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

Department of Communities

Construction Specification – Supplement 1

NATSPEC | Wind Regions C & D

June 2023

This supplement to the reference specification has been developed by NATSPEC in conjunction with the Western Australia Department of Communities. 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.

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 1a 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.

TABLE OF CONTENTS

0171 GENERAL REQUIREMENTS

1 GENERAL

1.1 INTERPRETATION

Add subclause as follows.

Wind regions C and D
Classification: To AS/NZS 1170.2 (2021) Figure 3.1(A).

0242 LANDSCAPE - FENCES AND BARRIERS

1 GENERAL

Add clause as follows.

1.1 DESIGN

General
Requirement: Conform to the following:

- BCA (2022) Schedule 11 WA B2 [Not in NCC 2019], AS/NZS 1170.2 (2021) and AS 4055 (2021), as appropriate.
- AS 3623 (1993).
- AS/NZS 4600 (2018).
- Maximum truss spacing: 1200 mm centres.

Designated design Wind Regions: C or D.

Designated design Terrain Category: TC2.

1.2 SUBMISSIONS

Add subclause as follows.

Design documentation
Requirement: Submit fencing, support and connection details by a professional structural engineer.

0342 LIGHT STEEL FRAMING

1 GENERAL

Add clause as follows.

1.1 DESIGN

General
Requirement: Conform to the following:

- BCA (2022) Schedule 11 WA B2 [Not in NCC 2019], AS/NZS 1170.2 (2021) and AS 4055 (2021), as appropriate.
- Maximum truss spacing: 1200 mm centres.

Designated design Wind Regions: C or D.

Designated design Terrain Category: TC2.

1.2 SUBMISSIONS

Insert additional text to subclause as follows.

Design
Design compliance: Submit certification from a professional engineer that the framing and connections conform to 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.

2.2 ROOF AND CEILING FRAMING

Replace subclause as follows.

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

0382 LIGHT TIMBER FRAMING

1 GENERAL

Add clause as follows.

1.1 DESIGN

General
Requirement: Conform to the following:

- BCA (2022) Schedule 11 WA B2 [Not in NCC 2019], AS/NZS 1170.2 (2021) and AS 4055 (2021), as appropriate.
- AS 1684.3 (2021).
- Maximum truss spacing: 1200 mm centres.

Designated design Wind Regions: C or D.

Designated design Terrain Category: TC2.

1.2 SUBMISSIONS

Insert additional text to subclause as follows.

Design
Design compliance: Submit certification from a professional engineer that the framing and connections conform to 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

Insert additional text to subclause as follows.

Installation

Fixing: 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 GENERAL

Insert additional text to subclause as follows.

Fixing

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 (2014) for the following:

- Serviceability design wind pressure: To AS 2047 (2014) Table 2.1, as appropriate for the project site conditions.
- Ultimate strength test pressure: To AS 2047 (2014) Table 2.5, as appropriate for the project site conditions.

Add clause as follows.

1.2 SUBMISSIONS

Products and materials

Type tests: Submit results, as follows:

- Wind-borne debris impact for windows, doors and screens to AS/NZS 1170.2 (2021) clause 2.5.8.

2 PRODUCTS

2.1 COMPONENTS

Add subclause as follows.

Cyclone debris screens

Location: Provide to all glazed windows and doors.

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 (2021) clause 2.5.8.

3 EXECUTION

3.1 INSTALLATION

Add subclause as follows.

Cyclone debris screens

Requirement: Black powder coated stainless steel mesh screen welded to extruded powder coated aluminium frame.

- Screen (surround) frame: 70 x 20 mm.
- Screen configuration: Align with window configuration. Maximum panel dimension 1200 x 1500 mm.

Locking system: One touch keyless locking system.

Mounting: Top-hung (windows) and side-hung (doors), 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.

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.

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

- Hook material: 6 mm galvanized steel rod.

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 SUBMISSIONS

Products and materials

Manufacturer's data: Submit the manufacturer's product data sheets.

Type tests: Submit the following:

- Wind-borne debris impact: Verification from an Accredited Testing Laboratory of wind-borne debris impact rating.

Add subsection as follows.

2 PRODUCTS

2.1 GENERAL

Marking and labelling

Garage doors and other large access doors: To AS/NZS 4505 (2012) Section 8.

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 (2022) H6D2(1)(b)(iii) [BCA (2019) 3.12.3.4].
- Exhaust fans: Operated by a separate wall switch.
- Ducting to the outside: Conform to the following:
  . 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 (2012) 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.

REFERENCED DOCUMENTS

The following documents are incorporated into this worksection by reference:

AS/NZS 1170		Structural design actions
AS/NZS 1170.2	2021	Wind actions
AS 1684		Residential timber-framed construction
AS 1684.3	2021	Cyclonic areas
AS 2047	2014	Windows and external glazed doors in buildings
AS 3623	1993	Domestic metal framing
AS 4055	2021	Wind loads for housing
AS/NZS 4505	2012	Garage doors and other large access doors
AS/NZS 4600	2018	Cold-formed steel structures
BCA 3.12.3.4	2019	Acceptable construction - Energy efficiency - Building sealing - Exhaust fans
BCA H6D2	2022	Class 1 and 10 buildings - Energy efficiency - Application of Part H6
BCA Schedule 11 WA B2	2022	Changes to AS/NZS 1170.2:2021

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