

Our Ref: D2025-009

30 April 2025

3 MEMORY AVENUE CROOKWELL

BUILDING CODE OF AUSTRALIA 2022

CAPABILITY STATEMENT FOR DA SUBMISSION

Prepared for

**NINE 28 PTY LTD AND CHILDCARE
PROPERTY DEVELOPMENTS PTY LTD**

Table of Contents

<u>0.0</u>	<u>Author and Reviewer</u>	3
<u>1.0</u>	<u>Executive Summary</u>	3
<u>2.0</u>	<u>Property Description</u>	4
<u>2.1</u>	<u>Location</u>	4
<u>2.2</u>	<u>Building Description</u>	4
<u>3.0</u>	<u>Building Code of Australia Assessment</u>	5
<u>3.1</u>	<u>Fire Resistance and Stability (Section C, BCA)</u>	5
<u>3.2.</u>	<u>Access and Egress (Section D, BCA)</u>	6
<u>3.3.</u>	<u>Services and Equipment (Section E, BCA)</u>	7
<u>3.4.</u>	<u>Health and Amenity (Section F, BCA)</u>	Error! Bookmark not defined.
<u>3.5.</u>	<u>Ancillary Provisions (Section G, BCA)</u>	11
<u>3.6.</u>	<u>Energy Efficient Construction (Section J, BCA)</u>	11
<u>4.</u>	<u>Fire Safety and Other Measures</u>	11
<u>4.1.</u>	<u>Proposed Fire Safety Measures</u>	11
<u>5.</u>	<u>Conclusion</u>	11
<u>6.</u>	<u>References</u>	11

0.0 Author and Reviewer

Revision history

Revision No.	Reviewed by	Description	Date
R00	Dean Morton BDC0742	Draft	24/02/2025
R02	Dean Morton BDC0742	Final	30/04/2025

1.0 Executive Summary

This report has been prepared so as to assess the architectural documentation as detailed in Part 6 in accordance with the Building Code of Australia Volume 1 (BCA) 2022 and adopted standards.

The proposed development is the construction of a single-storey early childhood centre with associated on grade car parking. The assessment has revealed that the proposed development will be capable of achieving compliance with BCA 2022. The following matters will require further consideration during detailed design development at the construction stage of the project:

- The building is to adopt Type C construction.
- External walls located between 1.5m-3m of the western boundary are to have a FRL of 60/60/60 and the FRL being achieved from the outside face of the wall only.
- Openings located to the external wall and within 3m of the western boundary will be protected in accordance with clause C4D3 and with a method as permitted by clause C4D5.
- There is to be an automatic shutdown of any ducted air handling system or for any individual room unit that exceeds 1000l/s capacity.
- The building is to be provided with a fire services including hydrant coverage, hose reels and a smoke detection with occupant warning system. The design of systems to be undertaken at the construction certificate stage.
- Disabled access is required to all parts normally used by the occupants and will be subject to assessment at the construction certificate stage. Compliance can be readily achieved.
- Sanitary facilities will be suitable for the proposed population.
- The external play areas are to be enclosed with a barrier that is compliant with AS 1926.1.
- The building is to comply with Section J with respect to climate zone 7 with regards to energy efficiency outcomes.

2.0 Property Description

2.1 Location

The subject building is located at 3 Memory Avenue Crookwell and has a secondary frontage to Prell and McIntosh Streets. The property is bounded to the north and west by undeveloped land. The property is taken to face south to McIntosh Street for the purpose of the report.

2.2 Building Description

<i>Use / Classification</i>	Class 9b:	Early childhood centre (ground) Note the car parking is on grade and therefore not a building that is provided with a classification.
<i>Rise in Storeys</i>	The development will have a rise of one storey (one storey contained)	
<i>Floor Area</i>	The maximum floor areas of fire compartments are:	
	Class 9b - Maximum floor area of	2000m ²
	The proposed building floor area is approximately 600m ² and does not exceed the maximum size of fire compartments in table C3D3	
<i>Volume</i>	The maximum volumes of the fire compartments are:	
	Class 9b - Maximum volume of	12,000m ³
	The proposed building volume is approximately 2,160m ³ and not exceed the maximum size of fire compartments in table C3D3	
<i>Effective Height</i>	The building will have an effective height of 0m (single storey)	
<i>Type of Construction</i>	The building requires Type C Construction.	
<i>Climate Zone</i>	For the purposes of Section J the climate zone is 7	
<i>Population</i>	The population noted based on advised child numbers will be 94 with a minimum of 16 supervising staff.	

3.0 Building Code of Australia Assessment

3.1 Fire Resistance and Stability (Section C, BCA)

Fire Resistance

The building is to comply with Clause C2D2 and Specification 5, for a building required to have Type C construction. Refer to clauses S5C24 and table S5C24(a) of Specification 5 of the BCA for the specific Fire Resistance Levels [FRL's].

In this regard the west external wall located between 1.5-3.0m from the boundary is to have a FRL of min 60/60/60 and the FRL may be achieved from the outside face of the wall only.

Lightweight construction & fire hazard properties

Where lightweight fire rated construction is proposed for walls, the system must comply with clause C2D9 and specification 6 of the BCA and the manufactures tested specification.

The fire hazard properties of floor, wall and ceiling linings are to comply with clause C2D11 and Specification 7 of the BCA. All materials selected for use in the construction should be accompanied by a valid test report demonstrating compliance with defined fire hazard properties.

Compartmentation & separation

In general there is no requirement for compartmentation of the building. Fire separation from the western boundary will require the external wall located between 0-1.5 from the boundary to have a FRL of 90/90/90 and between 1.5-3.0m from the boundary to have a FRL of min 60/60/60. The FRL is required to be achieved from the outside face of the wall only. Plans suitably detail compliance in this regard.

Protection of Openings

The openings within the western wall required to achieve a FRL are to be protected in a manner permitted under clause C4D5 and will be protected with fixed fire rated windows with a FRL of -/60/-. The plans detail compliance in the regard.

Electrical Supply

Electrical equipment is to be separated from the building in accordance with Clause C3D14 of the BCA. The main switchboard is to be constructed to achieve a fire resistance level of 120/120/120 with the door being -/120/30 fire rated.

3.2. Access and Egress (Section D, BCA)

Number of exits required

It is noted that as the building requires a minimum of 2 exits are required to every storey and part of a storey as required in D2D3 of BCA. It is noted that the required minimum number of exits is proposed.

Exit travel distances

Exit travel distances to a required exit or a point of choice between exits generally comply with Clause D2D5 of the BCA. In this regard travel distances does not to exceed 20m to a point in choice in travel and 40m to an exit.

Distance between alternative exits

The distance between alternative exits generally comply with Clause D2D6 of the BCA. In this regard the distance between exits does not exceed 60m or is less than 9m.

Dimensions of exits

Exits and paths of travel to exits are to comply with D2D8 of the BCA. Generally exits widths are 1m in width clear of any obstruction including hand rails or other fixtures. Reductions in width are available at doorways to not less than 750mm clear.

The unobstructed width of a required exit must not diminish in the direction of travel to a road or open space.

The required aggregate width based on the population determined in Section 2.2 of the report is required to be 1m.

Egress Doors

All exit doors will swing in the direction of egress and are required to be provided with the appropriate hardware in accordance with Clauses D3D25 & D3D26 of the BCA, the latches will be downward or pushing action on a single device. It is noted that a concession to locate latches above 1100mm AFFL is permitted for an early childhood centre provided there are trained staff to open doors during a fire event.

Access for people with a disability

The proposed building is required to comply with the following:

- The Disability (Access to Premises — Buildings) Standards 2010;
- Part D4 of BCA;
- Australian Standard AS 1428.1-2009, AS/NZS 1428.4.1-2009, AS/NZS 2890.6-2009

Buildings and parts of buildings must be accessible as required by Clause D4D2, unless exempted by clause D4D5, which requires access as follows:

Class 9b – To and within all areas normally used by the occupants.

The following areas are to be considered for design development:

- Access is to be provided from the allotment boundaries at the main points of pedestrian entry to the front entry door.
- Accessible car parking is to comply with AS 2890.6 incorporating shared zones with a minimum width of 2400mm.
- Where widths of accessways are less than 1m (reducing to 850mm through doorways)
- Door widths through the front entry are to provide minimum 850mm.
- Doors are to be provided with a colour contrast to the adjacent wall of minimum 30%

3.3. Services and Equipment (Section E, BCA)

Hydrant Systems

The building is required to be provided with a system of hydrant coverage in accordance with the provisions of Clause E1D2 of the BCA and AS 2419.1-2021.

The design of the hydrant service is subject to input from an accredited practitioner (fire safety).

Hose Reel Systems

The building is to be provided with a fire hose reel system in accordance with the provisions of Clause E1D3 of the BCA and AS 2441-2005. The design of the hose reel service is subject to input from an accredited practitioner (fire safety).

Portable Fire Extinguishers

Fire extinguishers are to be provided in accordance the provisions of Clause E1D14 of the BCA and AS2444 - 2001.

Exit and Emergency Lighting

Emergency lighting will be provided throughout the building in accordance with Part E4 of the BCA and AS/NZS 2293.1-2018

Smoke Hazard Management

The building is to be provided with the following smoke control measures:

- An automatic smoke detection and occupant warning system is to be provided throughout the building complying with Specification 20 of the BCA.
- Automatic shutdown of any ducted air handling system or individual room units with a capacity more than 1000l/s is to be initiated from a smoke detection system.

3.4. Health and Amenity (Section F, BCA)

Damp and Weatherproofing

Adequate measures will be employed to ensure compliance Part F1 of the BCA is achieved in terms of weatherproofing, this is to include compliance with AS 4654.2-2012 in respect of waterproofing of external balconies.

Sanitary and Other facilities

Facilities will be provided in accordance with the provisions of Part F4 of the BCA. In this regard it is proposed to provide a unisex wheelchair accessible compartment that will accommodate a staff number of 8 males and 8 females (16 staff in total).

There is to be a minimum of 7 pans and 7 basins for the children being junior pans based on 94 children and having washbasins with a height not exceeding 600mm and accessible from internal and external play areas.

An early childhood centre is to be provided with the following facilities:

- A kitchen for food preparation including a sink, space for a refrigerator and a space for cooking facilities.
- The kitchen is required to permit supervision of children under the age of 2, in this regard the placement of the kitchen is to be subject to a performance solution.
- A bath, shower or shower bath
- A laundry comprising a washtub and space for a washing machine
- A bench type baby bath within 1m of the nappy change bench
- A nappy changing bench within 1m of adult handwash basin, have an area of minimum 0.9m² and at a height of 850-900mm AFFL, contain a storage space 800mm high x 500mm wide x 850mm deep for the storage of steps and be located to permit supervision of play areas.

Sanitary Facilities for People with Disabilities

Facilities will be provided in accordance with the provisions of Clause F4D5 and F4D6 and AS1428.1 – 2009. In this regard there is to be a wheelchair accessible sanitary compartment to every floor containing sanitary facilities.

Ceiling Heights

The following minimum building ceiling heights must be maintained.

- Common kitchen, laundry or the like – 2.1m
- Corridor, passageway or the like – 2.1m
- Bathroom, shower, sanitary compartment or the like – 2.1m
- Habitable rooms including common areas – 2.4m (min 2.7m where accommodating more than 100 persons)

Natural and Artificial Lighting

Natural lighting is to be provided to playrooms of early childhood centers and have a minimum of 50% of window sills located a maximum of 500mm above floor level. There is to be a minimum of 10% of the floor area provided as windows (light transmitting elements exclusive of frames) to achieve compliance.

Artificial lighting may be provided throughout other parts of the building in accordance with the provisions of Clause F6D5 of the BCA and AS1680.0.

Compliance can be readily achieved and is subject to detailed design development at the construction certificate stage.

Ventilation

The building is required to be provided with ventilation in accordance with the provisions of Clause F6D6 of the BCA. Ventilation may be provided by natural means or a mechanical system complying with AS 1668.2-2012.

3.5. Ancillary Provisions (Section G, BCA)

Play area barriers

Outdoor play areas are to be enclosed with a barrier that is equivalent to that of a swimming pool barrier and complying with AS 1926.1 with the intent that the barrier be designed as if the swimming pool is outside of the play areas.

3.6. Energy Efficient Construction (Section J, BCA)

The following BCA Section J provisions are applicable to the early childhood centre class 9b:

Building Fabric

Parts of the building forming an envelope to a conditioned space are to achieve the minimum construction requirements for insulation R-Values required by BCA Part J4 for the class 9b part. It is noted there are no conditioned spaces for the class 7a part.

Building Sealing

Openings in the building such as doors, windows, exhaust fans and ventilation systems forming part of an envelope to a conditioned space must be sealed to the requirements of Part J5 of the BCA to prevent loss of conditioned air.

In that regard, all external doorways and windows must be fitted with a draft seal, exhaust fans to have dampers, there are to be tight fitting skirting boards, cornices and architraves. The requirement for seals does not apply to fire doors fitted between the fire-isolated stairways in the conditioned areas of the building.

Air-conditioning and Ventilation System

The design of all mechanical air-conditioning and ventilation systems must achieve compliance with Part J6 of the BCA with regard to input power and efficiency features and applies to the class 2 parts of the building.

Artificial Lighting and Power

The building is to maintain maximum lighting power levels and control systems as applicable. The design of lighting systems must comply with BCA Part J7 to the class 7a parts of the building.

Hot Water Supply

Hot water supply systems will be installed in accordance with Part J8 of the BCA and AS/NZS 3500.4 and incorporate insulation to inlet and outlet lines of hot water storage units.

Access for Maintenance and Facilities for Monitoring of Energy Use

The building is to have facilities for maintenance and energy monitoring in compliance with BCA Part J9 and the NSW variations.

4. Fire Safety and Other Measures

4.1. Proposed Fire Safety Measures

In terms of the proposed works the following fire safety measures are proposed to be installed;

Fire Safety Measure	Standard of Performance
Automatic fire detection and alarm system	BCA 2022 S20C4 and AS 1670.1 - 2018
Emergency lighting	BCA 2022 Clause E4D2, E4D4 and AS/NZS 2293.1 - 2018
Exit and directional signage	BCA 2022 Clause E4D5, NSW E4D6, E4D7, E4D8 and AS/NZS 2293.1 - 2018
Fire hydrant systems	BCA 2022 Clause E1D2 and AS 2419.1 - 2021
Fire hose reel systems	BCA 2022 Clause E1D3 and AS 2441 - 2005
Mechanical air handling systems (automatic shut down)	BCA 2022 Clause E2D3 and AS 1668.1 - 2015
Building Occupant Warning System	BCA 2022 S20C7 and AS 1670.1 - 2018
Portable fire extinguishers	BCA 2022 Clause E1D14 and AS 2444 - 2001

5. Conclusion

Following an assessment of the proposed building it is considered that the proposed building, can achieve compliance with the provisions of BCA 2022, without alteration that would necessitate an amendment to the development consent.

6. Referenced plans

Plans prepared by Faubourg 24 Pty Ltd (issue A and received 30 April 2025)

Sheet Set
 DA00- Cover Page
 DA01- Site Plan
 DA02- Ground Floor Plan
 DA03- Roof Plan
 DA04- Design Facts
 DA10- Streetscapes/Elevations
 DA11- Elevations/ Section AA
 DA12- Colour Schedule
 DA20- Shadow Diagrams
 DA21- Artist Impressions