

BC Update 206: Amendments to Acceptable Solutions and Verification Methods

Posted: 8 December 2016

Twenty-eight Acceptable Solutions and ten Verification Methods for complying with the Building Code have been amended and will take effect from 1 January 2017.



Consultation on the amendments to the Acceptable Solutions and Verification Methods, as well as two new Acceptable Solutions, took place from 20 July to 31 August 2016. Ninety-two people submitted feedback on these proposals, which helped to refine and finalise the amendments.

Two proposed Acceptable Solutions, E2/AS4 Torch-on Membrane Systems for Roofs and Decks and E3/AS2 Internal Wet Area Membranes, require further development and will not be published at this time.

Update: Please note that on 1 February 2017 minor corrections were made to the details below on amendments to B1 Structure and C1-C6 Protection from fire.

The following describes which version of an Acceptable Solution or Verification Method to use when submitting a complete application for a building consent:

- Until 31 December 2016: use the existing version (prior to 1 January 2017 only the existing version is an Acceptable Solution or Verification Method)
- From 1 January to 30 May 2017 *: use either the existing version or the newly published version (during this transition period either version is an Acceptable Solution or Verification Method)
- From 31 May 2017 *: use the newly published version (the existing version is no longer an Acceptable Solution or Verification Method)

* An exception to this transition period is for D2/AS1, which is extended to 6 August 2017. From 7 August 2017, only the Amendment 7 version of D2/AS1 can be used as an Acceptable Solution.

Amendments have been made to the following documents (a brief description of the changes to each acceptable solution or verification method is given):

- **B1 Structure: B1/AS1, B1/VM1, B1/VM4** (<https://www.building.govt.nz/building-code-compliance/b-stability/b1-structure/#jumpto-acceptable-solutions-and-verification-methods>)

NZS 4223 Parts 1 to 4 are updated to the latest versions in B1/AS1, and the structural glass barrier requirements in Part 3 are modified.

Clause 7.4.1.3 and Figures 7.10(b) and 7.10(c) in NZS 3604 are modified to clarify the requirements (in accordance with the latest test data).

The modification in B1/VM1 on applying the hazard factor Z , to buildings with structure periods less than 1.5 seconds in the Canterbury earthquake region, is deleted.

The modification in B1/VM1 on applying a minimum risk factor for the serviceability limit state of $R_s = 0.33$ in the Canterbury earthquake region is deleted.

Clause 9.3.9.4.13 in NZS 3101 is modified in B1/VM1 to limit the depth of precast units to 300 mm and the overall depth to 400 mm.

The formula in B1/VM4 paragraph 3.3.2b) is corrected.

- **B2 Durability: B2/AS1** (<https://www.building.govt.nz/building-code-compliance/b-stability/b2-durability/#jumpto-acceptable-solutions-and-verification-methods>) (<https://www.building.govt.nz/building-code-compliance/b-stability/b1-structure/#jumpto-acceptable-solutions-and-verification-methods>)
NZS 4223.2:2016 is cited as a means of compliance for the durability of insulating glass units (double glazing)

- **C1-C6 Protection from fire: C/AS1 to C/AS7** (<https://www.building.govt.nz/building-code-compliance/c-protection-from-fire/c-clauses-c1-c6/#jumpto-acceptable-solutions-and-verification-methods>)
Paragraph 1.1.2, C/AS2 to C/AS6: Clarification that an alternative solution or Verification Method can be used for buildings with complex features or specific fire engineering design.

Paragraph 2.3, C/AS1 to C/AS7: Scope limitations on Life rating and Property rating are removed.

Paragraph 3.4, C/AS1 only: NZS 4514 domestic smoke alarms can be used to extend travel distance in housing.

Paragraph 3.15.5, C/AS3 only: Door widths clarified.

Paragraph 4.1.3, C/AS7 only: Limitations on intermediate floors do not apply to car parks.

Paragraph 4.9.6, C/AS2 only: Paragraph removed as requirements are given in Paragraph 3.9.6.

Paragraph 4.16.12, C/AS3 and C/AS4: Location of smoke dampers clarified.

Paragraph 5.1.2, C/AS1 only: Requirement for notional boundary between buildings only applies where there is sleeping use.

Paragraph 5.5.7, C/AS2 to C/AS6: The tabulated method for calculating Unprotected Areas can be used.

Paragraph 5.8.3, C/AS2, C/AS4 to C/AS6: Removed dispensation from external cladding requirements for buildings sprinklered and less than 25m.

Appendix C, C/AS2 to C/AS6: Table added enabling Australian and European Standards to be used to determine Group Numbers.

- **D1 Access routes: D1/AS1, D1/VM1** (<https://www.building.govt.nz/building-code-compliance/d-access/d1-access-routes/#jumpto-acceptable-solutions-and-verification-methods>)

Section 2.1 on slip resistance of walking surfaces is revised and references AS 4586: 2013 'Slip resistance classification of new pedestrian surfaces'.

Paragraph 1.2.1 includes a requirement for maximum vertical variations in flooring. BS EN 14975: 2006 'Loft ladders – Requirements, marking and testing' is referenced as an acceptable solution. AS 1657: 2013 'Fixed platforms, walkways, stairways and ladders – Design, construction and installation' replaces an earlier version. Minor changes and corrections are made throughout the text for clarity.

- **D2 Mechanical Installations for Access: D2/AS1** (<https://www.building.govt.nz/building-code-compliance/d-access/d2-mechanical-installations-for-access/#jumpto-acceptable-solutions-and-verification-methods>)

The lift standard EN 81-20:2014 is cited, with appropriate modifications for use in New Zealand, to incorporate modern technology and practices. The transition period for introducing EN 81-20 aligns with its introduction internationally.

- **E1 Surface Water: E1/VM1** (<https://www.building.govt.nz/building-code-compliance/e-moisture/e1-surface-water/#jumpto-acceptable-solutions-and-verification-methods>)

Six reference Standards are updated. Minor corrections are made to Table 1 and paragraph 9.0.6.

- **E2 External Moisture: E2/AS3** (<https://www.building.govt.nz/building-code-compliance/e-moisture/e2-external-moisture/#jumpto-acceptable-solutions-and-verification-methods>) (<https://www.building.govt.nz/building-code-compliance/d-access/d2-mechanical-installations-for-access/#jumpto-acceptable-solutions-and-verification-methods>)

The code of practice CCANZ – CP 01: 2014 errata 1 January 2015 replaces the 2014 version.

- **E3 Internal Moisture: E3/AS1** (<https://www.building.govt.nz/building-code-compliance/e-moisture/e3-internal-moisture/#jumpto-acceptable-solutions-and-verification-methods>)

Comment under paragraph 1.1.4 is corrected – clause E3 does not apply to buildings that are not Housing or Communal residential.

- **F2 Hazardous Building Materials: F2/AS1** (<https://www.building.govt.nz/building-code-compliance/f-safety-of-users/f2-hazardous-building-materials/#jumpto-acceptable-solutions-and-verification-methods>)

NZS 4223.3: 2016 Amendment 1 'Glazing in buildings – Human impact safety requirements' replaces the 1999 version. A comment is provided on asbestos in building materials.

- **F4 Safety from Falling: F4/AS1** (<https://www.building.govt.nz/building-code-compliance/f-safety-of-users/f4-safety-from-falling/#jumpto-acceptable-solutions-and-verification-methods>)

Minor changes to Table 1 regarding barriers on stairways. A comment is provided on access to building services equipment mounted on roofs. Requirements for opening windows are clarified in section 2.0.

- **F6 Visibility in Escape Routes: F6/AS1** (<https://www.building.govt.nz/building-code-compliance/f-safety-of-users/f6-visibility-in-escape-routes/#jumpto-acceptable-solutions-and-verification-methods>)

Comments are modified to improve guidance on "occupant load" and "slopes".

- **F8 Signs: F8/AS1** (<https://www.building.govt.nz/building-code-compliance/f-safety-of-users/f8-signs/#jumpto-acceptable-solutions-and-verification-methods>)

AS/NZS 2293.2 is updated to the latest version and NZS 4541 is cited. Exit signs, sprinkler signage and electromagnetic compatibility are clarified

(paragraphs 4.5.1, 5.4 and Appendix A respectively). Suitable LED lighting is included as an acceptable means to recharge photoluminescent signs.

- **G2 Laundering:** G2/AS1 (<https://www.building.govt.nz/building-code-compliance/g-services-and-facilities/g2-laundering/#jumpto-acceptable-solutions-and-verification-methods>)
The reference to AS/NZS 1229:2002 is corrected. The minimum space requirements for laundries and laundries for persons with disabilities are clarified (paragraph 1.2 and Figures 1 and 2).
- **G3 Food Preparation and Prevention of Contamination:** G3/AS1 (<https://www.building.govt.nz/building-code-compliance/g-services-and-facilities/g3-food-preparation-and-prevention-of-contamination/#jumpto-acceptable-solutions-and-verification-methods>)
The minimum clear area for domestic kitchens and the associated requirements for facilities for persons with disabilities are clarified in G3/AS1 (Figure 1 and paragraphs 1.5.1 and 1.5.2).
- **G4 Ventilation:** G4/AS1, G4/VM1 (<https://www.building.govt.nz/building-code-compliance/g-services-and-facilities/g4-ventilation/#jumpto-acceptable-solutions-and-verification-methods>)
AS/NZS 5601.1:2013 and the Workplace Exposure Standards are updated to the latest versions, including consequential changes to G4/AS1 paragraphs 2.4.1(c) and 3.0.1.
- **G10 Piped Services:** G10/AS1, G10/VM1 (<https://www.building.govt.nz/building-code-compliance/g-services-and-facilities/g10-piped-services/#jumpto-acceptable-solutions-and-verification-methods>)
AS/NZS 5601.1:2013 is updated to the latest version, including consequential changes to G10/AS1 paragraph 5.0.1.
- **G11 Gas as an Energy Source:** G11/AS1 (<https://www.building.govt.nz/building-code-compliance/g-services-and-facilities/g11-gas-as-an-energy-source/#jumpto-acceptable-solutions-and-verification-methods>)
AS/NZS 5601.1:2013 updated to the latest version.
- **G12 Water Supplies:** G12/AS1, G12/AS2, G12/VM1 (<https://www.building.govt.nz/building-code-compliance/g-services-and-facilities/g12-water-supplies/#jumpto-acceptable-solutions-and-verification-methods>)
Eight referenced Standards are updated to the latest versions and BS EN 1567:1999 is referenced. Minor corrections, clarifications and consequential changes from updating Standards are made to G12/AS1 and G12/AS2.
- **G13 Foul Water:** G13/AS1, G13/AS2, G13/AS3, G13/VM2 (<https://www.building.govt.nz/building-code-compliance/g-services-and-facilities/g13-foul-water/#jumpto-acceptable-solutions-and-verification-methods>)
Five referenced Standards are updated to the latest versions and consequential changes are made to G13/AS1, G13/AS2 and G13/AS3. Minor changes are made in G13/AS1 relating to air admittance valves.
- **G14 Industrial Liquid Waste:** G14/VM1 (<https://www.building.govt.nz/building-code-compliance/g-services-and-facilities/g14-industrial-liquid-waste/#jumpto-acceptable-solutions-and-verification-methods>)
Four referenced Standards are updated to the latest versions.
- **H1 Energy Efficiency:** H1/AS1, H1/VM1 (<https://www.building.govt.nz/building-code-compliance/h-energy-efficiency/h1-energy-efficiency/#jumpto-acceptable-solutions-and-verification-methods>)
NZS 4218:2009 replaces the 2004 version in H1/AS1 and H1/VM1. Overall the requirements in H1/AS1 do not change, but foil insulation is no longer within the scope of H1/AS1.