



Government of **Western Australia**
Department of **Communities**
Housing

HOUSING

CONSTRUCT SPECIFICATION – SUPPLEMENT 1

Wind regions C & D

NATSPEC October 2019

This supplement to the reference specification has been developed by NATSPEC in conjunction with the Western Australia Department of Communities, Housing. The requirements in this document are generic and are to be read in conjunction with the reference specification for the class of building project specific documents from the Design consultant, including drawings, schedules and appendices. It does not cover the requirements for every project situation.

The Design consultants' documents take precedence. Check the consultants' documents for any variations to the requirements of the specification.

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PREFACE

This specification supplement for Wind regions C & D sets out requirements that are in addition to HOUSING PART C: CONSTRUCT SPECIFICATION for BCA class 1 and 10 buildings. Read this supplement in conjunction with HOUSING PART C: CONSTRUCT SPECIFICATION and other project specific documents, including drawings, schedules and appendices and conform to the applicable requirements.

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0171 GENERAL REQUIREMENTS

1.1 INTERPRETATION

Insert additional text to subclause as follows.

Definitions

General: For the purposes of this document the definitions given below apply:

- Northern areas: Sites located north of 27° latitude.

Add subclause as follows.

Wind regions C and D

Wind regions C: Include areas located as follows:

- Within 50 km of the coast between latitudes 25°S and 27°S.
- Between 50 km and 100 km from the coast between latitudes 20°S and 25°S.
- Within 50 km of the coast north of latitude 20°S.

Wind regions D: Include areas located as follows:

- Within 50 km from the coast between latitudes 20°S and 25°S.

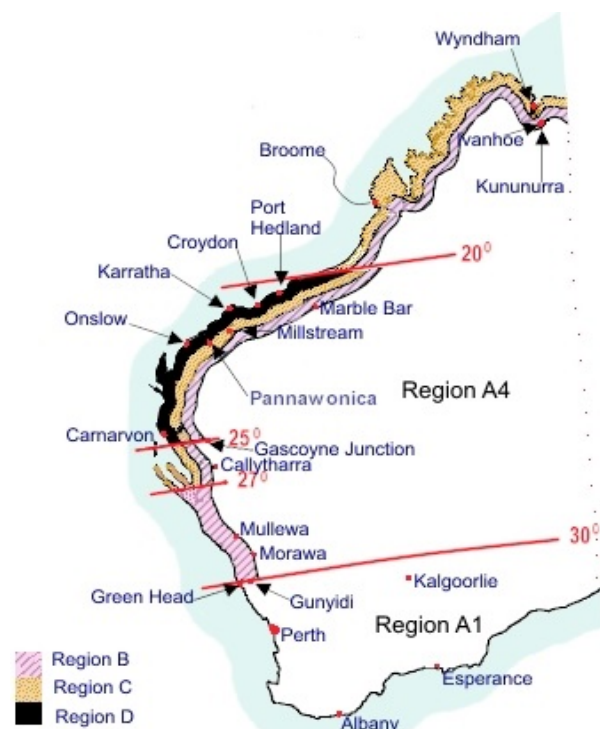


Figure 3.1 (A) WIND REGIONS AS/NZS 1170.2

0242 LANDSCAPE - FENCES AND BARRIERS

1 GENERAL

Add clause as follows.

1.1 DESIGN

General

Requirement: Conform to the following:

Supplement 1: Wind regions C & D

- AS/NZS 1170.2 for Wind Regions C or D and Terrain Category 2 (TC2).
- AS 4055, as appropriate for the project site conditions.

Submission: Provide documentation of fencing details, supports and connection by a professional structural engineer.

0342 LIGHT STEEL FRAMING

1 GENERAL

1.1 STANDARDS

Insert additional text to subclause as follows.

General

Framing and trusses: Conform to the following:

- AS/NZS 1170.2 for Wind Regions C or D and Terrain Category 2 (TC2).
- AS 4055, as appropriate for the project site conditions.
- Maximum truss spacing: 1200 mm centre.

1.2 SUBMISSIONS

Insert additional text to subclause as follows.

Design

Design compliance: Provide certification from a professional engineer that the framing and connections comply with the wind ratings for the site location.

2 EXECUTION

2.1 GENERAL

Add subclause as follows.

Cyclone debris screens

Noggings: Provide as required to support screen fixings.

Roof battens: Provide as required to support screens under verandahs and eaves when in the fully open position.

Add clause as follows.

2.2 ROOF FRAMING

Battens

Roof batten: G550 steel battens with minimum 0.75 mm BMT, total coated thickness of 0.8 mm.

0382 LIGHT TIMBER FRAMING

1 GENERAL

1.1 STANDARDS

Insert additional text to subclause as follows.

General

Framing and trusses: Conform to the following:

- AS/NZS 1170.2 for Wind Regions C or D and Terrain Category 2 (TC2).
- AS 4055, as appropriate for the project site conditions.
- Maximum truss spacing: 1200 mm centre.

Submissions: Provide certification from a professional engineer that the framing and connections comply with the wind ratings for the site location.

2 EXECUTION

2.1 WALL FRAMING

Add subclause as follows.

Trimmers

Noggings: Provide to facilitate cyclone debris screen fixings.

0421 ROOFING

1 EXECUTION

1.1 SHEET METAL ROOFING

Add subclause as follows.

Roof sheet installation

Fixing of roof sheeting: To the manufacturer's recommendations and as follows:

- Cyclonic fasteners and washer: Provide galvanized steel cyclonic fasteners and EPDM bonded cyclone washers to the manufacturer's recommendations for the appropriate substrate.

0431 CLADDING

1 EXECUTION

1.1 CONSTRUCTION GENERALLY

Add subclause as follows.

Cladding

Cyclonic fasteners and washer: Provide galvanized steel cyclonic fasteners and EPDM bonded cyclone washers to the manufacturer's recommendations for the appropriate substrate.

0451 WINDOWS AND GLAZED DOORS

1 GENERAL

1.1 STANDARDS

Replace subclause as follows.

General

Selection and installation: To AS 2047 for the following:

- Serviceability design wind pressure: To AS 2047 Table 2.1, as appropriate for the project site conditions.
- Ultimate strength test pressure: To AS 2047 Table 2.5, as appropriate for the project site conditions.

Add subclause as follows.

Testing

Debris impact resistance for glazed sidelights and sliding doors: Tested for loading conforming to AS/NZS 1170.2 clause 2.5.8.

2 PRODUCTS

2.1 COMPONENTS

Add subclause as follows.

Cyclone debris screens

Location: Provide to all openable windows.

Screens and fixing to frame: Powder coat finished stainless steel screw clamped 0.9 mm strand type 304 stainless steel wire mesh screens.

Testing: Provide certification that screen has been tested to withstand impact loading from wind borne debris conforming to AS/NZS 1170.2 clause 2.5.8.

3 EXECUTION

3.1 INSTALLATION

Add subclause as follows.

Cyclone debris screens

Mounting: Top hung, fully framed, mitred and staked to protect from side impact and insects.

- Hinge: Minimum three 70 mm fixed pin hinges for each screen.
- Hinge position: 170 to 180 mm from outer edge of screen at 500 mm centres.

Screen (surround) frame: 70 x 20 mm.

Base frame:

- Fixing: Screw fixed to the building structure, through cladding into wall framing, with 10g tamper resistant screws at 100 mm from the corners and 300 mm centres.
- Drainage points: Minimum two 20 x 5 mm (elongated) holes to prevent water pooling.
- Wire surface clearance: Provide projection so that wire clearance from glazing is not less than the rate of instantaneous deflection measured during testing, 105 mm optimum.

Screen configuration: Align with window configuration.

- Maximum panel dimension: 1200 x 1500 mm.

Gravity self-centring hook: Provide hook to hang screen from rafter or eaves when in the fully open position.

- Hook material: 6 mm galvanized steel rod.

Screen finish:

- Mesh: Black powder coat.

- Frame: Powder coat.

Marking: Provide the manufacturer's name in 3 mm high letters on the internal face of the frame, using one of the following methods:

- Embossing the frame.
- Adhesive, transparent acrylic, untearable polyester film label.

0454 OVERHEAD DOORS

1 GENERAL

Add clause as follows.

1.1 SUBMISSION

Certification

Requirement: Submit manufacturer's data verifying the following:

- Materials, products and installation: The door is able to withstand wind pressure to AS/NZS 4505 Table 5.2 for the wind classification appropriate to the project site.
- Testing: In conformance with AS/NZS 4505 Appendix A for cyclonic regions.

0572 MISCELLANEOUS FIXTURES AND APPLIANCES

1 EXECUTION

1.1 APPLIANCES

Replace subclause as follows.

Rangehood and exhaust fan

Requirement: Provide as follows:

- Habitable rooms: Fit with self-closing damper or filter to BCA 3.12.3.4.
- Exhaust fans: Operated by a separate wall switch.
- Ducting to the outside : Side exhaust with PVC-U cover painted to match exterior colour scheme. Ducting not permitted through the roof.

Installation: To the manufacturer's recommendations.

0802 HYDRAULIC

1 EXECUTION

1.1 COLD AND HEATED WATER

Insert additional text to subclause as follows.

Solar and heat pump systems

Roof mounted collectors: Install using cyclone mounts or frame to the manufacturer's recommendations.

Photovoltaic panel mounting frame: Galvanized steel frame and fixings able to withstand wind classification as defined in AS/NZS 4505 appropriate to the project site.

Collector panel stone guards: Provide powder coat finished galvanized steel framed welded mesh (stone guard) enclosure, to all roof mounted collector panels, to the solar heater manufacturer's recommendations. Colour to match roof finish.

0902 ELECTRICAL

1 EXECUTION

1.1 GENERAL

Add subclause as follows.

Accessories

Electrical accessories (including switches and socket outlets): To have an International Protection (IP) Rating, to AS/NZS 3000, if installed in a location where water ingress is possible, including where exposed to cyclonic conditions.

REFERENCED DOCUMENTS

The following documents are incorporated into this worksection by reference:

AS/NZS 1170		Structural design actions
AS/NZS 1170.2	2011	Wind actions
AS 2047	2014	Windows and external glazed doors in buildings
AS/NZS 3000	2018	Electrical installations (known as the Australian/New Zealand Wiring Rules)
AS 4055	2012	Wind loads for housing
AS/NZS 4505	2012	Garage doors and other large access doors
BCA 3.12.3.4	2019	Acceptable solutions - Energy efficiency - Building sealing - Exhaust fans



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99 Plain Street, East Perth, WA 6004
www.housing.wa.gov.au