



INFORMATION SHEET

BUILDING SERVICES

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DOES BUILDING WORK ALWAYS NEED TO COMPLY WITH AUSTRALIAN STANDARDS?

The mere fact that an Australian Standard exists does not mean that there is a legal requirement to use them. Australian Standards have no legal standing in their own right and only obtain legal status when they are referenced in legislation, mandatory codes of practice or when contract documents directly reference them.

Some recent tribunal cases considered similar matters related to this and the findings were that only the applicable Australian Standard referenced in the enacting legislation, including the version (date and/or amendment number) listed in the legislation, had legal status.

The following information outlines the regulatory requirements for building work and how Australian Standards fit into that framework.

It is also important to note that where an inconsistency occurs between the requirements of an Australia Standard and the enacting legislation which calls up the Building Code of Australia (BCA), the requirements of the BCA will take precedence.

What are Australian Standards?

Australian Standards are documents pertinent to a particular subject, field or industry. In the building industry they deal with building material specifications, testing criteria and specifications, or simply how to design and/or build construction elements.

Australian Standards are described using the abbreviation AS followed by a number, its year of publication and then its title, for example *AS 3740 - 2010 Waterproofing of domestic wet areas*. This is generally shortened to AS followed by the number, such as AS 3740.

Australian Standards are produced by an organisation known as Standards Australia. Standards Australia is an independent non-profit, non-government organisation that writes and prepares its own publications.

Building legislation & Australian Standards

Building legislation in every state and territory makes direct reference to the National Construction Code (NCC) calling it up as the technical standard that new building work must meet.

The NCC is published in three volumes. The BCA is Volumes One and Two of the NCC and the Plumbing Code of Australia (PCA is Volume Three of the NCC.

It is important to note that building legislation only refers to the NCC and not to individual Australian Standards. There are other sectors in the building industry where legislation does make direct reference to Australian Standards, such as electrical work or workplace health & safety. This is not the case for building legislation.

Figure 1 depicts the Australian building regulatory framework in relation to Australian Standards and their legal status.

NOTE: This information sheet will address the requirements of the BCA Building Code of Australia bearing in mind the requirements for the PCA Plumbing Code of Australia are almost identical. The references herein are related to BCA Volume Two.

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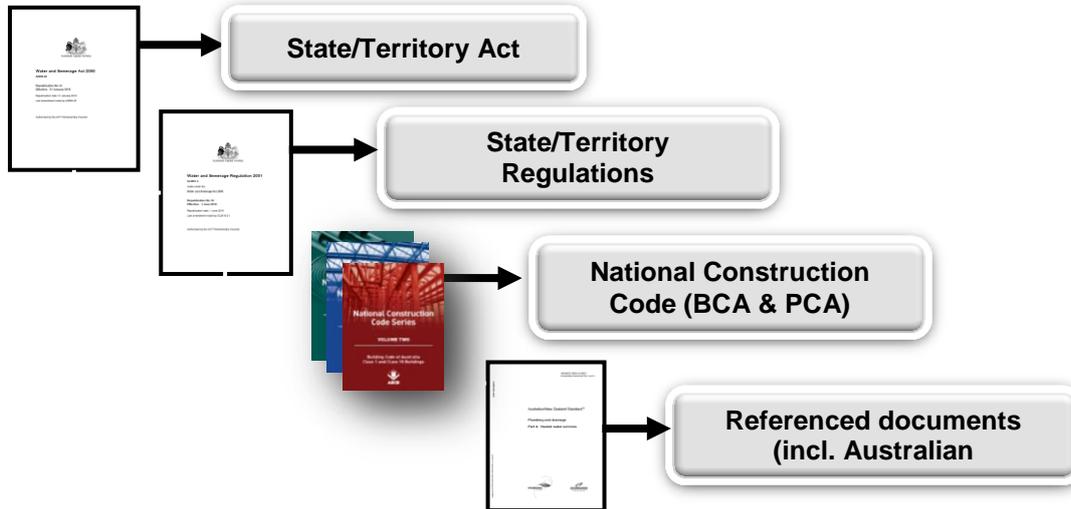
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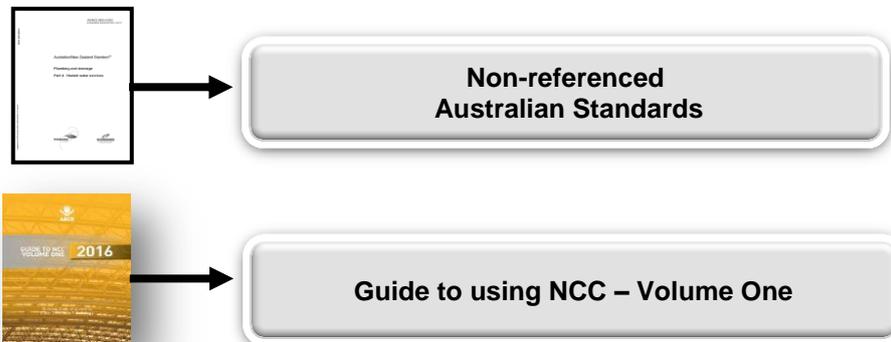
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Figure 1: Australian Building Regulatory Framework

Compliance Level – i.e. mandatory (must be complied with)



Guidance Level – i.e. non mandatory (may or can be used for guidance in meeting mandatory requirements)



The Building Code of Australia & Australian Standards

A common myth in building in accordance with the BCA is that compliance is achieved by only following an Australian Standard. This misconception is shared by designers, builders and certifiers alike and is also prevalent within the legal and judicial sectors as well.

So to break down where and when Australian Standards applies it is important to understand how compliance with the BCA is achieved.

Compliance with the BCA is achieved by satisfying the Performance Requirements. There are two pathways for a building design to meet those requirements – the use of a Performance Solutions or a Deemed-to-Satisfy Solution.

Generally speaking, for a Class 1 and Class 10 building a Performance Solution is the compliance pathway used when a new or innovative material or form of construction is used and is not prescribed in the Deemed-

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to-Satisfy Provisions or the design seeks to vary the construction methods offered by the Deemed-to-Satisfy Provisions.

In the most part the BCA references Australian Standards and other documents such as the National Association of Steel-framed Housing (NASH), as part of the Deemed-to-Satisfy Provisions and their use forms part of a Deemed-to-Satisfy Solution.

BCA Volume 2 (2016) refers to approximately 80 Australian Standards and other documents. A full list of the Australian Standards referenced in Volume Two is at **Appendix A**.

In referencing the Australian Standards and other documents the BCA is quite precise when specifying the version of any referenced document. New standards, or amendments to existing standards are not automatically adopted.

Documents do not become part of the BCA until they have been referenced by the code. Australian Standards and other documents that are not referenced could still be used as part of a Performance Solution to demonstrate compliance with the Performance Requirements.

Partial references

A few words of caution, some Australian Standards are referenced by the BCA in their entirety and some are only referenced in part. Where only a part of the standard is referenced the remainder of the standard is irrelevant and has no authority.

An example of this is the Weatherproofing Verification Method V2.2.1 in Volume Two {specifically clause (c)(i)(B) and (C)} where it specifically and only refers clauses 8.5.2 to 8.6.2 of AS/NZS 4284.

Also important to note is that an Australian Standard may be referenced in its entirety but the BCA may also prescribe requirements in addition to compliance with the Australian Standard including prescribing the context for which the Australian Standard is referenced.

For example:

The BCA contains a number of requirements for a window in a Class 1 building. Under the Deemed-to-Satisfy Provisions it references AS 2047 for the design and construction of a window. Additionally, the Deemed-to-Satisfy Provisions in 3.9.2.5 contain a concurrent requirement for an openable window in a bedroom which is 2m or more above the surface beneath, for it to have restrictions on the openable portion of the window.

It is also important to note that a window complying with AS 2047 also needs to be installed in the right application i.e:

- if the window is installed within 500 mm from the finished floor level there is additional human impact requirements for the glazing; and
- if the window is to be installed in an area with a designed wind speed of more than N3, additional structural loading requirements apply to the window.

Therefore you to that the material, product, design or form of construction satisfies all relevant requirements of the BCA.

Contracts and Australian Standards

It is prudent to always review the contract documents to ascertain whether any additional Australian Standards or other documents have been referenced in addition to those prescribed in the Building Code of Australia. The client or the builder have discretion to include direct references to Australian Standards in the contract, the plans or the specification (which are part of the contact documents). It is essential that you check this.

So, does building work always need to comply with Australian Standards?

No.

Standards that **are not** referenced in the BCA either in whole or in part, and standards that **are not** specified in the contract documents, should have no bearing on the design and/or construction of a building.

The building plans and specification should clearly identify whether the design is using a Deemed-to-Satisfy Solution or a Performance Solution (and where applicable, an Australia or international standard) for any part of the building work. It is essential to ensure that the building surveyor/certifier issuing the building approval is aware of which pathway will be used for each element of construction.

It is for this reason that HIA believes unreferenced Australian Standards should have no role in compliance checks or post occupancy dispute when they arise.

The BCA is now freely available on line so if you do not have an up to date copy it is recommended that you log onto the [ABCB website](#) and sign up.



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Appendix A- BCA VOLUME TWO STANDARDS ADOPTED BY REFERENCE

Standard No.	Title
AS/NZS 1170: • Part 0 • Part 1 • Part 2 • Part 3	Structural design actions – • General principles • Permanent, imposed and other actions • Wind actions • Snow and ice actions
AS 1170.4	Structural design actions – Earthquake actions in Australia
AS 1273	Unplasticized PVC (UPVC) downpipe and fittings for rainwater
AS/NZS 1276.1	Acoustics – Rating of sound insulation in buildings and of building elements: Airborne sound insulation
AS 1288	Glass in buildings – Selection and Installation
AS 1289 (Method 6.3.3)	Methods of testing soils for engineering purposes – Determination of the penetration resistance of a soil – Perth sand penetrometer test
AS 1397	Continuous hot dip metallic coated sheet steel and strip – coatings of zinc and zinc alloyed with aluminium and magnesium
AS 1530: • Part 1 • Part 2 • Part 4	Methods for fire tests on building materials, components and structures – • Combustibility test for materials • Test for flammability of materials • Fire-resistance test of elements of construction
AS/NZS 1530.3	Methods for fire tests on building materials, components and structures – simultaneous determination of ignitability, flame propagation, heat release and smoke release
AS 1562.1	Design and installation of sheet roof and wall cladding
AS/NZS 1562: • Part 2 • Part 3	Design and installation of sheet roof and wall cladding – • Corrugated fibre-reinforced cement • Plastics
AS/NZS 1664: Part 1 Part 2	Aluminum structures – Limit state design Allowable stress design
AS 1668.2	The use of ventilation and airconditioning in buildings – Mechanical ventilation in buildings
AS 1670.1	Fire detection, warning, control and intercom systems – Systems commission: Fire
AS/NZS 1680.0	Interior lighting – Safe movement
AS 1684: • Part 2 • Part 3 • Part 4	Residential timber-framed construction – • No-cyclonic areas • Cyclonic areas • Simplified – Non-cyclonic areas
AS 1720: • Part 1 • Part 5	Timber structures – • Design methods • Nailplated timber roof trusses
AS/NZS 1859.4	Reconstituted wood-based panels – Specifications – Wet-processed fibreboard
AS 1926 • Part 1 • Part 2 • Part 3	Swimming pool safety – • Safety barriers for pools • Location of safety barriers for swimming pools • Water recirculation systems
AS 2047	Windows and external doors in buildings

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AS 2049	Roof tiles
AS 2050	Installation of roof tiles
AS 2159	Piling – Design and installation
AS/NZS 2179.1	Specification for rainwater goods, accessories and fasteners – metal shape or sheet rainwater goods and metal accessories and fasteners
AS/NZS 2269.0	Plywood – Structural - Specifications
AS 2327.1	Composite structures – simply supported beams
AS 2870	Residential slabs and footings
AS/NZS 2904	Damp-proof courses and flashings
AS/NZS 2908.2	Cellulose cement products – flat sheets
AS/NZS 2918	Domestic solid fuel burning appliances - Installation
AS/NZS 3500:	Plumbing and drainage
• Part 3	• Stormwater drainage
• Part 5	• Housing installations
AS 3600	Concrete structures
AS 3660:	Termite management:
• Part 1	• New building work
• Part 3	• Assessment criteria for termite management systems
AS 3700	Masonry structures
AS 3740	Waterproofing of domestic wet areas
AS 3786	Smoke alarms using scattered light, transmitted light or ionization
AS 3959	Construction of buildings in bushfire-prone areas
AS 4055	Wind loads for housing
AS 4072.1	Components for the protection of openings in fire-resistant separating elements – service penetrations and control joints
AS 4100	Steel structures
AS/NZS 4200:	Pliable building membranes and underlays:
• Part 1	• Materials
• Part 2	• Installation
AS 4254:	Ductwork for air-handling systems in buildings:
• Part 1	• Flexible duct
• Part 2	• Rigid duct
AS/NZS 4256:	Plastic roof and wall cladding material:
• Part 1	• General requirements
• Part 2	• Unplasticized polyvinyl chloride (UPVC) building sheets
• Part 3	• Glass fibre reinforced polyester (GFR)
• Part 5	• Polycarbonate
AS/NZS 4284	Testing of building facades
AS/NZS 4505	Garage doors and other large access doors
AS 4586	Slip resistance classification of new pedestrian surface materials
AS/NZS 4600	Cold-formed steel structures
AS 4654:	Waterproofing membranes for external above-ground use:
• Part 1	• Materials
• Part 2	• Design and Installation
AS 4773:	Masonry for small buildings:
• Part 1	• Design
• Part 2	• Construction
AS/NZS 4859.1	Materials for the thermal insulation of buildings – General criteria and technical provisions
AS 5146.1	Reinforced autoclaved aerated concrete – Structures
SA TS 101	Design of post-installed and cast-in fastenings for use in concrete
Non-Australian Standards adopted by reference	
ASTM D3018–90	Class A asphalt shingles surfaced with mineral granules
ABCB	Protocol for Structural Software, Version 2011.1
ABCB	Standard for Construction of Buildings in Flood Hazard Areas, Version 2012.2

ISO 717.1	Acoustics – Rating of sound insulation in buildings and of building elements – Airborne sound insulation
ISO 8336	Fibre cement flat sheets
NASH Standard	Steel Framed Construction in Bushfire Areas
NASH Standard: • Part 1 • Part 2	Residential and Low-Rise Steel Framing: • Design Criteria • Design Solutions
Northern Territory	deemed to comply Standards manual
TN 61	Cement Concrete and Aggregates Australia – Articulated walling

Notes:

1. Only the edition of the standard listed in the BCA i.e. year together with any amendment, is the applicable version which can be used as part of a Deemed-to-Satisfy Solution.
2. The BCA additionally contains a list of standards in Part 1.4 of BCA Volume Two that are referenced in State and Territory Variations and Additions to the national BCA provisions.
3. A standard referenced in the BCA (primary reference) may also contain a reference to another document (secondary reference). In these situations the secondary document also forms part of the legislative requirements, but only in so much as is relevant in the context in which the document is quoted.