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## Part F8 and NSW Part J Report - NCC 2022



### Millimetre Consulting Proposed Residential Development

To be built at 5-9 Nulla Nulla St, and 4-6 Ku-ring-gai Ave, Turramurra, 2074 NSW

Issue	File Ref	Description	Author	Date
A	2502047	Part F8 and NSW Section J DTS Assessment and Report	LP	04/11/2025
B	2502047	Part F8 and NSW Section J DTS Assessment and Report (Address correction)	AR/LP	24/11/2025



**Sustainable Building Consultants**

p. 02 9970 6181 e. [admin@efficientliving.com.au](mailto:admin@efficientliving.com.au)  
[www.efficientliving.com.au](http://www.efficientliving.com.au)

**Report Contact:** Laura PArengkuan  
Email: laura@efficientliving.com.au

**Prepared For:**

Millimetre Consulting  
Helen Li  
helenli@mmservice.com.au

141 Walker St  
North Sydney NSW 2060  
0488 484 355

Efficient Living has been engaged by Millimetre Consulting to outline the compliance requirements of Part F8 and NSW Section J of NCC 2022 for the building located at 5-9 Nulla Nulla St, and 4-6 Ku-ring-gai Ave, Turramurra, 2074 NSW.

This report has been based upon the documentation specified below and information provided by Millimetre Consulting. Should these documents be changed then this report will require updating to reflect changes.

For a Class 2 building with a BASIX Certificate issued under:

- Version 4.0 or later, Section J of NCC 2022 Volume One applies
- Version 3.0 or earlier, Section J of NCC 2019 Volume One Amendment 1 applies

**Information used for Assessment**

This report is based on the floor plans, elevations and sections prepared by PMDL received on 09/10/2025.

Area	Comments
Class 2 – Sole occupancy units (SOU)	NatHERS, BASIX and NCC 2022 Part F8 and NSW Part J provisions apply.
Class 2 – Air-conditioned common areas & residential managers office & pool & gym (if less than 10% of the floor plate) non-conditioned common areas & car park.	BASIX and NCC 2022 NSW Part J provisions apply.
Class 9b Child Care, Class 6 Retail, Non Class 2	Full Section J1 – J9 report required. Separate report required.

Compliance with Deemed-to-Satisfy Provisions is achieved by compliance with following clauses.

Part	Clause	Comments
Part F8 – Condensation Management	Part F8	DTS compliance to be documented by Architect and Services Engineer.
Part J3 – Elemental Provisions	J3D5, J3D6 and J3D10(3, 5, 6)	Yes, if requirements listed in this report are met.
Part J4 – Building Fabric	J4D3	Yes, if requirements listed in this report are met.
Part J5 – Building Sealing	Part J5	DTS compliance to be documented by Architect and Services Engineer.
Part J6 – Air Conditioning & Ventilation Systems	Part J6	DTS compliance to be documented by Services Engineer.
Part J8 – Heated Water Supply and Swimming Pool and Spa Pool Plant	J8D2	DTS compliance to be documented by Hydraulics Engineer.
Part J9 – Energy Monitoring and On-site Distributed Energy Resources	J9D3, J9D4 and J9D5	DTS compliance to be documented by Electrical Engineer.

## Part F8 – Condensation management

### Verification Methods

#### F8V1 Condensation management

A verification method using the AIRAH Mould Index calculation can be used to assess condensation risk in a building. The verification method includes quantified targets for allowable condensation risk. A Mould Index of 3 (a measure of mould growth potential) must not be exceeded.

### Deemed-to-Satisfy Provisions

#### F8D2 Application of Part

These requirements only apply to Class 2 Sole Occupancy Units.

#### F8D3 External wall construction

1) Where A building membrane is installed in an external wall it must:

- Comply with AS 4200.1
- Be installed in accordance with AS 4200.2
- Be located on the external side of the primary insulation layer in an external wall.

Minimum Class 3 vapour permeance to membranes / sarking / insulation layer to external walls in climate zone 5

2) The primary water control layer must be separated from water sensitive materials by a drained cavity, except for single skin masonry and single skin concrete where a building membrane is not installed

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#### F8D4 Exhaust Systems

Exhaust system requirements:

- 1) Minimum air flow rate for exhaust systems of:
  - a. 25 L/s for a bathroom or sanitary compartment; and
  - b. 40 L/s for a kitchen or laundry
- 2) Kitchen, bathroom and laundry exhaust systems must be discharged to the outside of a building
- 3) If a traditional vented clothes dryer is to be installed, then ventilation ducting to the outside of the building is required
- 4) If a condenser dryer is installed, then ventilation ducting to outside air is not required
- 5) Exhaust systems installed in bathrooms or sanitary compartments, which are not run continuously or are not naturally ventilated; must be controlled to turn on when the lights in the room are turned on. They also require a timer to continue to operate for 10 minutes after the lights are turned off.
- 6) Except for rooms that are naturally ventilated, a room must be provided with make-up air in accordance with AS 1668.2

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#### F8D5 Ventilation of roof spaces

This clause does not apply to climate zone 5.

### Part J1 – Energy Efficiency

#### Verification Methods

##### J1V4 Verification of building envelope sealing

Compliance with building sealing and thermal performance can be confirmed if an air permeability rate, tested in accordance with Method 1 of AS/NZS ISO 9972, is:

- 1) No more than  $10\text{m}^3/\text{hr.m}^2$  at 50 Pa reference pressure; and
- 2) No less than  $5\text{m}^3/\text{hr.m}^2$  at 50 Pa reference pressure, otherwise:
  - a) a mechanical ventilation system is required in accordance with J1V4
  - c) Any space with a gas-fueled combustion appliance must be ventilated in accordance with Clause 6.4 and 6.4.5 of AS/NZS 5601.1

**Note:** To avoid retrofitted installation of mechanical air ventilation systems, consider designing the building with mechanical air ventilation systems in place

### Part J3 – Elemental Provisions

#### Deemed-to-Satisfy Provisions

##### NCC J3D5 Roof Thermal Breaks

As per plans referenced above, the proposed roof is concrete, therefore J3D5 is not applicable.

##### NCC J3D6 Wall Thermal Breaks

J3D6 is not applicable to Concrete walls.

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### NCC J310 Floors

As per plans referenced above, the proposal does not have a concrete slab-on-ground with either in-slab or in-screed heating, therefore J3D10 is not applicable.

## Part J4 - Building Fabric

### Deemed-to-Satisfy Provisions

#### NSW J4D2 Application of Part

NSW J4D3 (thermal insulation) applies to building elements forming the envelope of Class 2 Sole Occupancy Units where the NatHERS Certificate specifies that insulation is to be provided.

#### NSW J4D3 Thermal construction – general

- (1) Insulation must be installed in compliance with AS/NZS 4859.1:
  - (a) insulation must abut/overlap adjoining insulation other than supporting members such as studs, joists, noggins, furring channels, etc.
  - (b) it must form a continuous thermal barrier with ceilings, walls, bulkheads, floors, skylight shafts; and
  - (c) it must not interfere with services or fittings.
- (2) Reflective insulation must be installed with:
  - (a) the necessary airspace to achieve the required R-Value between the reflective side of the insulation and the building lining or cladding; and
  - (b) the reflective insulation closely fitted against any penetration, door or window opening; and
  - (c) the reflective insulation adequately supported by framing members;
  - (d) each adjoining sheet must either be overlapped by at least 50mm or be taped together
- (3) Bulk insulation must be installed so that:
  - (a) it maintains its position and thickness, other than where it is compressed between cladding and supporting members, water pipes, electrical cabling or the like; and
  - (b) in a ceiling, where there is no bulk insulation or reflective insulation in the wall beneath, it overlaps the wall by at least 50mm

## Part J5 - Building Sealing

### Deemed-to-Satisfy Provisions

#### NSW J5D2 Application of Part

The requirements that follow in this Part apply to the envelope of a Class 2 building, except where a building ventilation opening is necessary for the safe operation of a gas appliance; or for parts of the building that cannot be fully enclosed.

Part	Compliance
NCC J5D3 Chimneys and flues	N/A – There are no solid-fuel burning appliances
NCC J5D4 Roof lights	N/A – There are no roof lights proposed
NSW J5D5 Windows and doors	See below
NCC J5D6 Exhaust fans	See below

NCC J5D7 Construction of ceilings, walls, and floors	See below
NCC J5D8 Evaporative coolers	N/A – There are no evaporative coolers proposed

#### NCC J5D3 Chimneys and flues

No Chimneys or flues proposed

#### NCC J5D4 Roof Lights

No Roof lights proposed.

#### NSW J5D5 Windows and doors

- 1) A door, openable window or the like must be sealed:
  - a) When forming part of the envelope; or
  - b) In climate zones 4, 5, 6, 7 or 8
- 2) Requirements of (1) do not apply to:
  - a) A window complying with AS 2047; or
  - b) A fire door or smoke door; or
  - c) A roller shutter door, roller shutter grille or other security door or device installed only for out-of-hours security
- 3) A seal to restrict air infiltration:
  - a) For the bottom edge of a door, must be a draft protection device; and
  - b) For the other edges of a door or the edges of an openable window or other such opening, may be a foam or rubber compression strip, fibrous seal or the like
- 4) An entrance to a building, if leading to a conditioned space must have an airlock, self-closing door, rapid roller door, revolving door or the like, other than:
  - a) Where the conditioned space has a floor area of no more than 50m<sup>2</sup>

#### NCC J5D6 Exhaust fans

All exhaust fans must be fitted with a sealing device such as a self-closing damper or the like when serving:

- a) A conditioned space
- b) A habitable room in climate zones 4, 5, 6, 7 or 8

#### NCC J5D7 Construction of ceilings, walls & floors

- 1) All new construction forming elements must be constructed to minimize air leakage in accordance with J5D7 (2).
- 2) J5D7(2) Construction required by (1) must be:
  - a) enclosed by internal lining systems that are close fitting at ceiling, wall and floor junctions; or
  - b) sealed at junctions and penetrations with:
    - i) close fitting architrave, skirting, cornice; or
    - ii) expanding foam, rubber compression strip, caulking or the like.
- 3) These requirements do not apply to smoke hazard management openings.

#### NCC J5D8 Evaporative coolers

No evaporative Coolers proposed.

## Part J6 – Air Conditioning & Ventilation Systems

### Deemed-to-Satisfy Provisions

#### NSW J6D2 Application of Part

Compliance is not required with the national BCA provisions of J6D10 Space Heating, as those matters are regulated under BASIX.

The project mechanical engineer shall be responsible for ensuring compliance with Part J6 Air conditioning and ventilation systems listed below if applicable:

- J6D3 Air conditioning system control; and
- J6D4 Mechanical ventilation system control; and
- J6D5 Fan and duct systems; and
- J6D6 Ductwork insulation; and
- J6D7 Ductwork sealing; and
- J6D8 Pump systems; and
- J6D9 Pipework insulation; and
- J6D11 Refrigerant chillers; and
- J6D12 Unitary air-conditioning equipment; and
- J6D13 Heat rejection equipment.

**Compliance:** Part J6 to be addressed as part of Mechanical Design Certificate, read in conjunction with BASIX specifications.

## Part J8 Heated water supply

### Deemed-to-Satisfy Provisions

#### J8D2 Heated Water Supply

Any new heated water supply system for food preparation must be designed and installed in accordance with Part B2 of NCC Volume Three – Plumbing Code of Australia.

Part B2 of NCC Volume Three – Plumbing Code of Australia explains the requirements for a variety of hot water systems including solar heater, heat pump heater, gas water heater, electric resistance water heater and wood fired thermosiphon water heater. Electric resistance water heater are heavily restricted and should be avoided. For all the relevant requirements refer to Part B2 of NCC Volume Three. Further information can be provided if required.

**Note:** Compliance is not required with the national BCA provisions of J8D3 and J8D4 (Pool / Spa heating, pumps, timers and pool covers) as those matters are regulated under BASIX.

## Part J9 Energy monitoring and on-site distributed energy resources

### Deemed-to-Satisfy Provisions

#### J9D2 Application of Part

The following is applicable; however it does not apply within the sole occupancy units.

#### J9D3 Facilities for energy monitoring

The development floor area is over 2500m<sup>2</sup>, therefore it must have energy meters configured to enable individual time-of-use energy consumption data recording of:

- (i) air-conditioning plant including where appropriate, heating plant, cooling plant and air handling fans; and
- (ii) artificial lighting; and
- (iii) appliance power; and
- (iv) central hot water supply; and
- (v) internal transport devices including lifts, escalators, and travelators where there is more than one serving the building; and
- (vi) other ancillary plant.

Energy meters required by in the above must be interlinked by a communication system that collates the time-of-use energy consumption data to a single interface monitoring system where it can be stored, analyzed, and reviewed.

The above provisions do not apply to a Class 2 building with a floor area of more than 2500m<sup>2</sup> where the total area of the common areas is less than 500m<sup>2</sup>.

#### J9D4 Facilities for electric vehicle charging equipment

- 1) A carpark associated with a Class 2 building must be provided with electrical distribution boards dedicated to electric vehicle charging:
  - a) In each storey of the carpark in accordance with Table J9D4 below; and
  - b) Be labelled to indicate use for electric vehicle charging equipment
- 2) Electrical distribution boards dedicated to serving electric vehicle charging in a carpark must:
  - a) Be fitted with a charging control system with the ability to manage and schedule charging of electric vehicles
  - b) Have capacity for each circuit to support an electric vehicle charger able to deliver a minimum of 12 kWh from 11:00pm to 7:00am daily; and
  - e) Be sized to support the future installation of a 7 kW (32A) type 2 electric vehicle charger in:
    - i) 100% of the parking spaces associated with a Class 2 building
  - f) Contain space of at least 36 mm width of DIN rail per outgoing circuit for individual sub-circuit electricity metering to record electricity use of electric vehicle charging equipment; and
  - g) Be labelled to indicate the use of the space required by (f) is for the future installation of metering equipment

Table J9D4

Carpark spaces per storey for electric vehicles	Electrical distribution boards for electric vehicle charging per storey
0 - 9	0
10 - 24	1
25 - 48	2
49 - 72	3
73 - 96	4
97 - 120	5
121 - 144	6
145 - 168	7
169 +	7 + 1 additional distribution board per each additional 24 spaces or part thereof

**Note:** For mixed use developments, refer to J9D4 for additional electric vehicle charging requirements for parking spaces associated with a Class 3, 5, 6, 7b, 8 or 9 building.

#### J9D5 Facilities for solar photovoltaic and battery systems

- (1) The main electrical switchboard of a building must:
- (a) Contain at least two empty three-phase circuit breaker slots and four DIN rail spaces labelled to indicate the use of each space for
    - (i) A solar photovoltaic system; and
    - (ii) A battery system; and
  - (b) Be sized to accommodate the installation of solar photovoltaic panels producing their maximum electrical output on at least 20% of the building roof area

**Note:** J9D5(1)(a)(i) and (b) do not apply to a building with solar panels installed on at least 20% of the roof area or to a building with battery systems installed.

- (2) At least 20% of the roof area of the building must be left clear for the future installation of solar photovoltaic panels, unless it has solar panels installed to at least 20% of the roof area.