



PLANNING circular

BUILDING SYSTEM

Building regulation advisory note

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Related	

Commencement of the Building Code of Australia 2009

This circular is to advise councils, accreditation bodies, relevant government agencies, industry groups and other stakeholders of the commencement of the Building Code of Australia (BCA) 2009; and the Environmental Planning and Assessment Amendment (Building Code of Australia) Regulation 2009.

Background

The Building Code of Australia (BCA) is amended on an annual cycle with each new amendment beginning on 1 May of the relevant year.

BCA 2009, which commences on 1 May 2009, is given legal effect in NSW through the *Environmental Planning and Assessment Act 1979* (EP&A Act) and the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation), which ‘call-up’ the BCA as amended from time-to-time.

BCA 2009 does not contain any major reforms, however, it incorporates amendments identified through the Australian Building Code Board’s (ABCB’s) Proposal For Change process. The BCA 2009 changes provide the opportunity to focus on issues of clarification and better understanding, and application of the BCA, which is of considerable benefit to all stakeholders and end users of the BCA.

It should be noted in relation to places of public entertainment that a package of reforms for the regulation of entertainment is currently being developed by the Department, which includes the definition of a new term ‘entertainment venue’. While the reform package is not yet completed, the term ‘entertainment venue’ has been included in the NSW Appendix of BCA 2009—however, its implementation is delayed until the EP&A Regulation is amended as part of these reforms. Further information will be issued on this at a later date.

BCA 2009

The purpose of the BCA 2009 amendment is to make changes to Volume One (Class 2 to 9 buildings) and Volume Two (Class 1 and 10 buildings) as follows.

In both Volumes:

- update referenced documents
- delete all references to the older loading standards contained in the AS 1170 series (except for AS 1170.4 1993) and all provisions referring to them, due to the expiry of the agreed transition period
- simplify the wire balustrade provisions, including the addition of a Verification Method
- clarify how distances are measured in the construction of sanitary compartments to enable an unconscious occupant to be removed
- clarify the required height of rooms with a sloping ceiling and in an attic
- further update the energy efficiency provisions
- include minor technical changes for clarity and consistency.

In Volume One only:

- clarify the application of the vertical separation provisions
- clarify the intent of separation of equipment.

BCA 2009—NSW Appendix

The purpose of amendments to the NSW Appendices is to make changes, as follows.

In both Volumes (NSW Appendices):

- include a new footnote under Electrical Installations.

In Volume One (NSW Appendix) only:

- delete NSW C3.2(a) due to it being incorporated into the main BCA
- make editorial changes to a number of references to Subsection J(A) and J(B)
- amend all references to public entertainment in the NSW Appendix, to read ‘entertainment venue’ as follows:
 - replace the definition of place of public entertainment with a new definition of ‘entertainment venue’ which refers to the definition under the EP&A Regulation
 - amend other definitions, as appropriate, to substitute the new term ‘entertainment venue’
 - delete references to place of public entertainment wherever occurring in the NSW Appendix and replace them with the new term ‘entertainment venue’.

Note: a number of these replacements have been omitted in BCA 2009—NSW Table D 1.13 and the title to NSW Part H101. It was intended that these provisions also refer to the new term ‘entertainment venue’. This will be rectified with BCA 2010.

EP&A Amendment (Building Code of Australia) Regulation 2009

The EP&A Amendment (Building Code of Australia) Regulation 2009, published on 1 May 2009, delays the commencement of all the amendments that apply the term ‘entertainment venue’, as described in the above section (BCA 2009—NSW Appendix), until such time as the EP&A Regulation is amended to make provision for entertainment venues.

As a ‘savings and transitional regulation’, EP&A Amendment (Building Code of Australia) Regulation 2009 ensures that until the definition of ‘entertainment venue’ is included in the EP&A Regulation, the BCA will continue to apply as if the amendment of the term had not been made. The practical effect of the regulation amendment is that the defined term ‘place of public entertainment’ and its use in BCA 2008 will continue to apply until ‘entertainment venue’ is defined in the EP&A Regulation.

Further information

The ABCB’s List of Amendments for each volume, listing each individual change made under BCA 2009 is attached to this circular.

It is also the Department’s intention to issue a further circular on BCA 2009 at a later date to provide practitioners with more comprehensive information on the changes to the BCA and their application in NSW.

Note: This and other Department of Planning Building Circulars are published on the web at <http://www.planning.nsw.gov.au/planningsystem/brans.asp>.

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Important note

This circular does not constitute legal advice. Users are advised to seek professional advice and refer to the relevant legislation, as necessary, before taking action in relation to any matters covered by this circular.

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LIST OF AMENDMENTS - BCA 2009 - VOLUME ONE

This set of notes has been prepared by the Australian Building Codes Board to assist BCA users in identifying changes incorporated in the 2009 edition of Volume One of the BCA (BCA 2009).

The notes provide a description of major changes made from the previous edition of the BCA. If additional information is required to assist in understanding, interpreting or applying the provisions of BCA 2009, reference should be made to the Guide to the BCA.

While the Australian Building Codes Board has attempted to include all major changes made from the previous edition of the BCA Volume One, the Board does not give any warranty nor accept any liability in relation to the contents of this list of amendments.

BCA Reference	Change and Commentary	
Section A		
A1.1		The following definitions have been inserted or amended:
	Air-conditioning	Clarification added that "air-conditioning" does not include a service that directly cools or heats cold rooms and hot rooms.
	Assembly building	Examples of types of assembly buildings added.
Figure A1.1	Climate zone map	The climate zone map in Figure A1.1 has been updated.
Table A1.1		In Victoria, the climate zone for Bairnsdale has been changed to 6.
	Conditioned space	A Class 6 building where the input power to an air-conditioning system is not more than 15 W/m ² has been added to the spaces not considered to be a "conditioned space".
	Fire hazard properties	Clarification added on which fire hazard properties must be determined as defined in A1.1 and which must be determined in accordance with Specification A2.4.
	Fire-source feature	The far boundary of lakes and rivers added to the list of features considered to be a fire-source feature.
	Glazing	The intent of the definition has been clarified by referring to the "envelope" of the building rather than the "external fabric" of the building.
	Illumination power density	Clarification added that the power used by floor standing lamps, desk lamps or work station lamps plugged into socket outlets and for intermittent use is not included when determining the illumination power density.
	Lamp power density	Clarification added that the power used by floor standing lamps, desk lamps or work station lamps plugged into socket outlets and for intermittent use is not included when determining the lamp power density.
	Sarking-type material	Clarification added that a sarking-type material includes reflective insulation.
A1.3(d)		New provision inserted clarifying that where a document listed in Specification A1.3 is subject to publication of a new edition, the new edition need not be complied with in order to comply with the Deemed-to-Satisfy Provisions.
A2.4		Clarification added on which fire hazard properties must be determined as defined in A1.1 and which properties must be determined in accordance with Specification A2.4.
A3.2		Class 6: Clarification added that Class 6 includes bar areas other than those that are an assembly building.

BCA Reference	Change and Commentary
Specification A1.3 Table 1	<p>The following references have been inserted or amended:</p> <p>AS/NZS 1170 Part 1 Amdt 2 to AS/NZS 1170 "Structural design actions" Part 1 "Permanent, imposed and other actions" referenced.</p> <p>AS 1170 Part 1 After the expiry of the agreed transition period, reference to AS 1170 "Minimum design loads on structures" Part 1 "Dead and live loads and load combinations" 1989 has been deleted.</p> <p>AS 1170 Part 2 After the expiry of the agreed transition period, reference to AS 1170 "Minimum design loads on structures" Part 2 "Wind loads" 1989 has been deleted.</p> <p>AS 1170 Part 3 After the expiry of the agreed transition period, reference to AS 1170 "Minimum design loads on structures" Part 3 "Snow loads" 1990 has been deleted.</p> <p>Note: The ABCB expects to delete reference to AS 1170 "Minimum design loads on structures" Part 4 "Earthquake loads" 1993 as part of the changes for BCA 2010.</p> <p>AS 1684 Part 2 Amdt 1 to AS 1684 "Residential timber-framed construction" Part 2 "Non-cyclonic areas" referenced.</p> <p>AS 1684 Part 3 Amdt 1 to AS 1684 "Residential timber-framed construction" Part 3 "Cyclonic areas" referenced.</p> <p>AS 1684 Part 4 Amdt 1 to AS 1684 "Residential timber-framed construction" Part 4 "Simplified — non-cyclonic areas" referenced.</p> <p>AS 1720 Part 1 The notes to AS 1720 "Timber structures" Part 1 "Design methods" have been deleted due to deletion of all references to the older loading standards contained in the AS 1170 series.</p> <p>AS 2419 Part 1 As a consequence of changes to C2.12, reference to that provision has been included for AS 2419 "Fire hydrant installations", Part 1 "System design, installation and commissioning".</p> <p>AS 3700 The notes to AS 3700 "Masonry structures" have been deleted as a consequence of changes to B1.4.</p> <p>AS/NZS 4859 Part 1 The note to AS/NZS 4859 "Materials for the thermal insulation of buildings", Part 1 "General criteria and technical provisions" allowing test and calculation reports demonstrating compliance with the standard carried out prior to the introduction of Amdt 1 has been removed after the expiry of the agreed transition period.</p> <p>ABCB Reference to the ABCB "Protocol for House Energy Rating Software Version 2005.1" has been deleted after the agreed transition period with the 2006.1 version.</p>
Section B	
BP1.1(b)(xv)	Termite actions have been included as one of the actions to which a building may reasonably be subjected.
B1.0(a)	<p>With the deletion of the older loading standards except for the 1993 edition of AS 1170.4, the provision has been amended to clarify that the relevant Performance Requirements are satisfied —</p> <ul style="list-style-type: none"> • by complying with B1.1, B1.2 and B1.4; or • for the earthquake resistance component of the Performance Requirements, by complying with B1.3 and B1.4.

BCA Reference	Change and Commentary
B1.3	With the deletion of the older loading standards except for the 1993 edition of AS 1170.4, the provision has been amended to only refer to determination of earthquake loads. All other references to superceded loading standards have been removed.
B1.4	With the deletion of the older loading standards except for the 1993 edition of AS 1170.4, the provision has been amended to require earthquake actions on masonry structures to be determined in accordance with AS 1170.4 (2007). This means that AS 1170.4 (1993) cannot be used to determine earthquake actions for masonry structures.
Specification B1.2, Clause 1	Both references to AS 1170.2 deleted due to the deletion of all references to the older loading standards contained in the AS 1170 series.
Section C	
C2.4(b)(i)	Clarification added that the vehicular access must provide continuous access for emergency vehicles around the entire building.
C2.5(b)(ii)	C2.7 has been added to the provisions which are overridden by C2.5(b)(ii) which requires a floor separating a fire compartment in a Class 9c building from the remainder of the building to have an FRL of 60/60/60. C2.7(c)(i) requires a floor separating fire compartments to have the same FRL as a fire wall, which is not intended to apply in this case.
C2.6(c)	New provision inserted clarifying the meaning of window or other opening when used in C2.6.
C2.7(a)(iii)	The term "roof sarking" has been replaced with the defined term "sarking-type material" to clarify that reflective insulation or other flexible membranes used for waterproofing, vapour proofing or thermal reflectance may cross a fire wall.
C2.12(a)	<ul style="list-style-type: none"> • The exemption for the separation of lift motors and lift control panels to be separated by construction having an FRL of not less than 120/-, has been moved from (a)(i) to (d)(ii) so that all the required FRL's are contained together in (d). • Clarification has been added to (ii) that the generators referred to are only those that are used to sustain emergency equipment operating in the emergency mode. • The reference to central smoke control plant has been moved to be a separate listed item. This has resulted in the subsequent items being re-numbered. • Clarification has been added in the new (v) that the battery or batteries referred to are only those that are installed in the building and that have a voltage exceeding 24 volts and a capacity exceeding 10 ampere hours.
C2.12(b)	To be consistent with the wording of (a), the provision has been amended to refer to equipment that need not be separated in accordance with (a).
C2.12(c)	Reference has been made to AS 2419.1 — Fire hydrant installations, instead of a general reference to E1.3.
C2.12(d)	The provision has been redrafted to require the separating construction between a lift shaft or motor room and the remainder of the building to have an FRL of not less than 120/-.
C3.2(a)	C3.2(a) has been deleted, to allow openings in external walls to be any distance from a fire-source feature. Consequently, the NSW variation to this provision has been deleted and the remaining subclauses have been re-numbered.
C3.2(b)(ii) (New C3.2(a)(ii))	As a consequence of the changes to the definition of "fire-source feature", reference to a river, lake or the like has been added.

BCA Reference	Change and Commentary
C3.4(a)	To assist in the readability of the provision, it has been restructured. There has been no technical change other than clarifying that the automatic windows and fire shutters must be automatic closing and that sprinkler protection of other openings is not permitted where the opening consists of a void.
Specification C1.1, Clause 3.1(c)(iii)	The term "roof sarking" has been replaced with the defined term "sarking-type material" to clarify that reflective insulation or other flexible membranes used for waterproofing, vapour proofing or thermal reflectance may cross an internal wall required to have an FRL.
Specification C1.1, Clause 4.1(d)(iii)	The term "roof sarking" has been replaced with the defined term "sarking-type material" to clarify that reflective insulation or other flexible membranes used for waterproofing, vapour proofing or thermal reflectance may cross an internal wall required to have an FRL.
Specification C1.1, Clause 4.3(b)	New sub-clause inserted allowing the concession for Class 2 buildings to apply where one storey is used solely for carparking. The concession is similar to that contained in clause 3.10(b). However, allowance of an additional storey has not been included due to the maximum rise in storeys of a Class 2 building of Type B construction being 2.
Specification C1.1, Clause 5.1(d)(iii)	The term "roof sarking" has been replaced with the defined term "sarking-type material" to clarify that reflective insulation or other flexible membranes used for waterproofing, vapour proofing or thermal reflectance may cross an internal wall required to have an FRL.
Specification C2.5, Clause 3(b)(iii)	Amended to clarify that all penetrations of the ceiling are to be sealed against the free passage of smoke.
Section D	
DV1	New Verification Method inserted setting procedures for the testing of wire balustrades as an alternative to complying with the relevant Deemed-to-Satisfy Provisions contained in D2.16.
D1.3(a)	Clarification added that the extra storey included in Class 2 or 3 buildings can be of any classification.
D1.3(b)(iii)	Clarification added that the extra storey included in Class 5 to 9 buildings can be of any classification.
D2.16(a) and (b)	<ul style="list-style-type: none"> • All situations where subclause (a) does not apply have been consolidated into a new subclause (b). Consequently, all the remaining subclauses have been re-numbered. • Clarification added that the requirement to provide a balustrade or other barrier does not apply to a retaining wall unless the retaining wall unless it is associated with a delineated path of access to a building from a road, or between buildings.
D2.16(i)(ii)	Reference to Note 4 in Table D2.16a added.
D2.16(i)(iii)(C)	Maximum spacing between rails for a continuous vertical wire balustrade increased from 800 mm to 900 mm to allow a wider range of balustrade designs.
Table D2.16a	Table amended by revising some tension values, providing a greater range of wires and wire spacings, deleting galvanised wire, deleting deflection values (now in new Table D2.16c), and providing additional notes.
Table D2.16b	Table amended by revising the wire spacings, providing new tension values to each wire listed and providing additional notes.
Table D2.16c	New table included providing only deflection values. The table has been derived from the old Table D2.16a but with revised values.
D2.17(a)(v)	Wording amended for consistency with (a)(iv).

BCA Reference	Change and Commentary
Section E	
E1.4	<ul style="list-style-type: none"> Clarification added that fire hose reels need not be located within 4 m of every exit or adjacent to every fire hydrant. Additional fire hose reels may also be installed remote from exits and hydrants if necessary to achieve the system coverage specified in AS 2441. The circumstances under which an extended fire hose may pass through a doorway fitted with a fire or smoke door have been restructured and elaborated with no technical change.
Specification E1.5, Clause 2(d)	The phrase "as applicable" has been added as AS 2118.4 systems can only be used if the Class 9c building is not greater than 4 storeys in height.
Table E2.2a	In the part of the Table dealing with Class 7a buildings, clarification has been added that fans with metal blades suitable for operating at normal temperatures may be used instead of fans required to operate at elevated temperatures as required by Clause 4.8.1 of AS 1668.1.
Specification E2.2a, Clause 3(b)	Clarification added that any type of detector is not required in a kitchen or other area if the kitchen or other area is sprinklered.
Specification E2.2a, Clause 4(b)	Clarification added that any type of detector is not required in a kitchen or other area if the kitchen or other area is sprinklered.
Specification E2.2a, Clause 4(d)(i)(B)	For consistency with similar provisions, clarification has been added that where the use of the area is likely to result in smoke detectors causing spurious signals, any other detector deemed suitable in accordance with AS 1670.1 may be installed in lieu of smoke detectors.
Section F	
F2.5(b) and new Figure F2.5	Reference to new Figure F2.5 inserted to provide clarification on the measurement of the 1.2 m clear space.
F3.1(a)	For Class 2 or 3 buildings and Class 4 parts, amended to specify the minimum ceiling height for attic rooms, rooms with a sloping ceiling or where there is a projection below the ceiling line.
Part F5	The Queensland variation flag has been deleted due to the variation being deleted from the Queensland Appendix.
Section I	
IP2.1 Limitation	The limitation has been amended to clarify that IP2.1 does not apply to services serving only one sole-occupancy unit of a Class 2 building or only a Class 4 part of a building.
Section J	
JV3 Verification	With the removal of JV2 at BCA 2008, the application of JV3 has been extended so that it now applies to all Class 3 to 9 buildings.
Part J2	The title of the Part has been amended to "Glazing" to more closely reflect the contents of the Part.
J2.3(a) and (b)	Clarification added that when a mezzanine is included in a storey, it is included when calculating glazing allowances for the storey.
J2.4(a)	<ul style="list-style-type: none"> Amended so that the glazing in each storey must be assessed separately in accordance with (b) and (c) for both the glazing in the external fabric facing each orientation and for the glazing in the internal fabric using the south orientation energy constants and shading multipliers. Clarification added that when a mezzanine is included in a storey, it is included when calculating glazing allowances for the storey.

BCA Reference	Change and Commentary
Table J2.4c	Additional heating shading multipliers added for climate zones 4 and 5, zones 6 and 7 and zone 8 for more than 1200 mm but less than 1800 mm.
Table J2.4c, notes	<ul style="list-style-type: none"> • Due to the changes to the Table, the reference in note 1 to "1200 mm" has been changed to "1800 mm". • New note added advising users that for glazing in the internal fabric to use the appropriate value for the south orientation sector with a P/H value of 2.0.
Table J2.4d	Additional cooling shading multipliers added for climate zones 1, 2 and 3, zones 4 and 5, zones 6 and 7 and zone 8 for more than 1200 mm but less than 1800 mm.
Table J2.4d, notes	<ul style="list-style-type: none"> • Due to the changes to the Table, the reference in note 1 to "1200 mm" has been changed to "1800 mm". • New note added advising users that for glazing in the internal fabric to use the appropriate value for the south orientation sector with a P/H value of 2.0.
J3.4(d)(ii)((B))	Typographical correction.
J3.6(a)	<ul style="list-style-type: none"> • Ceilings have been added to the list of elements required to be sealed to minimise air leakage. • Reference to "conditioned space" removed as the definition of "envelope" refers to separation of conditioned and non-conditioned spaces.
J4.2(b)(iii)	Clarification added that the ventilation opening to the adjoining room need only comply with Table J4.2 for the floor area of the adjoining room and the proportion of the habitable room that is ventilated from the adjoining room.
J5.2(a)(vi) and new Table J5.2a	Amended to better cover more conventional systems due to the existing provisions being found to be too restrictive for specialised applications where there is a high internal load such as a computer suite or a telephone exchange. The changes include the addition of a new Table J5.2a.
J5.2(a)(vii)(A)	The reference to J5.4(c) has been deleted due to that provision setting refrigeration performance and not fan efficiency as covered by J5.2(a)(vii). The subsequent provisions have been re-numbered.
J5.2(b)(i)	Due to the occupants of sole-occupancy units in Class 2 buildings and Class 4 parts of buildings usually controlling any mechanical ventilation system, the provision has been amended to exempt these parts of a building from the requirement for such systems to be capable of being inactivated when the building is not occupied.
J5.2(b)(iii)(A)	As a consequence of the change of Table number, the reference to Table J5.2 has been amended to Table J5.2b.
Table J5.2	As a consequence of the inclusion of new Table J5.2a, Table J5.2 has been re-numbered Table J5.2b.
J5.3	<p>Amended to limit the requirement for a time switch so that one is not required where the air-conditioning or ventilation system serves a sole-occupancy unit in a Class 2 or 3 building, a Class 4 part of a building or a Class 9c building. The reason for this is that Class 2 buildings and Class 4 parts are privately owned residential buildings and likely to be closely controlled by the occupants. The sole-occupancy units of a Class 3 building are already controlled by an occupant activated device and likely to be controlled by the occupant when they are in residence while staff and public areas are likely to be in use. Class 9c buildings are also likely to be closely controlled 24 hours a day.</p> <p>Likewise, a time switch is not required where air-conditioning or ventilation is needed for 24 hour occupancy as it is likely to be of little use.</p>

BCA Reference	Change and Commentary
J5.4(a)(ii)(A) and new Table J5.4a	Rather than specify the total motor shaft power to an air-conditioning pump depending on the floor area of the building, a new Table J5.4a, has been included. The new table also includes allowance for the internal load of equipment and people as well as the floor area of the building.
J5.4(b)	<ul style="list-style-type: none"> • Clarification has been added that the water heater being referred to is only one that is part of an air-conditioning system. • As a consequence of the change of Table number, the reference to Table J5.4a has been amended to Table J5.4b.
Previous Table J5.4a	As a consequence of the inclusion of new Table J5.4a, the previous Table J5.4a has been re-numbered Table J5.4b.
J5.4(c)	As a consequence of the change of Table number, the reference to Table J5.4b has been amended to Table J5.4c.
Previous Table J5.4b	As a consequence of the inclusion of new Table J5.4a, the previous Table J5.4b has been re-numbered Table J5.4c.
J5.4(d)	<ul style="list-style-type: none"> • Clarification added that the provision only applies to a refrigerant chiller that is part of an air-conditioning system. • As a consequence of the change of Table number, the reference to Table J5.4c has been amended to Table J5.4d.
Previous Table J5.4c	As a consequence of the inclusion of new Table J5.4a, the previous Table J5.4c has been re-numbered Table J5.4d.
J5.4(e)	<ul style="list-style-type: none"> • Clarification added that the provision only applies to a fan motor of an air cooled condenser that is part of an air-conditioning system. • Amended to specify maximum motor shaft power and input power that is realistic and achievable.
J5.4(f)	<ul style="list-style-type: none"> • Clarification added that the provision only applies to a fan of a cooling tower that is part of an air-conditioning system. • Amended to specify maximum motor shaft power and input power that is realistic and achievable.
J5.4(g)	<ul style="list-style-type: none"> • Clarification added that the provision only applies to a fan of a closed circuit cooler that is part of an air-conditioning system. • Amended to specify maximum motor shaft power and input power that is realistic and achievable.
J5.4(h)	<ul style="list-style-type: none"> • Clarification added that the provision only applies to a fan of an evaporative condenser that is part of an air-conditioning system. • Amended to specify maximum motor shaft power and input power that is realistic and achievable.
J5.4(i)	Clarification added that the provision only applies to a spray water pump of a closed circuit cooler or an evaporative condenser that is part of an air-conditioning system.
J6.2(a)(ii)(A)	Clarification added that the 30% increase in the lamp power density only applies when floor areas of less than 20 m ² are enclosed.
Table J6.2c Note 7	Clarification added that the application of the two illumination power density adjustment factors that can be applied to an area, excludes the room size.
J6.3(a)	Class 3 buildings removed from subclause, effectively requiring switches or other devices for artificial lighting to all rooms and spaces in all Class 2 to Class 9 buildings.

BCA Reference	Change and Commentary
J6.3(c)	<ul style="list-style-type: none"> Reference to other control device has been added. In (i), clarification added that the requirements apply to an artificial lighting switch. (ii) amended so that the requirements only apply to buildings other than a Class 2 or 3 building or a Class 4 part.
J6.3(d)	Clarification added that the requirements only apply to buildings other than Class 2 or 3 buildings or a Class 4 part.
J6.3(g)	A reference to a Class 9c aged care building has been added so that the requirements of (d) do not apply to those buildings.
J6.5(a)(i)	Rewritten for clarification including re-numbering. Reference to Specification J6 has been deleted.
Specification J1.2, Table 2b	Where available, typical R-Values have been included in a revised Table.
Specification J1.2, Table 2c	<ul style="list-style-type: none"> The existing 3 pitches for cathedral-type ceilings have been replaced with a progression of ranges. The term "reflective insulation" in the heading of the first column has been italicised because it is a defined term.
Specification J1.2, Clause 2(d)	To align with Volume Two, requirements for a ventilated roof space have been added.
Specification J1.3, Figure 2(a), (b), (c) and (d)	<ul style="list-style-type: none"> To align with Tables 2b and 2c above, and as applicable to AS 2050 "Installation of roof tiles", the roof slope lower range limit has been reduced to 15°. To align with Volume Two, requirements for a ventilated roof space have been added in note 4.
Specification J5.2, Clause 2(a)(ii)	Clarification added that it is only necessary for the ductwork to be sealed with a draw band in conjunction with either a sealant or adhesive tape.
Specification J5.2, Clause 2(b)	Clarification added that the exemption applies to the ductwork and fittings located within the only room or the last room that is served by the ductwork.
Specification J5.2, Clause 3(a)(ii)	The intent has been clarified that flexible ductwork not longer than 3 m from an outlet must achieve the Total R-Value specified in Tables 3a and 3b (which refer to evaporative cooling systems, heating-only systems, refrigerated-only systems and combined heating and refrigerated cooling systems) or achieve a Total R-Value of 1.0.
Specification J5.2, Clause 3(d)(i)	Clarification added that the exemption for the ductwork not to be thermally insulated applies to the ductwork and fittings located within the only room or the last room that is served by the ductwork.
Specification J5.2, Table 3b	As a consequence of the changes to Clause 3(d)(i), the reference to "other than where the space is the only or last space served" is unnecessary and has been deleted.
Specification J5.4, Clause 2(a)(ii)	Reference to vessels, heat exchangers and tanks has been added due to the Specification including such items.
Specification J6 Clause 3(b)(i) and (ii)	Occupant sensing devices added as well as devices such as a security card reader.
ACT Appendix	
ACT G1.103	Provisions for awnings and projections deleted.
Footnote	Footnotes for "Land Use and Development Control", "Occupational Health and Safety" and "Utilities" updated.

BCA Reference	Change and Commentary	
NSW Appendix		
NSW A1.1	The following definitions have been inserted or amended:	
	Auditorium	The definition has been amended.
	Entertainment venue	New definition inserted to replace definition of "place of public entertainment".
	Place of public entertainment	Definition deleted. It has been replaced with new definition of "entertainment venue". Consequently, the term "place of public entertainment" has been replaced with the term "entertainment venue" throughout the NSW Appendix.
	Public entertainment	Definition deleted. It is no longer necessary.
	Stage	The definition has been amended.
NSW C3.2	Due to the deletion of C3.2(a) from the main BCA, the NSW variation has been deleted.	
NSW Table E2.2b	<ul style="list-style-type: none"> • The heading of "Night Clubs, Discotheque, and Other Licensed Premises Providing Entertainment" amended to "Night Clubs, Discotheque, and the Like". • The first sentence in this part of the Table has been amended to reflect this change. • In the section titled "Other Assembly Buildings", the term "a night club, discotheque or other licensed premises providing entertainment" amended to "a nightclub, discotheque or the like". 	
NSW Section J	A number of references to Subsection J(A) and J(B) have been corrected by adding "NSW".	
Footnote	New footnote 8.3 inserted.	
NT Appendix		
NT Table 1	The following references have been inserted or amended:	
	AS 1170 Part 2 - 1989	The 1989 edition of AS 1170 "Minimum design loads on structures", Part 2 "Wind loads" has been deleted as it is no longer referenced in the NT Appendix.
Queensland Appendix		
Qld Part F5	Part deleted.	
Qld Specification F5.2	Specification deleted.	
Qld Specification F5.5	Specification deleted.	
SA Appendix		
SA A1.1	The following definitions have been inserted:	
	Energy Rating label	A new definition of "Energy Rating label" inserted.
	Renewable Energy Certificate	A new definition of "Renewable Energy Certificate" inserted.
	Rated hot water delivery	A new definition of "rated hot water delivery" inserted.
SA Table 1	The following references have been inserted or amended:	

BCA Reference	Change and Commentary				
	AS 1056 Part 1 The 1991 edition of AS 1056 "Storage water heaters", Part 1 "General requirements" has been referenced.				
	AS 1720 Part 2 The 2006 edition of AS 1720 "Timber structures", Part 2 "Timber properties" has been referenced.				
	AS 4234 The 1994 edition of AS 4234 "Solar water heaters — Domestic and heat pump — Calculation of energy consumption" has been referenced.				
	AS 4552 The 2005 edition has been referenced and the title corrected to "Gas fired water heaters for hot water supply and/or central heating".				
Department of Climate Change	The 2008 edition of "National Greenhouse Accounts (NGA) Factors" has been referenced.				
SA G5.2	Amended to include requirements for Class 10 buildings adjoining Class 2 and 3 buildings located in a designated bushfire prone area.				
SA G5.3	Amended to include requirements for low bushfire attack categories as well as medium, high and extreme bushfire attack categories.				
SA JP3	New Performance Requirement and Limitation inserted limiting greenhouse gas emissions for heated water services.				
SA JV4	New Verification Method inserted.				
SA Part J7	Amended to include deemed-to-satisfy provisions for heated water services.				
Tasmania Appendix					
Tas Table 1	<p>The following references have been inserted or amended:</p> <table> <tr> <td>AS/NZS 3500 Part 2.2</td><td>Reference to AS/NZS "National plumbing and drainage code", Part 2.2 "Sanitary plumbing and draining — acceptable solutions" deleted because it is no longer referenced in the Tasmania Appendix.</td></tr> <tr> <td>AS/NZS 4220</td><td>Reference to AS/NZS "Bunk beds" deleted because it is no longer referenced in the Tasmania Appendix.</td></tr> </table>	AS/NZS 3500 Part 2.2	Reference to AS/NZS "National plumbing and drainage code", Part 2.2 "Sanitary plumbing and draining — acceptable solutions" deleted because it is no longer referenced in the Tasmania Appendix.	AS/NZS 4220	Reference to AS/NZS "Bunk beds" deleted because it is no longer referenced in the Tasmania Appendix.
AS/NZS 3500 Part 2.2	Reference to AS/NZS "National plumbing and drainage code", Part 2.2 "Sanitary plumbing and draining — acceptable solutions" deleted because it is no longer referenced in the Tasmania Appendix.				
AS/NZS 4220	Reference to AS/NZS "Bunk beds" deleted because it is no longer referenced in the Tasmania Appendix.				
Tas G1.1	<ul style="list-style-type: none"> • (f) and (g) have been deleted due to the provisions for chlorine rooms being covered by Tas H120.4(a)(vi) and AS 2927. • Consequently, the existing (h) has been renumbered (g). 				
Tas H101.8	<ul style="list-style-type: none"> • (b) has been deleted due the provisions being covered in the main BCA. • Consequently, the numbering of (a) has been deleted. 				
Tas H102 O1 Application and Limitation	The Limitation has been amended as result of the deregulation of the Part applying to shellfish premises where live shellfish are packed.				
Tas H102 F1 Application and Limitation	The Limitation has been amended as result of the deregulation of the Part applying to shellfish premises where live shellfish are packed.				
Tas H102 P12 Application and Limitation	The Limitation has been amended as result of the deregulation of the Part applying to shellfish premises where live shellfish are packed.				
Tas 102.0	The provision has been amended as result of the deregulation of the Part applying to shellfish premises where live shellfish are packed.				

BCA Reference	Change and Commentary
Tas H109.4	<ul style="list-style-type: none"> The heading has been amended to "Grab rails". (b) has been deleted due to the provisions being covered by D2.17(b) in the main BCA. Consequently, the numbering of (a) has been deleted.
Tas H109.6	The provision has been deleted due to water temperature supplied to these facilities being covered by Plumbing legislation.
Tas H110.2	<ul style="list-style-type: none"> (b) has been deleted due to separation of these facilities being covered in a workplace by F4.8 and F4.9 in the main BCA. Consequently, (a) has been restructured.
Tas H113.2(c)	The provision has been deleted due to the safety requirements for roof lights being covered by AS 1288 and AS/NZS 1562.3.
Tas H122.2(c)	Clarification added that the indoor play space in a centre-based child care facility must be directly accessible to the toilet facilities.
Tas H122.3(e)	Clarification added that the outdoor play space of a centre-based child care facility must be directly accessible to the indoor play space.
Tas 122.4(a)(ii)	The term "over 12 months and under 2 years" has been replaced with the term "aged one year".
Tas 122.5	The term "Table" has been deleted.
Tas 122.6(a)(iv)	The term "Table" has been deleted.
Tas 122.11	The term "and safe" has been inserted to apply to the storage.
Victoria Appendix	
Vic D2.21	As a consequence of changes to D2.21 in BCA 2008, Vic D2.21(g) has been re-numbered Vic D2.21 (a)(vi).
Vic Part H102	The reference to "Building (Interim) Regulations 2005" has been updated to "the Building Regulations 2006".
Part J2	For consistency with the change to the main BCA, the title of the Part has been updated to "Glazing".
Footnote	<ul style="list-style-type: none"> Footnote for "Asbestos Removal" has been inserted. Consequently, the following footnotes have been renumbered. Footnotes for "Radiation Safety", "Sanitary Plumbing, Water Supply and Sewerage" and "Septic Tank Installations" updated.
Abbreviations and Symbols	
um	Corrected to "μm".
History of BCA Adoption	
7.0	Clause 7.0 and Table 7.0 have been added in order to set out the adoption dates of the 2009 edition of the BCA in each State and Territory and to summarise the purpose of the changes from BCA 2008.

LIST OF AMENDMENTS - BCA 2009 - HOUSING PROVISIONS

This set of notes has been prepared by the Australian Building Codes Board to assist BCA users in identifying changes incorporated in the 2009 edition of the Housing Provisions (Volume Two) of the BCA (BCA 2009).

The notes provide a description of major changes made from the previous edition of the BCA.

While the Australian Building Codes Board has attempted to include all major changes made from the previous edition of the BCA Housing Provisions, the Board does not give any warranty nor accept any liability in relation to the contents of this list of amendments.

BCA Reference	Changes and Commentary
Part 1.1	
1.1.1.2	<p>The following definitions have been inserted or amended:</p> <p>Breaking surf New definition "Breaking surf" inserted along with explanatory information to provide examples of where breaking surf is likely to occur. As a result, the term has been italicised where used in the Housing Provisions.</p> <p>Cavity The definition of "cavity" has been moved from 3.3 to the definitions in Part 1.1 so that it applies to the whole of the Housing Provisions. Consequently, the term has been italicised where used in the Housing Provisions.</p> <p>Figure 1.1.4 The climate zone map in Figure 1.1.4 has been updated.</p> <p>Climate zones for thermal design</p> <p>Table 1.1.2 In Victoria, the climate zone for Bairnsdale has been changed to 6.</p> <p>Design wind speed Reference to AS 1170.2 has been deleted as a consequence of the deletion of all references to the older loading standards contained in the AS 1170 series.</p> <p>Low rainfall intensity area New definition of "low rainfall intensity area" inserted along with explanatory information to clarify which areas are considered to have a low rainfall intensity. As a result, the term has been italicised where used in the Housing Provisions.</p> <p>Sarking-type material Clarification added that a sarking-type material includes reflective insulation.</p> <p>Figure 1.1.3 Figure 1.1.3 which is used to illustrate the definition of separating wall has been amended so that the separating walls do not extend above roof level. Any wall above this height is an external wall.</p>
1.1.3(d)	New provision inserted clarifying that where a document listed in Part 1.4 is subject to publication of a new edition, the new edition need not be complied with in order to comply with the Deemed-to-Satisfy Provisions.
Part 1.3	
Figure 1.3.1	Figure amended to clarify which walls are separating walls and which walls are external walls.
Part 1.4	
Table 1.4.1	The following references have been inserted or amended:

BCA Reference	Changes and Commentary
	Generally For consistency with Volume One, a list of the provisions that refer to each referenced document in the Housing Provisions has been included.
AS/NZS 1170 Part 1	Amdt 2 to AS/NZS 1170 "Structural design actions" Part 1 "Permanent, imposed and other actions" referenced.
AS 1170 Part 1	After the expiry of the agreed transition period, reference to AS 1170 "Minimum design loads on structures", Part 1 "Dead and live loads and load combinations" 1989 has been deleted.
AS 1170 Part 2	After the expiry of the agreed transition period, reference to AS 1170 "Minimum design loads on structures", Part 2 "Wind loads" 1989 has been deleted.
AS 1170 Part 3	After the expiry of the agreed transition period, reference to AS 1170 "Minimum design loads on structures", Part 3 "Snow loads" 1990 has been deleted.
	Note: The ABCB expects to delete reference to AS 1170 "Minimum design loads on structures" Part 4 "Earthquake loads" 1993 as part of the changes for BCA 2010.
AS 1684 Part 2	Amdt 1 to AS 1684 "Residential timber-framed construction" Part 2 "Non-cyclonic areas" referenced.
AS 1684 Part 3	Amdt 1 to AS 1684 "Residential timber-framed construction" Part 3 "Cyclonic areas" referenced.
AS 1684 Part 4	Amdt 1 to AS 1684 "Residential timber-framed construction" Part 4 "Simplified — non-cyclonic areas" referenced.
AS 1720 Part 1	The notes to AS 1720 "Timber structures" Part 1 "Design methods" have been deleted due to deletion of all references to the older loading standards contained in the AS 1170 series.
AS/NZS 2908 Part 1	AS/NZS 2908 "Cellulose cement products", Part 1 "Corrugated sheets" has been deleted because it is no longer referenced in the Housing Provisions.
AS 3700	The notes to AS 3700 "Masonry structures" have been deleted as a consequence of changes to 3.11.6.
AS 3798	Reference to AS 3798 "Guidelines on earthworks for commercial and residential developments" has been deleted as a consequence of the deletion of 3.2.2.2(b).
AS 4055	After the expiry of the agreed transition period, reference to AS 4055 "Wind loads for housing" 1992 has been deleted.
AS/NZS 4859 Part 1	The note to AS/NZS 4859 "Materials for the thermal insulation of buildings", Part 1 "General criteria and technical provisions" allowing test and calculation reports demonstrating compliance with the standard carried out prior to the introduction of Amdt 1 has been removed after the expiry of the agreed transition period.
ABCB	Reference to the ABCB "Protocol for House Energy Rating Software Version 2005.1" has been deleted after the agreed transition period with the 2006.1 version.
South Australian Referenced Documents	The following references have been inserted or amended:
AS 1720.2	The 2006 edition of AS 1720 "Timber structures", Part 2 "Timber Properties" has been referenced.

BCA Reference	Changes and Commentary
	<p>AS 4552 The 2005 edition has been referenced and the title corrected to "Gas fired water heaters for hot water supply and/or central heating".</p> <p>Department of Climate Change Due to the amendments to the heated water service requirements, the National Greenhouse Accounts (NGA) Factors has been referenced.</p>
Victorian Referenced Documents	The following references have been inserted or amended:
	<p>Plumbing Regulations The 2008 edition of the Plumbing Regulations has been referenced.</p>
Part 2.1	
P2.1(b)(xv)	Termite actions have been included as one of the actions to which a building may reasonably be subjected.
Part 2.4	
V2.4.6 State and Territory variation	Queensland variation deleted.
Part 2.5	
P2.5.2	For consistency with changes made at BCA 2008 and the Performance Requirement in Volume One, P2.5.2 has been amended so that openable windows are no longer exempted from the requirement to protect people from falling.
V2.5.1	New Verification Method inserted setting out procedures for the testing of wire balustrades as an alternative to complying with the relevant Deemed-to-Satisfy Provisions contained in 3.9.2.3.
V2.6.1 State and Territory variation	In V2.6.1 the reference to the Plumbing Regulations 1998 has been updated to the Plumbing Regulations 2008.
Part 2.6	
2.6 State and Territory variation	<ul style="list-style-type: none"> • Due to Queensland adopting the main BCA provisions for energy efficiency, the reference to Queensland has been deleted from Note 2. • New Note 3 inserted stating that in Tasmania Part 2.6 is replaced with BCA 2005 Part 2.6 until 1 January 2010. Consequently, the reference to Tasmania in Note 2 has been removed.
Part 3.1	
3.1.2.3(a)	The slope of finished ground surfaces adjacent to buildings has been reduced from 50 mm to 25 mm over the first 1 m for areas of low rainfall intensity.
3.1.2.3(b)	<ul style="list-style-type: none"> • Reference to "measured at the edge of the slab" has been removed to reflect the intent that the slab height is measured to the finished slab height, not the top of the slab edge rebate. • The requirements for the slab height above the external finished surface has been amended to allow reduced heights in areas of low rainfall intensity or sandy well drained areas and paved or concreted areas.
3.1.2.3 Explanatory information	Amended as a consequence of changes to 3.1.2.3.
3.1.2.3(a) State and Territory variation	As a consequence of the changes to 3.1.2.3(a), the South Australian variation has been deleted.
Figure 3.1.2.2	Amended as a consequence of changes to 3.1.2.3.

BCA Reference	Changes and Commentary
3.1.3.2(a)(i)	Reference to AS 3660.1 deleted from the acceptable construction practice in recognition that the option of compliance with AS 3660.1 is available under 3.1.3.0 as an acceptable construction manual. Consequently, the remaining subclauses have been re-numbered.
Part 3.2	
3.2.2.2(b)	The provision has been deleted as AS 3798 was no longer considered appropriate as a BCA referenced document.
Figure 3.2.2.1 Explanatory information	The reference to AS 3798 has been replaced with a reference to the acceptable construction manuals listed in 3.2.0 due to AS 3798 no longer being considered appropriate as a BCA referenced document.
3.2.3.1(a)(iii)	Allowable concrete slump amended from 80 mm to 100 mm in line with industry practice and to reduce the likelihood of water being added on-site to improve concrete workability.
Part 3.3	
3.3	The definition of "Cavity" has been moved from 3.3 to the definitions in Part 1.1 so that it applies to the whole of the Housing Provisions.
Figure 3.3.1.4	To allow for common construction practices and to align with AS 1684.2, Figure 3.3.1.4 (Diagram a) has been amended by— <ul style="list-style-type: none"> • removing unnecessary detail; and • reducing the gap to accommodate truss deflection at the trussed roof-wall junction from 15 mm to 10 mm.
3.3.1.6	The provision has been re-drafted to clarify that mortar must comply with AS 3700 except that the mortar may be mixed by proportions as set out in Table 3.3.1.2. The old (c) and (d) have been deleted because those provisions are covered by AS 3700.
3.3.1.8(g)	New subclause added to prohibit the use of articulation joints over garage doors unless the brickwork is reinforced or lateral support is provided.
3.3.2.2(g)(ii)	After the expiry of the agreed transition period, reference to AS 1170 "Minimum design loads on structures", Part 2 "Wind loads" 1989 has been deleted.
Table 3.3.3.1	The term "breaking surf" has been italicised because it is now a defined term.
3.3.3.4(c)	As a consequence of the inclusion of a new Table for corrosion protection requirements for built-in structural steel members, the reference to Table 3.4.4.2 has been changed to Table 3.3.3.2.
3.3.3.5	New provision added requiring corrosion protection of built-in structural steel members such as lintels, shelf angles, connectors, accessories (other than wall ties) and the like to be in accordance with Table 3.3.3.2.
Table 3.3.3.2	New table inserted for corrosion protection of built-in structural steel members such as lintels, shelf angles, connectors, accessories (other than wall ties) and the like.
Part 3.3.4 Appropriate Performance Requirements	Performance Requirement P2.2.3 has been included in the list of appropriate Performance Requirements because Part 3.3.4 includes Deemed-to-Satisfy Provisions to prevent moisture from the ground entering the building.
3.3.4.2	Amended by allowing mullions located in cavities to be exempted from minimum cavity widths stated in (a) and (b) provided that a vertical DPC is installed between the outer masonry leaf and each mullion.
3.3.4.5(c)(iv)	Amended so that in low rainfall intensity areas, the height of a DPC or flashings serving as a DPC stated in 3.3.4.5(c)(ii) and (iii), may be reduced to 15 mm and 0 mm respectively.

BCA Reference	Changes and Commentary
3.3.4.5 explanatory information	Amended as a consequence of changes to 3.3.4.5(c)(iv).
3.3.4.5 State and Territory variation	South Australian variation amended as a consequence of changes to 3.3.4.5.
Part 3.4	
3.4.2.2	The term "breaking surf" has been italicised (three times) because it is now a defined term.
3.4.4.4	The provision has been amended to only refer to corrosion protection of structural steel members that are not built into a masonry wall.
3.4.4.4 explanatory information	Existing notes 1 to 3 (that deal with steelwork in dry locations and over kitchens and the like) have been deleted from the explanatory information because they have been incorporated into Table 3.4.4.2. Information added that corrosion protection for structural steel members built into masonry is dealt with in the new Table 3.3.3.2.
Table 3.4.4.2	Due to the provisions for corrosion protection of built-in structural steel members (including lintels) now being located in the new Table 3.3.3.2, the column containing provisions for lintels has been removed from Table 3.4.4.2.
Part 3.5	
3.5.1.2(b)	A minimum roof pitch (15 degrees) for which the fixing details in Figure 3.5.1.1 are appropriate has been included in addition to the current maximum pitch of 35 degrees.
Figure 3.5.1.1	The Figure has been amended for consistency with AS 2050 "Installation of roof tiles".
Table 3.5.1.1a	The term "breaking surf" has been italicised (four times) because it is now a defined term.
3.5.2.4(d)	For consistency with the acceptable construction manual AS/NZS 3500.3, the requirement to avoid overflow back into the building where high-fronted gutters are installed, has been amended to refer to overflow measures.
Table 3.5.2.2 explanatory information	The explanatory information has been amended as a consequence of the changes made to 3.5.2.4(d).
Part 3.6	
3.6.0(a) State and Territory variation	Queensland variation deleted.
Part 3.7	
3.7.1.4(c) Figure 3.7.1.2b	New provision and figure inserted clarifying the method of measurement between external walls of different height buildings.
Figure 3.7.1.2	Due to the inclusion of new Figure 3.7.1.2b, the existing figure has been renumbered as Figure 3.7.1.2a.
3.7.1.7(b)	Rainwater tanks have been moved from (b)(i), where they were required by (c) to be non-combustible if within 450 mm of the boundary, to (b)(v) where they may be combustible at any distance.
3.7.1.8(a)	"A wall that separates" has been replaced with the defined term "separating wall".
Figure 3.7.1.10	Figure amended to avoid confusion on what is a separating wall and what is an external wall.
3.7.1.8(f)	The word "masonry" has been deleted so that the provisions regarding service openings apply to a separating wall of any material, not just those of masonry.

BCA Reference	Changes and Commentary
3.7.4.0 State and Territory variation	SA variation amended so that 3.7.4.0 does not apply in South Australia.
3.7.4.1 State and Territory variation	SA variation amended as a result of the relocation of the additional requirements to Table SA 3.7.4.1.
3.7.4.2 State and Territory variation	SA variation amended to include reference to general bushfire risk areas.
3.7.4.3 State and Territory variation	New SA variation inserted.
Table 3.7.4.1	References to "sarking" have been replaced with the defined term "sarking-type material".
Table SA 3.7.4.1	New SA variation inserted to Table 3.7.4.1.
Part 3.8	
Table 3.8.1.1	Due to the relocation of the diagram, under the requirements for inserted baths, the reference to Figure 3.8.1.4 has been amended to Figure 3.8.1.8(c).
Figure 3.8.1.4	The figure has been deleted and moved to be with the other bath details in Figure 3.8.1.8.
Figure 3.8.1.8	New diagram (c) added from Figure 3.8.1.4 so that all bath details are contained in the one figure.
3.8.2.2(e)	Amended to specify the minimum ceiling height for attic rooms, rooms with a sloping ceiling or where there is a projection below the ceiling line.
3.8.3.3 and Figure 3.8.3.3	3.8.3.3 amended to refer to Figure 3.8.3.3 which provides clarification on measurement of the 1.2 m clear space between the closet pan and the doorway.
3.8.6 State and Territory variation	Queensland variation deleted.
Part 3.9	
Figure 3.9.1.3	The titles of Diagrams b and c have been corrected to be consistent with the wording in 3.9.1.4(b)(i)(A) and (B).
3.9.2.2	<ul style="list-style-type: none"> All situations where (a) does not apply have been consolidated into a new (b). Consequently, all the remaining provisions have been re-numbered. Clarification added that the requirement to provide a balustrade or other barrier does not apply to a retaining wall unless it is associated with a delineated path of access to a building from the road or between buildings.
3.9.2.3(a)(ii)(B)&(C)	Amended to be consistent with the Volume One balustrade requirements on landings and at openable windows.
3.9.2.3(d)	The reference to AS 1170.1 has been deleted as a consequence of the deletion of all references to the older loading standards contained in the AS 1170 series.
3.9.2.3(f)(i)(B)	As part of the revision of the wire balustrade tables, the reference to Table 3.9.2.1 has been changed to Table 3.9.2.3
3.9.2.3(f)(ii)	Reference to Note 4 of Table 3.9.2.1 added.
3.9.2.3(f)(iii)(C)	The maximum spacing between rails for a continuous vertical wire balustrade has been increased from 800 mm to 900 mm to allow a wider range of balustrade designs.
3.9.2.3 explanatory information	Note 4 amended as a consequence of the revision of the wire balustrade tables and a new Note 9 added covering safety issues related to the exposed ends of wires.

BCA Reference	Changes and Commentary
Table 3.9.2.1	The table has been amended by revising some tension values, providing a greater range of wires and wire spacings, deleting galvanised wire, deleting deflection values, and providing additional notes.
Table 3.9.2.2	The table has been amended by revising the wire spacings, providing new tension values to each wire listed and providing additional notes.
Table 3.9.2.3	New table providing only deflection values. The table has been derived from the old Table 3.9.2.1 but with revised values. Revised notes have also been included.
Part 3.9.3 State and Territory variation	Note 2 to the NSW variation has been deleted.
3.9.3.4 explanatory information	Additional explanatory information included that, where possible, auxiliary buildings and structures should be located outside the pool area to reduce the likelihood of access to the pool via propped open gates.
Part 3.10	
3.10.1.0(e)(i) State and Territory variation	Queensland variation deleted.
Part 3.11	
3.11.1	<ul style="list-style-type: none"> • With the deletion of the older loading standards except for the 1993 edition of AS 1170.4, the provision has been amended to clarify that the relevant Performance Requirements are satisfied — <ul style="list-style-type: none"> – by complying with 3.11.2, 3.11.3 and 3.11.6; or – for the earthquake resistance component of the Performance Requirements, by complying with 3.11.5 and 3.11.6. • (d) has been amended to allow any combination of using (a) and (b). This allows the use of the newer editions of AS 1170 for permanent, imposed and wind actions along with the 1993 edition of AS 1170.4 for earthquake loads. • (e) has been deleted as it is no longer necessary.
3.11.1 explanatory information	With the deletion of the older loading standards except for the 1993 edition of AS 1170.4, and the consequential changes to 3.11.1, the explanatory information has been deleted as it is no longer required.
3.11.3(c)(ii)	With the deletion of the older loading standards, including AS 4055 (1992), the reference to "AS 4055 (2006)" has been changed to "AS 4055" because it is no longer necessary to distinguish between AS 4055 (2006) and AS 4055 (1992).
3.11.4	Provision deleted as a consequence of the deletion of the older loading standards except for the 1993 edition of AS 1170.4.
3.11.5	With the deletion of the older loading standards except for the 1993 edition of AS 1170.4, the provision has been amended to only refer to determination of earthquake loads. All other references to superceded loading standards have been removed.
3.11.6(g)	With the deletion of the older loading standards except for the 1993 edition of AS 1170.4, the provision has been amended to require earthquake actions on masonry structures to be determined in accordance with AS 1170.4 (2007). This means that AS 1170.4 (1993) cannot be used to determine earthquake actions for masonry structures.
3.11.6 (i)(i) State and Territory variation	Queensland variation deleted.
Part 3.12	

BCA Reference	Changes and Commentary
3.12 State and Territory variation	<ul style="list-style-type: none"> Due to Queensland adopting the main BCA provisions for energy efficiency, the reference to Queensland has been deleted from Note 2. New Note 3 inserted stating that in Tasmania Part 3.12 is replaced with BCA 2005 Part 3.12 until 1 January 2010. Consequently, the reference to Tasmania in Note 2 has been removed.
3.12 explanatory information 1	<ul style="list-style-type: none"> The term "reflective insulation" has been italicised because it is a defined term. New Note 3 added explaining that some types of reflective insulation may also serve other purposes such as waterproofing or vapour proofing.
3.12.0 State and Territory variation	Reference to Victorian Plumbing Regulations changed from 1998 to 2008.
3.12.1.2(b)(ii)(C)	New provision inserted to clarify that a tiled roof without a sarking type material at roof level is a ventilated roof space.
Figure 3.12.1.1 Notes	The reference in Note 4 to "sarking" has been amended to "sarking-type material" which is a defined term.
3.12.1.2(e)	New provision inserted to compensate for a reduction in ceiling insulation when exhaust fans and downlights are 1% or more of the ceiling area with reference to new Table 3.12.1.2a.
Table 3.12.1.1a	New table inserted. See comments on 3.12.1.2(e).
Table 3.12.1.1 explanatory information	New explanatory information has been added to provide an example of how 3.12.1.2(e) would apply to a typical house.
3.12.1.4(b) explanatory information	Explanation of the term "surface density" has been added.
Table 3.12.1.3	For climate zone 1 clarification has been added that (c) is only applicable to masonry external walls with a surface density of not less than 220 kg/m ² and the term "surface density" has been explained in Note 1. In (d)(ii) the term "external wall" has also been deleted.
3.12.1.4(d)	Reference to Table 3.12.1.3 has been included so the requirement of (i) for the wall to achieve the minimum Total R-Value became unnecessary and therefore has been deleted. Consequently, the remaining provisions have been re-numbered.
Figure 3.12.1.3	The total R-Value for concrete blockwork masonry has been increased to 0.53 to be consistent with Volume One.
Figure 3.12.1.3 explanatory information	<ul style="list-style-type: none"> Where reference is made to where the cavity or airspace is filled in explanatory information Note 1, clarification has been added that the Total R-Value should be reduced by 0.17. An explanation of the term "surface density" has been added to Note 4.
3.12.2.1(a)	Clarification added that, when a mezzanine is included in a storey, it is included when calculating glazing allowances for the storey.
3.12.2.1(b) explanatory information	<ul style="list-style-type: none"> In note 1, the reference to guidelines of the National Fenestration Rating Council (NFRC) has been changed to the Technical Protocol and Procedures Manual for Energy Rating of Fenestration Products by the Australian Fenestration Rating Council (AFRC). In line with this change, in Note 2 the reference to the NFRC has been changed to AFRC.

BCA Reference	Changes and Commentary
3.12.3.5(b) explanatory information	New explanatory information has been inserted to clarify that caulking includes sealant, expanded foam or other gap filling material.
3.12.4.1(b)(iii)	Clarification added that the ventilation opening to the adjoining room need only comply with Table 3.12.4.1 for the floor area of the adjoining room and the proportion of the habitable room that is ventilated from the adjoining room.
3.12.5.3(a)(iii)(B)	Clarification added that it is only necessary for the ductwork to be sealed with a draw band in conjunction with either a sealant or adhesive tape.
ACT Appendix	
Footnote	Footnotes for "Land Use and Development Control", "Occupational Health and Safety" and "Utilities" updated.
NSW Appendix	
Footnote	<ul style="list-style-type: none"> • In 4.2, the reference to "Occupational Health and Safety Act 2000" has been updated to "Occupational Health and Safety Regulations 2001". • New footnote 4.3 inserted.
SA Appendix	
SA 7 Limitation	The limitation has been amended to apply to all heated water services installed to serve any Class 1 building.
SA 7.1	<p>The following definitions have been deleted—</p> <ul style="list-style-type: none"> • Large heated water service • Small heated water service
SA 7.2	Performance Requirement amended by limiting the amount of carbon dioxide permitted to be emitted from heated water services.
SA 7.3	Amended as a result of changes to Performance Requirement SA 7.2.
SA 7.4	Amended as a result of changes to Performance Requirement SA 7.2.
Victoria Appendix	
Footnote	<ul style="list-style-type: none"> • Footnote for "Asbestos Removal" has been inserted. Consequently, the following footnotes have been renumbered. • Footnotes for "Sanitary Plumbing, Water Supply and Sewerage" and "Septic Tank Legislation" updated.
Abbreviations and Symbols	
RBM	Abbreviation deleted because it is no longer used in the Housing Provisions.
um	Corrected to "μm".
History of BCA Adoption	
7.0	Clause 7.0 and Table 7.0 have been added in order to set out the adoption dates of the 2009 edition of the BCA in each State and Territory and to summarise the purpose of the changes from BCA 2008.