



## Industry Bulletin 147

# Western Australian State Variation NCC 2022 Buildings in wind Regions B and D

***This Industry Bulletin provides information relating to new Western Australian State Variations introduced in the 2022 edition of the National Construction Code (NCC 2022).***

NCC 2022 has been published by the Australian Building Codes Board (ABCB) and is available on the [ABCB website](#). It will be adopted on 1 May 2023 with certain transition arrangements for [implementation in Western Australia](#).

Schedule 11 of NCC 2022 Volume One, Volume Two and the ABCB Housing Provisions Standard 2022 include new state variations relating to buildings located in wind Regions B and D in Western Australia.

The **design team including structural engineers** must ensure buildings are designed to meet applicable building standards, being NCC requirements including relevant state variations.

**Building surveyors** must check that plans and specifications demonstrate compliance with applicable building standards before signing a certificate of design compliance. This includes checking that the design team and engineer have incorporated relevant state variations.

**Builders** must ensure, on completion, that the building complies with applicable building standards including relevant state variations.

### Wind Region B

The state variation for wind Region B is a result of an investigation that was carried out after Tropical Cyclone Seroja passed through the mid-west of Western Australia. The main cause of severe structural damage to buildings as a result, was identified as a combination of large suction forces on the roof and a rapid increase in internal pressure.

The state variation now requires designers to consider increased internal pressures when designing buildings and use the cyclonic (C) classification instead of the non-cyclonic (N) classification. This includes wind Region B2 as referenced in the 2021 edition of AS/NZS 1170.2.

While there are extended transitional arrangements planned for Western Australia, it is strongly recommended that the state variation requirements, relating to wind Region B in NCC 2022, are applied when building in the region. The state variation requirements are intended to improve the resilience of homes and other buildings located within wind Region B.

### Wind Region D

The state variation for wind Region D only affects parts of the region located north of the Tropic of Capricorn. NCC 2022 references the 2021 editions of AS/NZS 1170.2 and AS 4055 in which the calculated design wind speeds for wind Region D are reduced.

The state variation has a new table that defines new Annual Exceedance Probabilities for buildings in wind region D north of the Tropic of Capricorn. This means that designs under NCC2022 using AS/NZS 1170.2:2021 will produce similar design wind speeds for buildings in this region as the 2011 edition of AS/NZS 1170.2. The state variation also has a new table for WA to replace Table 2.2 in AS 4055:2021 and gives similar wind classifications for wind region D as those in AS 4055:2011.

### The changes

It is important to note that the application of referenced documents AS/NZS 1170.2 and AS 4055 for wind Regions B and D in Western Australia have been varied. These variations must be applied when using these standards as primary, secondary or subsequent referenced documents.

The following tables list the changes and provide some commentary in relation to the state variations found in Schedule 11 of the:

1. NCC 2022 Volume One;
2. NCC 2022 Volume Two; and
3. ABCB Housing Provisions Standard 2022.

<b>NCC 2022 Volume One – Schedule 11 WA Variations</b>	
Reference	Changes and commentary
WA B1D3	<p>B1D3(c)(i)(B) varied to reference WA Table B1D3b in lieu of Table B1D3b.</p> <p>WA Table B1D3b has an additional column that assigns specific Annual Probability of Exceedance for cyclonic wind, in wind Region D north of the tropic of Capricorn.</p>
	B1D3(c)(iv) varied to include wind Region B2 as a cyclonic area.
WA B1D4	B1D4(l) varied to apply to wind Region B2 in addition to wind Regions C and D.
S4C1	Varied to apply to wind Region B2 in addition to wind Regions C and D.
WA Part B2	<p>New Part added to set out changes necessary to the application of AS/NZS 1170.2:2021 in Western Australia for wind Region B.</p> <p>It has requirements that replace 5.3.1, 5.3.2 and Table 3.1(A) of AS/NZS 1170.2:2021 which identifies wind Region B2 as cyclonic similar to wind Regions C and D.</p>
Schedule 1	Definition of Design wind speed varied to include wind Region B as cyclonic.
Schedule 2	Note added to require the application of variations to AS/NZS 1170.2:2021 as set out in WA Part B2.

<b>NCC 2022 Volume Two – Schedule 11 WA Variations</b>	
Reference	Changes and commentary
WA H1D7	Varied to apply to wind Region B in addition to wind Regions C and D.
Schedule 1	Definition of Design wind speed varied to include wind Region B as cyclonic.
Schedule 2	Notes added to require the application of variations to AS/NZS 1170.2:2021 and AS 4055:2021 as set out in WA Part 2.3 of the ABCB Housing Provisions.

**Disclaimer** – The information contained in this fact sheet is provided as general information and a guide only. It should not be relied upon as legal advice or as an accurate statement of the relevant legislation provisions. If you are uncertain as to your legal obligations, you should obtain independent legal advice.

<b>ABCB Housing Provisions Standard 2022 – Schedule 11 WA Variations</b>	
Reference	Changes and commentary
WA 2.2.3	<p>2.2.3(c)(i)(B) varied to reference WA Table 2.2.3b in lieu of Table 2.2.3b.</p> <p>WA Table 2.2.3b has an additional column that assigns specific Annual Probability of Exceedance for cyclonic wind, in wind Region D north of the tropic of Capricorn.</p>
WA 2.2.4	2.2.4(q) varied to apply to wind Region B in addition to wind Regions C and D.
WA Part 2.3	<p>New Part added to set out the changes necessary for Western Australia to the application of AS/NZS 1170.2:2021 for wind Region B2 and AS 4055:2021 for site wind classification.</p> <p>It has requirements that replace 5.3.1, 5.3.2 and Table 3.1(A) of AS/NZS 1170.2:2021 which identifies wind Region B2 as cyclonic similar to wind Regions C and D.</p> <p>It also has requirements that replace Table 2.2 of AS 4055:2021 to nominate 'C' classifications for wind Region B and to differentiate between Region D north and south of the Tropic of Capricorn.</p>
Schedule 1	Definition of design wind speed varied to include Region B as cyclonic
Schedule 2	<p>Notes added to require the application of variations to AS/NZS 1170.2:2021 and</p> <p>AS 4055:2021 as set out in WA Part 2.3 of the ABCB Housing Provisions 2022.</p>

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