may be conducted by a qualified third party certifier and/or the relevant fire fighting authority.

A.1.4.9 PRODUCT AUTHORISATION

Materials and products used in fire fighting water services are to be authorised by a recognised body as complying with the relevant Australian Standard(s) for the specific application.

A.2 – SANITARY PLUMBING & DRAINAGE SYSTEMS

A.2.1 SCOPE

This *Part* sets out the requirements for the construction, installation, replacement, repair, alteration and maintenance of any part of a sanitary plumbing and drainage system of a property from sanitary fixtures and appliances to an *approved disposal system*.

A.2.2 REFERENCED DOCUMENTS

The following documents are referred to in this *Part*:

AS 1428.1	Design for access and mobility
Part 1	General requirements for access-New building work
Part 2	Enhanced and additional requirements-Building and facilities
Part 3	Requirements for children and adolescents with physical disabilities
AS/NZS 3500	National plumbing and drainage
Part 2.2	Sanitary plumbing and drainage – Acceptable solutions
Part 5	Domestic installations – Section 4 – Sanitary plumbing and drainage

A.2.3 DEFINITIONS

For the purpose of this *Part*, the definitions in documents referenced in I-3.3, in the documents referenced in A.2.2 apply.

A.2.4 OBJECTIVES

The Objectives of this *Part* are to:

- (i) safeguard people from illness due to infection or contamination resulting from personal hygiene activities;
- (ii) safeguard people from the loss of amenity due to unpleasant odours or the accumulation of offensive matter resulting from sewage disposal;
- (iii) safeguard people from disturbance or loss of amenity as a result of excessive or undue noise from a sanitary plumbing or drainage system;

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- (iv) ensure that *sanitation* facilities provided for the use of people with disabilities are *adequate*; and
 - (v) ensure that the sanitary plumbing and drainage installation throughout its design life will continue to satisfy the requirements of items (i) to (iv).

A.2.5 FUNCTIONAL STATEMENT

Sanitary fixtures and *sanitary appliances* using water-borne waste disposal are to be provided with an *adequate* disposal system that does not impact adversely on occupants of the premises, the network utility operator's infrastructure, property and the environment.

A.2.6 PERFORMANCE REQUIREMENTS

A.2.6.1 Sanitary plumbing system

A sanitary plumbing system using water-borne waste disposal is to be installed in such a manner as to:

- (i) convey sewage or sullage to a sanitary drainage system or an *approved disposal system* in a manner that does not create undue noise;
- (ii) avoid the likelihood of *blockage* and leakage;
- (iii) avoid the likelihood of ingress of water, foul air and gases from the system into buildings;
- (iv) be adequately supported, jointed and protected in a way that;
 - (a) avoids the likelihood of penetration by roots,
 - (b) avoids the likelihood of the ingress of ground water; and
 - (c) avoids the likelihood of damage from superimposed loads or normal building movement
- (v) provide for the effective and efficient use of water; and
- (vi) provide *adequate* access for maintenance and for clearing *blockages*.

A.2.6.2 Sanitary drainage system

A sanitary drainage system using water-borne waste disposal is to be installed in such a manner as to:

- (i) convey sewage from a sanitary plumbing system to an *approved disposal system* in a manner that does not create undue noise;
 - (ii) avoid the likelihood of *blockage* and leakage;
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- (iii) avoid the likelihood of ingress of water, foul air and gases from the system into buildings;
- (iv) be adequately supported, jointed and protected in a way that;
 - (a) avoids the likelihood of penetration by roots,
 - (b) avoids the likelihood of the ingress of ground water; or
 - (c) avoids the likelihood of damage from superimposed loads or normal building movement
- (v) provide *adequate* access for maintenance and for clearing *blockages*;
- (vi) provide ventilation to avoid the likelihood of foul air and gases accumulating in the sanitary drainage system;
- (vii) protect against internal contamination;
- (viii) avoid the likelihood of ingress of stormwater into the sewerage system;
- (ix) avoid the likelihood of uncontrolled discharge;
- (x) avoid the likelihood of damage to existing buildings or site works; and
- (xi) avoid the likelihood of damage to the sewerage system or other *approved disposal system*.

A.2.6.3 People with disabilities

In facilities provided for people with disabilities, sanitary fixtures are to be suitable for their use.

A.2.7 DEEMED TO SATISFY

Compliance with the following is deemed to satisfy the requirements of this *Part*:

- (i) AS 1428.1, AS 1428.2 or AS 1428.3, as appropriate, for access to fixtures for people with disabilities; and
- (ii) AS/NZS 3500.2.2 or AS/NZS 3500.5 Section 4, as appropriate, for the construction, installation, replacement, repair, alteration and maintenance of the system.

A.2.8 MEANS OF VERIFICATION

Verification acceptable to a regulatory authority can be demonstrated either:

- (i) By calculation and certification by persons or organisations with *recognised credentials* in the design or testing of sanitary plumbing and drainage systems; or

By satisfying the required criteria when tested in accordance with a specified test method endorsed by a *recognised auditing body*.

A.2.9 PRODUCT AUTHORISATION

Products used in sanitary plumbing and drainage systems are to be certified and authorised as specified in Part B of this Code.

A.3 – STORMWATER DRAINAGE SYSTEMS

A.3.1 SCOPE

This *Part* sets out the requirements for the construction, installation, replacement, repair, alteration and maintenance of any part of a roof drainage system, surface drainage system and subsoil system to the point(s) of connection or other approved disposal point.

A.3.2 REFERENCED DOCUMENTS

The following documents are referred to in this *Part*:

AS/NZS 3500	National plumbing and drainage
Part 3.2	Stormwater drainage – Acceptable solutions
Part 5	Domestic installations - Section 5 – Stormwater drainage
ABCB	Building Code of Australia
Vol. 2	Housing provisions

A.3.3 DEFINITIONS

For the purpose of this *Part*, the definitions in documents referenced in I-3.3 and in the documents referenced in A.3.2 apply.

A.3.4 OBJECTIVES

The Objectives of this *Part* are to:

- (i) minimise risks of injury or inconvenience to people and damage to property caused by stormwater;
- (ii) protect against damage to the stormwater drainage systems of an individual property and of the network utility operator's system;
- (iii) safeguard property and the environment against damage and degradation; and
- (iv) ensure that stormwater drainage systems throughout their design life will satisfy the requirements of items (i) to (iii).

A.3.5 FUNCTIONAL STATEMENT

Buildings and their surroundings are to be provided with a stormwater installation constructed to provide protection for people, property and the environment from the adverse effects of stormwater.

A.3.6 PERFORMANCE REQUIREMENTS

A.3.6.1 Roof drainage systems

Roof drainage systems are to be installed to avoid the likelihood of injury to people, damage to property and loss of amenity from the adverse effects of stormwater.

A.3.6.1.2 Overflow devices or measures

Overflow devices or measures are to be installed and maintained where overtopping of the roof drainage system could cause significant monetary loss, property damage or personal injury taking into account the effect of possible obstructions and *blockages*.

A.3.6.1.3 Watertightness

All internal roof drainage components are to be *watertight*.

A.3.6.2 Surface drainage systems

Surface drainage systems are to dispose of stormwater flows from rainfall events having an Average Recurrence Interval (*ARI*) appropriate to the importance of the site and the severity of potential damage and injury that would result from the failure of such systems.

A.3.6.3 Subsoil drainage systems

Subsoil drainage systems for the removal of excess groundwater and the reduction of soil moisture levels are to be installed in such a manner as to not cause damage to buildings and other facilities by changing soil moisture conditions.

A.3.6.5 Stormwater drainage systems

Stormwater drainage systems are to be installed in such a manner as to:

- (i) convey stormwater to a point of collection using gravity flow where possible;
 - (ii) avoid the likelihood of *blockages*;
 - (iii) avoid the likelihood of leakage and penetration by roots;
 - (iv) provide *adequate* access for maintenance and clearing of *blockages*;
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- (v) avoid the likelihood of damage to the external stormwater drainage network where the stormwater is being discharged to such a network;
 - (vi) avoid the likelihood of damage from superimposed loads on normal ground, or building movements;
 - (vii) avoid the likelihood of ingress of sewage, trade waste or both;
 - (viii) avoid the likelihood of ingress of stormwater into a sanitary drainage system;
 - (ix) avoid the likelihood of damage to buildings, property or site works, in particular during the construction phase; and
 - (x) avoid the likelihood of uncontrolled discharge.

A.3.6.6 No point of connection

In addition to the requirements listed in A.3.6.5 above, where a point of connection to a network utility provider's stormwater drainage network is not available, the stormwater drainage system is to be installed and maintained to avoid the likelihood of the concentration of stormwater outside the approved disposal system.

A.3.7 DEEMED TO SATISFY

Compliance with AS/NZS 3500.3.2, AS/NZS 3500.5 Section 5, as appropriate, is deemed to satisfy the requirements of this *Part*.

(**Note.** See the Building Code of Australia for areas of work other than those covered by AS 3500.3.2.)

A.3.8 MEANS OF VERIFICATION

Verification acceptable to a regulatory authority can be demonstrated either:

- (i) by calculation and certification by persons or organisations with *recognised credentials* in the design or testing of stormwater water drainage systems; or
- (ii) by satisfying the required criteria when tested in accordance with a specified test method endorsed by a *recognised auditing body*.

(**Note:** Stormwater drainage – Methods for verification (AS3500.3.3) is in the course of preparation)

A.3.9 PRODUCT AUTHORISATION

Products used in stormwater and drainage systems are to be certified and authorised as specified in Part B of this Code.

A.4 – HEATING, VENTILATION AND AIR-CONDITIONING

A.4.1 SCOPE

This *Part* sets out the requirements for the installation, alteration, addition, replacement, maintenance or repair of mechanical heating, cooling and/or ventilation systems of a building.

A.4.2 REFERENCED DOCUMENTS

The following documents are referred to in this *Part*:

ABCB	Building Code of Australia
AS/NZS 1200	Pressure Equipment
AS 1271	Safety valves, other valves, liquid level gauges, and other fittings for boilers and unfired pressure vessels
AS 1324	Air filters for use in general ventilation and air conditioning
Part 1	Application, performance and construction.
AS 1345	Identification of the contents of pipes, conduits and ducts.
AS 1358	Bursting discs and bursting devices—Guide to application, selection, and installation.
AS/NZS 1571	Copper—Seamless tubes for air conditioning and refrigeration.
AS/NZS1668	The use of mechanical ventilation and air-conditioning in buildings
Part 1	Fire and smoke control in multi-compartment buildings
AS 1668 Part 2	Mechanical ventilation for acceptable indoor-air quality.
Part 2	Supplement 1 - Commentary.
AS/NZS 3500	National plumbing and drainage.
Part 1.2	Water supply – Acceptable solutions
Part 2.2	Sanitary plumbing and drainage – Acceptable solutions
Part 4.2	Hot water supply systems – Acceptable solutions.

AS/NZS 3666	Air handling and water systems of buildings-Microbial Control.
Part 1	Design, installation and commissioning
Part 2	Operation and maintenance
Part 3	Performance-based maintenance of cooling water systems
AS 4041	Pressure Piping
AS 4254	Ductwork for air-handling systems in buildings.
AS 4426	Thermal insulation of pipe work, ductwork and equipment – Selection, installation and finish.
AS 5601	Gas installations.

A.4.3 DEFINITIONS

For the purposes of this *Part* the definitions given in I-3.3 and the documents referenced in A.4.2 apply.

A.4.4 OBJECTIVES

The objectives of this *Part* are to:

- (i) safeguard people from illness caused by infection due to contact with contaminated indoor air;
- (ii) safeguard people from loss of amenity arising from the lack of heating, cooling and/or ventilation within the building;
- (iii) safeguard people from disturbance or loss of amenity as a result of excessive or undue noise from any service associated with the heating, cooling and/or ventilation equipment;
- (iv) safeguard people from injury due to rupture of a pressure vessel or from contact with an excessively hot surface;
- (v) safeguard people from internal building environments which are offensive in odour and taste;
- (vi) safeguard people from risk of illness due to mechanical, heating, cooling and/or ventilation equipment failure; and
- (vii) ensure that energy efficiency issues and outcomes are among the major considerations in the installation, ongoing maintenance and operating performance of any heating, cooling and/or ventilation installation.
- (viii) ensure that a heating, ventilation and air conditioning service throughout its design life will continue to satisfy the requirements of items (i) to (vii).

A.4.5 FUNCTIONAL STATEMENT

Mechanical services, plant and equipment used for heating, cooling and/or ventilation of a building are to be *adequate*.

The building's heating, cooling and/or ventilation system installation and maintenance are to support energy efficient outcomes and minimise any adverse impact on building occupants or occupants of adjoining places, the network utility operator's infrastructure, property and the environment.

A.4.6 PERFORMANCE REQUIREMENTS

Mechanical services, plant and equipment for heating, cooling and/or ventilation are to be installed in such a manner as to:

- (i) deliver heating cooling and/or ventilation whilst avoiding the likelihood of people being exposed to microbial infection;
- (ii) avoid the likelihood of damage to property and loss of amenity to the building occupants;
- (iii) provide an environment that meets with occupational health, safety and welfare requirements;
- (iv) incorporate energy efficient and cost effective considerations; and
- (v) provide adequate access for maintenance.

A.4.7 DEEMED TO SATISFY

Compliance with the following is deemed to satisfy the requirements of this *Part*:

- (i) AS/NZS 1200, AS 1324.1, AS 1345, AS 1358, AS 1358, AS 1668.1, AS 1668.2, AS/NZS 3500.1.2, AS/NZS 3500.2.2, AS/NZS 3500.4.2, AS 4254, AS 4426 and AS 5601, as appropriate, for the construction, installation, replacement, repair, alteration and maintenance of mechanical ventilation equipment;
 - (ii) Building Code of Australia, AS/NZS 3666.1, AS/NZS 3666.2, AS/NZS 3666.3, as appropriate, for occupational health and safety considerations and for microbial control;
 - (iii) AS/NZS 1200, AS 1271, AS 4041, as appropriate, for pressure equipment and piping; and
 - (iv) AS/NZS 1571 for copper piping for air conditioning and refrigeration.
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A.4.8 MEANS OF VERIFICATION

Verification acceptable to a regulatory authority can be demonstrated either:

- (i) by calculation and certification by persons or organisations with *recognised credentials* in the testing of heating, ventilation and air conditioning systems; or
- (ii) by satisfying the required criteria when tested in accordance with a specified test method endorsed by a *recognised auditing body*.

A.5 – ON-SITE WASTEWATER SYSTEMS

A.5.I-1 SCOPE

This *Part* of the *Code* contains the technical requirements for the construction, installation, replacement, repair, alteration and maintenance of:

- (i) on-site waterless composting toilets;
- (ii) on-site treatment and conveyance of water borne domestic all-waste, blackwater and greywater (with on-site and/or off-site disposal); and
- (iii) on-site treatment and conveyance of trade waste (with on-site and/or off-site disposal)

that are associated with human occupancy of and/or activity in buildings.

It details the *Objectives*, *Functional Statements*, *Performance Requirements* and the *Plumbing or Drainage Solutions* for each of the above services or systems.

A.5.1 ON-SITE DOMESTIC WASTEWATER TREATMENT AND DISPOSAL

A.5.1.1 SCOPE

This *Part* sets out the requirements for the construction, installation, replacement, repair, alteration and maintenance of any part of a system of a property used for the on-site treatment and conveyance of water borne domestic all-waste, blackwater and greywater (with on-site and/or off-site disposal) with a loading equivalent not in excess of 10 people and its associated land-application system, as appropriate.

A.5.1.2 REFERENCED DOCUMENTS

The following documents are referred to in this *Part*:

AS/NZS 1546	On-site domestic wastewater treatment units
Part 1	Septic tanks
Part 2	Waterless composting toilets
Part 3	Aerated wastewater treatment systems
AS/NZS 1547	On-site domestic-wastewater management
AS/NZS 3500	National plumbing and drainage code
Part 0	Glossary of terms
Part 2.2	Sanitary plumbing and drainage – Acceptable solutions

A.5.1.3 DEFINITIONS

For the purposes of this *Part* the definitions given in I-3.3 and the documents referenced in A.5.1.2 apply.

A.5.1.4 OBJECTIVES

The Objectives of this *Part* are to:

- (i) safeguard people from illness due to infection resulting from contact with untreated or partially treated sewage;
- (ii) safeguard people from illness by ensuring that all discharges satisfy the relevant regulatory authority's requirements.
- (iii) safeguard the environment from degradation by ensuring that all discharges satisfy the relevant regulatory authority's requirements.

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- (iv) safeguard people from the loss of amenity due to the presence of unpleasant odours or the accumulation of offensive matter resulting from sewage water disposal;
 - (v) ensure sustainable compliance with the relevant regulator's requirements;
 - (vi) ensure that the installation throughout its design life will continue to satisfy the requirements of items (i) to (v).

A.5.1.5 FUNCTIONAL STATEMENT

On-site wastewater treatment systems are to collect, contain and process domestic-wastewater, human excreta, or both so that public health and environmental standards required by the relevant regulatory authority are achieved.

A.5.1.6 PERFORMANCE REQUIREMENTS

A wastewater treatment system is to be installed in such a manner as to:

- (i) protect and enhance public health and environment;
 - (ii) be of sufficient capacity to receive, treat, and absorb all wastewater outputs from premises on the property;
 - (iii) complete the treatment, uptake and absorption of the final effluent within the boundaries of the property;
 - (iv) avoid the likelihood of the creation of unpleasant odours or the accumulation of offensive matter;
 - (v) avoid the likelihood of the ingress of sewage, foul air or gases into buildings;
 - (vi) avoid the likelihood of stormwater entering the system;
 - (vii) avoid the likelihood of root penetration or ingress of ground water;
 - (viii) avoid the likelihood of damage from superimposed loads or normal ground movement;
 - (ix) provide ventilation to avoid the likelihood of foul air and gases from accumulating in the system;
 - (x) protect against internal contamination;
 - (xi) provide *adequate* access for maintenance;
 - (xii) incorporate *adequate* provisions for effective cleaning;
 - (xiii) avoid the likelihood of unintended or uncontrolled discharge; and
 - (xiv) avoid the likelihood of blockage and leakage.
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A.5.1.7 DEEMED TO SATISFY

Compliance with the following, as appropriate, is deemed to satisfy the requirements of this *Part*:

- (i) AS/NZS 1546.1 for size determination, design and installation of septic tanks;
- (ii) AS/NZS 1546.2 for the installation of waterless composting toilets;
- (iii) AS/NZS 1546.3 for size determination, design and installation of aerated wastewater systems;
- (iv) AS/NZS 3500.2.2 for the construction, installation, replacement, repair, alteration and maintenance of all sanitary plumbing and drainage systems;
- (v) AS/NZS 1547 for the management of on-site wastewater treatment systems; and
- (vi) in accordance with the specified or agreed provisions as required by the relevant regulatory authority.

A.5.1.8 MEANS OF VERIFICATION

Verification acceptable to a regulatory authority can be demonstrated either:

- (i) by calculation and certification by persons or organisations with *recognised credentials* in the design or testing of on-site domestic wastewater systems; or
- (ii) by satisfying the required criteria when tested in accordance with a specified test method endorsed by a *recognised auditing body*.

A.5.1.9 PRODUCT AUTHORISATION

Products used in sanitary plumbing and drainage systems connected to the on-site domestic wastewater treatment units are to be certified and authorised as specified in Part B of this Code.

A.5.2 TRADE WASTE

A.5.2.1 SCOPE

This *Part* sets out the requirements for the construction, installation, replacement, repair, alteration and maintenance of any part of a system of a property used for the on-site treatment, conveyance and disposal of trade waste.

A.5.2.2 REFERENCED DOCUMENTS

The following documents are referred to in this *Part*:

AS/NZS 3500 National plumbing and drainage

Part 2.2 Sanitary plumbing and drainage – Acceptable solutions

A.5.2.3 DEFINITIONS

For the purposes of this *Part* the definitions given in I-3.3 and the documents referenced in A.5.2.2 apply.

A.5.2.4 OBJECTIVES

The Objectives of this *Part* are to:

- (i) protect the environment and public health and safety;
- (ii) safeguard people from illness caused by infection or contamination resulting from working in and around trade waste installations;
- (iii) safeguard people from the loss of amenity due to the presence of unpleasant odours or the accumulation of offensive matter;
- (iv) ensure sustainable compliance with public health and environmental requirements;
- (v) treat trade waste so that it meets the requirements of the relevant regulatory authority; and
- (vi) ensure that the installation throughout its design life will continue to satisfy the requirements of items (i) to (v).

A.5.2.5 FUNCTIONAL STATEMENT

Where trade waste is generated *adequate* spaces and facilities are to be provided for the safe and hygienic collection, holding, treatment and disposal of the waste.

On-site trade waste treatment systems are to process liquid waste generated from industry, business, trade or manufacturing process so that public health and environmental standards required by the relevant regulatory authority and/or particular requirements of the sewerage authority, where applicable, are achieved.

A.5.2.6 PERFORMANCE REQUIREMENTS

A.5.2.6.1 General

An on-site trade waste system is to be installed in such a manner as to:

- (i) protect public health by ensuring that:
 - (a) all discharges comply with the relevant regulatory authority; and
 - (b) risks associated with the discharge of treated trade waste to the environment are minimised.
- (ii) maintain and enhance the quality of the environment by ensuring that:
 - (a) environmental quality objectives set by the relevant regulatory authority are attained;
 - (b) surface and ground water are not polluted;
 - (c) soil productivity is maintained or enhanced; and
 - (d) adverse cumulative environmental effects comply with the relevant environmental requirements.
- (iii) maintain and enhance community amenity by ensuring that:
 - (a) on-site trade waste systems are managed so as to achieve sustainable long term performance;
 - (b) the on-site system design and its implementation contribute to improving and sustaining aesthetic values within individual properties and groups of properties; and
 - (c) the requirements of any community resource utilisation programme for the reuse of resources within wastewater are met.
- (iv) meet the requirements for the acceptance of *trade waste* to sewers, as appropriate.

A.5.2.6.2 Acceptance

Trade waste is to be discharged according to the requirements and agreement of the relevant regulatory authority and the receiving utility.

A.5.2.6.3 Conveyance

Trade waste is to be conveyed to storage containers and within disposal systems in a way that:

- (i) transfers wastes safely and hygienically;
- (ii) avoids the likelihood of *blockage* and leakage;
- (iii) avoids the likelihood of foul air and gases entering buildings;
- (iv) permits the manufacturer, model, serial number and designed capacity to be reasonably easily identifiable after installation; and
- (v) provides *adequate* and safe access for clearing *blockages*.

A.5.2.6.4 Storage, treatment and disposal facilities

Facilities for the storage, treatment and disposal of trade waste are to be constructed:

- (i) with *adequate* treatment and storage capacity for the volume of waste and frequency of disposal;
 - (ii) with *adequate* size, strength and rigidity for the nature, flow rates, volume of wastes, by-products and residues which are to be processed;
 - (iii) with *adequate* vehicle access for collection, if required;
 - (iv) with *adequate* structural strength for pedestrian or vehicular traffic likely to be encountered;
 - (v) to avoid the likelihood of contamination of any potable water supplies installed in compliance with Part A of this *Code*.
 - (vi) to avoid the likelihood of contamination of soils, ground water and waterways except as permitted;
 - (vii) from materials which are impervious both to the waste for which disposal is required and to water;
 - (viii) to avoid the likelihood of foul air and gases accumulating within or entering into buildings;
 - (ix) to avoid the likelihood of unauthorised access by people;
 - (x) to permit cleaning, maintenance, measurement and performance sampling;
 - (xi) to avoid the likelihood of stormwater entering the *sewerage system*;
 - (xii) to avoid the likelihood of uncontrolled discharge; and
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- (xiii) so that the installation throughout its design life will continue to satisfy the requirements of items (i) to (xii).

A.5.2.7 DEEMED TO SATISFY

The following minimum requirements are deemed to satisfy the performance requirements of Clause A.5.2.6

A.5.2.7.1 General

Where pre-treatment facilities are required, they are to comply with the requirements of the appropriate regulatory authority, including those responsible for occupational health and safety, dangerous goods management and environmental protection.

A.5.2.7.2 Agreement requirements

Where the written agreement of the relevant regulatory authority and receiving utility is required, the installation is to comply with the minimum agreement requirements.

A.5.2.7.3 Pre-treatment facilities not required

Where pre-treatment facilities are not required by the relevant regulatory authority, the minimum requirement for Clauses A.5.2.6.3 and A.5.2.6.4 is compliance with AS 3500.2.2.

A.5.2.8 PRODUCT AUTHORISATION

Products used in sanitary plumbing and drainage systems connected to the trade waste units/systems are to be certified and authorised as specified in Part B of this *Code*.

PLUMBING CODE OF AUSTRALIA

PART B

**PRODUCT
CERTIFICATION
AND
AUTHORISATION**

PART B - PRODUCT CERTIFICATION AND AUTHORISATION

B1 SCOPE

This part of the *Plumbing Code of Australia* provides detailed information on the authorisation procedures and requirements for the certification of plumbing products used for Drinking Water and Non Drinking Water delivery and products used for Plumbing and Sanitary Drainage systems based upon the National WaterMark. These certification marks form the basis of the National Certification of Plumbing and Drainage Products Scheme (known as the National Product Certification and Authorisation Scheme) Levels 1 to 3, respectively.

B.2 APPLICATION

This *Part* applies to all plumbing and drainage products that are required to be certified for authorised use in new installations, alterations, additions, replacement and repairs to existing installations.

The National Product Certification and Authorisation Scheme provides for three levels of certification:

Type 1 **The WaterMark Level 1** requires manufacturers to have a quality assurance system to ISO 9002 in place and for products to comply with the relevant Australian Product Standard.

Type 2 **The WaterMark Level 2** requires products to comply with an Australian Standard or approved specification as detailed in AS 5200 and to have a quality assurance system in place.

Type 3 **The WaterMark Level 3** provides an Interim Authorisation for product outside the current scope of the schedule of standards or specifications listed in AS 5200.

The Interim Authorisation covers new or hybrid products where an Australian Standard or WaterMark specification is not available.

This *Part* is not intended for purpose-designed, site-specific product. Where a product is of a specialized nature or are sold in numbers that cannot justify licensing and they have no impact on health issues, manufacturers may wish to seek approval from the local plumbing regulator for each individual installation of the product.

Authority authorisation of plumbing and drainage products issued locally as a permitted product is not part of the National Product Certification and Authorisation Scheme.

This *Part* outlines the appropriate process to enable certifying bodies and manufacturers of plumbing and drainage products to:

- (a) Determine if their types of products are covered by the scheme and, if so, ascertain which Standard or specification is applicable.
- (b) Determine the level of certification.
- (c) Understand the process leading up to certification and beyond.

B.3 REFERENCED DOCUMENTS

The following documents are referred to in this *Part*:

SAA Miscellaneous Publications

MP 52	Manual of authorisation procedures for plumbing and drainage products (also known as AS 5200)
MP 78-1999	Manual for the assessment of risks of plumbing products
AS/NZS 4020	Products for use in contact with drinking water

B.4 DEFINITIONS

For the purpose of this *Part* the definitions below apply.

Authorised products are products that are automatically deemed by the participating authorities as acceptable for use in plumbing and drainage installations, consequent upon the granting of a WaterMark licence by the Certifying Body.

Certification means the process by which plumbing and drainage products are evaluated in accordance with the procedures specified in this *Part*, and are thereby found to satisfy the nominated requirements.

Certified components are components that have been tested in a Certifying Body recognised laboratory to the relevant clauses of the Australian Standard or other accepted published document for Component WaterMark Licensing. Evaluation of test results is undertaken by the Certifying Body.

Certifying Body (CB) means organisation(s) approved by JAS/ANZ to administer the National Product Certification and Authorisation Scheme.

Component is the part, or a subassembly of parts, that contributes to the construction of a total assembly by choice or design which will offer variations of fitment for the application of the major element of the product, whether produced by that same manufacturer or not.

Licence (WaterMark) is a formal document that covers the use of the WaterMark certification trademark owned by Standards Australia. It is granted to manufacturers whose products meet a specific Australian or International Standard or is approved by Water Services Association of Australia (*WSAA*) or other approved published document.

Manufacturer's (or supplier's) warranty means a statement by the manufacturer or supplier of a product that says that the product is suitable for use under specified conditions. The conditions may be limits on water pressure, water temperature or any other operating circumstance.

NOTE: The statement must be included with the product when sold and may be stamped onto the product, printed on the packaging, or included as part of the installation instructions.

Participating authority is an authority that has adopted the National Product Certification and Authorisation Scheme (*see Appendix G*).

Product means a product, product component or an appliance used for the conveyance of drinking water, non drinking water and sanitary and sanitary drainage systems

Recognised testing laboratory means a testing laboratory from which certified test results will be accepted.

NOTE: The laboratory must be one acceptable to the Certifying Body (CB) as being competent to conduct type tests under the WaterMark Scheme.

Regulator is the authority that has statute jurisdiction over the installation of plumbing and drainage work and the authorisation of plumbing and drainage products.

Specification means a specification that is acknowledged by the contributing organisations as applicable to the product being submitted for authorisation. A specification may be an Australian Standard, a requirement as listed in AS 5200 (MP52) or a 'countertop' Specification (prepared by the Certifying Body and manufacturers' and approved by the WS-031 Committee of Standards Australia). Products for which there is no specification cannot be considered for licensing under the National Product Certification and Authorisation Scheme.

Supplier of a product is the applicant to whom the authorisation is issued.

NOTE: Under the WaterMark Scheme, the supplier is the manufacturer.

WaterMark See Licence

WS-031 Committee means the Australian Standards Committee WS-031 Technical Procedures for Plumbing and Drainage Products Authorisation.

WS-014 Committee means the Australian Standards Joint Technical Committee WS-014, National Plumbing and Drainage Code

NOTE:

1. AS 5200 or MP 52 mean the current SAA Miscellaneous Publication MP 52, Manual of authorisation procedures for plumbing and drainage products.

B.5 OBJECTIVES

The objective of this *Part* is to ensure that plumbing products are fit for purpose and that their use in plumbing installations minimises the risks of or avoids the likelihood of:

- (i) personal illness, injury or death;
- (ii) environmental degradation;
- (iii) contamination of the water resource;
- (iv) adverse impact on infrastructure (Private and Public);
- (v) contamination of the water supply;
- (vi) wastage of resources (Water and Energy);
- (vii) premature failure of the product; and
- (viii) the inability of a product to function as intended.

B.6 PRODUCT MARKING

All products certified under the National Product Certification and Authorisation Scheme must be marked with the appropriate certification mark to satisfy the requirements of the participating regulators. In exceptional cases where the product is too small to receive a mark, manufacturers may make application for an exemption to this requirement. Application must be made to the National Product Certification and Authorisation Scheme via the Certifying Body. The system of marking products indicates the following:

WaterMark Level 1

Level 1 is applicable to products that have been tested in a Certifying Body recognized laboratory to the relevant Australian Standard or other accepted published document. Certification must be by evaluation of the test results and auditing the product compliance program at the factory by the Certifying Body. On successful completion, registration to WaterMark Level 1 is affected and involves the manufacturer applying the WaterMark logo to the product. An Interim Authorisation licence is not available for WaterMark Level 1

WaterMark Level 2

Level 2 is applicable to products that have been type tested in a Certifying Body recognized laboratory or for which an acceptable test report from a Certifying Body agreed laboratory is available. Appliances and other nominated products for which TypeTest Certification is required are listed in the Schedule of Specifications in AS 5200.

WaterMark Level 3 is applicable to new or hybrid plumbing, drainage products seeking WaterMark Level 2 certification. Products qualifying for Interim Authorisation will have been tested in a Certifying Body recognized laboratory to a specification approved by the WS-031 Committee. The Certifying Body must undertake evaluation of the test results. An Interim Authorisation licence will terminate at or before a 2-year period during which time the applicant will be required to participate in the development of a relevant Standard or AS 5200 Specification.

TABLE B1 - MINIMUM REQUIREMENTS FOR THE MARKING OF PLUMBING PRODUCTS

Table B1 provides a summary of the levels of product marking referred to in clause B6.

Type of evaluation	Quality assurance	Status	Participation by manufacturers or suppliers
1 Full compliance with a relevant Australian Standard or accepted International Standard	By Certifying Body to the StandardsMark Scheme. Full Product Approval or Type Test + ISO 9000:2000 W¹ WaterMark Level¹	Authorised by all participating regulators	Essential minimum requirement for WaterMark Level 1 licence
2 Full compliance to Australian Standard or approved specification as detailed in AS 5200 (in course of preparation(formerly MP52))	By the Certifying Body to the WaterMark Scheme, Type Test Approval a quality assurance program is required. W² WaterMark Level²	Authorised by all participating regulators	Essential minimum requirement for WaterMark Level 2 licence
3 Interim authorisation to an approved countertop specification	By the Certifying Body, based on risk assessment for level W³ WaterMark Level³	Authorised by all participating regulators for a period of two years only	Essential minimum requirement for countertop approval and WaterMark Level 3 licence

B.7 PRODUCT CERTIFICATION REQUIREMENTS

The product certification requirements for the WaterMark are legally defined as the WaterMark Quality Assurance Program, which becomes a legally binding contract between the Certifying Body and the licensee covering the use of the certification trademark.

The basic requirement is that appropriate controls are in place to ensure all products bearing a certification mark fully comply with the Standard or specification. For guidance, the quality system requirements contained within the Product Compliance Programs (PCP) follow closely the Clauses of the Standard AS/NZS/ISO 9002. Some of the PCP requirements are more specific than AS/NZS/ISO 9002 and, conversely, not all of the requirements of AS/NZS/ISO 9001.

The product certification requirements for the WaterMark Level 2 is legally defined as the TypeTest Mark Certification Scheme, which becomes a legally binding contract between Certifying Body and the licensee covering the use of the certification trademark.

The basic requirement is for the manufacturer to give a warranty that all products bearing the WaterMark Level 2 shall comply with relevant Standard specification. Initial product compliance is verified by a laboratory recognized by the Certifying Body against the appropriate specification.

Products in contact with drinking water

All water supply system components intended for drinking water applications must comply with AS/NZS 4020 as of 5 July 2001.

It is the responsibility of manufacturers, suppliers and installers to verify the suitability of products for drinking water applications

B.8 INTERIM PRODUCT AUTHORISATIONS

Where Interim Authorisation is applied for:

- (i) The WS-031 Committee reserves the right to set conditions with regard to Interim Authorisation, eg. It may request advice from the appropriate Standards Australia Committee or similar group in determining the acceptability of a countertop specification.
- (ii) The WS-031 Committee reserves the right to determine the suitability of any countertop specification for WaterMark authorisation (based on the issues related to health and safety, durability including performance and material requirements).

NOTES:

1. Interim Authorisation can be granted for International (including Australian) and de factor International Standards subject to initial acceptance as a countertop specification by the WS-031 Committee.
2. Products certified as complying with the respective types of certification are listed on the Schedule that accompanies the Licence issued by the Certifying Body.
3. Companies that seek to gain certification of their products under the interim authorisation process should also be aware of any restrictions or limitations with regard to their type of product in its installation.

B.9 PROCEDURES

The process for verifying product compliance and reviewing the manufacturers' quality assurance capabilities must follow uniform procedures and be evaluated against uniformly applied criteria. The products currently covered by the National Product Certification Scheme are listed in AS 5200.

Proposed installation details are to be submitted to Standards Australia Technical Committee WS-014 for a product covered in MP 52 that does not have corresponding installation details in an Australian Installation Code or Standard.

When a plumbing product is not listed in MP 52, the Certifying Body is to assess, in accordance with MP78, the risks associated with its use. Should the outcome of the assessment be that certification of the product is required, the Certifying Body is to seek approval from WS-031.

The installation requirements or limitations will be set by WS-014. Formal testing and assessment for conformance with the product specifications are to be carried out by the Certifying Body only when approvals for functional and installation proposals and product specification have been received from WS-031 and WS-014.

When products are certified in accordance with an approved specification from WS-031, a Certifying Body, on behalf of the Manufacturer is to prepare the Standard for the product. Such Standard is to be completed within 2 years of the WaterMark being issued to the product, failing which the WaterMark will be withdrawn. In such an event the WS-031 will remove the product from the WaterMark register.

An extension may be granted subject only to extenuating circumstances.

Figure B1 details the process for the certification of a plumbing product. The diagram includes administrative details to assist the understanding of the overall process.

Examples are provided in this *Part* for guidance in the use and interpretation of the certification and authorisation process.

B.10 THE CERTIFICATION PROCESS

Where a manufacturer has a new product to be introduced into the market they may arrange for a Certifying Body to assess, in accordance with the requirements of MP52 and MP78. The outcome of the assessment determines whether the product requires certification or not or the level of certification required.

Certification not required

If the outcome of the Certifying Body's assessment is that certification is not required, the Certifying Body is to advise Standards Australia WS-031 Committee of the details of the product and the outcome of the assessment. WS-031 will review the assessment. If WS-031 concurs that the product does not require certification, the manufacturer may produce, market and have the product incorporated in plumbing and drainage installation without the need for a WaterMark certification.

Certification required and Standard available

If the outcome of the Certifying Body assessment is that the product requires certification then the authorised process shown in Example 2 must be followed.

Issues of WaterMark

When the outcome of the assessment indicates that compliance with the Standard and the licence requirements have been met then the Certifying Body is to issue the WaterMark licence for the product and register the product on the WaterMark Register. The information will also be sent to WS-031 Committee and the Authorised Products List will be updated by the managing organisation.

WaterMark Licences are issued for a period of two years. At the end of this period products must be reassessed by a Certifying Body for compliance.

Certification required but no Standard available

As above, the Certifying Body has assessed (to MP 78) that the product requires certification however there is not an appropriate Standard against which to assess compliance. In this case the Certifying Body is to forward an application with the product specification, details of the proposed use and proposed installation methods to the WS-031 Committee for approval. This documentation is to be in a product standard format.

If the product is covered in MP 52 and WS-031 supports the proposal they forward the application details to the WS-014 Committee.

The WS-014 Committee is to advise WS-031 if installation conditions are required. On receipt of the advice, WS-031 will formally advise the Certifying Body of the approval.

The Certifying Body then assesses the manufacture of the product for compliance with the approval and any relevant accompanying condition(s).

If the product is not covered in MP 52, WS-031 is to assess the acceptability of the specification. If necessary the manufacturer and Certifying Body may need to refine the specification before WS-031 will approve it.

Once the specification is approved WS-031 forwards the application details to the WS-014 Committee. From here the certification process is the same as that for products covered in MP 52.

Development of Product Specifications

All new product specifications must be developed on an Australian Standard Product template format and include installation requirements.

Marking of Product

All certified products must be marked unless exempted by the National Plumbing Regulators Forum. Application for exemption shall be made to the National Product Certification and Authorisation Scheme via the Certifying Body.

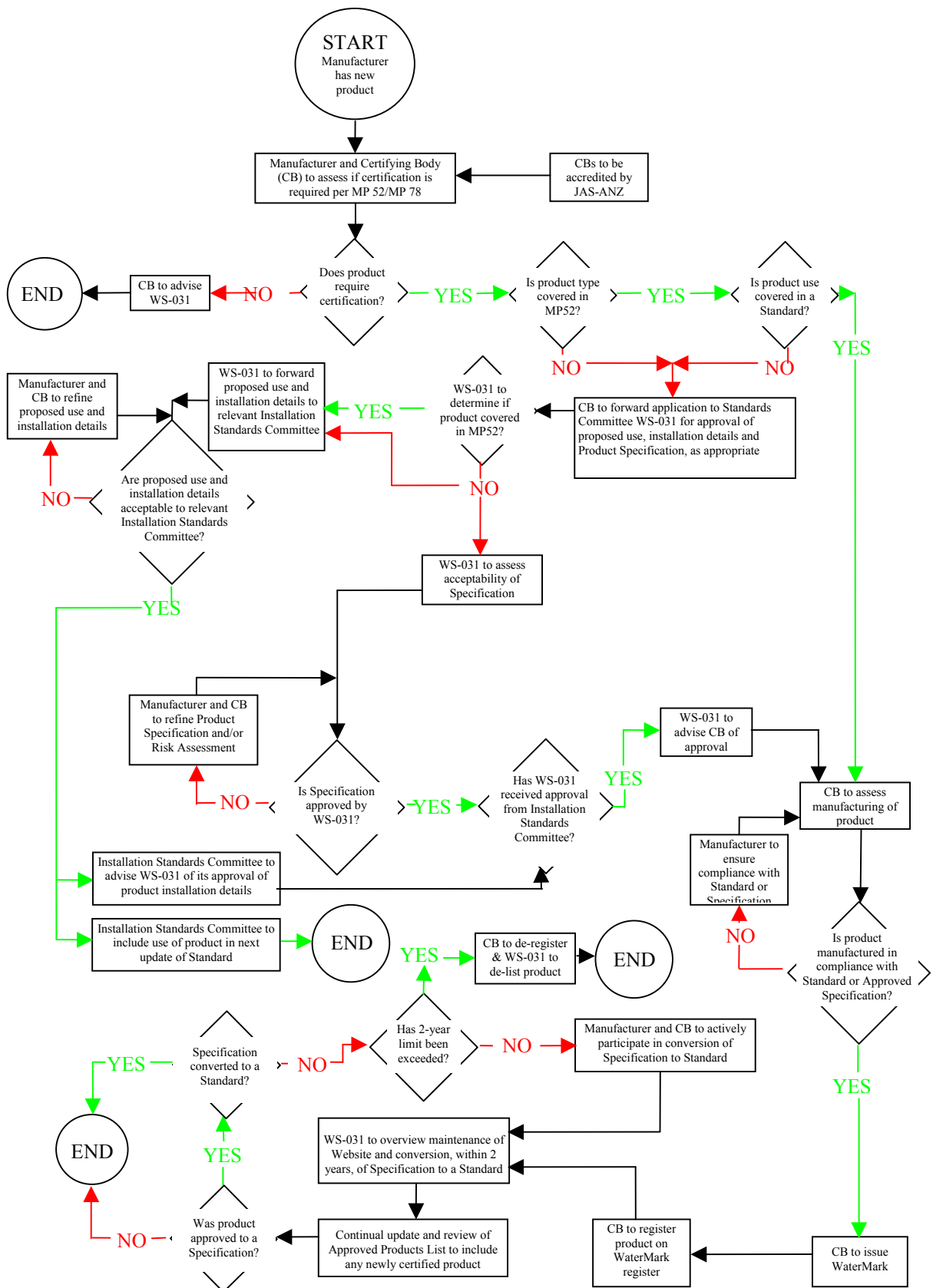


FIGURE B1 – FLOW CHART - PRODUCT CERTIFICATION AND AUTHORISATION

EXAMPLE 1

CERTIFICATION NOT REQUIRED

Follow the **red highlighted** portion of the diagram and numbered squares in Figure B2.

1. STARTS where a manufacturer has a new product to be introduced into the market.
2. The next step calls for the manufacturer and Certifying Body to assess, in accordance with MP 52 and/or MP 78, whether the product requires certification.
3. If the outcome is “**NO**”, the product does not require certification.
4. The Certifying Body is to advise WS-031 the details of the product and the outcome of the assessment.
5. WS-031 considers the advice from the Certifying Body.
6. WS-031 agrees that product does not need to be certified and the process ends.
7. The product may be incorporated in plumbing and drainage installations without having it certified and authorised.
8. If WS-031 does not agree with the Certifying Body’s advice they advise the Certifying Body that product must be certified and provide reasons.
9. Certifying Body advises manufacturer that certification is required.

EXAMPLE 2

PRODUCT REQUIRING CERTIFICATION AND COVERED BY MP 52 AND AN INSTALLATION STANDARD

Following the **blue highlighted** portion of the diagram and numbered squares in Figure B3.

1. STARTS where a manufacturer has a new product to be introduced into the market.
2. The next step calls for the manufacturer and Certifying Body to assess, in accordance with MP 52 and/or MP 78, whether the product requires certification.
3. If the outcome is “YES”, the product requires certification and authorisation.
4. The Certifying Body then determines whether the product is covered in MP 52.
5. If the outcome is, “YES” the Certifying Body must to determine if the product installation is covered in an installation Standard.
6. If there is an appropriate installation standard, the Certifying Body can proceed to assess the manufacturing process for compliance with the relevant Standard.
7. If the Certifying Body assesses that the manufacturing processes do not comply
8. Manufacturers processes will have to be revised until they comply.

The process loop (represented by boxes numbered 6, 7 and 8) is not broken until the manufacture of the product complies with the requirements of the Standard.
9. When the Certifying Body assesses that compliance with the Standard is achieved (box 7) the Certifying Body issues the WaterMark to the product.
10. The Certifying Body then registers the product on the WaterMark register.
11. The information is also sent to WS-031

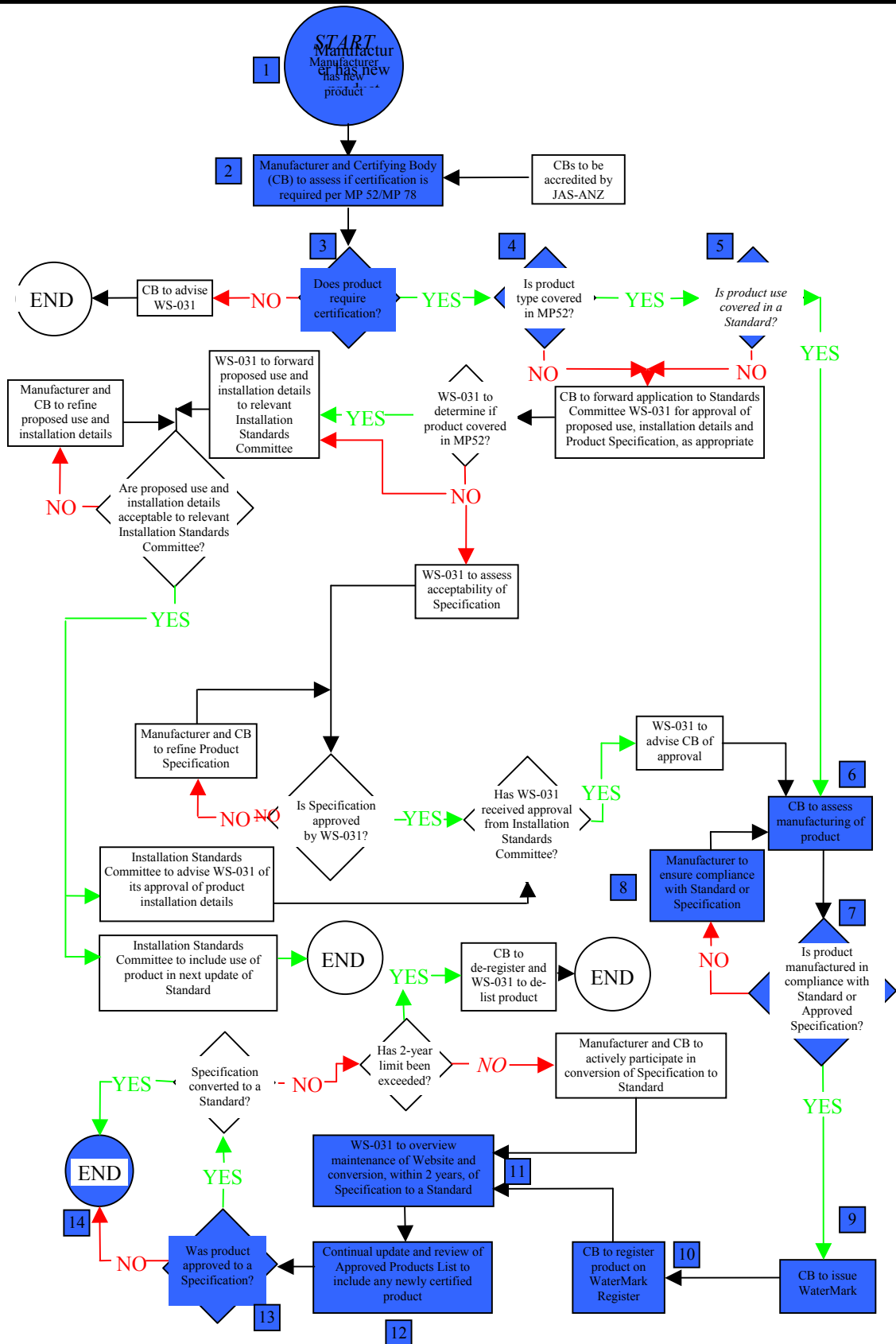


FIGURE B3 – FLOW CHART - PRODUCT CERTIFICATION REQUIRED COVERED BY MP 52 AND AN INSTALLATION STANDARD

EXAMPLE 3

PRODUCT REQUIRES CERTIFICATION AND IS COVERED BY MP 52 BUT NOT AN INSTALLATION STANDARD

For the **green highlighted** portion of the diagram and numbered squares in Figure B4.

1. STARTS where a manufacturer has a new product to be introduced into the market.
2. The next step calls for the manufacturer and Certifying Body to assess, in accordance with MP 52 and/or MP 78, whether the product requires certification.
3. If the outcome is “**YES**”, the product requires certification and authorisation.
4. The Certifying Body then determines whether the product is covered in MP 52.
5. If the outcome is “**YES**” the Certifying Body is to determine if the product installation is covered in an installation Standard.
6. If the product is NOT covered by MP 52 **OR** there is NOT an appropriate installation standard, the Certifying Body forwards draft specification and details of proposed use and installation methods to WS-031 for approval.
7. WS-031 reassesses if product is covered in MP 52.
8. If YES, WS-031 forwards the application details to the relevant Installation Standards Committee.
9. Installation Standards Committee assesses application data for acceptability.
10. The Certifying Body is advised if amendment is required.
11. If the proposed use and installation details are approved, the Installation Standards Committee initiates 2 actions. One is to include details relevant to the product in the next update of the installation Standard.
12. That part of the process ends when this is completed.
13. The second action is to advise WS-031 that approval has been granted.

-
14. On receipt of the advice
 15. WS-031 will formally advise the Certifying Body of the approval.
 16. The Certifying Body then assesses the manufacturer for compliance with the approval and any relevant accompanying condition(s).

From here, the process is the same as in Example 2 Boxes 10 & 11.

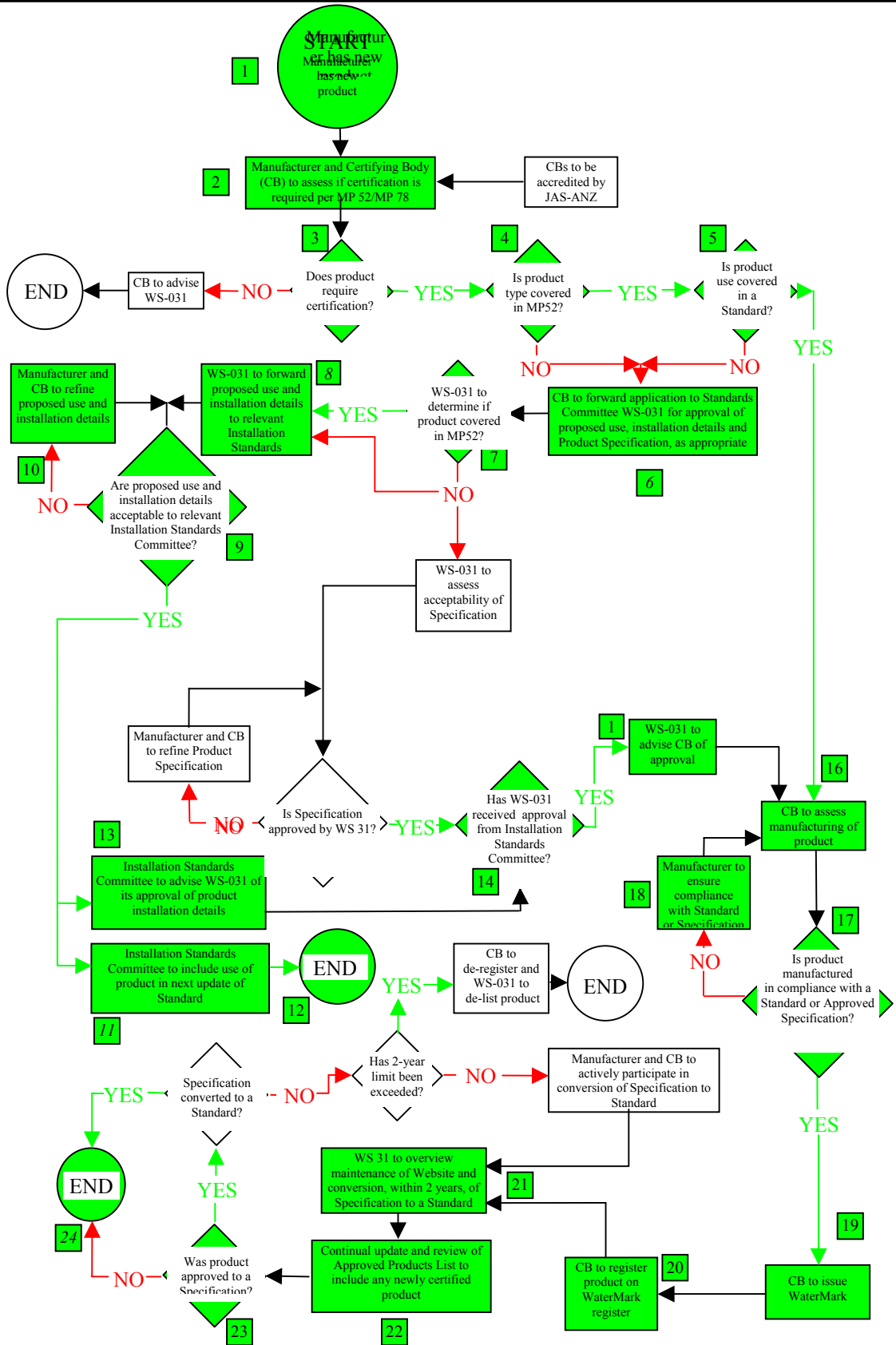


FIGURE B4 – FLOW CHART - PRODUCT CERTIFICATION REQUIRED COVERED BY MP 52 AND NOT COVERED BY AN INSTALLATION STANDARD

APPENDIX 1

DEFINITIONS

Unless the contrary intention appears –

ABCB means Australian Building Codes Board

Adequate means adequate to achieve the particular objective of the *Code*.

Alternative Solution means a *Plumbing Solution* which complies with the *Performance Requirements* other than by reason of satisfying the *Deemed-to-Satisfy Provisions*.

Approved disposal system means a system approved by the relevant regulating authority for the disposal of sewage.

Assessment Method means a method used for determining that a *Plumbing Solution* complies with the *Performance Requirements*.

BCA means the Building Code of Australia.

Blockage means an obstruction within a drainage system.

Code means the Plumbing Code of Australia.

Deemed-to-Satisfy Provisions means provisions which are accepted as satisfying the *Performance Requirements*.

Drainage means any sanitary or stormwater drainage system.

Energy conservation relates to the effective and efficient use of energy through the construction, installation, replacement, repair, alteration and maintenance of plumbing installations and systems.

Expert Judgment means the judgment of a person who has the qualifications and experience to determine whether a *Plumbing Solution* complies with the *Performance Requirements*.

Expert means a person who has the qualifications and experience to determine whether a *Plumbing Solution* complies with the *Performance Requirements*.

Functional Statement describes what the *Plumbing Solution* needs to do to meet the *Objective*.

JAS-ANZ means the Joint Accreditation System of Australia and New Zealand

NPRF means the National Plumbing Regulators Forum

Objective is the broad societal goal.

Overflow devices are devices that provide relief to a water, sewer or stormwater service or system to avoid the likelihood of uncontrolled discharges.

Overflow measures are measures provided in a plumbing or drainage installation which avoid the likelihood of property damage, environmental damage, loss of amenity and protect public health and safety.

Part means the particular part or section of the *Code*.

Performance Requirement means a requirement which states the level of performance which a *Plumbing Solution* is to meet.

Plumbing means water plumbing and sanitary plumbing.

Plumbing Solution means a solution which complies with the *Performance Requirements* and is:

- (i) an *Alternative Solution*; or
- (ii) a solution which complies with the *Deemed-to-Satisfy Provisions*; or
- (iii) a combination of (i) and (ii).

Point of connection for a hot water service means the point where the water heater connects to the cold water service downstream of the isolation valve.

Point of connection for sewage disposal means the point where the sanitary drainage connects to the network utility operator's sewerage system or to an on-site wastewater system.

Point of connection for stormwater disposal means the point where the stormwater drain connects to the network utility operator's stormwater system or to an on-site storage.

Point of connection for a water service means the point where the service pipe within the premises connects to the network utility operator's property service or to an alternative water supply system.

Recognised auditing body means a person or organisation appropriately licensed by the Joint Accreditation System of Australia and New Zealand or one that is accepted by the relevant regulatory authority to carry out the work in the area of plumbing and drainage in question

Recognised credentials means qualifications and experience in the area of plumbing and drainage in question recognised by the relevant regulating authority.

Recognised expert means a person with qualifications and experience in the area of plumbing or drainage in question recognised by the relevant regulating authority.

Resource conservation relates to the effective and efficient use of a resource such as water or energy and the prevention of its contamination.

Watertight means will not allow water to pass from the inside to the outside of the component or joint and vice versa.

Note: Supplementary definitions are also provided in other parts of this *Code* for special terms that occur therein.

APPENDIX 2

STANDARDS ADOPTED BY REFERENCE

1. Schedule of referenced documents

The Standards and other documents listed in Table 1 are referred to in the *Code*.

Table 1 SCHEDULE OF REFERENCED DOCUMENTS			
Document No.	Date	Title	PCA Clause
AS/NZS 1200	2000	Pressure equipment	A.4.7
AS/NZS 1221	1997	Fire hose reels	A.1.4.7
AS 1271	1997	Safety valves, other valves, liquid level gauges, and other fittings for boilers and unfired pressure vessels	A.4.7
AS 1324		Air filters for use in general ventilation and air-conditioning	A.4.7
Part 1	2001	Application, performance and construction	
AS 1345	1995	Identification of the contents of pipes, conduits and ducts	A.4.7
AS 1358	1989	Bursting discs and bursting disc devices - Guide to application, selection, and installation	A.4.7
		Amdt 1 April 1991	
AS 1428		Design for access and mobility	
Part 1	2001	General requirements for access – New building work	A.1.1.7 A.1.2.7 A.1.3.7 A.2.7
Part 2	1992	Enhanced and additional requirements-Building and facilities	A.1.1.7 A.1.2.7 A.1.3.7 A.2.7
Part 3	1992	Requirements for children and adolescents with physical disabilities	A.1.1.7 A.1.2.7 A.1.3.7 A.2.7

Table 1 SCHEDULE OF REFERENCED DOCUMENTS (continued)			
Document No.	Date		PCA Clause
AS/NZS 1546		On-site domestic wastewater treatment units	
Part 1	1998	Septic tanks	A.5.1.7
Part 2	2001	Waterless composting toilets	A.5.1.7
Part 3	2001	Aerated wastewater treatment systems	A.5.1.7
AS/NZS 1547	2000	On-site domestic wastewater management	A.5.1.7
AS/NZS 1571	1995	Copper - Seamless tubes for air-conditioning and refrigeration	A.4.7
AS 1668		The use of mechanical ventilation and air-conditioning in buildings	
AS/NZS 1668			
AS/NZS	1998	Fire and smoke control in multi-compartment buildings	A.4.7
Part 1			
AS Part 2	2002	Ventilation design for indoor air contaminant control	A.4.7
AS Supp 1	2002	Supplement to AS 1668.2: 2002	A.4.7
AS 2118		Automatic fire sprinkler systems	
Part 1	1999	General requirements	A.1.4.7
		Amdt 1, June 2000	
Part 4	1995	Residential	A.1.4.7
Part 5	1995	Domestic	A.1.4.7
Part 6	1995	Combined sprinkler and hydrant	
Part 9	1995	Piping support and installation	A.1.4.7
AS 2419		Fire hydrant installations	
Part 1	1994	System design, installation and commissioning	A.1.4.7
		Amdt 1, Oct 1996	
Part 2	1994	Fire hydrant valves	A.1.4.7
AS 2441	1998	Installation of fire hose reels	A.1.4.7

Table 1 SCHEDULE OF REFERENCED DOCUMENTS (continued)			
Document No.	Date		PCA Clause
AS/NZS 3500		National plumbing and drainage code	
Part 0	1995	Glossary of terms	I.3.3
Part 1.2	1998	Water supply – Acceptable solutions	A.1.1.7 A.1.3.7 A.4.7
Part 2.2	1996	Sanitary plumbing and drainage	A.2.7 A.4.7 A.5.1.7 A.5.2.7.3
Part 3.2	1998	Stormwater drainage – Acceptable solutions Amdt 1 Nov 1998	A.3.7
Part 4.2	1997	Hot water supply systems – Acceptable solutions	A.1.2.7 A.4.7
Part 5	2000	Domestic installations	A.1.1.7 A.1.2.7 A.1.3.7 A.2.7 A.3.7
AS/NZS 3666		Air handling and water systems of buildings-Microbial Control.	
Part 1	2002	Design, installation and commissioning	A.4.7
Part 2	2002	Operation and maintenance	A.4.7
Part 3	2000	Performance-based maintenance of cooling water systems	A.4.7
AS/NZS 4020	1999	Products for use in contact with drinking water Amdt 1 May 2001	
AS 4041		Pressure piping Amdt 1 April 2001	A.4.7
AS 4254	2002	Ductwork for air-handling systems in buildings	A.4.7

Table 1 SCHEDULE OF REFERENCED DOCUMENTS (continued)			
Document No.	Date		PCA Clause
AS 4118		Fire sprinkler systems	
Part 2.1		Piping general	A.1.4.7
AS 4426	1997	Thermal insulation of pipework, ductwork and equipment - Selection, installation and finish	A.4.7
AS 5601	2002	Gas installations	A.4.7
(AG 601)	2002		
MP 52	2001	Manual of authorisation procedures for plumbing and drainage products	B5
(AS 5200)			
MP 78	1999	Manual for assessment of risks of plumbing products	B5
BCA	1996	Building Code of Australia	
Volume 1		Class 2 – 9 Buildings	A.3.7
		Amdt 11, July 2002	A.4.7
Volume 2		Class 1 & 10 Buildings - Housing Provisions	A.3.7
		Amdt 11, July 2002	

APPENDIX 3

STATE & TERRITORY VARIATIONS

CONTENTS

Australian Capital Territory (Appendix)

New South Wales (Appendix)

Northern Territory (Appendix)

Queensland (Appendix)

South Australia (Appendix)

Tasmania (Appendix)

Victoria (Appendix)

Western Australia (Appendix)

APPENDIX 3

AUSTRALIAN CAPITAL TERRITORY

INTRODUCTION

(Sample text only)

This Appendix contains variations and additions to the Plumbing Code of Australia (PCA) provisions which are considered necessary for the effective application of the *Code* in the Australian Capital Territory and shall be treated as amendments to the *Code*.

APPENDIX 3

NEW SOUTH WALES

INTRODUCTION

(Sample text only)

This Appendix contains variations and additions to the Plumbing Code of Australia (PCA) provisions which are considered necessary for the effective application of the *Code* in New South Wales and shall be treated as amendments to the *Code*..

APPENDIX 3

NORTHERN TERRITORY

INTRODUCTION

(Sample text only)

This Appendix contains variations and additions to the Plumbing Code of Australia (PCA) provisions which are considered necessary for the effective application of the *Code* in the Northern Territory.

APPENDIX 3

QUEENSLAND

INTRODUCTION

(Sample text only)

This Appendix contains variations and additions to the Plumbing Code of Australia (PCA) provisions which are considered necessary for the effective application of the *Code* in Queensland and shall be treated as amendments to the *Code*.

APPENDIX 3

SOUTH AUSTRALIA

INTRODUCTION

(Sample text only)

This Appendix contains variations and additions to the Plumbing Code of Australia (PCA) provisions which are considered necessary for the effective application of the *Code* in South Australia and shall be treated as amendments to the *Code*.

APPENDIX 3

TASMANIA

INTRODUCTION

(Sample text only)

This Appendix contains variations and additions to the Plumbing Code of Australia (PCA) provisions which are considered necessary for the effective application of the *Code* in Tasmania and shall be treated as amendments to the *Code*.

APPENDIX 3

VICTORIA

INTRODUCTION

(Sample text only)

This Appendix contains variations and additions to the Plumbing Code of Australia (PCA) provisions which are considered necessary for the effective application of the *Code* in Victoria and shall be treated as amendments to the *Code*.

APPENDIX 3

WESTERN AUSTRALIA

INTRODUCTION

(Sample text only)

This Appendix contains variations and additions to the Plumbing Code of Australia (PCA) provisions which are considered necessary for the effective application of the *Code* in Western Australia and shall be treated as amendments to the *Code*.